

# NJDEP TECHNICAL GUIDANCE - RESPONSE TO COMMENTS

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**COMMITTEE:** Soils PA/SI/RI Technical Guidance Committee

**DOCUMENT:** **GUIDANCE FOR SITE INVESTIGATION OF SOIL, REMEDIAL INVESTIGATION OF SOIL, and REMEDIAL ACTION VERIFICATION SAMPLING FOR SOIL**

**START of Comment Period:** Tuesday, April 12, 2011

**END of Comment Period:** Tuesday, May 24, 2011

*Commentors:*

Name	Affiliation
Roger Ferguson	Sadat Associates, Inc.
George Nicholas	NJDEP
Joseph Krulik	Brilliant Environmental Services
George Schlosser	DOL
Suzanne Shannon	NJDEP
Ron Poushti	NJDEP
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John F. Donohue	Fuel Merchants Association of New Jersey

Page	Chapter	Section	Subsecti	COMMENTS	RESPONSE TO COMMENTS
2				Table of contents: Typo on Section 3 - should be "Site"	Revised accordingly
2	3			Table of Contents - line 7, E is missing from the "SITE".	Revised accordingly
2,3				"Table of contents" needs page numbers for the various sections	Revised accordingly

5	1	1st para	3rd line	Replace "Preliminary Assessment" with "Site Investigation, Remedial Investigation and Remedial Action Verification Sampling for Soil".	Revised accordingly
5	1	1		General - The document states that person will be replaced with "investigator". There are at least ten instances in the document where the word "person" has been used when investigator should have been used. This should be corrected in the document.	Based on this comment the document was re-scanned for the use of the word "person". When deemed appropriate, "person" was replaced with "investigator". Please note however, that "investigator" is not used when a specific party is being referenced in the guidance.
5	1	1		The section on the committee should be moved to an acknowledgement page at the beginning of the guidance.	Comments regarding the format of the document are beyond the scope of this technical comment session. No revision required.
6		2nd para	8th line	Need to put section number "1.2" before the title of this section.	Revised.
6	2	0		A verb, I assume "must" should be inserted before the word be.	This section has been revised and the comment is no longer relevant.
7	2	0		Delete the sentence beginning with "Contamination is delineated". Duplication of sentence before it.	Although there is some duplication between the two statements, the sentence that begins with "Contamination is delineated..." is considered to have merit will remain as is.
7	2	0		The two paragraphs on variances should be integrated with the variance section in Chapter 1 (try not to duplicate sections). I suggest that Variances receives a separate section due to its importance.	Although this section discusses alternative approaches to remediation, there is no specific discussion about variances. The reviewer does not see the need to modify the "overview" section as recommended in this comment.

8	3	0		<p>"no further action". This is ONLY soils guidance. In addition to soils, some AOCs may still require groundwater investigations (for examples: dry wells, screened above and below the watertable or leaking USTs below the watertable, that have no soil impacts but have groundwater impacts). Clarify through this guidance that any NFA or RAO decision reached is for SOILS ONLY. Also, correct the reference Soil Remediation Standards (not criteria) as stated in NJAC 7:26D.</p>	<p>The referenced section states "The objective of the soil sampling program in the SI phase is to assess if any contaminants are present in an AOC above any of the applicable soil remediation standards (N.J.A.C. 7:26D) or if no further action (investigation or remedial action) is required." Part of this process is to determine if contaminants noted have impacted groundwater. The typical approach in the SI phase is to first investigate the soil and determine 1) If there is an exceedance of soil remediation standards and 2) If there is a potential for groundwater to be impacted. When it is determined that neither of these two are a concern, then typically no further remediation is required. However, if soil remediation standards are exceeded, or if it is determined that there is a potential for groundwater to be impacted, then further remediation is required. Therefore, it is the reviewers position that the phrasing should remain unchanged.</p>
8	3	2	1	<p>Delete the two sentences starting with, "In most cases" which suggests that SI or RA sampling are not appropriate for USTs. An SI is required when USTs are left in service (such as ISRA investigations or after a PA identifies them as an AOC) or placed within temporary out of service status (NJAC 7:14B 9.1(c)) and USTs which are decommissioned are investigated as part of a remedial action (RA) NJAC 7:26E 6.3.</p>	<p>The reviewer of this comment agrees that the language is unclear. It was determined that this is only informational and was not required, so these sentences were deleted.</p>
8	3	2	1	<p>Second paragraph; 4th sentence (sentence starting with "There may also be instances..."). Long sentence; try and break into 2 smaller ones.</p>	<p>This sentence has been modified.</p>

8	3	3.2	3.2.1	This section states that "In most cases, Underground Storage Tank (UST) investigations will not involve SI phase, as described in Appendix II. Please be aware, however, that the UST remediations are subject to the regulatory and mandatory SI timeframes." The guidance should indicate how, if a UST investigation does not involve an SI phase, the investigator may satisfy the regulatory and mandatory SI timeframes.	Since this sentence was removed this comment no longer requires a response.
8	3	2	2	The discussion of Data Quality Objectives (DQO) and Conceptual Site Model (CSM) are both consistent with the development of the Quality Assurance Procedures Plan (QAPP). The QAPP will still be required by the TRSR at NJAC 7:26E-2.1, and will be the subject of separate guidance being developed by the Department and workgroup.	Citation N.J.A.C. 7:26E-2.2 has been added for reference.
10	3	2	3	A sentence should be inserted after "In those Cases" which is that the alternative method must confirm the presence/absence of contaminants, such as " However, in any case, an ACO must be investigated by collecting samples or other information that would confirm the presence or absence of contaminants."	The reviewer agrees with the comment and has inserted language to clarify the issue indicated within the comment.
12	3	3.2.4	2nd para	The link provided at the end of the paragraph does not open online.	Tested and reset hyperlink. Should work now.
12	3	3.3	3rd para	The link provided at the middle of the paragraph does not open online.	Tested and reset hyperlink. Should work now.

13	3	3		Delete "Incremental Sampling" and discussion related to it. It is impossible to determine the appropriateness of this document (and discussion section) when it does not exist. If this is a viable method, insert an existing reference and discussion here.	Reference to the Incremental sampling guidance has been removed. Inserted language referencing specific options for alternative sampling approaches. Please note, however, that Incremental Sampling Guidance is available as of February 15, 2012.
13	3	3		The installation of soil borings should include a reference to the NJDEP regulations at NJAC 7:9D rather than the statute. This paragraph should also note that a soil boring or license is required for the operator and that the boring needs to be grouted or backfilled immediately upon completion.	The reviewer agrees with the comment that the NJDEP regulation should be referenced and has inserted language referencing the regulation along with a hyperlink to the regulation. With regard to additional language about proper sealing of the boring, since this is already covered in the regulation, the Department did not feel it necessary to include in this section
13	3	3		This paragraph should also recommend that a thorough understanding of the location and thickness of a confining layer should be understood BEFORE any borings or wells are installed into the next aquifer to prevent inadvertent pathways. Double casing may be necessary to prevent downward migration.	The reviewer agrees with the comment and has inserted language indicating the commenter's point.
13	3	3		Give the citation for the OSHA trenching and excavation standard - 29 CFR 1910.<X> and 1926.<X>.	Reference to 29 CFR 1910 and 1926 was added as recommended.
13	3	3		Upon completion of a test pit, the materials removed should be returned in the opposite order they were excavated.	Already in FSPM. Not needed in this document. No revision required.
13	3	3		First paragraph on page: Instead of stating "(ITRC Document due out 2012)" it may be more appropriate to state (ITRC document - due to be issued in 2012).	This sentence was removed altogether.

13	3	3		3rd paragraph/3rd sentence: It states "While the boring is being drilled, it is necessary to identify the subsurface materials, ...". Do you intend for the investigator to log and document soils encountered (for later evaluation and data use) or simply to identify them during drilling?	Although, the investigator should log and document the information about the soils encountered, the intent in this sentence is not to require logging and documenting the information, but rather to indicate a knowledge about the soil characteristics is required in order to determine when the boring installation should be terminated.
14	3	3		Bottom of page: It is stated that "Collection of groundwater samples is addressed in the Department's Groundwater Investigation Guidance". It is probably more accurate to state that <i>investigation</i> of ground water will be address by the Department's Groundwater Investigation Guidance. The actual <i>collection</i> of ground water samples is outlined in the NJDEP Field Sampling Procedures Manual.	The reviewer agrees with the comment and has modified the language as recommended.
14	3	3		What interval should "surface VOCs" be collected? 18-24 inches bgs?	The Field Sample Procedures Manual provides a detailed procedure to conduct soil sampling for VOCs and does not include a specific depth requirement for sampling. Therefore, the guidance committee chose not to include it in the guidance but instead to reference the FSPM.
14	3	3		Any subsurface sampling event must first clear subsurface markout. Include a reference to the dial "811" to obtain markout from the public utilities and note that a private utility location service may be necessary outside of the right of way.	The requirement to conduct mark outs is covered under other state and federal laws. It is also part of most environmental company's policies. It is beyond the scope of this guidance document. No revisions required.

14	3	3		A discussion of sampling soil below the water table should be from the perspective of identifying residual product (e.g. sorbed mass on the matrix). Below the watertable, the emphasis should be on the groundwater quality, and not the soil.	This is "soil" guidance and not ground water guidance. Therefore, the guidance provided here is specifically for soil investigations. The committee believes that this guidance is appropriate as written.
14	3	3	Subsurface	Subsurface Samples-- Section discusses drilling borings to bedrock or to the water table. What about the 10' depth as discussed in 7:26E-3.6(a)4.ii	The 10 foot depth below ground surface has been added to this section.
15	3	3		The six inch increment is antiquated and need to be re-thought. If you are sampling for VOCs only using an Encore, then the postive biased interval may be one or two inches at most. More than 6 inches may be required to collect a TAL/TCL+30 from a GeoProbe boring. The sampling interval should be discussed in the Workplan and QAPP.	The six inch increment is still referenced in the FSPM and it is used in determining vertical location of samples. The guidance states "If more or less than a six-inch increment is sampled because of poor sample recovery or other field logistical problems, provide an explanation in the report." This is specific to use of boring equipment and there is not a need to revise this statement.
15	3	3		The last paragraph should emphasize the development of the QAPP when using field analytical. The sentence should read, "Depending on the DQOs, <b>and the field lab's certifications</b> , it may be necessary to calibrate these methods against <b>fixed certified laboratory analyses.</b> " Emphasis in bold/italics for changed text.	Language added.
15	3	3		Top of page: It is stated that "...drilling through the confining unit is necessary, proper isolation techniques, as mandated by NJDEP regulation, must be employed." Is there a regulatory citation/reference for this?	The regulatory citation of N.J.A.C. 7:9D has been added as a reference.

15	3	3		2nd paragraph from top. It states "If more or less than a six inch increment is sampled because of poor sample recovery or other field logistical problems, an explanation needs to be provided in the report." This is inferring a requirement, which is not allowed in guidance. If a regulatory requirement can be cited for this, it's OK. If not, change the words "needs to" to "should".	Language modified by removing the word "needs".
16	3	4		The full title USACE engineering pamphlet, "MUNITIONS AND EXPLOSIVES OF CONCERN (MEC) SUPPORT DURING HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND CONSTRUCTION ACTIVITIES" should be referenced with the pamphlet number. Other USACE guidance is also applicable.	Agree with comment and added the full title of the document.
16	3	4		Last sentence of section sounds like you should call the DEP prior to 911 when immediate danger exists. Change "911 can always be called in addition to DEP" to "911 can always be called prior to the DEP Hot Line..."	This language has been modified to clarify 911 is to be called when an emergency exists.
17	3	5		In the first sentence of the third paragraph ("The locations of the sampling locations...), consider changing to "The locations of the sampling points..."	The language in this section has been modified to active language and as a result this phrasing has been modified.
17	3	5		The word "must" is used (The locations of the sampling locations must be recorded). In guidance, If not specifically referring to a rule or regulation, use the term "should".	This language has been modified and "must" is no longer used.

17	3	5		A discussion of the different soil classification systems and their uses/limitations would be helpful. Recommend consistency of a single system through out a project.	Language has been added which references the FSPM for further information on soil classification systems and additional language was added to recommend the use of a single system throughout a remediation.
18	3	5		General - The reference to the FSPM is appropriate, however, the commentator would just like to point out that for consistency between the two documents, repeating information from the FSPM should be limited so inconsistencies do not "creep" into the guidance during revisions to either document.	Agree with comment and will attempt to minimize repeating language within the FSPM in this guidance document.
17	3	6		Change the reference from "full scan" to "TAL/TCL + 30" to be consistent with the TRSR.	full scan has been replaced with "TCL+TICs/TAL, hexavalent chromium, plus petroleum hydrocarbons, and pH".
18	3	6		Define "full scan", does this mean TCL/TAL, or GC/MS, does it include pesticides/herbicides/pcbs/others, parameters? In addition, the phrase which should be deleted. This information should be in the RI phase section, the SI is only to determine the need to delineate identified contaminants.	full scan has been replaced with "TCL+TICs/TAL, hexavalent chromium, plus petroleum hydrocarbons, and pH".
18	3	6	1-2	These sections read like regulation, not guidance. The references to sample frequency reduction should be discussed as a deviation from guidance that requires documentation of the investigator's rationale in the next key report.	The beginning of section 3-6 references sampling frequency and the use of professional judgement when appropriate to deviate from the recommendations within the section. Further language discussing deviation is not required.

18, 19	3	6	1	Circumference and perimeter are synonyms. A perimeter is a general term for any object and a circumference is the specific term for a circle perimeter. The guidance calls for one soil sample for every 100 feet of perimeter and three samples for every 100 feet of circumference. Please clarify.	Agree. Section on site investigation of above ground tanks has been modified to allow for professional judgement.
19	3	6	1	ASTs over paved surface - First paragraph is confusing. Should just state "If evidence of a discharge is identified (soil staining, stressed vegetation, historic aerials, documentation, etc) or is unknown, soil samples should be collected as below:"	Agree. Section on site investigation of above ground tanks has been modified to allow for professional judgement.
19-20	3	2.6	3.6.2	The exact location of below-grade piping is not known with certainty. Attempting to sample immediately beneath or within 2 ft of active piping may not be feasible, and/or may present a safety hazard and expose the investigator to a high risk of causing a discharge and/or possible personal injury. Rather than indicating that samples must be collected no farther than 2 ft from the piping, please include a qualifying statement to allow the investigator to use their best professional judgement in how closely they may safely collect samples.	The use of professional judgement is discussed in the preamble of the section and the use of alternative approaches is already allowed, therefore no revision was made to this section based on this comment.
20	3	6	2	The TRSR currently requires sampling only if integrity of the piping is not established, e.g. via video inspection. NJAC 7:26E-3.9(d)1iii. Whys is this now more restrictive?	The commenter is referring to drainage systems 3.9(d)iii and not below grade piping which is 3.9(a)5. The guidance is not more restrictive as was suggested. No revisions required.

21	3	6	2	2cnd Paragraph, last sentence - "Piping lengths should be determined beyond the tank excavation". This sentence should be modified as it only applies to UST systems. Underground Piping may be associated with AST's (no excavations), process vessals, etc. Clarify.	This sentence was removed to reduce confusion and to allow for professional judgement to determine piping length.
21	3	6	4	Change the reference from "full scan" to "TAL/TCL + 30" to be consistent with the TRSR.	Modified pursuant to requirements in NJAC 7:26E-2.2 "TCL plus TICs/TAL, hexavalent chromium, petroleum hydrocarbons, and pH.
21	3	6	4	The word "must" is used ( <i>To prove otherwise, sampling consistent with inactive rail lines section below, must be conducted.</i> ). In guidance, If not specifically referring to a rule or regulation, use the term "should". If referring to a regulation, cite the regulation.	Agree with comment. Language has been modified.
21	3	6	5	In the sentence " <i>Pads should have a minimum of one sampling location per side adjacent to exposed soil for sides up to 30 feet long; for sides greater than 30 feet long, one additional sample location is required for each additional 30 feet of length.</i> " The words "is required" can only be used if it refers to a specific regulation. If so, it needs to be referenced/cited. Otherwise use "should".	Agree with comment. Language has been modified.
22	3	6	4	Inactive Rail Lines - If Rail Lines are left in place, but abandoned (not active), is sampling required? or is any Rail Line still in place considered active? Clarify.	Abandoned means removed or intended to be removed and this is clearly stated in this section. No additional clarification is needed.

22	3	6	4	What is the definition of full scan analysis (organics)?	Language modified pursuant to requirements in NJAC 7:26E-2.2 "TCL plus TICs/TAL, hexavalent chromium, petroleum hydrocarbons, and pH.
22	3	6	6	"Distinct layers of sediments thicker than six inches, as evidenced by color, particle size, or other physical characteristics, should be sampled individually." Should this not also apply to all soil samples, and not just sediment samples in lagoons, etc.?	This section is about sediment sampling not soil sampling. It is not appropriate to talk about soil sampling here as it is covered elsewhere (General SI). No revisions.
23	3	6	7	Roof Leaders-- should sample location be classified as "surficial" sample location?	Typically a surficial sample would be obtained, but not always. Leaving it general provides latitude to obtain appropriate sampling and use professional judgement. No revision required.
24	3	6	8	The exemption to sampling septic tanks at residential dwellings was deleted (without notice or comment) from the 11/4/09 revisions to the TRSR. This should be reinserted into the regulations.	This a TRSR comment and should be made as part of comments provided during the TRSR comment period. No revisions to the guidance are necessary.
24	3	6	7	Storm Sewer and Spill Containment Collection System - " samples should be collected <b>at</b> ", replace at with " <b>within</b> ".	Agreed. "at" has been replaced with "within".
25	3	6	8	Below Wastewater Treatment Collection Systems. Delete sentence "The primary purposes of these samples...". Actually, this is not the primary purpose of an SI for these structures. In most cases, the analysis of sludge in the tank gives you an historic view of contaminants that have been discharged into the system. All samples should be collected prior to any cleaning of the structures.	Agreed. The sentence does not belong in the SI guidance and has been removed.

26	3	7		Should refer to the process for conducting a Baseline Ecological Evaluation (BEE) in accordance with the Ecological Evaluation Guidance.	Language modified to provide appropriate guidance document references
26	3	3.7	3rd para	Online links for Receptor Evaluation and Ecological Evaluation should be provided here.	Hyperlinks created.
26	4	4	4th para	The citation provided is general and broad. Needs more specific citation such as N.J.A.C. 7:26E-3.10	This more exact reference was added to the section.
27	4	1	2	Change- "collect a minimum of 8 to 10 background soil samples" to "minimum of 8" only	The current Tech Rule, amended February 2011 requires the collection of 10 samples for a natural background investigation. This section has been changed to indicate a minimum of 10 samples should be collected.
28				Between the SI and RI sections... Should there be a section about reporting a discharge to the Hotline after obtaining results from the SI phase which indicates exceedances of the SRS?	New section has been added as recommended.
29	5	5.1		Please revise the last sentence to read "In this circumstance the single phase remediation approach may be more appropriate.	Agree. Language has been modified.
29	5	5.2	3rd Bullet	The meaning of this bullet is not clear. It appears to contain some errant text.	Agree with comment. Language has been modified to attempt to clarify intent.

30	5	5.2	3rd Bullet	All text beyond the first sentence of this bullet addresses treatability studies, not soil investigation. It is outside of the scope of this guidance and should be removed from the document.	The TRSR requires, as part of the Remedial Investigation, that data be obtained which goes beyond that of just delineating the contamination to standards. Some of these activities, although not directly related to soil, do have some direct or indirect involvement with the remedial investigation of soil and it was the guidance committee's position that they add to the guidance document. Therefore, these section will remain in the guidance document.
30	5	5.2	4th Bullet	The text of this bullet addresses evaluation of soil data in comparioson of ecological criteria, not soil investigation. It is outside the scope of this guidance and should be removed from the document.	Commenter is referring to the 7th bullet. RI for soils goes beyond just delineation and comparison to ecological criteria is appropriate. See above response to comment.
30	5	2		The collection of samples to support the analysis of potential remedial alternatives, e.g. RASR/FS activities, is beyond the scope of the RI phase. NJDEP has previously agreed that RI is complete upon the completion of delineation of all impacted media in three dimensions.	Although the primary intent of the remedial investigation is to delineate the contamination to the standard, the person conducting the investigation will typically know after the first round of RI sampling whether or not a Remedial Action will be necessary. Unless the Remedial Action will be a simple cut and scrape removal, there will be a need for additional information in order to ascertain the viability of different remedial actions. In most cases, it is more cost efficient and more time efficient to collect this information during the RI rather than waiting until the RI has been completed. It is for this reason that this information is provided in the guidance and will remain in the guidance.

30	5	2	<p>The bullet states: "<i>• Identify the migration paths and actual or potential receptors of contaminants. A remedial investigation of soil could lead the investigator to other contaminated media such as air, bedrock, sediment, ground water, surface water, and buildings at a contaminated site. Delineation of the extent of contamination noted in these media would also be required.</i>" This likely refers to a regulatory requirement. If so, provide the citation (i.e. As per N.J.A.C. 7:26E 3.6?, delineation of the extent of contamination noted in these media would also be required).</p>	<p>The identification of migration paths is a requirement in the existing TRSR at NJAC 7:26E-4.1(a). Reference was added.</p>
30	5	2	<p>Goals - second indent "Determine general...", replace with general with specific, since the purpose of an RI is to get specific information to allow for Remedial Action evaluations.</p>	<p>The full phrase is "Determine the general surface and subsurface characteristics of the site, including, without limitation, the depth to ground water." It was determined that, although this information may be integral part in meeting the objective of the RI, it is not necessarily a goal of the RI and was removed.</p>
31	5	3	<p>The statement regarding the need to place a deed restriction on soils exceeding the IGW SRS contradicts the TRSR, Remedial Action Permit for Soil, and the IGW FAQ.</p>	<p>The guidance actually refers to what needs to be done when a deed restriction is determined as the course of action not when there is a need for a deed notice. In addition, this language was extracted directly from the TRSR and no contradictory statements were noted in the Remedial Action Permit for Soil Guidance or in the IGW FAQ. However, language has been modified for clarification.</p>

31	5	5.3		Regarding delineation for the purpose of placing a Deed Notice, this section states that "...the horizontal and vertical delineation of the soil contamination may be limited to the applicable restricted use standard or the applicable ground water impact soil cleanup criteria, whichever is lower." A Deed Notice does not apply to soil above the ground water impact soil cleanup criteria, so delineation to this standard for the purpose of a Deed Notice is not appropriate. Only the applicable restricted use standard should apply to delineation for the purpose of a Deed Notice.	As implied in this comment, a deed notice is not used as a vehicle to permit soil contamination to remain at concentrations above the impact to groundwater standards. What is stated is that there is some relief to delineation by permitting the restricted use soil cleanup standards be used as opposed to the unrestricted use soil cleanup standards. However, regardless of the use of the deed notice, there is no relief from the requirement to delineate to the impact to groundwater standards. This section was revised to attempt to clarify this point.
31	5	4	1	The word "must" is used ( <i>Once it has been determined that contamination exists in soil above a remediation standard(s), the extent of the contamination must be determined</i> ). In this case, the need to delineate the horizontal and vertical extent of contamination is a tech reg requirement, isn't it? If so, cite the regulation. If not, use "should".	Agree. A reference to the appropriate citation within the TRSR has been inserted.
31	5	5.4	5.4.1	The first sentence, "Once it has been determined that contamination exists in soil above a remediation standard(s), the extent of the contamination must be determined," should be deleted. The purpose of this document is not to put forth requirements. Rather, the purpose of this document is to provide guidance on HOW soil investigation should be conducted.	Although the primary purpose of this guidance is to indicate HOW to conduct a soil investigation, the guidance is based on the regulatory requirements and reference to such requirements will actually assist in guiding the reader to conduct the appropriate activities to complete a soil investigation along with meeting the regulatory requirements on which they are based.
32-33	5	4	1	The text of this section should also include references to applicable USEPA and ITRC guidance.	The links to the appropriate documents have been provided.

33	5	4	1	Composite Sampling-- Possibly include an example of using composite sampling for disposal purposes	Language has been added as suggested.
34	5	4	1	Composite Sampling - "incremental sampling" and "department attainment guidance document". Definition of "incremental sampling" and Citation of this document? If they do not exist, do not include in guidance.	<a href="http://www.itrcweb.org/Documents/TeamResources_MIS/ISM_Project_Introduction_7-09.pdf">Incremental sampling is a structured sampling protocol that reduces data variability and increases sample representativeness.</a>  <a href="http://www.itrcweb.org/Documents/TeamResources_MIS/ISM_Project_Introduction_7-09.pdf">http://www.itrcweb.org/Documents/TeamResources_MIS/ISM_Project_Introduction_7-09.pdf</a>
34	5	4	4	Triad Approach- suggest adding department contact information when engaging the DEP in an LSRP Triad Approach project	The specific person that is to be contacted will vary based on the specific situation and the typical situation will most likely not require input from a specific Department case manager. Therefore, there will not be a contact person per se that we can point to in this document. No revision required.
34	5	4	3	Delineation of soil impacts below the water table should not be required other than to identify areas where residual product may represent a source area. There is not a completed pathway for direct contact in this scenario.	The TRSR requires that soil contamination be delineated below the water table for direct contact. No revision required.
35	5	4	4	Second paragraph - the use of the wording LSRP's in the description. Can "investigators" not use the triad approach? And if they can, do they (and LSRPs) have to engage NJDEP and stakeholders by receiving approvals prior to implementing? Clarify.	If the work is being conducted without the oversight of an LSRP, then it would be under Department oversight and therefore, Department would be involved and would need to obtain approval prior to implementing. No revisions required.

35	6	1		In the first paragraph under Section 6.1, the last sentence states " <i>Whereas, if the contaminated soil is being treated then post-remediation confirmatory <u>sampling will also be required</u> in the impacted zones that were remediated to ensure the remediation was effective.</i> " If there is a regulatory requirement for post remedial sampling, provide the citation. Otherwise you can't use the word required.	Agreed - language has been modified.
35	6	6.1		Section 6 of the remedial action guidance document appears to deal only with remedial action verification sampling for soil. It does not discuss or provide reference to the various remedial technologies available. Online references should be made available for the various remedial technologies.	The purpose of this section is to lay out soil sampling strategies that will provide data to ensure that the remedial action has appropriately remediated the soil contamination. <b>References can be made to the attainment guidance document</b> , but referencing various remedial technologies via internet links is beyond the scope of this technical guidance document. Title of section has been modified to reflect intent.
35	6	6.1	2nd para	The second paragraph addresses compliance requirements for remedial actions, which is outside the scope of this document. Please remove this paragraph.	Agree - paragraph removed.
35	6	6.1	2nd para	Online links should be provided here for preparation of remedial action workplans, remedial action permits, etc.	Agree - But paragraph has been removed pursuant to above paragraph
35	6			The title provided for Section 6 is not consistent with the title provided for this section on Page 1.	Agree - Title of Chapter six has been modified to reflect purpose of chapter.

35-36	6	6.2		This section addresses application of institutional controls when concentrations are above an unrestricted use standard. This topic is outside the scope of this document, so this section should be removed.	Agree - section deleted.
35	6	2		Emphasize that the Remedial Action Permit for Soils, institutional controls, and, if necessary the engineering controls are only required where the soil contamination exceeds the residential direct contact SRS, or the non-residential SRS, respectively.	This section has been deleted.
36	6	6.3		Whether or not a single phase remediation is "acceptable" at a given site is outside the scope of this document, so this section should be removed.	Language in this section has been modified to refer the the confirmation sampling when conducting single phase remediations.
36-37	6	4	1	This section reads like regulation. Emphasis on the professional's judgement rather than deviation from the guidance should be provided.	The reader is always able to use professional judgement. This is guidance and provides general guidelines on conducting verification sampling. No revisions required.
38	6	4	1	The sentence "Voalitle organic samples should taken", replace with "should be taken". The sentence " For excavations open more than two weeks..." the reference to the SI guidance docuemtn should be cited as what specifically the author is looking for. I assume that after two weeks, the samples will need to be collected at depth and field screened for biasing.	Section on Volatile organic samples has been deleted.

38	6	6.4	6.4.2	<p>The first paragraph on the page, last sentence indicates that for confirmation of in-situ remediation, a minimum of two rounds of post-remedial sampling should be conducted to verify that the treatment met its objective. Just one round of post-remedial soil sampling has been required in the past. Two rounds should not be necessary.</p>	<p>Sentence modified to relate the number of rounds of verification sampling to the technology and professional judgement.</p>
38	6	6.4.3	3rd para	<p>Many of the online links and citations provided are general and broad. More specific links and citations need to be provided. For example in section 6.4.3, etc.</p>	<p>We attempt to link the reader to the general location of the document since in many instances this provides the reader with other resources. No revision required.</p>
				<p>The first six chapters of the document (ie the main document) do not appear to make any mention of vapor intrusion evaluation and guidance, soil gas data, etc. Vapor intrusion is first mentioned in section 3.2, Page 51 of the Appendix associated with landfills. There are contaminated sites that are not landfills but have vapor intrusion issues due to soil contamination.</p>	<p>There are no VI triggers in soil so there is no tie to vapor intrusion and therefore the reason that any reference is required. No revisions needed.</p>