No.	Location/ Page No.	Comment	CPG Response – 9/6/16
1	General	The technical memorandum provides an initial presentation of 1) proposed remedial action objectives and 2) the methods, analyses and proposal for preliminary remediation goals. The document was reviewed and comments were prepared on the initial presentation. However, the document needs to be based on EPA-accepted information, evaluations, concepts and conclusions of the remedial investigation (RI), baseline human health risk assessment (BHHRA) and baseline ecological risk assessment (BERA). The RI, BHHRA and BERA are being developed and this technical memorandum may change after the three documents are accepted by the EPA. For example, Risk Based Threshold Criteria (RBTCs) will need to be revised to be consistent with the final BHHRA and BERA. Therefore, the comments that have been prepared on this initial presentation should be considered preliminary. The comments may have been different or other comments may have been generated if the final versions of the three documents were available. After the necessary information, evaluations, concepts and conclusions are available from the RI, BHHRA and BERA, this technical memorandum should be revised to reflect changes in the aforementioned documents and resubmitted for review.	Noted. It is not clear if Region 2 is anticipating that the CPG will develop PRGs for the entire 17-mile LPRSA, or only for the upper nine miles, given that PRGs for the lower eight miles have already been presented in the 8-mile ROD. Given that the May 2007 AOC required that the Remedial Investigation and Risk Assessments be developed for the 17-mile study area, it is anticipated that PRGs in the revised 17-mile FS will be applicable to the entire 17-mile LPRSA. The CPG agrees that since the Region's directives related to the revision of 17-mile RI, BERA and BHHRA have not been completed or approved, their potential impact on the RAO-PRG technical memorandum cannot be fully evaluated and their implication(s) on the revisions of the RAO-PRG technical memorandum cannot be determined at this time. The CPG considers this a partial and preliminary response to the Region's comments provided in good faith for further discussions. As such, the CPG reserves its right under the May 2007 AOC in revising and completing this and other deliverables related to the 17-mile RI/FS.

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2	General	The COC list for human consumption of fish and crab is significantly reduced in the section of this report that selects PRGs (Section 4.2.3). Only two of the 16 COCs identified in the BHHRA remain. A brief summary of some information from the BHHRA is given as the basis for this decision. With no new data or additional analysis, such refinement of the COC list in this document is not justified. The COC list for human health and ecology should be completed in the BHHRA and BERA, respectively, where details of the risk estimates and background evaluation are presented. In this memorandum, a more robust evaluation needs to be performed to assess whether it is appropriate to reduce the COC list. The evaluation should refer to data, evaluations and conclusions that are made in the EPA-accepted RI, BHHRA and BERA to support the conclusions consistent with guidance.	Discussion of the rationale for the COCs included in PRG derivation will be expanded. It should be noted that methyl mercury is the only additional COC besides TCDD-TEQ and PCBs (non-DLC and TEQ) that Region 2 carried through PRG derivation in the FFS for fish consumption. Region 2's rationale in the 2014 8-mile FFS for COC selection is cancer risk greater than $1x10^{-4}$ or noncancer HQ greater than 1. CPG's rationale included COC risk/hazard, relative contribution to total risk/hazard, as well as background. The CPG will present an evaluation of COCs that is commensurate in detail with the Region's presentation in the 8-mile FFS and 8-mile ROD following approvals of the revised BHHRA and BERA.
3	General	This document includes reference to an "alternate" human health risk assessment the CPG developed outside of the RI/FS process, cited as AECOM2014a. With regard to potential human health risks, only the BHHRA conducted within the RI/FS process will be used as the basis for RAO and PRG development for the RI/FS. Delete references to the "alternate" HHRA from the document in Section 1 (Introduction) and Section 6 (Summary of Preliminary Remediation Goals). Remove Addendum A, which is based entirely on the CPG's "alternate" HHRA.	The CPG's disagrees with the Region's position that the site-specific human health risk assessment is inconsistent with the CERCLA RI/FS process. Nevertheless, Addendum A and reference to the Site-specific HHRA will be removed from the revised memorandum.
4	General	This document includes reference to AECOM 2014b, a draft data report for a creel/angler survey (CAS), to support the CPG's "alternate" risk assessment and PRGs. The CAS was	Noted. The Region is aware that the CPG's LPRSA Creel Angler Study work plan was developed and executed under the supervision of an independent peer review

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		conducted in the absence of EPA direction or oversight. The data quality of the AECOM CAS has not been confirmed to meet standards for inclusion in the BHHRA, and the study cannot be used to justify limiting exposure scenarios in the BHHRA or to develop PRGs for the site. Further this document has not been published in the literature. Consistent with EPA's previous comments on this issue (10/30/15, 12/4/15) for the BHHRA, reference to information collected in the CAS, "AECOM 2014b," can be made anecdotally, not quantitatively. Further, all references to the CAS should clearly state that observations were made under current conditions, in the presence of a fish and crab consumption advisories.	panel. The Region was offered the opportunity to oversee and participate in the development and execution of the LPRSA Creel Angler Study and the Region refused. An independent peer review provides a well-understood and generally accepted process for ensuring technical quality and rigor. The CPG continues to question the validity and applicability of the studies that the Region has used for its consumption rates and directed the CPG to use. None of the studies used by the Region were specifically designed to develop consumption rates for LPRSA anglers. The CPG stands by its valid and comprehensive criticism that it has taken in the 2011 HHRA Dispute Resolution and the 2014 FFS comments on the Region's selection of studies for developing consumption rates.
5	General	Text regarding Reasonable Maximum Exposure (RME) and Central Tendency Exposure (CTE) needs to clarify that the RME is the basis for any risk management decisions under the Superfund program. As currently presented, the text suggests decisions may be based on the CTE. Note that RAGS Part A, Chapter 6 (page 6-5) states "Actions at Superfund sites should be based on an estimate of the reasonable maximum exposure (RME) expected to occur under both current and future land-use conditions. The RME is defined here as the highest exposure that is reasonably expected to occur at a site. RMEs are estimated for individual pathways."	The text will be revised to clarify that the RME is the basis for risk management decisions under Superfund, and the identified quote from RAGS will be added. The CTE RBTCs will be put into an appendix for subsequent consideration in the FS for development of interim cleanup targets.
6	Section 1	Correct page numbers in Section 1 which are incorrectly numbered as "2-1" and "2-2".	Will be revised.
7	Section 1, page "2-2", top paragraph	The ending phrase of the fourth sentence should be deleted so that the sentence reads "The proposed PRGs were	The CPG disagrees; nonetheless the text will be revised. Text addressing the development of interim cleanup

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		developed based on the results of the BHHRA and BERA." Also, the final three sentences (sentences 5, 6 and 7) of this paragraph refer to PRGs based on the CPG's "alternate" HHRA and CAS which is unacceptable (see Comment 3). Delete the final three sentences of this paragraph, starting with "For comparison, alternative PRGs were developed based on…"	targets as a metric for assessing progress toward attaining the RAOs will be developed and provided in this paragraph.
8	Section 1, page "2-2", first full paragraph	Text states: "RBTCs were not developed for surface water, as no COCs were identified in surface water…." Additional surface water data have been added to the BHHRA and BERA in the past year. The Revised Draft BHHRA (December 2015) with the new data does not identify any COCs in surface water. However, RBTCs for surface water may need to be developed if surface water COCs are identified in the updated BERA.	Noted.
9	Section 1, page "2-2", first full paragraph	Text includes the following sentence: "…an ARAR waiver for the New Jersey Water Quality Standards…. will be required…" It is premature to conclude that it is technically impracticable (TI) to attain surface water ARARs. A technical evaluation to support a TI waiver is needed if a waiver is to be successfully invoked. This should be the subject of further discussion with EPA. This comment also applies to other text in Section 3 and Section 4 of the memorandum that refers to a waiver. Remove the third and fourth sentences of this paragraph, starting with "Attainment of surface water quality ARARs…"	CPG agrees that this needs to be discussed. The water column data collected above Dundee Dam during the remedial investigation show that concentrations of some COCs exceed New Jersey Surface Water Quality Standards. The 17-mile FS will include a technical evaluation to demonstrate the likely need for a TI waiver.
10	Section 2, page 2-1, first bullet	The first bullet regarding a proposed RAO for fish and crab consumption has a goal of reducing risks "by reducing dietary exposures" whereas the other proposed RAOs all	Will be revised.

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		focus on "reducing concentrations" in environmental media. The RAO for fish and crab consumption should similarly focus on reducing concentrations in fish and crab tissue, through reduction in concentrations of contaminants in sediment and surface water to which fish and crab are exposed. Please replace the phrase "…reducing dietary exposures to…" with "…reducing concentrations of…".	
11	Section 2, page 2-1, fourth bullet	The fourth bullet "Surface Water" seems to already be addressed by the second and third bullets that focus on human health and ecological receptors. The fourth bullet should either be deleted or edited to distinguish this RAO from the earlier proposed RAOs. Also, Sections 4 and 5 appear to disregard risk drivers in surface water, but the RAO refers to "… risk drivers in surface water". This apparent contradiction needs to be reconciled.	The fourth bullet will be deleted.
12	Section 3	Correct page numbers in Section 3 which are incorrectly numbered as 2-1 through 2-3.	Will be revised.
13	Section 3.2, page "2-3", top paragraph	While this paragraph states that several COCs exceed New Jersey Water Quality Standards both onsite and in background (i.e., above Dundee Dam), this document does not present the data or the standards. Refer the reader to the report where this comparison has been presented or add the information here.	Will be revised.
14	Table 3-1, page 1 of 1	In the last column titled "Applicability and Anticipated Requirements" of the first entry, please delete second sentence which discusses "flexibility in selecting ARARs." Please add the following statement thereafter: "Federally recommended water quality criteria that are more stringent	Will be revised. Region 2 and CPG to discuss.

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		than state criteria may be relevant and appropriate. Please revise the last sentence to state: "If such criteria are selected, and EPA agrees that they cannot be met, a waiver may be invoked for a particular action." In the last column titled "Applicability and Anticipated Requirements," of the second entry, please revise the last sentence to state: "If water quality criteria are considered relevant and appropriate, and EPA agrees that they cannot be met, a waiver may be invoked for a particular action." Please note that if the CPG believes there is a basis for such a waiver this should be documented and discussed with EPA.	
15	Table 3-2 and Table 3-3	Please refer to the Action and Location-Specific ARARs identified in the Lower 8.3 Mile ROD for consistency and revise these two tables, as appropriate.	Noted.
16	Table 3-2, page 1 of 4	In the last column titled "Applicability and Anticipated Requirements," of the first entry, please delete "(N.J.A.C. 7:7E-1 et seq.), and Coastal Permit Program Rules". As of July 6, 2015, the Coastal Permit Program rules and Coastal Zone Management rules were consolidated into one chapter, N.J.A.C. 7:7.	Will be revised.
17	Table 3-2, page 1 of 4	In the third column titled "Brief Description" of the third entry, please add the following statement: "Section 404(b)(1) guidelines provide the substantive environmental criteria to be used in evaluated impacts on the aquatic ecosystem."	Will be revised.
18	Table 3-2, page 2 of 4	Section 10 Rivers and Harbors Act of 1899, 33 U.S.C. §403 is a location specific ARAR.	Will be revised.

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19	Table 3-2, page 3 of 4	In the last column of the first entry "Management of Solid Waste" under Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. please revise the second sentence as follows: "In NJ, dredged material is typically excluded from the definition of solid waste." Also, please delete the last sentence starting with "Beneficial reuse" as the statement is not correct.	Will be revised.
20	Table 3-2, page 3 of 4	In the last column of the second entry "Management of Solid Waste" under Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. please revise the first full sentence to include "sediment that is managed as" before "...hazardous waste generated…" Also, please delete "Dredged material destined for beneficial reuse or upland disposal requires evaluation as a hazardous waste." If the sediment is RCRA-characteristic, it is not going to be disposed of in NJ which has no permitted hazardous waste landfills, which means it would be covered by the RCRA discussion above. If it is not hazardous, as noted directly above, it would still not be solid waste. It could be subject to beneficial use in NJ under NJDEP policy.	Will be revised.
21	Table 3-2, page 3 of 4	In the third column titled "Brief Description" of the first entry under Brownfield and Contaminated Site Remediation Act, N.J.S.A 58:10.3-1 et seq. please revise the sentence to say: "Establishes minimum regulatory requirements for investigation andremediation of contaminated sites being addressed under New Jersey authorities and oversight, including surfacewater, sediment and ecological evaluations."	Will be revised.

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		In the last column titled "Applicability and Anticipated Requirements," please revise the first sentence to state: "Substantive requirements for remedial action potentially relevant and appropriate for some aspects of remedial alternatives." Please make the next sentence a new paragraph and add "TBC:" before "NJDEP's "Technical Guidance on the Capping of Sites Undergoing Remediation…"	
22	Table 3-3, page 1 of 4	Please update the last sentence in the "Applicability and Anticipated Requirements" column under the Endangered Species Act, Section 7, 16 U.S.C. 1531 entry.	Will be revised.
23	Table 3-3, page 1 of 4	Delete sentence in the "Applicability and Anticipated Requirements" column under National Historic Preservation Act, 16 U.S.C. 470 entry. Please refer to ARARs table for the Lower 8.3 miles for the appropriate language.	Will be revised.
24	Table 3-3, page 2 of 4	Delete sentence in the "Applicability and Anticipated Requirements" column under the New Jersey Register of Historic Places, N.J.S.A. 13:1B-15.128 et seq. entry. Please refer to ARARs table for the Lower 8.3 miles for the appropriate language.	Will be revised.
25	Table 3-3, page 2 of 4	Delete "Program(N.J.A.C. 7:7E) and Coastal Permit Program Rules" from the third column titled "Brief Description" under the first entry for New Jersey Waterfront Development Law (N.J.S.A. 12:5-3). In the last column for this entry, please revise the second sentence to say: "For alternatives that include an onsite sediment processing facility, an Acceptable Use	Will be revised. Will be revised.

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		Determination Permit-Equivalent will also be sought, to establish substantive requirements."	
26	Table 3-3, page 2 of 4	For the second entry under New Jersey Waterfront Development Law (N.J.S.A.12:5-3), please revise table consistent with previous comment regarding combination into 7:7 in July 2015.	Will be revised.
27	Table 3-3, page 3-4	Under the Magnuson-Stevens Fishery Conservation and Management Act entry please delete the last statement in the column titled "Applicability and Anticipated Requirements."	It is unclear why the Region would remove this statement from the memorandum. The Region's 8-mile ROD Responsiveness Summary states on page 265 (H.4.3) *"based on comments and a review of fish windows recommended by NJDEP and NOAA's National Marine Fisheries Service during the Tierra Phase 1 Removal and RM 10.9 Removal work, EPA adjusted the fish window to 17 consecutive weeks, anticipated to occur from about March 1st to June 30th."* The Region has anticipated in its 8-mile ROD schedule that NMFS will recommend fish windows that will restrict dredging activities during certain times of the year, and therefore it is important for the FS to recognize this likely restriction. Fish windows are likely to be developed as the Region's 8-mile ROD states in its ARAR Table from *"a fish migration study will be conducted during remedial design and consultation will occur with NMFS and the New Jersey Department of Environmental Protection (NJDEP) regarding fish windows."* The CPG disagrees that this statement should be deleted.
28	Section 4.1, page 4-2, top paragraph	Delete the final sentence of Section 4.1 which states "Where COCs were identified for a receptor scenario based on RME risks only, RBTCs based on the CTE scenario are also included in this technical memorandum to provide a full range of RBTCs that may be considered in risk-based decision-making." RBTCs based on the CTE scenarios would	The CTE RBTCs will be moved to an appendix for subsequent consideration in the FS as potential interim cleanup targets.

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		not be protective of individuals with more than average exposure. The RME is the basis for risk management decisions under the Superfund program.	
29	Section 4.2.1, page 4-7, and Table 4-8	This section states "Background concentration estimates for each COC were defined as the maximum detected concentration in a given data set, after excluding any outlier concentrations." Table 4-8 lists maximum detected concentrations, and no other statistics, for background. However, Guidance for Comparing Background and Chemical Concentrations in Soil for CERCLA Sites (EPA 2002) emphasizes comparison of the mean concentration in background to the mean concentration in potentially impacted areas. Maximum concentrations detected in background samples should not be used as the basis for characterizing background conditions or identifying a PRG. A statistical approach consistent with the background guidance document (EPA 2002) should be applied. Further, while background concentrations of COCs should be taken into account in selecting PRGs, in a complex estuarine river such as the Lower Passaic they do not represent an absolute limit on attaining risk-based goals. In addition, only two COCs are included in Table 4-8: 2,3,7,8-TCDD and PCBs. The table should summarize available background concentrations for all identified COCs.	Per Comment #61, CPG understands that background concentrations will be revisited. Additional COCs will be added to Table 4-8.
30	Section 4.2.2, pages 4-7 and 4-8, first paragraph of section	Numerical risk estimates should be included in this summary of the COCs, in addition to their percent contribution. The text here does not adequately support excluding PCBs and PAHs. As noted in Comment 2, in this memorandum a more robust evaluation needs to be performed to assess whether	Numerical risk estimates will be added. Additional rationale will be provided regarding exclusion of PCBs and PAHs from PRG development for direct contact exposure.

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		it is appropriate to reduce the COC list. The evaluation should refer to data, evaluations and conclusions that are made in the EPA-accepted RI, BHHRA and BERA	
31	Section 4.2.3, page 4-8, first paragraph of section	Numerical risk estimates should be included in this summary of the COCs, in addition to their percent contribution relative to each other. For example, the statement of "BaP contributes less than 1 percent of RME adult fish and crab consumption risks" does not inform the reader about whether the cancer risk from BaP was 10^{-4} or 10^{-6}. For this COC, including the fact that BaP risks were 2.8E-6 or less would better support the assertion on page 4-9 that the risks are "relatively minor".	Numerical risk estimates will be added.
32	Section 4.2.3, pages 4-8 and 4-9, first through third paragraphs of section	These paragraphs refer back to the BHHRA and use a brief summary of some information from that report to cut the COC list for fish and crab consumption down to two chemicals. No new information is presented here. As noted in Comment 2, in this memorandum a more robust evaluation needs to be performed to assess whether it is appropriate to reduce the COC list. The evaluation should refer to data, evaluations and conclusions that are made in the EPA-accepted RI, BHHRA and BERA. For tissue, the risk-based target concentration is not a PRG. The cleanup addresses environmental media, not tissue, so it is not necessary to set a cleanup goal for tissue. The PRGs for sediment and surface water should be developed to achieve the fish-tissue target that is protective.	See response to General Comment #2. The CPG disagrees with the Region's contention that sediment and surface water PRGs are more appropriate than tissue-based PRGs for fish consumption risks because tissue exposure is the exposure pathway of concern and tissue concentrations reflect integrated uptake into the food web from sediment and surface water. Unique PRGs for sediment and surface water cannot be reliably established. Region 2's assertion that a tissue-based RBTC cannot be a PRG is surprising and inconsistent with precedents established at other Region 2 large sediment sites. Tissue-based PRGs have been established in Region

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			2 RODs addressing contaminated sediments for the Hudson River and Grasse River.
33	Table 4-1 and Table 4-2	Update these tables to be consistent with COCs identified in the Revised Draft BHHRA (December 2015). In addition, remove cis-Nonacholor and Oxychlordane; these chemicals will no longer be COCs when the BHHRA is updated with the December 2015 STSC toxicity information. Consistent with the Revised Draft BHHRA (December 2015), remove the "Mixed Fish Diet Without Carp" and "Crab Muscle" scenarios from these tables.	The tables will be revised to be consistent with the Revised Draft BHHRA (December 2015).
34	Tables 4-3 through 4-6	Remove the CTE scenarios from these tables of RBTC values. As noted in previous comments, the RME scenario is the basis for risk management decisions under the Superfund program.	Will be revised. The CTE RBTCs will be moved to an appendix.
35	Table 4-8	This table summarizes background concentrations for only two COCs: 2,3,7,8-TCDD and PCBs. The table should summarize background concentrations for all COCs identified in the HHRA.	Table 4-8 will be revised to include background concentrations for the COCs identified in the BHHRA.
36	Section 5, page 5-1, paragraph 1	The sentence before the last sentence in this paragraph states "Risk estimates were then evaluated within the context of the strength of the certainty surrounding the estimate and the potential for population level risks." As EPA's comment (Comment No. 1) on BERA regarding inclusion of all risk estimates (i.e., HQs based on all available data and exposure pathways) and interpretation of results,	Will be revised.

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		evaluations of "Strength of the certainty" cannot be fully supportable as currently interpreted. Revision of this paragraph is needed.	
37	Section 5, page 5-1, paragraph 2	This paragraph identifies focal species-COC pairs that are associated with unacceptable ecological risks. See EPA's comments (Comment No. 3, 92, 124, and 155) on the Draft BERA dated June 13, 2014 regarding focal species and their role as surrogates for other species within same trophic level for which site specific data are lacking. Current approach focuses on focal species without appropriate recognition that protection of these species is not the primary intent, which is protection of all species represented by these focal species. Revision is required.	Will be revised following the Region's approval of the Revised BERA.
38	Section 5, page 5-1, paragraph 3	This conclusion made in this paragraph needs revision based on EPA's comments on the Draft BERA dated June 13,2014 on reference area data (Comment No. 7, 9, 60, 62, 65, and 68). Comparison to reference minimums, the current approach, is unacceptable for evaluation of BMI metrics.	Will be revised. The discussion of reference approach will be consistent with the Region's directives on reference data screening for the revised BERA. Nonetheless, the CPG disagrees with the reference data screening approach imposed upon it by the Region's directives.
39	Section 5.1, page 5-1, paragraph1	This paragraph needs to be revised to clearly state that the goal is to protect, for example, all pelagic piscivorous fish species represented by largemouth bass, not just largemouth bass.	Will be revised following the Region's approval of the Revised BERA.
40	Section 5.2, page 5-2, paragraph 1	All potentially hazardous chemicals detected in all fish samples collected need to be screened against fish tissue (residue-based) TRVs associated with ecologically significant adverse effects. Subsequently the results should be summarized in this paragraph. Thus, this paragraph needs to be revised.	Will be revised following the Region's approval of the Revised BERA.

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41	Section 5.3, page 5-2, paragraph 1	It appears that food web models were used to determine dietary or dose-based risks for otter and sandpiper (or other taxa represented by otter and sandpiper). Clarify whether other representative receptors were also modeled and whether modeling was limited to only PCBs and TCDD-TEQ. The reason for the limited number of upper trophic level receptors and COCs subjected to food web modeling needs to be discussed in this paragraph. Also, see EPA's comments on the June 13, 2014 Draft BERA (Comment No. 45, 95, 104, and 204) regarding assumptions in food web models (e.g., fish species or size classes comprising assumed diets of upper trophic level piscivores).	Basic food web models (dietary uptake models) were used for birds and mammals per the Region 2-approved Problem Formulation Document (PFD) and the October 2013 RARC. This was done for all chemicals where a TRV could be determined. The focal species or representative species is representative of a larger group of organisms (sandpiper for all shorebirds for example). Please see the Region 2-approved PFD or the October 2013 RARC for a description of that process and the representative species selected. Comment noted.
42	Section 5.3.1, page 5-2, paragraph 1 below the equation	Delete the phrase "(i.e., acceptable risk level)" in this paragraph, HQs exceeding 1 are considered unacceptable. HQs at or below 1 are considered representative of acceptable hazard, per EPA guidance and standard practice. Further non-cancer should be referred to as a non-cancer hazard and not risk.	Please note this comment is inconsistent with the Region's May 2015 BERA comment 56 which in part states: *"This comment also applies to numerous other locations in the draft BERA where HQ > 1 is stated to be the "unacceptable" threshold; the threshold should be HQ ≥ 1."* The Region is requested to clarify this ambiguity.
43	Section 5.4, page 5-4, paragraph 2	Refer to EPA's comments on the June 13, 2014 Draft BERA on background (Comment No. 6, 7, 48, 62, and 71). Some Jamaica Bay locations appear to be unacceptable for use as background or reference due to elevated concentrations of contaminants in one or more exposure mediums. This paragraph needs to be revised after Appendix J of the Draft BERA is revised per EPA's December 22, 2015 comments.	Will be revised. Reference and background have been revised based on additional discussion with Region 2.

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44	Section 5.4.1, page 5-4, paragraph 1	Criteria for selection of fish tissue TRVs need to be included in this paragraph, as well as use and applicability of fish tissue TRVs. (e.g., were TRVs selected based on species, endpoint, life stage).The total PCB tissue TRV of 6.3 mg/kg ww for protective of piscivorous predators needs to be verified.	Will be revised following the Region's approval of the Revised BERA.
45	Section5.4.1, page 5-4, paragraph 2	Since HQs are dependent on TRVs selected, and tissue based TRVs are in question (see comment made on Section 5.2, page 5-2, first paragraph), this entire summary of fish tissue-based HQs needs revision.	Will be revised following the Region's approval of the Revised BERA.
46	Section 5.4.1, page 5-4, paragraph 2	The phrase "…nearly all species…" in the third sentence needs to be revised to clearly identify which species were and were not associated with elevated contaminant concentrations in tissue relative to background.	Will be revised.
47	Section 5.4.2, page 5-5. Paragraph 1	Otter prey should include all fish species present, with a focus on fish most likely to inhabit near shore environments such as carp.	Will be revised following the Region's approval of the Revised BERA.
48	Section 5.4.2, pages 5-5, paragraph 1	Any conclusions made regarding comparison to reference need to be revised once reference area data are subjected to more intensive evaluation per EPA direction (e.g., elimination of specific data associated with elevated contaminant concentrations).	Will be revised following the Region's approval of the Revised BERA. EPA has given additional direction on reference locations and process and the BERA has been revised.
49	Section 5.4.2, page 5-5, paragraph 2	While it is agreed that the LPRSA currently provides little habitat suitable for otter, risks to otter should be viewed as representative of risks to piscivorous/carnivorous mammals that may occur onsite in the future (this may include raccoon, mink, or otter, for example). Further, low risks to	Will be revised following the Region's approval of the Revised BERA.

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		piscivorous mammals represented by otter needs to be revised after otter diet is adjusted to include highly exposed fish species that are more easily caught, such as carp (slow moving, and commonly occur near shoreline).	
50	Section 5.5, page 5-6, paragraph 1(top of page, incomplete paragraph	The methods used for comparison to reference area results are questionable, as noted in EPA's Draft BERA (dated June 13, 2014) comments (No. 6, 7, 48, 62, and 71). Some reference area data should be eliminated from such comparisons because of elevated contaminant concentrations in sediment. Use of reference area minimums is also inappropriate for determining if LPRSA and reference area data are different. These issues and other related issues substantially affect the conclusions of the BERA, and to a great extent those summarized here.	The CPG finds the Region's directive on screening of reference data to be inconsistent with the process outlined in the October 2013 RARC. Nevertheless, the comparison to reference will be updated to be consistent with the Revised BERA and will be revised following the Region's approval of the Revised BERA.
51	Section 5.5, page 5-6, second bullet	It states "Statistical relationships between benthic impairment (either sediment toxicity or benthic community metrics) and sediment chemistry data are inconsistent or weak." This finding is not unexpected given the complex mixture of chemical contaminants in sediment. Both toxicity testing and BMI community metrics reflect exposures to this complex mix of chemicals, and comparison of individual chemical concentrations to benchmarks may not reflect chemical effects that are synergistic or antagonistic.	Noted. Region 2 directed the CPG to determine statistical relationships between benthic impairment and sediment chemistry.
52	Section 5.5, page 5-6, fourth bullet	The BMI community is very likely influenced by a variety of chemical, physical, and biological stressors. A major stressor affecting BMI communities clearly includes chemical contamination of sediment. While the effects associated with reduction or elimination of each type of stressor cannot be predicted, it should be recognized that the BMI	Noted. The peer-reviewed published literature is replete with well-documented results that the benthic community is influenced by salinity, organic carbon, and grain size. The Region is engaging in speculation when it states that the LPRSA BMI community would be enhanced by the

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		community would likely be enhanced by reducing concentrations of chemical contaminants in sediment. This is especially important for improving conditions over time in a step-wise manner. For example, if chemical contamination is substantially reduced, then future habitat improvements or DO-related improvements will have greater benefits to the BMI community and other communities reliant on the BMI community.	reduction of contaminant concentration in the absence of mitigating other stressors to the benthic community.
53	Section 5.5, page 5-6, paragraph following bullets	This section describing risks by location appears biased and revision is needed. As currently written, a list of locations associated with impairment is presented, then each location is eliminated from further consideration as candidates for remediation without considering the chemical contamination of sediments as a major stressor on BMI communities. Also, while a goal of remediation may include establishment of a diverse BMI community on small or large scales, another possible goal that is ignored here is reduction in the overall (larger scale) concentrations of hazardous chemicals in the aquatic system comprising the LPRSA. The BMI communities (and other aquatic and semi-aquatic communities) of the LPRSA will likely benefit from reductions in concentrations of hazardous chemicals in sediment regardless of location-specific habitat conditions, yet that likely outcome is not recognized. The language for each location should be revised to include a discussion on the chemical contamination of sediments as a major stressor on BMI communities. Additionally, the revised text should include a discussion on the overall reduction in concentrations of chemicals in the aquatic system and the benefit of the reductions to the BMI communities. Lastly, the information and conclusions from the BERA version that	The CPG disagrees that this section is biased; nevertheless, it will be revised following the Region's approval of the Revised BERA. The LPR and its benthic community would greatly benefit from the reduction of non-chemical stressors originating from the LPR watershed and the reduction of biological stressors (i.e., invasive species such as the common carp) currently affecting the river and its biota.

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		is accepted by EPA should be consistent with these discussions.	
54	Section 5.5, page 5-7, second paragraph	The last sentence states "The abundances of invertebrates at LPRT04B and LPRT4C were within the range of reference area data." Clarify whether "within the range of reference area data" is the single criterion for determining "difference". The BERA uses reference minimum, which is assumed to represent "within the range". Use of reference minimum is inappropriate, especially as some reference area data warrants removal from the reference area data set due to elevated concentrations of contaminants in sediment. This comment also applies to subsequent instances of the phrase "…within the range of reference area data" within Section 5.5.	Will be revised following the Region's approval of the Revised BERA.
55	Section 5.5, page 5-7, third paragraph	The paragraph states "….. because the harsh habitat conditions at LPRT04B and LPRT04C are expected to preclude sensitive taxa from becoming established there." Clarify how "sensitive" taxa and habitat limitations are related here. Sensitivity generally refers to sensitivity to chemical contaminants, not sensitivity to degraded habitats. BMI taxa can be sensitive to chemicals yet tolerant of marginal habitat, and vice versa. This paragraph needs revision. This comment also applies to subsequent discussions within Section 5.5 regarding sensitive taxa and "harsh conditions."	Will be revised following the Region's approval of the Revised BERA.

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56	Section 5.5, page 5-8, last sentence of paragraph	See comment 54 above regarding "…within the range of reference area data".	Will be revised following the Region's approval of the Revised BERA.
57	Section 5.5, page 5-8, last sentence paragraph 2	See comment 54 above regarding "…within the range of reference area data".	Will be revised following the Region's approval of the Revised BERA.
58	Section 5.5, page 5-8, last sentence paragraph 3	See comment 55 above regarding sensitive taxa and "harsh conditions".	Will be revised following the Region's approval of the Revised BERA.
59	Section 5.5, page 5-8, paragraph 1 under LPRT06B	See comment 55 above regarding sensitive taxa and "harsh conditions".	Will be revised following the Region's approval of the Revised BERA.
60	Section 6, page 6-1, paragraph 1	The last two sentences should be deleted.	Will be revised.
61	Section 6, page 6-1, paragraph 2	Background concentrations of contaminants need to be revisited once background area data reflecting unacceptable levels of chemical contamination are removed from the background dataset. Contingent on resolutions achieved in, and conclusions made from, the background evaluation, the language in this section may need to be edited.	The CPG rejects the Region's conjecture that there are unacceptable contaminant concentrations in the background data set. Statistical outliers were appropriately identified and removed from the background data with objective and well-established methodologies. Other screening criteria that "remove" data are inherently biased and subjective in nature.
62	Section 6, page 6-1, fourth paragraph	The third sentence of this paragraph should be deleted. It states "For example, the RBTCs derived in this memorandum based on CTE scenarios in the BHHRA are protective of "average" exposures and may serve as useful interim targets that allow for consumption of some LPRSA fish or crab."	See response to General Comment #5.

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		RBTCs based on the CTE scenarios would not be protective of individuals with more than average exposure. The RME is the basis for risk management decisions under the Superfund program.	
63	Table 6-1, PRGs based on background	For tissue, the risk-based target concentration is not a PRG. The cleanup addresses environmental media, not tissue, so it is not necessary to set a cleanup goal for tissue. The PRGs for sediment and surface water should be developed to achieve the fish-tissue target that is protective and incorporated into this table. Additionally, several PRGs are listed in this table that are based on background concentrations. The maximum background concentration is not the appropriate statistic for comparison to site concentrations. If it is determined that background should be used for a PRG, then a statistical approach consistent with the background guidance document (EPA 2002) should be applied.	See response to Comment #32. Will be revised following the Region's approval of the Revised BHHRA and BERA.
64	Table 6-1	As noted in Comments 32 and 63, for tissue, the risk-based target concentration is not a PRG. The cleanup addresses environmental media, not tissue, so it is not necessary to set a cleanup goal for tissue. The PRGs for sediment and surface water should be developed to achieve the fish-tissue target that is protective. Table 6-1 selects maximum background concentrations as the PRG for PCBs in fish fillets apparently because some of those maximum concentrations exceeded risk based threshold concentrations (RBTCs). RBTCs for PCBs in fish fillets are not presented in this table as possible PRGs. The RBTCs for PCBs should be considered as a step in developing	See response to Comment #32. Table 6-1 will be revised. In cases where revised background concentration estimates for one or more fish species are within the acceptable risk range, the appropriate RBTC will be specified as the PRG.

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		this table (which will be a table of PRGs in sediment and surface water). They should not be omitted from consideration because background concentrations in some species of fish exceeded the RBTCs. As shown in Table 4-8, several species of fish had lower detected background concentrations that were within the acceptable risk range.	
65	Attachment A	Attachment A consists of 7 tables with inputs used in calculation of human health risk-based threshold concentrations (RBTCs), not ecological RBTCs. The title of this Attachment should indicate that the RBTC inputs are specific to human health.	The tables in Attachment A will be revised to note the inputs are specific to human health.
66	Attachment A	Update the exposure assumptions in Tables A-1 through A-3 to be consistent with those used in the Revised Draft BHHRA (December 2015).	Will be revised following the Region's approval of the Revised BHHRA.
67	Addendum A	This addendum is based on an alternate risk assessment that the CPG developed outside of the RI/FS process and has not been approved by EPA. Addendum A should be deleted from the report.	The CPG disagrees that the SSHRA was developed outside the CERCLA RI/FS process. Addendum A will be removed from the memorandum.

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