

INSERT COMPANY LOGO HERE

DOCUMENT STYLE GUIDE:

COMPANY NAME

Document No. 2004-SG

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Prepared by:

Lori Jo Oswald, Ph.D., Technical Editor
Wordsworth Writing, Editing, & Research Services
PO Box 4083, Palmer, AK 99645
(907) 745-5674
www.wordsworthwriting.net
E-mail: editor@wordsworthwriting.net

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Sincerely,

Lori Jo Oswald, Ph.D., Author

Owner, Wordsworth Writing, Editing, and Document Formatting Services

MESSAGE TO WRITERS & COMPANY PERSONNEL

I would like this to be a document that makes your jobs easier as well as makes the company look better, so your input is welcome and encouraged. Many of these rules and styles will be applied by the technical editor (if you have one in-house; if not, you are encouraged to use our editing services and e-mail documents to us at editor@wordsworthwriting.net) once the document is reviewed, so it is not necessary for you to learn everything in this manual, but this way you have a handy reference when you need it. Our documents tell our clients a lot about us, and they should be error-free; it is therefore essential that you allow time for every document to be reviewed before it goes out.

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1.0 INTRODUCTION

The purpose of this style guide is to provide writing tips, editing guidelines, and samples of *Company Name* documents. But this style guide has other functions as well. We have tried to include specific acronym and style lists to help make report writing and editing at *Company Name* somewhat easier, or at least clearer.

Consider this a guide in helping you through the writing or editing process. It is subject to change, and you are encouraged to add your suggestions and changes and give them to the technical editor for inclusion in future versions of this document.

Why is a style guide important? The answers are consistency, clarity, and professionalism. Every document—e-mail, memo, letter, proposal, or report—gives an impression to clients or prospective clients about our company. As one editor said, “What we sell are reports.” One mistake, such as writing 2.5 liters instead of .25 liters, can have serious consequences as well as make us seem unprofessional. Errors distract from messages, cause credibility problems, and can communicate the wrong information. Our clients expect and demand high-quality writing.

Do we expect you to catch every error or check for every possible item mentioned in this guide? Definitely not—this is mostly a reference manual and will mainly be used by the technical editor. There is no such thing as a perfect draft. The writer handles the prewriting and writing stages, while the technical editor edits and proofreads the document. Peer reviewers can also serve as helpful editors. This guide has sections for both writers and editors.

Editing and writing are different tasks and require different people to do them. All good writers have editors. When an editor makes changes, corrections, and suggestions on a copy, there is nothing personal intended toward the writer. This is simply a common—and important—step in creating a strong, clear, and clean document.

What is important is that you understand the need for each document—no matter how small—to go through a review process, including the technical editor and at least one peer. Reviewers need to edit for the following:

- Grammar, punctuation, spelling, style, and format
- Organization
- Readability
- Consistency
- Logic

In addition, reports should be edited to ensure that all elements required are included (i.e., Executive Summary, List of Acronyms and Abbreviations, References, etc.) and that the data in the text, figures, and tables are consistent and accurate.

There are many resources to help with writing and editing, in addition to this guide. An English handbook, such as those required in college English classes, is useful. We also rely on *Merriam-Webster's Tenth New Collegiate Dictionary* for final decisions about spelling, capitalization, and hyphenation.

We hope that you find this guide useful. Again, please let your technical editor know if you have any changes or ideas for future editions.

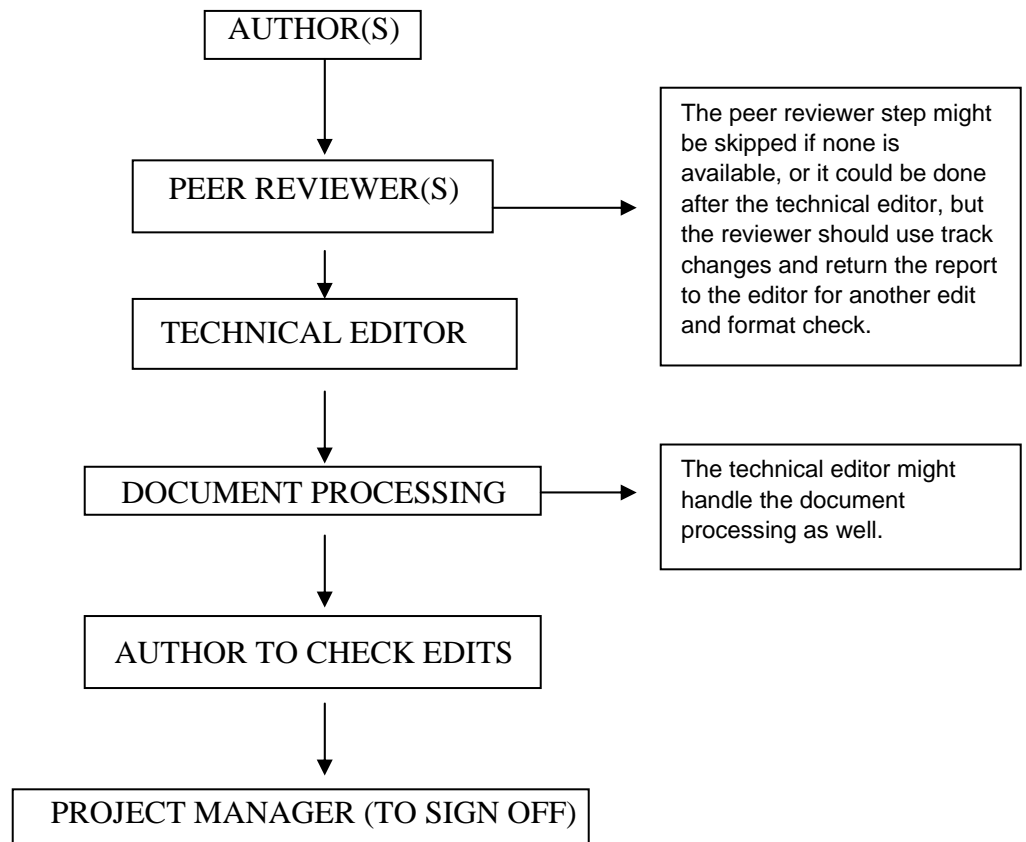
2.0 DOCUMENT REVIEW POLICY

As part of *Company Name's* commitment to quality control, all documents should go through the following review process:

1. Prepared by at least one employee
2. Reviewed by one or more qualified peers or supervisors
3. Reviewed by a technical editor
4. Changes made by technical editor and a document processor (or the editor can do both tasks separately).
5. All changes checked by original writer or peer
6. Approved by a senior manager

Since writing and editing are different processes requiring different skills, it is strongly recommended that all document writers obtain at least one edit from someone else. Even formal letters and memos should be reviewed by someone other than the author. Proposals, letter reports, and draft and final reports should all be read—at a minimum—by a peer reviewer, a technical editor, and a senior reviewer.

Figure 2-1 Document Review Flowchart



2.1 PEER REVIEW

Peer and senior edits are made to evaluate the concepts and conclusions from a technical standpoint, as well as to provide any other feedback as needed. Remember, the more readers your document has before it goes to the client, the better!

2.2 TECHNICAL EDITING

The technical editor, or someone else qualified to edit the report, should edit the document in the following areas:

- Evaluating grammar, punctuation, spelling, house style, and format (using this style guide as a source);
- Checking the organization of sections within the document, as well as the overall document;
- Looking for conciseness and readability;
- Making sure there is consistency among and within the text, tables, and figures;
- Determining whether there is a logical and clear progression from findings to conclusions; and
- Looking for the presence in the text of all the required sections.

Here are some specific problem areas the technical editor should check for in each document:

- Figures, graphs, and tables are clear;
- Errors in numbers in figures and tables (make sure data in text match data in tables)
- An acronym (and abbreviation) list is included;
- Each acronym is defined the first time (and only the first time) it is used in the regular text (exceptions: Transmittal Letter, Executive Summary, figures and tables, and resumes are treated as separate documents);
- The correct use and capitalization of acronyms using the acronym list in this style guide;
- Font size and style are correct;
- Figures and tables are referred to in the text; figures and tables either directly follow the first textual reference, or are located on the next page following the first textual reference;
- References are in proper *Company Name* format;
- Bullets are used instead of numbers with lists, unless numbers represent sequential steps;
- The use of *and/or* is avoided if possible;
- Appendices are referenced in order in the text and are complete;
- Maps and figures are clear, legible, and checked for spelling;

- The text is not too technical-sounding or filled with jargon or vague phrases (recommended Flesch readability score is no more than 10.7-year grade level; computer's grammar checking program should provide a score);
- Title page has proper elements, including the client's name and address, project number, and date;
- Table of contents matches text, including page numbering, headings, appendices, and titles of tables and figures;
- Transmittal letter and executive summary are edited;
- The headings are worded properly to reflect the text that follows;
- There are enough headings; and
- The numbering and font styles of the headings are appropriate.

It is also important that the technical editor, the original writer, or a peer check the document after it is returned from document processing to be sure all changes were made correctly and that the formatting is still correct.

Try to understand the time needed by the technical editor to do a thorough edit. Although many reports require little editing (rewriting) but instead require mostly proofreading (fixing errors in grammar, punctuation, and style), the average time involved in technical editing is six pages per hour, which means a medium-length report will require at least 6 to 12 hours to complete. Figures and tables often add more time. Also, remember that the editor probably has other documents to complete before yours. Try not to say, "Just do a quick edit," to the editor. There is no good way to do that. You would be asking for a shoddy, incomplete job.

2.3 DOCUMENT PROCESSING

The document processor puts the document in the proper format (i.e., report, proposal, letter, memo) using the appropriate fonts, margins, headings, footings, etc., using the specifications in this style guide, unless other specifications are given by the author or technical editor.

The document processor also does the following:

- Adds the Table of Contents page
- Inserts tables and figures and the correctly formatted table and figure headings (using the "Captions" feature in Microsoft Word)
- Inserts page breaks
- Inserts page numbers

3.0 PUNCTUATION

This section lists common punctuation rules and errors with examples similar to the ones we encounter in *Company Name's* documents.

3.1 APOSTROPHES

- Apostrophes are not used for plural forms of years and acronyms: 1990s, USTs.
- Apostrophes are used to show possession. The apostrophe precedes the “s” when the noun is singular; it follows the “s” when the noun is plural. There is no need for a second “s” after the apostrophe. Examples: the client’s bill, the USEPA’s decision, Robert Edwards’ letter, *Company Name's* documents.
- Its and it’s are often confused; its is the possessive form, and it’s is a contraction for it is. Examples: The agency believed its decision was correct. It’s not important to me. (Do not use it’s in technical writing; see next bullet item.)
- Do not use contractions: it’s, can’t, don’t, won’t, wouldn’t, etc.

3.2 CAPITALIZATION

- Generally, we tend to use capitals unnecessarily. If you are not sure, you probably do not need to capitalize the word. To be sure, you can use Merriam-Webster’s Tenth New Collegiate Dictionary; if it is capitalized there, go ahead and capitalize it. Also, follow the guidelines in this section.
- Acronyms and abbreviations are usually in all capital letters, although the words they are based on are often not capitalized. To be sure, check the abbreviations and acronyms list in Section 9.0 of this style guide. Example: inside diameter variation (IDV).
- Capitalize titles only when they directly precede a person’s name or are part of an address: The source of the information was Project Manager Jane Szmanski. The project manager is Jane Szmanski. Jane Szmanski, project manager, is. . . .
- Generally, capitalize counties, states, municipalities, cities, and boroughs when they are part of a name. They are usually lowercased when they precede a name: Kansas City, the Municipality of Anchorage, the state of Alaska, the city of Palmer, Washington State, the Pacific Northwest (the proper name of a region), northern Washington (a general direction).
- If you are referring to a specific document or table or entity or organization, capitalize it. If not, lowercase: draft reports, *Draft Report 1 for Bethel Landfill*, Figure 1-5; the figure; the Environmental Services Agency; the agency; the Federal Bureau of Standards; federal, state, municipal, and city agencies; the federal Department of Transportation; the federal government; Congress and the Senate; the state senate and the state legislature; the department; the Department of Public Works.
- Do not capitalize “the” before a company or institution name: the University of Alaska Anchorage.
- Capitalize the first word in columns and bullet lists if each item is a complete sentence or is particularly lengthy. For simple words or short phrases that finish

the sentence preceding the bullet list, lowercase the individual bullet items, use commas or semicolons at the end of each item as is appropriate, and end the final list item with a period. For example:

The ground is

- hard,
 - cold, and
 - dark.
- Capitalize specific geographic names but not general terms: John, Paul, and Mary creeks, Yukon River, the lakes, Lake Ontario, lakes Stephan and Willamette, Winston Lake.

3.3 COLONS

- Use only one space after a colon (and after a semicolon, for that matter). The contractor discovered three flaws: first, a loose bolt; second, a missing nut; and third, a broken screw.
- Colons in text are used after complete sentences (i.e., you should be able to replace the colon with a period). The same rule should apply to colons before bullet lists (but we are flexible here and allow for an incomplete sentence before a bullet list if necessary). Examples: We have six requests: the first . . . , the second . . . , etc. The ground is hard, cold, and dark.
- In the text, do not use a colon after the word “includes” or “including” unless the words “the following” appear after. Example: The punctuation list includes commas, semicolons, and periods. The list includes the following: cheese, bread, and water. It is acceptable to use a colon after “includes” or “including” before a bullet list, but it is still preferable to have a complete sentence before any colon.
- Colons are often used to precede lists. They are also used to precede clauses or phrases that clarify or illustrate. Although you need a complete sentence before a colon, you do not need one after a colon. However, it is not wrong to have a complete sentence after a colon. Examples: I have six pets: two dogs, two cats, and two horses. The monitoring well data were incomplete: additional testing was required. (Note: The writer could have used a semicolon, a period, or a comma with a conjunction [and] instead of a colon in the last sentence.)
- Use a colon after a salutation in a letter instead of a comma (Dear Mr. Jones:).
- A colon can be used after one word, as we have been using throughout this document with the word “Example.” Example: This is such a case. For example: Here is another one.
- When the expressions namely, for instance, for example, or that is are used in a sentence to introduce a list, a comma is usually used instead of a colon. Example: Birch’s study included the three most critical areas, namely, McBurney Point, Rockland, and Effingham.

3.4 COMMAS

Comma rules can be confusing, so we have provided subheadings for each use to help you find the appropriate rule quickly.

3.4.1 *Using Commas in a Series*

Always use a comma before “and” or “or” in a series of three or more items. This is a style requirement, not a rule. You might notice that most newspapers use Associated Press (AP) style, which does not use the last comma in a series. Most magazines use the Chicago Manual of Style, which does require it. It is standard in formal writing to use the comma. For example,

- Mammals in Area A include caribou, fox, and lemmings; mammals in Area B include polar bear, walrus, and several species of whales and seals.
- It was a fast, simple, and inexpensive process.

When adjectives modifying the same noun can be reversed and make sense, or when they can be separated by either “and” or “or,” they should be separated by commas:

- The drawing was of a modern, sleek, swept-wing airplane.

But when an adjective modifies a phrase, no comma is needed, as in the following example, where damaged modifies radar beacon system.

- The company investigated the damaged radar beacon system.

If there are only two items in a series, no comma is necessary.

- The drawing was of a modern sleek airplane.

3.4.2 *Using Commas to Separate Complete Sentences*

If you have two independent clauses (i.e., complete sentences that could stand on their own) separated by a coordinating conjunction (and, but, for, or, so, yet), put a comma before the coordinating conjunction. If the second clause is not an independent clause, do not use the comma before the coordinating conjunction.

- The pack ice breaks off from shore ice in June, and the shore is free of ice from late July until mid-August.
- The Gubik formation is mainly of marine origin and consists of lenses of gravel, sand, silt, and clay.

3.4.3 Using Commas to Set off Phrases (*Which, That, Who*)

Usually, when you use the relative pronoun “which,” you have a phrase that needs to be set off from the rest of the sentence with two commas. Usually when “that” is used, there are no commas. Whether or not to use commas before and after a clause beginning with “who” depends on the meaning of the sentence. If the information following the word “who” is essential to the meaning of the sentence, do not use commas; if it can be eliminated without changing the meaning of the sentence, do use commas.

- *Company Name*'s new style guide, which will be in use by December 1, ensures consistency in all documents.
- The style guide that *Company Name* is presently using is outdated.
- The editor, who studied at the University of Washington, is based in the Fresno office.
- The editor who is the most skilled in that area is in the Palmer office.

3.4.4 Using Commas with Names, Titles, and Addresses

Commas are used to separate distinct items in the text. Therefore, if you write an address on one line, separate the elements in this way: Chris Polsky, 4117 Ravensdale Road, Seattle, Washington 97506. Note that the state is spelled out in the text, but in letters and addresses, use the postal code abbreviation (listed in Section 8.0, Abbreviations and Acronyms):

Chris Polsky
4117 Ravensdale Road
Seattle, WA 97506
(206) 777-7677

Dear Chris Polsky:

Note that in the salutation, above, a colon is used instead of a comma in formal writing. Also, I addressed “Chris Polsky” instead of “Mr.” or “Ms.” Polsky because I am not sure whether Chris is a man or a woman, based on the name.

Here are some additional uses of commas with names, titles, and addresses:

- Toronto, Ontario, Canada
- Sally Jo Rogers, Ph.D.
- John Smith, P.E.
- LMB, Inc.

3.4.5 *Using Commas in Numbers*

Use a comma in numbers larger than 999: 131,000, 9,000, 800.

3.4.6 *Using Commas after Introductory Phrases*

In technical writing, always use a comma after an introductory phrase, in order to avoid confusion. For example, notice how the comma clarifies this confusing sentence: To be successful managers with MBAs must continue to learn. REVISED: To be successful, managers with MBAs must continue to learn.

3.4.7 *Using Commas with Quotation Marks*

Commas and periods always go inside the closing quotation marks; semicolons and colons always go outside closing quotation marks.

- Smith said, "I didn't do it," after he saw me.
- I said, "Yes, you did."
- I don't know why he said he "didn't"; it was clear that he did.

3.4.8 *Using Commas in Dates*

- August 27, 1999, was the day he proposed.
- *Company Name* conducted the site assessment in June 1998.

3.5 DASHES

- Dashes are usually used to emphasize the text in between them—to tell the reader this is important and look here—so they should be used sparingly.
- Dashes can also be used to define words. Anorexia nervosa—an eating disorder characterized by an aversion to eating and an obsession with losing weight—is common among young female gymnasts and ballet dancers.
- Type two hyphens with no spaces around them, and your word processing program should automatically replace them with a dash.
- *Company Name's* style is no spaces around dashes.

3.6 ELLIPSES

Ellipsis points (plural: ellipses) are a set of three or four spaced dots (periods on the keyboard) showing missing text from quotations. Usually you can quote without having to resort to using them (as in the first example below), but here are some ways they are used.

- Example without ellipsis: Peter Singer said that stones “do not have interests” because they can’t suffer, while a mouse does have “an interest in not being kicked down the road, because it will suffer if it is” (1975).
- Quotation with ellipsis: Yi-Fu Taun, author of *Dominance and Affection: The Making of Pets*, said that the breeding process is used to make animals more useful or desirable for humans: “With the horse . . . humans have tried to make the animal both larger and smaller” (1984).
- Use a fourth “dot”—a sentence-ending period—along with the ellipsis points when an ellipsis comes at the end of your sentence or when the material you have deleted contains at least one period: Summer also said that people have described personal space as “a small shell, a soap bubble, an aura. . . .” In *Animal Liberation*, Peter Singer wrote, “Nearly all the external signs which lead us to infer pain in other humans can be seen in other species. . . . Behavioral signs—writhing, facial contortions, moaning, yelping or other forms of calling, attempts to avoid the source of pain, appearance of fear at the prospect of its repetition, and so on—are present” (1975).
- Note spacing requirements: with three “dots,” space before and after each one; with four dots, do not space before the first one (or after the last one if a quotation mark immediately follows it).
- The ellipses points should not be separated at the end of a line and into the following line. This can be a problem in right-justified text. You may have to revise your sentence to fix it.

3.7 EXCLAMATION POINTS

- Avoid! Avoid! Avoid! They do not belong in formal writing! In fact, most good writers don’t use them at all, except perhaps in a quotation! (Jane screamed, “Eeek!”) And especially never use more than one!! That would be most inappropriate!!!!!!

3.8 HYPHENATION

- Hyphens are often used unnecessarily after prefixes. Check the lists in Merriam-Webster’s Tenth New Collegiate Dictionary if in doubt. Here are some examples of words that do not take hyphens after the prefixes: preexisting, semivolatile, nonprofit, nonhazardous, nonnegotiable. See Table 5-1 for a list of prefixes that do not usually take a hyphen.

-

Table 3-1 Prefixes Not Requiring Hyphens

Prefix	Example	Exception
after	aftereffect	
anti	antisocial	
bi	bilingual	
co	coworker	

Prefix	Example	Exception
counter	counterbalance	
equi	equilibrium	
extra	extracurricular	
infra	infrared	
inter	interstimulus	
intra	intraspecific	
macro	macrocosm	
mega	megawatt	
meta	metacognitive	meta-analysis
micro	microorganism	
mid	midterm	
mini	minisession	
multi	multiphase	
non	nonsignificant	non-achievement-oriented students
over	overaggressive	
post	posttest	
pre	preexperimental	pre-1970, pre-UAA trial
pro	prowar	
pseudo	pseudoscience	
re	reevaluate	re-pair (pair again), re-form (form again)
semi	semidarkness	
socio	socioeconomic	
sub	subtest	
super	superordinate	
supra	supraliminal	

Prefix	Example	Exception
ultra	ultrahigh	
un	unbiased	un-ionized (not ionized)
under	underdeveloped	

- Exceptions to the above include the following: if the prefix stands alone (pre- and postclosure elements), if the root word is capitalized (mid-August, non-American), if the root is a number (pre-1900), if the resulting word can have two meanings (retreat and re-treat or un-ionized and unionized), or if the second element consists of more than one word (non-English-speaking, non-achievement-oriented students).
- Generally, hyphenate words with the prefixes ex, all, and self and the suffix elect: all-encompassing, self-employed, president-elect.
- Hyphenate a numeral and a unit of measure used as an adjective: three 1,000-gallon tanks; 3-, 4-, and 6-inch-diameter pipes.
- Do not use a hyphen after adverbs ending in -ly: previously installed wells.
- Do not hyphenate Latin terms: in situ (per Webster's; you will see this term handled differently by different companies and agencies however, so if a client prefers another way—hyphenated or italicized or both—go ahead and use that style for that client).
- Hyphenate two words of equal value used as modifiers: gray-brown soil.
- Hyphenate compound modifiers when one word modifies or defines another but does not separately define the noun being referred to: dark-green building (but no hyphen in large green building, since large does not modify green).
- Before a noun, hyphenate a compound consisting of a noun and a participle: decision-making skills, broad-based experience. But do not hyphenate if the expression follows the noun: Her experience is broad based. The well is 73 feet deep.
- Hyphenate a phrase used as an adjective before a noun (up-to-date account) but not if it follows the noun (the account was up to date).
- Hyphenate compounds containing numbers that precede the noun: 23-year-old woman, twentieth-century innovation, one-year program, 7-foot depth, 7-foot-wide opening. But there is no hyphen in the following: in three years, 35 gallons of fuel, the woman was 23 years old.
- Hyphenate fractions that are spelled out: one-half, two-thirds.
- Hyphenate when referring to specific figures and tables: Figure 4-1, Table 3-7.
- Although most of the time, numerals 10 and over are not spelled out, if you must begin a sentence with a compound number, use a hyphen: forty-six, one hundred sixty-three.

3.9 PARENTHESES AND BRACKETS

- Generally, try not to overuse parentheses. Some editors believe that if it is not important enough to include as part of the text, then delete it. If it is important, set it off with commas or dashes instead. But, of course, sometimes it is necessary or useful to include parenthetical expressions. So here are some tips to guide you.
- Periods go inside parentheses when a complete sentence is contained within the parentheses. (We have tentatively scheduled this meeting for June 16, 2001.) Otherwise, put the period outside the parentheses: Previous studies found the landfill area safe (Compton, 1989).
- No other punctuation mark should directly precede the first parenthesis mark. The findings were explained by Smith (1989), and they were confirmed by Jones (1993).
- Within a parenthetical phrase, if you have another parenthetical phrase, use brackets: Buck (in *The Call of the Wild* [1903] by Jack London) was one of the most developed dog characters in literature.
- However, for code regulations that already contain parentheses, use brackets on the outside where you would normally use parentheses: [24 CFR 1600(4)(5)].

3.10 QUOTATION MARKS

- Quotation marks are used only around direct quotes (i.e., words taken from a source exactly as they were written). If you are changing or condensing the information from another source, still give credit, but do not use quotation marks. The latter is an indirect quote.
 - DIRECT QUOTE, COMPLETE SENTENCE: John Smith said, “This is wrong.”
 - DIRECT QUOTE, WORD OR PHRASE ONLY: Darrell Cohen said he is “positive” the actions were appropriate.
 - DIRECT QUOTE, WORD OR PHRASES WITH MATERIAL DELETED: According to Daniel Danielson, the site was “always empty . . . and left alone.”
 - DIRECT QUOTE, COMPLETE EXCEPT MATERIAL DELETED FROM END OF SENTENCE: Patricia Meyers said, “I don’t think I can agree with that assessment. . . .”
 - DIRECT QUOTE, MATERIAL MISSING FROM BEGINNING OF QUOTED SENTENCE: Hillary Capra said that the area “is in need of a bulldozer and explosives.” (Note: There are no ellipses marks used at the beginning of a partial quotation; the word “that” preceding the quote as well as the lower case “is” tell the reader that this is not a complete quotation.)
 - INDIRECT QUOTE: John Smith said that he disagrees with Mark Benson on the results.
- Periods and commas always go inside quotation marks: John Smith said, “I don’t think so,” and Jane Doe said, “I agree.”
- Colons and semicolons always go outside quotation marks: John Smith said he is firmly “committed”; his partner is undecided.

- Single quotation marks are used only within double quotation marks: John Smith said, “James told me, ‘I am sure,’ before he left.”
- When quotations are longer than four lines or 40 words, remove the quotation marks, introduce the quotation, and set the direct quotation off with two indents, as in the following example (for readability, we have indented this example more than 10 spaces or 2 tabs, so that you can see the indent easier in this bulleted section). In *Handbook of Technical Writing*, Alread, Brusaw, and Oliu (2000) explained how to set off quotations:

Material that is four lines or longer (MLA) or at least 40 words (APA) is usually inset; that is, it is set off from the body of the text by being indented from the left margin ten spaces (MLA) or five to seven spaces (APA). The quoted passage is spaced the same as the surrounding text and is not enclosed in quotation marks. . . . If you are not following a specific style manual, you may block indent 10 spaces from both the right and left margins for reports and other documents.

3.11 SEMICOLONS

- Semicolons are used in two ways. The first and the most common is between two independent clauses not joined by a conjunction (and, or, for, so, but, yet): I am right; you are wrong. Often, these sentences contain a transition word or phrase such as however, furthermore, for example, consequently, or moreover. The semicolon precedes the transitional word or phrase as long as there is a complete sentence both before and after it: I believe I am right; however, I am open to suggestions. I do not, however, agree. (Note that there is a comma after the transitional word when a semicolon precedes it.)
- The second use of the semicolon is to clarify a list that contains commas. The semicolon separates elements that go together. For example: I have lived in Anchorage, Alaska; Eugene, Oregon; New York, New York; and Seattle, Washington.

4.0 WRITING TIPS

The purpose of this section is to help you make your writing sharp and clear and to point out common errors to avoid, such as using clichés.

4.1 ACTIVE AND PASSIVE VOICE

“Don’t use passive voice,” is probably one of those red-ink English teacher comments you sometimes saw but that was never explained. Active voice is preferred because it is easier to read and to understand, so it is especially important in technical material. Basically, in the active voice, the subject comes first. Another way to look at it is that the subject does the acting.

ACTIVE: The contractor evaluated the data.

In passive voice, the subject is acted upon. The reason this is a problem is that it is wordy and harder to follow.

PASSIVE: The data were evaluated by the contractor.

4.2 BE SPECIFIC

Technical writers should be as clear and specific as possible, avoiding vague language. Therefore, if you are seeing words like “many, some, a few” in a document, it probably needs revising. Instead of writing “a very high concentration,” for example, give the exact measurement. Give the depth of a test pit rather than just calling it “shallow” or “deep.” Instead of merely saying something is “contaminated,” provide the reader with the amount by which the standard is exceeded and specifically name the compounds involved. Instead of saying something is satisfactory, state exactly which standards or regulations it meets.

4.3 CLICHES

Avoid clichés like the plague; they are overused expressions that have lost their meaning. Even if you are blind as a bat, you can see a cliché for what it is: nothing.

4.4 GETTING STARTED

Here are some tips that may help you get started in writing your document. An English handbook also provides many ideas for beginning the writing process, outlining your ideas, and organizing your material. So if you have “writer’s block,” it might also be useful to look through those sections in a handbook. Here are steps to take before you begin writing:

1. gather information and data (think about what you want to say)
2. identify and refine your document’s purpose (consider why you are going to say it)
3. identify your audience (determine who you are going to say it to)

4. organize your information and ideas (decide how you are going to say it)

For Step 4, it is useful to make an outline. Your outline can be changed, of course, but it will often lead you to knowing your headings and subheadings and where to put specific material in your document. A writer might find it easier to write the outline as a Table of Contents page.

The next step is actually writing the draft. You can write sections out of order, if needed. Do not worry about grammar, punctuation, and style at this point. Just get something down.

After you have your draft written, go ahead and do your revisions. If you have time to set it aside a day, go ahead and do so. As you revise, aim to clarify, strengthen, and condense your message. Also, check the overall organization. This is also the time to go back and write the introductory material, such as the Transmittal Letter and Executive Summary, if needed in this report.

As you revise, here are some questions that might assist you:

- Does the reader know what the report, section, or paragraph is about? If not, make sure you have the topic sentences or main ideas listed first. Example: "This section evaluates the data collected from the three well sites."
- What does the audience most likely want to know? Check any materials you have (bid packet, report guidelines, previous reports, original proposal) to make sure you have provided the necessary information.
- How well organized is the document?
- Are there any gaps in logic or information?
- Is there enough supporting material (i.e., figures, tables, graphs)?
- Did you use transitional words and phrases (therefore, furthermore, for example, however, in fact, also, first, second, finally, consequently, in addition, on the other hand, next, in conclusion, as a result, in the same way, in other words, in contrast, most important, further, to summarize)?
- How well did you say it? Do you have awkward sentences? Have you checked for the following problem areas (this is also done by the technical editor): sentence structure, sentence variety, subject-verb agreement, passive voice, wordiness, misuse of pronouns, misplaced modifiers, faulty parallelism, poor organization, and poor formatting? Use your handbook or this style guide for suggestions on improving these areas.
- Did you leave anything out that is essential to fulfilling the requirements of the document?
- Did you include information that is not relevant?
- Did you use specific, concrete language? Can a nonexpert read your document?
- Did you avoid jargon, clichés, and wordiness?
- Did you use enough headings and bullet lists to add to readability?

4.5 JARGON

One of the main goals of technical writers is to make text clear and simple. One of the ways this is done is by replacing jargon with simple, clear language. Jargon is technical vocabulary, and it is often not necessary. One of the best things to happen to technical writing in the last 20 years is the elimination of jargon and the increase in readability of documents. Writing jargon or extra words (such as this example from APA: “monetarily felt scarcity” instead of “poverty”) prevents readers from understanding the text. Here is an example from another company’s style guide:

Winston Churchill, facing Hitler’s armed forces in 1940, said to Americans, “Give us the tools, and we will do the job.” He did not say, “Supply us with the necessary inputs of relevant equipment, and we will implement the program and accomplish its objectives.”

Table 3.1 contains examples of jargon and ways to correct them.

Table 4-1 Simplifying Jargon

Replace	With
adjacent to	next to, beside, near, adjoining
atop	on
currently	now
per your request	as requested
observed	saw
presently	now
prior to	before
with regard to, relating to	about, for, of
reside	live
residential structure	residence
stated	said
subsequent to	after
upon	on
usage	use
utilize	use
with respect to	about

4.6 SENTENCE ERRORS

Comma splices, fragments, and run-on sentences are the three most common sentence errors. Any English handbook contains detailed definitions of each of these, but here are examples for your reference.

Comma Splice: A comma splice has a complete sentence before the comma, it also has a complete sentence after the comma.

How to correct: Use a period or a semicolon instead of a comma, or add a coordinating conjunction after the comma (and, but, or, for, so, yet).

Fragment: An incomplete thought. Fragments are unfinished because. All sentences need, at a minimum. A subject and a verb.

How to correct: If it sounds incomplete, it is probably a fragment. Revise the sentence.

Run ons: Run-on sentences are two sentences crashed together they have no punctuation in between them.

How to correct: The easiest way to correct run-on sentences is to put a period or semicolon in between the two sentences.

4.7 VAGUE TERMS

Try to avoid using “it” and vague pronoun references. State exactly who or what you mean.

CONFUSING: Columbia Analytical Services gave the results to *Company Name*. It then gave the results to the client’s representatives. They . . .

CLARIFIED: Columbia Analytical Services gave the results to *Company Name*. *Company Name* gave a copy of the results to the client, Company A. Company A then . . .

Also, note that a company is singular, so you would not use “they” when referring to a company. This is where you will sometimes use “it,” but make sure your text is clear on who or what “it” refers to.

4.8 WORDINESS

Technical writing should be “tight” and clear. If you can use one word instead of three or four, do so. The main problem with wordiness is that it makes the text hard to read. Table 4-2 shows some shorter alternatives to wordy phrases such as using “for” instead of “for the purposes of.”

Another way to eliminate wordiness is to avoid redundant phrases. In the following examples from APA, the italicized words are redundant and should be eliminated: *one and the same*, in *close proximity*, *completely* unanimous, *period of* time, summarize *briefly*, the reason is *because*, has been *previously* found, small *in size*, a *total of* 68 participants, *both* alike, four *different* groups.

Table 4-2 Eliminating Wordiness

Wordy Phrase	Better
a 7-year period	7 years
a large number of	many
ahead of schedule	early
as to whether	whether
at this point in time	now
based on the fact that	because
blue in color	blue
close proximity	proximity
conduct interviews with	interview
consensus of opinion	consensus
constructed in two-levels	two-story
contained within	in
designated, termed, named as	designated, termed, named
developed for residential use	residential
divided into four quarters	divided into quarters
during the time that	while, when
end product	product
few in number	few
fine-grained in texture	fine-grained
first priority	priority
for the purpose of assessing	to assess
for the purpose of	for, to
future potential	potential
immediately adjacent to	next to, beside, adjoining
in a shingle-type method	like shingles
in advance of	before
in excess of	over, exceeding

Wordy Phrase	Better
in order to accomplish	to accomplish
in proximity to	near
in regard to, in relation to	regarding, about, of
in the event that	if
in the near future	soon
in the vicinity of	near, about
infiltrate through	infiltrate
integral part	part
is in a muddy condition	is muddy
is to be established	will be established
it is <i>Company Name's</i> understanding	<i>Company Name</i> understands
may, might possibly	may, might
of a similar nature, similar in nature	similar
on a monthly (weekly) basis	monthly (weekly)
on an as-needed basis	as needed
performed a site reconnaissance	reconnoitered (the site)
prior to the collection of samples	before samples are collected
results so far achieved	results so far
the present study	this study
there were several students who completed	12 students completed
to the point that	enough, sufficiently
topographic features	topography
were used for the storage of	stored
work, tasks performed	work, tasks

4.9 WORDS TO AVOID FOR LIABILITY REASONS

Try to avoid overstating or overpromising. Be careful with word selection. Make sure if you use the following words and ones similar to them that you are not promising or saying too much: all,

none, always, never, any, eliminate, stop, equal, guarantee, warrant, certify, ensure, insure, best, highest, maximum, minimum.

There are other words available in this rich English language that should serve your purposes just as well, depending on the context, such as sufficient, typical, facilitate, monitor, equivalent, similar, limit, reduce, recommend, and review.

Here is an example: Instead of *Company Name* guarantees to provide the client with the best choice, write *Company Name* will advise the client on the most appropriate action.

5.0 COMPANY NAME STYLE

This section lists our “house style” for document text issues. Many of these items are not necessarily “rules” of grammar or punctuation. Instead, the word “style” refers to a company’s preferences for how such items as acronyms, commas in a series, capitalization, justification, and italics are used. There are almost as many styles as there are companies and publications. Newspapers, for example, usually use the Associated Press (AP) style. The styles we have chosen for *Company Name* relies on standards in the technical writing industry, the Chicago Manual of Style, the Government Printing Office style, as well as the preferences of our clients. These are subject to change. However, it is important to be consistent within documents themselves, and within our company. Therefore, try to follow these style guidelines when writing your document. The technical editor will also look to make sure that all documents meet our style requirements; therefore, do not worry if you are not sure of something or do not have time to check everything. This is the editor’s job, and this section is mainly written for editors and document processors to use. This is probably the most important section of this style guide, as it sets down the guidelines for our own company’s style.

5.1 ABBREVIATIONS AND ACRONYMS

- There is no need to use an abbreviation if a term is only used once. Just spell out the term. (Example: The U.S. Environmental Protection Agency is. . . .)
- If using an abbreviation more than once, place it in parentheses after the complete term first appears. From then on, use the abbreviation only. (Example: The U.S. Environmental Protection Agency (USEPA) is. . . . According to the USEPA. . . .)
- Generally, do not use “the” before abbreviations (example: TPH was detected). Exceptions are certain government agencies (the USEPA, the ADEC).
- Abbreviations and acronyms are generally treated as singular nouns (the USEPA is the agency overseeing the program). Make acronyms plural by adding s (no apostrophe), as in VOCs. Only use the apostrophe for possession (the FDA’s position).
- TPH and BTEX are collective nouns that take singular verbs; do not add the s to them: Total petroleum hydrocarbons were detected; TPH was detected.
- Do not define U.S., Latin abbreviations (etc.), or compass directions (NE). Some companies prefer not to define F (for Fahrenheit) or C (for Celsius) as well. Abbreviations do not contain periods, except U.S., in., Mr., Ms., no. (number), p. (page), pp. (pages), and Latin abbreviations (i.e., et al., etc., e.g.).
- The original words that the acronym represents are not necessarily capitalized; see the abbreviations and acronyms list in Section 8.0 of this document to be sure. (Example: method reporting limit [MRL]).
- Articles agree with the pronunciation of the acronym: an MSDS (em ess dee ess), a RCRA assessment (rik-rah).
- Latin (i.e., e.g., etc.). You do not need to define Latin abbreviations. But do make sure you are using them correctly. i.e. means that is, e.g. means for example, and etc. means and so forth or and so on. Check Merriam-Webster’s Tenth New Collegiate Dictionary if

you are not sure of the meaning of a Latin abbreviation (see the abbreviations section near the back of the dictionary).

- Always use a comma after i.e. and e.g. Also, they should be used in parenthetical text only: The tanks hold two liquids (i.e., gasoline and methanol).
- If etc. ends a sentence, do not add a second period. Usually you can avoid using etc. by revising the text to include a phrase such as “and others” or “and so on.” Another way is to revise the phrase that precedes a list by adding the word includes or including. Instead of writing *The mammals I saw were moose, elk, rabbits, etc.* write *The mammals I saw included moose, elk, and rabbits.*
- Treat resumes, executive summaries, transmittal letters, and figures and tables as separate documents. Redefine acronyms and abbreviations in them. Provide a key to all acronyms and abbreviations used in the tables and figures; the key goes at the bottom of the table or figure.

5.2 COMPANIES AND AGENCIES

- Use the name as the company or agency does on its official documents. It may contain and, &, Inc., Co., or Company.
- You can shorten Company to Co. and Incorporated to Inc.
- Usually there is a comma before “Inc.,” but if the company is not using a comma in its official documents, leave it out.
- A company is singular, so it takes a singular verb. Also, if you use a pronoun to reference the company, use “it” instead of “they.” Champion Word Services is skilled in providing detailed editing to corporate documents. It is also. . . . (Since the “it” is a bit awkward sounding, this is a good place to use an acronym [CWS] as long as it is defined previously, to use “The company,” to use the company’s full name again, or to combine the two sentences and eliminate the need for the subject to be repeated [Champion Word Services is skilled in providing detailed editing of corporate documents and in providing quality workshops to corporate personnel.])

5.3 DATES

- Do not add letters to a date: June 27, not June 27th.
- Do not shorten: 1970s, not ‘70s
- Use a comma with month, day, and year: August 18, 1999, was the date of the test.
- Do not abbreviate months in text (okay in figures and tables): December, not Dec.
- Only use an apostrophe with a date if it is possessive. Examples: The 1990s were very good years. In my experience, 1974’s best song was “Me and Mrs. Jones.”

5.4 ITALICS

- Generally, avoid italics in formal writing, except for the following examples.
- Italicize the names of vessels: the *Exxon Valdez*.
- Do not italicize punctuation that precedes or follows italicized words or sections.

- Italicize the taxonomic names of genera, species, and varieties: The mountain is covered by second-growth forests of Douglas fir (*Pseudotsuga menziesii*).
- Do not italicize punctuation before or after an italicized word, just those that are part of the italicized material.
- Italicize foreign words and phrases only if they have not yet entered common usage (do not italicize in situ; this is commonly used).
- In the text and in the reference list, italicize titles of major documents; do not use quotation marks around such titles: *Final Report: Bethel Landfill Cleanup*. When you refer to chapters or articles within larger works (such as an article within a journal), use quotation marks around the shorter work's title: In "The Story of the Essay," from Jane Doe's *English Secrets*, we learn that every successful essay has a thesis. Do not put quotation marks around section titles of reports, however. Example: Section 1.0 of this document contains an overview of the work performed.

5.5 HEADINGS AND TITLES

- Capitalize the first word, the major parts of speech (nouns, adjectives, adverbs, and verbs), other parts of speech with four or more letters (including prepositions with four or more letters), and the last word in all levels of headings: Memory in Hearing-Impaired Children, On-Site Wells, Playing With Fire.
- Do not use 0.0, 0.1, 0.2, etc. as a chapter heading. The first chapter should begin with "1," as in 1.0, 1.1, 1.2, etc. The Transmittal Letter, the Abbreviations and Acronym List, and the Executive Summary do not have heading numbers.
- The following are the fonts normally used in standard *Company Name* reports. You do not need to format the fonts; they are provided here for your information. Document processing will take care of this. You also should never number your headings; this is automatically done by Document Processing using the styles feature in Microsoft Word.
 - .Caps, Centered, bold, Arial 14, NUMBER AT LEFT IS 4.0
 - .All caps, left justified, bold, Arial 12, NUMBER AT LEFT IS 4.1
 - .Upper and lowercase, left, bold, Arial 11, NUMBER AT LEFT IS 4.1.1
 - .Upper and lowercase, number is indented .5 (1 tab), no bold, italic, Arial 10, NUMBER AT LEFT IS 4.1.1.1
 - .Fifth-level heading. Italics, Arial 10, underlined, DO NOT USE NUMBER AT LEFT

5.6 HEADING INTRODUCTIONS

Always write at least a one-sentence introduction under a heading title before going on to another heading title. For example: This section describes the 2002 remediation activities at the Bethel Landfill.

5.7 JUSTIFICATION

Currently, *Company Name* report style is full justification (i.e., right and left margins are both “justified.” Tests, however, reveal that left justification (i.e., ragged right) is more readable, especially with lengthy and technical material. Therefore, it is acceptable to use ragged right in *Company Name* documents.

5.8 LISTS (BULLETED AND NUMBERED LISTS)

Bullet styles vary from company to company and from style book to style book. These are guidelines for *Company Name* documents but are always subject to change. For now, these are our preferences.

- Generally, bullets are preferred to numbers for lists. Numbers can be used in sequential steps.
- Perhaps most important is the introductory sentence or phrase to the list. Again, there are lots of styles and discussions on this, but for consistency, the following outlines *Company Name*'s preferred style. It is up to you, or to the editor, whether to use a colon after the last word preceding the bullet list even though the sentence might be a fragment (e.g., The three tests run were:). If you can make a complete sentence to precede the colon, this is preferred. One way to do this is to add the words “the following” to the clause you have and then use a colon. Example: The methods used will include the following:
- Note that if you use the word “include” or “including” in your introductory sentence, you have an incomplete list following. Drop the “include” if you have a complete list. The animals seen included wolves, moose, and ptarmigan. (Other animals were also seen.) The animals seen were wolves, moose, and ptarmigan. (No other animals were seen.)
- It is important that each bullet item be parallel to the others. Therefore, if one is a complete sentence with a period, the others should all be complete sentences with periods.
- If each bullet item is not a complete sentence, do not use periods. Also, make sure they each follow the introductory sentence (i.e., that they make sense when joined with the introductory sentence).
- If you use commas at the end of the bullet items, add the word “and” after the last comma (i.e., the second to last bullet item), and insert a period at the end of the last bullet item.
- If there are commas within bulleted items, but the entire bullet list is part of a complete sentence, use semicolons instead of commas at the end of each bullet item (and a period at the end).
- Capitalize the first word of each item in a list if each item is a complete sentence or is lengthy. Include the period as well in these cases. Do not capitalize the first word and use commas (or semicolons as described above) if the bullet items consist of one or a few words and merely complete the sentence introducing them. For example:

Laboratory quality control (QC) samples will include:

- method blanks,
- laboratory control sample duplicates, and

- matrix spike duplicate samples.

5.9 MEASUREMENTS

- Use figures (i.e., don't spell out) for numbers that refer to measurements: 8 cm wide, 9 percent, 8 years old, 5-mg dose, 4 miles, 6 minutes, 3 inches, 7 acres.
- Spell out simple units in the text, such as inch, acre, liter, minute, and year. But if they are part of a complex unit, use the abbreviation (define first use just as you would with any abbreviation): ft/min, mg/L.
- Abbreviated measurements are written the same whether singular or plural. For example, lb can refer to both pound and pounds.
- Most measurement abbreviations do not take a period. Some do, however (in. for inch). See the list of measurement abbreviations in Section 9.0 to be sure.

5.10 NUMBERS

- Generally, spell out numbers less than 10 (one, three), and use numerals for 10 and higher (14, 256).
- Always use numerals to express measurement (2 feet, 4 mg/L, 7 gmp, 5 pore volumes), time (10 p.m.), parts of a document (Chapter 4, Phase 4, Section 2, Item 3, Table 6-1, Figure 2-3), money (\$3 million), very large numbers followed by million or billion (7 million), percentages and decimal fractions (3 percent, 3.14, 1.2), and ratios (1 to 10).
- When two or more numbers are listed in a group in the same sentence, and one or more is 10 or more, use numerals for all:
 - The laboratory evaluated 7 of the 12 samples.
 - The contractor drilled 12 borings to a depth of 70 feet and completed 4 of the 12 borings as vapor extraction wells.
 - The contractor drilled six borings to a depth of 70 feet and completed four of the six borings as vapor extraction wells.
- Spell out all numbers that start a sentence: Twelve test holes were analyzed. You can also rewrite the sentence to move the number: *Company Name* analyzed 12 test holes.
- When numbers appear together in the same phrase, it is often a good practice to express one as a word and one as a number (*Company Name* purchased fourteen 8-inch pipes) but not in a list (*Company Name* purchased 6-, 8-, and 12-inch pipes).
- Use a comma in numbers larger than 999: 12,000, 9,000, 800.
- Use Arabic (1, 2, 3), not Roman (I, II, III), numerals for figures, illustrations, and tables.
- Change Roman numerals to Arabic in references, even when Roman numerals are used in the work itself: (Example: USEPA Region 10, Phase 3).

5.11 PARALLELISM

This is an important—albeit confusing—topic for technical writers, especially since we use so many lists. Basically, the elements in a list must all have the same grammatical structure. They must each flow individually from the introductory sentence. Make sure all the elements in a bulleted list, for example, are parallel to each other. If you begin one item with a verb, for example, all items must begin with a verb. The beginning of a list is the most important part; if necessary, it is acceptable to add additional elements to one or more items (see final example, below).

Incorrect: I like to do the following: flying an airline, ride a bicycle, and shooting a gun.

Correct: I like to do the following: flying an airplane, riding a bicycle, and shooting a gun.

Incorrect: My dog is old, ugly, and he has a disease.

Correct: My dog is old, ugly, and diseased.

Incorrect: Approximately half the landfill was open to the public, and 25 percent was under development.

Correct: Approximately 50 percent of the landfill was open to the public, and 25 percent was under development.

Incorrect:

- Drill borings
- Installing wells
- Collection of samples

Correct:

- Drill borings
- Install wells
- Collect samples

Incorrect:

The objectives of this investigation were as follows:

- To determine the extent of petroleum-hydrocarbon impacted soils in the areas of confirmed impact.
- Determining the potential presence of petroleum-hydrocarbon impact to soil and water along the eastern edge of the pad.
- Collect subsurface hydrogeologic information.
- Collect such data as may be necessary, including identifying physical characteristics of the site, to support development of corrective actions and RBCLs, if warranted.

Correct:

The objectives of this investigation were as follows:

- To determine the extent of petroleum-hydrocarbon impacted soils in the areas of confirmed impact.
- To determine the potential presence of petroleum-hydrocarbon impact to soil and water along the eastern edge of the pad.

- To collect subsurface hydrogeologic information.
- To collect such data as may be necessary, including identifying physical characteristics of the site, to support development of corrective actions and RBCLs, if warranted.

5.12 REFERENCES IN THE TEXT

- All that is necessary in the text is the author's last name and the year of publication (Smith, 1989). The complete information is found in the reference section. However, if you choose to give the author's full name first use or to list the title, that is acceptable.
- Use a semicolon to separate two or more references in the text (*Company Name*, 1993; USEPA, 1999).
- If the same author has more than one publication from the same year listed in the references section, use "a," "b," etc. (*Company Name*, 1999a).
- Note that commas follow the last name in *Company Name* style (Jones, 2000).

5.13 SPACING

- *Company Name* style is to put two spaces after a period.
- There should only be one space after a comma, semicolon, or colon.
- The spacing of ellipses points is (space) dot (space) dot (space) dot (space). Example: Mr. Rogers said that "easy children are . . . "wonderful."
- The spacing of ellipses points with an end period is (no space) dot (space) dot (space) dot (space). Example: According to NOAA, "The data are. . . . incomplete."

5.14 SPELLING

- Use Merriam-Webster's Tenth New Collegiate Dictionary as a standard spelling reference. If there is a choice of two spellings, use the first one (for example, canceled rather than cancelled).
- A list of commonly misspelled words is included in the Appendices of this style guide.
- Watch for the following plurals, and remember that plural nouns take plural verbs. Singular: datum, matrix, phenomenon, schema. Plural: data, matrices, phenomena, schemas. The data are, the datum is. . . .

5.15 TEMPERATURES

- Use the numeral, the degree symbol, and either "F" or "C" for temperatures. Example: The temperature was 14 °F inside the building.
- Be consistent with using either F or C.
- The correct definitions and spellings are Fahrenheit (F) and Celsius (C). Some companies use "Centigrade" instead of "Celsius," but *Company Name's* style is to use Celsius.

5.16 TENSE

In general, technical writers use present tense unless referring to past events. In those cases, use past tense. Proposals will probably also use future tense (*Company Name* will evaluate the data). Refer to other sources in past tense (Smith said that . . .). Discuss past results of tests in past tense (One water sample was analyzed for VOCs). Discuss final results and conclusions in present tense (the results indicate). Following are examples of correct tense usage:

- John Smith said, "I don't think so."
- The landfill was evaluated by Jane Doe, who said at the time, "There are clear violations here."
- Janet Smith, in *The Making of a Great Disposal Area*, wrote, "Efficiency is the most important thing."
- If the participant is finished answering the questions, the data are complete.
- Since that time, investigators from several studies have used this method.
- The CERCLA investigation includes the following. . . .
- Successfully completing site investigation or RI/FS projects has been the thrust of *Company Name's* business in the 1990s.
- The group was formed to provide a core of specialists to the FAA. . . .
- *Company Name's* field staff members are trained to. . . .
- Examples of site investigations *Company Name* has performed in Alaska include. . . .
- This report includes seven sections and two appendices.
- Section 1.0 contains the report introduction. . . .
- *Company Name* is recognized as a leading groundwater consulting firm.

5.17 TIME

- Use a.m. and p.m. (note lowercase and periods) when included with the time: 10 a.m.
- Do not define a.m. and p.m.
- Use numerals when referring to a specific time, even if the number is less than 10. Example: *Company Name* ran the test at 3 p.m. and again at 9 p.m.
- Do not put two periods next to each other, even if a.m. or p.m. end the sentence. Example: *Company Name* ran a final test at 1 a.m.
- Do not put o'clock or :00 after the time if it is on the hour (Example: Sample collection occurred between 11 a.m. and 1 p.m.). But do use a colon and a numeral when giving specific times that are not on the hour (Examples: 2:15 p.m., 4:32 a.m).
- If you are referring to a nonspecific time, do not use a.m. or p.m. Example: The company representatives arrived in the afternoon. But generally, in technical writing, we try to be exact, so use the correct time if you can.

5.18 TITLES AND NAMES OF PEOPLE

- Capitalize titles only when they directly precede a person's name or are part of an address: The source of the information was Project Manager Jane Szmanski. The project manager is Jane Szmanski. Jane Szmanski, project manager, is. . . .
- Do not use a hyphen in vice president.
- In the text, give the person's full name the first mention. From then on, use Mr. or Ms. before the last name. If you are not sure of the person's gender, continue using the full name. Examples: John Smith, Mr. Smith; Sally Jones, Ms. Jones; Pat Johnson, Pat Johnson.

5.19 UNBIASED LANGUAGE

By now we all know we should write language that is inoffensive, but sometimes it is difficult to know what to replace words with. And sometimes the correction may seem wordy or awkward. Often the simplest way to avoid using *he/she* or *he and she* is to make the subject plural. For example, replace "An English teacher has little time to read anything except his or her students' papers" with "English teachers have little time to read anything except student papers." Modern English handbooks contain many suggestions for revising to eliminate biased language. Table 5-1 contains examples from the *Publication Manual of the American Psychological Association*.

Table 5-1 Replacing Biased Language with Unbiased Language

<u>Replace</u> : The client is the best judge of his counseling.	<u>With</u> : Clients are the best judges of the counseling they receive. The client is the best judge of the value of counseling.
<u>Replace</u> : man, mankind	<u>With</u> : people, humanity, human beings, humankind, human species
<u>Replace</u> : man a project	<u>With</u> : staff a project, hire personnel, employ staff
<u>Replace</u> : manpower	<u>With</u> : workforce, personnel, workers, human resources
<u>Replace</u> : woman doctor, lady lawyer, male nurse, woman driver	<u>With</u> : doctor or physician, lawyer, nurse, driver
<u>Replace</u> : chairman	<u>With</u> : chair, chairperson
<u>Replace</u> : foreman	<u>With</u> : supervisor or superintendent
<u>Replace</u> : Eskimos	<u>With</u> : Inuit, Aleuts (be specific)
<u>Replace</u> : disabled person, mentally ill person	<u>With</u> : person with a disability, person with mental illness
<u>Replace</u> : stroke victim, suffering from multiple sclerosis, confined to a wheelchair	<u>With</u> : individual who had a stroke, people who have multiple sclerosis, uses a wheelchair

6.0 COMMONLY USED WORDS

The purpose of this section is to provide consistency with certain words. Is it one word or two? Is there a hyphen or not? Should it be capitalized or not? When in doubt, use Merriam-Webster's Tenth Collegiate Dictionary to be sure. Here are some examples from one company's documents:

- as-built (when used as an adjective preceding a noun, as in as-built survey)
- echo sounder (two words, Webster's)
- echo sounding (not in Webster's, but presumably two words based on echo sounder)
- fieldwork
- side-scan sonar (hyphen and use with the word sonar, Webster's)
- site-specific (adjective preceding noun)
- static GPS
- subbottom (not sub-bottom)

As you come across words that you think need to be included in this list, suggest them to the technical editor for future editions of this style guide. (Note: Adjectives listed with hyphens only take the hyphen when they appear before the noun.)

A

abovegrade (adj; abovegrade work)
 above grade (adv; occurred above grade)
 aboveground (adj; aboveground tank)
 above ground (adv: occurred 50 feet above ground)
 absorption
 accommodate
 across-bed
 adsorption
 aerial
 air bag (noun)
 airborne
 air conditioning (noun)
 air-cooled
 airflow
 airport
 airstream
 airtight
 alluvial, alluvium
 anemometer
 anisotropy, anisotropic
 anticline
 appendices (plural)
 appendix (singular)

aquifer, aquitard
 areal
 areawide
 as-built
 auger
 autotransformer

B

back draft
 backfill (noun), backfilled
 backflow
 backhoe
 backlighted
 back pressure
 backup (noun, adj)
 back up (verb)
 backwash
 backwater
 backyard
 baffle board
 baghouse
 bakehouse
 bar screen
 bark chips
 bark dust

base flow	buy back (verb)
base-neutral-acid	bypass
baseline	by-product
base map	
baseplate	C
base station	campground
basinwide	canary grass
bathymetry (n)	cannot
bathymetric (adj)	casthouse
bathymetrical (adj)	catch basin
bathymetrically (adv)	Cenozoic era
bay water	centerline
bedrock	center pivot
belowgrade (adj; belowgrade work)	centigrade (international term for Celsius)
below grade (adv; occurred below grade)	chain-link (adj; chain-link fence)
belowground (adj; belowground sampling)	chain-of-custody (adj)
below ground (adv; occurred below the ground)	chain wheel
benchlands	checklist
benchmark (standard; point of reference)	checkout (noun)
bench mark (permanent elevation marker)	check out (verb)
bench-scale	check stop
biocell	chipboard
biodegradeable	citywide
bioremediation	clayey
bioturbated	claypan
bioventing	claystone
biweekly	cleanup (adj/noun; cleanup equipment)
block work (construction)	clean up (verb)
blow-count (noun)	climatological
blow line	closeout (adj/noun)
blowdown, blowup	close out (verb)
bondholder	coal tar
bookkeeping	coarse-grained (adj)
borehole	coauthor
bottom-land	coastline
bottommost	cobbly
breakdown (noun)	cocaptain
break down (verb)	cochair
buildout (noun)	co-composting
build out (verb)	co-containment
buildup (noun)	cofferdam
build up (verb)	colinear
bulldozer	colluvium
buoys	combined-sewer (adj)
buy-back (adj; buy-back terms)	commingle
	compatibility

condenser (not condensor)	de-energize
connate	deice
constant-discharge test	deionized
contaminant (noun)	-demand (peak-demand period)
contaminate (v)	-density (high-density protein)
co-own	desiccate
co-owner	dew point
co-ownership	dewatered
corehole	DEW Line
corrosion-resistant (adj)	dielectric
coulomb	digester
Coulomb field	dilatancy
Coulomb force	double up
cost-effective (adj)	downdip
cost-effectiveness	downdropping (adj; downdropping slope)
cost-of-service (adj; cost-of-service fees)	downgradient
counter-rotate	downhold tools
countertop	downhole
court-ordered (adj)	downslope
coworker	downspout
cowrite	drainageway
crop out (v)	drain field
cropland	drainpipe
cross-checking	drawdown (noun)
crosscut	draw down (verb)
crossover (noun)	drillhole
cross over (verb)	drill hole
cross contamination	drill rig
crossgradient	drip pan
cross section	drip-proof
cross-sectional	drop-box (adj; drop-box service)
cross ties (noun)	drop box (noun)
curbside	drop-off (adj; drop-off items)
cutoff (adj; cut-off date)	drop off (verb)
D	dry cleaning (n), dry-clean (v)
dam site	dry wall
data (pl.), datum (sing.)	dry well
database	ductwork
datalogger	dump truck
data sets	dust tight
datum (singular)	E
decision maker	earth flow
decision making (n.)	easternmost
decision-making (adj.)	east side
de-emphasize	E-logs

earth moving equipment
 earthfill
 echo sounder
 echo sounding
 ecotoxicity
 electromelt
 end caps (noun)
 end point
 end product
 end result
 end seal
 ensure
 evapotranspiration
 ex situ (no hyphen or italics)
 -exempt (tax-exempt bond)
 explosion-proof
 extra-capacity (adj; extra-capacity trunks)

F

facies (n sing. and pl.)
 falling-head test
 fallout
 farmland
 fast-track (adj)
 fast track (noun)
 fatal-flaw (adj; fatal-flaw analysis)
 feasibility
 federal
 -feed (center-feed clarifier; step-feed mode)
 feedstock
 feedwater
 feed well
 fence line
 fence post
 fiberglass
 field crew
 field screening techniques
 fieldwork (n)
 field-worker
 fine-grained (adj)
 fine-tune
 firebox
 firefighter
 fire fighting (n)
 fire-fighting (adj)
 firmwide

fishkill
 fish screen
 flame ionization
 flareup (adj/noun)
 flare up (verb)
 flash point
 flexible-wall permeater
 flip chart
 floodplain
 floodwater
 flood way
 floor plate
 floppy disk
 -flow (restricted-flow issues; on-flow train)
 flowchart
 flowmeter
 flow path
 flow rate
 flow sheet
 flow stream
 flow top
 fluvial
 fly ash
 -focus (deep-focus earthquake)
 follow-up (n, adj)
 follow up (verb)
 food chain
 force main
 fossiliferous (adj)
 formwork (construction)
 freestanding
 Freon
 freshwater (adj)
 fresh water (noun)
 front-end loader
 front loader
 front yard
 full-time (adj; full-time equivalent)
 fuse holder

G

gas station
 gauge
 gauge line
 Geo-probe
 geochemical

geodetic
 geologic (except U.S. Geological Survey)
 geomembrane
 geomorphic
 geotechnical
 geotextile
 -glass (cast-glass ceramics)
 glass-ceramic (noun; adj)
 grain-size analysis
 grassland
 grasslike
 -grade (at-grade floor)
 -graded (well-graded roadway)
 green chain
 -grid (coarse-grid receptor)
 ground bed
 ground cover
 groundwater (except National Ground Water Association) (but note: surface water)

H

half-life (n)
 halocarbons
 halogen
 handheld
 handhold
 handhole
 hands-on
 hand switch
 hard copy
 head loss
 head shaft
 headspace
 headwall
 headworks
 high-capacity production
 high-level (adj)
 high resistivity (adj)
 hillslope
 hollow-stem (adj)
 Holocene
 homeowner
 hook hole
 horsepower
 hot spot
 hydrogeology, hydrogeologic

hydropower
 in-board (adj; in-board motor)
 inboard (adj)
 incompatibility
 in-depth (adj; in-depth evaluation)
 in depth (adv; studied in depth)
 inflow (noun)
 in-house (adj; in-house distribution)
 in-line (adj; in-line service)
 in-county (adj; in-county use)
 in-place (adj; in-place test)
 in-plant (adj; in-plant operations)
 in-service (adj; in-service testing)
 in situ (no hyphen or italics)
 in-stream
 interbred, interbred
 interdisciplinary
 interfinger
 interlayered
 intermittent
 ion exchange
 isooctane
 isotropic

J

judgment
 juxtapose

K

kickoff (noun)
 kick off (verb)
 Kjeldahl

L

label, labeled, labeling
 lamina (n sing.), laminae (pl.)
 land clearing
 landfill (noun)
 landform
 landowner
 landfarm
 landslide
 land-spreading (adj)
 large-scale
 lay-up

leach field
 leach line
 leachate
 leak-proof
 leak-tight
 least squares (n pl.)
 -level (low-level radiation)
 life cycle
 lignin
 -like (only if preceded by double 11:
 shell-like; grasslike)
 likelihood
 lineal
 linear
 line shaft
 liquefaction
 lithologic (adj)
 -loading (barge-loading facility)
 lockset
 logbook
 lognormal (adj)
 long-range (adj)
 long range (noun)
 long-term (adj)
 long term (adv/noun)
 low-capacity tank
 lowlands
 low-lying (adj)
 low-permeability (adj)
 low-resistivity (adj)
 low-yield
 lunch room
 lysimeter

M

mainframe
 main line
 makeup (noun, adj)
 make up (verb)
 -making (steel-making process)
 manganese
 man-made
 man-day (use workday)
 maplet
 medium (n sing.), media (n. pl.)
 medium-grained (adj)

medium-range missile
 medium-sized
 megascopic
 meltwater
 metasediments
 micaceous (adj)
 microcomputer
 micromho(s)
 microorganism
 monitoring well
 milestone
 millscale
 mill water
 modeling
 moistureproof
 mudflow
 multibeam
 multidisciplinary
 multifamily residence
 multilayered
 multimedia
 multipathway
 multitask
 multiyear

N

nameplate
 naphtha
 nationwide
 no-action (adj; no-action alternative)
 no-build (adj; no-build alternative)
 nonconductive
 non-debt-funded (adj; non-debt-funded
 project)
 nonequilibrium
 nonhazardous
 nonlisted
 nonmarine
 nonnuclcar
 nonroutine
 non-steady-state (adj; non-steady-state
 issues)
 nontoxic
 nonturbid
 nonvolatile
 non-water-bearing

nonwetable	percent (no % except in figures/tables)
northernmost	permeability, permeable
northwest-southeast	per se
northwest-trending	persistent
N-value (noun)	petroleum hydrocarbon-contaminated soils
O	pH
occurrence	phase-In (adj)
off gas, offgas, or off-gas???	phase in (verb)
offline	phase-out (adj)
off-load	phase out (verb)
off-peak (adj)	phenol
offpost	photoionization
off-road (adj; off-road vehicle)	phreatic
offset (n, adj, or v)	physiography
offshore	piezometer, piezometric
off-site (adj and adv)	pillow block
oil rig	pilot-scale
oilless	pipeline
ongoing	Pitot tube
onshore	plan holder
on-line (adj or adv)	plasterboard
on line (in or into operation)	playground
on-site (adj or adv)	Pleistocene
orthophosphate	pole yard
Otto fuel	policyholder
outbuildings	policymaker
outcrop (n, v)	policy-making
outfall	polyethylene
output	polyurethane
overburden	pore water
overflow	portland cement
overlap	postaccident (adj; postaccident data)
overlie, overlay, overlain	post-closure
overrun	post-evaluation
P	postmortem (adj/noun)
packer test, packer-tested	posttreatment (adj)
parametric	pothole
parkland	potliner
part-time (adj)	pot room
pass-through (noun)	powerhouse
pass through (verb)	power line
pastureland	power plant
pebble-sized	precede
per person (adj; per person data)	precursor
	predominant (adj)
	predominate (v)

preevaluation
 preexisting
 preplanned
 pressure meter
 pretreatment
 principal-in-charge
 printout (noun; adj)
 print out (verb)
 problem solving (noun)
 process water
 promontory
 proof-roll
 pseudoclassical
 pump house
 punch list
 purge-and-trap method

Q

quack grass
 quantitation
 quartzose (adj)
 quasi-permanent

R

radii
 radioactive
 railcar
 railroad
 rainfall
 rainwater
 rail yard
 rangeland
 rainwater
 -rate (constant-rate test)
 ratemaking
 ratepayer
 rate setting (noun)
 readout (noun)
 read out (verb)
 real-time
 real-time kinematic
 record-keeping (adj)
 record keeping (noun)
 re-create (verb; to create again)
 -reducing (cost-reducing measures)
 reed canary grass

reequibrated
 reestablish
 reevaluate
 reexamine
 -regulating (temperature-regulating valves)
 -related (hazardous-waste-related tasks)
 remediation
 reprint
 -resistant (corrosion-resistant metal)
 resistivity
 restroom
 re-treat (no treat again)
 re-use (adj, as in re-use planning)
 reuse (v)
 rinsate
 rinse water
 riprap
 riverbank
 riverbed
 roadbed
 road map
 roadway
 rock fill
 -rolled (hot-rolled steel)
 roll-off (adj; roll-off box)
 roll off (verb)
 roll-up (adj; roll-up shades)
 roll up (verb)
 -roof (flat-roof building)
 rooftop (adj; rooftop repairs)
 rule-making, (adj)
 rule making, (noun)
 runoff (noun; adj)
 run off (verb)
 run-on (adj/noun)
 run on (verb)

S

saltwater (adj.)
 salt water (noun)
 sandbag
 sandbank
 sandblasting, grit
 sandpack
 sandpaper
 -scale (large-scale operations)

scaleup (adj/noun)
 scale up (verb)
 scrap yard
 seawater
 sedimentary
 selenium
 self-contained
 self-feeder
 self-monitoring (adj)
 semiannual
 semiarid
 semiconfined
 semilog, semilogarithmic
 semivolatile
 set point
 -setting, (rate-setting goals)
 setup (noun)
 set up (verb)
 sewer flow
 sewerline
 sewer shed
 sheepsfoot
 sheet iron
 sheet metal
 sheet metalwork
 sheet piles
 Sheetrock®
 sheet steel
 sheet tin
 shipyard
 shop blast
 shoreline
 short-range (adj)
 short range (noun)
 short-term (adj)
 short term (adv/noun)
 shutdown (noun)
 shut down (verb)
 shutoff (adj)
 shut off(v)
 side-scan sonar
 side slope
 side water
 siliceous
 siltstone
 single-family residence
 site-specific (adj; site-specific issue)
 site work
 sledgehammer
 -slope (down-slope length)
 smoothed-in (adj; smoothed-in roadbed)
 smooth sheet
 snowmelt
 soil gas (soil gas field survey)
 soil-pore liquid
 solid waste
 sonar
 -source (near-source well)
 southernmost
 southwest-northeast
 southwest-trending
 spark-proof
 -specific (industry-specific regulation)
 spectrometry, spectrophotometry
 split case
 split-spoon sampler
 -spoon (split-spoon sample)
 spray head
 spreadsheet
 spring line
 stainless steel (noun)
 stainless-steel (adj)
 standpipe
 start-up (adj/noun)
 start up (verb)
 state-certified
 state-of-the-art (adj)
 state of the art (noun)
 statewide
 static GPS
 -status (special-status species)
 steady state (n, adj)
 steam clean (v)
 steam generator
 steel-making (adj)
 steel making (noun)
 -stem (hollow-stem auger)
 step-discharge test
 step-drawdown test
 step-down, step-up (n, adj)
 stepwise
 stop nut

storativity
 stormwater (adj)
 storm water (noun) (note: clients may prefer
 "stormwater" as both noun and adj)
 stratigraphy, stratigraphic
 streambank
 streambed
 streamflow
 stream water
 strength (full-strength test)
 stubout (adj/noun)
 subaerial
 subbottom
 subcontractor
 subsurface
 sulfate, sulfite, sulfitic
 sulfur, sulfuric, sulfurous
 Superfund
 supernate
 subsea
 subsurface
 sulfur
 supersede
 surface water
 surficial
 switchgrass
 switch ties
 switchyard
 syncline, synclinal

T

tailwater
 tamper-proof
 tamper-resistant
 tank farm
 tannin
 task force
 task order
 teamwork (noun)
 tectonic
 Teflon (trademark)
 -tested (tightness-tested seal)
 test pit
 through bolt
 time frame
 time line

time sheet
 timetable
 toolshed
 top-of-casing (adj)
 topsoil
 total Kjeldahl nitrogen
 -track (fast-track schedule)
 trade name
 trademark
 tradeoff
 trans-Alaska oil pipeline (AP style)
 Trans-Alaska Pipeline System (TAPS)
 (Alyeska style)
 transferable
 transmissivity
 travel, traveled
 -treated (heat-treated metals)
 tremie (adj, *not* v)
 trench side
 troubleshooting
 trunk line
 truss-joist
 tuffaceous
 turbidity
 turnaround time
 twofold
 two-phased (adj)
 Tyrek®

U

ultra-high (adj; ultra-high frequency)
 unconfined
 unconformable, unconformity
 unconsolidated
 undercut
 underdrain
 underfloor (adj; underfloor pipe)
 under floor (adv; the mouse was under the
 floor)
 underground (adj; underground pipe)
 under ground (adv; the pipe was under the
 ground)
 underlie, underlay, underlain
 underlying
 under-voltage
 underwater (adj; underwater activity)

under water (adv; the site was under water)
 underway (adj) (occurring, performed, or used while traveling or in motion *underway replenishment of fuel)
 under way (adv)
 United States (n.), U.S. (adj.)
 unsaturated
 unthreaded
 upbed
 updip
 upflow
 upgradient (adj; upgradient well)
 uplands
 uppermost
 uptake
 upwind
 usable (not useable)
 USEPA-approved
 user friendly

V

vadose zone
 venturi
 volatile
 volumetric

W

walk-through (noun)
 walk through (verb)
 -wall (double-wall construction)
 wallboard
 washwater
 waste line
 waste load
 waste stream
 wastewater
 water-bearing (adj)
 water-cooled (adj)
 watercourse
 waterline
 water main
 watershed
 water stop
 water table
 watertight
 waterway

water well
 web site
 weekday
 weep holes
 -well (near-well transmissivity)
 wellbore
 wellfield
 wellhead
 well house
 well-known (adj before noun)
 well known (adj after noun)
 well point
 well screen
 westernmost (but west side)
 wet well
 wheatgrass
 wholly owned
 windblown
 windbreak
 windrow (row of heaped matter)
 windup (adj/noun)
 wind up (verb)
 wingwall
 wood waste
 wood yard
 workday
 workflow
 workforce
 workload
 workman, workers' compensation
 workplace
 work plan
 work scope
 work sheet
 workshop
 workstation
 workweek
 worldwide

Y

yard—see backyard, front yard, pole yard, rail yard, shipyard, scrap yard, switchyard, and wood yard
 yearlong (adj)
 year-round (adj)

Z

-zone (trench-zone data)

7.0 ACRONYMS AND ABBREVIATIONS MOST COMMONLY USED AT COMPANY NAME

7.1 OVERVIEW

Since this is the first version of *Company Name's* style guide, this list of acronyms and abbreviations is a work in progress. Please let the technical editor know of any missing acronyms/abbreviations or of any mistakes in this list. In the meantime, here are some of the acronyms that are currently used in *Company Name's* documents, as well as some that might be used in future documents. Again, the most important thing to remember is to be consistent within documents and within the company. Therefore, use this list as a guide for capitalization rules, spelling, and definitions of acronyms. For example, use ArcInfo as presented here instead of ARC/INFO or Arc/Info. Although all of these uses of ArcInfo have been used in *Company Name's* documents, we have chosen one (based on ESRI's web site) to use in our documents from now on. *Note: These are acronyms and abbreviations taken from various company lists and Web site lists; some may not be relevant to your firm, some names may have changed, and your style may be different for others. We suggest that you make notes on your hard copy of which ones to delete, change, or add, as you (or your technical editor) use this document.*

If you have your own acronym list and would like to paste it in, we suggest that you paste special, and then select unformatted text, anywhere in the acronym list. Then you can select all the acronyms (the ones here and the new list you have inserted) and choose Table and Sort by paragraph, and you will automatically alphabetize everything. This should save you a lot of time!

7.2 GENERAL GUIDELINES

General rules for using acronyms and abbreviations follow:

- Always spell out word or term when it is first used in the text, followed by the acronym or abbreviation in parentheses. You can use the acronym from then on. Examples: The U.S. Environmental Protection Agency (USEPA) and the Alaska Department of Fish and Game (ADF&G) agree that
- It is not necessary to use acronyms. For items appearing only once or twice in a text, it is better to spell it out.
- *Company Name* includes an acronym list at the beginning of each report or proposal. This does not preclude defining each acronym first use, however.
- Please add, delete, and change as you see fit, and turn in your suggestions to the technical editor.
- Certain acronyms and abbreviations are included here that will only be used in figures and tables if needed for spacing, never in the text. Examples include SYST for system.

7.3 ACRONYMS & ABBREVIATIONS

%	use for “percent” only in table/graph/equation
μCi	microcurie(s)
μg	microgram(s)
μg/kg	microgram(s) per kilogram
μg/L	microgram(s) per liter
μm	micrometer(s) (avoid outdated “micron” per U.S. Government Printing Office and NBS Special Publication 330)
‘	instead of apostrophe, use minute or foot in text
“	instead of quote mark, use second or inch in text
°C	degree(s) Celsius (centigrade)
O ₃	ozone
18 AAC 80	18 = chapter number, AAC = Alaska Administrative Code, 80 = section number
A	ampere; air
A&G	administrative and general
a.m.	ante meridian (before noon) (do not define in text)
A/E	architect/engineer, architectural/engineering
A/E/C	architect/engineer/construction (or architectural, engineering, and construction)
A/M	availability/maintainability
A/S	activated sludge
AA	atomic absorption (spectrophotometry)
AAAC	all-aluminum alloy conductor
AAC	Alaska Administrative Code; acceptable ambient concentration
AADT	average annual daily traffic
AAL	acceptable ambient level, applied action level
AAPG	American Association of Petroleum Geologists
AAQS	ambient air quality standard
AASHTO	American Association of State Highway and Transportation Officials
AATDF	Advanced Applied Technology Demonstration Facility
ABC	activity-based charging
ABCC	Atomic Bomb Casualty Commission
ABDN	as-built discrepancy notification
ABDT	auxiliary building drain tank
ABF	activated biological filter
ABIH	American Board of Industrial Hygienists
ABP	as-built package
ABPS	auxiliary building passageway sump
ABS	auxiliary building sump; acrylonitrile-butadiene-styrene
ac	alternating current
ac	alternating current; acre
AC	asbestos-cement
ACA	ammoniacal copper arsenate
ACAS	Architect-Engineer Contract Administration Support System

ACB	air circuit breaker
ACC	accumulator
ACCA	Air Conditioning Contractors of America
ACDP	air contaminant discharge permit
ACEC	American Consulting Engineers Council
ACEEE	American Council for an Energy Efficient Economy
acfm	actual cubic feet per minute
ac-ft	acre-foot (volume of water 1 foot deep and 1 acre in area)
ACGIH	American Conference of Governmental Industrial Hygienists
ACI	American Concrete Institute
ACL	alternative concentration limit; alternative cleanup level, Alternative Concentration Limit (EPA),
ACM	asbestos-containing material
ACO	assistant control operator
ACP	administrative control procedure, Air Carcinogen Policy
ACRS	Advisory Committee on Reactor Safeguards
ACS	American Chemical Society, Alaska Communications System)
ACSL	approved contractors and suppliers list
ACSM	American Congress on Surveying and Mapping
ACTR	actuator
ACWA	Oregon Association of Clean Water Agencies
ACWD	Alameda County Water District (California)
ACZA	arsenic, copper, zinc, and ammonia
AD	analog-to-digital (adjective, e.g., AD converter)
ADA	Americans with Disabilities Act
ADC	analog-to-digital converter
ADCOM	Advisory Committee
ADCP	Acoustic Doppler Current Profile
ADD	average-day demand
ADDS	average-day dry-sea-son (adjective)
ADDW	average-day dry-weather (adjective)
ADEC	Alaska Department of Environmental Conservation
ADEQ	Arizona Department of Environmental Quality
ADF	average daily flow
ADF&G	Alaska Department of Fish and Game
ADF&G	Alaska Department of Fish and Game
ADI	acceptable daily intake
ADL	Alaska Department of Labor
ADNR	Alaska Department of Natural Resources
ADNR	Alaska Department of Natural Resources
ADP	automated data processing; adenosine diphosphate
ADR	absolute drift indication
ADS	auto dispatch signal
ADSS	air data screening system
ADT	average daily traffic
ADWC	average dry-weather capacity

ADWF	average dry-weather flow
ADWS	average-day wet-season (adjective)
AE	action engineer
A-E	Architect-Engineer
AEC	Atomic Energy Commission (now NRC); alternate emergency coordinator, Army Environmental Center (USAEC now preferred)
AEE	Association of Energy Engineers
AEF	Atomic Industries Forum
AEG	Association of Engineering Geologists
AERM	alternate emergency response manager
AF	audio frequency, air force (see USAF)
AFB	Air Force Base
AFB	auxiliary fuel building; air force base (capitalize if part of full name, as in Elmendorf Air Force Base)
AFCEE	Air Force Center for Environmental Excellence
AFD	axial flux differential
AFDC	allowance for funds used during constriction
AFFF	aqueous film-forming foam
AFI	Air Filter Institute
AFP	auxiliary feedwater pump (use AFWP instead)
AFRC	Air Force Reserve Command
AFRC	assistant field team coordinator, Air Force Reserve Command
AFS	Air Force Station
AFS	auxiliary feedwater system (use AFWS instead)
AFSWC	Air Force Special Weapons Center
AFW	auxiliary feedwater
AFWP	auxiliary feedwater pump
AFWS	auxiliary feedwater system
Ag	silver
AGA	automatic gas analyzer; American Gas Association
AGC	automatic gain control
AGI	Association for Geographic Information
AGI	Applied Geotechnology, Inc., American Geological Institute
AGI	Association for Geographic Information
AGMA	American Gear Manufacturers' Association
AGT	aboveground tank (see AST for aboveground storage tank, preferred)
AGWSE	Association of Ground Water Scientists and Engineers
AHC	available soil water-holding capacity
AHERA	Asbestos Hazard Emergency Response Act of 1986
AHM	acutely hazardous material
AIA	American Insurance Association; American Institute of Architects
AICHE	American Institute of Chemical Engineers
AICP	American Institute of Certified Planners
AIEE	American Institute of Electrical Engineers (now IEEE)
AIME	American Institute of Metallurgical, Mining, and Petroleum Engineers; American Institute of Mining Engineers

AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AK	Alaska
AK	Alaska
Al	aluminum
AL	analytical limit; Alabama; action level
ALARA	as low as reasonably achievable
ALGOL	algorithmic language
ALP	airport layout plan
ALS	approach lighting system
ALT	ambient laboratory testing; alternative; alternate
ALTM	Airborne Laser Terrain Mapper
Alyeska	Alyeska Pipeline Service Company
AM	amplitude modulation
AML	ARC Macro Language
amp	ampere (shortened word, not abbreviation)
AMSAC	anticipated transient without scram mitigating system actuation circuitry
AMSL	above mean sea level
aMW	average megawatt(s)
AMWA	American Medical Writers Association
ANI	American Nuclear Insurers; American nuclear inspector
ANII	authorized nuclear in-service inspector
ANOVA	analysis of variance
ANR	Agency of Natural Resources
ANS	American Nuclear Society; American Nuclear Standard (document)
ANSI	American National Standards Institute
ANSI	American National Standards Institute
ANSI	American National Standards Institute
ANWR	Arctic National Wildlife Refuge
AO	administrative order; auxiliary operator; air Operated (adverb); air-operated (adjective, e.g., AO valve)
AOC	administrative order on consent
AOR	area of review
AOS	assistant operations supervisor
AOV	air-operated valve
AP	audit plan; acceptance plan; administrative procedure; action plan
APC	air pollution control
APCA	Air Pollution Control Association (California)
APCD	air pollution control district (California)
APCO	air pollution control officer (California)
APCS	air pollution control system
APCSB	Auxiliary Power Conversion Systems Branch (of the NRC)
APEG	alkaline metal/polyethylene glycol
APHA	American Public Health Association
API	Application Program Interface; American Petroleum Institute
APM	assistant project manager

APR	air-purifying respirator
APUC	Alaska Public Utilities Commission
APWA	American Public Works Association
AQ	augmented quality
AR	accounts receivable; acknowledgment of receipt; Arkansas
ARAR	applicable or relevant and appropriate requirement
ARCC	active and reactive current compensator
ArcInfo	computer mapping software (an ESRI computer program)
ArcView	(An ESRI computer program)
ARD	automatic ringdown (e.g., ARD phone system)
AREA	American Railway Engineering Association
ARG	annunciator response guide
ARI	all rods in; Air Conditioning and Refrigeration Institute
ARM	area radiation monitor
ARMS	area radiation monitoring system
ARO	all rods out
AROMS	automated remote organic monitoring system
ARPA	Automatic Radar Plotting Aid
ARR	acclimation, release, and recapture
ARRC	Alaska Railroad Corporation
ARS	aerial radio system
As	arsenic
ASA	American Standards Association (now USASI); American Society of Agronomy
ASAP	as soon as possible
ASB	Auxiliary Systems Branch (of the NRC)
ASC	auxiliary safeguards cabinet
ASCE	American Society of Civil Engineers
ASCET	American Society of Certified Engineering Technicians
ASCII	American Standard Code for Information Interchange
ASFO	amended stipulation and final order
ASHRAE	American Society of Heating, Refrigeration, and Air Conditioning Engineers
ASI	auxiliary systems instrumentation; Alternative Services, Inc.
ASIL	acceptable source impact level
ASL	above sea level
ASL	approved suppliers list
ASLAB	Atomic Safety and Licensing Appeal Board
ASLB	Atomic Safety and Licensing Board
ASM	area sensor module
ASME	American Society of Mechanical Engineers
ASPIS	Abandoned Sites Program Information System (database, California)
ASR	aquifer storage and recovery
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
ASWAT	Air Solid Waste Assessment Test

AT	accumulator tank
ATA	air and training admixture
ATD	aerobic thermophilic digestion
ATDC	after top dead center
ATESI	Advanced Technology Engineering Systems, Inc.
atm	atmosphere
ATP	adenosine triphosphate
ATTIC	Alternative Treatment Technology Information Center
ATV	all-terrain vehicle
ATWS	anticipated transient without scram
AUNI	animal unit month(s)
AVB	antivibration bar
AVHRR	Advanced Very High Resolution Radiometer
AVI	Alaska Village Initiatives
AVT	all-volatile treatment
AWARE	avoid waste and reduce emissions
AWB	Association of Washington Businesses
AWG	American wire gauge (e.g., AWG cold lead wires)
AWMA	Air and Waste Management Association
AWOIS	Automated Wreck and Obstruction Identification System (NOAA)
AWPI	American Wood Preservers Institute
AWQC	ambient water quality criteria, ambient water quality criterion
AWS	American Welding Society, available water capacity
AWT	advanced waste treatment
AWTF	advanced wastewater treatment facility
AWWA	American Water Works Association
AWWTP	advanced wastewater treatment plant
AWWU	Anchorage Water and Wastewater Utility
AZ	Arizona
B	concentration between detection limit and contract-required detection limit
B&PV Code	<i>Boiler and Pressure Vessel Code</i> (ASME document)
B(a)P	benzo(a)pyrene
B/W	black and white (photograph)
Ba	barium
Ba	Barium
BA	boric acid
BAAQMD	Bay Area Quality Management District (California)
BAC	blood alcohol concentration
BACT	best available control technology
BADCT	best available demonstrated control technology (Arizona)
BAE	bone acid evaporator
BAM	budget accounting management
BAN	base/acid/neutral
BASIC	Beginner's All-Purpose Symbolic Instruction Code (computer language)
BAST	boric acid storage tank
BATP	boric acid transfer pump

bbf	barrel
BCD	binary-coded decimal (noun)
BCF	bioconcentration factor
BCT	best conventional technology
BCW	bearing cooling water
BCWS	bearing cooling water system
BDAT	best demonstrated available technology (RCRA)
BDL	below detection limit
BDMT	bone dry metric ton
Be	beryllium
BEF	best-estimate flow
BETX	benzene, ethylbenzene, toluene, and total xylenes (BTEX preferred)
bgs	below ground surface
bgs	below ground surface
BHC	benzene hexachloride (insecticide)
BI	backward-inclined (adjective, e.g., BI fan)
BIA	Bureau of Indian Affairs
BIC	bearing identification code
BIF	boiler and industrial furnace
BIL	basic impulse level
BIST	boron injection surge tank
BIT	boron injection tank
BKR	breaker
BLDG	building
BLG	bulge
BLM	Bureau of Land Management
BLOB	Binary Large Object
BLPU	Basic Land and Property Unit
bls	barrels
bls	barrels
BLS	black liquor solids; boundary layer separation
BLUE	Best Linear Unbiased Estimate
bmp	below the measuring point
BMP	best management plan; best management practice
BMPP	best management practices plan
BNA	base, neutral, acid (extractables)
BOD	biochemical oxygen demand (an indicator of pollutant concentrations)
BOD ₅	5-day biochemical oxygen demand (when preceded by "carbonaceous," use BOD instead)
BOL	beginning of (core) life
BOM	bill of materials
BOP	balance of plant
bp	boiling point
BP	see BPXA, which is preferred
bpm	beats per minute
BPRA	burnable poison rod assembly

BPS	brazing procedure specification
BPXA	British Petroleum Exploration (Alaska) Inc.
BRC	below regulatory concern; bipolar relay converter
BRS	boron recovery system
BSU	Basic Spatial Unit
BTDC	before top dead center
BTEX	benzene, toluene, ethylbenzene, and xylenes (preferred over BXTE or BETX)
BTP	<i>Branch Technical Position</i> (NRC document)
Btu	British thermal unit(s)
BTV	bleeder trip valve
BUECI	Barrow Utility Electric Cooperative, Inc.
BWR	boiling water reactor
BWT	Ballast Water Treatment (caps okay?)
BWW	Bureau of Water Works (Portland city agency)
C of C	certificate of compliance
C	Celsius (Centigrade is the International word)
C	slight change; control (interlock); coulomb; carbon; clay
C&D	construction and demolition (materials and waste)
C&RP	chemistry and radiation protection
C.E.	Civil Engineer
C.E.G.	certified engineering geologist
C.S.E.	civil and sanitary engineer
C ₆ H ₁₄	hexane
Ca	calcium; carcinogenic
CA	containment atmosphere, California; cellulose acetate
CAA	Clean Air Act
CAA(A)	Clean Air Act (Amendments)
CAAQS	California ambient air quality standard
CAB	cellulose acetate butyrate (McG-H0; Civil Aeronautics Board
CAC	containment air cooler; citizens' advisory committee
CACO	Corporate Administrative Contracting Officer
CACS	containment air cooler system
CAD	computer aided drafting, computer-aided design (use AutoCAD for the computer program)
CAD	computer-aided drafting, computer-aided design
CADD	computer-aided drafting and design
CADD	computer-aided drafting and design
CAE	computer-aided engineering, carbon alcohol extract
CAG	computer-aided graphics
CAL	computer-assisted learning
CAI	calibration
Cal-OSHA	California Occupational Safety and Health Administration
CAM	computer-aided mapping
CAM	continuous air monitor
CAP	corrective action program

CA-PASS	containment atmosphere-postaccident sampling system
CAPCOA	California Air Pollution Control Officers Association
CAR	corrective action request; corrective action report; closure action report, certified analytical report; contamination assessment report
CARC	chemical-agent-resistant coating
CAS	central alarm station; compressed air system; Chemical Abstracts Service (registry number), Columbia Analytical Services
CASE	computer-aided software engineering
CASE	coordinating agency for supplier evaluation
CBI	confidential business information
CBNS	Center for the Biology of Natural Systems
CBOA	cellobioseoctaacetate
CBOD5	carbonaceous 5-day biochemical oxygen demand
cc	obsolete--use cm ³ for cubic centimeter(s)
CCA	copper, chorium, and arsenic
CCB	control center blower
CCC	calibration check compounds
Ccf	hundred cubic feet
cci	contact closure input, construction cost index
cco	contact closure output
CCP	centrifugal charging pump
CCR	<i>California Code of Regulations</i> (document)
CCRO	central control room operator
CCTV	closed-circuit television
CCU	central control unit
CCV	continuing calibration verification
CCW	component cooling water
ccw	counterclockwise
CCWE	constituent concentrations in the waste extract
ccws	component cooling water system
Cd	cadmium
CD	civil defense
CD&T	career development and training
CDC	Centers for Disease Control (HHS)
CDD/CDF	chlorinated dibenzo-p-dioxin and chlorinated dibenzofuran
CDE	chief discipline engineer
CDFG	California Department of Fish and Game
CDG	chlorine dioxide gas; chloride dioxide generating
CDI	chronic daily intake
CDL	Commercial Driver's License; construction, demolition, and land clearing
CDMG	California Division of Mines and Geology
CDMS	chemistry data management system
CDOG	California Division of Oil and Gas
CDQR	Chemical Data Quality Review
CE	combustion engineering
CEA	Chugach Electric Association

CEG	conditionally exempt generator
CEI	Chugach Engineering, Inc.; Central Environmental, Inc.
CEM	continuous emission monitoring
CEMS	continuous emission monitoring system
CEO	chief executive officer
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERB	Community Economic Revitalization Board
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Superfund)
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERI	Center for Environmental Research Information
CERNF	CERCLA Inventory Superfund Site/Event Listing subset (no further action at site required)
CESS	Control and Electrical Systems Standard (Westinghouse document)
CET	core exit thermocouple
CEU	continuing education unit
CFC	chlorofluorocarbon
cfd	obsolete—use ft ³ /day for cubic feet per day
CFI	cost, freight, and insurance
cfm	obsolete—use ft ³ /minute for cubic feet per minute
CFPS	corporate financial planning system
CFR	<i>Code of Federal Regulations</i> (federal document); crash, fire, and rescue
CFS	core flooding system
cfs	obsolete—use ft ³ /second for cubic feet per second
CFT	core flooding tank
CGI	Common Gateway Interface
CGI	combustible-gas indicator
CGM	Computer Graphics Metafile
CH	chlorinated herbicide
CH ₄	methane
CHAS	containment hydrogen analysis system
CHEM	chemistry
CHG	charging
CHMM	Certified Hazardous Material Manager
CHRS	containment heat removal system
CHWDT	chemical waste drain tank
CHWMP	County Hazardous Waste Management Plan (California)
CHWS	chilled water system
CI	containment isolation
ci	curie(s)
CIB	containment isolation Phase B
CIC	compensated ionization chamber
CIDS	Concrete Island Drilling System
CIF	cost, insurance, and freight

CIH	Certified Industrial Hygienist; Certified Inshore Hydrographer
CIP	capital improvement program; cast-in-place; capital improvement project
CIS	containment isolation signal
CIV	combined intercept valve
CIWMB	California Integrated Waste Management Board (replaces California Waste Management Board)
CKD	cement kiln dust
CKT	circuit
CLI	contaminant level index
CLNG	cooling
CLP	Contract Laboratory Program (USEPA)
CLP-M	Contract Laboratory Program (modified)
CLV	concentration limit variance
cm	centimeter(s)
CM	construction management
cm/sec	centimeter(s) per second
cm ³	cubic centimeter(s)
CMAA	Construction Management Association of America
CMAS	complete mix air-activated sludge
CMC	central monitoring and control
CMCB	centralized monitoring and control building
CMCF	centralized monitoring and control facility
CMD	corporate management document
CMEB	Chemical and Mechanical Engineering Branch (of the NRC)
CMI	corrective measures implementation
CMM	corporate management manual (type of document)
CMP	<i>Chemistry Manual</i> procedure; corrugated metal pipe
CMS	Construction Management Services; corrective management study; corrective measures study; compliance management system
CMTR	certified material test report (type of document)
CMU	concrete masonry unit
CN	cyanonaphthalene; cyanide
CNDSR	condenser
CNS	central nervous system
CNTRL	control
Co	cobalt
CO	contracting officer, control operator; Colorado; carbon monoxide
CO ₂	carbon dioxide
COBOL	Common Business Oriented Language (computer language)
COC	chain of custody
COD	chemical oxygen demand; cash on delivery
COE	U.S. Army Corps of Engineers: use USACE for all references except Corps of Engineers documents—use COE. Subject to change.
COGO	coordinate geometry
COH	Certified Offshore Hydrographer
COM	Component Object Model; computer output microfilm; common

COMPLI	Compliance Information on Stationary Sources of Air Pollution (software)
COMPQAP	Comprehensive Quality Assurance Plan
COMPS	Computerized Operations and Maintenance Program System (software)
COMSAT	communications satellite
COR	contracting officer's representative
CORBA	Common Object Request Broker Architecture
CORS	continuously operating reference stations (used for GPS)
COSS	cost-of-service study
CP	cathodic protection
cp	centipoise(s)
CPAH	carcinogenic polycyclic (or polynuclear) aromatic hydrocarbon
CPF	cancer (or carcinogenic) potency factor
CPFF	cost plus fixed fee
CPI	Consumer Price Index
CPM	critical path method
cpm	cycle(s) per minute
CPP	chemical protection program
CPR	continuing property record; chemical purchase requisition, cardiopulmonary resuscitation
CPS	contour plotting system
cps	cycle(s) per second (synonym for hertz); count(s) per second
CPT	cone penetration test
CPU	central processing unit
CPUC	California Public Utilities Commission
CQA	construction quality assurance
CQC	construction quality control, contractor quality control
Cr	chromium
CR	control room
CRA	control rod assembly
CRDCS	control rod drive control system
CRDL	contract-required detection limit
CRDM	control rod drive mechanism
CRDS	control rod drive shaft
CRE	control room envelope
CRO	control room operator
CRP	community relations plan
CRP	community relations plan
CRPD	control room pressure boundary
CRS	clean radwaste system; containment recirculation sump
CRT	cathode ray tube
CRWS	clean radioactive waste treatment system
Cs	cesium
CS	containment spray; commercial standard; chemical spray
CSA	channel statistical allowance
CSAS	containment spray actuation signal
CSB	Conversion Systems Branch (of the NRC)

CSC	company support center
CSD	cold shutdown (noun/adjective)
CSF	critical safety function
csf	cubic feet per second
CSFST	critical safety function status tree
CSI	Construction Specifications Institute; compliance sampling inspection (CWA); chemical substances inventory
CSIP	common stock investment plan
CSL	current switch logic; close support laboratory
CSLs	(marine sediment) cleanup screening levels
CSM	certified safety manager
CSO	combined sewer overflow
CSP	containment spray pump
CSR	cable spreading room
CSS	containment spray system; component summary sheet
CSSM	Content Standards for Spatial Metadata
CST	condensate storage tank
CSWMP	comprehensive solid waste management plan
CT	current transformer; Connecticut
CTC	control technology center
CTD	conductivity, temperature, and depth
CTL	commitment tracking list
CTSS	computerized technical specification system
cu ft	obsolete—use ft ³ for cubic foot (or spell out)
cu yd	obsolete—use yd ³ for cubic yard (or spell out)
CU	channel uncertainty; consolidated-undrained; confining unit
Cu	copper
CU1	Confining Unit 1
CUB	citizens' utility board
CUP	conditional use permit
CV	control valve
CVAA	cold vapor atomic absorption
CVCS	chemical and volume control system
CVM	Client Value Model
CVT	constant voltage transformer
cw	clockwise
CWA	Clean Water Act (aka FWPCA)
CWIP	construction work in progress
CWM	chemical waste management
CWP	chemical work permit
CWRT	clean waste receiver tank
CWS	circulating water system
CY	calendar year
cy	cubic yard
cyc	cycle(s)
d	spell out day; penny (nail size)

D	dead load (difference between hot and cold leg temperatures); drum; diluted sample
D&DS	discharge and dilution stricture
da	deka
DA	dose assessor; digital-to-analog (adjective, e.g., DA converter); discipline assistant
DAC	digital-to-analog- converter (hyphens per McG-H)
DAD	digital alarming dosimeter; dose assessment director
DAF	dissolved air flotation
dag	dekagram(s)
DAM	district administrative manager
DATS	diffused aeration treatment system
DB	database
dB	decibal
dB	decibel(s)
dBA	decibel (A-weighted scale)
DBA	design basis accident; doing business as; Davis-Bacon Act
DBE	design-basis earthquake; design-basis event
DBMS	Database Management System
DBP	disinfection by-product
DBRR	design basis review report (type of document)
DC	definite change; District of Columbia
DCA	dichloroethane
DCB	1,4-dichlorobenzene
DCD	Document Control Desk (of the NRC)
DCE	1,2-dichloroethane, 1,2-dichloroethene, dichloroethene
DCN	design change notice, drawing change notice
DCP	detailed construction package; design control package; design change package
DCR	design chance record
DCRDR	detailed control room design review
DDD	district discipline director; dichlorodiphenyldichloroethane
DDE	Dynamic Data Exchange
DDE	dichlorodiphenyldichloroethylene; dynamic data exchange
DDL	Data Definition Language
DDT	diesel day tank; 4, 4, dichlorodiphenyltrichloroethane
DE	Delaware, destruction efficiency
de	direct current
DEC	Department of Environmental Conservation (U.S.)
DECLG	double-ended cold leg guillotine
DEI	dose-equivalent iodine
DEIS	draft environmental impact statement (type of document)
DEM	Digital Elevation Model; Department of Emergency Management (Washington state agency)
DEMA	Diesel Engine Manufacturers Association
DEP	Department of Environmental Protection

DEPS	double-ended pump suction
DEQ	Department of Environmental Quality
DER	Department of Environmental Regulation
DERP/FUDS	Defense Environmental Restoration Program/Formerly Used Defense Sites
DEW-Line	Distant Early Warning Line (radar sites)
DF	decontamination factor; deflection factor; degree of freedom; deionization-filtration; dose factor; drive fit
DFO	diesel fuel oil
DFOS	diesel fuel oil system
DG	diesel generator
DGLS	diesel generator lubrication system
DGM	Digital Geospatial Metadata
DGPS	Differential Global Positioning System
DHHS	U.S. Department of Health and Human Services
DHRS	decay heat removal system
DHS	Department of Health Services (California)
DHSM	district health and safety manager
DHV	design hour volume
DI	demineralized; deionized; diluted; distilled; ductile iron
DID	direct inward dial
DIGEST	Digital Geographic Information Working Group Exchange Standard
DIME	Dual Independent Map Encoding
DIP	Digital Image Processing
DIR	design input record
DIW	deep injection well
DLC	donation land claim
DLCD	Department of Land Conservation and Development (of Oregon)
DLG	Digital Line Graph
DLRO	digital low-resistance ohmmeter ("ohmmeter" per McG-H)
DML	Data Manipulation Language
DMR	discrepant material report (type of document)
DMW	deep monitor well
DNA	deoxyribonucleic acid
DNAPL	dense non-aqueous-phase liquid
DNB	departure from nucleate boiling
DNBR	departure from nucleate boiling ratio
DNR	Department of Natural Resources (Washington)
DO	delivery order, dissolved oxygen
DOC	Department of Commerce (federal department)
DOC	U.S. Department of Commerce
DOD	Department of Defense (federal department)
DOD	U.S. Department of Defense
DOE	U.S. Department of Energy; Department of Ecology (of Washington state)
DOGAMI	Oregon Department of Geology and Mineral Industries
DOI	U.S. Department of the Interior

DOJ	U.S. Department of Justice
DOL	U.S. Department of Labor (federal department)
DOR	Division of Operating Reactors (of the NRC)
DOS	Disk Operating System
DOT	U.S. Department of Transportation (federal department) (USDOT now preferred)
DOT&PF	Alaska Department of Transportation and Public Facilities
DP	differential pressure; delta pressure
DPAS	Defense Property Accountability System
DPD	<i>N,N</i> -diethyl- <i>p</i> -phenylenediamine
DPI	dots per Inch
DPIS	differential pressure indicating switch
dpm	disintegration(s) per minute
DPM	district personnel manager
dps	disintegration(s) per second
DPST	double-pole single-throw (adjective)
DPT	dye penetration test
DPU	differential pressure unit
DPW	Department of Public Works
DQO	data quality objective
DRE	destruction and removal efficiency
DRF	discrepancy resolution form (type of document)
DRO	diesel range organics (don't add "s" to make plural)
DRP	discrete radioactive particle
DRPH	diesel-range petroleum hydrocarbons
DRPI	digital rod position indication; digital rod position indicating
DRR	design review report (type of document)
DRW	dirty radioactive waste
DS	distorted indication; dissolved solids
DSHS	Department of Social and Health Services (Washington state agency)
DSI	direct-service industry
DSL	Division of State Lands (Oregon agency)
DT	delta temperature
dt	dry ton(s)
dt/day	dry tons per day
DTM	Digital Terrain Model
DTM	digital terrain model
DTO	danger tagged out
DTS	dedicated telephone system
DTSC	Department of Toxic Substances Control (California)
dv/dt	excessive fast-rising voltage wave fronts
DVM	digital voltmeter
DVMT	dirty waste drain tank
DW	dangerous waste
DWDI	double-width, double-inlet (adjective, e.g., DWDI fan)
DWI	deep well injection

DWMT	dirty waste monitor tank
DWPRF	dry weather peak-hour flow
DWR	Department of Water Resources (California, Idaho)
DWS	domestic water system
DWST	demineralized water storage tank
DXF	Digital Exchange Format
E	operating basis earthquake load; east
<i>E. coli</i>	<i>Escherichia coli</i>
EA	environmental allowance; environmental assessment
EAB	exclusion area boundary
EAD	energy-absorbing device
EADG	environmental assessment/dosimetry group
EAF	electric arc furnace
EAL	emergency action level
EAP	employee assistance program; emergency action plan
EB	equipment rinsate blank; equipment blank
EBCT	empty bed contact time
EBL	emergency battery lantern; emergency battery lighting; emergency battery light
EBM	engineering branch manager
EBOP	emergency bearing oil pump
EBS	emergency broadcast system
EC	emergency coordinator; electrical conductivity; equivalent concentration
EC ₅₀	concentration affecting 50 percent of organisms or producing a 50 percent reduction in a parameter
ECA	emergency contingency action
ECC	eccentricity; emergency command (or control) center
ECCS	emergency core cooling system
ECD	Environmental Cleanup Division, electron capture detection (detector)
ECI	essential control and instrumentation
ECL	Environmental Conservation Law
ECN	engineering change notice
Ecology	Department of Ecology (of Washington state)
ECP	estimated critical position (adjective, e.g., ECP calculation)
ECSIS	environmental cleanup site information system
EDA	Economic Development Administration
EDB	ethylene dibromide
EDC	ethylene dichloride
EDCN	engineering, design change notice
EDF	Environmental Defense Fund, electronic digital format;
EDG	emergency diesel generator
EDI	Electronic Data Interchange
EDIFACT	Electronic Data Interchange For Administration, Commerce and Transport
EDIP	Early Detection Incentive Program
EDMS	environmental database management system
EDNA	Environmental Designation for Noise Abatement

EDP	Electrical Department procedure; electronic data processing
EDTA	ethylenediaminetetraacetic acid, ethylene diamine triacetic acid
EDU	equivalent dwelling unit
EE	electrical engineer
EE/CA	engineering evaluation and cost analysis
EEEQ	electrical equipment environmental qualification
EEO	equal employment opportunity
EERI	Earthquake Engineering Research Institute
EERS	earth electrical resistivity survey
EFC	emergency fan cooler
EFF	E-field race
EFP	emergency fire procedure
EFPY	equivalent full-power year
EFSEC	Emergency Facility Site Evaluation Council (Washington state agency)
EFU-CG	exclusive farm use-crop grazing
Eh	oxidation-reduction potential (in millivolts)
EHC	electrohydraulic control
EHCS	electrohydraulic control system
EHF	extremely high frequency
EHR	electric hydrogen recombiner
EHRS	electric hydrogen recombiner system
EHS	environmental health and safety
EHV	extra-high voltage
EHW	extremely hazardous waste
EI	emergency instruction
EIA	environmental impact assessment
EIA	Environmental Impact Statement
EIC	environmental information center
EIFOV	Effective Instantaneous Field of View
EIP	emissions inventory plan
EIR	environmental impact report (type of document)
EIS	environmental impact statement (type of document) (NEPA)
ELD	extraction line drain
EM	electromagnetic; electromagnetometer
EMF	electric and magnetic field
emf	electromotive force
EMGY	emergency
EMI	electromagnetic interference
EMO	electric-motor-operated
EMP	electrical maintenance procedure; energy management program
EMSL	environmental monitoring and support laboratory
EMTIC	emission measurement technical information center
ENC	Electronic Navigation Chart
ENR CCI	<i>Engineering News-Record</i> construction cost index
ENR	<i>Engineering News-Record</i>
ENRAC	environmental remedial action

ENS	emergency notification system (NRC red phone)
EOB	end of business (day)
EOBC	Engineer Officer's Basic Course (U.S. Army Corps of Engineers)
EOC	emergency operations center
EOD	explosive ordnance disposal
EOF	emergency operations facility
EOP	emergency operating procedure
EOS	Earth Observation Satellite
EP	extreme pressure; emergency procedure; emergency plan; extraction procedure (EP toxicity test or criteria)
EPA	U.S. Environmental Protection Agency (USEPA preferred); electrical penetration assembly
EPC	emergency planning coordinator
EPCP	emergency preparedness and contingency plan
EPCRA	Environmental Planning Community Right-to-Know Act
EPDM	ethylene propylene diene monomer
EPI	emergency public information
EPR	ethylene propylene
EPRI	Electric Power Research Institute
EPS	effluent pumping station
EP _{tox}	toxicity (e.g., lead) evaluated in an extraction procedure
EPZ	emergency planning zone
EQ	equipment qualification; environmental qualification; ecological quotient
EQAG	equipment qualification advisory group
EQC	Environmental Quality Commission
EQDP	environmental qualification data package
EQS	equipment qualification summary
EQTR	equipment qualification test report
EQUIP	equipment
ER	event report; emergency response; electrical resistivity
ERB	engineering review board
ERC	energy resource center; emission reduction credit
ERDA	Energy Research Development Agency (once AEC; federal agency)
ERDS	emergency response data system
ERF	emergency response facility
ERG	emergency response guideline
ERIN	Environmental Resources Information Network
ERL	effects range low
ERM	effects range-medium values, emergency response manager
ERNS	Emergency Response Notification System (database)
EROS	Earth Resource Observation Systems
ERP	emergency response plan
ERT	emergency response team (USEPA)
ERTS	Earth Resources Technology Satellite
ES	environmental stockpile
ESA	Endangered Species Act

ESA	environmental site assessment; Endangered Species Act
ESB	Environmental Services Branch (USEPA)
ESCI	Environmental Cleanup Site Information System (database) (replaced SDDB)
ESD	Environmental Sciences Department
ESEI	event-specific emergency instruction
ESF	engineered safety feature
ESFAS	engineered safety features actuation system
ESHB	engrossed d substitute house bill
ESI	environmental site investigation, expanded site investigation
ESP	electrostatic precipitator
ESP	electrostatic precipitator; exchangeable sodium percentage
E-Spec	Equipment specification
ESR	electron spin resonance
ESRI	Environmental Systems Research Institute (developers of ArcInfo)
ET	elevated temperature; evapotranspiration; effective temperature; emergency tank; electronic transfer
ETS	environmental technical specification; emergency trip system; east tank farm
eV	electron volt
EVA	early valve actuation
EWTS	expandable wing tank structure
EXH	exhaust
F	farad; fluoride; flyash
F ⁻	fluoride ion
FAA	Federal Aviation Administration
FAA	Federal Aviation Administration; flame atomic absorption (spectrophotometry)
fab	fabrication facility
FAC	facilities associate contractor; factor; farm advisory committee; fast as can; field accelerator; final acceptance criterion-, fixed air capacitor; free available chlorine; frequency analysis and control
FAQ	Frequently Asked Question
FAR	Federal Acquisition Regulation
FARR	facility assessment risk reduction
FB	freight bill; field blank
FBI	Federal Bureau of Investigation (federal bureau)
fbm	board foot; board foot measure
FC	flow controller; fecal coliform; field capacity
fc	foot candle(s)
FCC	Federal Communications Commission
FCD	fluid cooler drain (adjective, e.g., FCD header)
FCN	field change notice; fuel change notice
FCS	field control sample; facility control system
FCU	flow control unit
FCV	flow control valve

FD	feed; fire departments; free dock; field duplicate
FDA	Food and Drug Administration (federal agency)
FDDI	Fiber Distributed Data Interface
FDER	Florida Department of Environmental Regulation
FDM	frequency deviation meter; functional development model; feasibility demonstration model; formal development method
FDR	feeder
FE	flow element
Fe	iron
FEA	Federal Energy Administration
FEIS	final environmental impact statement (type of document)
FEMA	Federal Emergency Management Agency (not Association or Administration)
FERC	Federal Energy Regulatory Commission
FET	field-effect transistor
FFA	full freight allowed; federal facilities agreement (type of contract)
FFCA	federal facilities compliance agreement
FFD	fitness for duty
FFP	firm fixed price
FGCC	Federal Geodetic Control Committee
FGDC	Federal Geographic Data Committee
FH	fuel handling
FHA	Federal Housing Administration; fire hazards analysis
FHP	fuel-handling procedure
FHWA	Federal Highway Administration
FI	flow indicator
FIC	flow-indicating controller
FICA	Federal Insurance Contributions Act
FID	flame ionization detection; flame ionization detector
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FINDS	Facility Index System (database)
FIPS	Federal Information Processing Standard
	fire-resistant (adjective, e.g., FR items)
FIS	flow-indicating switch; <i>Flood Insurance Study</i> (document)
FIT	field investigation team
FIT	flow-indicating transmitter
FJS	fluid jet supply
FL	full length; Florida
FLAM	flammable
FLMC	full-load motor current
fm	fentometer(s)
FM	frequency modulation; flowmeter
FmHA	Farmers' Home Administration
FML	flexible material liner, flexible membrane liner
FMP	facilities management plan
FMP	Fishery Management Plan

FO	free oil
FOB	free on board
FODP	Fuel Operations Department procedure
FOG	fat, oil, and grease
FONSI	finding of no significant impact
fp	fire protection; freezing point
FPIC	fire protection interface control
fpm	flash(es) per minute; feet per minute; foot per minute
FPS	fire protection system
fps	flash(es) per second; feet per second; foot per second
FR	flow recorder; functional restoration; <i>Federal Register</i> (document);
FRC	federal response center
FRG	fully regulated generator
FRI	functional restoration instruction, focused remedial investigation
FRMAC	Federal Radiological Monitoring and Assessment Center
FRPA	Fixed Radiation Pattern Antenna
FRRP	federal radiological response plan (type of document)
FRSTDOSE	computer code for initial dose assessment
FS	feasibility study; factor of safety
FS/RA	feasibility study/risk assessment
FSAP	field sampling and analysis plan
FSAR	final safety analysis report (type of document)
FSP	field sampling plan (type of document)
FSPF	first-stage pressure feedback
FSRA	Full-Service Remedial Action
FST	fuel storage tank
FT	flow transmitter
ft	use for foot only in table/graph/equation, if space tight
ft ²	square foot or square feet or sq ft
FTA	field termination assembly; Federal Transit Administration
FTC	field team coordinator
FTE	full-time equivalent
FTL	field team leader
FTP	file transfer protocol
FTS	fuel transfer system
FUDS	formerly used defense site
FVNR	full-voltage nonreversing (adjective, e.g., FVNR controller)
FVR	full-voltage reversing (adjective, e.g., FVR controller)
FW	feedwater
FWD	falling weight deflectometer
FWHM	full width at half the maximum (adjective, e.g., FWHM peak height)
FWI	feedwater isolation
FWIS	feedwater isolation signal
FWIV	feedwater isolation valve
FWPCA	Federal Water Pollution Control Act (aka CWA)
FWQCs	federal water quality criteria

FWRV	feedwater regulating valve
FWS	fire water system
FY	fiscal year
FYI	for your information
G	gauss (magnetic field strength); giga (10^9 prefix), acceleration (14g vertical); gram(s)
g/sec	gram(s) per second
GA	Georgia
GAC	granular activated carbon
gal.	use for "gallon(s)" only in table/graph/equation, if space tight
GAM	Geographical Analysis Machine
GAO	General Accounting Office (federal office)
GBF/DIME	Geographic Base File/Dual Independent Map Encoding
GBT	gravity-belt thickener
GC	gas chromatograph; gas chromatography
GC/MS	gas chromatography/mass spectrometry
GCH	gas collection header
GDT	gas decay tank
GDTDP	gas decay tank discharge permit
GE	general emergency; General Electric Company
GEIS	generic environmental impact statement
GEOSAT	Geodetic Satellite
GEP	good engineering practice
GET	general employee training
GFAA	graphite furnace atomic absorption
GFCI	ground fault circuit interrupter
GFI	ground fault indicator; round fault interrupter
GIRAS	Geographic Information Retrieval and Analysis
GIS	geographic information system
GIS	Geographic Information System
GKS	Graphics Kernel System
GL	class containers
GLA	generation licensing and analysis
GLONASS	Global Navigation Satellite System
GLPC	gas-liquid partition chromatography
GM	gas monitor; general manager
GMAW	gas-metal arc welding (MIG welding)
GMT	Greenwich Mean Time
GNP	gross national product
GO	government obligation (bond type)
GOES	Geostationary Operational Environmental Satellite
GOI	general operating instruction
gpapd	gallon(s) per acre per day
gpcpd	gallon(s) per capita per day
gpd	gallon(s) per day
gpd/ft	gallons per day per foot

gpepd	gallons per employee per day (?)
gpm	gallon(s) per minute
GPO	Government Printing Office (federal office)
GPR	ground-penetrating radar
gps	gallon(s) per second
GPS	Global Positioning System
gr/dscf	grain(s) per dry standard cubic foot
GRASS	Geographic Resources Analysis Support System
GRO	gasoline range organics (don't add "s" to GRO to make plural)
GRPH	gasoline-range petroleum hydrocarbon
GRS	ground radio system; gaseous radiologic waste system
GRW	gaseous radwaste
GSA	Geological Society of America; General Services Administration (U.S.)
GT	gas team
GTAW	gas tungsten arc welding (TIG welding)
GTG	gas turbine generator
GU	general utility
GUI	Graphical User Interface
GW	groundwater; gas well
GWP-Ind	groundwater protection standard(s) for industrial use
GWT	gross weight
H	henry (inductance unit)
H&S	health and safety
H&TMH	hazardous and toxic materials handling (facility)
H&V	heating and ventilation
H:V	horizontal:vertical (slope)
H ₂ O	water
H ₂ S	hydrogen sulfide
H ₂ SO ₃	sulfurous acid
H ₂ SO ₄	sulfuric acid
HA	health advisory; health and safety
HAA	haloacetic acid
HAD	heat-actuated detector
HAP	hazardous air pollutant; hydroxylamine perchlorate
HAR	hydrogeologic assessment report
HARL	high airborne radioactivity level
HARN	High Accuracy Reference Network
HAS	hollow-stem auger
HASP	health and safety plan
HASP	Health and Safety Plan
HAZMAT	hazardous materials
HAZWOPER	Hazardous Waste Operations and Emergency Response
HB	house bill (e.g., House Bill 247)
HBHC	high-boiling-point hydrocarbons
HBZ	H. B. Zachary (company)

HCDT	hard-copy data transmission; hard-copy data transmitter; hard-copy data terminal
HCl	hydrochloric acid; hydrogen chloride
HCID	hydrocarbon identification
HCRF	Hydrographic Chart Raster Format
HCV	hand control valve
HDAPS	The Hydrographic Data Acquisition and Processing System
HDCS	Hydrographic Data Cleaning Software
HDP	heater drain pump
HDPE	high-density polyethylene
HDR	header
HDT	hard-copy data transmission; heater drain tank
HECL	harsh environmental current leakage
HED	human engineering deficiency; human engineer-in- discrepancy
HELB	high-energy line break
HELP	hydrologic evaluation of landfill performance (model)
HEPA	high-efficiency particulate air (adjective, e.g., HEPA filter)
HF	high frequency; heavy fuel; hundred feet; hydrogen fluoride; hollow
HFP	hot full power
Hg	mercury
HgA	air (atmospheric) pressure
HGL	hydraulic grade level
HH	halogenated hydrocarbon
HHW	hazardous household waste
HI	hazard index
HIRL	high-intensity runway light
HMIS	hazardous materials inventory statement
HMO	health maintenance organization
HMS	hydrogen mixing system
HMTA	Hazardous Materials Transportation Act (1974, 1990)
H _o	pipe reactions under normal operating conditions
HOC	halogenated organic compound
HOV	high-occupancy vehicle
HP	high-pressure (adjective); health physics-, health physicist; Hewlett Packard
hp	horsepower
HPAH	polycyclic aromatic hydrocarbon with three or more benzene rings (?)
HPES	human performance evaluation system
HPF	high power factor
hp-hr	horsepower-hour
HPI	high-pressure injection
HPL	hurricane protection level
HPLC	high-performance liquid chromatography
HPM	hazardous production material
HQ	hazard quotient
hr	use for hour only in table/graph/equation, if space tight

HRCQ	highway route controlled quantity
HRS	hazard ranking system
HRSG	heat recovery steam generator
HRV	High Resolution Visible
HS	hand switch
HSB	hot standby (noun/adjective)
HSD	hot shutdown (noun/adjective)
HSMSG	hazardous and contaminated substance health and safety guide
HSM	health and safety manager
HSMS	Hazardous Substances Management System
HSO ₃	biosulfite
HSP	health and safety plan (type of document); also see SHP
HSWA	Hazardous and Solid Waste Amendments
HTGR	high-temperature gas-cooled reactor
HTM	high-trajectory missile
HTMR	high-temperature metal recovery
HTRW	hazardous, toxic or radioactive waste
HTTP	Hypertext Transfer Protocol
HTU	height of transfer unit
HTW	hazardous toxic waste
HUD	U.S. Department of Housing and Urban Development
HUT	hold-up tank
HV	high-voltage (adjective, e.g., HV unit)
HVAC	heating, ventilation, and air conditioning (compound noun)
HVDC	high-voltage direct current
HVE	high vacuum extraction
HWDF	hazardous-waste-derived fuel
HWDMMS	hazardous waste data management system (OSWER)
HWIS	Hazardous Waste Information System (database?)
HWMP	hazardous waste management plan
HX	heat exchanger
HYD	hydraulic
hypot test	high-potential test
Hz	hertz
HZP	hot zero power
I	iodine
I&C	instrumentation and control
I.D.	identification
i.d.	inside diameter
I/I	infiltration and inflow
I/O	input/output (adjective, e.g., I/O device)
I/P	electropneumatic (adjective, e.g., I/P converter)
I/V	current/voltage (adjective, e.g., I/V input)
IA	instrument air; Iowa
IAC	Inter-application Communication
IAEA	International Atomic Energy Agency

IAH	International Association of Hydrogeologists
IARC	International Agency for Research on Cancer
IAW	in accordance with
IBD	isolated bus duct; (cooler) isolated (phase) bus duct
IBEW	International Brotherhood of Electrical Workers
IC	ion chromatography
IC(A)P	inductively coupled (argon) plasma
IC ₂₅	concentration causing a 25 percent reduction in biological growth
ICA	independent cost assessment; instrument control and automation; investigative and corrective action; ionized calcium analyzer
ICBO	International Conference of Building Officials
ICC	inadequate core cooling; (U.S.) Interstate Commerce Commission
ICEA	Insulated Cable Engineers Association
ICP	instrumentation and control procedure; inductively coupled plasma; internal communication plan, interim cleanup plan
ICRP	International Commission on Radiological Protection
ICRPM	International Commission on Radiation Protection and Measurement
ICRU	International Commission on Radiological Units
ICS	integrated control system; industrial control standard
ICSB	Instrumentation and Control Systems Branch (of the NRC)
ICU	copper indication
ICV	individual cell voltage
ID	Idaho
IDA	International Development Association
IDB	industrial development bond
IDCN	interim design chance notice; interim drawing change notice
IDF	intensity-duration-frequency
IDIQ	indefinite delivery/indefinite recovery
IDL	instrument detection limit
IDLH	immediately dangerous to life and health
IDO	indefinite delivery order
IDTC	Indefinite Delivery Type Contract
IDTRA	Indefinite Delivery Type Remedial Action
IDU	intertie development and use
IDUG	interdepartmental users' group
IDV	inside diameter variation
IDW	investigation-derived waste
IDWR	Idaho Department of Water Resources
IE	Office of Inspection and Enforcement (of the NRC)
IEEE	Institute of Electrical and Electronics Engineers
IEIN	inspection and enforcement information notice (type of NRC document)
IEIR	inspection and enforcement inspection report (type of NRC document)
IES	Illuminating Engineering Society
IF	intermediate frequency
IFB	invitation for bids
IFIM	instream flow incremental methodology

IFMA	International Facility Management Association
IFOV	Instantaneous Field of View
IFR	instrument flight rule
IGDS	Interactive Graphics Design Software
IGES	International Graphics Exchange System
IGSL	industrial-grade suppliers list
IHMM	Institute of Hazardous Materials Management
IHO	International Hydrographic Organization
IHP	in-house position
IL	indicating light; Illinois
ILM	frequency control unit
ILRT	integrated leak rate test
ILS	instrument landing system
IMB	inside missile barrier
IMF	International Monetary Fund
IMP	information management procedure
IMPATT	impact ionization avalanche transient time
IMS	in-core monitoring system
IMU	Inertial Measurement Unit
in.	use for inch only in table/graph/equation, if space tight
INM	indication not measurable
IO	ion exchanger
IOS	inventory ordering system
IOU	investor-owned utility; I owe you
IP	information processing; inspection plan
IPE	individual plant examination
IPL	initial pressure limiter
IPS	iron pipe size
IQR	interquartile range
IR	infrared
IR	intermediate range; infrared resistance; insulation resistance; infrared radiation
IRA	interim remedial action
IRAP	interim remedial action plan
IRDS	Information Resource Dictionary System
IRIS	Infrared Interferometer Spectrometer
IRIS	Integrated Risk Information System
IRM	Interim Remedial Measures (CERCLA)
IRP	<i>Nuclear Incident Response Plan</i> (NUREG-0728. an NRC document), radium dial painter; Installation Restoration Program
IRS	infrared spectroscopy; Internal Revenue Service (federal agency)
IRTS	Infrared Temperature Sounder
IS	installation standard
ISA	Instrument Society of America
ISAS	instrument and service air system
ISBN	International Standard Book Number

ISC	initial site characterization
ISCA	isolator calibration accuracy
ISCST	industrial source complex-short term (EPA model)
ISD	isolator drift
ISDN	Integrated Services Digital Network
ISI	in-service inspection
ISIS	Inflatable Sunshield in Space
ISM	Interstellar Medium
ISO	International Standards Organization
ISOL	isolation
ISS	<i>Interim Status Standards</i> (document)
IST	in-service testing
ITDP	improved thermal design procedure
IV	intercept valve
IW	industrial wastewater
IWT	industrial waste treatment; integrated wastewater treatment
J	joule; estimated value; estimated result
JAR	job approval request
JCO	justification for continued operation
JE	journal entry
JEIP	joint emissions inventory program
JFA	jurisdictional flow agreement (type of contract)
JPEG	Joint Photographic Expert Group
JRG	job review group
JTU	Jackson turbidity unit
k	kilo
K	kelvin, unit of thermodynamic temperature; potassium; hydraulic conductivity (ft/sec); estimated result (biased high)
kbps	kilobits per second
keV	kiloelectron volt(s)
keV	kilo electron volts
kg	kilogram(s)
kg/ha	kilogram(s) per hectare
kHz	kilohertz
KI	potassium iodide
kip	unit of weight equal to 1,000 pounds, used to express deadweight load
kJ	kilojoule (energy measure)
klbb	kilopound-force
km	kilometer
KPEG	potassium hydroxide/polyethylene glycol
KS	Kansas
ksf	kips (thousands of pounds) per square foot
kV	kilovolt(s)
kVA	kilovolt-ampere(s)
kW	kilowatt(s)
kWh	kilowatt-hour

KY	Kentucky
L	live load; liter; length of screened interval in feet; lagoon;
I	see L
L&I	Department of Labor and Industries (Washington)
L/O	locked out
LA	Louisiana
LAER	lowest achievable emission rate
LAN	Local Area Network
Landsat	Land Remote Sensing Satellite
LANL	Los Alamos National Laboratory
LANT	local area network
LAP	laboratory analytical protocol
lat	latitude
lb	pound(s)
LC	level controller; load center (of switchgear); locked closed; lower clay
lc	lowercase (i.e., not capitalized)
LC ₅₀	lethal concentration with 50 percent mortality
LCA	license chance application
LCC	load control center
LCL	lower control limit
LCM	large core memory
LCO	limiting condition for operation
LCR	license change request; license change report
LCRS	leachate collection and removal system
LCS	local control station; laboratory control sample
LCSC	laboratory control sample duplicate
LCU	load control unit
LCV	level control valve
LD50	lethal dose for 50 percent of a population
LDCR	licensing document change request
LDCRS	leachate detection collection, and removal system
LDI	licensing document interpretation
Ldn	weighted forecast of airport noise exposure level
LDPE	low-density polyethylene
LDR	land disposal restriction
LEA	local enforcement agency
LED	light-emitting diode
LEL	lower explosive limit; lower exposure limit
LER	licensee event report (type of document)
LET	linear energy transfer
LEW	leachate extraction well
LFG	landfill gas
LFL	lower flammability limit
LI	level indicator, liquidity index
Li	lithium
LIC	level-indicating controller

LID	local improvement district
LIDAR	Light Detection and Ranging
lin ft	linear foot; linear feet
LIS	Land Information System
LIS	level-indicating switch; licensing information service
LIT	level-indicating transmitter
LL	liquid limit
LLC	Limited Liability Company
LLD report	lower limit of detection report (type of document)
LLD	lower-level discriminator; lower limit of detection
LLEA	local law enforcement agency
LLRT	local leak rate test
lm	lumen; lumina
LMTD	log mean temperature difference
LN	line
ln	natural logarithm
LN ₂	liquid nitrogen
LNAPL	light non-aqueous-phase liquid
LNG	liquefied natural gas
L _o	equivalent live load
LOA	local operation action; local operator action
LOAEL	lowest observable adverse effects level; lowest observed adverse effect level
LOCA	loss-of-coolant accident
LOD	limit of detection
LOEP	list of effective passes
log	logarithm base 10
long.	longitude
LOQ	limit (level) of quantification
LOS	level of service
LOSC	loss of secondary coolant
LP	low pressure (noun); low-pressure (adjective, e.g., LP turbine); loop; line printer
LPAH	polycyclic aromatic hydrocarbon
LPEC	local peripheral entry controller
LPG	liquefied petroleum gas
LPIS	low-pressure injection system
LPMA	loose parts monitoring system
LPO	local purchase order
LPP	loss prevention program
LPPS	lighting panel power supply
LPR	liquid penetration rate
LPST	leaking petroleum storage tank
LPT	liquid penetration test
LR	level recorder

LRC	lead resistance compensator; level recording controller; line rectifier circuit
LRRS	Long Range Radar Site
LRT	light rail transit
LS	level switch; line segment, lump sum
LSA	low Specific activity
LSSS	limiting safety system setting
LT	level transmitter-, locked throttled
LTDN	letdown (noun/adjective)
LTM	low-trajectory missile
LTO/LTM	long-term operations/long-term maintenance
LTOPS	low-temperature overpressure system
LUFT	leaking underground fuel tank
LUT	Look-up Table
LW	lower waste
LXDA	linear x-ray detector array
m	meter; milli
M&TE	measuring and test equipment
MΩ	megohm(s)
M/SR	material/service request
MA	Massachusetts
mA	milliamperes(s)
MACE	Material Association of Corrosion Engineers
MACRO	(a system control computer language)
MACT	maximum achievable control technology
Maint	maintenance
MAPS	Mesoscale Analysis and Prediction System
MAWP	maximum average working pressure
mb	millibar
MBA	Metropolitan Business Association, master's of business administration
MBE	minority business enterprise (designation)
Mbps	megabits per second
MBWA	management by wandering around
Mbyte	megabyte
MCA	multichannel analyzer
MCAC	management corrective action committee
MCES	main condenser evacuation system
MCL	maximum contaminant level
MCLG	maximum contaminant level goal
MCM	circular mils, in thousands (a cable size); thousand circular mils; million cubic meters; mercury cycling model
MCP	maximum permissible concentration
MCPA	methylchlorophenoxyacetic acid (a herbicide)
MCPWR	microcomputer model for dynamic analysis of pressurized water reactor plants
MCS	master control switch; model conservation standard

MD	Maryland
MDA	minimum detectable activity
MDC	mechanical design criterion
MDD	maximum day demand
MDF	mechanical design flow
MDL	method detection limit
MDS	makeup demineralizer system
MDSR	material disposal and sales request
ME	Maine
MEE	material engineering evaluation
MEK	methyl ethyl ketone
MELB	moderate-energy line break
meq	milliequivalent(s)
MET	scrap metals
METEOSAT	Geosynchronous Meteorology Satellite (ESA)
MeV	mega electron volts
MeV	megaelectron volt(s)
MF	medium frequency
MFS	Minimum Functional Standards for Solid Waste Handling (Washington)
MFT	materials functional task
MFW	main feedwater (adjective, e.g., MFW pump)
MFWLB	main feedwater line break
MFWP	main feedwater pump
Mg	magnesium
mg	milligram(s)
MG	motor generator; million gallon(s)
mg/kg	milligram(s) per kilogram (some companies prefer mg/Kg)
mg/L	milligram(s) per liter
mgd	million gallon(s) per day
MH	manhole; silt with clay
MHD	magnetohydrodynamic; maximum hour demand
mhhw	mean higher high water
mht	mean high tide
MHz	megahertz
mHz	millihertz
MI	mineral insulated (adverb); mineral-insulated (adjective, e.g., MI equipment); Michigan
MIBK	4-methyl-2-pentanone
MIDAS	Multiple Independent Dish-Based Application System (software?)
MIG	metal-inert gas (kind of underwater welding see GMAW entry)
millirem	milliroentgen equivalent man
MIL-STD	Military Standard (federal document section)
min	use for minute only in table/graph/equation, if space tight
MIS	management information system
MIT	mechanical integrity testing
ml	milliliter(s)

MLD	maximum lethal dose
mllw	mean lower low water
MLO	main lube oil
MLSS	mixed-liquor suspended solids
mlw	mean low water
MLW	mean low water
mm	millimeter(s)
mM	millimolar (concentration, e.g., 2 mM nitrogen)
MMD	maximum month demand
MMDS	maximum-month dry-season (adjective)
MMDW	maximum-month dry-weather (adjective)
MMF	magnetomotive force
mmol	millimole(s) (mass, e.g., 2 mmol of the substance)
MMPA	Marine Mammal Protection Act
MMSW	mixed municipal solid waste
MMWS	maximum-month wet-season (adjective)
Mn	manganese
MN	Minnesota
MO	motor-operated (adjective, e.g., MO device); Missouri
mo.	use for month only in table/graph/equation, if space tight
MOA	Municipality of Anchorage, multiple-objective amenity
MODEM	modulate-demodulate
MODT	modified oven drying technique
MOGAS	motor gasoline
MON	monitor
MOP	mixed other paper; monitoring only plan
MORT	management oversight and risk- tree
MOU	Memorandum of Understanding
MOV	motor-operated valve
MP	maintenance procedure; Mile point
mp	melting point
MPA	Office of Management and Program Analysis (NRC office)
MPBB	maximum permissible body burden
MPC	maximum permissible concentration
MPD	maximum permissible dose
MPI	maintenance pickup item
MPN	most probable number (bacteria count)
MPS	makeup and purification system
MR	master relay; maintenance request
mR	milliroentgen(s)
M _r	resilient modulus
MRB	material review board
mrem	millirem
MRF	material recovery facility
MRFF	maximum required fire flow
MRG	management review group

MRL	method reporting limit; method reporting level
MRO	medical review officer
MRW	moderate-risk waste
MS	Mississippi; mass spectrometry; matrix spike
MS/MSD	matrix spike/matrix spike duplicate
MSAC	mitigation system actuation circuitry
MSB	Matanuska-Susitna Borough
MSC	<i>Mechanical Specialty Code</i> (document); media-specific concentration
MSD	matrix spike duplicate
MSDS	Material Safety Data Sheet
MSE	mechanically stabilized earth
MSHA	Mine Safety and Health Administration
MSIV	main steam isolation valve
MSL	mean sea level
msl	mean sea level (e.g., 54 feet above the msl) (
MSLB	main stream line break
MSLI	main stream line isolation
MSP	motor suction pump
MSPR	material/service purchase requisition
MSR	moisture separator reheater; main steam relief
MSRV	main steam relief valve
MSS	Multispectral Scanner
MSS	main steam supply; Manufacturers Standardization Society; Material Standards Society
MSSS	main steam support structure
MSV	mean square voltage
MSW	municipal solid waste
MSWLF	municipal solid waste landfill
MT	magnetic (particle) test; Montana
mt	mean tide
MTBE	methyl-tert-butylether
MTBF	mean time between failures
MTR	material test report (type of document)
MTSV	master trip solenoid valve
MTU	magnetic tape unit
MTVS	mechanical trip valve switch
MU	mapping unit
MUD	municipal utility district
MUPP	makeup pump
MUTCD	<i>Manual of Uniform Traffic Control Devices</i> (document)
mV	millivolt(s)
MVA	megavolt ampere(s)
mVA	millivolt ampere(s)
MW	megawatt(s); monitoring well
mW	milliwatt(s)
mwh	mean high water

mwl	mean water line
MWP	mixed waste paper
MWTS	makeup water treatment system
N	north; newton(s); spike sample recovery not within control limits
N'IP	National Toxicology Program
NO ₃	nitrate
N ₂	nitrogen
NA	not applicable; not authorized; not available; not analyzed
Na	sodium
NAAQS	national (primary and secondary) ambient air quality standard(s)
NACE	National Association of Corrosion Engineers
NaCO ₃	soda ash
NAD	North American Datum
NAF	Naval Air Field
NAHB	National Association of Home Builders
NAMA	National Agricultural Marketing Association
NAOH	liquid caustic soda
NAPL	non-aqueous-phase liquid
NAPP	National Aerial Photography Program
NARUC	National Association of Regulatory Utility Commissioners
NAS	National Academy of Science
NAS	National Academy of Sciences
NASA	National Aeronautics and Space Administration
NASCOM	NASA Communications Network
NASD	Nuclear Administrative Services Department
NASDP	Nuclear Administrative Services Department procedure
NATICH	National Air Toxics Information Clearinghouse <i>National Standard</i> (document)
NATLSCO	National Loss Control Service Corporation-
NAV D88	North American Vertical Datum of 1988
NAVO	National Oceanographic Office
NAWAS	national warning system
NAX	ion-exchange softening
NBC	<i>National, Building Code</i> (document)
NBIC	<i>National Board Inspection Code</i> (document)
NBS	National Bureau of Standards
NC	no change; North Carolina; not calculated
NCAR	nonconformance activity report (type of document)
NCARB	National Council of Architectural Registration Board (in D.C.)
NCASI	National Council for Air and Stream Improvement
NCDC	National Climatic Data Center
NCIC	National Cartographic Information Center
NCL	National Chemical Laboratory
NCN	nonconforming notice
NCP	<i>National Contingency Plan</i> , also known as <i>National Oil and Hazardous Substances Pollution Contingency Plan</i> (document)

NCR	nonconformance report (type of document)
NCRP	National Council on Radiation Protection
NCRPM	National Council on Radiation Protection and Measurement (once Advisory Committee on X-Ray and Radium Protection)
ND	North Dakota; not detected above detection limit; not detected
NDE	nondestructive examination
NDT	northeast, Nebraska
NEC	<i>National Electrical Code</i> (MCG-H/NEC handbook); Nuclear Energy Commission
NEDCO	Neighborhood Economic Development Corporation
NEIC	National Enforcement Investigations Center (OEC)
NELL	Nuclear Electric Insurance, Limited
NELPA	Northwest Electric Light and Power Association
NEL-PIA	Nuclear Energy Liability-Property Insurance Association
NEMA	National Electrical Manufacturers Association
NEP	National Estuaries Program
NEPA	National Environmental Policy Act
NEPIA	Nuclear Energy Property Insurance Association
NERA	National Economic Research Association
NERC	National Electric Reliability Council
NESC	<i>National Electrical Safety Code</i> (document)
NESCO	Northwest Energy Services Company
NESHAP	National Emission Standards for Hazardous Air Pollutants
NEW	Nuclear Energy Women
NFA	no further action
NFC	<i>National Fire Code</i> (document)
NFPA	National Fire Protection Association
NFRAP	no further response action planned
NFS	Network File System
NGD	National GeoSpatial Database
NGS	National Geodetic Survey (U.S.)
NH	New Hampshire
NH ₃	ammonia
NH ₃ -N	ammonia-nitrogen
NHD	National Hydrography Dataset (EPA and USCG)
Ni	nickel
NIH	National Institutes of Health
NIMA	National Image and Mapping Agency
NIN	Northwest Irrigation Network
NIOSH	National Institute of Occupational Safety and Health
NIS	nuclear instrumentation system
NIST	National Institute of Standards and Technology
NJ	New Jersey
NL	no limit found in literature
NLA	net feasible area
NLGI	National Lubricating Grease Institute

NLIS	National Land Information Service
NLRB	National Labor Relations Board
nm	nanometer(s)
NM	New Mexico; no measurement
NMAC	Nuclear Maintenance Applications Center (of the EPRI)
NMCs	nine minimum controls
NMD	number mean diameter (of particles)
NMFS	National Marine Fisheries Service
NMPX	nonmultiplexed
NMSS	Nuclear Material Safety and Standards (NRC office)
NNC	Northway Native Corporation
NNM	nuclear magnetic resonance
NNRIPA	National Nuclear Risks Insurance Pools and Associations
NNS	nonnuclear safety
NO ₂	nitrogen dioxide
NO ₂	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration (under the U.S. Department of Commerce)
NOAEL	no observed adverse effect level; no observable adverse effect level
NOB	Nuclear Operations Board (of the NRC)
NOC	notice of construction (e.g., an NOC issue)
NOD	notice of deficiency (RCRA); notice of disposal (Arizona)
NOEC	no observable effect concentration; no observed effect concentration
NOI	notice of intent
NON	notice of noncompliance
non-QA	non-quality-assurance (adjective, e.g., non-QA issue)
NOR	normal
NOS	National Ocean Service (part of NOAA)
NOSC	Naval Ocean Systems Center
NOV	notice of violation (from NRC)
NO _x	nitrogen oxides
NPAR	nuclear plant aging research
NPB	Nuclear Regulation Branch
NPDES	National Pollutant Discharge Elimination System
NPDL	National Pacific Division Laboratory
NPL	National Priorities List (note plural Priorities)
NPM	net profit margin
NPPC	Northwest Power Planning Council
NPR	new production reactor
NPRDS	nuclear plant reliability data system
NPS	National Park Service
NPS	Nuclear Power Services (Westinghouse division); National Park
NPSH	net positive suction head
NPTF	national pipe tight fit
NPV	net present value
NQ	non-quality-related (adjective/adverb)

NQA	nuclear quality assurance
NR	not requested; not required; narrow range
NRC	Nuclear Regulatory Commission (federal agency)
NRCIRC	NRC Incident Response Center (Bethesda center)
NRCOC	NRC Operations Center (headquarters)
NRCS	Natural Resource Conservation Service
NRDA	natural resource damage assessment
NRF	northwest regional forecast
NRL	Naval Research Laboratory
NRMCA	National Ready-Mixed Concrete Association
NRR	Nuclear Reactor Regulation (NRC office)
NRS	nonrising steam
NS	not sampled
NSAC	Nuclear Safety Analysis Center (NRC center)
NSB	North Slope Borough
NSC	Nuclear Services Corporation; National Security, Council
NSD	normal shutdown (noun); Nuclear Security Department
NSF	National Science Foundation; National Sanitation Foundation
NSH	<i>National Soils Handbook</i> (document)
NSIC	Nuclear Safety Information Center
NSP	nuclear security procedure
NSPS	National Society of Professional Land Surveyors
NSR	new source review
NSRI	nuclear safety and regulation instruction
NSRP	nuclear safety and regulation procedure
NSS	nuclear steam system
NSSS	nuclear steam supply system
NSWMA	National Solid Waste Management Association
NSY	naval shipyard
nT	nano-Tesla
NT	Northwest Territories
NTF	National Transfer Format
NTIS	National Technical Information Service
NTS	not to scale (used in figures)
NTU	nephelometric turbidity unit
NUCON	Nuclear Consulting Services, Inc.
NUFPG	Nuclear Utility Fire Protection Group (utilities lobby)
NUGEQ	Nuclear Utility Group for Equipment Qualification
NUMARC	Nuclear Management and Resources Council
NUPIC	Nuclear Procurement Issues Council
NUREGs	<i>Nuclear Regulations</i> (NRC document)
NURP	Nationwide Urban Runoff Program (of USEPA)
NV	Nevada, none visible
NVLAP	National Voluntary Laboratory Accreditation Program
NW	northwest
NWAPA	Northwest Air Pollution Authority

NWAS	Northwest Aluminum Specialties Company
NWCLF	Northern Wasco County Landfill
NWI	National Wetlands Inventory (map makers)
NWNG	Northwest Natural Gas (a company)
NWPP	Northwest Power Pool
NWPPC	Northwest Power Planning Council northwest region
NWR	National Wildlife Refuge
NWREL	Northwest Regional Educational Laboratory
NWS	National Weather Service (federal agency)
NWSWMD	Northwest Solid Waste Management District (Vermont)
NWWA	National Water Well Association
NY	New York
NYDEC	New York Department of Environmental Conservation
NYDEP	New York Department of Environmental Protection
NYSERDA	New York State Energy Research and Development Authority
O&M	operation and maintenance; operations and maintenance
o.d.	outside diameter
O ₂	Oxygen
OAAE	Oregon Alliance for Adequate Energy
OAL	Oregon Analytical Laboratory
OAQPS	Office of Air Quality Planning and Standards
OAR	operational assessment review; Oregon Administrative Rule (document section)
OBE	operating-basis earthquake
OCA	overall channel accuracy
OCB	oil circuit breaker
OCC	old corrugated containers; other corrugated containers
OCP	organochlorine pesticide
OCR	Optical Character Recognition
OCS	Outer Continental Shelf
ODBC	Open Database Communication
ODCM	<i>Offsite Dose Calculation Manual</i> (document)
ODFW	Oregon Department of Fish and Wildlife
ODOC	Oregon Department of Commerce
ODOE	Oregon Department of Energy
ODOT	Oregon Department of Transportation
OE	operating experience
OEA	Office of Environmental Assessment (of EPA)
OEAS	<i>Oregon Environmental and Analytical Standard</i> (document)
OECM	Office of Enforcement and Compliance Monitoring
OECR	Oregon Environmental Cleanup Rule
OERP	operating experience review program
OERR	Office of Emergency and Remedial Response (OSWER)
OEW	ordnance and explosive waste
°F	degree(s) Fahrenheit
OFM	Oregon fire marshal; Office of Financial Management (Washington state)

OGIS	Open GeoData Interoperability Specification
OH	Ohio
OHSD	Oregon Health Sciences Division
OHSU	Oregon Health Sciences University
OI	operating instruction; oil impregnated
OIRM	Office of Information Resources Management
OK	Oklahoma
OL	overload (adjective, e.g., OL contact); over the line, organic
OLE	Object Linking and Embedding
OMB	outside missile barrier
OMD	Oregon Military Department
OMG	Object Management Group
OMM	operation and maintenance manual
OMS	overpressure-mitigating system; Office of Mobile Sources
OMSI	Oregon Museum of Science and Industry
ONI	off-normal instruction
OOSHC	<i>Oregon Occupational Safety and Health Code</i> (document)
OP	operating permit
OPA	Oil Pollution Act of 1990
OPP	organophosphorus pesticide
OPR	operator
OPUS	OnLine Positioning User Service (service of NGS)
OR	Oregon
ORA	orifice rod assembly
ORP	oxidation reduction potential
ORS	Oregon Revised Statute
Ortho-P	orthophosphate-phosphorus
OSC	operations support center; operational support center
OSF	Open Systems Foundation
OSHA	Occupational Safety and Health Administration (federal agency)
OSHD	Oregon State Health Division
OSI	Open Systems Interconnection
OSSC	<i>Oregon Structural Specialty Code</i>
OSTF	Ordnance Survey Transfer Format
OSWER	Office of Solid Waste and Emergency Response
OSWRB	Oregon State Water Resources Board
OSY	outside screw and yoke
OTBS	outside the bioshield
OTM	on-site technical monitor
OTSC	onsite technical support center
OU	operable unit
OVA	organic vapor analyzer
OVM	organic vapor monitor; organic vapor meter
OW	organic waste
OWRC	Oregon Water Resources Commission
OWRD	Oregon Water Resources Department

OWS	oily waste separator
oz	use for ounce only in table/graph/equation, if space tight
P	protective (interlock); poise(s) (viscosity measure); perforation;
phosphorus	
P&ID	pipng and instrumentation diagram; process and instrumentation diagram
P.E.	professional engineer
P.G.	professional geologist
p.m.	post meridian (after noon)—do not define in text
Pa	peak test pressure; pascal(s)
PA	preliminary assessment; pulse-to-analog- (adjective, e.g., PA converter); project assistant; Pennsylvania
PA/RD	preliminary assessment/remedial design
PAC	portal access controller; pulse-to-analog converter; political action committee
PAE	protective action evaluator
PAG	<i>Protective Action Guide</i> (Federal Radiation Council document)
PAH	polynuclear aromatic hydrocarbon, polycyclic aromatic hydrocarbon
PAN	peroxyacetyl nitrate
PAR	protective action recommendation
PARCC	precision, accuracy, representativeness, comparability, and completeness (of calculations)
PARMS	postaccident radiation monitoring system
PASR	pending, action status report (type of document)
PASS	postaccident sampling system; procurement automated source system
PAT	policy advisory team
Pb	lead
PBB	polybrominated biphenyl
PC	printed circuit; programmable controller; pressure controller; personal computer; protective clothing; polycoated cartons; point of curvature
PCA	precision cleaning agent; power cost adjustment
PCAP	preliminary contamination assessment plan
PCAR	preliminary contamination assessment report
PCB	power circuit breaker; polychlorinated biphenyl
PCC	plant configuration change
PCCB	power-controlled circuit breaker
PCDD	polychlorinated dibenzodioxin; pentachlorodioxin
PCDF	polychlorinated dibenzofuran
PCE	tetrachloroethane; perchloroethylene or tetrachloroethylene
pcf	pound(s) per cubic foot
PCI	pneumatic circuit indicator
PCM	phase contrast microscopy
PCP	plant control panel; pentachlorophenol
PCT	peak clad temperature
PCV	pressure control valve
PD	project definition
PDCP	positive displacement charging pump

PDP	positive displacement pump
PDS	plant system design
PDWF	peak dry-weather flow
PE	polyethylene
PEA	primary element accuracy
PEC	peripheral entry controller
PEL	permissible exposure limit
PEP	plant engineering, procedure
PEPMS	process and effluent radiation monitoring system
PERM	process and effluent radiation monitor
PERT	program evaluation and research technique
PES	Professional Engineers Society
PET	periodic engineering test; polyethylene terephthalate
PETS	procurement engineering tracking system
PF	power factor
PFD	process flow diagram
PFRP	process to further reduce pathogens
PG&E	Pacific Gas and Electric (California)
PGE	Portland General Electric Company
pH	hydrogen (ion) concentration
PHA	pulse height analysis
PHC	principal hazardous constituent
PHDW	peak-hour dry-weather (adjective)
PHIGS	Programmer Hierarchical Interactive Graphics System
PHWS	peak-hour wet-season (adjective)
Pi	plasticity index
PI	pressure indicator; proportional-integral (adjective); public information
PIC	person in charge; pocket ionization chamber; pressure-indicating controller, product of incomplete combustion
PICT	periodic instrumentation and control test
PID	photoionization detector; photon-induced dissociation
PIM	Petroleum Inventory Management
PIMS	radiation-monitoring system
PIP	programs in perspective; photoionization period; photoionization potential
PIRS	project information retrieval system
PIS	pressure-indicating switch
PIT	pressure-indicating transmitter
PIV	post-indicator valve
PL	permissible leakage; Public Law
PLC	programmable logic controller
PLL	phase lock loop
PLS	Professional Land Surveyor
PLUB	power-load imbalance; power-load unbalance
PM	preventive maintenance; particulate matter; plus module; plant modification; project manager
PM ₁₀	particulate matter less than 10 micrometers in aerodynamic diameter

PMA	process measurement accuracy; polymer-modified asphalt
PMCR	preventive maintenance change request
pmf	probable maximum flood
PMG	permanent monitor generator; permanent magnet generator
PMP	plant modification procedure; probable maximum precipitation
PMW	primary makeup water
PNA	polynuclear aromatic hydrocarbon
PNB	Pacific Northwest Bell
PNI/EA	performance monitoring/event analysis
PNUCC	Pacific Northwest Utility Conference Committee
PO	purchase order
POC	point of contact, particulate organic carbon; particulate organic concentration; precision oscillator crystal; purgeable organic carbon; point of compliance
POHC	principal organic hazardous constituent
POL	petroleum, oil, and lubricants
POM	plant operating manual (type of document)
POR	power-operated relief
PORV	power-operated relief valve
POSIX	Portable Operating System Interface
POSS	plant operator selection system
POT	periodic operating test
POTW	publicly owned treatment works
POW	power operator
PP	polypropylene
ppb	part(s) per billion
ppb	parts per billion
PPC	personnel protection committee
ppd	pound(s) per day
PPE	personal protective equipment
PPM	part(s) per million
ppm	parts per million
ppmv	part(s) per million by volume
ppmvd	part(s) per million by volume, dry
PPP	public participation plan
PPR	plant problem report
PPRC	personnel protection review committee
PQL	practical quantification limit
PQR	procedure qualification record
PR	power range; purchase requisition; pressure recorder; process residue
PRA	probabilistic risk assessment
PRAC	Pre-Placed Remedial Action Contract
PRB	plant review board
PRE	possible reportable event; preliminary risk- evaluation
PRG	preliminary remediation goal
PRM	process radiation monitor

PRMC	process radiation monitor computer
PRO	possible reportable occurrence
PRO/E	possible reportable occurrence/event
PRP	potentially responsible party
PRT	pressurizer relief tank
PRV	pressure-reducing valve
PS	pressure switch; pump station; primary sludge, project station, polystyrene
PS&E	plan specifications and estimate
PSAR	preliminary safety analysis report (type of document)
PSC	plant setpoint change
PSD	prevention of significant deterioration
PSE	plant systems engineering
PSEL	plant site emission limit
psf	pound(s) per square foot
PSH	phase-separated hydrocarbon
PSI	pollution source inventory, Pollutant Standards Index
psi	pound(s) per square inch
psia	pound(s) per- square inch absolute
psig	pound(s) per square inch gauge
PSP	peer support program; pipe-to-soil potential
PSR	periodic (preliminary) site review
PSRP	physical sciences research paper, process to significantly reduce pathogens
PSSD	plant safety status display
PST	petroleum storage tank
PSU	permanent single unit (adsorber unit)
PSV	pressure safety valve
PT	pressure transmitter; potential transformer; point of tangency
Pt	reduced test pressure
PTFE	polytetrafluoroethylene; Teflon
PTL	pull to lock
PTS	pressurized thermal shock
PU	power unit
PUC	Public Utility Commission (Oregon state agency); Public Utilities Commission (Washington, Hawaii, and California)
PUD	people's utility district; planned unit development; public utility district
PURPA	Public Utilities Regional Policies Act
PVA	polyvinyl alcohol; polyvinyl acetate
PVAC	polyvinyl acetate
PVC	polyvinyl chloride
PWF	present worth factor
PWM	pulse width modulation
PWR	pressurized water reactor
PWSC	peak wet-season capacity
PWST	primary water storage tank

Q	quality factor (electronics); quarterly
QA	quality assurance
QA	quality assurance
QA/QC	quality assurance/quality control
QA/QC	quality assurance and quality control
QAE/S	quality assurance engineer/specialist
QAFR	quality assurance finding report (type of document)
Qal-c	lower coarse-grained zone
Qal-f	upper fine-grained zone
QAO	quality assurance objective
QAP	quality assurance procedure; quality assurance plan
QAPP	quality assurance project plan
QAS	quality assurance station
QASP	quality assurance sampling plan
QASR	quality assurance surveillance report (type of document)
QC	quality control
QC	quality control
QCR	quality control report (type of document)
QI	quality inspection
QN	quality notice
QO	quality objective; quality operation
QPA	quality plan for acceptance
QPI	quality performance index
QPIR	quadrant power ratio (what does the I in QPIR signify?)
QPR	quarterly progress report
QPTR	quadrant power tilt ratio
QS	quality support
QSL	quality suppliers' list
QVQS	quality vendor qualification supervisor
R	Reynolds number; roentgen; rejected result (presence or absence of constituent cannot be certain)
R&R	remove and replace
R(O)WD	report of waste discharge
R.C.E.	registered civil engineer
R.G.	registered geologist
R/W	right-of-way
RA	remedial action; risk assessment; removal action
RACER	Remediation Action Cost Engineering and Requirements (software)
RACM	regulated asbestos-containing material
RACT	reasonable available control technology
RAD	random-access device (computer term); rapid access data
RADAR	Radio Detecting and Ranging
RAGS	<i>Risk Assessment Guidance under Superfund</i> (a document)
RAH	recirculation air handler
RAI	remedial action implementation
RAL	recommended action level

RAM	random access memory
RAM	random access memory; regional administrative manager
RAOM	remedial action operation and maintenance
RAP	remedial action plan
RAS	return activated sludge; routine analytical services
RBC	rotating biological contractor; red blood cell (erythrocyte); risk-based concentration
RC	responsibility center; resistor-capacitor (adjective, e.g., RC circuit);
rc	well casing radius
RCA	rack calibration accuracy; radiologically controlled area
RCAP	Resource Conservation and Recovery Act Corrective Action Program
RCC	rod cluster control; reactive current compensator (droop circuit)
RCCA	rod control cluster assembly
RCDT	reactor coolant drain tank
RCL circuit	circuit with resistors $\text{\textcircled{R}}$, inductors (L), and capacitors $\text{\textcircled{C}}$
RCL	reactor coolant liquid
RCL-PASS	reactor coolant liquid-postaccident sampling, system
RCP	reactor coolant pump
RCPB	reactor coolant pressure boundary
RCRA	Resource Conservation and Recovery Act (NOTE: pronounced "rickrah," not "are cee are aye"; therefore, use <u>a</u> RCRA issue not <u>an</u> RCRA)
RCRIS	Reserve Conservation and Recovery Information System
RCS	reactor coolant system; radar cross section
RCSA	rack comparator setting accuracy
RCSG	radiological control and shielding group
RCU	remote controlled unit
RCW	<i>Revised Code of Washington</i> (document)
RD	rack drift; remedial design
RD/IP	remedial design and implementation plan
RDBMS	Relational Database Management System
RDBMS	relational database management system
RDC	request for design change
RDCO	regional document control officer
RDF	radio direction finder
RDF	refuse-derived fuel
RDII	rainfall-derived infiltration and inflow
RDMG	rod drive motor generator
RDSI	report of disposal site information
RDT	Reactor Development and Technology (NRC division)
Re	radius of effect (in feet)
REA	Rural Electrification Administration (federal agency)
RECIRC	recirculation; recirculate
REG	(field voltage) regulator; reactor engineering group
REL	rescue equipment locker; rate of energy loss; restricted energy loss; recommended exposure limit
REP	radiological emergency plan

RER	radiological event report (type of document)
RERP	radiological emergency response plan
RESA	real estate site assessment
RESAR	reference safety analysis report (type of document)
	Residential /Commercial (zone)
RETS	radiological effluent technical specification
RF	radio frequency
RF	report of failure (also ROF); radio frequency
RFA	RCRA facility assessment
RFB	request for bids
RfC	reference concentration
RfD	calculated oral reference dose; reference dose
RFD	request for determination
RFE	request for evaluation
RFI	radio-frequency interference; RCRA facility investigation
RFI/CMS	RCRA facility investigation/corrective measures study
RFP	Request for Proposal
RFP	request for proposals
RFPD	rural fire protection district
RFQ	request for quotation (qualifications)
RG	regulatory guide (from NRC)
RGWS	radioactive gaseous waste system
RH	relative humidity
RHM	regional health manager; radiation health manager
RHR	residual heat removal
RHRS	residual heat removal system
RHSM	regional health and safety manager
RI	resident inspector (of the NRC); resistor-inductor (adjective, e.g., RI circuit); Rhode Island; remedial investigation
RI/FS	remedial investigation/feasibility study
RI/O	remote input/output
RIB	rapid infiltration basin
RIL	rod insertion limit
RIP	receiving inspection plan
RIR	receiving inspection report (type of document)
RL	reporting limit
RLE	Run Length Encoding
RLR	referee laboratory replicate
RM	radiological manager; river mile(s)
RME	reasonable maximum exposure
rms	root means square(d) (e.g., 120 V rms)
RMZ	regulatory mixing zone
RNA	ribonucleic acid
RNNIS	reactor nonnuclear instrumentation system
RNO	response not obtained
ROD	record of decision

ROF	report of failure (also PF)
ROI	return on investment
ROM	read-only memory
ROV	remotely operated vehicle
ROW	right-of-way
RP	radiation protection
RPC	Remote Procedure Call
RPD	relative percent difference
RPE	radiation protection engineer
RPEC	remote peripheral entry controller
rpm	revolution(s) per minute
RPM	radiation protection manual (type of document); remedial program manager, regional project manager
RPS	reactor protection system
rps	revolution(s) per second
RPV	reactor pressure vessel
RQD	rock quality designation
RR	refinery residual; railroad, resource recovery
RRO	residual range organics (don't add "s" to abbreviation to make plural)
RRS	required response spectrum
RRTF	Reentry and Recovery Task Force (Washington state task- force)
RS	rising steam
RSA	removal site assessment (Reynolds project); remedial site assessment
RSD	Remote Sensor Data
RSIC	reactor shielding information center
RSP	remedial site project
RSS	remote shutdown station
RT	remote terminal
RTCM	Radio Technical Commission for Maritime Services
RTD	resistance temperature detector; resistance temperature detection
RTK	real-time kinematic
RTS	reactor trip system; radioactive tracer survey
RTV	relay trip valve; room temperature vulcanizing (sealant)
RV	reactor vessel
RVDT	rotational variable differential transformer
RVHV	reactor vessel head vent
RVL	reactor vessel level
RVLIS	reactor vessel level indicating system; reactor vessel level instrumentation system
RW	recirculation water
rw	well bore radius (in feet)
RWIP	removal work in progress
RWP	radiation work permit
RWQCB	regional water quality control board
RWST	refueling water storage tank
S	south; siemens; screen; soil; sulfur

S&EE	safety and environmental evaluation
S/S	stabilization and solidification
SACM	Superfund accelerated cleanup method
SAE	Society of Automotive Engineers; site area emergency
SAIC	Science Applications International Corporation; switch action interrupt count
SALP	systematic assessment of licensee performance
SAM	system analysis model
SAP	sampling and analysis plan (type of document)
SAQIL	significant air quality impact level
SAR	safety analysis report; sodium adsorption ratio', structure-activity relationship
SARA	Superfund Amendments and Reauthorization Act of 1986
SAROAD	storage and retrieval of aerometric data ("and" correct)
SAS	secondary alarm station; special analytical services
SATT	state aquatic toxicity test
SAVE	Society of American Value Engineers
Sb	antimony
SB	senate bill, small business
SBA	Small Business Administration
SBD	small disadvantaged business
SBO	station blackout event
SBRA	Small Business in Rural Area
SBS	static bypass switch
SC	selenium
SC	South Carolina
SCADA	supervisory control and data acquisition
SCUBA	self-contained underwater breathing apparatus
SCC	security control center, status command center; system capacity chore
SCD	system chance description
scfh	standard cubic feet per hour; standard cubic foot per hour
scfm	standard cubic feet per minute; standard cubic foot per minute
SCH	Seismic Category II
SCI	Seismic Category I
SCP	security control point
SCR	silicon-controlled rectifier; selective catalytic reduction
SCS	Soil Conservation Service (of U.S. Department of Agriculture)
SCU	speed control unit
SD	sensor drift; shutdown (noun/adjective); South Dakota; standard deviation
SDC	services during construction; system development char(,e
SDG	sample delivery group; supplemental data gathering
SDL	sample detection limit
SDM	shutdown margin
SDML	Spatial Data Manipulation Language
SDMS	security data management system
SDR	standard dimension ratio

SDRA	sealed double-ring, infiltration
SDRI	scaled double-ring infiltrometer
SDTS	Spatial Data Transfer Standard
SDWA	Safe Drinking Water Act
SEC	significant environmental concern
sec	use for second only in table/graph/equation if space tight
SECM	sample event control module
SEE	safety and environmental evaluation
SEL	selector; select
SEN	significant event notification
SEPA	State Environmental Policy Act
SER	safety evaluation report (type of NRC document); significant event report; sequence event recorder; significant emission rate
SERI	Solar Energy Research Institute Service
SETAC	Society of Environmental Toxicology and Chemistry
sf	some companies prefer ft ² for square feet
SF	service factor
SFO	stipulation and final order
SFP	spent fuel pool
SFPCS	spent fuel pool cooling system
SFR	supplier finding report (type of document)
SG	steam generator
SGA	sand and gravel aquifer
SGBD	steam generator blowdown system
SGFWP	steam generator feedwater pump
SGTR	steam generator tube rupture
SGTS	standby gas treatment system
SGWL	steam generator water level
SGWLC	steam generator water-level control
SGWLCS	steam generator water-level control system
SHF	super high frequency
SHP	safety and health plan (type of document); also see HSP
SHSO	site health and safety plan
SHWDF	solid hazardous waste derived fuel
Si	silicon
SI	site investigation; site inspection, safety injection
SIC	Standard Industrial Classification
SIF	Standard Interchange Format
SI-IB	substitute house bill
SIL	significant impact level
SIM	selected ion monitoring; selected ion mode
SIN	signal-to-noise ratio
SINES	Spatial Information Enquiry Service
SiO ₂	silica dioxide
SIP	state implementation plan; site inspection prioritization

SIPP	safety injection pump
SIR	screening information request, structural interface review
SIRS	storeroom inventory reporting system
SIS	safety injection signal
SITE	Superfund Innovation Technology Evaluation
SL	seal; sludge
SLAMS	state and local air monitoring system
SLI	steam line isolation; spent liquor incinerator
SLIS	steam line isolation signal; steam line isolation system
SM	standard method; silty sand
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
SMAW	shielded metal arc welding
SMCRA	Surface Mining Control and Reclamation Act
SME	summary material evaluation; subject matter expert
SMIG	<i>Stock Material Issue Guideline</i> (document)
SMM	subcooling margin monitor
SMP	strategic marketing plan
SMSA	standard metropolitan statistical area
SMW	shallow monitor well
Sn	tin
SNA	Systems Network Architecture
SNARLS	suggested no adverse response levels
SNC	state nuclear control
SNCR	selective noncatalytic reduction
SNG	synthetic natural gas
SO	spurious operation
SO ₂	sulfur dioxide
SO ₃	monosulfite
SOC	synthetic organic compound, semivolatile organic compound
SOCMI	synthetic organic manufacturing industry
SOER	significant operating experience review; significant operating event report (type of document); significant operating experience report (type of document)
SOP	stock ownership plan, standard operating procedure, standard of practice; shaft oil pump
SOQ	statement of qualifications
SOQ	Statement of Qualifications
SOR	system operation review
SOW	scope of work
SP	Spontaneous Potential
SPC	system planning committee
SPCC	spill prevention, containment, and countermeasure; system performance check compounds
SPCCP	spill prevention, control, and countermeasure plan
SPCS	steam and power conversion system
SPD	storeroom practices document

SPDMS	safety parameter display and monitoring system
SPDS	safety parameter display system
SPE	sensor pressure effect; service procurement evaluation
SPEER	spare parts equivalency evaluation report; spare parts evaluation equivalency replacement; spare parts repeating, requisition
SPL	spent pot liner; sound pressure level; soil-pore liquid
SPLP	synthetic precipitation leaching procedure (EPA Method 1312)
SPLT	synthetic precipitation leach test
SPRR	stock purchase repeating requisition
SPS	standard procurement specification
SPST	single-pole single-throw (adjective, e.g., SPST circuit)
SPT	special plant test
SQG	small-quantity generator
SQL	Structured Query Language
SQL/MM	Structured Query Language/MultiMedia
SRG	Standardized Raster Graphic
SRM	standard reference material
SRO	senior reactor operator
SRR	single-source reduction and recycling
SRRE	source recovery (or reduction) and recycling element
SRS	solid radiologic waste system
SRSS	square root of the sum of the squares
SRST	spent resin storage tank
SRT	solids retention time
SRW	solid radiologic waste
SS	shift supervisor; sampling system; selective signaling; safe shutdown (noun); safety system; suspended solids
SSA	Seismological Society of America; sole source aquifer
SSB	substitute senate bill
SSC	System Support Center; superconducting super collider; site safety coordinator
SSCR	store stock change request
SSE	safe shutdown earthquake
SSF	slow sand filter
SSFI	safety system functional inspection
SSFO	supplemental stipulation and final order
SSHP	site safety and health plan
SSHSP	site-specific health and safety plan
SSLPS	solid-state logic protection system
SSO	sanitary sewer overflow
SSP	site-specific plan
SSPS	solid-state protection system
SSQAPP	site-specific quality assurance project plan
SSSA	Soil Science Society of America
STA	shift technical advisor; station; shunt trip attachment
STE	sensor temperature effect; surveillance and test engineering,

STEL	short-term exposure limit
STEP	Standard for the Exchange of Data
STG	stage; steam turbine generator
STLC	soluble threshold limit concentration
STM	steam; system training manual (type of document)
STMP	system training management plan; stamp
STOL	short take-off and landing
STP	sewage treatment plant; sample tracking, program
STS	standard technical specification
STSF	spatial transformation of sound field
SU	startup (noun/adjective)
SV	stop valve
SVE	system valve engineering; soil vapor extraction
SVI	sludge volume index
SVOC	semivolatile organic compound (don't add "s" to SVOC to make plural.)
SW	service water; southwest; switch; surface water
SWAC	Solid Waste Advisory Committee
SWANA	Solid Waste Association of North America
SWAPCA	Southwest Washington Air Pollution Control Authority
SWAT	solid waste assessment test
SWBP	service water booster pump
SWCC	Solid Waste Composting Council
SWD	sidewater depth; solid waste disposal (permit from DEQ)
SWDA	Solid Waste Disposal Act
SWGR	switchgear
SWICSWAB	Southwest Washington Inter-County Solid Waste Advisory Board
SWMG	Strategic Water Management Group (Oregon state agency)
SWMM	Stormwater Watershed Management Model (software)
SWMP	solid waste management plan
SWMU	solid waste management unit
SWP	service water pump
SWPCP	storm water pollution control plan
SWPPP	storm water pollution prevention plan
SWS	service water system; security watch super-visor
SWSI	single-width, single-inlet (adjective, e.g., SWSI fan)
SWTR	Surface Water Treatment Rule
SYS	system
T	tera (trillion)
t	ton(s); time since test began (seconds); transmissivity (square feet per second)
TA	trust agreement; teaching assistant
TAC	training advisory committee; toxic air contaminant
TACT	typically achievable control technology
TAFEFU	transfer and fuller's earth filtering unit
TAL	Target Analyte List (or is it Analytes?)
TAP	training administrative procedure; toxic air pollutant; tactical action plan

TAPPI	Technical Association of the Pulp and Paper Industry
TAS	thickened activated sludge
TAT	technical advisory team; technical assistance team
T _{avg}	average reactor coolant system temperature
TB	trip blank
TBC	to be considered
TBCW	turbine building cooling water
TBHX	thermal barrier heat exchanger
TBS	turbine bypass system
T _c	reactor coolant system cold leg temperature
TC	thermocouple; to contain (pipette marking); toxicity characteristic
TCA	1,1,1-trichloroethane; time-critical action
TCDD	tetrachlorodibenzodioxin
TCE	trichloroethene; trichloroethane, trichloroethylene
pcf	ton(s) per cubic foot
TCL	Target Compound List
TCLP	toxicity characteristic leaching procedure (USEPA Method 1311)
TCM	transportation control measure
TCP/IP	Transmission Control Protocol/Internet Protocol
TDC	top dead center
TDF	thermal design flow
TDR	time-domain reflectometry
TDS	total dissolved solids
tech	technician
TEDA	triethylenediamine
TEF	toxic equivalency factor
TEFC	totally enclosed, fan-cooled (adjective, e.g., TEFC motor enclosure)
TEGD	technical enforcement guidance document
TEM	transmission electron microscopy
TEMA	Tubular Exchanger Manufacturers Association
TENV	totally enclosed, nonventilated (adjective, e.g., TENV motor enclosure)
TEP	transportation improvement program
TEPS	Total Environmental Protection Support
TER	training evaluation report (type of document); technical evaluation report (type of document)
TERC	Total Environmental Restoration Contract
TFC	thin film composite
TFE	tetrafluorethylene (a plastic)
TFH	total fuel hydrocarbons
TG	top gas
TGL	theoretical ground line
TGOP	turning-gear oil pump
T _h	reactor coolant system hot leg temperature
THM	trihalomethane
THS	The Hydrographic Society
THSOA	The Hydrographic Society of America

TI	technical impracticality
TI	thallium
Ti	titanium
TIC	technical information center, tentatively identified compound
TID	total integrated (radiation) dose
TIE	toxicity identification evaluation
TIG	tungsten-inert gas (kind of welding; see GTAW entry)
TIGER	Topologically Integrated Geocoding and Referencing
TIM	technical interpretive memorandum
TIN	Triangulated Irregular Network
TIR	total indicator reading; total indicator runout
TK	see TNK
TKN	total kjeldahl nitrogen
TLC	ton-layer chromatography
TLD	thermoluminescent dosimeter; total lethal dose
TLV	threshold limit value
TM	Thematic Mapper
TM	temporary modification
TMDL	total maximum daily load
TMP	traffic management plan
TN	Tennessee
TNT	trinitrotoluol
T _o	thermal load under normal operating conditions
TOC	total organic carbon; table of contents; top of casing
TOG	total oil and grease
tonne	1,000 kg
TOP	temporary operating permit
TOS	traffic operations system
TOT	time of travel
TOV	total organic vapors
TP	test pit
TPAH	total polycyclic (or polynuclear) aromatic hydrocarbons
tpd	ton(s) per day
TPH	total petroleum hydrocarbons
TPH-D	total petroleum hydrocarbons for diesel
TPH-G	total petroleum hydrocarbons for gasoline
TPH-IR	total petroleum hydrocarbon ared
TPO	term purchase order
TPT	temporary plant test
TQM	total quality management
TR	transformer room
TRE	toxicity reduction evaluation
T _{Ref}	reactor coolant system reference temperature
TRI	toxic release inventory
TRPH	total recoverable petroleum hydrocarbons (don't add "s" to TRPH to make plural)

TRS	test response spectrum; total reduced sulfur
TRTE	time response test equipment
TS	technical specification; total solids (not tertiary sludge; not thickened sludge)
TSC	technical support center
TSCA	Toxic Substances Control Act (1976)
TSD	treatment, storage, and disposal
TSDF	treatment, storage, and disposal facility
TSE	transaction screening evaluation
tsf	transverse shear force
TSI	technical specification improvement; turbine supervisory instrumentation
TSIS	turbine supervisory instrumentation system
TSM	traffic system management
TSP	total suspended particulates; trisodium phosphate
TSR	training summary report (type of document)
TSS	total suspended solids
TTF	test to failure; time to failure; transistor test fixture
TTLC	total threshold limit concentrations
TTO	total toxic organic compounds
TURF	thorium-uranium recycle facility
TWA	time-weighted average
TWAS	thickened waste activated sludge
TWMT	treated-waste monitor tank
TX	Texas
U	undetected at the associated quantification limit
U.S.	United States (acceptable to use U.S. first definition and no need to define; note use of periods)
UA	unburned plus ash
UAA	University of Alaska Anchorage (notice no comma)
UAF	University of Alaska Fairbanks (again, no comma)
UBC	<i>Uniform Building Code</i> (document)
UC	undercurrent; upper clay
UCC	Union Carbide Corporation
UCL	upper confidence limit
UEL	upper explosive limit
UF	ultrahigh frequency
UFC	<i>Uniform Fire Code</i> (document)
UFL	upper flammability limit
UFSAR	updated final safety analysis report (type of document)
UGB	urban growth boundary
UHF	ultra-high frequency
UHP	ultra-high purity
UIC	uncompensated ionization chamber; underground injection control
UIL	unidentified leak-acre
UJT	unijunction transistor
UL	Underwriters Laboratories, Inc.

ULD	upper-level discriminator
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
UPRR	Union Pacific Railroad Company
UPS	uninterruptible power source; uninterruptible power system; United Parcel Service
URA	urban reserve area (cap only if formal title)
URAL	underexcited reactive ampere limit
URSQ	unreviewed safety question
US	unit substation
USACE	U.S. Army Corps of Engineers (preferred to COE unless client requests COE)
USAEC	U.S. Army Environmental Center (preferred over AEC)
USAED	U.S. Army Engineer District, Alaska (Alaska District); use Alaska District instead of COE or USAED or USACE, for USAED reports (when USAED is the client). Otherwise, use USACE.
USAED-AK	U.S. Army Engineer District – Alaska
USAF	U.S. Air Force
USASI	USA Standards Institute (once ASA)
USATHAMA	U.S. Army Toxic and Hazardous Materials Agency
USB	urban services boundary (cap only if formal title)
USBR	U.S. Bureau of Reclamation
USC	<i>U.S. Code</i> (document); unconfined compressive strength
USCG	U.S. Coast Guard
USCGS	U.S. Coast and Geodetic Survey
USCS	Unified Soil Classification System
USDA	U.S. Department of Agriculture
USDI	U.S. Department of the Interior
USDOE	U.S. Department of Energy
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service (some companies prefer USF&WS)
USG	U.S. Gypsum
USGCRP	U.S. Global Change Research Program
USGS	U.S. Geological Survey
USGS	United States Geological Survey
USI	unresolved safety issue
USNAS	U.S.. National Academy of Sciences
USNBS	U.S.. National Bureau of Standards
USNRC	U.S. Nuclear Regulatory Commission
USPS	U.S. Postal Service
UST	underground storage tank
UT	ultrasonic testing; Utah
UT	Universal Time
UTC	Universal Time Coordinated
UTM	Universal Transverse Mercator

UTS	universal treatment standard
UV	ultraviolet
UV	under-voltage; ultraviolet
UVNIS	ultraviolet/visible
UVTA	undervoltage trip attachment
UW	upper waste
V	volt(s) (e.g., 120-V dc power supply); voltmeter
V&LPMS	vibration and loose parts monitoring system
V&V	verification and validation
v/o	volume percent
VA	volt-ampere; Virginia
VAC	vacuum
VACP	vital area control point
VAS	VISSR Atmospheric Sounder (GOES)
VCH	vent collection header
VCO	voltage-controlled oscillator
VCT	volume control tank
VDT	video display terminal
VEL	vendor evaluation log
VES	vapor extraction system; vertical electrical sounding
VFD	variable frequency drive
VFR	visual flight rule
VGES	variable geometry experimental station
VHF	very high frequency
VHF	Very High Frequency
VI	viscosity index; visual inspection; Virgin Islands
VIRS	Visible Infrared Scanner
VIRSR	Visible Infrared Scanning Radiometer
VIS	Visible
VISSR	Visible/Infrared Spin-Scan Radiometer (GOES)
VLDPE	very low density polyethylene
VLV	valve
VMT	vehicle miles traveled; Valdez Marine Terminal
VOA	volatile organic analytic (via] type); volatile organic analysis
VOC	volatile organic constituent; volatile organic compound
VOCx	halogenated volatile organic compounds
vol	volume
vom	volt-ohm meter; volatile organic monitoring
VOR	very high frequency omni-directional range
VPF	Vector Product Format
VPI	valve position indication
VRF	Vector Relational Format
vs.	spell out versus in text
VSPC	virtual storage personal computing
VSS	volatile suspended solids
VSW	Village Safe Water

VT	visual test; Vermont
VTVM	vacuum-tube voltmeter
VWO	valve wide open
W	watt; west; waste; postdigestion spike for furnace AA (?) analysis outside control limits
WA	Washington
WACS	White Alice Communications System
WAG	water-alternating gas
WAIS	Wide Area Information Server
WAN	Wide Area Network
WAP	waste analysis plan (RCRA)
WAS	waste activated sludge
WBD	whole-body dose
WBE	women's business enterprise (designation)
WBZ	water-bearing zone
WC	water column
WDOE	Washington Department of Ecology (use Ecology)
WDR	Waste Discharge Requirements (California)
WDS	waste disposal system
WEF	Water Environment Federation
WET	Waste Extraction Test
WETA	Western Environmental Trade Association
WG	waste gas
WGA	waste generation area
WGC	waste gas compressor
WGDT	waste gas decay tank
WGST	waste gas storage tank; waste gas surge tank-
WHA	wellhead protection area
WHHP	water heater heat pump
WHIP	water heater incentive program
WHP	wellhead protection
WI	work initiator; Wisconsin
WISHA	Washington Industrial Safety & Health Administration
wk	use for week only in table/graph/equation, if space tight
WLA	waste load allocation
WMBE	Women Minority Business Enterprise
WME	warehouse material evaluation
WMMA	Waste Materials Management Act
WMP	waste management plan
WMS	Watershed Management Section
WNWF	wet-weather treatment facility
WOB	woman-owned business
WOSM	woman-owned small business
WP	workplan
WPCF	Water Pollution Control Federation; water pollution control facility
WPCP	water pollution control plant

WPPSS	Washington Public Power Supply System
WPR	work package review
WPS	welding procedure specification; word processing services
WPT	water pretreatment
WQC	water quality criteria
WQPS	water quality protection standard
WR	wide range
WR/R	waste reduction and recycling
WRA	water-reducing admixture; Washington Retail Association
WRC	Water Resources Commission (of Oregon)
WRD	Water Resources Department (Oregon)
WRITE	Waste Reduction Innovative Technology Evaluation (computer software)
WSP	working steam pressure
WSPA	Western States Petroleum Association
wt	spell out weight unless part of combination unit of measure (see
wt/vol	weight per volume
wt/wt	weight ratio (weight per weight)
WTFA	west triangle fill area
WTL	wetland (for instance, WTL3 is a wetland sample designation)
WTP	water treatment plant
WTR	water
WV	West Virginia
WWA	wet weather area
WWTP	wastewater treatment plant
WWW	World Wide Web
WY	Wyoming
XAROUND	cross-around
XCONN	cross-connect
Xe	xenon
XFMR	transformer
XFR	transfer
XPRF	x-ray fluorescence
yd	use for yard only in table/graph/equation, if space tight
Yo	maximum well drawdown in feet
yr	use for year only in table/graph equation, if space tight
Yt	drawdown at time t, in feet
ZID	zone of initial dilution; zone of immediate dilution
Zn	zinc
ZOC	zone of contribution
ZPA	zero period acceleration
Zr	zirconium

8.0 MEASUREMENT ABBREVIATIONS

A

acre ac
 acre-foot ac-ft
 actual cubic feet per minute acfm
 alternating current ac
 ampere A or amp
 angstrom Å
 ante meridiem (before noon) a.m.
 atmosphere atm
 atomic mass unit amu
 atomic weight at wt

B

barrel bbl
 barrels per day bpd
 below ground surface bgs
 board foot bd ft
 boiling point bp
 British thermal unit Btu

C

calorie (small) cal
 calorie (large) Cal
 centimeter cm
 centipoise cP
 cubic centimeter cm³
 (cc for gas volume only)
 cubic centimeter-second cm³-sec
 cubic foot ft³
 cubic feet per day cfd or ft³/day
 cubic feet per hour cf/h
 cubic feet per minute cfm or ft³/min
 cubic feet per second cfs or ft³/sec
 cubic meter m³
 cubic yard cy
 curie Ci
 cycles per minute cpm
 cycles per second cps or Hz

D

decibel dB
 decibel, A-weighted dBA
 degrees Celsius °C
 degrees Fahrenheit °F

degrees Kelvin K
 diameter diam
 direct current dc

E

electromagnetic force emf
 electromagnetic unit emu
 electron volt eV
 et alia (and others) et al.
 et cetera etc.

F

foot ft
 feet per minute fpm or ft/min
 feet per second fps or ft/sec
 foot-pound ft-lb

G

gallon gal
 gallons per acre per day gpad
 gallons per day gpd
 gallons per minute gpm
 gallons per second gps
 grain gr
 gram g
 gram-square centimeter g-cm²
 gravitational constant G

H

hertz Hz
 horsepower hp
 hour hr
 horizontal to vertical H:V

I

id est (that is) i.e.
 inch in.
 inside diameter i.d.

J

joule J

K

kelvin (temperature unit) K

Kelvin (temperature scale) K
 kilo..... k
 kilocycles per second (kilohertz) .kHz
 kilocalorie kcal
 kiloelectron voltkeV
 kilogram kg
 kilometer kM
 kilovoltkV
 kilovolt ampere..... kVA
 kilowattkW
 kilowatt-hour.....kWh

L

liter L

M

magnification (power of)..X (e.g., 5X)
 mean lower low water MLLW
 mean low water MLW
 mean sea level..... MSL
 (5 feet MSL is above sea level; -
 -5 feet MSL is below sea level)

mega (million) M
 megahertz MHz
 megavolt MV
 megawatt MW
 melting point..... mp
 meter m
 metric ton metric ton or tonne
 microgram µg
 microgram per kilogram µg/kg

(same as ppb)

microgram per liter µg/L

(same as ppb)

microliter µL
 micrometer µm
 micromho µmho
 micromolar µM or µM
 micromoles..... µmol
 micron (micrometer) µm
 microsiemen..... µS
 mile mi
 milliequivalent meq
 milligram..... mg
 milligram per kilogram..... mg/kg

(same as ppm)

milligram per liter mg/L
 (same as ppm)

milliliter..... ml
 (for liquid capacity; for gases, use cc)

millimeter mm

millimicron..... mµ

million gallons per day mgd

million electron volts MeV

million standard cubic feet per day ...
mscfd

millivolt..... mv

milliwatt.....mw

minute min

molar..... M or M

molecular weight..... mol wt

mole percent..... mol %

month..... mo.

N

nanocurie nCi

normal (concentration)..... N or N

normal cubic meters Nm³

ounce oz

outside diameter o.d.

P

page..... p.

pages..... pp.

parts per billion ppb

parts per billion by volume ppbv

parts per million ppm

parts per million by volume..... ppmv

percent..... %

..... %

(in tables, spell out in text)

post meridiem (after noon) p.m.

pound..... lb

pounds per cubic foot . pcf or lb/ft³

pounds per square foot psf or lb/ft²

pounds per square inchpsi

pounds per square inch, absolute psia

pounds per square inch gauge ...psig

.....

Q

quart qt

R**S**

second sec or s
specific gravity sp gr
square centimeter sq cm or cm²
square feet sq ft or ft²
standard cubic feet per minute.. scfm
standard deviation..... SD
standard error of the mean SE

T

temperature (tables only) temp.
thousand (kilo) k
ton, metric metric ton or tonne
tons per day tpd

V

versus (tables only)vs.
volt V
volume per volumev/v
volume percent vol%

W

watt W
watt-hour..... W-hr
week wk
weightwt
weight per volume w/v
weight percent wt %

Y

yard..... yd
year..... yr
years before present..... ybp

9.0 COMPANY AND EQUIPMENT NAMES

Note: This section will vary depending on your own company. We have inserted this chapter here in case you want to start building your own list, based on software that you use, equipment that you use, subcontractors that you use, and any others. We often see inconsistency in company and product names in documents, which is why we added this chapter. We have included some examples based on hydrographic surveying, for your interest.

Company Name's previous documents have shown quite a bit of inconsistencies as far as capitalization, spelling, and spacing of equipment names, including computer equipment, GPS systems, and vessel-related equipment. The purpose of this section is to provide an accurate, exact list of all of *Company Name's* equipment and keep this list up to date to avoid confusion in the future. Please let me know if you see any company or equipment names that should be added or have changed.

9.1 COMPANY NAMES

The following *Company Names*, including capitalization, spelling, hyphenation, were checked on company Web sites in 2003. Whenever possible, I have included the company web site address for checking additional products, update names, and other questions.

Triton Elics International (can use Triton or TEI for multiple uses; just define first use)

Web site: <http://www.tritonelics.com/>

Products:

- BathyPro™
- Bathy+Plus™
- DelphMap™
- DelphNav™
- Delph Seismic®+Plus
- HydroSuite™
- Isis® Sonar
- SeaClass™
- SGISTM

Thales GeoSolutions Group Ltd.

Thales Geosolutions (Pacific) Inc.

Trimble®

9.2 EQUIPMENT NAMES

These equipment names have been taken directly from company Web sites in 2003, so the spacing, spelling, capitalization, and the use of the TM or R symbols should be correct. Whenever possible, I have inserted the company (manufacturer's) name in parentheses after the equipment or software name. Please let me know if you see any missing. The rule on the TM or R symbol is to either use the symbol throughout the document or to use it at least the first time the product is mentioned in a document (the company would no doubt prefer the first

technique, but for proposals, I usually use the second; for published reports, I use the first [i.e., list TM or R symbol with every mention]).

AutoCAD
AutoCAD/MAP
Bathy+Plus™ (Triton Elics International)
BathyPro™ (Triton Elics International)
CARIS®
CARIS® HIPS
CARIS® SIPS
Delph Seismic®+Plus (Triton Elics International)
DelphMap™ (Triton Elics International)
DelphNav™ (Triton Elics International)
Echotrac (use Odom Echotrac)
ESRI
HydroBat (Reson software)
HydroSuite™ (Triton Elics International)
HYPACK®
HYPACK® MAX
Isis® (side-scan sonar acquisition system made by Triton Elics International)
Isis® Sonar (Triton Elics International)
Magellan NAV 6150 Chartplotter (need to find out the exact name of the one[s] we have)
MapInfo
MicroStation (made by Bentley Systems Inc.)
Morad Electronics Corp. (manufacturer of antennas)
Odom
Odom Echotrac (a dual-frequency survey echo sounder)
ORE Offshore
ORE Offshore Trackpoint (Be specific: Trackpoint 4440A or Trackpoint II; give full name if possible)
Polaris Imaging
Polaris Imaging EOSCAN® (a sonar data acquisition and display system)
Reson (full name of U.S. company: Reson Inc.)
SeaBat (Reson software)
SeaClass™ (Triton Elics International)
Seapath 200 (made by Seatex Inc.)
SGISTM (Triton Elics International)
Tripod Data Systems (a Trimble® company)
Triton Elics International (can use Triton or TEI for multiple uses; just define first use)
Triton Isis®
WaterLOG®
WinFrog (Thales Geosolutions)

9.2.1 Surveying Equipment

9.2.2 *Heavy Equipment*

List here.

9.2.3 *Other Equipment*

Make subheadings as needed.

9.3 COMPUTERS

9.3.1 *Computer Software*

9.3.2 *Computer Hardware and Printers, Plotters, and Scanners*

10.0 COMMONLY MISPELLED WORDS

absence	abundance	accessible	accidentally	acclaim	accommodate	accomplish
accordion	accumulate	achievement	acquaintance	across	address	advertisement
aggravate	alleged	annual	apparent	appearance	argument	atheist
athletics	attendance	auxiliary	balloon	barbecue	barbiturate	bargain
basically	beggar	beginning	believe	biscuit	bouillon	boundary
Britain	business	calendar	camouflage	cantaloupe	category	cemetery
chagrined	challenge	characteristic	changing	chief	cigarette	climbed
collectible	colonel	colossal	column	coming	committee	commitment
comparative	competent	completely	concede	conceive	condemn	conscientious
consciousness	consistent	continuous	controlled	coolly	corollary	convenient
correlate	correspondence	counselor	courteous	courtesy	criticize	deceive
defendant	deferred	dependent	descend	description	desirable	despair
desperate	develop	development	difference	dilemma	dining	disappearance
disappoint	disastrous	discipline	disease	dispensable	dissatisfied	dominant
drunkenness	easily	ecstasy	efficiency	eighth	either	eligible
emperor	enemy	entirely	equipped	equivalent	escape	especially
exaggerate	exceed	excellence	excellent	exhaust	existence	expense
experience	experiment	explanation	extremely	exuberance	fallacious	fallacy
familiar	fascinate	feasible	February	fictitious	finally	financially
forcibly	foreign	forfeit	formerly	foresee	forty	fourth
fulfill	fundamentally	gauge	generally	genius	government	governor
grievous	guarantee	guerrilla	guidance	handkerchief	happily	harass
height	heinous	hemorrhage	heroes	hesitancy	hindrance	hoarse
hoping	humorous	hypocrisy	hypocrite	ideally	idiosyncrasy	ignorance
imaginary	immediately	implement	incidentally	incredible	independence	independent
indicted	indispensable	inevitable	influential	information	inoculate	insurance
intelligence	intercede	interference	interpret	interrupt	introduce	irrelevant
irresistible	island	jealousy	jewelry	judicial	knowledge	laboratory
legitimate	leisure	length	lenient	license	lieutenant	lightning
likelihood	likely	loneliness	losing	lovely	luxury	magazine
maintain	maintenance	manageable	maneuver	marriage	mathematics	medicine
millennium	millionaire	miniature	minutes	mischievous	missile	misspelled
mortgage	mosquito	mosquitoes	murmur	muscle	mysterious	narrative
naturally	necessary	necessity	neighbor	neutron	ninety	ninth
noticeable	nowadays	nuisance	obedience	obstacle	occasion	occasionally
occurred	occurrence	official	omission	omit	omitted	opinion
opponent	opportunity	oppression	optimism	ordinarily	origin	outrageous
overrun	panicky	parallel	parliament	particularly	pavilion	peaceable
peculiar	penetrate	perceive	performance	permanent	permissible	permitted
perseverance	persistence	physical	physician	picnicking	piece	pilgrimage
pitiful	planning	pleasant	portray	possess	possessive	potato
potatoes	practically	prairie	preference	preferred	prejudice	preparation
prescription	prevalent	primitive	privilege	probably	procedure	proceed
professor	prominent	pronounce	pronunciation	propaganda	psychology	publicly
pursue	quandary	quarantine	questionnaire	quizzes	realistically	realize

really	recede	receipt	receive	recognize	recommend	reference
referred	relevant	relieving	religious	remembrance	reminiscence	repetition
representative	resemblance	reservoir	resistance	restaurant	rheumatism	rhythm
rhythmical	roommate	sacrilegious	sacrifice	safety	salary	satellite
scenery	schedule	secede	secretary	seize	separate	sergeant
several	shepherd	shining	similar	simile	simply	sincerely
skeptic	skeptical	skiing	soliloquy	sophomore	souvenir	specifically
specimen	sponsor	spontaneous	statistics	stopped	strategy	strength
strenuous	stubbornness	subordinate	subtle	succeed	success	succession
sufficient	supersede	suppress	surprise	surround	susceptible	suspicious
syllable	symmetrical	synonymous	tangible	technical	technique	temperature
tendency	themselves	theories	therefore	thorough	though	through
till	tomorrow	tournament	tourniquet	tragedy	transferred	truly
twelfth	tyranny	unanimous	undoubtedly	unnecessary	until	usage
usually	vacuum	valuable	vengeance	vigilant	village	villain
violence	visible	warrant	Wednesday	weird	wherever	wholly
yacht	yield	zoology				

11.0 STANDARD DOCUMENT FORMATTING

This section may be changed per your own company's style. For example, your text font might be different than Arial 11 point. Change as needed.

11.1 MEMORANDUM

The standard format for memoranda is as follows:

1. Margins: 1 inch from top, bottom, and both sides.
2. Justification: Memos are fully justified.
3. Font: Text font is Arial 11 point.
4. Use *Company Name's* stationery.
5. Introductory material: The template has the necessary information in the following order:

Date:
To:
From:
Subject:
Reference No.:

Signature: Memos are not signed.

Spacing: single-spaced paragraphs with a double space between each paragraph.

End: At the end of a memo, always include the following:

Attachments
Enclosures (if any)
cc: file (and any other names or places copies are going)

Length: A memo should only be one or two pages; if more than one page, consider using a letter format instead.

11.2 TRANSMITTAL LETTER

A transmittal letter is sometimes included in the front matter of lengthy (40 or more pages) report. Here are some features of the transmittal letter:

- Usually one page
- Language is not technical
- Documents when the report was sent, how it was sent, to whom it was addressed, how many copies were sent, and who was responsible for preparing the report
- Does not use acronyms and abbreviations

- Usually has three paragraphs: introduction, body, and closing
- Letter is addressed to a specific person (Dear Mr. Jones:)
- Distribution is noted on the bottom left (cc.)
- Letter also clarifies if it is a draft report, and, if so, when comments are due back and how.
- Letter indicates, if it is a draft, what is missing from the report (if anything) and when the missing information will be available
- Letter closes by thanking the client and using the word “Sincerely,”

11.3 STANDARD REPORT

11.3.1 Document Design

The standard document contains the following elements in this order:

- Title page
- Any preface materials (such as a transmittal letter)
- Table of Contents
- List of Appendices
- Table of Figures and Tables
- List of Acronyms and Abbreviations
- Section 1.0 Executive Summary
- Section 2.0 Introduction
- Other sections, leading up to the Conclusions and Recommendations Section
- References
- Appendices

11.3.2 Section Headings

Each section contains up to five levels of headings, which are formatted as follows:

- Caps, Centered, bold, Arial 14, NUMBER AT LEFT IS 4.0
- All caps, left justified, bold, Arial 12, NUMBER AT LEFT IS 4.1
- Upper and lowercase, left, bold, Arial 11, NUMBER AT LEFT IS 4.1.1
- Upper and lowercase, number is indented .5 (1 tab), no bold, italic, Arial 10, NUMBER AT LEFT IS 4.1.1.1
- Fifth-level heading. Italics, Arial 10, underlined, DON'T USE NUMBER AT LEFT

The Table of Contents should be formatted so that only the first three-level headings are shown there.

11.3.3 Spacing and Text Fonts

- Single space text
- Double space between paragraphs
- Use Arial 11 pt. font
- Two spaces after a period
- Margins are fully justified
- One space after a colon

11.4 TITLE PAGE

The title page should include the following:

- Report title
- Type of report (interim, internal, progress, draft, final)
- Contract, delivery, and *Company Name* job order numbers
- Date
- Client (Prepared for) name and address
- Client logo if available
- *Company Name* (Prepared by) name and address
- Terra logo

11.5 TABLE OF CONTENTS PAGE

- The header, **TABLE OF CONTENTS**, should be centered and bold.
- Items in the Table of Contents (TOC) should be all caps or initial caps, just as they appear in the text headings.
- No bold or underscores are used in the TOC.
- Second and third-level headings are indented.
- TOCs use up to third-level headings.
- Multivolume reports should each have their own individual TOCs.
- If the TOC continues to a second page, use the heading (TABLE OF CONTENTS) all capped and bold, the same as on the first page, along with (continued) in parentheses, as in this example:

TABLE OF CONTENTS (Continued)

11.6 LIST OF TABLES AND FIGURES

- Use the heading "LIST OF TABLES AND FIGURES" all bold and caps at top of the page.
- Begin the List of Tables and Figures on a separate page from the TOC.

- Numbering is handled with hyphens: Figure 1-1.
- Items are in upper/lowercase (title case), no bold.
- If you use the caption command correctly in the text, you should never have to type in the titles and page numbers; just insert the Table of Contents, Tables, and then the Table of Contents, Figures.

11.7 LIST OF APPENDICES

- The List of Appendices (if needed) is placed after the List of Tables and Figures. If it fits, it can be on the same page as the List of Tables and Figures (see example, next page).
- Use the following format for the Appendices TOC:

LIST OF APPENDICES	
Appendix A	Title Here
Appendix B	Title Here

- Note that no page numbers are listed for the List of Appendices since they do not actually have page numbers. If they are lengthy documents of themselves that do include page numbers, number each page as A-1, A-2, etc. for Appendix A, and B-1, B-2, etc. for Appendix B.

11.8 LIST OF ACRONYMS AND ABBREVIATIONS

- *Company Name* places the acronyms list at the front of the document, between the TOC and the Executive Summary.
- All acronyms used in the report, including in figures, tables, and appendices, must be included.
- Use the acronyms and abbreviations list in Section 8.0 of this style guide for guidance on capitalization and spelling.
- Be sure the entries are in alphabetical order.

11.9 EXECUTIVE SUMMARY

- Reports more than 40 pages should have an Executive Summary. It is helpful to the reader to have an Executive Summary even if the report is shorter than 40 pages.
- The Executive Summary states the purpose and nature of the investigation; provides a brief account of the approach used; and includes the major results, conclusions, and recommendations.
- The Executive Summary has its own page numbers in the format “ES-#,” as in ES-1, ES-2, etc. This emphasizes that the Executive Summary can stand on alone.

- Acronyms are defined in the Executive Summary as if it is a separate document that will stand on its own. Do not use them heavily.
- Though unusual in an Executive Summary, if you include Tables or Figures, number them as follows: Figure ES-1.

11.10 SAMPLE REPORT PAGE

- Each main section begins on a right-hand page.
- Page numbering is based on the section. For example, page 3-2 means Section 3, page 2.
- Documents are normally printed on both sides of the page.
- Blank pages may be necessary when there is an 11x17 (fold-out) figure or table because the foldout must begin on an odd-numbered page. The page after the foldout is also blank. Both blank pages are still counted in page numbering, however.
- Text font is 12 pt. Times, no bold.
- Standard practice for reports is full justification.

11.11 SAMPLE FIGURES AND TABLES

- Tables and figures are numbered according to the overall sections they are in. The second number has nothing to do with the subsections (second-, third-, and fourth-level headings); it is based on the table's order in that section. Therefore, Table 3-3 is the third table in Section 3 of the report.
- Capitalize the words table and figure only when they are used with a specific number (Table 4-4, the table).
- Use a hyphen, not a period, to separate table numbers (Table 5-7).
- Tables and figures appear after the first mention, either on the same page after the text mention, or on the following page. They must be referred to in the text. Example: Figure 4-2, Site Location, identifies four areas of concern.
- Figure and table fonts are as follows: Arial 10, bold, centered. Then insert two spaces before typing the title in title case. Here is an example:

Table 4-1 Cook Inlet Survey Data – 2002

Title Here - Bold and Centered	Title Here – 10 pt.	Title Here
Text in this column is usually left justified	Text in all other columns is usually centered	Text – All text is 10 pts.
Text	Text	Text
Notes: Always include definitions to all acronyms and notes below in 8 pt. font, Arial, no bold, left justified. Note that the cells are merged here. Key: USEPA – U.S. Environmental Protection Agency		

11.12 SAMPLE REFERENCE PAGE

The format of references is a stylistic matter. There is no right or wrong. It may seem that there are almost as many reference styles as there are books. The main point is to be consistent—both throughout a document and throughout a company. So, for now, these are *Company Name's* reference section style guidelines.

Entries should be alphabetically arranged by author's last name (first author listed in original text). If there is no author, list under the title.

The order and description within entries are as follows:

1. Author(s) or editor(s). Spell out the names of authors and editors in the text as they appear on the title page of the document. Avoid using "et al." (which stands for "and others") in this list unless there are more than six authors' names; reserve et al. for the text when there are more than three authors.
2. Date. List the year of publication or "n.d." if there is no date available. If there are two or more reports by the same author in the same year, add a, b, c, etc. to the date in both text and list.
3. Title. Titles are typed in capital and lowercase letters. Titles are either italicized, placed within quotation marks, or typed with no italics or quotation marks according to the following rules:
 - Books and reports. Italicize titles of all separate, freestanding, printed publications. Use standard capitalization rules, and spell out titles completely.
 - Journal articles, papers in proceedings, and manuscripts in collections. Titles of material contained within larger documents are put in quotation marks; the name of the larger work is italicized and spelled out in full.
 - Regulations and statutes. Titles of regulations and statutes are typed with no underline or quotation marks.
4. Editor, if entry by author.

5. Symposium or proceedings dates and locations in parentheses, if not part of the title.
6. Volume number.
7. Government or agency report number.
8. Mention of draft status, if applicable.
9. Revision or edition number.
10. Publisher.
11. Location of publisher. Use the two-letter U.S. Postal Service codes for state names.
Publisher and location are not required when referencing a periodical (journal or magazine).
12. Page numbers. Insert the inclusive page numbers for articles within journals, proceedings, and technical reports, preceded by "pp." if more than one page, or by "p." if only one page.
13. Month and day, if needed to distinguish between drafts, etc.

11.13 PROPOSALS

Proposals are a marketing tool, and therefore we can have a bit more flexibility as far as formatting goes. In general, use the same formatting as the report. That can be fine for a proposal as well. If it is agreed to by the writer, editor, and project manager, such formatting changes as columns, headings with color, text boxes featuring quotes from clients and advantages to using our company, and changes in fonts may be used. No more than two or possibly three (say, for tables) fonts should be used within one document.

11.14 RESUMES

There are four standard resumes used by *Company Name*. Brief descriptions of these follow. As soon as you begin working here, you should write your resumes (in all four formats) and give them to the technical editor for editing and formatting. Also, if you already work for *Company Name*, you should update your resume at least every 6 months and give your changes to the technical editor.

11.14.1 Resume: *Standard Long Version*

- Treat each resume as a separate document. This means it should stand on its own, so all acronyms should be defined first use.
- Long resumes can be 2 or more pages.
- For samples resumes, see Appendix E.

11.14.2 Resume: Short Version

- Treat each resume as a separate document. This means it should stand on its own, so all acronyms should be defined first use.
- The short version is usually 1 page; 2 pages can be used if necessary.
- See Appendix E for a sample short resume.

11.14.3 Resume: One Paragraph

- These are used in proposals as well as on our Web site.
- Remember to update them frequently and give your changes to the technical editor.
- See the sample one-paragraph resume in Appendix E.

11.14.4 Resume: 255 Form

- For certain government proposals, we are required to use what is called the 254/255 form. These resumes are set in two columns on one Landscape-formatted page. The font size is usually 10 points.
- There are certain, standard sections to each 255 form. See the sample in Appendix E.

12.0 FORMATTING AND WRITING TABLES

12.1 CAPTIONS

The captions, or titles, of tables and should be as follows:

Table 1-1 Title Here in Upper and Lower Case

Note the features of the above:

1. Arial 10 point bold.
2. Separate lines for table number and table title (0 spaces between title lines, 6 spaces between final title line and table).
3. Title in upper and lower case.
4. Space after table title is 6 points, to separate it slightly from the table title.
5. There is no period at the end of either the table number line or the table title line.

Note that if standard numbering is used instead of the alphanumeric numbering system, the table and figure numbers will be different than above, as in the following example:

Table 1-1 Title Here

Table 1-2 Title Here

Table 1-3a Title Here

Table 1-3b Title Here

12.2 TABLE NUMBERING

The numbering of the tables and figures should be consistent throughout the document and will depend on the numbering used in the main document.

12.2.1 *Alphanumeric Numbering System*

For standard MMS numbering (I.A, I.A.1, I.A.1.a., etc.), the numbering of the table starts with the main section number where it is first mentioned in the text, followed by a period, followed by the section letter where it is first mentioned in the text (i.e., Table II.A), followed by the table number (determined by the order of the tables). Here are some examples:

- II.A-1, II.A.2, II.A-3
- III.C-1, III-C-2

The writer or editor might also choose to number related tables with an additional small letter, as follows: IV.1-9a, IV.1-9b, IV.1-9c

12.2.2 *Numeric Numbering System*

For the more traditional numbering system, which uses numbering only (i.e., 1.0, 1.1, 1.1.1, 1.1.1.1), the tables and figures are numbered by the section that they appear in followed by a hyphen, followed by the number (which is determined by order). Here, as an example, are the first five table numbers from Section 2.0 of a report:

- Table 2-1
- Table 2-2
- Table 2-3
- Table 2-4
- Table 2-5

Note that for this method, the table (and figure) numbers only use two levels of numbering; it does not make a difference whether the tables appear in a first-, second-, third-, or fourth-level heading. They are still numbered in order of their textual reference. Also, no roman numerals are used. (As an example, this document uses this method for numbering sections and tables.)

12.3 TABLE BORDERS

12.3.1 Standard Borders

There are two major borders used in most MMS (Alaska) tables:

1. For the outside border, as well as the border around the outside of the table header row(s), we use a 1-1/2 point black border (or line).
2. For the inside of the table, we use a 3/4-line border. Borders will be used around all items within a table for consistency and readability.

Table 3-1 is an example of our main borders.

Table 12-1 Standard Borders

12.3.2 Special Column Borders

A bolder line (1-1/2 points) may be used between columns in one case: when there are multiple cells within a column, as in the following example (Table 3-2).

Table 12-2 Table Showing Bold Borders within Table Columns

Title Here	Title Here	Title Here (Days)			Title Here (Days)			Title Here (Days)		
		10	20	30	10	20	30	10	20	30

12.3.3 Special Row Borders

The heavier border (1-1/2 points) may be used between rows in one case—when subtitle rows are included (subtitle rows are described in Section 4.2 of this document). Note that in such a case, only the row above the subtitle row has the thicker border. See Table 3-3 for an example.

Table 12-3 Table Showing Bold Border within Table Rows

Title Here	Title Here	Title Here	Title Here	Title Here
Subtitle Here				
Subtitle Here				
Subtitle Here				

12.4 TABLE SHADING

We use shading in several ways and in several percentages, based on the area of the table the shaded areas are in, as described below:

12.4.1 Header Rows

The main use of the heading, and probably the only use for most tables, is in the header row. This is the first (top) row of the table, which sometimes includes several cells within a column. This entire area will be shaded at 15%. Table 4-1 is an example.

Table 12-4 Header Row Shading

Table 4-2 is another example, with multiple cells within a column.

Table 12-5 Multiple Cell Shading

Title Here ¹	Title Here ²	Title Here (Days)			Title Here (Days)			Title Here (Days)		
		10	20	30	10	20	30	10	20	30

Notes:

¹Note that the cell alignment for the far left top row is left justified, bottom of row.

²Note that the cell alignment for the rest of the header rows is centered, bottom of row.

12.4.2 Shaded Rows within Table Body

This section describes the two ways shading is used within a table body: for subtitle rows and long data tables.

Subtitle Rows

For tables with subtitles (i.e., subheadings) within the table body, do the following:

1. Merge the cells for the subtitle row.
2. Use Arial 10 point bold for the subtitle font.
3. Left justify the subtitle.
4. Use 10% shading for the entire row where the subtitle is.
5. Use the bolder line (1-1/2 points) for the border above the subtitle row.
6. The paragraph spacing is 2 points above and below the text for the subtitle row, the same as the rest of the table body and header rows.

See Table 4-3 for an example.

Table 12-6 Subtitle Row Shading

Title Here	Title Here	Title Here	Title Here	Title Here
Subtitle Here				
Subtitle Here				

Blank Cells—There should never be a “blank cell.” Use either NA or -- to fill each cell where no data are listed. See Table 5-1 for an example.

Cell Alignment—For the header row, align the cells at the bottom (in Microsoft Word, select the header row, right click, choose cell alignment, and choose the bottom centered tab). All rows are centered except, in some cases, the left row, which would be left justified (including the header).

Note that no italics or all-capitalized words (except acronyms and abbreviations) are used in the table body.

Table 12-8 Sample “Blank Cell” Data and Notes

		--	NA	

Notes:

-- = No data are available for this sample.

NA = Not applicable.

A table font style with these features will be set up in the MMS templates for use by data processors, editors, and writers.

Exceptions: The table font size and table width can vary depending on need and text (see Section 6.0 for a discussion of table width). If, for example, it is possible to fit a table onto one page if the font size is changed to 9 points and the notes (as discussed in Section 7.0) are reduced to 8 point, the document processor has that freedom. Similarly, if the document processor needs to make the paragraph spacing above and below the table text 1 point instead of 2 to fit the table to one page, that is acceptable.

12.6 TABLE WIDTH AND JUSTIFICATION

In general, the table width is across the page.

Margins for table and figure pages are 1” from top and bottom, and 1.5” from left and right.

Exception: It is acceptable for narrow tables (for example, 2 to 3 columns with little text) to not use the entire page width. In that case, keep the left justification, and just narrow the column width to a bit wider than the text. See Table 6-1 for an example.

Table 12-9 Exception to Page Width for Tables

12.7 TABLE NOTES

Table notes can come with three headings: Notes, Key, and Source, and if more than one is used, they should appear in that order.

Table notes have the following features:

- Arial, 9 point
- The first word (such as “Notes:” in Table 7-1, below) should have a 3-point space between it and the bottom border of the table.
- Left justified
- The words “Key:” “Notes:” and “Source:” will be bold (the colon is also bold).
- There is no border around the table notes section (see Table 7-1).
- Footnotes are included under the “Notes” heading.
- “Key” is used when acronyms and abbreviations need to be defined; the format is shown in Table 6-1.
- The words “Notes:” “Key:” and “Source:” appear on a separate line from the text that follows, as show in Table 7-1.
- Periods are used for complete sentences and source listings.
- For acronym and abbreviation listings, no periods are used. An equal (=) sign is used between the acronym and the definition, as in GRO = gasoline range organics.
- Follow regular capitalization rules when defining acronyms and abbreviations. If the definition is capitalized (for example, EPA = Environmental Protection Agency), capitalize it in the Key section. If the definition is not usually capitalized (for example, PAH = polycyclic aromatic hydrocarbons), do not capitalize it in the Key section.

Table 7-10 Table Notes, Key, and Sources Example

Title Here	Title Here	Title Here (Days)	Title Here (Days)	Title Here (Days)
		23 ¹		
		45		
		62		

Notes:

Production and reserve data as of December 2000.

¹Days estimated based on results from November 2001 sampling.

Key:

DRO = diesel range organics

EPA = Environmental Protection Agency

Source:

Griffiths and Gallaway (1982).

APPENDICES

A – SAMPLE DOCUMENTS

B – ENGLISH USAGE OF COMMONLY CONFUSED WORDS

APPENDIX A
SAMPLE DOCUMENTS

This section is left blank for you to insert sample documents if you would like. We suggestion you include examples of each type of document (such as the four types of resumes and four types of project formats) so that you have examples to go by. In the meantime, please let the editor know what you would like to see here.

APPENDIX B
ENGLISH USAGE GLOSSARY
AND COMMONLY CONFUSED WORDS

ENGLISH USAGE GLOSSARY AND COMMONLY CONFUSED WORDS

Any handbook such as those used in college English courses should suffice to answer most English usage questions. Still, the most common errors are included here for your reference and for clarification. (Sources include *The St. Martin's Handbook* and *The Simon & Schuster Handbook for Writers*.)

a, an. Use a with a word that begins with a consonant (a forest), with a sounded h (a hemisphere, a history), or with another consonant sound such as “you” or “wh” (a euphoric moment, a one-sided match, a 1,000-gallon tank). Use an with a word that begins with a vowel (an umbrella), with a silent h (an honor), or with a vowel sound (an X-ray).

accept, except. The verb accept means “receive” or “agree to.” Melanie will accept the job offer. The preposition except means “aside from” or “excluding.” All the plaintiffs except Mr. Smith decided to accept the settlement offered by the defendant.

absorption, adsorption. Absorption means to soak up, like a sponge; dissolving in liquid or gas. Adsorption refers to when one entity adheres to another, as in carbon adsorption, where a molecule adheres to the activated carbon surface.

advice, advise. Advice is a noun meaning opinion or suggestion; advise is a verb meaning offer or provide advice. She advised her that his advice was poor.

affect, effect. Affect is a verb meaning influence or move the emotions of. Effect is a noun meaning result, or, less commonly, a verb meaning bring about. Use the “the” test. If you can put “the” in front of it, you have a noun and effect. The effect of the rain was a flood. If the can only go after the word, use affect, as in: The rain affected the roof by causing it to break.

all ready, already. All ready means fully prepared. Already means previously. We were all ready for Lucy's party when we learned that she had already left.

all right. Always write all right as two words.

a lot. A lot is always two words. Avoid in formal (i.e., technical) writing.

a.m., p.m. Use only with numbers, not as substitutes for the words morning, afternoon, or evening.

among, between. Use between for two items or people and among for three or more items or people. The relationship between the twins is different from that among the other three children.

amount, number. Use amount for quantities that you cannot count (singular nouns such as water, light, or power). Use number for quantities that you can count (usually plural nouns such as objects or people). A small number of volunteers cleared a large amount of brush within a few hours.

and/or. Avoid if possible. Use x, y, or both instead.

anion, cation. Anion is an ion with a negative charge; cation is an ion with a positive charge.

any body, anybody, any one, anyone. Note the differences: Although anyone could enjoy carving wood, not just anybody could make a sculpture like that. Any body of water has its own distinctive ecology. Customers were allowed to buy only two sale items at any one time.

anyway, anyways. Use anyway, never anyways.

as, because. Avoid using as for because or when in sentences where its meaning is not clear. For example, does Carl left town as his father was arriving mean at the same time as his father was arriving or because his father was arriving?

as, like, such as. For comparisons, use as when comparing two qualities that people or objects possess. The box is as wide as it is long. Also use as to identify equivalent terms in a description. Gary served as moderator at the town meeting. Use like to indicate similarity but not equivalency: Hugo, like Jane, was a detailed observer. In formal writing, such as is preferable to like in most cases.

assure, ensure, insure. Assure means convince or promise, and its direct object is usually a person or persons. The candidate assured the voters he would not raise taxes. Ensure and insure both mean make certain, but insure is usually used in the specialized sense of protection against financial loss. When the city began water rationing to ensure that the supply would last, the Browns found that they could no longer afford to insure their car wash business.

as to. Do not use as to as a substitute for about. Phoebe was unsure about (not as to) Bruce's intentions.

because of, due to. Both phrases are used to describe the relationship between a cause and an effect. Use due to when the effect (a noun) is stated first and followed by the verb to be. His illness was due to malnutrition. (Illness, a noun, is the effect.) Use because of, not due to, when the effect is a clause, not a noun. He was sick because of malnutrition. (He was sick, a clause, is the effect.)

being as, being that. Avoid these expressions (substitutes for because) in formal writing.

beside, besides. Beside, a preposition, means next to. Besides is either a preposition meaning other than or in addition to or an adverb meaning moreover. No one besides Jennifer knows whether the tree is still growing beside the house.

bi, semi. Bi means every other, and semi means twice in a given period.

breath, breathe. Breath is the noun, and breathe is the verb.

but, yet, however. Use these words separately, not together.

but that, but what. Avoid these as substitutes for that.

can, may. Can refers to ability and may to possibility or permission to do something. Since I can ski the slalom well, I may win the race. May I leave early to practice?

can't, couldn't. Avoid all contractions in formal writing.

choose, chose. Choose is the simple form of the verb; chose is the past-tense form. I chose the movie last week, so you choose it tonight.

compare to, compare with. Compare to means describe one thing as similar to another. Hillary compared the noise to the roar of a waterfall.

Compare with is the more general activity of noting similarities and differences between objects or people. The detective compared the latest photograph with the old one, noting how the man's appearance had changed.

complement, compliment. Complement means go well with or enhance. Compliment means praise.

comprise, compose. Comprise means contain (the whole comprises the parts). Compose means make up (the parts compose the whole). The class comprises 20 students. Twenty students compose the class.

consequently, subsequently. Consequently means as a result or therefore. Subsequently just means afterwards. Roger lost his job, and subsequently I lost mine. Consequently, I was unable to pay my rent.

continual, continuous. Continual describes an activity that is repeated at regular or frequent intervals. Continuous describes either an activity that is ongoing without interruption or an object that is connected without break. The damage done by continuous erosion was increased by the continual storms.

couple of. Avoid in formal writing. Say specifically what you mean.

criteria, criterion. Criterion means a standard of judgment or a necessary qualification. Criteria is the plural form.

data. The word data is the plural form of the Latin word datum, meaning a fact or a result collected during research. Treat data as plural in formal writing. These data indicate that fewer people smoke today than 10 years ago.

- different from, different than. Different from is generally preferred in formal writing.

discreet, discrete. Discreet means tactful or prudent. Discrete means distinct or separate. The dean's discreet encouragement brought representatives of all the discrete factions to the meeting.

dispose, dispose of. Dispose means to incline or to be inclined toward something. Dispose of means to throw away.

disinterested, uninterested. Disinterested means unbiased or impartial. Uninterested means not interested or indifferent.

elicit, illicit. The verb elicit means to draw out or evoke. The adjective illicit means illegal.

especially, specially. Especially means very or particularly. Specially means for a special reason or purpose. The audience especially enjoyed the new composition, specially written for the holiday.

every day, everyday. Everyday is an adjective used to describe something as ordinary or common. Every day is an adjective modifying a noun, specifying which particular day. I ride the subway every day even though pushing and shoving are everyday occurrences.

every one, everyone. Everyone is an indefinite pronoun; every one is a noun modified by an adjective, referring to each member of a group. Because he began the assignment after everyone else, David knew that he could finish every one of the selections.

explicit, implicit. Explicit means directly or openly expressed. Implicit means indirectly expressed or implied. The explicit message of the ad urged consumers to buy the product while the implicit message promised popularity.

farther, further. Farther refers to physical distance. How much farther is it to Munich? Further refers to time or degree. I want to avoid further delays and further misunderstandings.

fewer, less. Use fewer with objects or people that can be counted (plural nouns). Use less with amounts that cannot be counted (singular nouns). The world would be safer with fewer bombs and less hostility.

firstly, secondly, thirdly. These are old-fashioned and unwieldy word for introducing a series of points. Use first, second, and third.

following. Following is an adjective (the following items) or a noun (a large following), not a substitute for after. After the holes were dug, not Following the hole digging.

from . . . to, between . . . and. These have different meanings. The store operated from 1950 to 1970. The store operated between 1950 and 1970. Concentrations were detected from 5 mg/kg to 10 mg/kg. Concentrations detected were between 5 mg/kg and 100 mg/kg.

good, well. Good is an adjective and should not be used as a substitute for the adverb well. Gabriel is a good host who cooks quite well.

has got to, has to. Avoid these colloquial phrases for must.

have, of. Have, not of, should follow could, would, should, or might.

he/she, his/her. He/she and his/her are ungainly ways to avoid sexism in writing. Other solutions are to write out he or she or to alternative using he and she. But perhaps the best solution is the eliminate the pronouns entirely or to make the subject plural (they), thereby avoiding all reference to gender. Everyone should carry his or her driver's license with him or her could be revised to Drivers should carry driver's licenses at all times or to People should carry their driver's licenses with them.

hopefully. Hopefully is widely misused to mean it is hoped, but its correct meaning is with hope. Sam watched the roulette wheel hopefully, not Hopefully, Sam will win.

if, whether. Use whether or whether or not to express an alternative. She was considering whether to buy the new software. Reserve if for the subjunctive case. If it should rain tomorrow, our Tai Chi class will meet in the gym.

- impact. As a noun, impact means a forceful collision. As a verb, impact means pack together. Because they were impacted, Jason's wisdom teeth needed to be removed. Avoid the colloquial use of impact as a vague word meaning to affect. Population control may reduce (not impact) world hunger.

imply, infer. To imply is to suggest. To infer is to make an educated guess. Speakers and writers imply; listeners and readers infer. Beth and Peter's letter implied that they were planning a very small wedding; we inferred that we would not be invited.

inside, inside of, outside, outside of. Drop of after the prepositions inside and outside. The class regularly met outside the building.

in situ, ex situ. In situ means in its place or in a proper position.

interact with, interface with. Avoid these colloquial expressions.

irregardless, regardless. Regardless is the correct word; irregardless is a double negative.

is when, is where. These vague and faulty shortcuts should be avoided in definitions. Schizophrenia is a psychotic condition in which (not when or where) a person withdraws from reality.

its, it's. Its is a possessive pronoun, even though it does not have an apostrophe. It's is a contraction for it is; avoid it's and other contractions in formal writing.

lay, lie. Lay means place or put. Its forms are lay, laid, laying, laid, and laid. It generally has a direct object, specifying what has been placed. She laid her books on the desk. Lie means recline or be positioned and does not take a direct object. Its forms are lie, lay, lain, lying. She lay awake until 2 a.m., worrying about the exam.

like, such as. Both like and such as may be used in a statement giving an example or a series of examples. Like means similar to; use like when comparing the subject mentioned to the examples. A hurricane, like a flood or any other major disaster, may strain a region's emergency resources. Use such as when the examples represent a general category of things or people. Such as is often a graceful alternative to for example. A destructive hurricane, such as Gilbert in 1988, may drastically alter an area's economy. Commas are not always necessary before and after the phrase containing such as. Adding fruits such as apples and pears to the bowl should enhance its appearance.

loose, lose. Lose is a verb meaning misplace. Loose, as an adjective, means not securely attached. Sew on that loose button before you lose it.

lots, lots of. Avoid in formal writing.

may be, maybe. May be is a verb phrase. Maybe, the adverb, means perhaps. He may be the president today, but maybe he will lose the next election.

media. Media, the plural form of medium, takes a plural verb. The media are going to cover the council meeting.

Ms. Use Ms. instead of Miss or Mrs. unless a woman specifies another title before her name. Ms. should appear before her first name, not before her husband's name: Ms. Jane Tate, not Ms. John Tate.

nor, or. Use either with or and neither with nor.

off of. Use off rather than off of. The spaghetti slipped off the plate.

on, upon. Upon is an old-fashioned and overly formal substitute for on.

ordnance, ordinance. Ordnance refers to military supplies such as weapons, ammunition, and combat vehicles. Ordinance refers to a decree or order.

owing to the fact that. Avoid this and other unnecessarily word expressions for because.

percent, percentage. These words identify a number as a fraction of 100. Because they show exact statistics, these terms should not be used casually to mean portion, amount, or number. Last year, 80 percent of the club's members were female. Use percent after a figure. In formal writing, spell out percent rather than using its symbol (%). Percentage is not used with a specific number. A large percentage of sales representatives are single.

- precede, proceed. Both verbs, precede means "come before," and proceed means continue or go forward. Despite the storm that preceded the hallway flooding, we proceeded to class.

principal, principle. These words are unrelated but are often confused because of their similar spellings. Principal as a noun, refers to a head official or an amount of money loaned or invested. When used as an adjective, principal means most significant. The word meaning a fundamental law, belief, or standard is principle. When Albert was sent to the principal, he defended himself with the principle of free speech. The principal intent of the document was to inform.

raise, rise. Raise means lift or move upward. In the case of children, it means bring up or rear. As a transitive verb, it takes a direct object—someone raises something. The guests raised their glasses in good cheer. Rise means go upwards. It is not followed by a direct object; something rises by itself. She saw the steam rise from the pan just as the soup bubbled into a boil.

respectfully, respectively. Respectfully means with respect. Respectively means in the order given. The brothers, respectively a juggler and an acrobat, respectfully greeted the audience.

set, sit. Set means put or place, and it is followed by a direct object—the thing that is placed. Sit does not take a direct object and refers to the action of taking a seat. Amelia sat in the armchair and set her teacup on the table next to her.

since. Since has two meanings. The first meaning shows the passage of time (I have not eaten since

Tuesday); the second and more informal meaning is because (Since you are in a bad mood, I will go away). Be careful not to write sentences in which since is ambiguous in meaning. Since I broke my leg, I could have been doing nothing but sleeping. (Since here could mean either because or ever since. In order to avoid such problems some writers prefer not to use since to mean because.)

some body, somebody, some one, someone. When somebody comes walking down the hall, I always hope that it is someone I know. In dealing with some body like the senate, arrange to meet consistently some one person who can represent the group.

stationary, stationery. Stationary is an adjective meaning standing still. Stationery is a noun meaning writing paper or materials. When the bus was stationary at the light, Karen took her stationery and wrote a quick note to a friend.

than, then. Use the conjunction than in comparative statements. The cat was bigger than the dog. Use the adverb then when referring to a sequence of events or emotions. Jim finished college, and then he joined the Peace Corps.

that, which. That, always followed by a restrictive clause, singles out the object being described. The trip that you took in Japan was expensive. Not that the clause after "that" is essential to the meaning; it cannot be deleted. Which may be followed by either a restrictive or a nonrestrictive clause but often is used only with the latter. The which clause may simply add more information about a noun or noun clause, and it is set off by commas. My house, which is in Palmer, is a two-story duplex.. You can delete the phrase in between the commas and still keep the main idea of the sentence that you want to get across. But you cannot delete the words following that without losing the meaning of the sentence. The book that is on the table is the one I want.

their, there, they're. There is a pronoun, the possessive form of they. The gardeners held onto their hats as the helicopter flew over. There refers to a place. There, birds sing even at night. There also is used with the verb be in expletive constructions (there is, there are). There is only a short line at the cafeteria right now. They're is a contraction of they are, and, like all contractions, it should be avoided in formal writing.

to, too, two. To is a preposition, generally showing direction or nearness. Stan flew to Cleveland. Avoid using to after where. Where are you flying (not flying to)? Too means also. I am flying there too. Two is the number.

toward, towards. Towards is considered archaic; toward is now preferred (per Webster's).

visible, visual. Visible means capable of being seen, while visual means pertaining to sight. No holes were visible in the tank. The method of examination was visual.

where. Use where alone, not with prepositions such as at or to. Where do you shop? (not shop at)

which, who, that. When referring to ideas or things, use which or that. When referring to people, use who or whom. My aunt, who was irritated, pushed on the door, which was still stuck. The book that I like best is Old Yeller. The teacher whom I like best is Ms. Pastorelli. People who are interested can sign up after class. Interestingly, animals can be referred to by either who or that, depending on the writer's view of them. Sometimes people refer to pets by using the word who and wild animals by using the word that. Woody, who is my best friend, is a collie. The wolf that ate the rabbits is now in a pen.

who, whom. Use who if the following clause begins with a verb. Monica, who smokes incessantly, is my godmother. Monica, who is my godmother, smokes incessantly. Use whom in the following clause beings with a pronoun. I have heard that Monica, whom I have not seen for 10 years, wears only purple. An exception occurs when a verbal phrase such as I think comes between who and the following clause. Ignore such a phrase as you decide which form to use. Monica, who (I think) wears nothing but purple, is my godmother.

who's, whose. Who's is the contraction of who and is. Avoid contractions in formal writing. Whose is possessive. Whose sculpture is in the garden?

your, you're. Your shows possession. Bring your sleeping bags along. You're is the contraction of you and are. Avoid contractions in formal writing.

