Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
1	Executive Summary	General Comment	An Executive Summary is intended to be a brief summary of the Feasibility Study (FS). Please revise and condense the Executive Summary to the salient points.	Executive Summary has been revised based on EPA comments.	Comment not fully addressed. Refer to revised FS text
2	Section 1	General Comment	Please include a reference to EPA's guidance on conducting a FS and EPA's role in the process. Suggested language for the Introduction is provided below: The Feasibility Study (FS) was prepared in accordance with EPA's Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final, October 1988 (OSWER Directive Number 9355.3-01) (hereafter referred to as the RI/FS Guidance). The FS contains remedial alternatives that have been evaluated by EPA as a basis for determining an appropriate course of action for Riverside in order to protect human health and the environment. The full reference for the RI/FS guidance is: USEPA. 1988. Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA. Interim Final. EPA 540/G-89/004. Office of Emergency and Remedial Response, Washington, DC. October 1988.	Suggested language added. Reference added.	Response acceptable.
3	Section 1	Page 1-1, Paragraph 5	Please revise last sentence and append the following new sentence: "USEPA approved the responses to the DASRAT Memorandum on February 27, 2020. The DASRAT Memorandum was not revised, rather EPA requested that the Feasibility Study be developed with recognition of EPA's comments on the DASRAT." This comment also applies to Section 5, Page 5-1, Paragraph 1; please incorporate the change globally in the FS.	Text revised to reflect February 27, 2020 USEPA letter. "USEPA conditionally approved the August 2019 DASRAT memo on February 27, 2020 with the condition that USEPA comments be incorporated into the FS."	AM: Response acceptable
4	Section 2.2	Page 2-2, Bullet 1	We could not locate information in the RI confirming that Baron Blakeslee occupied Building #7 as a laboratory. Please clarify why this information was provided in the FS, but not included in the RI.	The information was provided in RIR. RIR Appendix A at PDF page 56 is the deed notice identifying Baron Blakeslee "QC Lab" in Building 7. That deed notice is referenced in RIR at Lot 63/page 1-20.	Response acceptable
5	Section 2.2	Page 2-2, Bottom paragraph	The FS states that "Since 1971, at least 12 documented spills and releases have occurred at the Site, and the Site is subject to at least seven New Jersey Industrial Site Recovery Act (ISRA) remediation cases under NJDEP environmental regulations." Please check the accuracy of the totals in this sentence because the Site Characterization Summary Report cites 11 historic spills (not 12), and only six ISRA cases are listed in the RI (not 7).	FS changed to agree with the SCSR as mentioned in the comment. At least 11 documented spills and releases and 7 ISRA cases (per SCSR).	Response acceptable
6	Section 2.3	General Comment	There are several statements in Section 2.3 (that start with the phrase "As of November 2019") of the FS that were not included in the RI. Please clarify the source of this information and explain why it was not provided in the RI.	Text is based on observations after completion of the RI field work and is intended to update the reader on each lot's status. Text changed to "Based upon November 2019 observations…. "	Response acceptable
7	Section 2.3.2	Page 2-4, Paragraph 1	The following statement in the FS was not included in the RI: "It is assumed that this NJDEP-led remediation is closed." Please clarify the source of this information and explain why it was not provided in the RI.	Although the assumption reflecting lack of documentation is reasonable, the sentence was removed.	Response acceptable
8	Section 2.3.7	Page 2-9, Paragraph 1	The following statement was included in the FS but not the RI: "The status of the case is uncertain based on NJDEP files." Please clarify the source of this information and explain why it was not provided in the RI.	See comment 7.	Response acceptable
9	Section 2.3.11	Page 2-14, Paragraph 3	The following statement was included in the FS but not the RI: "The status of the ISRA remediation of this lot is unclear based on NJDEP records." Please clarify the source of this information and explain why it was not provided in the RI.	See comment 7.	Response acceptable
10	Section 2.3.16	General Comment	Please change the title of Section 2.3.16 to read "Existing Institutional Controls and Engineering Controls" and move to a new main section after "Previous Investigations" (for example, insert as new Section 2.6 and renumber subsequent sections accordingly).	Title changed and the commenter's preference on format accommodated.	Response acceptable
11	Section 2.3.16	Page 2-18, Lot 70	The 2010 historic fill CEA on Lot 70 also included benzene, according to the RI (please refer to Section 1.4.15 of the RI). Please revise the text accordingly or provide additional information.	FS revised by adding benzene.	Response acceptable
12	Section 2.5	Page 2-21, Paragraph 1	The text summarizes comparisons of detected chemical concentrations to Project Action Level (PALs) made in the RI. Please define the PALs.	It is assumed that the comment refers to what the PALs were based on and not acronym definition. PALs basis added.	Comment not fully addressed. Refer to revised FS text

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
13	Section 2.5.2	Page 2-21, Paragraph 3 and 2-22, top of page	In response to DASRAT Comment EPA 27, PPG committed to including the following text in the FS: "Monitoring wells and temporary well points in the vicinity of the USTs did not have a measurable thickness of LNAPL, but had elevated BTEX levels that are potentially indicative of petroleum-based material." Please ensure that references to NAPL in monitoring wells include the text above and are consistently described throughout the FS.	To be consistent with the RIR, text added: "Monitoring wells and temporary well points in the vicinity of the USTs did not have a measurable thickness of NAPL, but they did have elevated BTEX concentrations, which are potentially indicative of petroleum impacts to groundwater."	Comment not fully addressed. Refer to revised FS text
14	Section 2.5.7	Page 2-26, Paragraph 1	Please define the PALs and state whether they are residential or industrial screening levels. Please revise the text to define the exposures associated with the PALs.	See comment 12.	Response acceptable
15	Section 2.5.7	Page 2-26, Paragraph 1	Please include a discussion of shallow groundwater as a potential source of subsurface vapor intrusion into current or future buildings, noting: (1) the results of the vapor intrusion modeling conducted in the Baseline Human Health Risk Assessment (BHHRA) that indicated no unacceptable health risks/hazards, and (2) comparison of maximum shallow groundwater concentration to NJDEP's Vapor Intrusion Screening Levels (VISLs) for groundwater nevertheless identifies benzene, 1,3-dichloropropene (total), ethylbenzene, trichloroethene, vinyl chloride, and total xylenes as contaminants detected at concentrations that warrant evaluation in the FS.	Section 2.5.7 is a summary of RI results and accurately reflects air results. No changes. VISLs are TBC and discussed in Section 3.	Response acceptable
16	Section 2.7	Page 2-27, Paragraph 1	Please delete the word "conservative" as this descriptor is inconsistent with evaluation of reasonable maximum exposure (RME).	Text has been updated.	Response acceptable
17	Section 2.7	Page 2-27, Paragraph 2	Please clarify that unacceptable human health risks were for current and future use scenarios.	The referred-to paragraph discusses current land use scenarios. The subsequent two paragraphs discuss future land use scenarios. We have revised text in the fifth paragraph to address both current and future scenarios.	Response acceptable
18	Section 2.7	Pages 2-27 to 2-28, Embedded Table	(a) Please add the following receptors for the indicated scenarios below to the table, based on exceedance of the soil Lead criterion <u>or</u> the predicted blood lead (PbB) level: • Current, Lot 63, Lead: Utility worker (see BHHRA Table 6-8) • Current, Lot 64, Trespasser, Lead: outlier locations • Current, Lot 70, Lead: Indoor worker (see BHHRA Table 6-6) and utility worker (see BHHRA Table 6-8) • Future, Lot, 63, Lead: Utility worker (See BHHRA Table 6-45) • Future, Lot 70, Lead: Indoor worker (see BHHRA Table 6-38) and utility worker (see BHHRA Table 6-45) (b) For Current, Lot 64, trespasser and Future, Lot 64, outdoor workers and trespassers, it is not clear why only the "hot spot" at boring B-75 is noted since a number of other Lead hot spots are discussed in the BHHRA. Please refer to BHHRA Section 6.3.2.1 "Hot Spots, STEP 5: Hot Spot Analysis Results," where two other borings (B-74 and B-70) are specifically noted and should be added to the table. In addition, please discuss how these points were identified in an outlier analysis, and do not necessarily represent "hot spots."	The table is revised to indicate either risk or action level exceedances. Based on the BHHRA, outdoor worker and trespasser are only exposed to soil between 0-2 ft-bgs. B-74 (3-4') and SB-70 (5-7') were collected at depths greater than 2 ft-bgs. If the site is redeveloped, subsurface may be brought to the surface. Although prolonged exposure to these three points in isolation by the outdoor worker or trespasser is not anticipated, they are retained for future evaluation in the FS.	(a) RC: Response acceptable (b) Comment not fully addressed. Refer to revised FS text.
19	Section 2.7	Page 2-28, Last paragraph	Please include a discussion of the ecological receptors and the Contaminants of Potential Ecological Concern (COPECs) identified in the Screening Level Ecological Risk Assessment (SLERA).	Although Section 2.7 is a SLERA summary directly from RIR summary, the FS section summarizing the SLERA has been expanded to include this information.	Comment not fully addressed. Refer to revised FS text
20	Section 3	Page 3-1, Paragraph 1	(a) Please clarify which New Jersey Remediation Standard is being referenced. According to Table 3-3, the nonresidential direct contact soil standards are being used. (b) Please include NJDEP Maximum Contaminant Levels as groundwater Applicable or Relevant and Appropriate Requirements (ARARs) and reevaluate the ARAR exceedances in Table 3-4. (c) Please change the word "consisting" to "including" in the sentence: "In addition, concentrations of COPCs in soil and groundwater were compared to numeric ARARs, consisting …"	(a) Text has been updated. (b) NJDEP Maximum Contaminant Levels were considered in selecting GW ARAR and FS clarifies this (see Section 3 and 3.4.2 in report). (c) Text has been updated.	(a) Response acceptable (b) Response acceptable. (c) Response acceptable
21	Section 3.1	Page 3-1, Paragraph 1	Please revise sentence to read: "Several contaminants were identified as COPCs in the BHHRA and COPECS in the SLERA ~~RIR~~. These COPCs and COPECs pose unacceptable human health and ecological risks under current and/or future use scenarios and are addressed in the FS and are listed below. Identification of other COPCs ~~respect to~~ by comparison with ARARs is provided in Section 3.4."	Text has been updated.	Response acceptable (note alternative text used in FS)

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
22	Section 3.1.1	Page 3-1, Paragraph 1	Please revise the following sentence to read: "~~Allocation~~ Defining the fraction of lead concentrations associated with ~~to~~ natural conditions, historic fill, or a release(s) was not discussed in the RI ~~an RI objective~~." This comment also applies to Section 3.7.2 under Lead, Step 3 on Page 3-14 and Section 5.3.5 on Page 5-9.	This sentence is from the approved RIR (Section 7.2) and is accurate concerning the RI objective. This response also applies to 3.7.2 and Section 5.3.5.	Response acceptable; however, Section has been revised
23	Section 3.1.1	Page 3-1, Paragraph 2	Please remove the phrase "and is carried through to the FS", here and throughout the FS, because this report is the FS. Please apply this comment globally to the FS text.	Text has been updated.	Response acceptable; however, Section has been revised
24	Section 3.1.1	Page 3-1, Paragraph 3	Section 3.1 (overall) is intended to be a summary of unacceptable risk; therefore, please remove the sentence "Copper concentrations at the Site did not exceed the ARAR (see Section 3.4)." Please keep all discussions pertaining to ARAR comparisons in Section 3.4. This comment also applies to Section 3.1.4 (page 3-1) when discussing sewer water ARAR exceedances.	Text has been updated.	Response acceptable; however, Section has been revised
25	Section 3.1.1	Page 3-1, Paragraph 3	Please revise the following sentence to read: "Remedial action to address risks due to lead ~~will~~ would also address human health risk and potential ecological risks due to copper."	Text has been updated.	Sentence deleted; comment addressed
26	Section 3.1.2	Page 3-1, Paragraph 1	As discussed during the November 4, 2019 conference call between EPA and PPG, please revise the discussion on groundwater to acknowledge that the aquifer is classified by NJDEP as Class IIA, regardless of whether the groundwater is currently being used as a potable source. This comment also applies to Section 3.4.2, Page 3-5, Paragraph 1; Section 3.5.3, Page 3-8, Paragraph 1; and elsewhere in the FS (please implement the comment globally in the FS).	Text revised.	Comment not fully addressed. Refer to revised FS text
27	Section 3.1.2	Page 3-1, Paragraph 1	(a) Since Section 3.1 (overall) is intended to be a summary of unacceptable risk, please list the groundwater COPCs for the hypothetical potable use scenario. (b) Please revise the following sentence to read: "However, hypothetical future potable use of groundwater is presented in the BHHRA for the purpose of ensuring that the FS ~~includes a remedial action to prevent potable use~~ includes one or more alternatives that are protective of this pathway."	(a) A table has been created which summarized the groundwater COPCs based on the BHHRA. (b) Text has been updated to match the BHHRA: However, hypothetical future potable use of groundwater is presented in the BHHRA for the purpose of facilitating development of appropriate institutional controls.	(a) Response acceptable. Table 3-1 updated (b) Comment not fully addressed. Refer to revised FS text.
28	Section 3.1.4	Page 3-1, Paragraph 1	Please add the following information per the DASRAT that "Nine, 4-inch diameter steel pipe terminations were identified in Manhole 8. Only one of the pipes (Line L) is not blocked. Cleaning of the manhole and the one unplugged pipe would generate an estimated 300 gallons (approximately 1.5 cy) of liquids."	Description of Manhole 8 has been added to Section 3.1.4.	Response acceptable
29	Section 3.2	Page 3-2, Paragraph 1	Please revise the following sentence to read: "ARARs and numeric PRGs are components of the RAOs." Please note that TBCs may be used to develop PRGs in the absence of ARARs.	Text has been updated.	Response acceptable

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
30	Section 3.2	Page 3-2, Paragraph 2	Please revise the following paragraph to read: "The national goal of remedy selection is to protect human health and the environment, to maintain that protection over time, and to minimize untreated waste (40 Code of Federal Regulations [CFR] Part 300.430 of the NCP ~~(55 FR 8846)~~). In accordance with Section 121(d) of CERCLA, 42 U.S.C. § 9621(d), site remediation must comply with all applicable or relevant and appropriate laws, regulations, and standards promulgated by the federal government, except where waived. Substantive state environmental and facility siting requirements must also be attained, under Section 121(d)(2)(c) of CERCLA, 42 U.S.C. § 9621, if they are legally enforceable and consistently enforced statewide, and if the state ~~ARAR~~ standard is more stringent than the federal ~~ARAR~~ standard. If a state is authorized to implement a program in lieu of a federal agency, state laws arising out of that program provide the "applicable" standards. However, federal standards of that program that are more stringent may be considered "relevant and appropriate." TBCs are non-promulgated guidance and policy documents, advisories, and other criteria that do not have the enforcement status of ARARs but support the development and evaluation of remedial alternatives. While TBCs are not promulgated or enforceable, TBCs may be consulted to interpret ARARs or to establish PRGs when ARARs do not exist for particular contaminants or do not sufficiently eliminate identified risks. Section 121(e) of CERCLA, 42 U.S.C. § 9621, also codified in the NCP at 40 CFR Part 300.400(e), exempts any response action conducted entirely on site from having to obtain federal, state, or local permits, where the action is carried out in compliance with Section 121. Remedial actions conducted on CERCLA sites need to comply only with the substantive aspects of laws that qualify as ARARs and not with the corresponding administrative requirements."	Text changed.	Response acceptable
31	Section 3.2	Page 3-3, top sentence on page	The FS states that "For the purpose of this FS, chemical specific ARARs include New Jersey soil and groundwater standards (Table 3-1)." Please revise this sentence and Table 3-4 to include USEPA MCLs and NJDEP MCLs.	USEPA MCLs and New Jersey's Drinking Water Standards added to text.	Response acceptable
32	Section 3.2	Page 3-3, Last paragraph in section	Please add the following text to the FS regarding Green and Sustainable Remediation (GSR): "In August 2016, USEPA issued a memorandum titled "Consideration of Greener Cleanup Activities in the Superfund Cleanup Process" (EPA, 2016) that provides guidance on the use of GSR in the CERCLA site remediation process. The memorandum states that "In addition to ensuring that CERCLA response actions are protective of human health and the environment, the Agency may consider a number of factors when evaluating remedial action alternatives, including response actions' potential environmental impacts, mitigative measures' effectiveness and reliability during implementation, and innovative technologies' use."	Text added.	Response acceptable
33	Section 3.4	Page 3-4, Paragraph 1	(a) Please replace the first sentence with the following: "This section compares contaminants that were identified at the site, but that do not necessarily give rise to unacceptable risk, to ARAR values to identify any additional COPCs for further evaluation in the FS." (b) There is more than one chemical specific ARAR for each COPC. Please provide rationale on why the NRDCSRS values were selected for soils and the NJDEP GWQS and MCLs were selected for groundwater. (c) The FS states that "New Jersey Non-Residential Direct Contact Soil Remediation Standards (NRDCSRS) are soil ARARs (the two are used interchangeably below) …." Use of both "ARAR" and "NRDCRS" interchangeably is confusing. Please use consistent terminology. (d) Regarding groundwater ARARs, please revise sentence to read that the lowest values among the NJDEP GWQS, NJDEP MCLs, and USEPA MCLs are groundwater ARARs. (e) In reference to Comment 34, please clarify how To Be Consider (TBC) guidance is being implemented in the FS. For example, NJDEP Impact to Groundwater Contact (N.J.A.C. 7:26D) guidance is listed as a chemical-specific TBC in Table 3-2; however, it is unclear how these screening values are being applied in the evaluation.	(a) Text revised. (b) Text revised (c) Text revised (d) Text revised (e) Text revised	Comment not fully addressed. Refer to revised FS text
34	Section 3.4	Page 3-4, Paragraph 1	New Jersey Impact to Groundwater Standards are also chemical-specific ARARs for soil and need to be included in the soil remedy. https://www.nj.gov/dep/srp/guidance/rs/igw_intro.htm	NJ IGW standards was added as a TBC as listed in Table 3-1.	Refer to Comment 33

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
35	Section 3.4	Page 3-4, Paragraph 2 and Table 3-3	The FS blends certain aspects of the EPA CERCLA process and the NJDEP Site Remediation program, resulting in an incorrect delineation of soil contamination on the Site. The footprint of a CERCLA remedial action is based on single-point compliance to PRGs and ARARs; compliance averaging may be used in the future to determine if the remedy met remedial goals. Please remove the discussion of "compliance averaging" in Section 3.4 and Table 3-3 and revise the footprint of the CERCLA remedial action using single-point compliance. Please refer to Comment 97 and the figure prepared by EPA, which shows soil boring locations where soil contaminant concentrations (regardless of soil depth) exceed the PRGs and/or ARARs (i.e., NJDEP NRDCSRS). The footprint of the CERCLA remedial action is then delineated to the nearest soil boring with no exceedance or the boundary of an existing building. It should be noted that NJDEP requires that soil assessments focus on specific areas of concern (areas of known or suspected discharges based on RI information) and discourages the use of site-wide averages in comparison to soil remediation standards unless it is known or demonstrated that the "discharge" occurred site-wide. Please revise the FS accordingly.	Delineation was revised.	Comment not fully addressed. Refer to revised FS text
36	Section 3.4.1	General Comment	(a) As discussed during the March 24, 2020 conference call on the FS, the soil COCs and soil remedial action needs to be presented on a site-wide basis, not limited by Lot boundaries. Please revise Section 3.4.1 and other text in the FS to evaluate contamination on a site-wide basis. The site-wide presentation of the Lead soil results in Figure 3-1 is acceptable, but the subsequent Lot-based figures presented in Figures 3-2, 3-3, 3-4, and 3-5 should be removed from the FS. (b) Please include a discussion of naphthalene. As shown on Table 3-3, naphthalene concentrations exceed the ARAR at Lot 62. (c) Please include a discussion of the Extractable Petroleum Hydrocarbon (EPH) ARAR. For No. 2 fuel oil impacted soil, NJDEP uses the EPH cleanup criteria of 54,000 mg/kg for non-residential use. In addition, the free product limit for No.2 Fuel Oil is 8,000 mg/kg. For No. 6 fuel oil-impacted soil, NJDEP has health-based criterion calculators for fractionated EPH concentrations, in addition to the default and site-specific free product limit calculator. (Based on the RI, No. 2 fuel oil is impacting soil on Lot 63 and Lot 64, while No. 6 fuel oil is impacting soils on Lot 58.) (d) Please remove the discussion of "statistical outliers," here and elsewhere in this section, because statistical outliers would only be relevant to determining EPCs in the BHHRA and not comparing concentrations to ARARs.	(a) Delineation of impacts clarified. Delineation was taken to "clean" sample locations, to building walls, and to Site (not lot) boundaries, as applicable. (b) Added to FS. (c) See comment 75. (d) Text revised.	(a) Comment not fully addressed. Refer to revised FS text. (b) Response acceptable (c) Comment not fully addressed. Refer to revised FS text. (d) Response acceptable
37	Section 3.4.1	Page 3-4, Paragraph 1	(a) Please replace the first and second sentences with the following: "Lead results were compared to applicable chemical-specific ARARs (Table 3-3) by lot. Lead concentrations for Lots 1, 57, 58, 59, 60, 65, 66, 67, and 69 were detected at or below the lead ARAR (800 mg/kg)." (b) The FS text correctly states that Figure 3-1 compares soil results to the Lead ARAR of 800 mg/kg. Please correct title and legend in Figure 3-1 to state ARAR (not PRG).	(a) Text has been updated (b) Figure changed.	(a) Sentence has been removed; comment addressed. (b) Response acceptable
38	Section 3.4.1	Page 3-4, Paragraph 2	Please include Lot 62 when discussing unacceptable Lead hazards based on the BHHRA (see BHHRA Table 6-22 for current child visitor, Table 6-52 for future construction worker, and Table 6-63 for future child visitor risks).	Comment is not germane to the chemical-specific ARAR evaluation.	Response acceptable; however, Section has been revised
39	Section 3.4.1	Page 3-4, Paragraph 6	(a) Please revise the following sentence to read: "Benzo(a)pyrene concentrations at select locations were above ~~not in compliance with~~ ARARs …" Please make similar revision throughout the FS. (b) Please revise the following sentence to read: "… is not a COPC to be carried through the FS ~~due to ARARs~~ for further evaluation." Please make similar revision throughout the FS since this document is the FS.	(a) Text has been updated (b) Text has been updated	(a) Sentence has been removed; comment addressed (b) Sentence has been removed; comment addressed.
40	Section 3.4.1	Page 3-4, Paragraph 6	The FS states that "As shown in Table 3-3, these values were slightly over the ARAR (2 mg/kg). Based on this information, benzo(a)pyrene is not a COPC to be carried through to the FS due to ARARs." If the contaminant exceeds ARARs, then it should be carried through to the FS regardless of the magnitude of exceedance. This comment also applies to Section 3.4.1, Page 3-5, Paragraph 1 pertaining to Arsenic at B-54 with a 19.8 mg/kg soil concentration.	Section 3.4.1 revised and COPC exceeding ARARs were carried through the FS.	Response acceptable; however, Section has been revised

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
41	Section 3.4.1	Page 3-4, Paragraph 6 and Table 3-3	The FS states that "Benzo(a)pyrene along with other PAHs are carried through to the FS in the context of total PAH concentrations for ecological receptors." Please revise the FS to include a discussion on Total PAH as a COPEC for ecological receptors.	Section 2.8 now includes a discussion of the SLERA conclusions and states that PAHs (low and high molecular weight) were identified as COPECs.	Response acceptable; however, Section has been revised
42	Section 3.4.1	Page 3-4, Paragraph 6	Please remove the discussion of "typical urban soil concentrations" as it is not germane to the chemical-specific ARAR evaluation.	Section revised based on other comments. Comment is no longer applicable.	Sentence has been removed; comment addressed.
43	Section 3.4.1	Page 3-4, Paragraph 7	Please revise the following sentence to read: "As shown in Table 3-3, the ARAR ~~compliance~~ is …" Please make similar revision throughout the FS.	Text has been updated	Response acceptable; however, Section has been revised
44	Section 3.4.2	General Comment	The RI sampling included three events over an 11-month period. These data cannot be used to establish a "trend". Please remove language discussing "trends" from the document.	Section 3.4.2 accurately states that some groundwater concentrations changed in the last sampling event from earlier results. The FS presents factual information and does not discuss "trends." No change.	Comment not fully addressed. Refer to revised FS text
45	Section 3.4.2 under Shallow Fill Unit	Page 3-5, Paragraph 2	(a) The FS states that "Because the shallow fill unit wells are screened in fill containing these metals that were not identified as soil COPC, these chemicals are not identified as groundwater COPCs." Exclusion of a COPC in one medium (soil) does not necessarily translate to a site-wide, alternate medium (groundwater) exclusion. Please remove this statement or clarify further. (b) Please include Antimony and Selenium among the listed metals. As shown on Table 3-4, Antimony and Selenium concentrations exceed ARARs in more than one monitoring well.	(a) Clarification added (b) Antimony and Selenium added	(a) Sentence has been removed; comment addressed. (b) Response partially acceptable. Text revised to include groundwater exceedances from all GW events
46	Section 3.4.2 under Shallow Fill Unit	Page 3-5, Paragraph 3	Please clarify if EPA's Office of Water Action Level for Lead was used in the evaluation, since it is not listed.	The reference sources of the groundwater ARARs is listed in first paragraph under Section 3.4.2. Chemical-specific ARARs listed in Table 3-1.	Response acceptable. Refer to Table 3-6 revisions.
47	Section 3.4.2 under Shallow Fill Unit	Page 3-6, List of Figures and Lot-specific summaries	(a) Please make the list of figures a complete list (including the handful of figures previously identified in the text on page 3-5) and remove the phrase "for other chemicals" from the sentence introducing the list of figures. (b) As shown on Table 3-4, bis(2-ethylhexyl)phthalate, 2-butanone, 1,2-dibromo-3-chloropropane, 1,3-dichloropropene, 2-hexanone, indeno(1,2,3-cd)pyrene, methylene chloride, 2-methylnaphthalene, and 1,2,4-trichlorobenzene exceeded ARARs in at least one monitoring well, yet they are not addressed in the lot-by-lot discussions. Please include discussion of these organic chemicals on page 3-6.	(a) FS text adjusted per commenter's preference. (b) Lot discussion of groundwater removed based on other USEPA comments. Comment no longer applicable.	(a) Response acceptable; however, Section has been revised (b) Comment not fully addressed. Refer to revised FS text
48	Section 3.4.2 under Shallow Fill Unit	Page 3-6, Bullet on Lots 60/62	Please double-check the reference to 1,1,1-TCA as it appears that 1,1,2-TCA should be noted instead. 1,1,1-TCA is not listed in Table 3-4 as a groundwater COPC.	FS changed to 1,1,2-TCA.	Response acceptable; however, Section has been revised
49	Section 3.4.2 under Shallow Fill Unit	Page 3-7, Paragraph 1	Groundwater sampling results demonstrate widespread metal contamination across the Site in the shallow unit. The metals include Arsenic, Lead, Iron, Aluminum, Manganese, and Sodium. The FS only recommends Lead to be evaluated as a COPC. EPA agrees that Lead is a site-related contaminant, and the Lead-impacted soil is impacting the groundwater. Similar to Lead, elevated Arsenic concentrations are reported in the soils around and near Building #7. This Arsenic contamination may be site-related due to PPG's use of 'Corona Dry' (powdered Arsenate of Lead) at the Site to manufacture paints. Like Lead, Arsenic-impacted soils may be contributing to the Arsenic levels in the groundwater. While Arsenic exceedances are widespread in the shallow and deep groundwater units, Arsenic is not consistent across the Site and the highest detected levels of Arsenic are associated with elevated Arsenic concentrations in the soil. Since the historical PPG manufacturing process included products such as 'Corona Dry', it is possible that the elevated Arsenic concentrations around Building #7 are site related (**refer to attached EPA figure showing Lead and Arsenic in soil and groundwater**). Please also see Comment 50.	To the extent EPA's comment suggests that "site-related" contaminants are those related to operations, allocation of impacts due to natural conditions, pre-placement of contaminated fill, or a release(s) was not an RI objective. PPG does not have documentation that its manufacturing process at the Site used or included "Corona Dry" or powdered arsenate of lead, and such information was not included in the RIR or SCSR. If such documentation exists, please provide it. Even if such documentation exists, there is no basis to assert that arsenic detections are attributable to site operations. Contaminants such as arsenic are commonly found in historic fill and urban soil.	Comment not fully addressed. Refer to revised FS text
50	Section 3.4.2 under Shallow Fill Unit	Page 3-7, Paragraph 1	Based on the risk assessment, the groundwater alternatives must address arsenic contamination in shallow groundwater.	Based on the risk assessment, the potential hypothetical potable shallow and deep groundwater use is a risk. The FS does address hypothetical potable use including the presence of arsenic in groundwater.	Response acceptable; however, Section has been revised

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
51	Section 3.4.2 under Deep Fill Unit	Page 3-7, Paragraph 1	The deep unit groundwater samples were collected below the historic fill, so please remove the sentence that states "Metals above ARARs were the fill-related metals described above …"	It is agreed the deep groundwater is below the fill layer. But the metals are same soil/fill metals listed above in that section. Sentence is accurate.	Comment not fully addressed. Refer to revised FS text
52	Section 3.4.2 under Deep Fill Unit	Page 3-7, Paragraph 2	The FS states that "Because exceedances in the deep unit are random, sporadic, and/or at low concentrations, deep unit groundwater is not identified as a medium to be carried through the FS." If the deep unit groundwater had ARAR exceedances, these exceedances should not be dismissed. As discussed in the RI, the former Passaic River stratum does not restrict vertical communication between the shallow and deep groundwater units. Consequently, it is not surprising that contaminants that exceeded the shallow groundwater ARARs (such as 1,4-Dioxane, Benzene, and 1,1,2-TCE) also exceed the ARARs in the deep groundwater. Please revise the FS to discuss the deep groundwater remedial alternatives that can achieve ARARs in groundwater and/or prevent vertical migration from the shallow groundwater to the deep groundwater unit. Please also see Comment 53.	Groundwater Alternatives 2-4 address both shallow and deep groundwater (e.g., slurry wall or sheet piling would extend to a confining layer). Appropriate GW alternatives (Section 5) revised to indicate "that treatment of relatively low concentrations away from the hot-spot areas, including deep unit groundwater, would be extremely inefficient…. "	Sentence has been removed; comment addressed.
53	Section 3.4.2 under Deep Fill Unit	General Comment	Based on the risk assessment, the groundwater alternatives must address shallow and deep groundwater contamination.	Based on the risk assessment, there are unacceptable human health risks related to hypothetical future potable use. FS alternatives address hypothetical potable use.	Response acceptable; however, Section has been revised
54	Section 3.5	Page 3-7, Paragraph 1	Throughout this section the text indicates that the contaminated media will be evaluated in the FS. Please provide a specific cross-reference to a section in the FS report with information on how the contamination is being addressed.	The text "will be evaluated" has been changed.	Sentence has been removed; comment addressed.
55	Section 3.5.1	Page 3-7, Paragraph 1	Please add a statement that NAPL-impacted soils are also discussed in Section 3.5.2 and the corresponding Soil/Fill Alternatives.	The requested change made.	Response acceptable
56	Section 3.5.2	Page 3-7, Paragraph 1	The FS states that "Some site contaminants, including metals and PAHs, are commonly found in historic fill and urban soil and are not COPCs, including iron, sodium, aluminum, barium, arsenic, and manganese." (a) Please check the accuracy of this sentence since this section is titled "Soil/Fill" while iron, sodium, aluminum, barium, arsenic, and manganese were identified as groundwater COPCs in Section 3.4.1. (b) Per NJDEP's "Historic Fill Material Technical Guidance" (2013), even if a contaminant is assumed to be related to historic fill, if the contaminant concentrations exceeds ARARs, the contaminant is listed as a COPC and requires further evaluation. Please revise FS text accordingly to inclusively evaluate all contaminants with ARAR exceedances as COPCs.	(a) Section 3.5.2 revised. (b) ARAR exceedances are address in section 3.5.	(a) Comment not fully addressed. Refer to revised FS text. (b) Response acceptable; however, Section has been revised
57	Section 3.5.5	Page 3-8, Paragraph 1	Please delete the statement: "As required by USEPA". The Licensed Site Remediation Professional (LSRP) will address the discharge to the Lower Passaic River.	"As required by USEPA" deleted.	Sentence has been removed; comment addressed
58	Section 3.6 in RAO Table	Page 3-10 under Soil Gas	The RAO table should only list General Response Actions (GRAs). Please remove the Process Option listed in parentheses.	The one process option in parentheses in GRA column was removed per comment.	Response acceptable
59	Section 3.7	General Comment	(a) Please calculate and present RBCs for target cancer risks of 10^{-4} and 10^{-6} and a noncancer target hazard index (HI) of 1, as appropriate for the COPC. (b) Please provide a table indicating the receptors, COPCs, and PRGs for the noted target risks/hazards to demonstrate that the PRGs under consideration are within the cancer risk range and below the noncancer goal of protection of an HI = 1. (c) Please provide information on COPCs that affect the same target organ and implications regarding the derivation of RBCs based on noncancer health effects.	(a) Calculation of Cancer RBCs based on 10-6, 10-5 and 10-4 (and HI=1) are presented on Table 3-11. Additional cancer risk level calculations were added to Table 3-10 as requested. (b) Human Health HQs and cancer risks were estimated to determine if human health PRGs are within acceptable risk range and noncancer protection goal, as shown on Table 3-13. (c) Noncancer target organ information has been added to Table 3-13.	(a) Response acceptable; however, Section has been revised (b) Response acceptable; however, Section has been revised (c) Comment not fully addressed. Refer to revised FS Table 3-13 and Table 3-14.
60	Section 3.7.2	Page 3-11, Paragraph 1	The text describes the evaluation of background as part of the process for selecting PRGs (item no. 3 after table). Information regarding how background concentrations will be evaluated needs to be provided here.	Background concentrations are discussed later in this section under Step 3. These bullets are intended to provide an overview of the overall PRG development process.	Response acceptable; however, Section has been revised

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61	Section 3.7.2	General Comment on PRGs and Table 3-11	(a) The FS and Table 3-11 need to have ecological PRGs included for all of COPCs identified in the BHHRA and COPECs identified in the SLERA. Please revise the FS accordingly. (b) The FS lacks adequate details to understand how decisions were made in the selection of the PRGs. Please add a discussion on the PALs and their selection during the RI.	(a) Ecological COPECS have been provided in Section 2.8 and added to Table 3-13. (b) Relevant text and table notes were revised to make the PRG selection process more transparent.	(a) Response acceptable; however, Section has been revised (b) Response acceptable; however, Section has been revised
62	Section 3.7.2	Page 3-11, Step 1, Copper	(a) Please note in the FS that the RBC for copper is based on a Reference Dose (RfD) referenced to ATSDR (1.0E-03 mg/kg-d) as used in the BHHRA, whereas the USEPA RSLs are based on an RfD referenced to HEAST (4.0E-02 mg/kg-d) which partially accounts for the apparent discrepancy between the RBC (526 mg/kg) and the USEPA RSLs for residential and industrial soils (3,100 mg/kg and 47,000 mg/kg, respectively). (b) Please also note that the RfD for Copper was derived by dividing the ATSDR intermediate Minimal Risk Level (MRL) by an uncertainty factor (UF) of 10.	(a) The ATSDR tox value was used in calculation of the PRGs, as noted in Table 3-5. This section does not use or reference EPA RSLs in this section, so it is unclear why a discussion of this discrepancy in this section is needed. We have, however, added a footnote indicating the discrepancy between the RBC and the NJDEP soil standard as related to the RfD. Additional language related to the basis of the RfD has been incorporated into the main text. (b) This UF is noted on Table 3-5. Additional text was added to the copper RBC discussion	(a) Response acceptable; however, Section has been revised (b) Response acceptable; however, Section has been revised
63	Section 3.7.2	Page 3-12, Step 1, Lead, Paragraph 2	Please clarify or delete the statement: "Note that the child visitor RBC of 200 mg/kg is equal to the USEPA Region 2 residential screening value for lead." The USEPA Region 2 residential screening value for Lead is not the RBC for child visitor; rather, the residential screening value is used in the derivation of RBC for the child visitor.	Text has been updated by removing sentence	Response acceptable; however, Section has been revised
64	Section 3.7.2 under Step 1, Vapor intrusion of VOCs via sub-surface soil	Page 3-13, Paragraph 5	It is unclear when the following step will be conducted in the FS process "If the selected remedy is source reduction or soil vapor extraction, the RBCs should be re-evaluated to include the mass balance analysis, because assuming an infinite source for highly volatile chemicals overestimates soil vapor intrusion cancer risk and non-cancer hazard". Please clarify.	Text has been updated by removing sentence.	Response acceptable; however, Section has been revised
65	Section 3.7.2 under Step 2	Page 3-14, Embedded Table	Please modify the table to include the calculated cancer risks and non-cancer hazards for the COPCs to provide a comparison with the NJDEP values.	The purpose of Step 2 is to the identify the appropriate ARARs. We have removed the in-text table, since ARARs are summarized on Table 3-13. Cancer risk/hazard have been calculated for the Final PRGs for human health COPCs and are presented on Table 3-14.	Response acceptable; however, Section has been revised
66	Section 3.7.2 under Selection of Final PRGs	Pages 3-14 to 3-15	A number of assumptions regarding the future land use are provided in the text. It is important to include provisions to assure that these assumptions are consistent with the final remedial design before the PRG can be approved. Please revise text accordingly.	Section 3.7 revised. The future land use remaining as commercial/industrial is incorporated into each of the soil alternatives, except No Action.	Response acceptable; however, Section has been revised
67	Section 3.7.2 under Selection of Final PRGs	Page 3-15, Paragraph 1	While the BHHRA identified unacceptable Copper concentrations in Boring B-33, based on the Copper PRG of 526 mg/kg, additional soil borings are also in exceedance of the Copper PRG, including B-57 with a Copper concentration of 590 mg/kg and B-58 with a Copper concentration of 543 mg/kg. Please discuss these additional points in the FS and the volume calculations in Section 3.8.2.	Lot 68 was not identified in the BHHRA for unacceptable risks due to copper. This risk-based PRG is only applicable to areas that posed excess risk due to copper in the BHHRA; it is not an "ARAR."	Revisions to FS are acceptable; however, compliance averaging is being removed.
68	Section 3.7.2 under Selection of Final PRGs	Page 3-16, Paragraph 2 and embedded table	The FS states that "Nonetheless, both Lots 67 and 69 will be considered for remediation with the objective of reducing the exposure of ecological receptors in shallow soil to constituent concentrations above the ecological screening values. No further risk assessment is proposed." The summary table at the end of Section 3.7.2 does not include COPECs (PAH and metals); please revise to be inclusive.	A table of SLERA COPECs has been added to the text.	Response acceptable; however, Section has been revised

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69	Section 3.7.2 under Selection of Final PRGs	Page 3-16, embedded table and bullet list	The FS describes a four-step process for selecting site-specific PRGs and identifies soil COPCs associated with ARAR exceedances; however, the FS is missing a description of how the selected PRGs and ARAR exceedances have resulted in the site figures provided in Appendix A: Soil Area/Volume Delineation Information. Please revise FS accordingly. Same comment applies to Section 3.8.2 and Appendix A.	Delineation revised.	Comment not fully addressed. Refer to revised FS text
70	Section 3.7.2 under Selection of Final PRGs	Page 3-16, Last sentence	Please include information regarding the PRG for benzene (i.e., associated target cancer risk, target non-cancer hazard) and the receptor.	Benzene was not identified as a human health risk driver in the BHHRA and therefore, a risk based PRG was not derived. Benzene concentrations exceeded the NJDEP nonresidential soil standard. Therefore, the PRG for benzene is the NJDEP soil standard.	Response acceptable; however, Section has been revised
71	Section 3.7.3	Page 3-16, Paragraph 2	Please indicate how the highest risks for 1,2-dibromo-3-chloropropane, pentachlorophenol, dibenz(a,h)anthracene, and arsenic are being addressed. In addition, please explain how the noncancer HIs ranging from 2 to 50, which are above the protection goal of 1, are being addressed. The single-chemical HQs are above the protection goal of 1 for a number of VOCs, SVOCs, and metals at each of the 15 properties at the Site (refer to BHHRA RAGS D Table 7).	1,2-dibromo-3-chloropropane was not detected in groundwater wells in the last two events. Dibenz(a,h)anthracene was not detected above PRG (0.3 ug/L). Arsenic added to this section. Pentachlorophenol was detected (0.42 ug/L, MW-107) in the last event and was added to this section.	Comment not fully addressed. Refer to revised FS text
72	Section 3.7.3	Page 3-17, embedded Metals Table	Please include a PRG for selenium, as appropriate.	Selenium was not detected above ARAR in the most recent sampling event, thus no PRG needed. During remedial design, GW quality will be updated.	Comment not fully addressed. Refer to revised FS text
73	Section 3.7.5	Page 3-17, Paragraph 1	Please provide a cross-reference to the section of the report that addresses the remedial actions for the sewer.	Text revised.	Response acceptable; however, Section has been revised
74	Section 3.8	General Comment	(a) Section 3.8 and the accompanying figures in Appendix A need more explanation on how the area, depths, and volumes were calculated. Please use a table to present information clearly and list the soil borings used to bound the delineation of contaminated areas. (b) Please provide better cross-references in Section 3.8.2 to the supplemental figure in Appendix A. (c) The soil mound is no longer present on Lot 68, so a remedial response around B-59 and B-60 is no longer needed. During the pre-design investigation, additional surface soil samples should be collected to confirm current conditions.	(a) & (b) Delineation was revised based on other comments. These specific comments are no longer applicable. (c) The soil mound borings B-59 and B60 are removed from consideration in FS.	(a) Section 3.8 removed; comment addressed (b) Section 3.8 removed; comment addressed (c) Response partially acceptable. Soil mound has been removed and the samples from the "fill" material is no longer applicable. Samples collected below ground surface are still usable.
75	Section 3.8.1	Page 3-18, Paragraph 1	The FS states that "A portion of Building #15A (pump house) contains a petroleum-based liquid (NAPL) beneath pooled water under a steel grated floor. The NAPL is approximately 0.5-foot to 0.65-foot thick and very viscous." This NAPL description is not consistent with a No.2 Fuel Oil (as presented in Section 2.5.1 and Section 3.5.1); rather, it appears to be describing a No. 6 Fuel Oil. Please clarify the apparent discrepancy.	Neither FS sections referenced or RIR lists the LNAPL as fuel oil number 2 or 6. It listed as a diesel/heating oil as a generic term based on results. Provide more clarification on perceived discrepancy.	Response acceptable (note Section 3.8 removed)
76	Section 3.8.2	Page 3-18, embedded table	Please correct the embedded soil PRG table with the values listed in Section 3.7.2. The Naphthalene PRG, based on Section 3.7.2, is 0.62 mg/kg (not 0.60 mg/kg) and the Total Xylenes PRG is 6.5 mg/kg (not 7 mg/kg).	Section 3.8 has been eliminated with PRGs and volumes incorporated in other sections.	Response acceptable (note Section 3.8 removed)
77	Section 3.8.2.1	Page 3-19, Paragraph 1	Please list and show the soil borings used to delineate the Lead footprint on Lot 1 near boring B-4 in Appendix A. As currently presented, the delineation includes parts of former Building #4.	Delineations have been revised based on EPA comments, including exclusion of the former Building #4 footprint from the delineation. Section 3.8 has been eliminated with areas and volumes being incorporated into other sections.	Response acceptable; however, footprint of remedial alternative revised using single-point compliance
78	Section 3.8.2.2	Page 3-19, Paragraph 2	Please list and show the soil borings used to delineate the Total Xylenes footprint on Lot 58 in Appendix A. As currently presented, the delineation does not extend to the nearest "clean" boring; rather the delineation extends to an unspecified point on Lot 1, including the former gate house.	Delineation has been revised based on EPA comments.	Response acceptable; however, footprint of remedial alternative revised using single-point compliance

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79	Section 3.8.2.4	Page 3-20, Paragraph 2	Please list and show the historic data used to delineate the Naphthalene footprint on Lot 62 in Appendix A. Based on historical maps, the delineation appears to extend to historical location SB-4.	See RTC 78.	Response acceptable; however, footprint of remedial alternative revised using single-point compliance
80	Section 3.8.2.5	Page 3-20, Paragraph 4	Please list and show the soil borings used to delineate the Copper (and Lead) footprint on Lot 63 in Appendix A. As currently presented, the Copper delineation does not extend to the nearest "clean" boring; rather the southern delineation extends to an unspecified point on Lot 63. Based on historical maps, it appears that data from a historical temporary well point may have been used to bound the delineation.	There are no ARAR exceedances for copper on Site. Refer to Appendix A for delineation for copper.	Response acceptable; however, footprint of remedial alternative revised using single-point compliance
81	Section 3.8.2.6	Page 3-21, Paragraph 2	Please list and show the historic data used to delineate the Lead footprint on Lot 64 near B-38 in Appendix A. Based on historical maps, the delineation appears to extend to historical locations ERT-2 and NS-1. Please note that data for ERT-2 and NS-1 are not available in the historical database provided with the SCSR; please provide the associated data.	See RTC 78.	Response acceptable; however, footprint of remedial alternative revised using single-point compliance
82	Section 3.8.2.9	Page 3-22, Paragraph 1	Please list and show the historic data used to delineate the TCE footprint on Lot 68 in Appendix A.	See RTC 78.	Response acceptable; however, footprint of remedial alternative revised using single-point compliance
83	Section 3.8.2.11	Page 3-22, Paragraph 2	Please list and show the soil borings used to delineate the Lead footprint on Lot 70 in Appendix A. As currently presented, the delineation does not extend to the nearest "clean" boring; rather the delineation extends to an unspecified point on Lot 70, as well as Lot 59 and Lot 69.	See RTC 78.	Response acceptable; however, footprint of remedial alternative revised using single-point compliance
84	Section 3.8.3	Page 3-23, Paragraph 3	(a) The FS states that "The allocation of the metals in groundwater due to natural conditions, pre-placement of contaminated fill, or a release(s) was not an RI objective. However, as listed in Section 3.4.2, lead is a groundwater COC, other metals are not." The purpose of a remedial investigation is to characterize the nature and extent of site-related contaminants. Please revise the sentence to read: "~~The allocation~~ Defining the fraction of ~~the~~ metals in groundwater associated with due to natural conditions, pre-placement of contaminated fill, or a release(s) was not discussed in the RI ~~an RI objective~~. However, as listed in Section 3.4.2, lead is a groundwater COC~~, other metals are not~~." (b) Please modify the text to address Arsenic in groundwater (refer to Comments 49 and 50).	(a) See comment 22. Section 3.8 has been incorporated into other sections (b) See response to Comment 50.	(a) Comment not fully addressed. Refer to revised FS text. (b) Response acceptable; however, Section has been revised
85	Section 3.8.4	Page 3-23, Paragraph 1 and Appendix A	(a) The FS states that "risks to future indoor workers from soil gas intrusion are unacceptable at Lots 58 (TCE and xylenes), 62 (naphthalene), and 68 (TCE and xylenes)." Please clarify if the footprint of the soil gas remedial action is intended to address the entire Lot or the delineations presented in Appendix A. (b) Please clarify the media being delineated for soil gas. Appendix A delineates Total Xylene and TCE on Lot 58 using soil borings, as well as historic groundwater samples from temporary well TW-1 and TW-2. Note that the PRG for soil gas is in units of mg/kg for soil, so it is unclear what thresholds were used to evaluate groundwater sample data.	(a) Section 3.8 was been incorporated into other sections. See RTC 78. (b) See RTC 78. Appendix A provides delineation areas. Non-RI and screening groundwater sample data was not used.	(a) Response acceptable; however, footprint of remedial alternative revised using single-point compliance (b) Response acceptable; however, footprint of remedial alternative revised using single-point compliance
86	Section 4.2.2	Page 4-2, Embedded Soil GRA Table and Table 4-2	Please confirm accuracy of the embedded Soil GRA table with Table 4-2. Here are examples of inconsistencies: (a) According to Table 4-2, "Shoreline Revetment" was not retained as a process option but it is listed in the embedded Soil GRA table and a cost was provided. Please correct Table 4-2. (b) The chemical oxidation option is not discussed in Table 4-2. Please add this process option to Table 4-2.	(a) Table 4-2 edited for Shoreline Revetment. (b) The chemical oxidation process option was added to Table 4-2.	(a) Response acceptable (b) Response acceptable
87	Section 4.2.2	Page 4-2, Paragraph after embedded table	The samples identified as potentially being characteristic waste should be further compared to the universal treatment standards (UTS). If constituents are present at concentrations greater than 10 x UTS, Land Ban regulations would apply, and the soil would require treatment to UTS levels or a 90 percent reduction in concentration prior to disposal.	Comment is noted.	Comment not fully addressed. Refer to revised FS text

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88	Section 4.2.3	Page 4-3, Embedded Groundwater GRA Table and Table 4-3	(a) The embedded groundwater GRA table is not consistent with Table 4-3. Please retain slurry wall as a process option in Table 4-3. (b) According to Table 4-3, the remedial technology of "Collection Systems" was not retained. If pump and treat systems have been excluded, then retaining the remedial technology of "Disposal" is not relevant since no groundwater will be treated ex-situ. Please correct the inconsistency. (c) The Candidate Technologies Memorandum retained the remedial technology of "Collection Systems" with ex-situ treatment. These remedial technologies were removed from the FS because (as stated in Table 4-3) "There are no unacceptable health risks under the current use and CEAs are anticipated for those lots currently without one to prevent groundwater use for other than monitoring. RI results suggest that groundwater quality has improved. Pump and treat options may address organic COPC, but would not eliminate dissolution of inorganic COPC to groundwater that remains in contact with urban fill. Pump and treat would offer marginal improvement of groundwater quality and are therefore screened out." EPA disagrees that the statement that the "RI results suggest that groundwater quality has improved" – please delete this sentence from the FS and Table 4-3. In addition, while groundwater is currently not being used, the groundwater is a Class IIA aquifer and there is a RAO to restore groundwater quality. Please revise FS and the groundwater GRAs to address the RAO of restoring groundwater quality. Please also see Comment 89.	(a) Slurry wall retained as a process option in Table 4-3. (b) Groundwater Alternatives have been revised to include pump and treat technologies. (c) The statement that "RI results suggest that groundwater quality has improved" revised as follows: "Groundwater concentrations of some COPCs were lower for the last event than prior events." Groundwater Alternatives have been revised to include removal and treatment to improve groundwater quality.	(a) Response acceptable (b) Response acceptable; however, Section has been revised (c) Comment not fully addressed. Refer to revised FS text
89	Section 4.2.3	Page 4-3, Paragraph under table	The FS states that "It is noted in the screening tables that ex-situ technologies and process options for groundwater have not been retained because there are no unacceptable health risks under the current use scenarios and CEAs are anticipated for those lots currently without one to prevent groundwater use for other than monitoring." This sentence assumes a selected remedy to exclude process options. Please remove this sentence and be inclusive of remedial technologies and process options for groundwater that will restore groundwater quality to a Class IIA aquifer.	The statement is factually correct in reference to the risk assessment results and anticipated groundwater use restrictions for all scenarios except no action. The groundwater alternatives revised to include removal and treatment to improve groundwater quality. Restoration to Class IIA may not be feasible due to presence of historic fill and is not an RAO.	Sentence has been removed; comment addressed
90	Section 4.2.3	Page 4-3, Paragraph under table	The text should clarify how groundwater quality has improved. What COCs decreased in concentration and how does this relate to the sources that were removed? What COCs are declining by natural attenuation?	See RTC 88. Benzene, ethylbenzene, trichloroethylene, toluene, vinyl chloride, m,p-xylene, 1,4-dioxane, and selenium concentrations were lower for the February 2019 event than prior events. It is reasonable that the concentrations of VOCs listed are benefiting from natural attenuation.	Response acceptable; however, Section has been revised
91	Section 4.2.3	Page 4-4, Top Paragraph	It is not correct that "groundwater concentrations in very limited areas of the Site exceed ARARs for organic COCs". Groundwater exceeds ARARs at most of the lots and most of the shallow wells on site.	Although sentence is accurate it was removed.	Sentence has been removed; comment addressed
92	Section 4.2.3	Page 4-4, Top Paragraph	The discussion of pumping needs to be expanded. Would pumping combined with a barrier wall prevent surface water intrusion to the Site? Could pumping achieve ARARs in any areas of the Site? Please refer to Comment 116 on proposed groundwater remedial alternatives.	The discussion of pumping expanded, under the appropriate groundwater alternatives	Response acceptable
93	Section 4.2.4	Page 4-4	The section on soil gas is out of sequence with the order of the corresponding tables. Please adjust accordingly, so that the sections and tables are in the same sequence.	Section 4.1 text revised.	Response acceptable
94	Section 5.1	Page 5-1, Paragraph 1	The FS states that "Wastes present in other site media are addressed with those media: Manhole 8 is addressed in Section 5.4 (Sewer), and LNAPL in soils is addressed in Section 5.2 (Soil/Fill)." However, the cost for "Impacted Soil Removal at USTs" is listed in Table B-1B for Waste Alternative 2 (not under the Soil/Fill Alternative Table B-2D for removal). Please clarify which alternative will include removal of NAPL-impacted soils.	The text clarified to indicate what soil will be removed coincidentally with UST removal and that removal of LNAPL identified in soil from the RI and not associated with the USTs will be included for all soil/fill alternatives, as per Comment 97.	Response acceptable
95	Section 5.1	Page 5-1, Last Paragraph	The FS states that "As discussed in Section 3.8, approximately 37,000 gallons of liquid and solid wastes remain at the Site in the various containers and six USTs." Please confirm that NAPL in Building #15A is included in this volume and the corresponding cost in Appendix B.	The estimated gallons of liquid and solid waste was clarified.	Response acceptable

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96	Section 5.1.2	Page 5-2, Last sentence	Please revise the following sentence to read: "Upon removal of contents, the USTs would be removed, and confirmation soil (including underneath the tank) and groundwater sampling will occur in accordance with New Jersey tank closure regulations." Note that following NAPL removal, soil and groundwater investigations would be required specific to the type product. EPH concentrations would need to be investigated, evaluated, and compared to the site cleanup objectives.	The requested change made, and the comment noted.	Response acceptable
97	Section 5.2	General Comment	Please revise the soil/fill alternatives to include the following alternatives (**refer to attached EPA figures with proposed remedial alternatives**): • Soil/Fill Alternative 1: No Action • Soil/Fill Alternative 2: Institutional Controls (including access restriction) and NAPL Removal • Soil/Fill Alternative 3: Institutional Controls, Engineering Controls (containment and bulkhead), and NAPL Removal • Soil/Fill Alternative 4: Institutional Controls, Engineering Controls (containment and bulkhead), Limited Removal with Off-Site Disposal of Lead, and NAPL Removal • Soil/Fill Alternative 5: Institutional Controls, Removal with Off-Site Disposal, and NAPL Removal • Soil/Fill Alternative 6: Institutional Controls, Ex-Situ Treatment and On-Site Placement, Engineering Controls (bulkhead), and NAPL Removal • Soil/Fill Alternative 7: Institutional Controls, In-Situ Remediation, Engineering Controls (bulkhead), and NAPL Removal Based on the remediation area footprints presented in Appendix B, the Soil/Fill Alternatives proposed by PPG focus on the shallow, unsaturated soils contaminated with Lead; they do not address the soils exceeding NJDEP NRDCSRS. Moreover, the extent of the soil delineation in Appendix B appears in some instances to extend to an unspecified point (where no boring was collected to confirm the soil concentration). Moreover, the Soil/Fill Alternatives proposed by PPG only address the NAPL-impacted soils in two alternatives. EPA is recommending that NAPL-impacted soils be addressed in all remedial alternatives (except No Action). In addition, the footprint of a CERCLA remedial action needs to be based on single-point compliance to PRGs and/or ARARs; compliance averaging may be used in the future to determine if the remedy met remedial goals. The attached figures show soil boring locations where soil contaminant concentrations (regardless of depth) exceed the PRGs and/or ARARs (i.e., NJDEP NRDCSRS). The footprint of the proposed EPA remedial action is then delineated to the nearest soil boring (or building) with no exceedance. The contaminated soils in this footprint can be remediated via Removal with Off-Site Disposal (Soil/Fill Alternative 5), Ex-Situ Treatment and On-Site Placement (Soil/Fill Alternative 6), or In-Situ Remediation (Soil/Fill Alternative 7). EPA does agree with PPG that one possible alternative is containment with a focused, limited soil excavation (removal with off-site disposal) of Lead; however, this focused removal should extend around Building #7 (Soil/Fill Alternative 4). By removing the source material, this focused removal will also have the benefit of mitigating the groundwater contamination. The bulkhead would need to be replaced or repaired for all alternatives (except Soil/Fill Alternatives 1 (No Action), Alternative 2 (Institutional Controls), and Alternative 4 (removal and off-site disposal) to address the RAO of preventing or minimizing offsite transport of soil containing COPCs between the Site and the Passaic River.	The soil/fill alternatives have been revised as requested, with some reordering and modifications. Removal of NAPL-impacted soil/fill following NJDEP guidance is included for each soil/fill alternative (except No Action). The soil/fill volumes exceeding PRGs below the water table and these volumes are included for the removal and treatment alternatives as noted in the applicable alternative. Compliance averaging was used to determine ARAR exceedance and the need for remedial action. In addition, the comment misstates the soil RAO. The applicable RAO is to "Prevent or minimize off-site transport of soil containing COPCs to minimize the potential for interaction between the Site and the Passaic River."	Response acceptable; however, Section has been revised
98	Section 5.2	General Comment	According to Section 3.5.1, "waste" includes NAPL. The only two GRAs for waste are "No Action" or "Removal/Disposal". Even though the remedial alternatives for the underground storage tanks and NAPL-impacted soils are discussed in Section 5.2 "Soils/Fill", the GRAs for waste remain the same: "No Action" or "Removal/Disposal." Consequently, every soil alternative (except Soil/Fill Alternative 1 "No Action") requires removal and disposal of NAPL-impacted soils followed by soil and groundwater investigations. EPH concentrations would need to be investigated, evaluated, and compared to the site cleanup objectives. Please revise the FS accordingly.	See response to Comment 97.	Response acceptable; however, Section has been revised
99	Section 5.2	Page 5-2, Embedded GRA Table and Table 4-2	Please include beneficial reuse of soil as a process option.	Beneficial reuse of soil/fill added to Table 4-2.	Response partially acceptable. Screening comments on Table 4-2 revised.

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
100	Section 5.2	Page 5-3, Bullets on Lots	Please move the Lot information into an embedded table. The volume breakdown should include total volume, volume above water table, and volume below water table. The table should also include the total (for all Lots) for each volume category.	The area and volume estimates were moved to the applicable alternative.	Response acceptable; however, Section has been revised
101	Section 5.2.2	Page 5-4, Paragraph 1	(a) Please move the sentence about vapor barriers to the Soil Gas Alternative in Section 5.5 ("Deed restrictions establishing requirements for new construction (i.e., vapor barriers and/or passive or active depressurization systems to prevent indoor vapor intrusion) and ensuring future use consistent with the use assumptions of the BHHRA would be developed and implemented."). (b) Please remove the words "Limited Action" from the title of Soil/Fill Alternative 2 because no action other than institutional controls is proposed.	(a) The requested change will be made. (b) See response to Comment 97	(a) Sentence has been removed; comment addressed (b) Sentence has been removed; comment addressed
102	Section 5.2.3	General Comment	Currently, vertical containment (bulkhead repair/replacement) is only included in Soil/Fill Alternative 3. Please include vertical containment (bulkhead) in the all of the other Soil/Fill Alternatives (except No Action and full soil excavation) to satisfy the RAO of preventing or minimizing offsite transport of soil containing COPCs between the Site and the Passaic River. In addition, this alternative should include sealing any piping or underground utility corridors that potentially convey site-related contamination to the river to satisfy the RAO of preventing or minimizing discharge of sewer water COPCs to surface water, further minimizing the potential for interaction between the Site and the Passaic River.	See response to Comment 97.	Response acceptable; however, Section has been revised.
103	Section 5.2.3	Page 5-4, Paragraph 2	Please revise the following sentence to read: "Other lots at the Site have concrete or asphalt surface pavement, although not part of a deed notice. During the remedial design, these surfaces would be inspected to determine their suitability to be used as a cover. Some existing pavement may need to be repaired to be used as an engineering control if the pavement meets the specifications of the cap design." Note that NJDEP does not consider existing cracked and/or deteriorating asphalt, concrete, or building foundations as meeting minimum requirements for appropriate remedial action engineering controls at contaminated sites; however, an existing pavement cover could be an acceptable direct contact remedy if the existing pavement cover is constructed to meet all cap design requirements.	Text revised and deteriorating pavement comment noted. In addition, the comment misstates the soil RAO. The applicable RAO is to "Prevent or minimize off-site transport of soil containing COPCs to minimize the potential for interaction between the Site and the Passaic River."	Comment not fully addressed. Refer to revised FS text
104	Section 5.2.3	Page 5-4, Paragraph 3	Soil/Fill Alternative 3 states that "Two other capping options were retained in the DASRAT Memorandum, including a single-layer cap (such as a soil or asphalt cover) and a multi-layer combination cap." Please reconcile this text with Table 4-2, which stated that the "combination cap" was retained but the "multimedia cap" was not retained.	The text revised as follows: "Two other capping options were retained in the DASRAT Memorandum, including a single-layer cap (such as a soil or asphalt cover) and a combination cap."	Response partially acceptable; screening comments for multimedia cap were revised in Table 4-2 to make it consistent with the text.
105	Section 5.2.3	Page 5-4, Paragraph 3	Soil/Fill Alternative 3 states that "While both types of cap accomplish the objective of preventing exposure to impacted soils, a single-layer cap is judged to be more compatible with the likely long-term future use of the Site. Accordingly, a 6-inch asphalt cap is proposed over exterior portions of the lots to prevent direct exposure to those soils." Please replace the proposed 6-inch single layer asphalt cap with a low-permeability cap pavement system following NJDEP Technical Guidance on the Capping Sites Undergoing Remediation (July 2014). This system needs to include a subbase; needs to be designed and constructed to minimize cracking and settling; and needs a maintenance plan to address weathering and deterioration to ensure that the engineering controls stay protective.	NJDEP guidance will be considered during design.	Comment not fully addressed. Refer to revised FS text
106	Section 5.2.3	Page 5-4, Paragraph 3 (continues to Page 5-5)	Soil/Fill Alternative 3 states "A cover consisting of soil, recycled concrete aggregate and/or alternate fill may be an appropriate substitution for asphalt based on reasonable future use during remedial design. Different covers may be appropriate for different lots." Due to the anticipated future use of the Site as an industrial area, this type of containment system cannot be maintained and therefore is not protective. If an unpaved, low-permeability soil cover cap is proposed, it must be 2-feet thick and consist of the following elements and be maintained: • Constructed of a geomembrane, plastic liners, clay, or a geosynthetic clay liner. • A granular soil or drainage geo-composite is needed above the low permeability liner to remove excess water. • Geotextiles may be necessary beneath or above a low-permeability liner to provide protection or separation of the liner from underlying soil or overlying components. • Upper 6 inches of the soil cover is typically comprised of topsoil and vegetated or may be gravel or a crushed stone surface. This surface cover should be designed to prevent erosion and deterioration and should be compatible with the intended property use.	The overreaching statement that other covers cannot be maintained and thus unprotective is inaccurate.	Sentence has been removed; comment addressed

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
108	Section 5.2.3	Page 5-5, Paragraph 5 and Table 4-2	Please add statement indicating that bulkhead stabilization or improvement would be required if a soil berm is used in combination with the existing bulkhead. This comment also applies to Table 4-2 under screening comments.	Table 4-2 revised.	Response partially acceptable. Table 4-2 was revised - statement was moved from "effectiveness" to "implementability".
109	Section 5.2.4	Page 5-5, Paragraph 1	The FS states that "Under this alternative, COC-impacted soil is excavated and transported to a permitted off-site facility for subsequent treatment (if needed) and disposal. The excavated areas would be backfilled with fill material selected in accordance with the NJDEP "Fill Material Guidance for SRP Sites" dated April 2015." If fill material will be brought to the site, not only does the fill material need to satisfy NJDEP "like-on-like requirements" but the contaminant concentration in the fill material must be less than the PRGs.	The text and Table 4-2 revised.	Comment not fully addressed. Refer to revised FS text
110	Section 5.2.4	Page 5-5, Paragraph 2	The FS states that "The extent of excavation will be determined during the remedial design phase"; however, based on Appendix A, an initial limit of excavation is presented for Lead (based on a PRG of 800 mg/kg) and Copper (around boring B-33). This limit of excavation does not consider soils exceeding the NJDEP NRDCSRS. Please explain why these exceedances were omitted from the development of the limits of excavation.	Delineation areas revised based on USEPA comments.	Response acceptable; however, refer to revised Appendix A
111	Section 5.2.4	Page 5-6, Paragraph 1	The FS states that "For the purposes of this document, it is assumed that for Lots 1, 58, 61, 62, 63, 64, 65, 68, and 70, select soils above the water table with COC concentrations above the PRGs (approximately 10,800 CY), including LNAPL-impacted soil, would be excavated and disposed, such that remaining soils above the water table would be in compliance with health-based or ARAR-based cleanup goals." Please remove the reference to the water table since N.J.A.C. 7:26E-4.2 regulations require that remedial investigations "Delineate the horizontal and vertical extent of all soil contamination that is associated with a site-related area of concern in both the saturated and unsaturated soil." In addition, N.J.A.C. 7:26E-5.1(e) regulations will be enforced by NJDEP irrespective of the water table. This comment also applies to Section 5.2.5, Page 5-6, Paragraph 3 (and Appendix B) with reference to the water table and limitation of soil remediation to the unsaturated zone.	Reference to the water table and limitation of soil remediation to the unsaturated zone for excavation alternatives removed from applicable Soil/Fill alternatives.	Response acceptable; however, Section has been revised.
112	Section 5.2.4	Page 5-6, Paragraph 3	Please reword the phrase ". . . to ensure that the future use of the Site is consistent with the assumptions of the BHHRA" to provide specific information on the referenced assumptions; please also provide a reference to the pertinent BHHRA assumptions. This comment also applies to Section 5.2.5 (Page 5-6) and elsewhere in the FS.	The phrase was reworded in Section 5.2.2 as follows: "to ensure that the future use of the Site remains commercial or industrial. Institutional controls in Section 5.2.4 alternative and other alternatives refer back to Section 5.2.2.	Response acceptable; however, Section has been revised.
113	Section 5.2.5	Page 5-6, Paragraph 1	The FS states that "This alternative combines the excavation and off-site disposal aspects of Soil/Fill Alternative 4 for lead-impacted soils on Lots 63 and 64 with the capping aspects of Soil/Fill Alternative 3 for the remaining affected soils." Please revise this sentence to note that Lead contamination would be removed regardless of the Lot 63/64 property boundary lines, if confirmation sampling at the Lot boundaries indicates that Lead concentrations exceed the PRGs.	The text indicates that the extent of limited removal will be determined during the remedial design to achieve acceptable residual human health risks and achieve ARAR compliance. PRG exceedance will not necessarily define excavation limits. No change necessary.	Comment not fully addressed. Refer to revised FS text
114	Section 5.2.5	Page 5-6, Paragraph 2	(a) The FS states that "The extent of hot spot excavation will be determined during the remedial design." Currently, Appendix A focuses the "hot spot" removal around the RI borings B-75 (1-3 feet) at 8,690 ppm, B-74 (3-4 feet) at 3,080 ppm, and B-70 (5-7 feet) at 3,020 ppm. However, based on the historic data, there are additional Lead "hot spots" around the perimeter of Building #7 on Lot 63 with Lead concentrations greater than 3,000 ppm, including B5-1 (1-4), B7-1 (8.5-9), B8-1 (5-5.5), HF-2 (11-12.5), LD-5 (10-10.5), STG-2 (10-10.5), and TT-1 (1.5-2). Collectively, these data encircle the perimeter of Building #7. R**efer to attached EPA figure showing Lead in soil and groundwater**, and please discuss the other soil samples with elevated Lead. (b) Please clarify the definition and process for delineating "hot spots," because other "hot spots" such as TSCA areas or Lead hazardous areas should also be considered and addressed.	(a) Figure 5-3 shows the footprint of the focused soil areas for lead based on BHHRA results using RI data. (b) Use of hot spots removed from FS.	(a) Response acceptable; however, Section has been revised (b) Response acceptable.
115	Section 5.2.6	Page 5-6, Paragraph 1	Soil/Fill Alternative 6 states that "Under this alternative, the affected soils would be subject to one or more of several readily implementable and well developed in-situ treatment methods. The specific methods to be implemented for each lot will depend on the nature of the contaminants to be treated." Please clearly list the proposed method per Lot or area. The FS should include a diagram showing areal extent and associated depths.	Text revised.	Response acceptable; however, Section has been revised

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
116	Section 5.3	General Comment	Please revise the groundwater alternatives to include the following alternatives (**refer to attached EPA figures with proposed remedial alternatives**): • Groundwater Alternative 1: No Action • Groundwater Alternative 2: Institutional Controls • Groundwater Alternative 3: Institutional Controls and Site Containment (Barrier Wall) • Groundwater Alternative 4: Institutional Controls, Site Containment at River Edge, and Pump & Treat • Groundwater Alternative 5: Institutional Controls and In-Situ Remediation • Groundwater Alternative 6: Institutional Controls, In-Situ Remediation, and (Targeted) Pump & Treat The remedial alternatives proposed by PPG focus on the shallow groundwater and disregard the observed ARAR exceedances in the deep groundwater, particularly the organics and Arsenic in the deep groundwater that may be partially attributed to site-related activities. The proposed alternatives by PPG also do not address the RAO to restore the water quality to a Class IIA aquifer, except the in-situ treatment alternative (to some extent for organics). Lastly, the FS correctly states that: "An assessment of the potential occurrence of MNA processes was not conducted as part of the RI." Consequently, MNA cannot be evaluated as a feasible alternative at this time. The RI groundwater sampling included three events over an 11-month period. These data cannot be used to establish a trend. Other than containment (Groundwater Alternative 3), EPA is recommending a series of groundwater remedial alternatives to address water quality in the shallow and deep units. Groundwater Alternative 4 is comprised of passive and active ex-situ remedial technologies to reduce or eliminate mass flux to the Passaic River while actively remediating site groundwater to achieve ARARs. Well locations shown in the figure are not definitive and are intended to communicate the area of treatment and the impacted areas and COPCs that must be addressed. The final remedial design would determine the actual number and location of extraction wells, area of influence, and treatment train. Groundwater Alternative 5 is consistent with the Draft FS; however, this remedy would address all ARAR exceedances in both shallow and deep groundwater. (The horizontal and vertical extent of the in-situ treatment area shown in the attached figures should be used to guide the evaluation of potential technology options.) Groundwater Alternative 6 combines in-situ treatment in the upgradient areas coupled with ex-situ treatment in the downgradient areas of the Site. As with Alternative 4, the ex-situ treatment areas (extraction well locations) are not definitive and are intended to communicate the areas of potential treatment using ex-situ technologies and the impacted areas and COPCs that must be addressed. Also, as with Alternative 5, the horizontal and vertical extent of the in-situ treatment area shown in the attached figures should be used to guide the evaluation of potential technology options. This hybrid remedial alternative represents one possible combination of technologies that could be used to achieve ARARs at the Site.	The groundwater alternatives revised based on USEPA comments. MNA was retained as a potential ancillary process option. While MNA was not assessed during the RI, none of the retained technologies has yet been subjected to a feasibility demonstration for the Site. In addition, the comment misstates the RAO. The RAO is to "restore groundwater quality" without reference to Class IIA aquifer.	Comment not fully addressed. Refer to revised FS text. MNA has been screened out. Please note that the aquifer is classified by NJDEP as Class IIA, and the word "restore" means to return to a former condition. Therefore, whether stated directly or not in the RAO, our clarification in the comment of what the RAO means is correct.
117	Section 5.3.2	Page 5-8, Paragraph 1	The FS states that "Groundwater Alternative 2 includes maintaining the existing CEAs and WRAs which have already been designated for portions of the Site and designating additional CEAs and WRAs for the remainder of the Site." Please note that EPA cannot enforce existing NJDEP CEAs and WRAs, so please revise text accordingly. In addition, while CEA is an Institutional Control, it is not a remedial action alternative. A CEA is used in conjunction with another remedial action. Please revise Groundwater Alternative 2 accordingly.	Text added to Alternative 2 – Institutional Controls: "EPA cannot enforce existing NJDEP CEAs and WRAs."	Response acceptable; however, Section has been revised

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
118	Section 5.3.3	Page 5-8, Paragraph 1	Groundwater Alternative 3 has several contradictory and incorrect statements that need to be revised. Moreover, MNA should not have been carried through the FS and should be removed from the document. (a) The FS correctly states that: "An assessment of the potential occurrence of MNA processes was not conducted as part of the RI"; however, the text makes the following contradictory statement that: "As indicated by RI results, in general groundwater quality improved between RI Phases 1 and 2. For chlorinated VOCs, concentrations for PCE and its degradation products have decreased substantially, providing evidence of the potential occurrence of natural attenuation processes." Discussion of "trends" in the RI data are unfounded due to the limited data available for evaluation. Decreased concentrations of PCE and degradation products is not necessarily evidence of natural attenuation. The "decrease" is suspect (not statistically significant), and any drop in a parent compound should be coupled with a proportional increase in the concentration of degradation products. (b) In reference to Comment 90 and Comment 141, the FS correctly states that: "An assessment of the potential occurrence of MNA processes was not conducted as part of the RI." However, the text suggests that MNA is occurring: "Additionally, dissolved oxygen and redox potential field measurements, the presence of abundant iron and manganese, and decreasing concentrations downgradient of the Lot 64 UST area are suggestive of natural anaerobic biodegradation of BTEX compounds." Assessments of potential MNA processes cannot be included in the FS because no MNA Study was conducted in the RI. Please remove these statements throughout the FS. (c) As stated in N.J.A.C. 7:26E-5.1(e), "Monitored natural attenuation of free product and residual product is prohibited." Please remove MNA from the groundwater alternatives.	See response to Comment 116 regarding retention of MNA as a potential ancillary process option for Alternatives 2 through 6. (a) The text has been revised as follows: "As indicated by RI results, benzene, ethylbenzene, trichloroethylene, toluene, vinyl chloride, m,p-xylene, 1,4-dioxane, and selenium concentrations were lower for the February 2019 event than prior events. Decreasing organic concentrations would be consistent with the occurrence of natural attenuation processes." (b) The cited sentence revised as follows: "Additionally, dissolved oxygen and redox potential field measurements and the presence of abundant iron and manganese represent conditions that are favorable for natural anaerobic biodegradation of BTEX compounds." (c) LNAPL has not been observed in Site groundwater wells. LNAPL in soils is addressed as part of the soil/fill alternatives.	Refer to Comment 116. (a) Comment not fully addressed. Refer to revised FS text. (b) Comment not fully addressed. Refer to revised FS text. (c) Comment not fully addressed. Refer to revised FS text.
119	Section 5.3.5	Page 5-9, Paragraph 4	The FS presumes a remedy for the Site without independently evaluating the alternatives. For example, Groundwater Alternative 5 states that "Metal COCs in groundwater are not suitable for in-situ remediation because of their ubiquitous presence in historic fill. As described in the RIR (RIR Section 7), fill material is present in surface and subsurface soils throughout the Site. This material is considered "historic fill" as it complies with the NJDEP definition of historic fill. Allocation of impacts due to natural conditions, pre-placement of contaminated fill, or a release(s) was not an RI objective. Metal COCs would be addressed via institutional controls listed in Groundwater Alternative 2." This statement presumes that Lead and Arsenic are the results of historic fill placement and presumes that institutional controls have already been selected as the selected remedy. Lead exceedances are not ubiquitous and closely resemble the distribution of 1,4-Dioxane exceedances, suggesting a site-related history. It should also be noted that Section 3.4.2 states that Lead exceedances are not widespread. Please revise the FS to remove presumptive evaluation of the selected remedy and independently evaluate the alternatives with respect to the reported groundwater exceedances.	See response to Comment 116. In addition, the comment regarding co-location of lead and 1,4-dioxane, and "site-related history," is speculative.	Sentence has been removed; comment addressed
120	Section 5.3.5	Page 5-9, Paragraph 4	This text does not specify what in situ treatment would be most effective, but the cost assumes in situ chemical oxidation. The text should explain why oxidation would be the most effective, considering that the current groundwater conditions are reducing and supposedly MNA processes are occurring. Please refer to Comment 118 on MNA.	The following has been added to the description of Alternatives 4 and 5: "Chemical oxidation is generally preferred over reductive dechlorination due to the presence of arsenic and the likely decrease of arsenic mobility with increasing oxidation state."	Response acceptable.

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
121	Section 5.5	General Comment	Please revise the soil gas alternatives to include the following alternatives (refer to attached figures): • Soil Gas Alternative 1: No Action • Soil Gas Alternative 2: Institutional Controls, Air Monitoring or Engineering Controls (existing occupied buildings), and Site-Wide Engineering Controls (either subsurface barrier or subsurface depressurization system in future buildings) • Soil Gas Alternative 3: Institutional Controls, Air Monitoring or Engineering Controls (in existing occupied buildings), and In-Situ Remediation of Soils to Address Future Buildings • Soil Gas Alternative 4: Institutional Controls, Air Monitoring or Engineering Controls (in existing occupied buildings), and Removal and Off-Site Disposal of Soils to Address Future Buildings • Soil Gas Alternative 5: Institutional Controls, Air Monitoring or Engineering Controls (in existing occupied buildings), and Ex-Situ Treatment and On-Site Placement of Soils to Address Future Buildings The remedial alternatives proposed by PPG only address mitigation of vapor intrusion in future buildings that may be constructed on the site on Lots 58, 62, and 68; however, based on the Soil Gas PRGs presented in Section 3.7.2, soils across the site may present a potential vapor intrusion risk to existing buildings and future buildings due to TCE, Total Xylenes, and Naphthalene. Monitoring Wells MW-106, MW-107, MW-122, and MW-124 also have shallow groundwater VOC levels that exceed the NJDEP VISL, requiring further investigation for potential vapor intrusion in buildings. While one round of indoor air monitoring was conducted in existing, occupied buildings during the RI, EPA is recommending continuing air monitoring or engineering controls in existing occupied buildings to confirm that there are no unacceptable risks to indoor workers (Soil Gas Alternative 2). Site-wide institutional controls will be required for future building(s). In lieu of (or in conjunction with) air monitoring and engineering controls in existing occupied buildings, EPA is also recommending that TCE, Total Xylenes, and Naphthalene in soils can be remediated with in-situ remediation (Soil Gas Alternative 3), removal and off-site disposal (Soil Gas Alternative 4), or Ex-Situ Treatment with On-Site Placement (Soil Gas Alternative 5). Note that these soil process options were discussed in Section 5.2 of the FS, but discussion was isolated to soils on Lot 58, 62, and 68.	The alternative titles in this comment are inconsistent with the description of the alternatives in the following text. The soil gas alternatives have been revised See also response to #122.	Response acceptable; however, Section has been revised
122	Section 5.5	General Comment	Both "NJDEP Vapor Intrusion Technical Guidance" and "EPA Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air" require a buffer distance of 100 feet from a monitoring well with groundwater results that exceed the NJDEP VISL. Please include a 100-foot radius around MW-106, MW-107, MW-122, and MW-124 as part of the evaluation of areas requiring remedial action; any existing or future building within this radius will need institutional controls, indoor air monitoring, and potential vapor intrusion engineering controls.	Provisions for institutional controls and future monitoring/engineering controls are included in the soil gas alternatives.	Response acceptable
123	Section 5.5.1	Page 5-11, Paragraph 1	The FS states that "Under no action, no measures would be taken to protect future indoor workers from exposure to organic soil vapors." Please consider clarifying the FS text to account for the potential overlap between the soil remedies (Section 5.2) that will mitigate soil gas contaminants and the remedial actions proposed in Section 5.5. It should be made clear, if intended, that the No Action alternative for soil gas does not account for any remediation under the Soils Alternatives that may help to mitigate soil vapor intrusion risks; alternately, if there is an intent to consider interaction between the two groups of remedies, this should be clearly described.	PPG agrees that certain Soil/Fill alternatives may address potential vapor intrusion risks. Text has been added to Section 5.5 describing this.	Response acceptable, but text moved to Section 6.4 under cross-media effects.
124	Section 5.5.2	Page 5-11, Paragraph 1	Please change the title of Soil Gas Alternative 2 to read "Institutional Controls" because the alternative describes enhancing deed notices and classification exemption areas (CEAs) to maintain existing NJDEP engineering controls. No new engineering controls are being constructed; rather, the deed notices are being modified to maintain existing NJDEP engineering controls and to include future engineering controls, such as a vapor barrier, as appropriate.	Title changed per comment 121 and scope of Soil Gas Alternative 2 revised per comment 121.	Response acceptable
125	Section 5.5.2	Page 5-11, Paragraph 1	Please reference NJDEP Vapor Intrusion Technical Guidance and reference this guidance in Table 3-2 as an Action-Specific TBC.	Tables 3-1, 3-2, and 3-3 revised.	Response acceptable

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126	Section 5.6	Page 5-12, Paragraph 1	Per USEPA RI/FS guidance, the screening of alternatives is based on effectiveness, implementability, and cost, not on the number of alternatives. Please a provide a better justification of why screening is not warranted and why all alternatives are being carried forward.	Per the RI/FS guidance 4.3.2, the purpose of the screening evaluation is to reduce the number of alternatives that will undergo a more thorough and extensive analysis, with a more general evaluation of effectiveness, implementability and cost. The preliminary screening section has been expanded.	Response acceptable; however, table has been revised.
127	Section 6.1	Page 6-1, Paragraph 1	The National Contingency Plan provides nine evaluation criteria, categorized as threshold, balancing, and modifying, to address the requirements of CERCLA (EPA, 1988). The FS Report evaluates the alternatives using seven of the nine criteria (two threshold criteria and five balancing criteria). The two modifying criteria (state and community acceptance) will be assessed by USEPA following public comment on the Proposed Plan. Please revise FS accordingly.	Sections 6.1.8 and 6.1.9 have been clarified with respect to the two modifying criteria being assessed by USEPA.	Response acceptable; however, Section has been revised
128	Section 6.1	Page 6-1, Bullet List	While not a formal evaluation criterion, please identify and consider Green and Sustainability Remediation in the FS.	Comment noted and discussed under applicable alternatives.	Response acceptable
129	Section 6.1.1	Page 6-1, Paragraph 1	The FS needs to show that the remedial alternatives will address COPCs and COPECs site-wide and that they are protective of the environment. Please revise FS accordingly to include a discussion on protectiveness of the environment.	Discussions on protectiveness of the environment has been added where appropriate.	Response acceptable
130	Section 6.1.2	Page 6-1, Paragraph 1	The FS states that "Each alternative is evaluated to determine how chemical- and action-specific ARARs would be met." Location-specific ARARs also need to be evaluated. Please revise the FS accordingly.	The section has been revised as requested.	Response acceptable.
131	Section 6.1.4	Page 6-2, Paragraph 1	Please add the following sentence to the FS: "CERCLA expresses a preference for remedial alternatives employing treatment technologies that permanently or significantly reduce the toxicity, mobility, or volume of hazardous substances."	The requested text has been added.	Response acceptable.
132	Section 6.1.5	Page 6-2, Bullet list	Please consider indicating that controls will be undertaken to minimize potential exposures during remedial actions.	The section has been revised as requested.	Response acceptable.
133	Section 6.1.7	Page 6-3, Last Bullet	Per cost estimating guidance, if the selected discount rate is lower or higher than 7 percent, a specific explanation should be provided. Please provide rationale for 3 percent.	Rationale for the discount rate has been added to Appendix B.	Response acceptable
134	Section 6.1.8	Page 6-3, Paragraph 1	State acceptance is based on review of EPA's Proposed Plan. Please revise the FS accordingly. This comment also applies to Section 6.1.9, Page 6-4 for community acceptance.	See response to #127.	Response acceptable.
135	Section 6.2	General comment	This section should include a summary table of the comparative evaluation of alternatives. Also, there should be a table that summarizes the estimated duration of the project, including breakdown of pre-design investigation/evaluations or pilot testing, remedial design, and remedial action. Please revise accordingly.	The requested tables have been added.	Response acceptable; however, table has been revised.
136	Section 6.2	Page 6-4, Paragraph 1	The FS states that "Note that although the five-year reviews required by the NCP will cover all site media, the costs for performing these reviews have been included only in the estimates for the waste alternatives." A breakdown needs to be provided in the cost estimate for each media type (not consolidated under the waste alternative in Table B-1A). Please revise FS accordingly.	5-year review costs have been included among each of the media types, with costs appropriate for the level of effort anticipated for each media.	Response acceptable; however, USEPA determined that no cost is needed for a No Action alternative.

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
137	Section 6.2.1.2	Page 6-5, Paragraph 1 to 4	(a) Please revise the following sentence to read: "This alternative includes the removal and appropriate disposal of waste from containers, Building #15A and the USTs, as well as the removal and disposal of the USTs. Refer to Soil/Fill Alternatives for removal of ~~and associated~~ impacted soil in accordance with state UST tank closure regulations and technical guidance." (b) Please revise the following sentence to read: "This alternative would provide protection of human health and the environment, as the wastes would be removed from the Site, thereby eliminating the potential for exposure of human and ecological receptors and release of the materials to environmental media; however, NAPL-impacted soil is not addressed via this set of alternatives." (c) Please revise the following sentence to read: "This alternative, in conjunction with a Soil/Fill Alternative for removal of NAPL-impacted soil, would comply with New Jersey UST regulations .... This alternative would meet chemical-specific ARARs (PRGs) since the wastes would be removed from the Site." (d) Please revise the following sentence to read: "The magnitude of the residual risk of waste would be minimal. No wastes requiring continuing controls would remain; however, NAPL-impacted soil is not addressed via this set of alternatives." (e) Please revise the following sentence to read: "This alternative would reduce the mobility of the waste through removal and appropriate off-Site disposal. The toxicity and volume of the waste would not be affected by treatment. This alternative would not reduce the TMV of NAPL-impacted soils."	The text has been clarified to indicate that LNAPL-impacted soil immediately adjacent to the USTs is addressed as part of the tank removals in accordance with NJDEP UST regulations, and therefore such removal is included as part of the Waste alternative. The UST regulations are not relevant to other LNAPL-impacted soils at the Site as the source of LNAPL has not been associated with a UST. That LNAPL soil is addressed as part of the Soil/Fill alternatives. There is documented illegal dumping of petroleum hydrocarbons materials at the Site.	Response acceptable; however, Section has been revised
138	Section 6.2.2.3	Page 6-9, Paragraph 1	Please clarify if the cost for Soil/Fill Alternative 3 "Engineering and Institutional Control" reflects costs for implementing the remedy before or after the Diamond Alkali Superfund Site OU2 remedy (bank-to-bank) chemical isolation layer is constructed. If the costs reflect a pre-OU2 construction scenario, then please estimate a percent markup to address the scenario where the remedy is implemented post-OU2 construction and the OU2 chemical isolation layer needs to be protected. Same comment applies to Section 6.2.3.4 for Groundwater Alternative 4 "Institutional Controls and Containment."	Costs have been developed independently and without consideration of remedies associated with the Lower Passaic River. An allowance has been considered for post-OU-2 remedy construction.	Response acceptable
139	Section 6.2.2.6 under Short-Term Effective-ness	Page 6-12, Paragraph 1	Chemical oxidation treatment is generally applied in several rounds with several months between treatments. Please explain how the duration of this alternative was determined and how many rounds of treatment were assumed in the cost estimate.	It is agreed that multiple treatment rounds are often necessary, especially for groundwater, if injection is the selected means of treatment rather than mechanical mixing (such as with large diameter augers). The text (costs) have been revised to acknowledge this.	Response acceptable; however, text and costs have been revised.
140	Section 6.2.3.3 under Reduction of TMV through Treatment	Page 6-15, Paragraph 1	For MNA to be effective, the ARARs would need to be achieved in a similar timeframe as an active remedy. Without the MNA study, it is unknown how long the MNA process would take to achieve the ARARs or if MNA could achieve the ARARs. Please refer to Comment 118 on MNA.	See response to #118.	Refer to Comment 116; MNA has been screened out.
141	Section 6.2.3.3 under Short-Term Effective-ness	Page 6-16, Paragraph 1	The text states that decreasing COC concentrations indicate short-term effectiveness for MNA, but there isn't sufficient evidence presented for the MNA process here and this sentence should be removed. Please refer to Comment 118 on MNA.	See response to #118.	Refer to Comment 116; MNA has been screened out.
142	Section 6.2.3.4	Page 6-16, Paragraph 1	Please incorporate a discussion (as was discussed in the RI Report) of the data used to support the potential for discharge of groundwater to the Passaic River. Please also see Comment 143.	No longer relevant to Section 6, as this alternative has been screened out in Section 5.6.	Response acceptable
143	Section 6.2.3.4	Page 6-16, Paragraph 1	For Groundwater Alternative 4, why would the vertical barrier be required around the Site to address off-site surface water? Where is the site groundwater discharging to surface water? This should be explained here and on page 5-9.	Discussion has been added to Section 5.3.6. See also response to Comment 142.	Response acceptable

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
144	Section 6.2.3.5	Page 6-17, Paragraph 1	The FS states "If LNAPL is observed in groundwater (outside of the UST area), this alternative would include remedial measures to address the LNAPL. Based on RI findings, LNAPL remedial measures are not warranted." However, the RI Report states: • Section 1.4.9 Lot 64: "A black viscous light non-aqueous phase liquid (LNAPL) sheen/film was observed in two of the six test pits (TP-3 and TP-5) located to the north (TP-3) and east (TP-5) of the UST field (SCSR)." • Section 7.1 Affected Media: "Observations of free product (oil-like substance) in soil were also noted at Borings B-34, B-35, and B-90 and Monitoring Well MW-201 adjacent to the UST area." • Section 8.2 Soil: "Isolated areas of LNAPL staining were also observed in soil during the drilling of Monitoring Well MW-201 between the ground surface and 7.2 feet bgs." • Section 8.3.1 Shallow Fil Unit: "LNAPL was observed in soil in the area of Lot 64 USTs." Please remove the text that states that LNAPL remedial measures are not warranted. Remedial alternatives to address LNAPL, preferably excavation to the extent of LNAPL, and post-excavation confirmation sampling based on the findings of the RI, are likely to be required. Please also see Comment 145.	Outside of the UST area, LNAPL has not been observed associated with groundwater. As such, based on RI findings, LNAPL remedial measures associated with groundwater are not warranted. LNAPL remedial measures associated with soil are included in the Waste (for the UST area) and Soil/Fill remedial alternatives. The text has been clarified.	Response not acceptable. Refer to revised FS text. Presence of LNAPL, regardless of whether it appears in wells, is the spirit of N.J.A.C. 7:26E-5.1(e). Addressing LNAPL under Soil/Fill alternatives is acceptable, and the following clarifying text from Alternative 3 (In-Situ) has been added to Alternative 4 (P&T, targeted periodic in-situ) "As with Alternative 3, if LNAPL is observed in groundwater (outside of the UST area), this alternative would include remedial measures to address the LNAPL, depending on the nature and extent of the LNAPL, and could include excavation and removal, passive absorption, or dual-phase extraction, among other potential approaches."
145	Section 6.2.3.5	Page 6-17, Paragraph 1	What additional remedial measures would address the LNAPL?	The text has been revised to include potential additional remedial measures should LNAPL be observed in groundwater.	Refer to Comment 144
146	Section 6.2.3.5 under Compliance with ARARs	Page 6-17, Paragraph 2	The text states "Groundwater would be monitored until PRGs for COCs are met" but it should state "until PRGs for organic COCs are met".	Per comment 116, all COCs are to be addressed by the alternatives, therefore, monitoring must continue until PRGs for all COCs are met, not just organics.	Response acceptable; however, Section has been revised
147	Section 6.2.5.1	Page 6-20, Paragraph 1 to 4 (continues onto Page 6-21)	(a) Please revise the following sentence to read: "The No Action alternative would not provide protection of human health since no action would be taken to prevent COCs in soil gas from migrating to indoor air (assuming that No Action also occurs under the Soil/Fill Alternative to address contaminated soils), although at the present time ~~there are no associated exposures~~ the detected concentrations do not pose unacceptable cancer risks or noncancer hazards, as modeled in the BHHRA." (b) Please revise the following sentence to read: "This alternative would not comply with ARARs, as no action would be taken to address COCs in soil gas (assuming that No Action occurs under the Soil/Fill Alternative to address contaminated soils)." (c) Please revise the following sentence to read: "The No Action alternative does not provide long-term effectiveness and permanence since COCs in soil gas would not be addressed (assuming that No Action occurs under the Soil/Fill Alternative to address contaminated soils)." (d) Please revise the following sentence to read: "No reductions of contaminant TMV through treatment would be achieved under this alternative (assuming that No Action occurs under the Soil/Fill Alternative to address contaminated soils)."	Text has been revised.	(a) Response acceptable (b) Response acceptable (c) Response acceptable (d) Response acceptable
148	Section 6.2.5.2	Page 6-21, Paragraph 1	In addition to referencing vacant buildings or future, occupied buildings, please also include an ongoing evaluation of existing, occupied buildings within 100 feet of a monitoring well with groundwater that exceeds the NJDEP VISL.	Ongoing monitoring has been added to the alternatives.	Response acceptable; however, Section has been revised
149	Section 6.3.1	Page 6-23, Paragraph 1	Please add the following sentence to the comparative analysis of waste: "Alternative 2 will need to be implemented in conjunction with a Soil/Fill Alternative for the removal and off-site disposal of NAPL-impacted soil, to maintain compliance with NJDEP regulations.	The text has been revised as appropriate. See also comment 137.	Response acceptable

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
150	Section 6.3.2	Page 6-23, Paragraph 1	(a) Please remove or revise the following sentence: "When a COC is related to natural conditions or historic fill, it is ubiquitous in the soil/fill, like background concentrations, likely resulting in non-compliance with chemical-specific ARARs regardless of alternative." As stated elsewhere in the FS, PPG did not define the fraction of contamination associated with natural conditions, historic fill, or a release(s). Moreover, the RI states that once placed the historic fill may have been impacted by historic or current releases associated with operations on the Site. (b) It is unclear why Soil/Fill Alternative 4 would not rate just as well as Alternatives 3, 5, and 6 in terms of protectiveness. compliance, and long-term effectiveness. Please clarify why Soil/Fill Alternative 4 was excluded. Note that Soil/Fill Alternative 4 also may address TMV by treatment since Lead hazardous material would need to be treated/stabilized prior to disposal. (c) In the comparative analysis, please compare the bulkhead alternatives of sheet piling versus rip rap, particularly when considering groundwater containment and satisfying the RAO to prevent or minimize discharge of groundwater containing COPCs to surface water to minimize the potential for interaction between the Site and the Passaic River.	(a) The sentence has been removed. (b) No longer relevant, alternative has been screened out due to implementability issues. (c) The text has been revised to discuss this comparison, but note that groundwater containment and minimizing the discharge of groundwater containing COPCs to surface water are not Soil/Fill RAOs.	(a) Response acceptable; however, Section has been revised (b) Response acceptable; however, Section has been revised (c) Comment not fully addressed. Refer to revised FS text
151	Section 6.3.2	Page 6-24, Paragraph 1	The text states that for Soil/Fill Alternative 4 may not meet ARARs for the deeper contaminated soil. Note that this statement is true for all the Soil/Fill Alternatives, not just Soil/Fill Alternative 4. Please revise the FS accordingly.	Alternatives have been revised to include addressing deeper impacted soil/fill.	Comment not fully addressed. Refer to revised FS text
152	Section 6.3.3	Page 6-24, Paragraph 1	The FS states that "Groundwater Alternatives 3 through 5 are similar in terms of overall protectiveness, compliance with ARARs, long-term effectiveness, and reduction of TMV …" Please separate the groundwater alternatives in the comparative analysis and revise the text accordingly, because containment will not reduce TMV and MNA has not been documented at the Site.	The text has been clarified as appropriate.	Response acceptable; however, Section has been revised
153	Section 6.3.3	Page 6-24, Paragraph 1	Page 6-24 text states that tidal influences would affect in situ treatment, but the tidal influence problem needs to be discussed earlier in the Section 6.2.3.5 text on comparative analysis and Section 5.3.5 text describing the alternative.	The text has been revised.	Response acceptable; however, Section has been revised
154	Section 6.3.3	Page 6-24, Paragraph 2	This text needs to clearly state that none of the alternatives would meet the chemical-specific ARARs for metals in groundwater. Only Alternative 5 would meet the chemical-specific ARARs for organic compounds. The alternatives would not achieve the groundwater RAO to restore groundwater quality.	Alternatives have been revised to include provisions for addressing metals, although the effectiveness and implementability of such provisions is uncertain at this time.	Response acceptable; however, Section has been revised
155	Section 6.3.3	Page 6-24, Paragraph 3	In reference to Comment 156, the FS states "Under Alternatives 3 through 5 (pending MNA suitability determination), O&M obligations related to groundwater organic COCs would diminish within 30 years." This statement is unsupported in the detailed analysis of groundwater alternatives. Please support or remove the statement.	It is well established that upon removal of source materials, many types of organic impacts attenuate over time, including chlorinated and petroleum-related compounds. Additional assessment would be performed as part of the Remedial Design. Text has been clarified.	Response acceptable; however, Section has been revised
156	Section 6.3.3	Page 6-24, Paragraph 3	Why would O&M obligations diminish in 30 years? Is this based on an MNA prediction?	See response to Comment 155.	Refer to Comment 155
157	Section 6.4	General	(a) Please add a discussion on cost benefits from overlap of remedial alternatives. (b) Please discuss the interrelationship between the Soil/Fill Alternative (which include the removal of NAPL-impacted soil) and the Waste Alternatives. (c) Please discuss the interrelationship between the Soil/Fill Alternatives (which include soil impacted by TCE, Total Xylenes, and Naphthalene) and the Soil Gas Alternatives. (d) Please discuss the interrelationship between the Soil/Fill Alternatives (which include the removal of source material) and groundwater quality. (e) Rather than asserting that various soil remedies will "reduce the potential benefit" of groundwater alternatives, please revise text to state that removing soil source material will increase the effectiveness of groundwater alternatives, potentially decreasing the time needed to achieve ARARs, and potentially reducing the scope of the proposed alternatives. Please expand on the analysis of cross media benefits of the various proposed alternatives; please also refer to Comment 158.	The text has been revised with respect to these comments where appropriate. Note that for (b), the waste alternatives have been defined to include NAPL-impacted soil/fill directly associated with the USTs (as is required under the NJ UST regulations/guidance), whereas other NAPL-impacted soil/fill at the Site is addressed by the soil/fill alternatives.	(a) Response acceptable (b) Response acceptable (c) Response acceptable (d) Response acceptable (e) Response acceptable
158	Section 6.4	Page 6-25, Bullet 3	The text on soil alternatives improving groundwater quality needs to be expanded. Would those alternatives change the volume or areas of groundwater that needs to be treated? Would they reduce the time necessary to achieve the groundwater ARAR for organics, or inorganics?	The text has been revised appropriately.	Response acceptable

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
159	Section 6.4	Page 6-25, Bullet 4	If Soil/Fill Alternative 3 with the sheet piling is selected, would that mean that Groundwater Alternative 4 with the vertical barrier would also be selected?	Not necessarily, as the two alternatives have different objectives and therefore potentially different design and construction approaches. A discussion has been added to the text.	Response acceptable
160	Table 3-1	--	Please evaluate the following regulations and determine if they need to be added as ARARs and TBCs: • Ambient Water Quality (40 CFR 131) • New Jersey Drinking Water Quality Acts MCLs (NJAC 7:10-16) • Clean Water Act Effluent Guidelines and Standards (40 CFR 401) • Treatment Works Approval (NJAC 7:14A-22) • Hazardous Material Transportation Act (HMTA) (49 USC 1801-1819) • CAA New Source Review and Prevention of Significant Deterioration Requirements (40 CFR Part 52) • CAA New Source Performance Standards (40 CFR Part 6) • New Jersey Soil Erosion and Sediment Control Act (NJSA 4:24-39) • USEPA Regional Screening Levels	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
161	Table 3-1 and Table 3-2	--	Please revise the format of Table 3-1 and Table 3-2 to include at a minimum the following column headers and information: • Name of the potential ARAR or TBC • Proper legal citations for potential ARARs • A synopsis of each requirement • How the requirement would be applied	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
162	Table 3-1, Chemical-Specific ARAR	--	Under the reference to the Clean Water Act (CWA), please clarify the applicable part of CWA that is being applied or the regulation being cited as an ARAR. CWA may not be applicable unless surface water remediation is being addressed. Note that it is unclear if this regulation is being listed as an ARAR due to discharge of effluent from the river wall pipes to the Lower Passaic River. Same comment applies to New Jersey Surface Water Standards.	Refer to revised Table 3-1, 3-2 and 3-3. In addition, note that the only observed discharge was not confirmed to be effluent as part of RI.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
163	Table 3-1, Chemical-Specific ARAR	--	Please remove National Ambient Air Quality Standards as a chemical-specific ARAR.	Refer to revised Table 3-1	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
164	Table 3-1, Chemical-Specific ARAR	--	Please move the following ARARs to the list of action-specific ARARs: • RCRA Toxicity Characteristic Leaching Procedure and Land Ban Requirements for Landfilling (40 CFR Part 261) • Hazardous Waste Identification Rule (40 CFR, November 30, 1998) • Toxic Substances Control Act (TSCA) - Requirements for Polychlorinated Biphenyls (PCB) Spill Cleanup (40 CFR 761.125) • New Jersey Ambient Air Quality Standards (N.J.A.C. 7:27-13) • Hazardous Waste Rules (N.J.A.C. 7:266G-5)	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
165	Table 3-1, Location-Specific ARAR	--	Please remove National Environmental Policy Act as a location-specific ARAR.	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
166	Table 3-1, Location-Specific ARAR	--	Please move the following ARARs to the list of To Be Considered (TBCs): • Executive Order on Wetlands Protection (Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA] Wetlands Assessments) No. 11990 • Executive Order 11988, "Floodplain Management" [Coastal Zone Management Act (15 CFR Part 923)	Refer to revised Table 3-1, 3-2 and 3-3.	Response partially acceptable (note that changes were made in Tables 3-2, 3-3 and 3-4). Table revised to include EO No. 11990 as location-specific ARARs.
167	Table 3-1, Location-Specific ARAR	--	Under Fish and Wildlife Coordination Act and Migratory Bird Treaty Act of 1918, please clarify the applicable part of the regulations being cited as an ARARs; only substantive requirements can be ARARs.	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
168	Table 3-1, Location-Specific ARAR	--	Under Water Pollution Control Act Water Quality Certification Requirements (NJSA 58: 10A1 to 13), please clarify the applicable part of the regulation being cited as an ARAR; only substantive requirements can be ARARs. Note that under CERCLA (Section 121(e), a water quality certificate does not need to be issued for on-site remedial work. Same comment applies to the Clean Water Act - National Pollutant Discharge Elimination System Permitting (40 CFR §§ 122 and 125). Note that it is unclear if this regulation is being cited due to discharge of effluent from the river wall pipes to the Lower Passaic River.	Refer to revised Table 3-1, 3-2 and 3-3. In addition, note that the only observed discharge was not confirmed to be effluent as part of RI.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
169	Table 3-1, Action-Specific ARAR	--	Please note that for RCRA Ground Water Monitoring and Protection Standards, 40 CFR Part 264, Subpart F is already listed as a chemical-specific ARAR. Please clarify what provisions under Subpart F are being referenced as action-specific ARARs.	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
170	Table 3-1, Action-Specific ARAR	--	Please clarify why RCRA Subtitle D Nonhazardous Waste Management Standards (40 CFR 257) is an action-specific ARAR.	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
171	Table 3-1, Action-Specific ARAR	--	(a) Please revise regulation to read: "TSCA PCB regulations (40 CFR Part 761)." (b) Please clarify which paragraphs are being referenced as ARARs.	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
172	Table 3-1, Action-Specific ARAR	--	Clean Water Act 40 CFR §121.2 provides content of a state certification of activities requiring a federal permit. This citation is not a substantive requirement for on-site work and not an ARAR. Please remove.	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
173	Table 3-1, Action-Specific ARAR	--	(a) Please remove the reference to "May 1, 1987 - Gold Book". This guidance document is not an ARAR. (b) Please revise the remaining reference to read: "Clean Water Act, 33 United States Code (USC) §1251 et. seq (Section 304, Water Quality Criteria)."	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
174	Table 3-1, Action-Specific ARAR	--	(a) Please revise reference to read: "Clean Water Act, 33 USC Navigation and Navigable Waters (33 CFR 322, 323, and 339)." (b) Please revise reference to read: "Clean Air Act, National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50)."	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
175	Table 3-1, Action-Specific ARAR	--	Please remove Occupational Safety and Health Standards for Hazardous Responses and General Construction Activities as an action-specific ARAR.	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
176	Table 3-1, Action-Specific ARAR	--	(a) Please revise reference to read: "Clean Air Act Section 112, (42 U.S.C. §74012, Section 112." (b) Please clarify which paragraphs are being referenced as ARARs.	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
177	Table 3-1, Action-Specific ARAR	--	Under Permits and Certificates for Minor Facilities (N.J.A.C. 7:27-8) and Air Permits and Certificates (N.J.A.C. 7:27-22, please note that under CERCLA 121(e). on-site response actions are exempt from the need to obtain permits and certificates, but substantive requirements are potential ARARs. Please clarify the referenced action-specific ARARs.	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
178	Table 3-1, Action-Specific ARAR	--	Please remove New Jersey Incineration Standards (N.J.A.C. 7:27-11) unless an incinerator will be constructed on-site.	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
179	Table 3-2, Chemical-Specific TBCs	--	TBCs are cited if needed to determine what is protective (e.g., in the absence of ARARs), or they may be useful in developing the remedy. If an ARARs exists for the COPC, and if EPA believes that the ARARs are protective, then there would be no need to use TBC values to calculate site-specific cleanup values. Please clarify the referenced chemical-specific TBCs: • Guidelines for Carcinogenic Risk Assessment • Supplemental Guidance for Assessing Susceptibility form Early-Life Exposure to Carcinogens • EPA Risk Reference Doses (RfDs) • Human Health Assessment Cancer Slope Factors (CSFs) • EPA Carcinogenic Assessment Group Potency Factors	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
180	Table 3-2, Chemical-Specific TBCs	--	Please clarify the following statements and how they qualify as TBCs: • Recommendations of the Technical Review Workgroup for Lead for an Approach to Assessing Risks Associated with Adult Exposure to Lead in Soil • TSCA Health Data • USEPA Drinking Water Health Advisories • USEPA Preliminary Remediation Goals	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
181	Table 3-2, Chemical-Specific TBCs	--	Please clarify the specific reference to "Toxicological Profiles, Agency for Toxic Substances and Disease Registry, U.S. Public Health Service." It is currently too broad.	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
182	Table 3-2, Chemical-Specific TBCs	--	Under Safe Drinking Water Act National Primary Drinking Water Regulations, maximum contaminant level goals (MCLGs) are ARARs, not TBCs. Please move to Table 3-1.	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.
183	Table 3-2, Action-Specific TBCs and Location-Specific TBCs	--	Please provide complete references for: • New Jersey Vapor Intrusion Screening Levels • New Jersey Indoor Air Screening Levels • Groundwater Screening Levels • Groundwater Classification Guidelines • Groundwater Protection Strategy	Refer to revised Table 3-1, 3-2 and 3-3.	Response acceptable. Refer to revisions to Tables 3-2, 3-3, and 3-4.

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
184	Table 3-3	--	(a) Table 3-3 incorrectly includes field duplicates in column called "Total Number of Samples." Parent samples and field duplicates should be averaged and included in Table 3-3 as one sample. (b) "Total Number of Samples" in Table 3-3 should include the total number of samples where a constituent was analyzed. For example, Lead and Arsenic were not analyzed in the supplemental surface soil samples that were designated for pesticides and herbicides only. Likewise, Lead and Arsenic were not analyzed in the Dioxin/Furan surface soil samples along the bulkhead. Therefore, these samples should not be included in the "Total Number of Samples" count. Please revise Table 3-3 accordingly. (c) Table 3-3 divides soil results into "surface" and "subsurface". Please remove this division; if a soil result exceeds the ARARs regardless of depth, then the location needs to be evaluated in the FS. (d) Please show all units in Table 3-3 in mg/kg for consistency with the text. (e) Per the BHHRA, please include Lead as a COPC parameter for Lot 62 and Lot 65. (f) Please clarify the added comments in the last column of Table 3-3 for Lead at Lot 61 and Naphthalene at Lot 62. BHHRA Appendix A Table 2.01 notes Lead was detected in 9 of 9 samples at Lot 61 (BHHRA page 63) and Naphthalene was detected in 3 of 4 samples at Lot 62 (BHHRA page 69). (g) Please delete the added comment in the last column of Table 3-3 for Lead in surface soil at Lot 63. A UCL concentration was not used at the EPC for Lead at Lot 63 in the BHHRA. (h) Please revise the added comment in the last column of Table 3-3 for Copper at Lot 63, from "child" to "child visitor". (i) Please correct the number of samples above the ARAR for Lead in Lot 68 (i.e., Lead concentration is above the ARAR in 3 subsurface soil samples in Lot 68 according to Figure A-7). (j) Please correct the number of samples in Lot 1 (i.e., Lot 1 accounts for 11 surface samples collected in 8 borings) and the statistical evaluation used when appropriate. (k) Please revise the averages since some of the Table 3-3 averages do not match the BHHRA averages (i.e., Benzo(a)pyrene average concentration in surface soils at Lot 1 is 1.24 mg/kg (as per BHHRA table 3.01.01). If a different set of samples is presented in the FS compared to the BHHRA, please explain this difference.	This table is now Table 3-5. a. Table revised based on other EPA comments and this comment may no longer be applicable. b. Table revised based on other EPA comments and this comment may no longer be applicable. c. Surface and subsurface provides information used in alternative evaluation and ecological exposure considerations. NJDEP compliance guidance describes subsurface vertical zones (2+ feet) being evaluated distinctly from the comparable functional areas within the surface vertical zone (0-2 feet). d. Units changed from ppm to mg/kg. e. Table revised based on other EPA comments and this comment may no longer be applicable. f. Table revised based on other EPA comments and this comment may no longer be applicable. g. The use is UCL is appropriate for this table. Either average or 95% UCL are used per NJDEP guidance. BHHRA EPC basis comment is not relevant to this table. h-k. Table revised based on other EPA comments and these comments may no longer be applicable.	Since NJDEP compliance averaging is no longer applicable, Table 3-5 has been replaced with single-point compliance.
185	Table 3-4	--	(a) Please add Cadmium to Table 3-4. Cadmium in sample MW-110_021419 (4.3 ug/L) exceeds the ARAR (4 ug/L). (b) Please correct the footnote "Method Detection Limit exceeds ARAR" to "Reporting Detection Limit exceeds ARAR".	a. New Table 3-6 includes cadmium. b. Change made.	(a) Response acceptable; however, refer to revised Table 3-6 (b) Response acceptable; however, refer to revised Table 3-6
186	Table 3-5	Page 1 of 2 and Page 2 of 2	(a) Since the RBC is derived for only the ingestion exposure route and only for noncancer hazards, please remove the extraneous equations and input parameters. While it is recognized that the table template is generic, removing extraneous information avoids the potential for confusion. (b) Please use the same parameter symbols in the equations and the list of parameters. (c) Please change the title "Volatile Organic Compounds (VOCs)" to "Metals" in the box at the bottom of the table. (d) Please add USEPA 2012 to the list of references at the bottom of table.	a. Table 3-7 has been updated to only show noncancer RBC equations b. Table 3-7 has been updated c. Table 3-7 has been updated d. RBA for copper is not applicable and therefore, the reference to USEPA 2012 was removed from the table	(a) Response acceptable (b) Response acceptable (c) Response acceptable (d) Response acceptable
187	Tables 3-6, 3-7, 3-8, and 3-9	Page 1	(a) Please correct the discrepancy between the table and notes. For example, Note 5 and Note 6 in the table are mis-numbered and do not match the notes at the bottom of the table. Also, all six notes should be cited in the table. (b) Please update the BHHRA reference.	a. Tables 3-8 through 3-11 have been updated b. BHHRA reference has been updated in Tables 3-8 through 3-11	(a) Response acceptable (b) Response acceptable
188	Table 3-10	Page 1 of 2	(a) Please use the same parameter symbols in the equations and the list of parameters. (b) In the box at the bottom of the table, please revise the following parameter symbols to match those in the list of parameters: Csg – Noncancer, Csg – Cancer, RBC – Noncancer, and RBC – Cancer.	a. Table 3-12 has been updated b. Parameters symbols have been updated in Table 3-12	(a) Response acceptable (b) Response acceptable
189	Table 3-11	Page 1	Please revise Note 3. The PRG for Lead for the child visitor is not based on the IEUBK model and the PRGs based on the ALM that are presented in Tables 3-6 to 3-9.	Comment is unclear; the lead value for the child visitor of 567 mg/kg was ultimately derived using the IEUBK model, consistent with the approach outlined in the BHHRA (and the FS text). However, we have modified the note to refer the reader to the FS text for explanation.	Response acceptable; however, refer to revised Table 3-13

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190	Table 4-2	Page 1 of 6, Process Option "Multimedia Cap"	There is no clear reason why this cap is not retained since its effectiveness and implementability is basically the same as the other two caps evaluated (single layer cap and combination cap). Please add language to better justify why this process option is not being retained.	Combination cap changed to retained in table.	Response not acceptable. This comment referred to "Multimedia Cap" not "Combination Cap", which was already retained. Table 4-2 was revised to better justify why multimedia caps were not retained.
191	Table 4-2	Page 5 of 6, Remedial Technology "Ex-Situ Treatment (Thermal)"	Ex-Situ Thermal Treatment remedial technology can be effective for treating PCB-impacted soils which are above TSCA levels. Please add to the screening comments that PCB Aroclor concentrations above 50 ppm have not been encountered at the Site, but if reported during the pre-design investigation, appropriate actions will be taken.	Table 4-2 revised.	Response partially acceptable. Table 4-2 revised to retain "Incineration" off-site. Also revised, Table 4-2 "Thermal Desorption" and section 4.2.2 of main text to include text on TSCA levels.
192	Appendix A	General Comment	(a) Appendix A needs an introduction describing the intent of the figures, including definition of the red boundary lines. (b) Volume calculations need to be presented in a table with rationale for the areas and depths presented. (c) Appendix A is not clear on how the area of influence for each point was determined. Example 1: In Figure A-1, the 2,800 SF area in Lot 64 has no bounding data point to the SW, yet the area is delineated as a square. Example 2: In Figure A-2, the 800 SF area in Lot 58 is delineated using the boundary of lot 58; however, the 4,200 SF area extends into Lot 1. Example 3: It is unclear why sample locations exceeding PRGs in Lots 1 and 64 are not included in the contaminated soil delineation. (d) Soil concentrations described in FS are presented in mg/kg units, yet soil concentrations in Appendix A are inconsistently presented in mg/kg and ug/kg. In addition, most figures do not include sample identifications. Please improve consistency in units and sample identification labelling.	a through d - Appendix A was revised based on USEPA comments.	Since NJDEP compliance averaging is no longer applicable, Appendix A has been replaced with single-point compliance.
193	Appendix A	Figure A-1	(a) Please make units equal to mg/kg for consistency with the FS text and to make the concentrations easier to read on the figure. (b) In the Legend, please define the red and blue lines (e.g., remedial action boundaries), and the halo around the markers. (c) In the Legend, please remove Note 3 as it does not seem to pertain to the noted concentrations. (d) In the Legend, please state how the field duplicates are presented on the figures. (e) In the "Surface" portion of the figure, the indicated label of "2,030 SF" is not pinned to any area and it is not clear how the areas in Lot 1 total the 8,360 SF noted in the text. Please clarify. (f) Please move Lead concentration for sample B-24(1.5-3.5) at 420,000 ug/kg from the subsurface map to the surface map. (g) Please correct the surface Lead concentrations for locations B-13 from 314,000 by 1,039,000 ug/kg and B-98 from 314,000 to 182,000 ug/kg. (h) Please show the missing surface Lead concentrations for sample B-14(0-1) at 33,900 ug/kg), there is a marker but no concentration. These comments apply to other figures in the series, please incorporate as appropriate.	a- h Delineation presented in Appendix A was revised based on other EPA comments and these comments are no longer be applicable.	Since NJDEP compliance averaging is no longer applicable, Appendix A has been replaced with single-point compliance.
194	Appendix A	Figure A-4	Please move Lead concentration for sample B-28(1.5-2.75) at 643,000 ug/kg from the subsurface map to the surface map.	See Comment 193.	Since NJDEP compliance averaging is no longer applicable, Appendix A has been replaced with single-point compliance.
195	Appendix A	Figure A-5	(a) Please move naphthalene concentration for sample B-28(1.5-2.75) at 100 ug/kg from the subsurface map to the surface map. (b) Please remove the qualifiers from the listed concentrations. Same comment applies to other figure in this series as appropriate.	a - Delineation presented in Appendix A was revised based on other EPA comments and these comments are no longer be applicable. b. Qualifiers were presented on similar RIR figures and other FS figures. No change.	Since NJDEP compliance averaging is no longer applicable, Appendix A has been replaced with single-point compliance.
196	Appendix A	Figure A-7	Please add the missing surface Lead concentration for sample B-83(0.3-1.3) at 798,000 ug/kg.	Delineation presented in Appendix A was revised based on other EPA comments and this comment is no longer be applicable.	Since NJDEP compliance averaging is no longer applicable, Appendix A has been replaced with single-point compliance.

Number	Section	Page	EPA Comment	PPG Response	EPA Back-Check of Responses
197	Appendix A	Figure A-8	Please add the missing subsurface Trichloroethylene concentration B-51(5-7) at 28 ug/kg.	Delineation presented in Appendix A was revised based on other EPA comments and this comment is no longer be applicable.	Since NJDEP compliance averaging is no longer applicable, Appendix A has been replaced with single-point compliance.
198	Appendix A	Figure A-9	(a) Please move the Lead concentration for samples B-8(1.5-2.5) at 71,600 ug/kg; B-64(1.5-2.5) at 1,080,000 ug/kg; B-65(1.5-2.7) at 3,540,000 ug/kg; B-66(1.5-2.5) at 391,000 ug/kg; and B-67(1.5-2.5) at 48,000 ug/kg from the subsurface map to the surface map. (b) Please add the missing surface Lead concentration for sample B-101(0-1) at 849,000 ug/kg, since the corresponding subsurface samples B-101(5-6) and B-101(11-13) are presented on the subsurface map. (c) Please verify the position of the historic sample SB_13_70 7'-7.5". Based on historic maps, this sample needs to be moved closer to the building (on the left side of location called 4_70 3').	a – c. Delineation presented in Appendix A was revised based on other EPA comments and these comments are no longer be applicable.	Since NJDEP compliance averaging is no longer applicable, Appendix A has been replaced with single-point compliance.
199	Appendix B	General comment	Appendix B is incomplete and should include the "Basis of Cost Estimate." The basis should include but not be limited to the following: • Determine the year the unit prices were estimated (*i.e.,* 2019 or 2020 dollars?) and provide the engineering News Record (ENR) Construction Cost Index at the time the estimate was developed. • Provide rationale on the selected discount rate. • Provide assumptions on how the unit quantities were estimated. • Provide assumptions on how the unit costs were estimated. • Provide assumptions on conversion factors that were used to determine Cubic Yards vs Tons. • For material cost such as backfill, gravel, or rip rap, specify what the unit cost includes (for example, does it include purchase and delivery, placement, and compaction). • For disposal costs, specify what the unit cost includes (for example, does it include transport as well as disposal). • For monitoring costs, specify the assumptions on how many points are being sampled and what parameters are being analyzed and whether the costs include processing, shipping, etc.	Text has been added to Appendix B to describe the basis of the estimates.	Response acceptable; however, text has been revised.
200	Appendix B	General Comment	For all tables, please explain what is provided in the Lump Sum costs.	Additional information has been provided in the basis of estimate and/or tables as appropriate.	Response acceptable; however, text has been revised.
201	Appendix B	Table B-1A	Please provide a breakdown by media type since the cost seems low. Please also specify what is included in the $4,000 lump sum listed as "Five-Year Reviews (annualized cost)".	See response to comment 136.	Response acceptable; however, cost tables have been revised.
202	Appendix B	Table B-1B	Costs for site restoration are missing. After placement of backfill, please clarify if a layer of topsoil and reseeding will be placed.	Restoration costs have been included as appropriate.	Response acceptable; however, cost tables have been revised.
203	Appendix B	Table B-2B	Please confirm that mobilization is not required for the fencing enhancements.	Mobilization for a fencing contractor is nominal and included in the overall fencing estimate.	Response acceptable; however, cost tables have been revised.
204	Appendix B	Table B-2C1	(a) Please clarify what is included under "Surface Waste Removal". (b) Please clarify whether "Temporary Silt Screen" is referring to an in-water silt curtain or an on-land silt screen. (c) Costs seem to be missing the removal of dilapidated bulkhead prior to installation of new sheet pile. Decontamination of materials would also need to be included due to impacts from Passaic River sediment.	Clarifications and bulkhead removal costs have been added.	Response acceptable; however, cost tables have been revised.
205	Appendix B	Table B-2D	(a) Hazardous lead material would need to be treated/stabilized prior to disposal. Please clarify whether this cost has been included in any of the line items. (b) Hazardous material will need to be contained and handled differently that non-hazardous material. Please clarify whether costs have been included for containment areas, covering stockpiles, etc.	Not relevant. Associated alternative has been screened out in June 2020 FS.	Response acceptable; however, cost tables have been revised.
206	Appendix B	Table B-2F	Please clarify whether oxidant treatment will only require one application or multiple applications.	The number of treatments required to achieve remediation goals cannot be predicted until treatability studies are performed. For costing purposes, up to three rounds are assumed.	Response acceptable; however, cost tables have been revised.

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The Development and Screening of Remedial Alternatives Technical Memorandum (DASRAT) was submitted on August 28, 2019. EPA submitted comments on October 21, 2019, and PPG submitted response-to-comments on November 25, 2019. EPA completed their back-check of the response-to-comment matrix on February 25, 2020. EPA conditionally approved the DASRAT response-to-comments on February 27, 2020 with the understanding that PPG would implement the responses into the FS. The review of the Draft FS indicated that the following DASRAT comments were not satisfactorily implemented. The following Comments Numbers, Section Numbers, and Page Numbers reference the DASRAT. EPA has provided the applicable section in the FS where the comment can be implemented.					
DASRAT NJDEP 6	DASRAT Section 5.2	DASRAT Page 5-1 and Table 5-2	Slurry wall should be retained for the soil and groundwater, not just the groundwater table. This comment is noting a discrepancy between the Groundwater Technology Screening Table 5-3 where slurry walls were retained, but they were not retained on the Soil Technology Screening Table 5-2 (even though the same rationale was provided). Please correct discrepancy. Please address this DASRAT comment and correct FS Table 4-2.	The apparent discrepancy as to the rationale for retaining and screening the slurry wall for groundwater and soil, respectively, has been resolved, as indicated in the Responses to DASRAT comments.	Tables 4-2 and 4-3 to have consistent terminology on slurry wall.
DASRAT EPA 1B	DASRAT Section 1.1	DASRAT Page 1-1, Paragraph 3	The DASRAT states that "The development and screening of remedial alternatives is intended to identify an appropriate range of remedial action alternatives, including options in which treatment is used to reduce the toxicity, mobility, or volume of wastes, including, at a minimum, the principal threats posed by the Site …" Please ensure that the FS includes a discussion of principal threat wastes as is applicable to the Site. Please address this DASRAT comment in FS Section 3.5.1 and include a discussion of principal threat waste.	Principal threat waste added to FS.	Response acceptable
DASRAT EPA 11B	DASRAT Section 4.0 and General Comment	DASRAT Page 4-1, Paragraph 1	Throughout the DASRAT, the terminology to describe soil material at the Site changes from "Soil" to "Soil and Fill" to "Soil and Historic Fill". Please revise the DASRAT to be consistent in the terminology. Please address this DASRAT comment throughout the FS when discussing the Soil/Fill media.	Comment addressed as appropriate in FS.	Response acceptable
DASRAT EPA 18	DASRAT Section 4.1	DASRAT Page 4-2, Paragraph 1 under bullets	The DASRAT states that "As noted in the RI Report, there are no sensitive species, habitats (e.g., wetlands), or significant cultural resources present at the Site…" Please revise this sentence to be consistent with RI Section 1.2.3 (under Lot 70), which identifies the riparian zone as 'Environmentally Sensitive Natural Resources.' Please address this DASRAT comment in FS Section 3.2 because NJDEP identified an Environmentally Sensitive Natural Resource on Lot 70 along the riparian zone.	Per the RIR (section 1.4.15), this information in about Lot 70 ESNR is from a previous investigation by other consultants (NJDEP did not identify). Per conditional approval DASART comment 18, FS is to reflect RI findings. No text change required.	Sentence deleted; comment removed
DASRAT EPA 49	DASRAT Section 6.2.2	DASRAT Page 6-3, Paragraph 1	Please clarify why institutional controls only includes Deed Notices under Soil/Fill Alternative 2, and not "Zoning/Ordinances" as also referenced on page 5-1. This comment also applies to Section 6.2.2 under Soil/Fill Alternative 3. Please address this DASRAT comment in FS Section 6.2.2.2 Soil/Fill Alternative 2 and Section 6.2.2.3 Soil/Fill Alternative 3 by adding "Zoning/Ordinances".	Zoning is covered in the section referenced and was clarified. Other soil/fill alternatives reference soil/fill alternative 2 as related to institutional controls.	Response acceptable
DASRAT EPA 51	DASRAT Section 6.2.4	DASRAT General Comment	Please consider adding a soil remediation alternative that includes excavation, ex-situ treatment, and replacement of treated soil under a cap on-site. Please address this DASRAT comment in FS Section 6.2.2 by adding this alternative (refer to Comment 97).	Per DASRAT Comment/, the FS was to consider ex-situ treatment and replacement alternative in developing the FS, which was done (4/26/20 FS Section 5.2.6). "the treated areas would be capped as described under Soil/Fill Alternative 3".	Response acceptable
DASRAT EPA 68	DASRAT Section 6.4.2	DASRAT Page 6-15, Paragraph 2	The DASRAT states that "Upon removal of the contents, Manhole 8 would be closed in place by plugging/filling so as to prevent future buildup of additional water and solids in the manhole." The Manhole and associated line need to be closed. Please revise DASRAT accordingly. Please address this DASRAT comment in FS Section 5.4.2 (here and elsewhere in FS) to include the Manhole and associated line.	4/26/20 FS Section 5.4.2 provides the exact text DASRAT comment 68 agreed upon. From FS "manhole and associated line would be water-jetted, and then closed in place by plugging/filling…". Specific clarification is requested if response is not acceptable.	Response acceptable

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DASRAT EPA 72	DASRAT Section 6.6.2	DASRAT Page 6-18, Paragraph 1	It is unclear why Sediment Alternative 2 "Shoreline Revetment" is being retained as a feasible process option. The existing bulkhead is approximately 7 feet high; considering a potential slope of 2:1, a revetment would require a 14-foot horizontal clearance. There is currently not enough distance between the bulkhead and the existing buildings (on all of the shoreline properties except Lot 67) to implement this process option. Please discuss how this would be combined with the Lower Passaic River sediment remedy and potential wetland mitigation requirements, such that there is additional rationale on how Sediment Alternative 2 is feasible and therefore retained. Please address this DASRAT comment in FS Section 5.2.3 to discuss where shoreline revetment would be placed. The FS currently states "The second bulkhead enhancement process option is shoreline revetment which would require sloping the shoreline back and placement of an impermeable liner and R-6 or larger riprap. Approximately 800 feet of shoreline revetment would be constructed." Please clearly state what areas of the Site are affected (i.e., the location of the 800 feet of new revetment).	Per DASART 72, the FS presents limitation of each alternative including shoreline revetment. The Final FS was revised to make it clearer where shoreline revetment or steel sheeting would be installed.	Shoreline revetment removed from FS
DASRAT EPA 80	DASRAT Section 7.6	DASRAT Page 7-4 under "Implement-ability"	The DASRAT states that "Vertical barrier installation may have to be completed from the river due to limited access between river and select existing buildings." Please expand this sentence to discuss how the vertical barrier would be implemented if the remedial action occurred after the placement of the Passaic River remedial design chemical isolation cap layer. Please address this DASRAT comment in FS Section 6.2.2.3 Soil/Fill Alternative 3 "Engineering and Institutional Control" and Section 6.2.3.4 Groundwater Alternative 4 "Institutional Controls and Containment."	FS revised with additional details on vertical barrier implementation.	Response acceptable