

NJDEP Technical Guidance Document Review Form

Document: "FSPM Chapter 6 - Sample Collection"

Comment Period: September 29, 2021 to November 30, 2021

NJDEP Committee Chairpersons: Crystal Pirozek and Biff Lowry

Comment #	Page	Section	Subsection	COMMENTS	RESPONSE
1	1			General comment - should there be a section on collecting sediment pore water data in gw discharge to sw bodies. See the Department's GW/SW tech guidance.	Pore water is addressed in both the Ecological Evaluation Guidance and the Characterization of Contaminated Ground Water Discharge to Surface Water Technical Guidance. These documents are referenced in the beginning of the Aqueous Sampling Section 6.8.2.1.1.
2	1			I noticed that there is no procedure for compost sampling for vegetative waste. In our research recently, it was discovered that most labs use glass containers to storage compost samples. We also had labs say they store compost samples in ziplock bags. Does the department have an official way they sample compost materials? Could this be included in this section? Any comments	addressed
3	1			GLOBAL COMMENT - Many words throughout Chapters 6 have incorrect spacing after hyphens (perhaps due to formatting changes) and the incorrect placement of hyphens in words that otherwise do not need them. In some cases, the necessary corrections only need to be made once. However, in some cases, the typos/incorrect word usage occurs many times, so, a global search of each word in the chapter should be conducted to identify all issues.	agreed to change
4	1			Global comment - parentheses that include (i.e.) and (e.g.) should be edited to (i.e.,) and (e.g.,)	agreed to change
5	7	6.1		List of guidance links contains colons after some items but not others.	agreed to change
6	7	6.1		The last sentence of the 2nd paragraph is missing 2 nouns. Suggest changing "OHSA, EPA" to "OSHA standards and EPA guidance".	sentence reworded
7	7	6.1		The documents at the link for Quality Assurance Project Plan Technical Guidance: https://www.nj.gov/dep/srp/guidance/#analytic_methods are dated 2014. Are they the most up to date? This link is in both Chapters 5 & 6. I went back to Chapter 2 and this link is included there also.	these links are up to date
8	7	6.1	1	This section states "It is recommended that sampling equipment not be stored or transported in the same vehicle used to transport generators, gasoline or decontamination solvents". I have never once seen this done at Langan due to the extra costs incurred by using a second vehicle and personnel costs for a second driver. I suspect this is the same across the industry.	The Department recommends this to prevent cross contamination, added text to clarify same compartment.

9	7	6.1	1	third paragraph - "The sampling device should be cleaned per one of the approved methods described in Chapter 2..." This sentence should be referencing Chapter 5.	agreed to change
10	7	6.1	1	third paragraph - Says sampling device should be cleaned per one of the approved methods described in Chapter 2...Change to Chapter 5	agreed to change
11	8	6.1	1	Second paragraph, "... (e.g., sampling for hexavalent chrome or Per- and Polyfluoroalkyl substances (PFAS))" "chrome" should be spelled out as chromium.	agreed to change
12	8	6.1	1	second paragraph - Change hexavalent " chrome " to " chromium "	agreed to change
13	8	6.1	1	Third paragraph, third sentence, "Bailers must be laboratory cleaned..". Suggest adding "new or" in front of laboratory cleaned.	agreed to change
14	8	6.1	1	Last sentence on page 7 into page 8 ends with "this". It could improve with an additional word at the end of the sentence, such as "task".	agreed to change
15	8	6.1	1.1	Second and third sentence on page 8, "on-hand" and "scrub-brushes". Is the hyphen necessary?	agreed to change
16	8	6.1	1.1	Second paragraph (first full paragraph on page 8), parenthesis inside parenthesis (PFAS). Should brackets be used instead?	considered, no change
17	8	6.1	2.1	Following "Waste:", there appears to be an extra space.	agreed to change
18	9	6.1	2.1	In the 1st paragraph, the acronym, " QAPP" should be spelled at first use.	agreed to change
19	9	6.1	2.2	In the 1st sentence of the 2nd paragraph, change "different points" to "different times".	agreed to change
20	9	6.1	2.2	In the 3rd paragraph, change "data is collected" to "data are collected". "Data" is a plural noun.	agreed to change
21	9	6.1	2.2	Third paragraph - Discussion on combination of two grab samples says "For instance, if a sampler wishes to composite two discrete samples into one and the method detection limit for a target compound were 330 ppb, the detection limit for the target compound does not change for the composite. However, the detection limit for the compound in the individual samples, which make up the composite is two times the normal detection limit or 2 x 330 = 660 ppb." Should the bolded detection limit say reporting limit?	changed section to make more clear
22	10	6.1	3	Consider adding the following bullet under Laboratory Procurement: whether the laboratory can perform the analysis within the applicable holding time.	agreed to change
23	10	6.1	3	Consider adding whether the laboratory's parameter specific detection levels/reporting levels meet data objectives.	added bullet with information
24	10	6.1	3	last para - The "the", "of", and "and" contained in the text " Regulations Governing the Certification of Laboratories and Environmental Measurements" should be lower case	agreed to change
25	10	6.1	3	First sentence, "The analytical needs associated with the collection of samples should be clearly defined in the site-specific sampling plan." Suggest adding QAPP after sampling plan.	agreed to change
26	10	6.1	5	A sentence should be added that alerts the reader that the QAPP should be <i>created and approved</i> before the sampling begins. Or, "as stated in Chapter 2, the development AND APPROVAL of a QAPP is required prior to the sampling"	The QAPP dos not require approval. That reference is not in the revised chapter 2.

27	10	6.1	5	<p>Are the terms "sampling plan" and "quality assurance project plan" used interchangeably by NJDEP in this document? If not, please remove "sampling plan or" from the first sentence in 6.1.5.</p> <p><u>Chapter 6</u> states the following:</p> <p>6.1.5 Quality Assurance Project Plans</p> <p>Since sampling situations vary widely and no universal sampling procedure can be recommended, it is important that a sampling plan or quality assurance project plan be developed per regulatory authority requirements. As stated in Chapter 2, the development of a QAPP is required prior to the sampling. Please refer to Chapter 2 for the Quality Assurance Project Plan Requirements.</p> <p>In the <u>Chapter 2</u> Introduction, the term: "Field Sampling Plan-Quality Assurance Project Plan (FSP-QAPP)" is used in the excerpt below re: site remediation projects. However, the term "sampling plan or quality assurance project plan" was not found in the chapter.</p> <p>For site remediation projects, selection and application of site-appropriate data quality levels should be discussed in the Field Sampling Plan-Quality Assurance Project Plan (FSP-QAPP). This document presents the organization, functional activities, and specific QA/QC activities needed to attain specific project goals and data quality objectives. A QAPP is required per the Technical Requirements for Site Remediation (N.J.A.C. 7:26E-2.2) for all remedial activities for which data are generated. To formulate a QAPP for a remediation case, see the Quality Assurance Project Plan Technical Guidance at: https://www.state.nj.us/dep/srp/guidance/#analytic_methods.</p>	changed to FSP-QAPP in 6.1.3 and 6.1.5
28	10	6.1	5	At the end of the paragraph (bottom of page 10) there should be a period.	agreed to change
29	11	6.1	6	It may be worth adding the health and safety considerations of long days and working past sunset to this section.	information is in chapter 4 not chapter 6
30	11	6.1	7	The last sentence in the first paragraph, one can use distilled or deionized water, not both. Should have an "or" not "and"	agreed to change
31	11	6.2		first paragraph – reference to SI/RI/RA guidance is wrong. Technical Guidance for Site Investigation of Soil, Remedial Investigation of Soil, and Remedial Action Verification Sampling for Soil	agreed to change
32	12	6.2	1	There should be agreement between terminology in all chapters to reduce confusion. Chapter 5 refers volatile organics as VOAs and this section refers to them as VOCs.	agreed that VOC is appropriate in this section, CH 5 is VOA because it is referring to VOA vials
33	12	6.2	1	Third full paragraph, there appears to be an extra space between "soil" and "spends" (1), and between "the" and "resistant" (3).	agreed to change
34	12	6.2	1	Third paragraph, "...2) use of rigid plastic liners to insulate the core from heat transfer from the metal casing" is cited as a potential solution for heat build-up associated with sonic drilling. Macrocores used during direct-push drilling are constructed of rigid plastic. Thus, it is suggested that clarification be provided to indicate whether the macrocore used with direct-push drilling is considered to provide sufficient insulation for potential heat build-up as well. If so, it is suggested that an explanation be included in the bullet list to indicate that sonic and direct push are not recommended for VOC sampling unless rigid liners are utilized.	changed text to address
35	12	6.2	1	In the 3rd paragraph, change "than resume" to "then resume".	agreed to change
36	12	6.2	1	sixth paragraph - Need to define PID and FID?	agreed to change

37	12	6.2	1	Bulleted list of typical sampling devices: "Soil coring device" has an asterisk indicating it (direct push, sonic) is not recommended for VOC collection. "Split spoon sampler" does not have an asterisk. However, in the preceding paragraph (2nd paragraph of page 12), split spoon is listed with macrocores (typically associated with direct push) and sonic as encountering potential heating and VOC loss issues when advancing in compact soils. If the same heating/VOC loss issues are expected with the split spoon sampler as the direct push/sonic methods, then the split spoon bullet should also have an asterisk indicating it is not recommended. Please also clarify whether the heating/VOC loss issues are expected during all direct push drilling, or only during slow advancement in compact soils.	added text to clarify, * was removed after direct push
38	13	6.2	1	last paragraph - Remove " 's " from "PFAS's"	agreed to change
39	13	6.2	2	In the 4th paragraph, change "the most professional results" to "the most reliable results".	agreed to change
40	13	6.2	3	In the 1st paragraph, change the 2 occurrences of "monitor wells" to "monitoring wells".	agreed to change
41	13	6.2	3	Extra space at the top of the page.	agreed to change
42	14	6.2	3	At the end of the first paragraph (after "Important!") it should end with "...laminated, varved, etc..". Currently there is a missing comma and period.	agreed to change
43	14	6.2	3	In the 4th paragraph, change "page 23" to "page 21".	agreed to change
44	15	6.2	3.1	In the header to Table 6.1, change "Folk, 1974" to "Folk, 1975".	corrected text and table to 1974
45	16	6.2	3.2	The title of Table 6.2 should end with a period like Table 6.1 on the previous page in order to remain consistent.	removed period
46	18	6.2	3.3	The title of Table 6.7 should end with a period like the other tables in order to remain consistent.	no periods in titles
47	18	6.2	3.4	Introduction paragraph should end with a period.	agreed to change
48	19	6.2	3.5	The first sentence in section 6.2.3.5 has clunky grammar that should be revised.	agreed to change
49	19	6.2	3.5	How is a "qualified" geologist or soil scientist defined? For example, I have carried out soil and sediment logging despite lacking a geology or soil science degree though aspects of both were covered in my education.	agreed to change to be more clear
50	19	6.2	3.5	Last paragraph of this subsection has multiple extra spaces throughout.	agreed to change
51	19	6.2	4	field books may not be appropriate for pfas sampling	agreed to change that an actual log book is not necessary
52	20	6.2	4	Missing page number and header at the top of the page.	agreed to change
53	20	6.2	4	Chart has format issues.	do not see format issues
54	22	6.2	5	At the end of the paragraph there is an extra space between "etc." and the parenthesis.	agreed to change
55	22	6.2	5.1	At the end of the second sentence of the first paragraph, "commencing sampling" does not seem like the best choice in wording.	agreed to change
56	22	6.2	5.1	Composite sampling is now allowed for characterization of donor material for alt fill	agreed to change
57	22	6.2	5.1	At the end of the second sentence, a word is missing. "...commencing with sampling".	agreed to change
58	23	6.2	5.2	first paragraph - "NJ" is missing from "DEP" in first word of first paragraph. This is noted in various other places (e.g. Page 27) in this Chapter. Need to do a find and replace to ensure "NJDEP" is always correctly referenced.	agreed to change

59	23	6.2	5.2	First sentence, "large-diamater sampling device" should be "large-diameter sampling devices".	agreed to change
60	23	6.2	5.2	First paragraph, parenthesis inside of parenthesis. Brackets could be used.	considered, no change
61	23	6.2	5.2	Remove the parentheses following "Shelby tube".	considered, no change
62	23	6.2	5.2.1	Paragraph 2 - typo. Add space between "...of fluids use to cut up the material; (add space here) 2) the length of time...."	agreed to change
63	24	6.2	5.2.1	In the 5th paragraph, change "any t buried utilities" to "any buried utilities".	agreed to change
64	24	6.2	5.2.1	Second paragraph under "Collection of VOC or SVOC Soil Samples in Areas of Subsurface Concern" either needs a new heading or should be moved because it does not seem to belong here.	changed the title to be more general, information is useful in section
65	24	6.2	5.2.1	Last sentence of "Collection of VOC or SVOC Soil Samples in Areas of Subsurface Concern" section has a typo. "This will help confirm the locations of any t buried utilities...." eliminate "t"	agreed to change
66	24	6.2	5.2.1	Fifth paragraph of the page (right before bullet points), "...any t buried utilities...". Accident "t" should be eliminated unless it provides meaning.	agreed to change
67	24	6.2	5.2.1	The last sentence in the section titled "Collection of VOC or SVOC Soil Samples in Areas of Subsurface Concern" has a typo; a "t" was placed between "any" and "buried".	agreed to change
68	24	6.2	5.2.1	Under the collection of VOC or SVOC..paragraph (2nd paragraph): Is the "t" correct? I believe this is a typo	agreed to change
69	24	6.2	5.2.1	Under the heading of "Collection of VOC or SVOC Soil Samples in Areas of Subsurface Concern", "...2) install two soft-dig borings parallel to the subsurface object of concern. If neither of the borings encounter the object of concern, install a third boring using a VOC appropriate advancement technique midway between the two soft-dig boreholes." This technique may not be acceptable under the consultant's or RP's health and safety protocols if the borehole is still within 5 feet of the object. Because the 2 parallel soft dig borings would not confirm the characteristics of the subsurface object, and thus provide confidence of its location, it is suggested that this method be deleted and replaced with a suggestion to pothole/daylight the object in 3 locations to determine depth, diameter and directionality, since this may be more acceptable for accurate location of subsurface objects.	agreed to change text
70	24	6.2	5.2.1	Under the heading of "Collection of VOC or SVOC Soil Samples in Areas of Subsurface Concern", last paragraph: "This will help to confirm the locations of any t buried" contains a typo. Remove the "t".	agreed to change
71	25	6.2	5.2.1	Last bullet of the Cons for GPR, the statement regarding FINDAR reads like it is a Pro, not a Con. Please clarify or move this bullet to the Pros.	agreed to change
72	25	6.2	5.2.1	Under "Intrusive methods" • Manual Excavation Suggest that the Cons include that manual excavation is not acceptable for VOCs, in order to make it consistent with prior sections,	agreed to change
73	25	6.2	5.2.1	Under "Intrusive methods" Air Knifing and Vacuum extraction Pros: No overhead power-line issues Suggest that the reference to no overhead power-line issues be removed, because some utility companies do not differentiate between types of equipment used in the vicinity of their lines (i.e. not just drill rigs are restricted). Alternate suggestion would be to qualify this with an asterisk to indicate that the utility company should be contacted to confirm on a case by case basis as to whether soft dig equipment can be used near power lines,	removed bullet

74	25	6.2	5.2.1	Inconsistent use of punctuation in the bullet points. Specifically in the Pros/Cons of GPR Imaging.	agreed to change
75	26	6.2	5.2.2	In Section 6.2.5.2.2 the fourth to last paragraph has a typo in the second sentence. "Open" should be "opened".	agreed to change
76	26	6.2	5.2.2	In the 4th paragraph, change "should not be upen by field personnel" to "should not be opened by field personnel".	agreed to change
77	26	6.2	5.2.2	Composite sampling is now allowed for characterization of donor material for alt fill	agreed to change
78	26	6.2	5.2.2	Fourth paragraph "Shelby tubes are typically used to collect undisturbed solid soil cores for laboratory analysis such as geotechnical parameters. Shelby tubes, once collected, should not be open by field personnel." The second sentence contains a typo. "Open" should be changed to opened. It is suggested that a sentence be added here to indicate that Shelby tubes are only appropriate for use in clayey or cohesive soils, and are not appropriate for use in granular soils, as granular soils will fall out of the tube when retrieved from the borehole. Please also clarify whether a pilot hole should be drilled nearby to evaluate the targeted interval, since the Shelby tube cannot be opened once removed from the borehole. There may also need to be considerations added to address how the sample interval would be determined and how it would be sampled once delivered to the laboratory.	agreed that specifics for the shelby tube is not required in this manual
79	27	6.2	5.2.3	Last paragraph "Where soil core recovery is less than 40%, it is the NJDEP's position that the true depth of a soil sample collected from that soil core cannot be estimated. In this situation the soil sample depth should be assigned to the base of the cored interval." It is suggested that additional clarification be added to this statement to allow for field interpretation, such as the presence of surface material in the core (i.e. if 12 inches is recovered from the first run of a 24 inch length split spoon or a 48 inch length macrocore, and the top of the interval contains intact grass, then the sampler can support the conclusion that the 12 inches represented the top of the core rather than the bottom). Other field indicators could also support that the soil was from the top of the core, such as the presence of sandy soils that fell out of the bottom of the core.	added text to clarify
80	27	6.2	5.2.3	Regarding the 2nd paragraph on the page: Be sure to watch your tenses. (i.e. use vs using)	agreed to change
81	27	6.2	5.2.3	In the last paragraph, change "soil quality standard" to "soil remediation standard".	agreed to change
82	28	6.2	6	4th line from the top of the page, change "when picking the soil interval" to "when selecting the soil interval".	agreed to change
83	28	6.2	6	There is a grammatical issue in this sentence in the fourth paragraph of the beginning of this section: "Proceed carefully, but quickly when field screening". The comma should either be removed or a second comma should be placed after "quickly".	agreed to change
84	28	6.2	6	Second full paragraph, first sentence ends with "Site". It should not be capitalized.	agreed to change
85	28	6.2	6	In the first full paragraph, change "Or optionally" to "Alternatively..	agreed to change
86	28	6.2	6	In the first full paragraph, insert a comma following "dye testing".	agreed to change
87	29	6.2	6	In the first paragraph under the PIDs heading change "(eV)can" to "(eV) can".	agreed to change
88	29	6.2	6	Second sentence in the PIDs section, "...(eV)can..." needs a space.	agreed to change
89	30	6.2	6	5th paragraph: spell acronyms before using.	agreed to change
90	32	6.2	7.1	First paragraph ends with a colon and incomplete thought.	changed to make clear

91	32	6.2	7.1	This passage states that VOC soil sample collection can only be done with a large-diameter coring device. Does that include surface samples? Can you hand dig to 6" below the surface and then collect directly from the borehole with an Encore?	agreed to change and add text to make more clear.
92	32	6.2	7.2	3rd paragraph: Remove the "t" in the second sentence or complete the word that was meant to be there	agreed to change
93	32	6.2	7.2	Third paragraph in section, second sentence, accidental "t".	agreed to change
94	32	6.2	7.2	In the 3rd paragraph, change "sampler should t be capable" to "sampler should be capable".	agreed to change
95	32	6.2	7.2	Typo - third paragraph second sentence, "The small-diameter core sampler should t be capable of collecting the required amount of sample from the large-diameter sampling device..." The t after should should be removed	agreed to change
96	32	6.2	7.2	Section 6.2.7.2 makes reference to VOC loss when samples are left out. Should there be more specific guidance on how soon this loss occurs and how long samples should ideally be left out?	added more language to address
97	33	6.2	7.2	regarding the process of sampling using the small core: shouldn't the empty core be weighed first (tared), to ensure the actual weigh of the sample is captured? If so, this is not listed here.	agreed the sample should not be weighed in the field, information not needed
98	33	6.2	7.2	Section 6.2.7.2 makes reference to collecting a test sample that should be weighed to determine the amount of soil needed for VOC analysis. I have never performed this step nor seen it completed by other investigators. Is this not a necessary step when using En Core samplers? If so, this should be specified here.	removed the test sample information, not needed
99	33	6.2	7.2	This section does not seem to be consistent with the explanation of using an Encore Sampler in Chapter 5 Section 5.4.1.6. This Section suggests that after collecting the sample with the Encore, you need to weigh the sample and potentially remove soil from the Encore, which could make it so it is capped with air inside the container.	agreed the sample should not be weighed in the field, information not needed
100	33	6.2	7.2	The final sentence of section 6.2.7.2 lists multiple acceptable small-diameter core samplers. To me, this contradicts section 5.4.1.6 in Chapter 5 which states only the En Core is acceptable. Did Chapter 5 mean to say the En Core sampler is acceptable only for performing sampling, storage, AND transportation all at once? If so, the text in both chapters should be revised to be clearer in meaning and in agreement with each other.	Chapter 5 was rewritten and "only acceptable" was removed
101	33	6.2	7.2	Last paragraph and following subsections contradict with Chap 5 that states ONLY an EnCore sampler can be used	Chapter 5 was rewritten and "only acceptable" was removed
102	33	6.2	7.2.1	In the 1st paragraph, change "5 cm ³ total volume" to "5 cm ³ total volume".	agreed to change
103	35	6.2	7.2.4	First line, insert the correct registered trademark symbol following "En Core".	agreed to change
104	36	6.2	7.3	The very first word on this page is "crossed referenced" which should be spelled as "cross-referenced".	agreed to change
105	36	6.2	7.4	The third sentence in section 6.2.7.4 states that certain methods "are preferred sample preservation method under the, USEPA Contract Lab Program (CLP)" when it should state that these methods "are the preferred sample preservation methods under the USEPA Contract Lab Program (CLP)" for proper subject-verb agreement and to remove the extraneous comma.	agreed to change
106	36	6.2	7.4	In the 2nd paragraph, change "maybe" to "may be".	agreed to change

107	36	6.2	7.4	Second paragraph, second sentence, "...control/ quality...". Throughout the section there is an inconsistent use of spacing when using dashes. Example: example/example, example /example, example/ example. Should be consistent throughout.	agreed to change
108	36	6.2	7.4	Last paragraph - out-way should be outweigh	agreed to change
109	37	6.2	7.4.1	Second paragraph, second sentence - eliminate first comma	agreed to change
110	37	6.2	7.4.2	Second sentence, "pre-pared" should just be "prepared".	agreed to change
111	39	6.2	7.4.3	In the 2nd paragraph, change "pack - age" to "package".	agreed to change
112	39	6.2	7.4.3	first full paragraph - Remove the hyphen between "pack" and "age" to make the word "package".	agreed to change
113	40	6.2	7.4.4	third paragraph - Remove the hyphen between "circum" and "stances" to make the word "circumstances".	agreed to change
114	40	6.2	7.4.4	In the 3rd paragraph, change "circum - stances" to "circumstances".	agreed to change
115	41	6.2	7.4.5	In the 5th paragraph, change "associate" to "associated".	agreed to change
116	41	6.2	7.4.4	Accidental bullet point at the top of the page.	agreed to change
117	42	6.2	7.4.5	In the 1st bullet, change "concentrations not" to "concentrations are not".	agreed to change
118	43	6.2	7.5	End of first paragraph is missing a period.	agreed to change
119	43	6.2	8	In the 1st line of the 4th paragraph, change "a soil is collected" to "a soil sample is collected".	agreed to change
120	43	6.2	8	In the 1st line of the 4th paragraph, change "the soil for VOC analysis" to "the soil sample for VOC analysis".	agreed to change
121	44	6.2	8	The "however" in the first sentence of this page should have a comma placed before it.	added semicolon
122	44	6.2	8	The last sentence in section 6.2.8 repeats the "crossed referenced" mistake referred to in Comment 11.	agreed to change
123	44	6.2	8	In the 3rd full paragraph, change "immediately return the container to an iced cooler" to "immediately place the container in an iced cooler". The container was not previously in an iced cooler.	agreed to change
124	44	6.2	9.1	Should section 6.2.9.1 also mention wearing a hard hat and safety glasses to protect from flying particles?	agreed to not change, proper PPE should be worn during all sampling
125	45	6.2	9.2	In the 5th line from the top of the page, change "due to the increase exposure" to "due to the increased exposure".	agreed to change
126	45	6.2	9.3	Change "very difficult I n these situations" to "very difficult in these situations".	agreed to change
127	45	6.2	9.3	First paragraph, second sentence - " I n" should be in	agreed to change
128	46	6.2	9.6	In the last sentence of the first paragraph on this page, "In such a situation" should have a comma placed after it.	agreed to change
129	48	6.3	2.1	Are the parathesis around the figure 6.1 really needed?	yes
130	50	6.3	3.3	Fifth bulletpoint is missing a period at the end of the sentence.	agreed to change
131	50	6.3	4	Change "Table 6.10" to "Table 6.11".	agreed to change
132	52	6.4		In the 2nd paragraph, change "working the same bore hole" to "working within the same bore hole".	agreed to change
133	52	6.4		In the 2nd paragraph, change "data is not influenced" to "data are not influenced". "Data" is a plural noun.	agreed to change

134	52	6.4		In the 3rd paragraph, change "7;9D" to "7:9D".	agreed to change
135	52	6.4		Fourth paragraph, there is an extra space after the link, before the period.	agreed to change
136	52	6.4		Last sentence, 1st paragaph - "When using direct push technology, you should apply, at a minimum, the Cold Regions decontamination procedure discussed in Chapter 2, <i>Quality Assurance</i> , Section 2.4., <i>Decontamination Procedures</i> " This is an incorrect reference. It should be citing Chapter 5. Possibly Section 5.2 (Decontamination Procedures). But there are no sections that specifically reference a "Cold Regions decontamination procedure"?	agreed to change
137	52	6.4		the end of 1st paragraph: Be consistent, in other parts of the chapter, when referencing other chapters-only the section title is listed. This is probably the best way to handle this because the section numbers will be changed throughout the manual.	agreed to change
138	52	6.4		1st sentence of the 3rd paragraph: it should be N.J.A.C -7:9D and not...-7;9D	agreed to change
139	52	6.4		General comment on this section: were drilling companies included as stakeholders?	committee members and stakeholders consulted with their drilling contractors
140	52	6.4		I have never seen high pressure, hot water cleaning performed to decontaminate direct push sampling equipment due to the logistical and financial constraints of providing a separate truck to transport the cleaning equipment.	changed to be more clear.
141	53	6.4	1	The last paragraph on this page mentions that "assessment of the soil core for heat buildup" should be performed. Is there a particular cut-off point for a temperature that would be of concern?	at this time we do not have a specific temperature that would negate the sample
142	56	6.5	2	Change "contents please" to "contents. Please".	agreed to change
143	56	6.5	2	In the 5th paragraph, change "until tank" to "until the tank".	agreed to change
144	56	6.6		The introduction to this section mentions that a technical consult may be necessary for waste that is outside the typical waste stream of soil. Should readers be instructed to contact BEERA and contact information be provided?	BEERA does not cover all waste streams, no contact information to include
145	56	6.6		Missing a period at the end of the first paragraph.	agreed to change
146	56	6.6	1.1	Change "in a real extent" to "in areal extent".	agreed to change
147	57	6.6	1.2.3	Missing a period between the first link and "Also".	agreed to change
148	59	6.6	2	Section 5.4.3 in Chapter 5 did not mention that soil sampling equipment can be used for waste pile sampling. The two chapters should be revised to be in agreement with each other on whether soil sampling equipment is permissible for sampling waste piles.	checked and confirmed they discuss the same thing
149	59	6.6	2	Inconsistent capitalization in the bullet points as well as format/spacing issues.	agreed to change
150	60	6.6	3.1	Extra space after the link at the end of the first paragraph.	agreed to change
151	60	6.6	3.2	2nd sentence - Change "detection" limits to "reporting" limits. Labs should be reporting to an actual reporting limit and not a statistical detection limit. Unless programs allow reporting to MDLs, data should be reported to a reporting limit, meaning the lowest calibration standard that has been verified.	agreed to change

152	60	6.6	3.2	paragraph references SW-846 3rd edition (or most recently approved). Since this is a revision the most current approved version should be listed here and then say (or most recently approved) so that the most current approved is what is referenced since the 3rd ed is already outdated. version V is the most current.	agreed to change
153	60	6.6	3.3	Missing a period at the end of the first paragraph.	agreed to change
154	61	6.7	2	SOP for wipe samples needs to be hyperlinked	checked the link and confirmed it worked
155	61	6.7	2	Introducing the links should have used a colon not a semicolon.	agreed to change
156	61	6.7	2	In the 1st paragraph, change "analytical data is received" to "analytical data are received". "Data" is a plural noun.	agreed to change
157	62	6.7	3	Introducing the link should have used a colon not a semicolon.	agreed to change
158	62	6.7	3	last paragraph - Link dead	link fixed
159	62	6.8		Change "hazards, be sure" to "hazards. Be sure".	changed to make clear
160	62	6.8		End of the first paragraph, last sentence sounds like a command. Could benefit from being rephrased. "Working in and around water has certain hazards, be sure to follow OSHA guidelines."	changed to make clear
161	62	6.8		Should sediment be defined to better differentiate this medium from soil?	agreed that this is not the spot to define sediment soil
162	62	6.8	1	I believe this section should also refer the NJPDES regulation and information for surface water, as well.	agreed to not add NJPDES regulation
163	63	6.8	1.3	I believe a reference to the section that talks about QAPP development would be beneficial here	agreed that the QAPP is discussed in Ch 1
164	63	6.8	1.4	The last sentence in section 6.8.1.4 has an extraneous comma after "important".	agreed to change
165	63	6.8	1.6	At the bottom of the page, there is an extra space between the link and the period.	agreed to change
166	64	6.8	1.8	Should considerations for historic pathway point discharge sampling be included in section 6.8.1.8 as well?	agreed to not add, should be developed in the workplan
167	64	6.8	1.8	6th paragraph: it would be helpful for the reader if a reference to the chapter that talks about grab or composite sampling was added here	added reference to chapter 6 discussing grab and composite samples
168	64	6.8	1.8	At the top of the page, the term "inspector" is used. Is this the proper title?	changed to investigator
169	65	6.8	1.8	Last bullet point, second sentence ends with "this". This could be improved.	reworded sentence
170	65	6.8	1.8	1st bullet on the page: reconsider rewording the second sentence as it is unclear.	agreed to change to make clear (first bullet)
171	65	6.8	1.8	Sixth (8) bullet - May want to address the use of pre-preserved bottles, these must not be rinsed. NJAC 7:18 states not to rinse DO, VOA, metals, or PFAS (PFAS added to proposed NJAC 7:18) sample containers in addition to Oil and Grease and micro samples as listed here.	added a bullet about pre-preserved samples and rinsing.
172	65	6.8	1.8	Seventh (9) Bullet - Add oxygen demand to list. List of sample containers to fill completely is slightly different from that in 7:18. FSPM includes ammonia, free chlorine, pH, sulfite, and ammonium while 7:18 does not. 7:18 includes oxygen demand, while FSPM does not.	agreed to add

173	65	6.8	1.8	8th (10) bullet point - "When taking a grab sample, the entire mouth of the container should be submerged below the surface of the waste stream" should add a note or directive when the sample bottle is pre-preserved? Pre-preserved bottles should not be submerged as the preservative will be lost.	agreed to add
174	65	6.8	2	Inconsistent use of punctuation in the bullet points.	agreed to change
175	66	6.8	2.1.1	Change "Characterization to Contaminated Ground Water Discharge to contaminated Ground Water Discharge to Surface Water Guidance" to "Characterization of Contaminated Ground Water Discharge to Surface Water Technical Guidance".	agreed to change
176	66	6.8	2.1.3	Second sentence - States to pre-rinse the sample container when collecting grab sample. May want to reference the list of parameters (bullet in 6.8.1.8 pg. 64) whose containers shall not be rinsed.	added text to address
177	67	6.8	2.1.5	First sentence, "lakes/other". Inconsistent spacing when using dashes, as I mentioned in comment 25.	no change required
178	67	6.8	2.1.6	Last Sentence - For sampling from a boat, states" Sampling should be performed as far from the stern as possible.. Site should be approached from downstream" I see intent is to minimize sample contact with engine components. On first read, this sounds like sampling is done at the stern, but as far off the stern as possible. Could say "..as far from the stern (closer to the bow).." for clarity	added text to address
179	68	6.8	2.2.1	Second bullet point has a period when the rest do not.	agreed to change
180	68	6.8	2.2.1	In section 6.8.2.2.1, the first sentence in the second paragraph should have "to" placed before "identify" and "determine".	added "to" after "are".
181	68	6.8	2.2.1	In the 2nd bullet, change"Toxicity Characteristics Leaching Procedure" to "Toxicity Characteristic Leaching Procedure".	agreed to change
182	70	6.8	2.2.1.2	In the second to last sentence in section 6.8.2.2.1.2, a comma should be added after "upon retrieval"	agreed to change
183	70	6.8	2.2.1.2	In the last sentence in section 6.8.2.2.1.2, "both" doesn't make grammatical sense as the sentence refers to a list of three items. Instead, the sentence should say "Decontaminate the corer, dredge, and trowel before collecting the next sample."	agreed to change
184	70	6.8	2.2.1.3	Section 6.8.2.2.1.3 suggests the use of containers with Teflon lined lids for organics. Should a caveat be added to not do so for PFAS sampling and suggest alternate suitable lids?	changed to make clear
185	71	6.8	2.2.2	3rd full para - the "-" should be removed from "pre- served" and the word should be updated to preserved.	agreed to change
186	75	6.8	2.3.3	Fourth paragraph, last sentence, "relation-ship" should be "relationship".	agreed to change
187	78	6.8	2.3.6.3	Third Sentence - Remove hyphen from "deter- mines"	agreed to change
188	79	6.8	2.3.6.3	1st paragraph of the page: Be consistent, some figure listing in the chapter have parathesis around them and in this section there are none. I don't believe they are needed for any of the instances.	removed all parathesis
189	80	6.8	2.3.6.3	Fifth bulet point is capitalized while none of the other bullet points are.	agreed to change
190	82	6.8	2.3.6.8	Top of the page, "relation-ship" should just be "relationship".	agreed to change

191	82	6.8	2.3.6.9	Should end with a period after the link.	agreed to change
192	82	6.8	2.3.6.10	Should end with a period after the link.	agreed to change
193	83	6.8	2.3.6.11	Table 6.12 has inconsistent punctuation	agreed to change
194	83	6.8	2.3.7.1	Fourth sentence, "over-looked" should just be "overlooked".	agreed to change
195	85	6.8	3.1	First paragraph, last sentence. "compete" should be "complete".	agreed to change
196	85	6.8	3.1	Second paragraph ends with a colon? Then the next section begins, incomplete.	agreed to remove
197	85	6.8	3.1.1	"Discreet" in section 6.8.3.1.1 should be "discrete".	agreed to change
198	85	6.8	3.1.1	The last sentence in section 6.8.3.1.1 has an extraneous comma after "NJDEP's".	agreed to change
199	85	6.8	3.1.2	Should the use of background datasets be added to section 6.8.3.1.2?	changed to make clear
200	86	6.8	3.2	The same error referred to in comment 29 is made in the second paragraph of section 6.8.3.2.	couldn't find error
201	87	6.9	1	Fourth paragraph on the page, "Field Sampling and Procedures Manual". Should be "Field Sampling Procedures Manual".	agreed to change
202	88	6.9	1.2	In the 1st sentence, change "NJDEP rules are followed" to "NJDEP rules and guidance are followed".	agreed to change
203	88	6.9	1.2	In the 3rd paragraph, change "data is presented" to "data are presented". "Data" is a plural noun.	agreed to change
204	88	6.9	1.2	Should "negative bias" within the first sentence on this page be defined?	changed to make clear
205	88	6.9	1.2	"Too" within the third sentence on this page should be "to".	agreed to change
206	88	6.9	1.2	Should "screening quality" in the third paragraph of this page be defined?	changed to make clear
	89	6.9	1.3	In "Rules" section, extra space between "sampling" and "related".	agreed to change
207	89	6.9	1.4	The comma after "variation" in the second bullet point under the Policy section of this page is extraneous and should be removed.	agreed to remove
208	89	6.9	1.4	The first sentence in the sixth bullet point on this page reads a little awkwardly. It may be better to word it as "The first two sampling rounds of each permanent well should also include the following water quality indicator parameters analyzed immediately : pH, dissolved oxygen, and turbidity."	added quotes around "analyze immediately".
209	90	6.9	1.4	In bullet number 6, change "ground water data is first submitted" to "ground water data are first submitted". "Data" is a plural noun.	agreed to change
210	90	6.9	1.4	#6, last sentence - Change "certified for the field collection of these parameters" to certified for the field <u>analysis</u> of these parameters." OQA does not certify for collection.	agreed to change
211	89	6.9	1.4	In "Policy" section, introduction to the guidelines is unnecessarily capitalized.	agreed to change
212	90	6.9	1.4	In "Policy" section, #6 and #9 could benefit from being re-worded.	changed to make clear
213	89	6.9	1.4	Under policy, totally on board with volume averaged, but at item 2, why not 90 days instead of 60? The paragraph lead with to address the concern for seasonal variation - 90 days is more likely to get you into a different season, or is the thought with the 60 to try to stay in within the same season? When we say two samples taken far enough apart to account for seasonal variation, we generally look for at least 90 days. It goes on to say the RP has the option to collect additional samples at a shorter interval, so why not 90?	chnaged to 90 days instead of 60 for seasonal variation

214	89	6.9	1.4	Item 6, please include ORP. BGWPA considers pH, DO, ORP, temperature, and conductivity to be standard field parameters to be reported for all ground water sampling associated with SRP.	added
215	90	6.9	1.4	Item 10, knowingly using a sampling method that generates a lower number than another method is deceptive unless clearly labeled in the report and data tables. Better to sample properly or not at all. Better yet, do additional investigation and figure out what is going on - certainly sounds like you may need a better data points if volume averaged comes up higher relative to a no purge method. If you must use a sampling method that generates lower numbers, it should be clearly flagged, so someone picking up the report does not inadvertently make a bad call because of it.	added link to make clear
216	91	6.9	1.4	When talking about change in sampling method results, are we comparing samples collected at the same time or comparing results of one sample collected by one method to results of another sample collection method collected at some later point in time. Comparison is best if done at the same time.	it is discussed in 6.9.1.5
217	91	6.9	1.5	Paragraph immediately before guidance documents - excellent.	thank you
218	91	6.9	1.5	Top of page - "...constitutes a significant concentration change at concentrations less than 100 ppb it is recommended that the difference between a sample and the sample duplicate be calculated. Twenty percent (20%) of the higher sample concentration should be added to the difference between the sample and the duplicate" Does this only apply when two sampling methods were utilized? (passive sampling vs Low Flow Purge and Sampling-LFPS) Is this only to be utilized in evaluating what constitutes a significant concentration change?	removed the 20% information to make more clear
219	91	6.9	1.5	under background recommendations and 3rd paragraph of the page: the parenthesis needs to be closed.	agreed to change
220	94	6.9	2.1	7th paragraph: the example needs to have the parenthesis closed	parenthesis closed
221	96	6.9	3.1	Extra space at the beginning of the second to last sentence in this subsection.	agreed to change
222	96	6.9	3.1	In many cases, a sample is collected from a well before a survey is done and an exact measurement between casing and ground surface can be made. It would be better to name the sample with depth relative to casing and then if desired, the sample depth relative to ground can be referenced in the report.	agreed to leave to ground surface not casing
223	96	6.9	3.2	Section 6.9.3.2 states "the overall goal is to limit well drawdown in the well intake interval to no more than 0.3 feet." Should special considerations be added for when tidal influence naturally causes a water level drop of 0.3 feet or more? Rising water level from tides may also obscure when too much drawdown occurs.	added sentence to address
224	97	6.9	3.3	Last bullet point should not end with "and". Either it should be a closed thought or the following sentence should be a bulletpoint.	agreed to change
225	98	6.9	3.4	The second sentence on this page references "low turbidity water". Is there a defined NTU concentration where groundwater would be considered low turbidity? At Langan, different project managers had different interpretations. The strictest would require <0.2 NTU while others just wanted to see turbidity stabilize over three readings without concern to concentration. Including a defined threshold may be good to standardize sampling procedures.	changed to make clear
226	98	6.9	3.6	At the top of the page, "than" should be "that".	agreed to change
227	98	6.9	3.6	In this section but relevant to the entire manual, the term "groundwater" should be written consistently. Throughout this chapter it is written in three different forms: "groundwater", "ground-water", and "ground water". In a 2009 memorandum, USGS determined that the most proper way to word the term is "groundwater" therefore I believe that is how it should be written across the entire manual.	The NJDEP standard is ground water. Converted all

	99	6.9	3.6	General comment - the less data that is presented on a ground water field sampling summary sheet, the less faith that the Department will have in the reliability of the data.	agree to statement but agree to not add anything
228	100	6.9	3.7	3rd paragraph: the certification must be displayed in the laboratory and must be current, as well.	agreed it is needed in the lab but does not need to be stated in the manual for field sampling
229	100	6.9	3.8	Need to define " O&M " This term is reference in other places in document but never defined in Chapter 6?	spelled out first use
230	100	6.9	3.8	Terms " PA " and " SI " are utilized but not defined in Chapter 6?	spelled out first use
231	101	6.9	3.8.1	General comment - Depth to Water - good stuff in here.	thank you
232	101	6.9	3.8.1	In the 1st paragraph. Change "elevation data has been plotted" to "elevation data have been plotted". "Data" is a plural noun.	agreed to change
233	101	6.9	3.8.1	Second full paragraph on the page, first sentence, "exits" should be "exists".	agreed to change
234	101	6.9	3.8.1	The fourth-to-last paragraph on this page includes a sentence with parentheses within parentheses. The inner parentheses around "cable, telephone" should be made into brackets instead.	agreed to change
235	102	6.9	3.8.1	The second paragraph on this page recommends placing a water level transducer in a well for several days to evaluate the potential for tidal influence. Would this be necessary in, say, north Jersey uplands where there is absolutely no potential for tidal influence? If so, that caveat should be added here.	we state that it is only needed if it is thought to be tidally influenced
236	102	6.9	3.8.1	In the 2nd paragraph, change "the data is presented" to "the data are presented". "Data" is a plural noun.	agreed to change
237	103	6.9	3.9	3rd para - Term " ACO " is never defined in Chapter 6.	spelled out
238	103	6.9	3.9	In the 1st paragraph, change "data is needed" to "data are needed". "Data" is a plural noun.	couldn't find error
239	103	6.9	3.9.1	Second paragraph of the subsection, fourth sentence, missing a space between the comma and parenthesis.	agreed to change
240	107	6.9	4.2	The bullet points in the "Field Observations" section are lacking an introduction. Also, the last bullet point on this page should not end with a period.	Intro added, bullet lists reformatted
241	109	6.9	5.1	Vertical profiling - NJDEP recommends that the well be vertically profiled sounds a little weak. Saying wells "should" be vertically profiled is a little stonger. If wells are not vertically profiled when they should be, the site in question may be in for a very bumpy road. So saying wells should be vertically profiled should be said in the strongest possible terms, as opposed to just recommending.	agreed to leave the text as is
242	110	6.9	5.1	"manor" within the second bullet point in this page should be "manner".	agreed to change
243	109	6.9	5.1	See comment 29, the same "discreet" mistake is made in the third bullet point in this page.	agreed to change
244	111	6.9	5.1	#5 maybe use FLUTE instead of flute. (Flexible Luner Underground Technologies). I would also insert "blank" before FLUTE - a liner that does not have any sampling ports.	agreed to change
245	112	6.9	5.2	I would feel more comfortable if reference to the GW Tech guidance were in here somewhere. It is the document that gives guidance on how to conduct a bedrock investigation. The guidance documents should be supporting each other.	we gave the link to the guidance in the beginning of the chapter

246	112	6.9	5.2	Third paragraph ends with a comma instead of a period.	agreed to change
247	116	6.9	6.3	Inconsistent punctuation in the bullet points.	agreed to change
248	116	6.9	6.3	Nice tables	thank you
249	118	6.9	6	The second to last sentence in the first paragraph in this page has a phrase "mat not available by all manufactures". Was this supposed to say "may not be available from all manufacturers?"	agreed to change
250	118	6.9	6.3.1	The word "aforementioned" seems over-used.	removed one
251	118	6.9	6.3.1	Second paragraph, third sentence, extra space between "with" and "a".	agreed to change
252	118	6.9	6.3.1	Second paragpah should end with a period.	agreed to change
253	118	6.9	6.3.1	Third paragraph, second sentence, extra space between "percentage" and "of".	agreed to change
254	118	6.9	6.3.1	Second to last bullet point on the page should not be capitalized.	agreed to change
255	118	6.9	6.3.1	2nd para - Last sentence is missing the period.	agreed to change
256	119	6.9	6.3.1	in the note at the end of page: the parathesis needs to be closed.	agreed to change
257	119	6.9	6.3.1	Introduction for the bullet points should be a colon, not a comma.	agreed to change
258	119	6.9	6.3.1	Following the bullet points, the protocol for PFAS sampling is mentioned. The PFAS protocol should be linked.	added link to EC website with PFAS info
259	119	6.9	6.3.1	In the yellow box, change "no exceedance." to "no exceedance)".	agreed to change
260	119	6.9	6.3.1	In the yellow box, change "data is presented" to "data are presented". "Data" is a plural noun.	agreed to change
261	120	6.9	6.3.1	On Table 6.14, under HDPE, Preferred Use, there is an extra space between "absorption/desorption" and "properties".	agreed to change
262	121	6.9	6.4	Inconsistent use of punctuation in the buillet points (semicolons and commas).	agreed to change
263	121	6.9	6.4	At the bottom of the page, #3 is difficult to understand.	changed to make clear
264	120	6.9	6.4	In the 2nd paragraph, change "100ml/min" to "100 ml/min".	agreed to change
265	121	6.9	6.4	Both "low-yield" and "low yeild" are used. Should be consistent.	added hyphen throughout document
266	122	6.9	6.4	Last paragraph of this subsection, second sentence, "That said" should be re-written. Not very technical.	removed "that said"
267	122	6.9	6.5	In "Submission of Well Purging Information", fifth sentence, "...during purging show..." should be "during purging may show...".	added "may"
268	124	6.9	6.5.1	Totally agree with preferred method of volume averaged samping - collect sample from the end of the discharge tubing. Hate it when volume averaged is done at super low rate, then a bailer is dropped in the well to collect a sample - what confidence do I have I'm getting a decent sample.	addressed in 6.9.6.5.1
269	125	6.9	6.5.1	Not sure where best place is, when checking for NAPL, this means sheen too. Some LSRP's think that sheen is something that does not need to be addressed. Somehow make clear, if you see sheen or smell odor, report it on sampling sheet.	added
270	125	6.9	6.5.1	Third full paragraph on this page, there is an extra space in this first sentence between "interval" and "should".	agreed to change

271	125	6.9	6.5.1	At the bottom of the page, first sentence of "Temperature Measurement and Submersible Pumps", there needs to be a space between rights reserved symbol and "pump".	agreed to change
272	127	6.9	6.5.2.1	In the last sentence of the section, change "data is not being used" to "data are not being used". "Data" is a plural noun.	agreed to change
273	128	6.9	6.5.2.2	Inconsistent punctuation in the bullet points.	agreed to change
274	128	6.9	6.5.2.2	The first paragraph states "the well is purged until the water quality indicator parameters stabilize". When I first read this section, I was curious if there was a definition for stabilization and saw there was so on Table 6.15. It may be worth adding that the DEP definitions for stabilization are listed in Table 6.15 to this sentence.	added reference to table 6.15
275	128	6.9	6.5.2.2	To comment on the statement that LFPS "has rapidly become the ground-water sampling method of choice for general sampling", I have used LFPS on all but one site in New Jersey where three-well-volume sampling was used.	agree with statement
276	129	6.9	6.5.2.2	This page recommends vertical profiling be conducted periodically in wells. I have never seen this completed or heard of others completing this.	this is what the NJDEP would like to see completed
277	129	6.9	6.5.2.2	This page states that the frequency of vertical profiling is based on a variety of factors but perhaps a minimum frequency should be specified like annual or biannual.	agreed that vertical profiling should not have a minimum frequency
278	129	6.9	6.5.2.2	Under multiple sample collection to Assess Contaminant Stratification (Vertical Profiling). Vertical profiling also may be needed following an in situ treatment event that may have emplaced a reagent that altered ground water flow paths or altered contaminant distribution - see Deptment's In Situ tech guidance. Same applies to no purge sampling.	agreed that this is a good idea but not specifically including it in the verticale profiling section
279	130	6.9	6.5.2.2	"As the collection of "analyze immediately" field water quality indicator parameters (WQIPs), such as pH, temperature, dissolved oxygen, turbidity, and conductivity, are a critical component of the LFPS method (i.e. their stabilization is a critiria for when a sample can be collected), personnel collecting this data for submission to the NJDEP must be certified in the collection of these analyze immediately parameters. " The bolded language is not accurate. NJDEP, OQA certifies laboratories, environmental firms, etc. but the certification is not given to specific personnel. In addition, the OQA certifies for the analyze immediately parameters (e.g. pH, temperature, etc.) but not the collection process. This type of statement occurred earlier in the doc as well and would also need to be updated. (page 90)	changed to make clear
280	129	6.9	6.5.2.2	2nd full para - "For more detail see the sections on laboratory certification and collection of water quality indicator parameters presented earlier in section 6.9." Maybe there should be a more specific reference to the laboratory certification section - 6.9.3.7 as 6.9 is a fairly detailed section.	added 6.9.3.7
281	129	6.9	6.5.2.2	Third Paragraph - Regarding Laboratory certificaion for LFPS Analyze Immediately parameters states: "...personnel collecting this data for submission to the NJDEP must be certified in the collection of these analyze immediately parameters". Change certified in collection of to certified in the analysis of, as OQA does not certify for collection of LFPS, only the analysis.	changed
282	132	6.9	6.5.2.3	I like the inclusion of options if WQIP stability has not been achieved after two hours because I have sampled quite a few wells that took that long or longer to stabilize.	thank you
283	132	6.9	6.5.2.3	Tidal influence may be worth adding as an obstacle to WQIP stabilization as I have observed wells near the mouth of the Delaware exhibiting tidal patterns with turbidity and water level over just two hours.	added

284	134	6.9	6.5.2.3	"Fowling" in the second paragraph under the section "Flow-Through Cell" should be spelled "fouling".	agreed to change
285	134	6.9	6.5.2.3	The last paragraph on this page states "Actions should be taken to maintain aquifer ground-water temperatures in the tubing and flow-through cell to the extent practicable." Something I used to do and have seen others do is to keep the flow-through cell in the same bucket that the purge water collects in so it's eventually fully submerged in the purged groundwater. The purge water in the bucket thus buffers the water in the flow-through cell from temperature changes in the air and helps maintain groundwater temperatures. If this is permissible to DEP, perhaps a suggestion to follow that procedure could be added to this section.	we do not recommend this option
286	135	6.9	6.5.2.3	This page mentions the use of a fitting placed ahead of the flow-through cell to collect the sample. I have never seen this used and instead carried out the second procedure listed on this page that suggests the sample be collected from tubing before the flow-through cell. I would just remove tubing from the flow-through cell and let the pumped water collect into the bottleware.	we do agree that both options would be acceptable
287	136	6.9	6.5.2.3	Calibration of probes - Last sentence, last para - "It is recommended that sampling not commence until all instruments are calibrated and operating properly. Should change recommended to required ."	can only use require with a rule
288	137	6.9	6.5.2.3	pH para - This section states that a calibration of a 4 and 10 should not be performed but then states that if pH of samples are unknown, then a 3 point calibration should be made. Since the pH can fluctuate, it is advisable to always calibrate with a 4, 7, and 10 buffer solution. pH methods and 7:18 require that the meter be calibrated with buffers that bracket the expected range of pH in the sample. The statement that says 4 and 10 should not be used should be removed.	chnaged to address comment
289	136	6.9	6.5.2.3	Block insert - The reference (6.9.3.5) is incorrect for Laboratory Certification Requirements. It should be referencing 6.9.3.7 .	agreed to change
290	136	6.9	6.5.2.3	Calibration of Probes - The first section of this page mentions that equipment calibration solution should be kept at the same temperature as the groundwater being measured. I have extensively used YSI probes and their calibration solution lists temperature correction factors. Could this be an alternative to the solution needing to be the same temperature as the groundwater? Keeping the solution at the same temperature as the groundwater often isn't feasible especially in winter months where you can physically feel that the groundwater is much warmer than ambient air or vice versa in the summer months.	changed to address comment and make more clear
291	137	6.9	6.5.2.3	Water Level Measurements - The last section of this page mentions that total depth to well bottom should be measured at least 48 hours prior to or directly after sample collection. I never saw this protocol followed at Langan, we generally would send a more senior staff member to gauge total well depth while others began sampling. However, care was taken to avoid disturbing bottom sediments during well gauging. I suspect this protocol wasn't followed due to the additional costs to send someone 48 hours prior to the site.	agreed to leave the section as is
292	138	6.9	6.5.2.3	Purge Rates - The last section of this page mentions that "The well sampler should know, or have an approximation of, the well yield prior to sampling of the well." At Langan, we would look at the parameter logs for past sampling events to estimate the well yield and a proper flow rate. If it was the first time the well was being sampled, we would look at the well construction boring log. Those suggestions may be worth adding to this section.	added
293	140	6.9	6.5.2.3	Pump Decontamination - I have seen the guidance for bladder pump decontamination listed on this page only partially followed. Langan exclusively used bladder pumps that were easy to disassemble and they were decontaminated before being used on a different well. However, bladders were routinely decontaminated instead of disposed; they would only be disposed of if there were structural issues with the bladder that usually developed after two to three well samplings in a row.	agreed to not change text because that is not decon policy

294	141	6.9	6.5.2.3	Field Blank Collection - I have never seen the guidance for field blank collection detailed on this page followed likely due to time constraints and deionized water costs. I would always pour deionized water through a decontaminated bladder.	agreed to not change text because that is not decon policy
295	141	6.9	6.5.2.3	Missing header and page number at the top of the page.	headers intentionally removed from sample forms
296	142	6.9	6.5.2.3	Missing header and page number at the top of the page.	headers intentionally removed from sample forms
297	143	6.9	6.5.2.3	The form provides a field under "Purge Information" to record the Water Quality Meters(s). Consider adding "and Unique Identifier" to this field as many times the meter is not identified on this form and not possible to link the meter measuring the water quality parameters to its calibration data.	added to forms
298	143	6.9	6.5.2.3	Missing header and page number at the top of the page.	headers intentionally removed from sample forms
299	144	6.9	6.5.2.3	Missing header and page number at the top of the page.	headers intentionally removed from sample forms
300	145	6.9	6.5.2.3	Thank you for including example Volume Averaged Sampling Field Sheet	Your Welcome
301	146	6.9	6.5.3	Vertical profiling - vertical profiling should be done with the equipment that you intend to use and not from another method. For example, if you vertical profiled using LFPS, but you then want to switch to PDBs, I would then prefer to re-profile with PDBs, rather than relying on the LFPS profile.	agreed to not add that specific requirement to chapter
302	146	6.9	6.5.3	In the paragraph above "Use of No-Purge Sampling Devices in Sentinel Wells," change "the data is not being used" to "the data are not being used". "Data" is a plural noun.	agreed to change
303	147	6.9	6.5.3	See comments 29 and 43, the same "discreet" mistake is made in the first sentence of this page.	agreed to change
304	148	6.9	6.5.3	In the 3rd paragraph under "Diffusion-Based Samplers," change "the data is presented" to "the data are presented". "Data" is a plural noun.	agreed to change
305	151	6.9	6.5.3.1	Last paragraph - Says "The weight should be constructed of stainless steel, which can be reused after thorough decontamination per acceptable decontamination procedures (See Chapter 2, Quality Assurance)." The only mention of decontamination procedures in Chapter 2 refers to Chapter 5	changed reference
306	151	6.9	6.5.3.1	In the 2nd paragraph, change "the data is presented" to "the data are presented". "Data" is a plural noun.	agreed to change
307	152	6.9	6.5.3.1	In the yellow box, change "PDBS" to "PDBs".	agreed to change
308	154	6.9	6.5.3.1	1st paragraph - Does this QA/QC only apply to samples collected using PDBs? Why is the collection of a MS/MSD specific only to PDBs? Is this what is specified in the National Field Manual?	No it does not only apply to PDBs. MS/MSDs are discussed with PDBs due to the limited water volume of PDBs. Any additional volume needed for MS/MSDs would need to be accounted for in the deployment.
309	154	6.9	6.5.3.1	QA/QC section - it should also be specified somewhere that coordination with the laboratory to determine the analytical method requirements must also be met. If more stringent QA/QC is included in the method, the method requirements must be met.	added sentence to address

310	153	6.9	6.5.3.1	At the end of the "Quality Assurance/Quality Control Samples" subsection, there is an extra space in the last sentence between "should" and "be".	agreed to change
311	156	6.9	6.5.3.1	Missing header and page number at the top of the page.	header intentionally removed
312	158	6.9	6.9.6.6	This paragraph states monitoring under a RAP will require the use of downgradient permanent monitoring wells that show no site-related GWQC exceedances. This sentence is not accurate as NJDEP allows for the use of temporary wells or other acceptable ground water sample collection options in GW RAPs for any required sampling points, including sentinel well locations. This sentence should be removed and there should simply be a reference to the NJDEP GW RAP Guidance document if this type of statement needs to remain in the FSPM at all.	added additional informaiton to address comment
313	158	6.9	9.6.6	First full paragraph of the page, last sentence, there is an extra space between "existing" and "site".	agreed to change
314	159	6.9	7.1	In the section title, change "LNAPLS" to "LNAPLs".	agreed to change
315	159	6.9	7.1	In the 1st line of the 1st paragraph, change "LNAPLS" to "LNAPLs".	agreed to change
316	161	6.9	8	This section should be made clear that if the sampling is performed for the Private Well Testing Act that the requirements of that Act must be followed, including the sampling must be conducted by a certified lab for PWTA sample collection. This section is not clear that there are differences between routine private well sampling for SRP and PWTA samples that require a raw sample.	added additional informaiton to address comment
317	161	6.9	10	First paragraph of subsection should end with a period after etc.	can't have two periods
318	163	6.9	12	Bullet points are written differently (punctuation wise) than other bullet points in this chapter.	agreed to change
319	165	6.9	12	sixth paragraph - Says " When sampling wastewater, any equipment coming in contact with the sample material must be clean (see Chapter 2, Quality Assurance). Should be chapter 5	agreed to change
320	167	6.10		Should habitat assessments be included in this section? I know the EPA and Maryland Biological Stream Survey have rubrics for carrying those out in streams.	added additional informaiton to address comment
321	171	6.10	5	There should be a colon and introduction before the bullet points.	added colon, removed capitalization
322	172	6.10	6.1.2	Bullet points could benefit from an introduction.	added colon, removed capitalization
323	173	6.10	6.2	Second sentence, "10-cm2" is not correct.	fixed superscript
324	173	6.10	6.2	First paragpah, second to last sentence, "tooth-brush" should just be "toothbrush".	agreed to change
325	173	6.10	7	What is the asterisk on this section header for? I don't see any footnotes later referring to it.	removed astrick
326	173	6.10	7.3	Third paragraph, should end with a period.	agreed to change
327	175	6.10	7.4	Inconsistent punctuation in the bullet points.	agreed to change
328	179	6.10	8.1.2	Fourth paragraph - Consider adding that depending on the size of the trawl used and nature of target specimens it may be necessary to invert the cod end of the net to remove entangled specimens which are often not dislodged by shaking alone.	agreed to add
329	180	6.10	8.1.4	May want to specify the seine net should be dragged against the current when currents are present.	agreed to change
330	184	6.10	8.2.4	"Envelop" in the last sentence on this page should be "envelope".	agreed to change

331	189	6.10	10.3.4	For section 6.10.10.3.4, could trail cams be an alternative or a supplement to trapping for gauging community composition? They could potentially be useful for seeing which birds and larger mammals are on-site since they can't be caught by traps. However, smaller mammals may not be picked up by the camera depending on the height it is set at. I have no experience with trail cams or community composition so this is more of a general thought that should be addressed by someone with more experience.	agreed to not add trail cam information
332	190	6.10	10	The Museum Special Traps section recommends guidance for deserts. Is this even applicable to New Jersey - would conditions in the Pine Barrens count as a desert? It may be more applicable to replace "deserts" with "grasslands" or "meadows".	agreed to change
333	194	6.11		This section details the collection of dilution water for toxicity testing. I've never done this before and am unsure of the purpose. I have some experience with toxicity test sampling so language on when dilution testing is appropriate and the general purpose behind it might be helpful to people with less experience than me.	agreed to not change
334	194	6.11	1	1st para - Section references N.J.A.C. 7:18-7.4(e)3ii. 7:18 is under significant revisions, as such specific references should be avoid as they will not be current after revisions are complete. Should make general references to full sections or subchapters only.	agreed to change
335	194	6.11		1st para - source water as a dilution water is not the norm and lab prepared water is preferred due to lack of potential interference and control of a source water sample. Paragraph should reflect more of the fact that lab prepared water prepared in should be used first unless a permit dictates source water.	agreed not to change
336	194	6.11		This reference is currently being updated and the sections have changed so, it may be better to simply list the section title only as subchapter 7 will be extensively revised.	changed
337	194	6.11		Second paragraph - Change title of 7:18-9.5 to "Requirements for toxicity testing samples" (remove the word acute) as this will be the subsection title when new 7:18 is published.	changed
338	195	6.11	1	Second paragraph - Consider referring only to 7:18-7 as exact citation will likely change when the new N.J.A.C 7:18 is published	changed
339	196	6.11	2	2nd bullet: may be better to simply list the section title only as 7:18 is under significant revision and section cited may not be appropriate for much longer. Safest to be general to subchapter or main section. NJAC 7:18-7.4(b)8ii as referenced will not exist in new version of 7:18. Consider referring to 7:18-7.4 generally	changed
340	196	6.11	2	reconstit fw/sw - the section on reconstituted fresh or salt water is the preferred option for toxicity tests and should be more at the front with the alternate dilution sources being the second option.	agreed to not change and sited guidance
341	196	6.11	3	Second Sentence - Change reference to 7:18-7.3(a)1 to refer to 7:18-7.4 as this section will contain dilution water requirements in the new rule	changed
342	196	N/A		A general comment upon finishing the chapter. Why were sampling procedures for indoor air, sub-slab soil gas, and porewater not included? Is that within a different chapter or guidance document?	Pore water is addressed in both the Ecological Evaluation Guidance and the Characterization of Contaminated Ground Water Discharge to Surface Water Technical Guidance, indoor air and sub slab is in the VIG

343	196	6.11	5	Change references to 7:18-7.5(b)5 and 7.5(o) to refer to 7:18-7.6 as this section will contain dilution water requirements in the new rule; or just keep general and refer only to 7:18-7 for just the subchapter.	changed
344	196	6.11	6	First sentence - Change reference to 7:18-7.3(a)13 to refer just to 7:18-7.3 as this section will contain these requirements in the new rule, they will not be specifically at 7.3(a)13; or just keep general and refer only to 7:18 subchapter 7.	changed
345	197	6.11	6	Second Paragraph - Change reference to NJAC 7:18-7.3(a)14 and 7:18-7.4(a) to refer to 7:18-7.3 and 7:18-9.6, these sections will contain effluent sample requirements in the new NJAC 7:18	changed
346	197	6.11	6	the containers should be rinsed at least three times with the sample water before taking the sample unless it is pre-preserved or the methodology says otherwise.	changed to make clear
347	197	6.11	6	NJAC 7:18 is being revised currently so, the section titles would be safest to list and nothing else. Be general for any references.	changed
348	197	6.11	6	Following the bullet points, the last setence could also be a bullet point.	agreed to change
349				Throughout - Inconsistent capitalization and punctuation of list items.	addressed
350	198	Ref.		"ASTM International, Classification of Soils for Engineering Purposes (Unified Soil Classification System), ASTM D2487-17. ASTM West Conshohocken, Pennsylvania, 2017" Needs a period at the end.	agreed to change
351	199	Ref.		CDC reference is the only one with an active link, and it is missing a period at the end.	added period
352	199	Ref.		Christensen reference has format issues, second line should be indented.	agreed to change
353	199	Ref.		Last reference on the page is two references that need to separated and formatted.	agreed to change
354	200	Ref.		First reference on the page, "deVera". Last name should be capitalized?	agreed to change
355	200	Ref.		Both "Dragun" references are missing a period following the reference.	agreed to change
356	200	Ref.		"Fetter" reference is missing a period after the reference.	agreed to change
357	200	Ref.		"Gallant" reference is missing a period after the reference.	agreed to change
358	201	Ref.		"Hacket" reference is missing a period at the end. Third "Hewitt" reference is missing a period at the end. Fourth "Hewitt" reference has format issues. Eighth "Hewitt" reference is missing a period.	agreed to change
359	202	Ref.		"McAllister" reference is missing a period a the end.	agreed to change
360	203	Ref.		"Mukhtar" reference is actually two references, they should be separated and formatted. NJ DEP, Safe Drinking Water Act reference has format issues. "Oneacre" reference needs a space at the end between the comma and the year. Second "Parker" reference is actually two references. They should be separated and formatted.	agreed to change
361	204	Ref.		First "Robbins" reference is missing a period at the end.	agreed to change
362	206	Ref.		"Triplet" reference has format issues. First EPA reference is missing a period at the end. "USEPA, Field and Laboratory Methods for Macroinvertebrate and Habitat Assessment of Low Gradient NonTidal Streams, Mid-Atlantic Coastal Streams Workgroup, Environmental Services Division, Region 3, Wheeling, WV 26003, 23 pp.,1997." needs a space between the comma and the year.	agreed to change

363	206	Ref.		EPA "CLP" reference should have a comma before the year not a period. "USEPA, Contract Lab Program Statement of Work for Organic Analysis" also needs a comma before the year. "USGS, Ground-Water Data-Collection Protocols and Procedures for the National Water-Quality Assessment Program: Collection and Documentation of Water Quality Samples and Related Data", needs a comma before the year and "Data" in the title should be italicized.	agreed to change
364	207	Ref.		First, fourth, and fifth "Vroblesky" references are missing periods at the end. "Wells" reference is missing a space between the comma and year.	agreed to change
365	208-210	URLs		All three US EPA links are not functioning. Last soil science (itc), second soil classification (JMU), third sediment (USACE), and fifth sediment (nap) links are not functioning. 12th manufacturer's link (Columbia) link is also not functioning. FRTR text in "General" section is highlighted, why?	updating all links
366	212	A.6	1.1	Missing a space between the numbers and "Introduction" in the title. Same issue also for A.6.1.2 title, A.6.1.3 title, A.6.1.4 title, A.6.1.5 title, A.6.2.1 title, A.6.2.2 title, and A.6.2.3 title.	fixed
367	212	A.6	1.2.1	Second sentence, "installation" should be "installations".	could not find error
368	213	A.6	1.2.2	Second paragraph (before mud rotary) should end with a period. Also sentence starting with "Drilling fluids for reverse circulation..." needs a period at the end.	agreed to change
369	214	A.6	1.3	In the section title, change "A.6.1.3Specialized" to "A.6.1.3 Specialized".	fixed
370	214	A.6	1.3.1	Third sentence of this page, "deter-mining" should be "determining". Also, at the end of the second paragraph, there is an extra space before"...and handling".	agreed to change
371	216	A.6	1.3.1	Second full paragpah, third sentence, there is an extra space between "soil" and "coring". Also "8using" should just be "using".	agreed to change
372	218	A.6	1.3	In the 3rd paragraph, change "the data is listed" to "the data are listed". "Data" is a plural noun.	agreed to change
373	218	A.6	1.4	In the section title, change "A.6.1.4Monitoring" to "A.6.1.4 Monitoring".	fixed
374	219	A.6	1.4.3	In the second paragprah of this subsection, there are multiple spacing errors.	agreed to change
375	220	A.6	1.4.5	In well depth, second paragraph, last sentence, there is an extra space between "into" and "the".	agreed to change
376	221	A.6	1.4.6	In the third sentence, there is a space missing between "FLUTe" and "method".	agreed to change
377	227	A.6	1.5.3	In the fourth paragraph of this section, there are spacing issues.	agreed to change
378	229	A.6	2.1	#6 Should be left justified (format issue).	agreed to change
379	229	A.6	2.1	In the section title, change "A.6.2.1Monitoring" to "A.6.2.1 Monitoring".	fixed
380	229	A.6	2.2	In the section title, change "A.6.2.2Monitoring" to "A.6.2.2 Monitoring".	fixed