TENTATIVE ADDENDUM NO. 4 TO CAO NO. R9-2004-0258

RESPONSES TO COMMENTS

Table of Contents

TDY Industries, Inc. - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
1	Global	Please replace “receptors of concern” with “on-site receptors”. “On-site receptors” is the standard term used in the risk assessment documents, “receptors of concern” is a term not previously used at this site.	Concur.
2	Global	Please replace “chemicals of concern” with “constituents of concern”. Some constituents of concern are metals rather than chemicals, thus the broader term “constituent” is more appropriate.	Concur.
3	Page 2	**4. DEMOLITION AND CLEANUP ACTIVITIES**. The former TDY site is vacant and leased by the San Diego County Regional Airport Authority (Airport Authority). The Airport Authority plans on redeveloping the site and as such, demolition activities are underway and being performed by the San Diego Unified Port District (Port District) as described in Finding 6 of Addendum No. 3 to CAO No. R9-2004-0258. Demolition is anticipated to be completed in June 2012. An Environmental Impact Report (EIR) was certified by the Port District in 2009 for the demolition project, but the scope of that project does not extend to cleanup and abatement activities required under this Order. The Port District is currently demolishing all above grade structures comprised of office and support buildings, manufacturing buildings, warehouses, and sheds, with the exception of Building 100. This phase of demolition activity ~~will~~ is scheduled to be completed by February 2011. Removal of Building 100 and subsurface structures such as concrete slabs, foundations, utilities, and most of the onsite storm water conveyance system (SWCS) ~~will~~ is scheduled to commence in June 2011 and end approximately in June 2012. During and after	Concur, however, the last sentence was modified as follows to be more specific: "During and after demolition, TDY plans to conduct remedial actions to complete the cleanup and abatement of waste discharged at the former TDY site to the cleanup levels specified in Directive 2."

TDY Industries, Inc. - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
		demolition, TDY plans ~~on~~ to conduct~~ing~~ remedial actions to complete the cleanup and abatement of ~~all~~ waste~~s~~ discharge~~s~~~~d~~ at the former TDY site.	
4a	Page 3-4	It is not the objective to cleanup and abate all waste discharges at the former TDY site. TDY remedial activities will be focused on cleanup and abatement of residual impacts above the alternative cleanup levels to the extent technically and economically feasible and protective of future potential commercial/industrial receptors.	Comment noted.
4b	Page 3	**c. 30-inch West Convair Lagoon Storm Drain**. The on-site portion of ~~T~~this storm drain is inactive, capped at the property boundary, and will be removed by the Port District during site demolition. The 30-inch west storm drain was previously ~~owned,~~ maintained~~,~~ and operated by TDY.	Concur.
4c	Page 3	**d. 30-inch East Convair Lagoon Storm Drain.** The on-site portion of this~~This~~ storm drain is inactive, capped at the property boundary, and will be removed by the Port District during site demolition. The 30-inch east storm drain was previously ~~owned,~~ maintained~~,~~ and operated by TDY.	Concur.
4d	Page 3	**e. 15-inch San Diego Bay Storm Drain.** The on-site portion of this ~~This~~ storm drain is inactive, capped at the property boundary, and will be removed by the Port District during site demolition. The 15-inch storm drain was previously ~~owned,~~ maintained~~,~~ and operated by TDY.	Concur.

TDY Industries, Inc. - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
4e	Page 4-6	**f. 30-inch San Diego Bay Storm Drain.** The on-site portion of this ~~This~~ storm drain is inactive, capped at the property boundary, and will be removed by the Port District during site demolition. The 30-inch storm drain was previously ~~owned,~~ maintained~~,~~ and operated by TDY.	Concur.
5	Page 4-6	Consider editing Table 1 AOCs/AOPCs so that page breaks are not through the middle of an AOC/AOPC, or repeat the AOPC and media in question at the beginning of the new page.	Concur.
6	Page 6 (Footnotes to Table 1)	1. AOPC = Area of Potential Concern. AOPCs are specific areas where COPCs have been detected above Site background or appropriate screening criteria, as described in the Site Characterization Report (Geosyntec, 2005)~~AOPCs were identified during the initial site investigation. These areas have chemicals in soil and groundwater detected more than once at concentrations exceeding the detection limit or background.~~	Reference to the AOPCs have been dropped from the Addendum to simplify the text.
7	Page 6 (Footnotes to Table 1)	2. AOC = Area of Concern. AOCs have concentrations of one or more of the ~~chemicals~~ constituents of concern in soil, soil gas, or groundwater that exceed the risk-based concentrations (RBCs) for those ~~chemicals~~ constituents. The RBCs are the ~~chemical~~ concentrations above which a potentially unacceptable cancer risk or health hazard may exist for ~~onsite to~~ future on-site receptors ~~of concern~~.	Concur.

TDY Industries, Inc. - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
8a	Page 6	**AREA~~S~~ OF POTENTIAL CONCERN AND AREA OF CONCERN FOR ~~POTENTIAL~~ TRANSPORT OF CONTAMINATED MEDIA TO CONVAIR LAGOON.** The table below identifies the area~~s~~ of potential concern and area of concern due to the ~~potential~~ transport of contaminated media to Convair Lagoon and identifies whether or not interim remedial actions have been conducted. These areas of concern and potential concern are described in Finding 10 and are shown in Attachment 3.[3]	Concur. Note that reference to AOPCs have been dropped from the Addendum to simplify the text.
8b	Page 6	**Table 2 - Area~~s~~ of Potential Concern and Area of Concern for ~~Potential~~ Transport of Contaminated Media to Convair Lagoon**	Concur. Note that reference to AOPCs have been dropped from the Addendum to simplify the text.
8c	Page 6	The Convair Lagoon Shoreline is considered to be an Area of Potential Concern as impacts have not been observed in excess of RBCs. Add columns for "AOPC" and "AOC" to Table 2. Designate Convair Lagoon Shoreline as an AOPC and 60-inch Convair Lagoon Storm Drain as an AOC.	References to "AOPCs" were dropped from Addendum 4 to simplify the text. The Convair Lagoon shoreline is still listed as an "Area of Concern" for the transport of wastes to Convair Lagoon via groundwater flow.
9a	Page 8	The migration rate of the trace PCB concentrations detected in groundwater near Convair Lagoon may be sufficiently slow to prevent discharge to Convair Lagoon in excess of the California Toxics Rule (CTR). However, ~~C~~concentration trends~~; however,~~ need to be established for these monitoring wells ~~especially for well MWCL-2 where increasing PCB concentrations have been noted~~. No other chemicals of concern have consistently exceeded applicable CTR criteria in these wells.	Concur.

TDY Industries, Inc. - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

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9b	Page 8	Only minor variations in PCB concentration have been observed in MWCL-2, ranging from roughly 2 to 6 parts per trillion between December 2008 and January 2010. Duplicate samples from the 3rd quarter 2010 ranged from 6-16 parts per trillion. This slight variability at trace levels, when combined with the observed method blank contamination and duplicate sample variability, does not indicate a trend in this or any other Convair Lagoon vicinity well.	Comment noted.
10	Page 8-9	All seeps found in the 54-inch and 60-inch Convair Lagoon storm drains were patched with concrete. Additionally, in order for this pathway to be significant, groundwater concentrations must exceed CTR criteria and intercept the 54-inch and/or 60-inch Convair Lagoon storm drains which are the only storm drains that are in contact with the water table. Hexavalent chromium and zinc concentrations in groundwater at the Building 158 AOC and PCB concentrations in groundwater at one well located in the corner of Building 120 are above CTR criteria. However, ~~T~~the ~~contaminated~~ impacted groundwater ~~groundwater plumes in these locations, however, have not migrated~~ does not extend to the vicinity of the 54-inch and 60-inch Convair Lagoon storm drains.	This text has been substantially rewritten in light of the information provided by the Airport Authority that groundwater is seeping into the 60-inch and 54-inch storm drains and that VOCs were detected in seep samples from the 60-inch line. Although the VOC concentrations were below CTR criteria for human consumption of organisms, the Addendum was revised to require TDY to monitor the seeps, and ensure that the quality of the seeps continues to support the beneficial uses of San Diego Bay.

TDY Industries, Inc. - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

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11a	Page 9	**f. Contaminated Sediment Within the SWCS to Convair Lagoon.** This pathway is a significant transport pathway and, therefore, poses a risk to human health and ecological receptors in Convair Lagoon. A majority of the PCB-impacted sediment will be removed when the laterals and specific storm drains are removed during site demolition. The 54-inch and 60-inch Convair Lagoon storm drains, however, will remain in place after site demolition. The 54-inch Convair Lagoon storm drain has remained essentially free of sediment accumulation since the January 2006 cleanout. Significant PCB-contaminated sediments, however, remain within the 60-inch Convair Lagoon storm drain~~,~~ ~~which~~ These sediments will be removed after demolition activities to prevent the discharge of the contaminated sediment to Convair Lagoon.	Concur. However, Finding 10.f. will be modified to indicate that, in addition to the significant PCB-contaminated sediments present in the 60-inch Convair Lagoon storm drain, there is a potential for PCB-contaminated sediments to be present in the other Convair Lagoon storm drains (54-inch, 30-inch West, and 30-inch East) and San Diego Bay storm drains (15-inch and 30-inch). The last cleanout of PCB-contaminated sediments in the onsite SWCS was in 2006. Cleanout of the 54-inch was completed in August 2006 and filter socks were installed in March 2007. This seven month gap occurred during the wet season (November to April) which, according to rainfall records for the San Diego Airport, had some precipitation. Furthermore, while the other storm drains are inactive and capped with concrete at the southern property boundary, the storm drain sections from the concrete cap to Convair Lagoon and San Diego Bay may potentially contain PCB-contaminated sediments. Significant rainfall events occurred following the 2006 SWCS cleanout and filter socks were not installed on any of the laterals of these storm drains. Filter socks were only installed on the 60-inch and 54-inch laterals.

TDY Industries, Inc. - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

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11b	Page 9	Removal of PCB-contaminated sediments from the 60-inch storm drain is also needed because there is a potential cancer risk and hazard exceedance for workers exposed to these sediments. The primary exposure route is through the incidental ingestion of sediment. This storm drain will be cleaned out to eliminate this potential risk. TDY has informed the City of San Diego of this potential risk and has advised the City that, prior to cleanout of the 60-inch Convair Lagoon storm drain,~~;~~ workers entering this storm drain need to take health and safety precautions to ~~avoid~~ mitigate exposure to potentially impacted sediment	Concur, however, we are using "contaminated" instead of "impacted."
12	Page 10	**ECOLOGICAL RISKS.** An ecological risk assessment was not conducted for the former TDY site because there are no ecological receptors at the site that would potentially be exposed to ~~contaminated~~ impacted soil and groundwater. An ecological risk assessment is needed for Convair Lagoon and San Diego Bay to determine potential ecological risks from contaminated marine sediments ~~polluted~~ impacted by discharges from the TDY site. A subsequent ~~enforcement~~ Order will require TDY to conduct this ecological risk assessment after Addendum No. 4 has been fully ~~executed~~ implemented, preventing future contamination of San Diego Bay sediment from the TDY site.	Disagree with changing "contaminated" to "impacted." The language about fully executing Addendum No. 4 has been dropped for clarity.

TDY Industries, Inc. - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
13a	Page 12	The table below summarizes the results of the evaluation of cleaning up soil, groundwater, and sediment within the 60-inch Convair Lagoon storm drain to background conditions for each chemical of concern. As shown in the table, it is infeasible to clean up to background conditions for all chemicals of concern in soil and groundwater, but feasible to ~~cleanup~~ remove the existing PCB-impacted sediments in the 60-inch Convair Lagoon storm drain ~~to background conditions~~. Complete removal of all visible sediments in the 60-inch storm drain is technologically and economically feasible and by doing so, Site related PCB impacts in storm drain sediment will be removed~~background conditions for PCBs in sediments will be achieved~~. Therefore, the cleanup level for PCB-impacted sediments in the 60-inch Convair Lagoon storm drain will be based on removal of all visible sediment from the 60-inch Convair Lagoon storm drain from the Northern Site boundary to the end of the discharge channel in Convair Lagoon Channel. ~~should be set at background~~.[10] However, it is noted that PCBs have been detected upgradient of the Site and it will be neither technically nor economically feasible to maintain background PCB concentrations.	Disagree. We recognize that when TDY removes the plugs following cleanout of the onsite portion of the 60-inch storm drain, the "clean" section may get recontaminated if there are upstream sources of PCBs (e.g., former General Dynamics Facility) and potential downstream sources of PCBs (remobilization of PCB-impacted sediments on top of the Convair Lagoon Cap). If PCB contaminated sediment is discovered within the laterals of the former General Dynamics Facility, a coordinated cleanout of the 60-inch storm drain is advised. Cleaning up the 60-inch storm drain after the Convair Lagoon Cap has been cleaned up may be necessary to avoid recontamination of the 60-inch storm drain from remobilized sediment on the Convair Lagoon Cap. These issues will be considered in developing the part of the Remedial Action Plan that addresses the cleanup of the 60-inch storm drain. Complete removal of all visible sediments in the 60-inch storm drain is technologically and economically feasible and by doing so, background conditions for PCBs in sediments will be achieved. Therefore, the cleanup level for PCB-impacted sediments in the 60-inch storm drain should be set at background levels. For the Convair Lagoon Cap, Resolution No. 92-49 will require cleanup of PCB-impacted sediments on top of the cap to background conditions unless it is determined to be technologically and/or economically infeasible to do so.

TDY Industries, Inc. - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

<table>
<tr><th>Comment No.</th><th>Page No. and Section Title/Topic</th><th>Comments/Proposed Changes</th><th>Response</th></tr>
<tr><td>13b</td><td>12</td><td>
<table>
<tr><td colspan="4">Soil</td></tr>
<tr><td></td><td>Technologically Feasible</td><td>Economically Feasible</td><td>Feasible to Cleanup to Background</td></tr>
<tr><td>PCBs</td><td>Yes</td><td>No</td><td>No</td></tr>
<tr><td>VOCs</td><td>Yes</td><td>No</td><td>No</td></tr>
<tr><td>TPH</td><td>Yes</td><td>No</td><td>No</td></tr>
<tr><td>Metals</td><td>Yes</td><td>No</td><td>No</td></tr>
<tr><td colspan="4">Groundwater</td></tr>
<tr><td></td><td>Technologically Feasible</td><td>Economically Feasible</td><td>Feasible to Cleanup to Background</td></tr>
<tr><td>PCBs</td><td><s>Yes</s> No</td><td>No</td><td>No</td></tr>
<tr><td>VOCs</td><td>Yes</td><td>No</td><td>No</td></tr>
<tr><td>TPH</td><td>Yes</td><td>No</td><td>No</td></tr>
<tr><td>Metals</td><td>Yes</td><td>No</td><td>No</td></tr>
<tr><td colspan="4">Sediment within 60” Convair Lagoon Storm Drain</td></tr>
<tr><td></td><td>Technologically Feasible</td><td>Economically Feasible</td><td>Feasible to Cleanup to Background</td></tr>
<tr><td>PCBs</td><td><s>Yes</s> No</td><td><s>Yes</s> No</td><td><s>Yes</s> No</td></tr>
</table>
</td><td>We concur that it is not technologically feasible to cleanup PCBs to background in groundwater, however, we disagree that it is technologically and economically infeasible to cleanup to background for PCB-impacted sediments in the 60-inch storm drain (see Response to Comment No. 13a).</td></tr>
<tr><td>13c</td><td>Page 12</td><td><u>It is not technologically feasible to clean up PCBs to background in groundwater due to slow degradation rates, resistance to in-situ reduction or oxidation, and the high retardation coefficient of PCBs which eliminates the ability to treat PCBs through traditional groundwater pump and treat methods.</u></td><td>Concur.</td></tr>
</table>

TDY Industries, Inc. - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

<table>
<tr><th>Comment No.</th><th>Page No. and Section Title/Topic</th><th>Comments/Proposed Changes</th><th>Response</th></tr>
<tr><td>14a</td><td>Page 13</td><td>The following modifications should be made to Table 4:
<table>
<tr><th></th><th colspan="2">Soil (mg/kg)</th><th colspan="2">Groundwater (mg/L)</th></tr>
<tr><th></th><th>Onsite Maximum detected concentration (1)</th><th>Alternative Cleanup Level (2)</th><th>Onsite Maximum detected concentration (1)</th><th>Alternative Cleanup Level (2)</th></tr>
<tr><td>PCBs</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Aroclor 1016</td><td>0.03</td><td>1</td><td>1.9</td><td>1.1</td></tr>
<tr><td>Aroclor 1242</td><td>0.16</td><td>1</td><td>Not detected</td><td>0.14</td></tr>
<tr><td>Aroclor 1248</td><td>290</td><td>1</td><td>63 (5)</td><td>0.13</td></tr>
<tr><td>Aroclor 1254</td><td>1.7</td><td>1</td><td>Not detected</td><td>0.078</td></tr>
<tr><td>Aroclor 1260</td><td>1.5</td><td>1</td><td>5.3 (5)</td><td>0.013</td></tr>
<tr><td>Aroclor 1262</td><td>0.33</td><td>1</td><td>Not detected</td><td>0.013</td></tr>
<tr><td>VOCs</td><td></td><td></td><td></td><td></td></tr>
<tr><td>1,1-Dichloroethane</td><td>0.003</td><td>25</td><td>120</td><td>30,000</td></tr>
<tr><td>Chloroethane</td><td>Not Detected</td><td>31</td><td>0.3</td><td>47,000</td></tr>
</table></td><td>Rather than list the Aroclors separately for soil, the table now lists one cleanup level for Total PCBs since each Aroclor has the same soil cleanup level. Separate groundwater cleanup levels are listed for the 5 Aroclors that exceeded an RBC because each has a significantly different slope factor for the groundwater risk assessment.</td></tr>
<tr><td>14b</td><td>Page 13</td><td>1. Based on the Site Wide Risk Assessment (Geosyntec, 2010), except where noted.</td><td>Concur.</td></tr>
<tr><td>14c</td><td>Page 13</td><td>5. Based on 3rd Quarter 2010 Groundwater Monitoring Report</td><td>Concur.</td></tr>
<tr><td>15a</td><td>Page 14</td><td>The following modifications should be made to Table 5:
<table>
<tr><th></th><th colspan="2">Soil (mg/kg)</th><th colspan="2">Groundwater (mg/L)</th></tr>
<tr><th></th><th>Onsite Maximum detected concentration (1)</th><th>Alternative Cleanup Level (2)</th><th>Onsite Maximum detected concentration (1)</th><th>Alternative Cleanup Level (2)</th></tr>
<tr><td>Metals</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Arsenic</td><td>23 (3)</td><td>23 (5)</td><td>0.0071 (4)</td><td>1.1</td></tr>
<tr><td>Chromium</td><td>1,390 (8)</td><td>450,000</td><td>880 (6)</td><td>23,000</td></tr>
<tr><td>Chromium, Hexavalent</td><td>170 (8)</td><td>23 (5)</td><td>700 (7)</td><td>23</td></tr>
</table></td><td>Table 5 was deleted and Hexavalent Chromium and Total Chromium were added to Table 4.</td></tr>
</table>

TDY Industries, Inc. - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
15b	Page 14	1. Based on the Site Wide Risk Assessment (Geosyntec, 2010), except where noted.	Concur.
15c	Page 14	5. The site specific background concentration for arsenic at the Site is 23 mg/kg. Because the risk based cleanup evaluation for arsenic in soil is lower than background, the Alternative cleanup level for arsenic is set at background.	Arsenic was removed as a COC because the maximum detection did not exceed an RBC.
15d	Page 14	6. Based on 1st Quarter 2009 Groundwater Monitoring Report data	Chromium was removed as a COC because the maximum detection did not exceed an RBC.
15e	Page 14	7. Based on 3rd Quarter 2009 Groundwater Monitoring Report data	Concur.
15f	Page 14	8. Based on the 2009 Interim Removal Action Status Report	Concur.
16	Page 14	Alternative Cleanup Levels are the Lowest Levels that are Economically Feasible. The alternative cleanup level for PCBs in soil is based on an economic feasibility study that showed that soil with a PCB concentration greater than 1.0 mg/kg was economically feasible to excavate from the site. This cleanup level for soil is lower than the PCB risk-based concentrations that are protective of human health as determined in the RI/FS. The alternative cleanup level for PCBs in groundwater is based on a risk-based concentration that will not cause an unreasonable impact to human health. This alternative cleanup level is the lowest level that is economically feasible to attain because the remedial alternative for cleaning up PCBs in both soil and groundwater is excavation. Excavating PCB-impacted soil to the alternative soil cleanup level ~~should~~ is anticipated to result in achieving the alternative	These two paragraphs were extensively rewritten for clarity. The rewrite addresses the concerns in the comment.

TDY Industries, Inc. - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
		cleanup level in groundwater. Excavating PCB-impacted soil to achieve a lower groundwater~~soil~~ cleanup level is economically infeasible; therefore, the groundwater alternative cleanup level is the lowest cleanup level that is economically achievable.	
17	Page 17	**iv. Building 158 AOC.** Soil confirmation samples collected from the Building 158 excavation showed exceedances of the alternative cleanup level for hexavalent chromium and indicated the potential extent of the hexavalent chromium impacts may be too large to address efficiently prior to building demolition. Additional remedial actions ~~are needed~~will follow~~ing~~ building demolition.	We understand that TDY intends to take the remedial actions. The purpose of the text, however, is to establish a foundation for requiring TDY to take the additional remedial actions and ensure those actions are included in the RAP.
18	Page 17	**v. Building 102 AOC.** Soil confirmation samples collected from the excavation showed that TDY cleaned up this AOC to the alternative cleanup levels for VOCs and TPH. An additional excavation, however, is needed to remove TPH-impacted soil to the ~~east~~ west of the initial Building 102 targeted excavation. This additional excavation ~~is needed~~will follow~~ing~~ building demolition.	See Response to Comment 17. "West" and "initial" changes made.
19	Page 17	**vi. Building 120 South AOC.** Results of soil confirmation samples collected from the Building 120 South AOC excavation as well as from step out borings and test pits (1) exceeded the alternative cleanup level for TPH, and (2) indicated concentrations of PCBs up to approximately 7 mg/kg in light non-aqueous phase liquids (LNAPL) within the soil media. Additional remedial actions to address these impacts ~~are needed~~ will follow~~ing~~ building demolition.	See Response to Comment 17.

TDY Industries, Inc. - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
20	Page 17	**vii. Building 180 AOC.** Results of soil confirmation samples collected from the excavation exceeded the alternative cleanup level for TPH and PCBs. Additional remedial actions ~~are needed~~will follow~~ing~~ building demolition.[17]	See Response to Comment 17. "and PCBs" change made.
21a	Page 18	The text for finding 16.f appears to be somewhat dated. We suggest the following updates. You may additionally cite the 3rd quarter 2010 groundwater monitoring report to support the more recent observations in footnote 19.	Concur. The footnote has been updated.
21b	Page 18	**f. Enhanced In-Situ Bioremediation.** Pilot studies were performed in the Building 131/242 AOC, Building 130/166 AST/120/121 AOC, Former Maintenance Yard AOC, and Building 180 AOC to evaluate the effectiveness of Enhanced In-Situ Bioremediation (EISB) in reducing VOC concentrations in groundwater and if present, dense non-aqueous phase liquid (DNAPL). Emulsified vegetable oil (EVO) and KB-1 microbial culture were injected into the subsurface using direct push technology. Monitoring data collected after the injections indicate that the natural biodegradation rates were significantly enhanced by the EISB injections and that the alternative cleanup levels ~~could potentially be~~were achieved over the majority of the pilot study area over an approximate 2-year timeframe. While there is insufficient data at this point to evaluate natural degradation rates and time to reach background ~~after~~ throughout the pilot stud~~ies~~y area, VOCs concentrations have been reduced to background over the majority of the pilot study area	Concur.

TDY Industries, Inc. - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
		and are expected to continue to be reduced ~~beyond the alternative cleanup levels,~~ in the balance of the pilot study area, ultimately reaching background conditions.[19]	
22	Page 19	**CALIFORNIA ENVIRONMENTAL QUALITY ACT.** This Order requires submittal of a detailed RAP for San Diego Water Board approval that addresses cleanup activities at the former TDY site. Although the RAP has not yet been submitted, the proposed activities under the RAP are expected to include remedial alternatives such as subsurface bioremediation injections and excavations at known areas of contamination. This Order also requires, if needed, implementation of a Contingency Plan for additional remedial action, if needed, in the event that demolition activities reveal new environmental concerns or previously undocumented underground storage tanks. The San Diego Water Board adopted a negative declaration on February 9, 2011, in accordance with California Environmental Quality Act (Public Resources Code, section 21000 et seq.) for approval of the activities expected to be included in the detailed RAP and Contingency Plan identified in this Order. In the negative declaration, the San Diego Water Board certifies that the proposed project will not have significant effects on the environment.	Concur.

TDY Industries, Inc. - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
23a	Page 19	~~**1. ABATE DISCHARGES.** TDY shall terminate all illicit discharges from the former TDY site, if any, to the storm water conveyance system.~~	Concur. This directive is duplicative of CAO Addendum No. 3, Directive 3 (modification of Directive A.1.c. of CAO R9-2004-0258) which states: "Prevent and eliminate illicit waste discharges related to TDY's historical activities into and through the onsite SWCS, offsite MS4s, and/or receiving waters."
23b	Page 19	We suggest that the storm water conveyance issues have been addressed under CAO Addendum No. 3 and do not need to be revisited in this CAO Addendum.	Disagree. Although Addendum No. 3 directs TDY to terminate illicit discharges to the SWCS there are no specific actions or due dates required. Addendum No. 4 requires TDY to provide plans and schedules in the RAP for addressing storm water conveyance issues.
24a	Page 20-21	Table 6 and Table 7	Concur.
24b	Page 20-21	See comments regarding Table 4 and Table 5.	Comment noted.
25	Page 23	~~e~~c. All media (soil, groundwater, and soil gas) are protective of all on-site receptors ~~of concern~~ based on a final site-wide post-remediation risk assessment.	Concur.

Environmental Health Coalition - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
1	General	The Regional Board is well-advised to be better safe than sorry. EHC strongly supports the city of San Diego's position on lining the storm drain. TDY should be required to line 60-inch storm drain after it is cleaned. Then, we don't have to worry about it any more. TDY representatives stated that it was only$1 million to do this which, in the world of PCB cleanup costs, is a small amount.	The San Diego Water Board lacks substantial evidence to support requiring TDY to line the main storm drains. Studies have not shown that contaminated soil is entering the storm drain mains through joints, nor have they shown that groundwater seeping into the main storm drains contain dissolved pollutants above CTR criteria. Finally, there is no evidence that the concrete pipes themselves are embedded with PCBs that are leaching out of the concrete.
2	General	Waste in levels that exceed California hazardous waste standards should not be left on-site. We understand that there is an outstanding dry weight/wet weight controversy but it seems like this should be able to be objectively resolved. Perhaps an advice letter from DTSC should be requested to resolve the issue.	Although not legally required to clean up beyond the established risk-based cleanup concentrations, TDY has agreed to alternative cleanup levels for soil set below the hazardous waste criteria since it doesn't change the economic or technical feasibility analysis. At present, there are no contaminants in soil at the site above hazardous waste criteria.

Environmental Health Coalition - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
3	General	EHC has a 23-year history with the TDY contamination of San Diego Bay with PCBs. In the early 90's TDY, at that time called Teledyne Ryan, argued vociferously that they should not be made to pay for an extensive cleanup of the bay due to all the jobs they provided to the region. They were allowed to cap the PCB contaminants in the Bay saving millions and millions of dollars….and soon after they closed down and moved jobs away. In our view, TDY owes this region adequate funding to fully clean the site up. Since the Regional Board analysis that it will only cost $1.2 million to remove all of the land site PCBs we believe that is an economically feasible action and should be required.	Resolution No. 92-49 establishes requirements for cleanup and abatement under Water Code section 13304 and the San Diego Water Board must abide by this policy in setting cleanup levels for the TDY site. TDY has demonstrated that the alternative cleanup levels prescribed in Addendum No. 4 meet all the requirements of Resolution No. 92-49. Therefore, the San Diego Water Board has no legal basis to require cleanup to lower soil and groundwater concentrations. Further, the cleanup levels established in this Addendum No. 4 is protective of beneficial uses.

Environmental Health Coalition - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
4	General	Cleanup levels for soil and groundwater should be the lowest levels that are technologically feasible and, in any case, not higher than the existing onsite maximum detected concentrations. First, the Alternative Cleanup levels themselves are ludicrous at face value. The alternative level for chloroethane in groundwater, for example, is 2,766,667 times the onsite maximum detected concentration. Finally, it may be premature to set any cleanup levels for these media, given the possibility (as stated on page 13 of Draft Addendum Number 4) that new areas of concern may be discovered; cleanup levels should not be set before full site assessment has been completed.	The Alternative Cleanup Levels were developed and are consistent with the Basin Plan and Resolution No. 92-49 for establishing cleanup levels above background. The alternative cleanup levels in Addendum No. 4 have been modified. Only chemicals that exceeded a risk-based threshold for human health in either soil or groundwater have alternative cleanup levels. This avoided the apparently "ludicrous" alternative cleanup levels for many chemicals. Any areas of concern discovered as part of the Phase 3 demolition (under the building foundations) are likely be to small since the TDY facility has been adequately characterized. Any contaminated soil discovered below building foundations are not likely to exceed the maximum concentrations detected in soil at the site because the foundations would have acted as a barrier between a spill or leak and underlying soil.
5	General	Any consultant used to conduct any verification should be selected and directed by the Regional Board and paid for by TDY.	TDY will select and pay for the consultant to conduct any third party verification that storm drains have been satisfactorily cleaned up. The San Diego Water Board will, however, set performance standards for the third party to follow in verifying the clean up.

Environmental Health Coalition - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
6	General	Visual sampling of any of the cleanup is not adequate. All verification should be testing and sampling.	Confirmation sampling of soil and groundwater will be conducted to ensure that remedial activities have met the requirements of the CAO. Visual observation of the storm drain mains is a legitimate approach to verifying that all visible sediment has been cleaned from the storm drain.
7	General	The Regional Board should require 2-5 years of monitoring of the discharges from the storm drains.	The demolition project includes removing all lateral SWCS and cleaning out the storm drains. Once the lateral SWCS are removed, there is no complete pathway for soil to get into the 54-inch or 60-inch main storm drains form the site. The addendum has been modified to require TDY to monitor groundwater seeps with the storm drains, and to ensure that the quality of groundwater seeps is at a level that supports the beneficial uses of San Diego Bay.
8	General	The closure documents issued by the Regional Board should include very specific and clear language that the closure can be revoked and the issue re-opened if the cleanup proves to be insufficient for any reason and/or if the land use plans change for the sites. It must also state that TDY is the responsible party in the event of a reopener.	The San Diego Water Board's closure documents routinely contain the language recommended in the comment.

Environmental Health Coalition - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
9	General	The Addendum and closure documents should state that the risk-based cleanup levels are un-protective for fish and wildlife and sensitive receptors on site.	A risk assessment has been performed and the Department of Toxic Substances Control has reviewed the report. The alternative cleanup levels are fully protective of human health for a commercial/industrial land use. Additionally, at the end of the cleanup activities, a final facility-wide risk assessment will be performed to verify that that any residual waste soils are protective of human health. Because this is a terrestrial cleanup, there are no fish receptors. Upon redevelopment, the site will have no wildlife receptors because the above ground sources of pollutants will have been removed, and because the site will be covered with asphalt, or another suitable treatment which will create a barrier between any wildlife and the underlying soil and groundwater.
10	General	The CAO and closure documents should name TDY as responsible if PCBs are found in any future testing in water, groundwater, storm water, the Bay, on land or in site materials.	Addendum No. 4 is clear that TDY is responsible for PCBs in soil, groundwater, and storm water at the site, and for PCBs in site material. TDY is also responsible for PCBs from its site that were discharged into San Diego Bay.

U.S. FISH AND WILDLIFE SERVICE - Comments On The Draft Addendum No. 4 to Cleanup And Abatement Order No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
1	General	While the proposed cleanup levels for contaminants in soil may be protective of human health under commercial/industrial exposure conditions, they would not be considered protective of terrestrial wildlife without further consideration. Risks to terrestrial species should be evaluated if any uses for soils other than those identified in Addendum No. 4 are considered in the future.	Terrestrial wildlife will be protected from exposure to residual chemicals in soil and groundwater at the site by the surface treatment the Airport Authority intends use to cover the site following demolition. If the land is redeveloped in a way that creates a complete exposure pathway for terrestrial wildlife, additional cleanup may be necessary.
2	General	In the event that soils migrate off site and become sediment in Convair Lagoon, the proposed cleanup levels for contaminants in soils would not be considered protective of aquatic life or aquatic-dependent wildlife.	Addendum No. 4 requires TDY to abate all soil discharges from the site to Convair Lagoon.

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
1	Order Finding 4. **DEMOLITION AND CLEANUP ACTIVITIES**	TDY's obligations for TRA Site cleanup should not be confused with the Port's demolition project, and therefore we request "AND CLEANUP" be deleted from the description of demolition activities.	Disagree. This finding clearly separates the demolition activities from the cleanup activities including responsibilities. TDY is solely responsible for conducting remedial actions during and after demolition and the Port District is solely responsible for conducting demolition activities.
2	Order Finding 8. **Table 2 - Areas of Concern for Potential Transport of Contaminated Media to Convair Lagoon**	Sampling performed by the Port and Airport in December 2008/January 2009 identified detectable concentration of PCBs in all six TRA Site-related storm drain outfalls either into Convair Lagoon or San Diego Bay. This data is presented in Attachment 1. This data indicates that in addition to the 60-inch, the 54-inch, 30-inch West, and 30-inch East storm drains to Convair Lagoon and the 15-inch and 30-inch storm drains to San Diego Bay are areas of concern for potential transport of contaminated media to Convair Lagoon and San Diego Bay.	Concur. Table 2 has been modified to include the following Areas of Concern: Convair Lagoon storm drains (54-inch, 30-inch West, and 30-inch East) and San Diego Bay storm drains (15-inch and 30-inch). Additionally, Finding 10.f. has been modified to indicate that, in addition to the significant PCB-contaminated sediments present in the 60-inch Convair Lagoon storm drain, there is a potential for PCB-contaminated sediments to be present in the other Convair Lagoon storm drains (54-inch, 30-inch West, and 30-inch East) and San Diego Bay storm drains (15-inch and 30-inch).

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
3a	Order Finding 10.c. **Contaminated Groundwater to the SWCS.**	During monthly stakeholder meetings, the City of San Diego has informed us on several occasions that the 60-inch SWCS is not water-tight by design. During TDY's SWCS sediment removal activities, infiltration of groundwater and base flow within the 54-inch and 60-inch drains were observed and had to be managed through installation of plugs and pumping (TDY PCB Report pp. 59, 65, 79, 94, Appendix C Tables 6 and 7). TDY has reported infiltration rates of up to 80 gallons per minute into the 60-inch SWCS over a 225-feet section (TDY PCB Report Appendix C, Table 6) prior to limited patching. This patching was of joints and cracks in three locations in the last 15 feet of the pipe before the outfall and was performed during June to October 2006 SWCS cleaning (TDY PCB Report p. 87). TDY sampled groundwater seeping into the 54-inch storm drain on 15 June 2006 (TDY PCB Report Appendix C, Table 7) prior to patching one location on 26 June 2009. Direct observations and sampling by Haley & Aldrich when entering the 54-inch and 60-inch trunk lines indicate that seeps exist in locations other than the four locations patched to date by TDY (Attachment 1). As the storm drains continue to age and deteriorate, future seeps will likely occur. In the absence of a maintenance program to monitoring and patch seeps or a liner, this pathway will likely become more significant as the SWCS ages.	The quality of any groundwater seeping into the SWCS should be at a level that supports the beneficial uses of San Diego Bay. The concentrations of VOC waste constituents in groundwater seep samples within the 60-inch SWCS were all below the CTR criteria for the protection of human health through consumption of organisms. There are no CTR criteria for VOCs for the protection of marine organisms. Although groundwater from the site may seep into the SWCS, the available evidence indicates that the quality of the groundwater supports the beneficial uses of San Diego Bay and additional groundwater cleanup is unnecessary. Continued monitoring of groundwater seeps into the SWCS is needed to fully characterize the variability in the quality of groundwater seeping into the SWCS. Addendum No. 4 has been revised to require TDY to continue monitoring the quality of groundwater seeps within the SWCS, and to ensure that the water quality of the seeps supports the beneficial uses of San Diego Bay. If concentrations rise above CTR levels, TDY can either clean up the groundwater entering the seeps to levels that support the beneficial uses of San Diego Bay, or stop the seeps.

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
3b		Seep sampling performed by the Port and Airport in January 2009 (Attachment 1), after the patching near the outfall of the 60-inch, identified chlorinated VOCs in the 60-inch storm drain beneath the TRA Site that correspond to chemicals of concern identified in groundwater at the TRA Site. TDY's 15 June 2006 PCB, VOC and SVOC in groundwater seep data for the 54-inch storm drain (TDY PCB Report Appendix C, Table 7) and the attached Port/Airport VOC groundwater seep data for the 60-inch storm drain indicated that TRA Site-related chemicals of concerns have entered the 54-inch and 60-inch trunk lines. This data indicates that a current pathway exists between groundwater at the TRA Site and the 60-inch trunk line, and as the 54-inch and 60-inch storm drains age, these pathways will become more significant if lining and/or maintenance are not performed.	Addendum No. 4 has been revised to recognize a complete pathway from groundwater at the site to the 60-inch storm drain and into Convair Lagoon.

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
3c		We understand from the RWQCB's 19 December 2008 letter to TDY and comments made by the RWQCB storm water personnel on several occasion during stakeholder meetings that any detectable concentrations of TRA Site-related chemicals in the SWCS would violate Prohibition No. 8 of the Basin Plan. As such, the Port and Airport consider groundwater seepage into the SWCS as a significant pathway that needs to be addressed by the RAP and appropriate cleanup levels need to be established that are protective of the receiving surface waters. The Port and Airport is concerned that failure by TDY to adequately address this pathway could result in an inappropriate burden being placed on government agencies that rely on public funding, either to demonstrate to the RWQCB that violations of Prohibition No. 8 are the responsibility of TDY after TDY has been released from the Site, or worse the public agencies are held responsible to remedy discharges related to TDY's waste releases.	Resolution No. 92-49 does not require a discharger to clean up to background concentrations if it is economically infeasible to do so. Based on TDY's economic feasibility analysis the San Diego Water Board has concluded that cleaning up to background concentrations is economically infeasible. The San Diego Water Board has also concluded that residual VOC levels in the 60-inch storm drain groundwater seeps do not currently pose a threat to San Diego Bay beneficial uses. Based on these considerations the San Diego Water Board is not requiring TDY to cleanup groundwater at the site to background concentrations. The San Diego Water Board can compel TDY to ensure that the quality of any groundwater that seeps from the site into a storm drain is of a quality that supports the beneficial uses of San Diego Bay. Although the groundwater seeps within the 60-inch storm drain contain dissolved VOCs, the concentrations are at levels below CTR criteria. Addendum No. 4 has been revised to require TDY to continue monitoring the quality of groundwater seeps within the 60-inch storm drain, and to ensure that the water quality of the seeps supports the beneficial uses of San Diego Bay. Based on all of these considerations the San Diego Board has concluded that the groundwater seepage discharge to the storm drain is an allowable non-storm water discharge under section B.2 of the San Diego County's MS4 storm water permit and thus also would be in conformance with Prohibition No. 8 of the Basin Plan.

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
3d		The RWQCB makes reference to CTR values; however, many of the groundwater Alternative Cleanup Levels are set above the CTRs values. As stated above (Comment #4), groundwater is currently and/or has the future potential to discharge to the SWCS and as such appropriate cleanup levels for the protection of surface water quality should established that lie between background and the CTR values.	Water quality of groundwater seeps within the SWCS is below CTR criteria. Thus, there is no evidence to support a requirement that TDY cleanup groundwater site wide to CTR criteria. Nonetheless, as discussed in the responses above, Addendum No. 4 has been revised to require TDY to continue monitoring the quality of groundwater seeps within the SWCS and to ensure that the water quality of any seeps within the SWCS supports the beneficial uses of San Diego Bay. If concentrations rise above CTR levels, TDY can either clean up the groundwater entering the seeps to levels that support the beneficial uses of San Diego Bay, or stop the seeps.

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
4	Order Finding 10.d. **Contaminated Surface Soil to the SWCS.**	The Port and Airport will follow best practices and best available technologies to prevent surface soils at the Site from being eroded and discharged to the SWCS. Recognizing that stormwater best practice and best available technologies have limitations, the Port's/Airport's compliance with Prohibition No. 8 of the Basin Plan may not be possible, if for examples, TDY is permitted by the RWQCB to leave detectable levels of PCBs in surface soil. Furthermore, neither the Port or Airport can guarantee that contaminated surface soil left at the TRA Site by TDY will be covered with clean fill or surfacing materials for all times in the future, and such an expectation would place an onerous burden on the Port and Airport for capping and managing TDY's wastes. This would also be in contravention of the Settlement Agreement between TDY, the Port and Airport for TDY to remediate the Site for unrestricted industrial/commercial use. A requirement for the Port and Airport to maintain a cap at the Site is considered to be a restriction on the Site use. TDY's economic feasibility assessment under Resolution No. 92-49 for PCBs in soil identifies an incremental cost of $1M to remediate to non-detect levels compared with their proposed alternative cleanup level of 1 mg/kg (TDY's RI/FS pp.32-34). This incremental cost is not economically infeasible for TDY and far more has been spent to date by TDY in lawsuits against others related to the cleanup of the Site and Convair Lagoon, and by others to defend themselves against TDY's claims. Furthermore, this incremental cost would be offset by avoided lifecycle costs associated with managing TDY's wastes on-Site *ad infinitum* or potential cost for subsequent cleanup of the SWCS, Convair Lagoon and San Diego Bay and potential legal disputes.	Section 2.1.4.7 of the Port District's Final EIR describes the final site disposition, which includes importing about 6,300 cubic yards of presumably clean fill in order to bring the area up to grade. In addition, upon completion of earthwork grading, a 1.5 to 2-inch asphalt overlay or other suitable surface treatment will be installed by the Airport Authority on the graded area to ensure proper site drainage, and to reduce soil runoff and fugitive dust once demolition activities have ceased. Given the above information it appears unlikely that any residual detectable levels of <u>any</u> constituent in the soil will be discharged into the SWCS. Furthermore, the San Diego Water Board is not a party to the Settlement Agreement between TDY, and the Port District and Airport Authority, and is not bound by the agreement. Nevertheless, if in the future, the land use changes such that additional cleanup is needed to protect human health and the environment at the site, or the beneficial uses of San Diego Bay, the San Diego Water Board has the authority to compel TDY to conduct additional cleanup of the site.

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
5	Order Finding 11. **ECOLOGICAL RISKS.**	Future ecological receptors at the TRA Site could include the Airport's very successful Least Tern colony as this colony expands and/or is relocated onto the TRA Site.	From the Port District's own EIR for the Site Demolition, this land use is not contemplated. Section 2.1.4.7 of the Final EIR describes the final site disposition, which includes importing about 6,300 cubic yards of presumably clean fill in order to bring the area up to grade. In addition, upon completion of earthwork grading, a 1.5 to 2-inch asphalt overlay or other suitable surface treatment will be installed by the Airport Authority on the graded area to ensure proper site drainage, and to reduce soil runoff and fugitive dust once demolition activities have ceased. The surface treatment will protect terrestrial wildlife from contact with residual chemicals in soil and groundwater at the site after demolition and cleanup. The Airport Authority clarified this comment at a March 2, 2011 meeting stating it might relocate the least tern's nesting habitat to an area on the eastern portion of the site following redevelopment. Without a written proposal or plan from the Airport Authority, this potential land use for endangered wildlife habitat is too speculative to consider in terms of setting alternative cleanup levels at the site. If the Airport pursues this land use option, the San Diego Water Board can reconsider the alternative cleanup levels for the site at that time if appropriate.

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
6a	Order Finding 13. **TECHNOLOGICAL AND ECONOMIC FEASIBILITY TO CLEANUP TO BACKGROUND CONDITIONS.**	For the reasons stated in Comment #7 above, the Port and Airport do not agree that the incremental cost to cleanup to background levels is economically infeasible for PCBs in soil (cost of $1M) (Geosyntec's 6 December 2010 Technical Memoranda).	Economic feasibility is a term of art under Resolution No. 92-49, and refers to the objective balancing of the incremental benefit of attaining more stringent cleanup levels compared with the incremental cost of achieving those levels. Economic feasibility does not refer to the subjective measurement of TDY's ability to pay the costs of the cleanup and are not relevant to the economic feasibility analysis.
6b		Based on our review of the cited documents that support this RWQCB finding (TDY's RI/FS and Geosyntec's 6 December 2010 Technical Memoranda), we do not see TDY's economic evaluation of costs to cleanup to background levels for all metals in soil and groundwater, and PCBs in groundwater. In the absence of this evaluation how does the RWQCB conclude that cleanup to background is economically infeasible?	The evaluation of treatment of metals in groundwater is presented in the Metals Alternative Evaluation Tech Memo (10-26-10) and is evaluated based on technical feasibility. Although it is possible to treat groundwater to below the RBCs using in-situ reductive technologies, the only way to reach background for metals is physical removal. Due to low permeability soils, pump and treat remedies would not be able to effectively extract groundwater for treatment and ongoing diffusion of groundwater from low-permeability silts and clays would provide an ongoing source which would potentially maintain metals concentrations above background indefinitely, regardless of extraction effort. Potential technologies to further reduce trace concentrations of PCBs in

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
			groundwater, beyond the physical removal of soils and water in the vicinity of points exceeding the RBCs were evaluated in Appendix A to the RI/FS. Groundwater pump and treat was screened as technologically infeasible, ineffective, and resulting in a more hazardous effluent waste stream than the groundwater it would be intended to treat. This evaluation resolved that trace concentrations below the RBC were best handled by monitored natural attenuation.
7a	Order Finding 14. **ALTERNATIVE CLEANUP LEVELS.**	Risk-based concentrations (RBCs) have been developed by TDY (TDY RI/FS Table 5-9) for more chemicals of concern (COCs) than are listed in Tables 4 and 5 (and the related Tables 6 and 7). Why has the RWQCB truncated the list of COC for which there are cleanup levels?	The list of chemicals of concern was modified in Addendum No. 4 to include only the chemicals exceeding the risk-based concentrations in either soil or groundwater. Based on this approach some chemicals were added and some were removed from the table. In general, the COCs that were dropped had maximum site concentrations well below RBCs.
7b		It is our understanding that the Alternate Cleanup Levels presented in Tables 4 and 5 are based on TDY's RBCs. We noted several discrepancies between the RBCs and Alternate Cleanup Levels, as follows:	

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
7c		A number of the Alternative Cleanup Levels presented in Table 5 are significantly above California Hazardous Waste Total Threshold Limit Concentrations (TTLC), notably chromium, copper, mercury and zinc. Leaving soils at the TRA site with contaminant levels that exceed hazardous waste levels is not acceptable to the Port and Airport and would place an inappropriate burden on these public agencies for managing this hazardous waste discharged by TDY in the event that this soil is dug up during redevelopment or other activities.	The list of chemicals for which alternative cleanup levels are established has been shortened in Addendum 4 as a result of comments received. Of the metals, only hexavalent chromium and total chromium have alternative cleanup levels because these are the only metals detected above risk based concentrations at the site. Of these, only total chromium has an RBC above hazardous waste criteria. TDY has agreed to accept the hazardous waste criteria as the alternative cleanup level for total chromium. Regarding groundwater, the management and disposal options for liquid wastes, with or without hazardous waste concentrations, are limited to treatment at a permitted Treatment, Storage and Disposal (TSD) facility or disposal at a hazardous waste landfill. Therefore, the residual concentration of chemicals in groundwater will not make a significant difference in the cost or burden of disposal.
7d		We understand that the cleanup levels presented in the order were developed in part with oversight from DTSC who supported the RWQCB related to human-health based cleanup goals. Can the RWQCB confirm that DTSC has reviewed and approved the proposed cleanup levels?	Yes. Please refer to emails from William Bosan of DTSC dated February 11, 2011 and March 28, 2011 (Supporting Document 4).

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
8	Order Finding 16. a. **Storm Drain Cleanout.**	As documented by TDY (PCB report pp. 88), following completion of TDY's July 2006 cleanout in the 60-inch trunk line beneath the TRA site, PCBs up to 2,780 mg/kg were detected. Following TDY's re-cleaning in July 2007, PCBs up to 403 mg/kg were detected (subsequent re-cleaning has yet to be performed). This RWQCB finding as written implies that the interim action cleanout have prevented further discharges of PCB-impacted sediments into Convair Lagoon through removal of PCB impacted sediments in the SWCS. This finding is not supported by the PCB analytical data cited by TDY.	At the time of the cleanout in 2006, PCBs contaminated sediment within the 60-inch SWCS was adequately removed. Subsequent to this cleanup and prior to site demolition, additional sediment sampling showed some PCB polluted sediment within the 60-inch SWCS. That is why Directive No. 2 requires TDY to perform additional corrective action to cleanup any contaminated sediment in the SWCS.
9a	Order Directive 2. b. **60-INCH CONVAIR LAGOON STORM DRAIN AND ENERGY DISSIPATION CHANNEL**.	A visual method has been used by TDY in past sediment removal activities for substantiating cleanout effectiveness. However, it has yet to be proven an effective performance standard. Post-cleanout sampling as documented by TDY (PCB report pp. 88), following completion of TDY's July 2006 cleanout in the 60-inch trunk line beneath the TRA site, identified PCBs up to 2,780 mg/kg. Following TDY's re-cleaning in July 2007, PCBs up to 403 mg/kg were detected (subsequent re-cleaning has yet to be performed).	Post cleanout sampling after July 2006 identified PCBs in sediment within the SWCS; however, this cleanup was performed prior to the identification and elimination of onsite PCB sources and pathways as shown in Figure 3 of the PCB Characterization Report (Conceptual Site Model). The primary PCB sources to the 60-inch SWCS include building materials and PCB polluted sediment within the tributaries. Demolition activities have removed all onsite buildings (with the exception of Building 100) and have blocked all tributaries that connect to the 60-inch and 54-inch SWCS. Addendum No. 4 requires TDY to provide details for clean out of the SWCS in the RAP.

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
9b		The directive to cleanup to background conditions "to the extent practicable" is a subjective standard in the absence of specificity as to the means of the sediment removal, and as such, TDY, the 3rd party inspector, the RWQCB and other stakeholders could disagree on whether the standard had been met. For instance, removal of sediment by Hydroblasting (the Best Available Technology used by GD; TDY PCB Report Appendix R) may ultimately remove more sediment than lower pressure jetting and manual labor (a technology previously used by TDY; TDY PCB Report p.59). A more robust standard may be to require TDY to remove all visible sediment to the extent practicable by applying Best Available Technologies as presented in the RAP to be submitted by TDY for approval by the RWQCB, and that any residuals that cannot be removed will be tested for PCBs and the volume quantified.	This concern will be addressed through the Remedial Action Plan in Directive No. 3 of the Addendum. TDY will be required to use the best available technology to clean the SWCS considering the age and condition of the SWCS. The San Diego Water Board can not dictate the means and methods of compliance with the order.
9c		Data shows (Attachment 1; TDY PCB Report pp. ix) that all six storm drain lines identified under Finding 5 of the Draft Addendum No. 4 continue to be impacted with PCBs. These impacts include PCBs in sediments in all six lines and in some cases PCBs in the concrete pipe materials (TDY PCB Report Appendix P). The last round of storm drain sediment removal was performed by TDY was in 2006 and 2007. Only those portions of the SWCS that contained PCBs in sediments in concentrations in excess of 1 mg/kg were target for cleaning. On-site storm drain laterals associated with these lines were capped in May 2010 by the Port as	Concur. This concern has been addressed by modifying Finding 8, Finding 10.f., Finding 12.c. and Directive No. 2. to require an investigation and if necessary, cleanup of these storm drains.

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
		part of Site demolition. TDY should be required through observation and chemical testing to appropriately characterize the post capping condition of the five storm drain trunk lines (other than the 60-inch) with respect to PCBs in sediment, characterize PCB impacts to the construction materials of the drains that will remain in-place, and take appropriate remedial actions.	
9d		We understand from discussions with the RWQCB and TDY during the stakeholder meeting on 10 January 2011 that the RWQCB is confident that once the SWCS laterals have been removed and observable sediment is removed from the 60-inch trunk line to the extent practicable then TRA Site-related PCB releases will have been abated. The Port and Airport do not share this confidence. As indicated by TDY (TDY PCB report pp. vii), as PCB-impacted construction materials weather with age they contribute to PCBs in sediments. Based on this finding by TDY, we are concerned that the storm drain trunk line building materials, which have been shown to be impacted with PCBs (see Note 1), are an ongoing source of PCBs in sediments and that solely removing the sediment in a one-time event may not prevent further on-going releases of PCBs to sediments in the storm drain lines and Convair Lagoon/San Diego Bay (further information to substantiate this concern is provided in Note 2 below). As such, this directive is viewed by the Port and Airport as an interim measure by TDY that may not be a final remedy in preventing TRA Site-related PCB discharges into the SWCS and Convair Lagoon/San Diego Bay,	The "storm drain trunk line" is not considered "building materials" included in that description of building materials for the site. Building materials referred to in the Addendum include on-site buildings with PCB-containing paint and expansion joint compound used in separating large slabs of concrete. Besides dielectric fluids in capacitors and transformers, PCBs are also associated with window caulking, plasticizers, rubber, and resins. The 60-inch SWCS was not manufactured with PCBs. The San Diego Water Board has not yet been provided with conclusive evidence that PCB-containing oils (that may have been sorbed onto the 60-inch concrete pipe due to historical use, storage, or handling of these oils) will act as a continuing source of PCBs to sediments within the pipe. The 60-inch pipe is approximately 70 years old. The lack of structural damage to the pipe indicates it is not weathered to any appreciable degree. Furthermore, as shown in Figure 3 of the PCB Characterization Report

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
		and TDY should be required to perform further actions to remediate these impacts, as appropriate. We request that this point be clarified in the addendum, since as currently written it could be misconstrued as a final remedy.	(Site Conceptual Model), the main PCB sources to the 60-inch pipe are from building materials (e.g., concrete joint compound (with concentrations of approximately 7,800 mg/kg) and PCB-containing sediments within the onsite tributaries (up to 1,700 mg/kg).
		Note 1. Three concrete chip samples were collected from the 54-inch trunk in January 2006 (TDY PCB Report Appendix P). All three samples contained PCBs up to 3.34 mg/kg. The attached internal TDY correspondence that came to light during litigation (see Attachment 2) indicated that on 21 September 1987 a sample chiseled from the former 30-inch east line contained PCBs in a concentration of 54,000 ppm. We understand that the 30-inch east line was replaced where this sample was collect. However, based on this data, the Port and Airport does not consider it unreasonable to conclude that the construction materials of the 60-inch trunk line are impacted with PCBs and that these will be continuing PCB sources until there are removed or encapsulated (and similarly for the other five TRA Site-related storm drains).	There are significant differences between the high concentrations observed in the historical concrete sample from the 30"-east SWCS and the sampled concentrations from the 54-inch SWCS. The 30"-east SWCS is not tidally influenced and generally dry. This would allow PCBs, if they entered the drain as an oil, to soak into the concrete matrix. The 54-inch SWCS and 60-inch SWCS are heavily tidally influenced. The 60-inch SWCS always contains water and the 54-inch SWCS is inundated with each high tide, such that the concrete in the line is either submerged or continually wet. These conditions strongly inhibit the ability of PCBs to penetrate the concrete (due to the hydrophobic nature of PCBs). Even if PCBs were to penetrate the concrete, no evidence has been identified that leaching of PCBs from concrete serves as an ongoing source of PCBs to the environment.

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
		Note 2a. TDY reports that filter socks were placed on all tributaries to the 60-inch trunk line in February 2007 and two diversion/filtration systems were installed at tributaries to the 60-inch trunk line that "contained significantly elevated PCB concentrations" (TDY PCB Report pp. 92-93). In July 2007, TDY performed sediment removal activities in the 60-inch line (TDY PCB Report p. 88), 6 months after reportedly all the tributaries had been equipped with filter socks, and/or diversion/filtration system BMPs were in place to prevent sediment in the laterals discharging to the 60-inch trunk line. Ten days after the 30 to 31 July 2007 sediment removal activities, PCBs were detected up to 294 mg/kg in sediments sampled on 10 August 2007 from the bottom of the 60-inch trunk line at a location specifically targeted for cleaning (TDY PCB Report Figure 1, sample CB133_15S_PI). This data indicates releases of PCBs into the 60-inch trunk line from on-Site sources other than the sediments in laterals that have been reportedly mitigated by TDY's BMPs.	TDY reported that filter socks were placed on all tributaries to the 60-inch SWCS in February 2007 and two diversion/filtration systems were installed at tributaries to the 60-inch SWCS that "contained significantly elevated PCB concentrations" (TDY PCB Report pp. 92-93). In July 2007, TDY performed sediment removal activities in the 60-inch line (TDY PCB Report p. 88), 6 months after reportedly all the tributaries had been equipped with filter socks, and/or diversion/filtration system BMPs were in place to prevent sediment in the laterals discharging to the 60-inch line. Ten days after the 30 to 31 July 2007 sediment removal activities, PCBs were detected up to 294 mg/kg in sediments sampled on 10 August 2007 from the bottom of the 60-inch line at a location specifically targeted for cleaning (TDY PCB Report Figure 1, sample CB133_15S_PI). This data indicates releases of PCBs into the 60-inch line from on-Site sources other than the sediments in laterals that have been reportedly mitigated by TDY's BMPs.

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
		Note 2b. This finding is not inconsistent with TDY's chromatogram interpretation (TDY PCB Report p. 93) that the "majority" of PCBs detected in the 60-inch trunk line during the 18 January 2007 sediment sampling event originated from the CB 131 and CB 133 tributaries. However, the fact that PCBs were detect up to 294 mg/kg in the 10 August 2007 sampling event, within 10 days of sediment removal activities while BMPs were in-place on the laterals, indicates other on-Site PCBs sources in addition to the BMP-protected laterals.	As noted above, the August 2007 cleanout was a targeted removal of sediment from approximately 150-feet of the storm drain line. In the 10 days following the cleanout, sediment from upstream of the cleanout area likely migrated into the cleaned area and was subsequently sampled. The elevated PCB result is most likely representative of the sediment washed down from SWCS north of the cleanout area, not new sediment entering the storm drain.
		Note 2c. It is also noteworthy that the range of Aroclors detected in the 60-inch trunk line in August 2007 after the sediment removal and BMP installation (i.e., 1242, 1248, 1254 and 1260) is different from the range of Aroclors detected in the filter socks on the laterals (i.e., 1248 and 1260). This is a second line of evidence for other on-Site PCBs sources in addition to the BMP-protected laterals.	The highest concentrations of PCBs identified in the filter socks are Aroclor 1248 and 1260. Because these concentrations were elevated, the samples needed to be diluted, and the detection limits of other Aroclors were significantly elevated. Thus, though they were not detected, Aroclors 1242 and 1254 could have been present. Also, as noted in the PCB Summary Report, weathering alters the chromatogram signatures from the standard unaltered Aroclor signature. Consequently, comparison of chromatogram signatures provide a more direct means of fingerprinting weathered PCB samples. The chromatograms for the sediment samples collected from the 60" SWCS reflect the composite chromatogram profiles

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
			from the tributaries contributing to the SWCS. The most significant contributions to the chromatogram signature are observed in the sediment beneath catch basins CB-131 and CB-133, with profiles strongly matching those observed in the adjacent filter socks.

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
9e		Convair Lagoon is currently impacted with PCBs from the TRA site (TDY Convair Lagoon Sand Cap Sampling Report dated 12 February 2008). As has been stated by TDY "fine sediment suspended in the water column may be transported under low-velocity conditions" (TDY PCB Report pp.27), and upstream ("incoming tide") velocities were measured by Geosyntec in 2002 (TDY PCB Report pp.26). Hence, PCB-impacted sediments in Convair Lagoon and in the SWCS beneath the TRA Site are a potential source of PCB-impacted sediments in the tidally influenced SWCS. Furthermore, the 60-inch drain is tidally influenced not only beneath the Site but further north beneath the Airport and Former GD Lindbergh Field Plant site (Eel Grass has been observed that could only have come from San Diego Bay at the manhole on the Former GD LFP site nearest to Washington Street; TDY PCB Report Appendix ZZ, Appendix D). Again, given these findings by TDY, this directive is viewed by the Port and Airport as an interim measure by TDY that should not be considered a final remedy in preventing PCBs that originated from the Site entering the SWCS and Convair Lagoon/San Diego Bay, and TDY should be required to perform further actions to remediate these impacts, as appropriate. We request that this point be clarified in the addendum.	To avoid recontamination of the SWCS by sediment from Convair Lagoon, cleanout of the 60-inch SWCS (as well as the other SWCS if necessary) could be delayed until after the PCB-impacted sediments in Convair Lagoon are cleaned up. Whether or not a delay in cleaning the SWCS presents an unacceptable risk to beneficial uses of San Diego Bay should be addressed by TDY in the Remedial Action Plan. If TDY cleans up the SWCS before cleaning up the Convair Lagoon sediment, and the SWCS are recontaminated by that sediment, another cleanup of the SWCS may be necessary.
9f		We recommend that the directive to remove sediment to 25 feet north of the property line be clarified if the intent is that this is 25 feet north of the northern TRA site property boundary. As currently written, it could be misconstrued as 25 feet from the southern boundary.	Concur. See the response below to comment 9g for more information.

San Diego Unified Port District & San Diego County Regional Airport Authority - Comments on Draft Addendum No. 4 to CAO No. R9-2004-0258

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
9g		As stated above (see Comment #20), the 60-inch drain is tidally influenced not only beneath the TRA Site but further north beneath the Airport and Former GD Lindbergh Field Plant site, approximately 1,700 feet north of the TRA site's northern property line. As such the basis for 25 feet is not clear, and may not address all TRA site-derived PCB impacted sediments in the 60-inch drain that have migrated upstream via the incoming tide.	Concur. Finding 2.b. has been modified by deleting "25-feet north of the property line." TDY will need to identify and justify the section of pipe that will be cleaned out north of the northern property line in the Remedial Action Plan.
10a	Order Directive 3.c. Monitoring Program.	We recommend that the groundwater monitoring be performed on a quarterly basis for at least one year *after* all cleanup levels have been reached.	Once cleanup levels have been reached in groundwater, TDY will be required to conduct verification monitoring to demonstrate that the cleanup levels are maintained over time. TDY will need to propose an appropriate frequency and duration for this verification monitoring. The verification work plan must be approved by the San Diego Water Board.
10b		We recommend that the monitoring program include sediment and water monitoring in the SWCS through sampling and laboratory analysis for PCBs and other COCs.	Disagree. Following implementation of the RAP, there should be no need to monitor the SWCS for sediment and water. Addendum No. 4 does require TDY to continue to monitor the quality of groundwater seeps with the SWCS.

City of San Diego - General Comments on Addendum No. 4

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
1	Page 1 - Scope	Draft Addendum No. 4 states in Finding 2 that the document only addresses the cleanup and abatement of wastes discharged to land at the former TDY site. However, subsequent language in Finding 2 includes the abatement of waste discharges beyond the TDY site to Convair Lagoon and San Diego Bay. Addendum No. 4 appears to include the abatement of any current or future waste discharges from the TDY site to adjacent areas, Convair Lagoon, San Diego Bay, and the cleanup and abatement of waste discharged to land within the TDY property boundaries. The City recommends the focus of Addendum No. 4 be further clarified so that these specific issues addressed under Addendum 4 are understood.	As stated in Finding No. 2, cleanup of the former facility is needed to prevent ongoing off-site discharges of waste before assessment of impacts to Convair Lagoon and San Diego Bay can occur. It is clearly stated that assessment and cleanup of wastes discharged from landside sources to marine sediments will be addressed in a subsequent order issued by the San Diego Water Board.
2	Page 2 - Demolition and Cleanup Activities	Site demolition and cleanup activities described in Finding 4 are limited to the area within TDY's historical property boundaries and does not include any discussion of the storm drains originating on the TDY site that exit the property. If Addendum No. 4 does in fact include waste discharges to Convair Lagoon and San Diego Bay, it is recommended that the Regional Board include the continuation of all storm drain pipes exiting the site.	Concur. We will further clarify the status of the continuation of all storm drain pipes exiting the site following demolition. The 15-inch storm drain discussed throughout the Addendum should be 18-inch as indicated in Attachment 1. Finding 5 has been modified to address this concern.

City of San Diego - General Comments on Addendum No. 4

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
3	Page 2 - On-Site Storm Water Conveyance System	Finding 5 describes the presence of four storm drains (60", 54", 30" West, 30" East) discharging to Convair Lagoon, and two storm drains (15" and 30") that discharge to Downtown Anchorage. These storm drains have received storm water, sediments, and, potentially, wastewater from historical TDY operations. Although Finding 5 describes the current and future status of these storm drains within the TDY property boundaries, the current and future status of the offsite continuation of these storm drains is not addressed. In addition to these six storm drains, there is an 18-inch San Diego Bay storm drain shown on Attachment 1 which is not discussed in Finding 5.	Concur. The off-site segments of the 30-inch west and 30-inch east Convair Lagoon storm drains, and the 18-inch and 30-inch San Diego Bay storm drains are further discussed in Finding 5. Additionally, in Finding 5, the 15-inch San Diego Bay storm drain has changed to the 18-inch San Diego Bay storm drain.
4		It is unclear if offsite storm drain infrastructure has recently been inspected for the presence of sediments that may contain contaminants associated with the TDY property (e.g. PCBs, metals, SVOCs, VOCs, etc.). If this activity has not occurred, it is recommended as part of the remediation of the TDY property that the offsite portions of these <u>six</u> storm drains be inspected, and if necessary, be cleaned of all accumulated sediments.	Concur. A work plan and schedule for the cleanup of these SWCS must be included in the Remedial Action Plan. This activity will be coordinated with off-site assessment and cleanup either in the schedule provided in the Remedial Action Plan, or as directed in a future order issued by the San Diego Water Board.

City of San Diego - General Comments on Addendum No. 4

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
5		The City also has concerns regarding the abandonment of these storm drains that continue offsite to San Diego Bay. Will these sections of inactive storm drains between the TDY property boundary and San Diego Bay be abandoned in-place or removed? Our records indicate that these are not City owned storm drains and if abandoned in-place, how will these storm drains be maintained to prevent them from becoming conduits for future contaminant issues? Additionally, it is our understanding that these storm drains have had PCB detections found in them, however, removal of PCBs has not been addressed.	The 54-inch and 60-inch storm drains will remain in place following demolition. The other storm drains (30-inch west Convair Lagoon storm drain, 30-inch east Convair Lagoon storm drain, 18-inch San Diego Bay storm drain, and 30-inch San Diego Bay storm drain) are capped with concrete at the southern property boundary of the former TDY site. It is our understanding that the sections of pipe from the concrete cap to the end of the pipe will not be removed. The unremoved sections of the 30-inch west and 30-inch east Convair Lagoon storm drains will be inoperable and will not drain any storm water runoff. The unremoved sections of the 18-inch and 30-inch San Diego Bay storm drains will continue to drain other off-site areas owned and maintained by entities other than TDY. Maintaining those portions of the off-site storm drains will be the responsibility of the owner of those drains or the MS4 Permit. We recognize that there is a potential for PCBs to be present in the storm drains other than the 60-inch storm drain and as such, Addendum No. 4 has been modified to address these storm drains.

City of San Diego - General Comments on Addendum No. 4

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
6	Page 2 - Potential Pathways to Convair Lagoon and Associated Human Health and Ecological Risks	Finding 10a concludes the discharge of groundwater to Convair Lagoon is an insignificant pathway and that the potential for PCBs present in local groundwater to migrate to Convair Lagoon at concentrations exceeding the applicable California Toxics Rule value is minimal. The discussion regarding PCB migration in groundwater adjacent to Convair Lagoon is based primarily on the results of a qualitative modeling exercise reported in the Site Wide Risk Assessment, Appendix A Section 3.1, pages A-7 to A-10. The screening model's results mainly concluded that PCBs detected in groundwater at this location is unlikely to migrate to Convair Lagoon in 1,000 years and the presence of PCBs is not related to past TDY operations.	The primary purpose of the analytical model was to evaluate the potential for PCB concentrations in groundwater to attenuate through diffusion and dispersal along the flow path from the Convair Lagoon shoreline wells to bottom sediments in Convair Lagoon (SWRA Report, Appendix A, Section 3.1.3.3). Conservative assumptions from site specific data were used for the transport modeling of PCBs. Model results show that the PCB concentrations in the Convair Lagoon shoreline wells would degrade to below the CTR standards in about 175 years with a travel distance of about 40 feet (about half the distance to the Convair Lagoon bottom sediments).
7	Page 3 - Potential Pathways to Convair Lagoon and Associated Human Health and Ecological Risks	The modeling incorporated conservative data derived from a small sample dataset or used default values included in the software's database. The modeling did not consider a range of values for groundwater or subsurface soil parameters applicable to this site, as demonstrated in site boring logs and other available data. Additionally, the modeling results were used in other site documents (including Attachment 6 of this Addendum) to support the assertion that historical PCBs discharges from the TDY site have not impacted groundwater adjacent to Convair Lagoon.	Input parameters for the model were based on Site specific data collected during the 3rd quarter 2009 sample event and the most conservative results from geotechnical samples collected within the Convair Lagoon vicinity in October, 2009. To ensure that the model was run for a worst case scenario, the highest hydraulic conductivity value derived from site data was used in the model to ensure the fastest travel time to Convair Lagoon.

City of San Diego - General Comments on Addendum No. 4

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
8		If such modeling results are allowed to support future decisions regarding responsibility for offsite impacts documented at Convair Lagoon, it is recommended that a more quantitative modeling exercise be conducted that includes an appropriate range of model inputs for soils, as well as other contaminants of concern associated with this site such as metals, VOCs, and SVOCs.	Ranges of model inputs for soils aren't necessary because the purpose of the model was to simulate a worst case scenario. Thus, only the "worst case" or highest hydraulic conductivity soil parameter needed to be modeled. Other constituents of concern do not need to be modeled because their concentrations in the Convair Lagoon shoreline wells have been consistently below CTR criteria.
9	Page 3 - Potential Pathways to Convair Lagoon and Associated Human Health and Ecological Risks	The Finding 10b conclusion that the use of former dredged material as backfill around the storm drains does not create a potential preferential pathway is not warranted unless supported by data collected from a representative cross-section of the storm drain right-of-ways. The City is concerned the finding may be based on potentially faulty assumptions regarding the use of former dredged material as backfill and the absence of representative subsurface data to adequately evaluate this pathway.	Soils obtained from borings directly adjacent to the storm drain pipe verified that the backfill material was the same as the original fill material. See Risk Assessment Appendix A (Section 4.2.1 August 2010).
10		Review of TDY boring logs and logs for the area between Convair Lagoon and the TDY site, as well as the TDY site itself show a widespread layering of former dredged material varying in texture ranging from clays and silts to fine and coarse sands and some gravels. The subsequent excavation of this pre-existing material for the installation of these storm drains completely changed the structure and texture of this material. The excavation, stockpiling, and placement back into the excavation thoroughly mixed the various distinct textures into one composite texture that was likely to be significantly different from the undisturbed material.	Disagree. Typically newer storm drain systems or other utilities or piping structures are constructed with some stabilizing bedding material like sand or gravel. These structures would indeed provide greater pore space and would tend to be preferential pathways for pollutant transport. This was not the case in construction of these older storm drain systems, where the storm drain was backfilled with the same fill material with the same lithologic composition. Soils obtained from borings directly adjacent to the storm drain pipe verified

City of San Diego - General Comments on Addendum No. 4

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
			that the backfill material was the same as the original fill material. See Risk Assessment Appendix A (August 2010).
11		Subsequent settling of storm drains and pre-existing backfill material over time due to natural processes, the installation of roads and other commercial infrastructure in the vicinity of these storm drains, and the constant fluctuation of groundwater has likely created areas adjacent to the storm drains where a range of distinctly different soil permeabilities and groundwater hydraulic conductivities exist.	This is a hypothetical situation and no data has been presented to substantiate this claim.
12		Previous site studies have documented the presence of seeps in the 60-inch and 54-inch Storm Water Conveyance System (SWCS) that clearly show the movement of local groundwater into the SWCS from adjacent pre-existing backfill material. It is recommended that the Regional Board consider this pathway a potentially complete migration pathway until such time additional data have been collected that documents otherwise. It appears that TDY is trying to achieve a reduction in liability for Convair Lagoon and San Diego Bay impacts by getting this pathway removed from consideration without the necessity of collecting the appropriate data.	Addendum No. 4 has been revised to recognize seeps into the SWCS as a complete pathway.

City of San Diego - General Comments on Addendum No. 4

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
13	Page 4 - Ecological Risks	Finding 11 states an ecological risk assessment was not conducted because there are no ecological receptors at the site. It is recommended that Finding 11 include a discussion regarding how the site will be secured from the intrusion of the endangered Least Tern and other species after demolition completion and before the site has been remediated and redeveloped. Exposure of birds to residual contaminants in surface soils and surface water runoff during this timeframe could potentially occur.	The Airport Authority clarified this comment at a March 2, 2011 meeting stating it has hired experts to ensure that Least Tern intrusion on the TDY facility during demolition would not occur. Furthermore, section 2.1.4.7 of the Port District's Final EIR describes the final site disposition after demolition, which includes importing about 6,300 cubic yards of presumably clean fill in order to bring the area up to grade. In addition, upon completion of earthwork grading, a 1.5 to 2-inch asphalt overlay or other suitable surface treatment will be installed by the Airport Authority on the graded area to ensure proper site drainage, and to reduce soil runoff and fugitive dust once demolition activities have ceased. The surface treatment will protect terrestrial wildlife from contact with residual chemicals in soil and groundwater at the site after demolition and cleanup.
14		While the necessity to evaluate ecological risks in Convair Lagoon is acknowledged in this finding, an assessment of human health risks for this area is not listed. If ecological receptors need to be evaluated in Convair Lagoon, the City recommends the appropriate human and environmental receptors (e.g., recreational or subsistence seafood consumers) also be evaluated.	Concur. The responsible dischargers will need to conduct a human health risk assessment in order to develop appropriate cleanup levels for Convair Lagoon sediment. These cleanup levels will be prescribed in a subsequent Order.

City of San Diego - General Comments on Addendum No. 4

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
15	Page 4 - Technological and Economic Feasibility to Cleanup to Background Conditions	Table 3 of Finding 13 states it is economically infeasible to cleanup various chemical groups to background concentrations. Text in Finding 14 only presents the alternative cleanup levels (ACLs) as an economically feasible solution based on cost curves provided in referenced technical memorandums and Remedial Investigation/Feasibility Study (RI/FS).	This response addresses both Comment No. 15 and 16. The costs were arrived at by multiplying the estimated excavation volume by the unit costs for excavation and disposal presented in Table 6-1 of the RI/FS.
16		It is not clear how the specified PCB remediation costs on a cubic yard or unit mass basis in Appendix H of the RI/FS were derived. Costs were simply listed in column F of the Appendix H tables without any footnotes describing the various costs or consideration included in the unit calculations. These estimated unit costs in conjunction with the estimated cubic yards of soil to be excavated at various cleanup levels were then used to generate the cost curves which support the proposed economically feasible PCB cleanup level. Similar comments can be made for VOCs, Total Petroleum Hydrocarbons (TPH), and metals. The City recommends the San Diego Water Board confirm the underlying unit cost basis for these estimated remediation costs as they are central to the identification of economically feasible ACLs.	
17a	Page 5 - Alternative Cleanup Levels	The ACLs listed in Tables 4 and 5 of Finding 14, Tables 6 and 7 attempts to address both currently documented areas of concern, and any areas of concern discovered during site demolition. However, some of the specified ACLs may not be appropriate for a site located near an ecologically sensitive area such as Convair Lagoon. Has the Regional Board considered possible future impacts to groundwater caused by specifying ACLs for	Resolution No. 92-49 establishes requirements for cleanup and abatement under Water Code section 13304 and the San Diego Water Board must abide by this policy in setting cleanup levels for the TDY site. TDY has demonstrated that the alternative cleanup levels prescribed in Addendum No. 4 meet all the requirements of Resolution No. 92-49. Therefore, the San Diego

City of San Diego - General Comments on Addendum No. 4

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
		some TPH fractions that exceed saturation concentrations in soils? The presence of TPH fractions in soils at concentrations greater than saturation may result in chronic leaching of TPH into local shallow groundwater after site remediation has been completed. Given this site is less than 400 feet from Convair Lagoon, the Regional Board must consider setting ACLS for TPH in soils below saturation concentrations to minimize the potential for TPH in soils to leach to groundwater.	Water Board has no legal basis to require cleanup to lower soil and groundwater concentrations. Additionally, the total petroleum hydrocarbon releases identified at the facility are relatively small in extent and have not migrated from the immediate area of release and have not shown a propensity to migrate in the past several decades.
17b		Due to the proximity of groundwater and Convair Lagoon to the TDY site, the Regional Board should evaluate some of the ACLs specified for the more mobile metals such as chromium and zinc and also consider lining the 60" storm drain to prevent re-infiltration of contaminants. The City recommends that ACLs levels for the site be based on the Water Quality Objectives and not the Occupational Safety and Health safety standards. As with PCB concentrations, if the Occupational Safety and Health standards are allowed to prevail as the ACL for TPH as drafted in Addendum 4, the City shall be held harmless from the Regional Board's failure to enforce Water Quality Objective standards in this cleanup order. For a legacy site such as this with its known conditions, please accept these comments as notice that it would be clearly unreasonable and likely unlawful for the Regional Board to later attempt to transfer responsibility to the City for attainment of WQOs for these constituents in the Convair Lagoon or in the public drains where it is clear that the City has no responsibility or control over their	Resolution No. 92-49 does not require a discharger to clean up to background concentrations if it is economically infeasible to do so. Based on TDY's economic feasibility analysis the San Diego Water Board has concluded that cleaning up to background concentrations is economically infeasible. The San Diego Water Board has also concluded that residual VOC levels in the 60-inch storm drain seeps do not currently pose a threat to San Diego Bay beneficial uses. Based on these considerations the San Diego Water Board is not requiring TDY to cleanup groundwater at the site to background concentrations. The San Diego Water Board can compel TDY to ensure that the quality of any groundwater that seeps from the site into a storm drain is of a quality that supports the beneficial uses of San Diego Bay. Although the groundwater seeps within the 60-inch storm drain contain dissolved VOCs, the concentrations are at levels below CTR criteria.

City of San Diego - General Comments on Addendum No. 4

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
		discharge and where that ability to control lies with the Regional Board in this matter.	Addendum No. 4 has been revised to require TDY to continue monitoring the quality of groundwater seeps within the storm drains, and to ensure that the water quality of the seeps supports the beneficial uses of San Diego Bay. TDY can accomplish this by either ensuring that the groundwater seeps within the storm drain remain at concentrations that support the beneficial uses of San Diego Bay, or by stopping the seeps. Based on all of these considerations the San Diego Board has concluded that the groundwater seepage discharge to the 60-inch storm drain is an allowable non-storm water discharge under section B.2 of the San Diego County's MS4 storm water permit and thus also would be in conformance with Prohibition No. 8 of the Basin Plan
18	Page 5 - Attachment 4	It is recommended that an additional transport mechanism and some revision to potentially exposed receptor populations be included for the Conceptual Site Model for Human Health Risks from Soil and Groundwater Contamination. Surface water runoff should be included as an additional transport mechanism, since all onsite storm drains have been sealed for the duration of site demolition and remediation activities and runoff of surface water to adjacent areas during heavy precipitation events is a possibility.	Disagree. Storm water management responsibilities during/after cleanup and during/after demolition are addressed in Finding 5 of Addendum No. 3 to CAO No. R9-2004-0258. In addition to TDY's responsibility to manage storm water as part of the cleanup, the Port District and the Airport Authority have responsibilities to manage storm water as Co-permitees under the San Diego County Municipal Storm Water Permit No. R9-2007-0001.

City of San Diego - General Comments on Addendum No. 4

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
19		It is recommended that Offsite Industrial/Commercial Worker population be classified as a potentially complete pathway for inhalation (indoor air) from the volatilization transport mechanism and that Recreator/Fisher populations be classified as potentially complete pathways for inhalation (outdoor air) from the erosion/fugitive dust transport mechanism.	Disagree. This issue will be addressed in the Port District's dust/contaminant control and monitoring plans as described in the Port District's Final EIR. While these plans are focused on protecting the California Least Terns, they should also reduce potential fugitive dust impacts to offsite industrial/commercial worker and recreator/fisher populations. Furthermore, pursuant to the Port District's Final EIR, a 1.5 to 2-inch asphalt overlay or other suitable surface treatment will be installed by the Airport Authority on the graded area to ensure proper site drainage, and to reduce soil runoff and fugitive dust once demolition activities have ceased.
20	Page 5 - Attachment 5	It is recommended that additional transport mechanisms and potentially complete exposure pathways be incorporated for the CSM for Human Health Risks from Migration of Chemicals. Groundwater migration to Convair Lagoon via storm drain backfill and seeps transport mechanisms <u>should be</u> identified as potentially complete exposure pathways for the Recreator/Fisher and Aquatic Organism populations. Site data suggests these transport mechanisms are present at the site.	Addendum No. 4 has been modified to recognize groundwater seeps as a completed pathway. When the storm drains were installed, the trenches were backfilled with the soil excavated from the trenches, which is indistinguishable from the surrounding soil and is not a preferential pathway. VOCs were detected in water samples collected at seeps within the 54-inch and 60-inch storm drains (Haley & Aldrich, December 2008/January 2009) and these concentrations are below CTR standards.
21		It is also recommended that fugitive dust emissions along with surface water runoff be included for surface sediment media as transport mechanisms.	Disagree. See response to Comment No. 19 above.

City of San Diego - General Comments on Addendum No. 4

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
22	Page 6 - Attachment 6	The Conceptual Site Model for PCB Sources and Pathways requires revision to more accurately describe potential PCB sources. The City does not agree with the depiction in Attachment 6 that PCBs in groundwater adjacent to Convair Lagoon are not site related. This conclusion is based on a small sample dataset and the results of a qualitative modeling exercise. The fact that the TDY site has been in operation upgradient of the lagoon since 1939 suggests the more likely source is past TDY operations and not some as yet undefined source. The City recommends at a minimum, the legend be revised to include 'unknown source' for this particular PCB source.	Even though the CSM suggests that PCBs in groundwater are not site related, data are inconclusive as to the source of PCBs in the Convair Lagoon shoreline wells.

City of San Diego - General Comments on Remediation Investigation

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
1	Page 1 - General Comments	The document's stated focus is to evaluate potential remedial alternatives for mitigating impacts from existing contaminated sediments in the 60" SWCS to the Convair Lagoon and migration of contaminants to off-site groundwater. The document does not discuss why similar potential impacts from the 54" SWCS and the two 30" SWCS are not included in this evaluation.	This comment is on the RI Report and doesn't reflect the contents of Addendum No. 4. Addendum No. 4 has been modified to indicate that, in addition to the significant PCB-contaminated sediments present in the 60-inch Convair Lagoon storm drain, there is a potential for PCB-contaminated sediments to be present in the other Convair Lagoon storm drains (54-inch, 30-inch West, and 30-inch East) and San Diego Bay storm drains (15-inch and 30-inch), and to require that a plan be included in the Remedial Action Plan to investigate and cleanup those SWCS if necessary.
2		Evaluation criteria for effectiveness, implementability, overall protection of human health, and cost are not clearly defined. Without clear and, quantitative definitions for these criteria, the feasibility evaluation of each alternative appears to be subjective.	The alternatives selected in the RI/FS report are common and well understood remedial approaches to soil, groundwater, and storm drain cleanup. The San Diego Water Board is satisfied that the alternatives selected for implementation are feasible.
3		Economic feasibility does not appear to be sufficiently documented. Estimated total costs for each alternative are provided without any detailed description as to how the total cost for the alternative was derived. Economic feasibility conclusions appear to be based primarily on the comparison and ranking of total cost for each alternative.	Economic feasibility is based on a cost/benefit analysis and not on total cost for remedial options. The selected remedial alternative is often the most cost effective to implement because it is the most efficient and technically feasible approach. It is not standard practice to provide an engineering level cost breakdown in a feasibility study. Unit cost breakdown for development of overall costs for each remedial strategy are provided in Table 6-1.

City of San Diego - General Comments on Remediation Investigation

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
4	Page 2 - 60" Stormwater Conveyance System Screening Analysis	Based on the results of a screening analysis, five alternatives were identified for the remediation of impacted sediments located in the 60" SWCS. The details of the screening analysis used to identify these five particular remedial alternatives were not provided in this document. Some discussion should be included regarding what other alternatives were considered in the initial screening process and why they were not evaluated further. At a minimum, a table listing all alternatives considered in the screening analysis with brief summaries for each alternative should be provided.	The San Diego Water Board is satisfied that the alternative selected for cleaning up impacted sediment from the 60-inch storm drain is feasible and will be effective.
5	Page 2 - Evaluation of Pathways and SWCS	The resulting five alternatives identified for inclusion in this document were based in part on addressing two potential pathways recommended for additional evaluation in the recently issued draft Risk Assessment Appendix A (March 1, 2010). The two pathways were identified as migration of existing contaminated sediment impacts within the 60" SWCS to the Convair Lagoon and migration of impacted groundwater to the Convair Lagoon. Some additional text should be included in this document discussing why the 54" SWCS, which will apparently exist after completion of site demolition, was not included in the evaluation of potential impacts to the Convair Lagoon.	Addendum No. 4 has been modified to indicate that, in addition to the significant PCB-contaminated sediments present in the 60-inch Convair Lagoon storm drain, there is a potential for PCB-contaminated sediments to be present in the other Convair Lagoon storm drains (54-inch, 30-inch West, and 30-inch East) and San Diego Bay storm drains (15-inch and 30-inch), and to require that a plan be included in the Remedial Action Plan to investigate and cleanup those SWCS if necessary.

City of San Diego - General Comments on Remediation Investigation

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
		Contaminants have been previously reported in the 54" SWCS under the TDY site and some of the same issues described for the 60" SWCS potentially exist for the 54" SWCS. Also, text should be included discussing why the two 30" SWCS will not present any future impacts to the Convair Lagoon. Contaminants (e.g. PCBs) were previously reported under the TDY site in the 30" (East) SWCS, and even though this SWCS is scheduled for removal during site demolition, no discussion has been presented regarding the fate of those sections of the SWCS that may be abandoned in place (i.e. under North Harbor Drive or adjacent to the Convair Lagoon).	Addendum No. 4 has been modified to include the following Areas of Concern: Convair Lagoon storm drains (54-inch, 30-inch West, and 30-inch East) and San Diego Bay storm drains (15-inch and 30-inch).

City of San Diego - General Comments on Remediation Investigation

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
6	Page 2 - Proposed Cleanup Criteria Impacts	Since the issuance of the original draft RIFS Appendix A in 2008, potential cleanup criteria for the 60" SWCS and groundwater in the vicinity of the Convair Lagoon have been reduced significantly. Presently, it appears some sort of background concentration for PCBs and applicable CTRs for groundwater have been proposed. It is unknown if any other contaminants (e.g. metals) will be addressed under these identified remedial alternatives. The reduction of cleanup criteria from previously proposed levels to current proposed cleanup criteria potentially presents a very significant impact on the ability of any of the identified remedial alternatives to achieve remediation of the 60" SWCS or groundwater. However, the current evaluation of preferred remedial alternatives for the 60" SWCS does not differ appreciably from the earlier 2008 draft. At a minimum, the re-evaluation of remedial alternatives, applicable criteria, and associated potential costs incorporating any potential impacts from the more restrictive proposed cleanup criteria is warranted before a selection of a preferred alternative is completed. If such an evaluation has been completed, the results should be provided in this document.	PCBs, copper, nickel, silver, thallium, zinc, and bis (2-ethylhexyl) phthalate have been detected in groundwater wells near the Convair Lagoon shoreline at concentrations that exceed CTR criteria for marine aquatic organisms. All constituents except PCBs, however, are likely not site-related. A screening transport groundwater flow model predicted that PCB concentrations would attenuate to levels below CTR criteria before reaching the pore water of Convair Lagoon bottom sediments. TDY will be responsible for continued monitoring of groundwater quality in the shoreline wells to determine if concentration trends increase over time. TDY will remediate PCB-contaminated sediments within the 60-inch Convair Lagoon storm drain to background conditions (achieved by removing all visible sediment and verified by daily field notes, digital photos, video clips, and 3rd party inspection).. Additionally, there is evidence that PCB-contaminated sediments may still exist within the other Convair Lagoon and San Diego Bay storm drains. As such, these storm drains will be further investigated by TDY and cleaned out as necessary (54-inch and the offsite portions of the 30-inch west, 30-inch east, 18-inch, 30-inch storm).

City of San Diego - General Comments on Remediation Investigation

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
7	Page 3 - Evaluation Criteria	In Section 2.1, the document states that each remedial alternative retained from the screening analysis was subjected to a detailed feasibility analysis against four criteria: effectiveness, implementability, overall protection of Convair Lagoon receptors, and costs. Other than providing a one-page summary Feasibility Analysis (FA) table which includes a brief description of the evaluation results for each alternative identified, a detailed analysis was not included in Appendix A.	Beginning on page A-7 through page A-11 and page A-15 through page A-17 of Appendix A, each retained remedial option is discussed in relation to effectiveness, implementability, overall protection of Convair Lagoon Receptors, and cost. The remedial alternatives are then evaluated. These analyses are summarized on Tables 1 and 2.
8		Effectiveness was based on the ability of a particular remedial alternative to prevent off-site impacts in excess of applicable CTRs or background criteria, as appropriate. Effectiveness criteria were listed as low, moderate, or high. However, the precise definition (e.g. probability of success, etc.) for these subjective classifications was not provided.	The San Diego Water Board is satisfied that the feasible remedial alternatives identified in the RI/FS will be effective in protecting water and sediment quality off site in Convair Lagoon.
9		Implementability was based on the ability to construct and reliably operate each alternative. Implementability ratings were listed as readily, moderately or difficult to implement based on a variety of parameters listed for the criteria. A clear definition of the readily, moderately or difficult rating was not provided.	The alternatives selected in the RI/FS report are common and well understood remedial approaches to soil, groundwater, and storm drain cleanup. The San Diego Water Board is satisfied that the alternatives selected are implementable.
10		Evaluation of overall protection of Convair Lagoon receptors was the ability to protect identified receptors during remedy implementation and after remediation was completed. The evaluation considered a longer timeframe to achieve remedial goals as less protective than a shorter timeframe. Because the ecological receptors were not described in this document or sufficiently referenced to the draft RA documents, it is unclear if this criterion was adequately evaluated	This comment is relevant to the investigation and cleanup of Convair Lagoon and is not relevant to Addendum No. 4.

City of San Diego - General Comments on Remediation Investigation

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
11		Costs were evaluated based on capital and recurring costs. The total costs provided for each remedial alternative were approximations based on the consultant's understanding of the potential design of the remedial systems. Other than a very basic breakdown of costs listed in the FA table for each alternative, it is unclear how the costs were actually derived or whether the complexity of the various remedial alternatives were understood. Considering the proposed cleanup levels for this site have been significantly reduced, re-evaluation of all remedial alternatives, applicable criteria, and potential costs is warranted and should be provided as support for the selection of the preferred remedial alternative.	Costs were based on scoping level costs provided by contractors and past experience implementing similar scopes of work. Design-level cost estimation is not required or provided in standard practice for a feasibility study. Proposed cleanup levels have not changed for Groundwater impacts or Sediment within the SWCS since the preparation of this evaluation.
12	Page 4 - Remedial Alternative Evaluations	Sections 2.2 and 2.3 present a description of each remedial alternative identified from the screening analysis and a limited evaluation of the benefits and limitations of the five remedial alternatives. The alternatives, which were identified as technically feasible, were subsequently evaluated on the basis of economic feasibility as described in the State Water Resources Control Board Resolution 92-49. Incremental benefits of attaining further reductions in constituent concentrations were compared with the incremental costs of achieving those reductions. Evaluated benefits included current and planned future land use and social or economic impacts to the surrounding community. However, such discussions regarding technical feasibility are brief.	The San Diego Water Board is satisfied that the remedial alternatives identified for implementation are technically feasible.

City of San Diego - General Comments on Remediation Investigation

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
13		Due to perceived economic infeasibility, the evaluation eliminated from any further consideration the excavation and replacement of the 60" SWCS option. Key reasons for eliminating this option were the fact that the removal action would result in major disruptions to North Harbor Drive, and that the application of the in-situ pipe replacement method was more cost effective. Actual impacts and potential costs were not documented.	Actual costs are not needed to conclude that in situ pipe replacement is significantly cheaper than digging up the 60-inch storm drain and replacing it.
14		Four of the five identified remedial alternatives were retained for possible application to mitigating discharges of impacted sediments from the 60" SWCS to the Convair Lagoon. The description of each remedial alternative in Section 2.2 is brief, and the subsequent evaluation of the benefits and limitations for each alternative in Section 2.3 are based on the interpretation of the previously described subjective classifications. The results of these five remedial alternatives require additional documentation to provide support for selection of one preferred remedial alternative.	The San Diego Water Board is satisfied that the alternative selected for cleaning up impacted sediment from the 60-inch storm drain will be effective in protecting Convair Lagoon from sediment discharges from the storm drain. Additional documentation is not needed.
15		The costs associated with three of the four retained remedial alternatives (no cost was provided for the No Action alternative) are presented simply as a total estimated cost without any documentation. The assumption that has to be made is that the estimated costs are based on the inclusion of all applicable costing criteria and potential variables. It is not appropriate to recommend a particular remedial alternative without defining and describing in detail the evaluation criteria used and providing tables that parse	The total costs for cleanout is based on contractor bid estimates and historical cleanout costs for the storm drain and channel. The costs for the channel cleanout were updated based on the last trench cleanout/lining operations which were performed in 2009; it appears the text was not updated to reflect these costs. A memo [RI/FS Appendix A Correction, January 2011] was submitted revising the text to reflect the values presented in Table 1.

City of San Diego - General Comments on Remediation Investigation

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
		the cost estimate into appropriately definable tasks. It should be noted that the total estimated costs for remedial alternative #2 (60" Discharge Channel Monitoring and Maintenance) and #3 (60" SWCS Cleanout) are reported in the text as $728,000 and $590,000, respectively, while in the FS table the costs for alternatives #2 and #3 are listed as $518,000 and $555,000, respectively. The overall impression of this section is that the identification and subsequent evaluation of the four retained remedial alternatives are not sufficiently documented to support the conclusions provided regarding mitigation of impacted sediments in the 60" SWCS.	
16	Page 4 - Recommended Remedial Alternative	Section 2.3.5 describes the selection of the recommended remedial alternative. The discussion basically provides a brief synopsis of the subjective evaluation completed in earlier sections of the document, and compares the estimated total costs for each of three alternatives. Based on this brief analysis, alternative #3 (60" SWCS Cleanout) was selected as the recommended remedial alternative for mitigating off-site impacts from contaminated sediments in the 60" SWCS. Based on previous comments, the major concern is that a remedial alternative has been selected as the preferred approach based on the application of subjective evaluation criteria, undocumented costs, and no discussion regarding what the impact may be from the application of the more restrictive proposed cleanup criteria.	The San Diego Water Board is satisfied that the alternative selected for cleaning up impacted sediment from the 60-inch storm drain will be effective in protecting Convair Lagoon from sediment discharges from the storm drain. Additional documentation is not needed.

City of San Diego - General Comments on Remediation Investigation

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
17	Page 5 - Conceptual Remedial Action Plan	Section 3 describes the basic approach for implementing the preferred remedial alternative (#3) in the portion of the 60" SWCS under the TDY site. Although it states that all tributaries to the 60" SWCS will be removed by the Port during site demolition, there is no discussion that the former entry locations of these tributaries will be sealed to prevent future influx of groundwater and/or sediments. Also, some discussion is required addressing the sealing of any holes, cracks and ungrouted joints to prevent inflow of water and sediments into other sections of the 60" SWCS under the TDY site. Without effectively sealing the 60" SWCS, the potential reintroduction of residual contaminants into the 60" SWCS and their subsequent discharge to the Convair Lagoon presents a potentially complete exposure pathway. Also, the same evaluations should be conducted for the 54" SWCS and the two 30" SWCS. It appears that the 54" SWCS will not be removed as part of site demolition, and portions of the two 30" SWCS will likely be abandoned in place in those areas where access is prevented (e.g. North Harbor Drive). Contamination has been reported previously in the 54" SWCS and the 30" (East) SWCS.	The San Diego Unified Port District is responsible for removing all laterals and appropriately sealing the former lateral entry locations as part of their demolition project as described in their Final EIR.

City of San Diego - General Comments on Remediation Investigation

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
18	Page 5 - Additional Issue	It has been documented that sections of the 60" SWCS and other SWCS present at the TDY site are influenced significantly by tidal fluxes and storm surges. One issue that should be addressed in this document is how implementation of the preferred remedial alternative will minimize or prevent potential re-contamination of SWCS discharge channels and those sections of pipe that are susceptible to tidal fluxes during incoming tides and storm surges. Contaminants (e.g. PCBs) present in and on the clean cap adjacent to SWCS discharge locations could present a potential source of contaminants to the remaining SWCS.	This will be an important issue during the investigation and remediation of Convair Lagoon sediment and sediment at other outfall locations. As such, this concern will be addressed into the planned future Cleanup and Abatement Order for Convair Lagoon sediment.
19	Page 5 - Remedial Alternatives for Off-Site Groundwater Impacts	The same issues discussed in the previous sections regarding the screening process, identification of remedial alternatives, the application of subjective criteria to evaluate the identified remedial alternatives, and estimation of potential costs without appropriate documentation are relevant to the evaluation of the groundwater pathway. The selection of the recommended alternative has not been documented sufficiently.	Although PCB contaminated groundwater could migrate directly to Convair Lagoon, modeling indicated that the concentrations of PCBs in the Lagoon shoreline wells will have significantly attenuated through diffusion and dispersion before contacting pore water in Convair Lagoon sediment.

City of San Diego - General Comments on Remediation Investigation

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
20		The discussion regarding the sporadic presence of metals, semivolatile compounds, and PCBs in monitoring wells (MWCL monitoring wells 1-8) adjacent to the Convair Lagoon is based on very limited datasets with potential data quality issues. The metals dataset consisted primarily of three rounds of sampling in the past 12 months, while the PCB dataset consisted of even fewer sampling events in only a subset of the wells. As a consequence, the ability to discern possible trends in contaminant concentrations on a spatial and temporal basis in the vicinity of the Convair Lagoon is very limited. In addition, the laboratory reporting limits (RL) for the majority of the metals and all the PCBs analyzed, exceeded their applicable CTR values. So qualitatively, the data are estimated to be nondetect based on the RL, but could still in theory exceed applicable CTR values.	These shoreline wells will continue to be monitored for the foreseeable future to evaluate pollutant trends and if the trends show an increase in concentrations or further information determines a nexus with the former facility, appropriate actions will be taken at that time.
21		The statement that none of the constituents reported in the vicinity of the Convair Lagoon, particularly PCBs and metals, are related to the TDY site is based on the application of a screening transport model, Bioscreen-AT 123D. The fact that the modeling scenario developed was based on a very limited PCB dataset and a set of very select modeling inputs does not provide any support for concluding the potential source(s) of contaminants in groundwater adjacent to the Convair Lagoon. In addition, the subsurface model developed was specific to the area of the MWCL monitoring wells.	This response addresses both Comment No. 21 and 22. The March 2010 Risk Assessment Appendix A was modified (dated August 2010). The primary purpose of the analytical model was to evaluate the potential for PCB concentrations in groundwater to attenuate in the vicinity of the Lagoon shoreline wells (SWRA Report, Appendix A, Section 3.1.3.3). Conservative assumptions from site specific data were used for the transport modeling of PCBs. Because the PCB data set was limited, the San Diego Water Board interpreted the analytical model to

City of San Diego - General Comments on Remediation Investigation

Comment No.	Page No. and Section Title/Topic	Comments/Proposed Changes	Response
22		The output for the model was subsequently extrapolated back to the TDY site without any consideration for the potentially significant differences likely to occur between the subsurface environment present at the TDY site and the MWCL well area. The modeling did not take into account the concentrations of contaminants at the TDY site versus the MWCL well area. Therefore, without the development of at least two modeling scenarios incorporating a range of contaminant concentrations and physical and chemical parameters for the subsurface environment, the suggestion that the contaminants present in groundwater in the vicinity of the Convair Lagoon are not related to the TDY site is not supportable by the data or the modeling.	be a qualitative method for assessing the PCB detection in the lagoon wells to attenuate before reaching Convair Lagoon. Any other conclusions based on this model are supported through site assessments, groundwater monitoring, and assessing trends from future groundwater monitoring.

City of San Diego - Comments on Risk Assessment Appendix A

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
2. Conceptual Site Model			
1	Technical Report Section 2 - Second Paragraph, Figure 1 – Convair Lagoon and SWCS Conceptual Site Model	**Exposure pathway determination and receptor populations** -The SWCS worker as evaluated in Section 5 of the report should be included in the CSM, as should a demolition worker with this risk scenario discussed and evaluated in the report. For ecological receptors, the only ones listed in the CSM are aquatic organisms; however, both sediment benthic invertebrates and upper trophic level wildlife should be included. The exclusion of benthic invertebrates may be just a miscommunication in that perhaps they are intended to be included in the category "aquatic organisms". The organisms included in this category should be clearly noted. Additionally, since PCBs are a particular concern because of their bioaccumulation and adverse effects potential to upper trophic level wildlife, terrestrial and aquatic dependent wildlife should be included as additional receptors. The designation of pathways as "complete", "potentially complete", and "incomplete" are not justified in the text, in which case all pathways identified as "incomplete" should be changed to "potentially complete".	Construction and demolition workers are evaluated in the main risk assessment. The SWCS worker was evaluated as a separate exposure scenario in the Appendix A as a courtesy to the City. The purpose of this document is to evaluate potential exposure pathways from the Site to Convair Lagoon. Incomplete pathways in the Conceptual site model are explained in Section 4. Aquatic organisms in the CSM refer to organisms living in and around the Convair Lagoon Marine environment. More detailed exposure analyses will be performed during a future assessment of Convair Lagoon impacts, but was not required in this screening level qualitative pathway evaluation.

City of San Diego - Comments on Risk Assessment Appendix A

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
2	Technical Report Section 2 - Second Paragraph, Figure 2 – Conceptual Site Model	**The conceptual site model (CSM) as presented appears incomplete and missing key components.** -1. Figure 2 should specify if the CSM presented represents all four SWCS or just the 60" SWCS. Interpretation and conclusions regarding potential impacts to the Convair Lagoon appear to focus solely on the 60" SWCS, even though data associated with the 54" SWCS and 30" (East) SWCS present evidence that these two SWCS may have or continue to potentially impact the lagoon.	The CSM identifies a SWCS pathway which is representative of all SWCS. All SWCS have the potential to provide pathways that may impact Convair Lagoon and San Diego Bay.
3		-2. If the conceptual site model represents only PCBs, it should be stated in the title. If the CSM represents PCBs, metals, and other contaminants then the title is correct, but the other contaminants should be added wherever PCBs are mentioned in the figure.	The CSM focused on the primary contaminant of concern (PCBs) for discharges of waste to Convair Lagoon. The CSM is a generalized depiction of possible pathways. Other contaminants of concern are likely to have the same pathways.
4		-3. Flow in those sections of the SWCS under the influence of tidal fluxes should be shown as bi-directional. The migration of contaminated, fine-grained sediments in the silt and clay size fraction discharged to the various SWCS from TDY conduits can be significantly impacted by tidal fluxes and storm surges into the SWCS from San Diego Bay and the Convair Lagoon. Fine-grained sediments including entrained organic material provide the largest amount of surface area for the adsorption, absorption, and complexation of PCBs, metals, and other contaminants. This fraction will be the most impacted fraction in the SWCS from tidal fluxes and storm surges.	The CSM has been modified and the directional arrow removed from the figure.

City of San Diego - Comments on Risk Assessment Appendix A

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
5		-4. Obviously Figure 3 is not to scale and that should be stated on the figure. Because tidal fluxes in the SWCS probably migrate farther up the system than currently displayed, the potential impact from the migration of contaminated fine-grained sediments is potentially greater than suggested in the figure.	A CSM is a tool used to support the decision making process for understanding and addressing pollutant pathways. A scale on a CSM figure is not required or necessary for understanding the pathways.
6		-5. In the figure there is a pipe leading from a building to the SWCS. The pipe should be identified as to what it represents. If the pipe represents floor drains, dry sumps, below grade trenches, etc., there are potentially significant pathways for PCBs, metals, VOCs to the subsurface environment.	The figure depicts any generic pipe that breaks into or connects with the main storm drain and is labeled on the figure.
7		-6. The figure should include the presence of PCBs, metals, and other environmental contaminants on the clean cap and in the general Convair Lagoon area. The presence of any of these contaminants on the clean cap adjacent to SWCS discharge locations provide a potentially continuing source of contaminants to the SWCS during incoming tides and storm surges.	This comment is not related to or required for issuing this Addendum No. 4 to address waste discharged to land from the site. A CSM will be required as part of addressing the Convair Lagoon and other discharges to the Bay in a subsequent enforcement order.

City of San Diego - Comments on Risk Assessment Appendix A

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
8	Technical Report Section 2 - Second Paragraph, Figure 2 – Conceptual Site Model	-7. It appears the CSM is suggesting that PCBs detected in groundwater in the vicinity of the MWCL monitoring wells are not related to the Site (green background) similar to other upgradient PCB sources described as not related to the Site. The data and the modeling discussed later in the report do not support the classification of PCBs in groundwater adjacent to the Convair Lagoon as not related to the Site. VOC and metals data in addition to PCB data for the area encompassed by the 60" and 54" SWCS suggest a possible connection with the TDY site.	As stated in the comment, TDY concluded that PCBs in groundwater at the Convair Lagoon shoreline wells are unlikely to be Site related. Data are insufficient to reach a definitive conclusion at this time. Therefore, Addendum No. 4 requires TDY to continue to monitor chemicals of concern in the shoreline wells to determine if concentration trends are stable, decreasing, or increasing, and if concentrations increase, to re-evaluate the risk to Convair Lagoon posed by this groundwater pathway.
3. Evaluation of Potential Groundwater/Seep Transport and Exposure Pathways			
3.1 Migration of Impacted Groundwater in the Shallow/Deep Interval from the Site to San Diego Bay			
9	Technical Report Section 3.1.3.3; Page - A-7 - PCBs,	**"PCBs have been routinely detected at trace concentrations above the CTR (0.00017 ug/L) in groundwater samples from the Convair Lagoon vicinity (Table 1)." The sentence is misleading in regard to the amount of PCB data available and its frequency of detection.** -PCB data reported in Table 1 show the following:	This response addresses Comments No. 9 through 15. The PCB concentration data are adequate to support the conclusions in the report for issuing Addendum No. 4.
10	Technical Report Section 3.1.3.3; Page - A-7 - First Paragraph,	- MWCL-3 has never been sampled for PCBs;	
11	Technical Report Section 3.1.3.3;	- MWCL wells 1, 5, and 7 have been sampled once for PCBs (January 2010);	

City of San Diego - Comments on Risk Assessment Appendix A

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
12	Page - A-7 - First Sentence	- MWCL wells 4 and 6 were sampled twice for PCBs in 2009;	
13		- MWCL-2 has been sampled three times for PCBs in the past 12 months; and	
14		- MWCL-8 has been sampled five times for PCBs in the past 24 months.	
15		-As a result of the limited sampling frequency in various MWCL wells and the subsequent sparse PCB dataset, statements regarding the frequency of detections of PCBs are limited to only two wells. The dataset significantly limits what can be concluded about PCBs in this area in the following paragraphs.	
16	Technical Report Section 3.1.3.3; Page - A-7 - PCBs, Second Paragraph, Second Sentence	**"PCBs were only detected in one well, B120-MW2 (Table 4)." is misleading because of the potential incompatibility of the two datasets.** -4. It is interesting to note that B120-MW2 is located adjacent to or in close proximity to underground lines that drain to the 30" (East) SWCS. A sediment sample collected at the discharge location for this particular SWCS and analyzed for PCB congeners (Figure 3, Geosyntec, 2008) displayed a significantly different congener signature than all other Convair Lagoon sediment samples analyzed. The result may suggest a potential connection to historical on-site discharges.	Comment noted.
17	Technical Report Section 3.1.3.3; Page - A-7 - PCBs,	**Discussion of the significance and whether the presence of PCBs is site-related is not currently supported by the data and should not be discussed in this subsection.**	As stated in the comment, TDY concluded that PCBs in groundwater at the Convair Lagoon shoreline wells are unlikely to be Site related. Data are insufficient to reach a definitive

City of San Diego - Comments on Risk Assessment Appendix A

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
	Technical Report Section 3.1.3.3; Page - A-7 - Second Paragraph, Technical Report Section 3.1.3.3; Page - A-7 - Last Sentence	-The conclusion that the PCB concentrations in the MWCL wells are "...unlikely to be Site related.", is not supported by the small amount of data presented in Table 1 nor documented sufficiently in previous discussions regarding groundwater characteristics and movement in this area. The focus of this subsection is the comparison of data to CTRs, not the connection of PCB concentrations to potential on-site sources. A separate section should be prepared evaluating all the data (VOCs, SVOCs, metals, PCBs, etc.,) in conjunction with the location(s) of detections and CTR exceedances, upgradient concentrations of similar chemical compounds (TCE, cis-1,2-DCE, trans-1,2-DCE, etc.), proximity to SWCS, and groundwater flow. The PCB data may be site related if the data are evaluated in regard to other available data.	conclusion at this time. Therefore, Addendum No. 4 requires TDY to continue to monitor chemicals of concern in the Convair Lagoon shoreline wells to determine if concentration trends are stable, decreasing, or increasing and if concentrations increase, to re-evaluate the risk to Convair Lagoon posed by this groundwater pathway.

City of San Diego - Comments on Risk Assessment Appendix A

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
18	Technical Report Section 3.1.3.3; Page - A-8 - Input Parameters Table	**The input data listed in this table are poorly documented as to their appropriateness for inclusion in the model.** -1. AT 123D Version 6.3 appears to be part of the SEVIEW Version 6.3 software package. To properly setup AT 123D, either the output from the SESOIL model or the Bioscreen model is used for AT 123D inputs. For the focus of this modeling exercise, SESOIL output would have been a preferred input as it describes the subsurface environment more completely than the Bioscreen model. Bioscreen is generally used to estimate natural attenuation of environmental contaminants, whereas SESOIL is applied more frequently to contaminant transport issues. The limitation of the Bioscreen – AT 123D model approach is that the subsurface environment is only partially described and the results should be considered a qualitative screening of potential contaminant transport.	These comments relate to an older draft version of the Risk Assessment Appendix A dated March 2010. This revised report dated August 2010 fully documents the assumptions and what site-specific data were used in the model. The modeling software package used was appropriate for its intended purpose (predicted fate and transport of PCBs in groundwater to Convair Lagoon sediments).
19		-2. Ideally, the modeling conducted should have considered the potential migration of environmental contaminants at historical concentrations from the TDY site to the Convair Lagoon and the potential migration of environmental contaminants at current concentrations from the MWCL monitoring wells to the Convair Lagoon. The two modeling scenarios vary significantly in contaminant concentrations and the numerous physical and chemical characteristics present in the two subsurface environments.	The concentrations of PCBs in the Convair Lagoon shoreline wells and geotechnical data from the shoreline area are the best indicators of actual conditions in the subsurface near the Convair Lagoon shoreline. Modeling the migration of groundwater from the site to the shoreline in order to predict groundwater concentrations at the shoreline is not as reliable as using actual monitoring well and geotechnical data from the shoreline area in the model.

City of San Diego - Comments on Risk Assessment Appendix A

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
20	Technical Report Section 3.1.3.3; Page - A-8 - Input Parameters Table	-3. The AT 123D modeling conducted in this document should have included modeling runs for a worst case scenario, a best case scenario, and what would be considered a realistic scenario. In lieu of that approach, the model input data should have used a range of model inputs representing expected variations in the saturated subsurface environment.	This response addresses Comments No. 20 through 21. Where geotechnical and groundwater data indicated a potential range of site conditions, the input parameter values used in the model were the most conservative values calculated from the site data. "Conservative" in this case means parameter values were selected that would model the fastest groundwater flow rates, highest PCB concentration in groundwater, and slowest dispersions and diffusion rates. Therefore, by using the most conservative values, a worst case scenario was modeled to evaluate PCB impacts to Convair Lagoon bottom sediments via the groundwater flow pathway (SWRA Report, Appendix A, Section 3.1.3.3). Addendum No. 4 requires TDY to continue to monitor chemicals of concern in the Convair Lagoon shoreline wells to determine if concentration trends are stable, decreasing, or increasing, and if concentrations increase, to re-evaluate the risk to Convair Lagoon posed by this groundwater pathway.
21		-At a minimum, if the datasets are truly representative of the subsurface environment between the TDY site and the Convair Lagoon, median or average model inputs should have been used. The selection of highest and lowest values for various physical characteristics suggests the impact these interrelated parameters have on each other may not have been completely understood.	

City of San Diego - Comments on Risk Assessment Appendix A

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
22		The PCB concentration of 0.008 ug/L is not listed in Table 1. A range of PCB concentrations should have been used in the model to insure that all potential PCB concentrations were evaluated.	A range of concentrations was not modeled because the purpose of the study was to model a worst case scenario. The PCB concentration used in the model was therefore the highest concentration detected in a Convair Lagoon shoreline well.
23		- The hydraulic conductivity value of 6.68E-4 cm/sec was reportedly the highest conductivity value of all PTS values. However, the data do not appear to be included in Attachments A or B. The only PTS data reported appear to be from filter sock and SWCS sediment sample analyses. Those data reflect a medium to fine sand or silty sand texture.	This response addresses Comments No. 23 through 25. The value for hydraulic conductivity used in the model was the highest value measured by a lab from the site-specific geotechnical data collected during the 3rd quarter 2009 sampling event (RA Appendix A, August 16, 2010).
24		-The hydraulic conductivities for medium-fine sand and silty sand can be up to a thousand times greater than the value used. Information provided in Section 1.3.1 of the 2008 draft Risk Assessment, reported subsurface materials consisting of silty sands, silts, clays, and bay fill comprised of sandstone. Based on that information, it is clear a range of hydraulic conductivity values should have been included in the modeling runs.	
25		- The average hydraulic gradient value of 0.002 used as a model input is not referenced. However, the 2008 draft RA Appendix A reports a steeper gradient. A range of gradients should have been included in the modeling runs.	
26		- Instead of the lowest effective porosity, a range of effective porosity values should have been used to capture the variation is subsurface material.	The effective porosity value used in the model was 0.21%. The effective porosity estimated from soil samples ranged from 0.21 to 0.22% (RIFS Appendix A evaluation). Using the 0.22% value in the model would not change the results.

City of San Diego - Comments on Risk Assessment Appendix A

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
27		- A range of dispersivities should have been used since different values can significantly impact the migration of contaminants over distance and time.	This response addresses Comment No. 27 and 28. A range of dispersivity values were used in the model. TDY stated in RA Appendix A section 3.1.3.3 "Because a plume of PCBs has not been defined in groundwater, a range of dispersivity values were evaluated due to the uncertainty related to this value. The approximate distance between the building 120-MW2 monitor well and Convair Lagoon (300 feet) was used as a conservative baseline for the potential plume length. To determine the sensitivity of the model to variations in dispersivity values, separate model runs were evaluated using potential plume lengths from 30 (local source in Convair Lagoon) to 1,000 feet (northern Site boundary)." The sensitivity analysis concluded that the model is not sensitive to the dispersivity parameter, so the value selected is not critical to the model results.
28		- A range of bulk density values or an average or median bulk density value should have been used rather than the lowest value. Bulk density can directly impact effective porosity and other parameters used to predict migration of contaminants.	
29		- The specific PCB listed in the SEVIEW chemical database should be referenced. There are five to six classes of PCBs listed in the database and each PCB group can exhibit significantly different chemical and physical characteristics related to partition coefficients, distribution coefficients, water diffusion coefficients, etc. These differences can result in AT 123D calculating different retardation factor.	The most sensitive input parameter for the different PCBs listed in the SEVIEW database appears to be the carbon adsorption coefficient (Koc). The PCBs with the lowest Koc (most mobile class of PCBs) was used in the modeling (verbal communication with Brian Hitchens, Geosyntec, March 28, 2011). This would provide a conservative modeling approach.
30		- Finally, all model inputs including the physical and chemical parameters listed for a chemical compound in the SEVIEW database should be verified as to their accuracy.	The SEVIEW database is routinely used by professionals and is a well documented program. Verifying the SEVIEW database is not required.

City of San Diego - Comments on Risk Assessment Appendix A

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
31	Technical Report Section 3.1.3.3; Page - A-9 - Approach, Technical Report Section 3.1.3.3; Page - A-9 - Third Paragraph	The conclusion that PCBs will not migrate 75 feet to the Convair Lagoon over a thousand years is not currently supported by the modeling exercise conducted.-For reasons stated earlier in regard to the inputs and assumptions used, the output from the application of this screening transport model is very limited in what it can predict regarding the potential migration of PCBs in the vicinity of the Convair Lagoon.	The RA Appendix A was revised in August 2010 and documents the input parameters.
32	Technical Report Section 3.1.3.3; Page - A-9 - Dispersivity, Last Paragraph, Second and Third Sentence	**"Based on the modeled results it is estimated that PCBs may have migrated up to 20 feet in groundwater in the 70 years since Site operations began. This is further evidence that the trace PCBs in Convair Lagoon, which are located over 200 feet south of the Site boundary, are unlikely to be related to Site impacts" This broad conclusion is not currently supported by the modeling exercise conducted.** -The modeling conducted did not take into consideration the range of possible physical and chemical parameters present in the subsurface environment.	This response addresses Comments No. 32 through 36. A range of physical and chemical parameters did not need to be modeled because the purpose of the model was to evaluate a "worst case" scenario for the migration of dissolved PCBs in groundwater to the pore water of Convair Lagoon bottom sediments. Input parameters for the model were based on Site specific geotechnical data collected during the 3rd quarter 2009 sampling event. The most conservative results calculated from tests on the geotechnical samples were used as model inputs. Parameter values resulting in the highest flow rates, highest initial PCB concentration, and estimated dispersion rate, were used to ensure that the model would predict the highest possible PCB concentrations in groundwater along the flow path to Convair Lagoon bottom sediments. The final Risk Assessment Appendix A (August 2010) provides documentation for the input parameters.
33		-The geology and hydrogeology described in Section 1.3.1 of Geosyntec's 2008 Risk Assessment indicate a varied subsurface environment exists. As reported in that document, layers of medium and fine sand including silty sand may exist and the hydraulic conductivities for those types of textures are up to 1,000 times greater than the value used in the model.	

City of San Diego - Comments on Risk Assessment Appendix A

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
34		-The history of potential on-site discharges of PCBs to the subsurface environment suggest that source terms for model inputs could have been much higher than the 0.008 ug/L used in this modeling effort.	
35		-All of these variations will significantly impact any model input. It is recommended that the single scenario used in this document be separated into two scenarios consisting of the TDY site - Convair Lagoon scenario and the MWCL well – Convair Lagoon scenario. The authors should evaluate all of these issues before concluding what the model may predict regarding the potential migration of on-site PCB sources to the Convair Lagoon.	
36	Technical Report Section 3.1.3.3; Page - A-9 - Degradation, Technical Report Section 3.1.3.3; Page - A-9 - Last Sentence	**"..expected to degrade to below the CTR in approximately 60 years, while migrating less than 5 feet." This statement is not currently supported by the modeling exercise conducted.** -The inputs used for the AT 123D model do not support the conclusion that PCBs will migrate less than 5 feet in 60 years.	
37	Technical Report Section 3.1.3.3; Page - A-10 - Summary	**The entire discussion in this section regarding what the model output predicts is based on sparse data, use of undocumented inputs, and overly restrictive assumptions. The conclusion is not supportable based on these issues.**	A modeling scenario from the site to Convair Lagoon has been removed from the final Risk Assessment Appendix A report. The concentrations of PCBs in the Convair Lagoon shoreline wells and geotechnical data from the shoreline area are the best indicators of actual

City of San Diego - Comments on Risk Assessment Appendix A

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
		-For the reasons described previously, the AT 123D model output cannot be used to relate the migration of historical on-site PCB discharges to the Convair Lagoon. A separate modeling scenario is required to evaluate the range of physical and chemical parameters present in the subsurface environment between the TDY site and the Convair Lagoon.	conditions in the subsurface near the Convair Lagoon shoreline. Modeling the migration of groundwater from the site to the shoreline in order to predict groundwater concentrations at the shoreline is not as reliable as using actual monitoring well and geotechnical data from the shoreline area.
38	Technical Report Section 3.3; Page - A-10 - Migration of Impacted Groundwater from the Site to the SWCS, Technical Report Section 3.3; Page - A-10 - First Paragraph	**The discussion appears to be limited to potential impacts from metals and PCBs to the 60" SWCS and not the other SWCS.** -The document should include an explanation as to why potential metals impacts to the 54" SWCS and potential PCB impacts (B120-MW2) to the 30'(East) SWCS are not evaluated. Data reported in earlier site documents list TCE and various TCE degradation products in groundwater adjacent to and in close proximity to the 54" SWCS, while PCBs have been reported in groundwater at B120-MW2 which is adjacent to and in close proximity to the 30" (East) SWCS.	VOCs were detected in water collected from seeps in the 54-inch storm drain. These seeps were patched to eliminate further discharges through the seeps. Further investigation and excavation will occur around the 30-inch (East) to address the PCBs that have been noted at that location. Information will be required in the RAP in Addendum No. 4.

City of San Diego - Comments on Risk Assessment Appendix A

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
4. Soil/Sediment to San Diego Bay Transport and Exposure Pathways			
39	Technical Report Section 4.1; Page - A-11 - Migration of Impacted Soil/Sediment from the Surface of the Site to the SWCS Followed by Discharge into San Diego Bay	**Discussion appears limited to potential impacts to the 60" SWCS after site demolition and final surfacing of the Site. Discussion does not consider potential impacts to other SWCS or prior to final surfacing of the Site.** -The document should include an evaluation of potential impacts to the remaining SWCS (60", 54", 30") caused by any remediation of surface/shallow subsurface soils after site demolition and prior to final surfacing of the Site. There will potentially be some surface migration of contaminated, fine-grained material via wind or surface water routes.	The Airport Authority is responsible for storm water runoff during demolition activities. TDY is responsible for storm water runoff for those areas under remediation. After demolition and soil remediation is complete, the Airport Authority will be responsible for all surface water runoff through its MS4 permit. The final site deposition prior to redevelopment has been addressed in the Port District's Final EIR (Section 2.1.4.7 Final Site Disposition).
6. Summary and Conclusions			
40	Technical Report Section 6.1; Page - A-17 - Groundwater/Seeps Pathways	**The conclusions discussed in this paragraph are not supported by the sparse dataset available, analytical results reported, or modeling results** -3. The conclusions described that are based on the groundwater modeling are not supported due to the undocumented data used as model inputs, overly restrictive assumptions applied, and the failure to model a range of physical and chemical characteristics potentially present in the subsurface environment.	The responses to the comments 32-37 above adequately respond to this comment.

City of San Diego - Comments on PCB characterization Report

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
Executive Summary			
1	Page i - Report Objective, First Paragraph, First Sentence	**The stated objective of this document is to "…summarize the current understanding of known … (PCB) sources….and to evaluate the relative significance of each source with regard to the potential to impact current and future on-site receptors, as well as the potential for the migration of impacts off-site to Convair Lagoon." However, the document appears incomplete in regard to the evaluation of potential impacts PCBs present on-site and off-site.** -The text should discuss in detail how areas with reported PCB concentrations remaining in place will impact current and future on-site receptors, as well as the potential for migration of on-site impacts to the Convair Lagoon via stormwater and groundwater pathways.	This response addresses Comment No. 1 and 2. The alternative cleanup levels are fully protective of on-site receptors for the designated land use of commercial/industrial. This land use will likely remain for the foreseeable future. The Port District's EIR (Final Site Disposition) describes how the Port will cover the site with asphalt, effectively precluding the discharge of any residual soils from the site.
2		-One example is the area located near the northern boundary of the TDY site adjacent to the 60" SWCS, east of Building 115. The 60" SWCS has been a continuing source of PCBs to the Convair Lagoon, primarily because of stormwater discharge from the TDY site. Residual PCBs in surface and subsurface media can provide a potential continuing source of PCBs unless specifically mitigated in some fashion.	

City of San Diego - Comments on PCB characterization Report

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
3	Page iii - Current Site Conditions, Surface Sediments, Last Sentence	**"The source of PCBs to surface sediment will be removed during Site demolition."** -Source of PCBs probably require some clarification as to what source(s) are being removed during site demolition. Atmospheric deposition of sediments and potentially PCBs will continue after site demolition, PCB sources associated with landscaping are not addressed in the summary table (page v).	The main PCB sources are building materials comprised of paint, joint compound, and concrete. The Port District's EIR (Final Site Disposition) describes how the Port will cover the site with asphalt, effectively precluding the discharge of any residual soils from the site. Atmospheric deposition of PCBs will continue, but TDY is not responsible for this source.
4	Page iii - Current Site Conditions, SWCS Sediment, Third and Fourth Sentences	**Remedial activities associated with the removal of all stormwater tributaries connected to the 60" SWCS do not mention the procedures for delineating and removing all PCB impacted soils adjacent to these conveyances nor the procedures for other existing SWCS (e.g. 54" and 30" East).** -Without a detailed mitigation plan, the potential for PCBs to continue to migrate into the remaining SWCS and subsequently discharge to the Convair Lagoon exists.	Through its agreement with TDY, the Port is responsible for removing all building materials and storm drain laterals that connect to the main storm drains. This action will eliminate the major source of PCBs on the site, and eliminate the major pathway from the surface to the storm drains. TDY will be responsible for cleaning up any soil containing PCB waste to the alternative cleanup levels in Addendum No. 4.
5	Page iii - Current Site Conditions, Soil	**It is unclear what procedures are in place to confirm PCB impacted soils and soils impacted by other environmental contaminants do not exist in areas that were previously inaccessible (e.g. under building concrete slabs, etc.).** -A summary should be provided here and discussed in detail in later sections as appropriate, regarding the process for sampling soils that were previously inaccessible due to surface and subsurface barriers.	This response addresses Comment No. 5 and 6. TDY's Contingency Plan addresses how previously inaccessible areas will be assessed and remediated. This information will be included in the Final Cleanup and Abatement Completion Report (Directive No. 7).

City of San Diego - Comments on PCB characterization Report

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
6		-It frequently occurs during site demolition of a contaminated site that new areas of contaminated soils are detected. Site demolition discussions in this document and the draft RA and RI/FS Appendix A documents do not address this issue.	
7	Page iv - Current Site Conditions, Soil	**Soil PCB concentrations** -Post excavation residual soil concentrations should be reported since concentrations for PCBs associated with other sources are reported.	This information will be included in the Final Cleanup and Abatement Completion Report (Directive No. 7).
8	Page iv - Current Site Conditions, Scope of Site Demolition Activities	**The process for which previously inaccessible areas will be tested for PCBs and other environmental contaminants is not discussed. It is unclear what sampling procedures or closure verification programs will be implemented to confirm PCB impacted soils and soils impacted by other environmental contaminants do not exist in areas that were previously inaccessible (e.g. under building concrete slabs, etc.).** -A summary should be provided here and discussed in detail in later sections, as appropriate regarding the sampling of soils that were previously inaccessible due to surface and subsurface barriers.	This response addresses Comment No. 8 and 9. TDY's Contingency Plan addresses how previously inaccessible areas will be assessed and remediated. This information will be included in the Final Cleanup and Abatement Completion Report (Directive No. 7).
9		-It frequently occurs during demolition of a contaminated site that new areas of contaminated soils are detected. Site demolition discussions in this document and the draft RA and RI/FS Appendix A documents do not currently address this issue.	

City of San Diego - Comments on PCB characterization Report

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
1. Introduction			
10	Technical Report Section 1.2; Page 1-2 - Limitations, First Paragraph, Second Sentence	**"…no attempt has been made to verify whether the data are representative, accurate, or complete."** -Data that has not been or cannot be verified as to its representativeness, accuracy, or completeness should be identified wherever it is presented in the text. The data are used without qualification in Sections 4, 5, and 6 to describe the Site, present conclusions about current site conditions, and planned demolition based on the data. At a minimum, the data used to support discussions in Sections 4, 5, and 6 should be discussed in terms of reliability.	This statement by TDY's consultant is standard report language for data the consultant did not collect themselves. For example, this statement would apply to any data used by TDY but collected and provided by the Airport Authority's consultant. The San Diego Water Board is satisfied that all of the data that support Addendum No. 4 are representative, accurate, and complete.
2. Summary of Previous Investigations			
11	Technical Report Section 2; Page 3 - Summary of Previous Investigations	**No explanation is offered as to why Section 2 is limited to only those investigative reports generated after 2001.** -An explanation should be provided supporting the choice of including only those documents generated after 2001.	This response addresses Comment No. 11 and 12. The PCB report is not limited to documents after 2001; it states only that several investigations have been performed since 2001. The report is in no way limited to post-2001 documents and contains reports of earlier investigations and remedial actions since 1982, outlined in Section 2.1 on page 3.
12		-According to the Executive Summary and Section 1, Introduction, the PCB Characterization Report is supposed to present the results of investigation and removal activities that have been performed through January 2010. That statement suggests pre-2001 documents should be included.	

City of San Diego - Comments on PCB characterization Report

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
4. Current Site Conditions			
13	Technical Report Section 4; Figure 3 – Conceptual Site Model	**The conceptual site model (CSM) as presented appears incomplete and missing key components.** -Figure 3 should specify if the CSM presented represents all four SWCS or just the 60" SWCS. Interpretation and conclusions regarding potential stormwater impacts to the Convair Lagoon appear to focus solely on the 60" SWCS, even though data associated with the 54" SWCS and 30" (East) SWCS present evidence that these two SWCS may have or continue to potentially impact the lagoon.	The CSM identifies a SWCS pathway which is representative of all SWCS. All SWCS have the potential to provide pathways that may impact Convair Lagoon.
14	Technical Report Section 4;Figure 3 – Conceptual Site Model	-It appears the CSM is suggesting that PCBs detected in groundwater in the vicinity of the MWCL monitoring wells are not related to the Site (green background) similar to other upgradient PCB sources described as not related to the Site. The data and the modeling results discussed in the March 2010 draft Risk Assessment Appendix A document do not support the classification of PCBs in groundwater adjacent to the Convair Lagoon as not related to the Site. VOC and metals data in addition to PCB data for the area encompassed by the 60" and 54" SWCS suggest a possible connection with the TDY site.	As stated in the comment, TDY concluded that PCBs in groundwater at the Convair Lagoon shoreline wells are unlikely to be Site related. Data are insufficient to reach a definitive conclusion at this time. Therefore, Addendum No. 4 requires TDY to continue to monitor chemicals of concern in the Convair Lagoon shoreline wells to determine if concentration trends are stable, decreasing, or increasing, and if concentrations increase, to re-evaluate the risk to Convair Lagoon posed by this groundwater pathway.

City of San Diego - Comments on PCB characterization Report

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
15	Technical Report Section 4.1; Page 78 - Conceptual Site Model, Groundwater	**“”…, based on analytical groundwater modeling results it is unlikely that these PCBs are site related or that they will reach Convair Lagoon at concentrations exceeding California Toxics Rule (CTR) standards.”, is not supported by the modeling conducted in the March 2010 draft Risk Assessment Appendix A document.** -It appears this discussion is referencing some screening transport modeling reported in the March 2010 draft Risk Assessment Appendix A document. The application of the screening transport model, AT 123D, in the RA Appendix A document to determine if PCBs present in groundwater adjacent to the Convair Lagoon are related to the TDY site or will migrate to the Convair Lagoon is not warranted. The model relied on the use of a very limited PCB dataset and model inputs and assumptions that were not sufficiently documented. The conclusions are overbroad in their scope and are not supported by the model.	This response addresses Comments No. 15 through 20. The comments on the screening transport model in this section are repeated in the section containing the City's comments on the March 2010 draft Risk Assessment Appendix. Please refer to that section for responses to comments on the screening transport model.
16		-Specifically, the modeling conducted in the RA Appendix A document should have included the development of the appropriate modeling scenarios, documentation and verification of all model inputs, discussion describing the various modeling assumptions evaluated, and the selection process should have been included.	

City of San Diego - Comments on PCB characterization Report

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
17		-The modeling should have also consisted of two model scenarios which considered the potential migration of environmental contaminants at historical concentrations from the TDY site to the Convair Lagoon and the potential migration of environmental contaminants at current concentrations from the MWCL monitoring wells to the Convair Lagoon. The two modeling scenarios vary significantly in contaminant concentrations and the numerous critical physical and chemical characteristics present in the two subsurface environments.	
18		-The AT 123D modeling conducted in the draft RA Appendix A should have included modeling runs for a worst case scenario, a best case scenario, and what would be considered a realistic scenario. In lieu of that approach, the model input data should have used a range of model inputs representing expected variations in the saturated subsurface environment or truly representative median or average values for critical input parameters.	
19	Technical Report Section 4.1; Page 78 - Conceptual Site Model, Groundwater	-The text should be substantially revised to discuss the "unlikely PCBs will reach Convair Lagoon at concentrations exceeding California Toxics Rule" or that "it is unlikely these PCBs are site related". Making such statements in this document without fully referencing the source document is incorrect.	

City of San Diego - Comments on PCB characterization Report

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
20		-At a minimum, the sections discussing the modeling conducted in the March 2010 draft Risk Assessment Appendix A, including Attachment B be included in this report's appendices as reference.	
21	Technical Report Section 4.2.2; Page 80 - Second Paragraph	**Detection limits** -The reported detection limits of 34 mg/kg and 3.3 mg/kg are very high and an explanation should be provided for the high detection limits reported with the data.	Elevated detection limits were due to heavy matrix interference requiring extensive laboratory clean up to analyze the samples, which leads to elevated detection limits.
22	Technical Report Section 4.5.2; Page 89 - Area D Light Non-aqueous Phase Liquid Results & Technical Report Section 4.5.3; Page 89-90 - Building 120 South LNAPL Results	**Reporting units.** -Should the concentration of PCBs in LNAPL be reported as mass per liter (e.g. ug/L)? Reporting PCBs in mg/kg for a liquid does not appear to be the correct concentration units.	Standard practice for non-aqueous reporting (oil phase) is to report concentrations as mass per mass not per volume, as the liquid may have a density significantly different from 1 kg/L (water).
24	Technical Report Section 4.6.6; Page 92 - 60-Inch SWCS Backfill Sampling	**No samples collected from backfill under the 60" SWCS.** -It should be noted that although samples from backfill at the sides and the top of the 60" SWCS reported essentially no PCBs, the potential for PCBs to be present beneath the 60" SWCS also exists.	The bottom 2/3rds of each joint in the 60-inch SWCS is sealed with a cement grout. Infiltration is only possible on the upper 1/3rd of the SWCS.

City of San Diego - Comments on PCB characterization Report

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
25		-The discussion in Section 3 of this report regarding the detection of elevated PCB concentrations and other contaminants under sections of the 30" East SWCS which were subsequently removed is evidence of this particular issue. Elevated PCB concentrations were reported under sections of the 30" SWCS not associated with inlet tributaries or catch basins suggesting the migration of PCBs and other environmental contaminants along the SWCS right-of-way or some other preferential pathway or from SWCS pipe failures (e.g. cracks, holes, collapsed pipe, etc.).	The 30-inch SWCS pollution is not analogous to the 60-inch SWCS. PCB impacts were observed in soils both adjacent to and below the 30-inch SWCS. The 30-inch SWCS is above the water table and it is dry in non-storm conditions. The removed portion of the 30-inch SWCS was constructed without grout seals between joints.
26	Technical Report Section 4.6.7; Page 92 - 2007 H&A Sub-Slab Sampling	**Soils beneath heavily stained concrete slabs were sampled in Buildings 120, 166, and 121.** -After all infrastructure has been removed during site demolition, a representative soil sampling program should be implemented within the former building footprints.	This response addresses Comments No. 26 through 28. Soil samples were taken from beneath areas in the buildings that showed that a spill or discharge occurred on the slab. These were the likely areas of discharge through the concrete into soil. There are basically two types of discharges containing PCBs. One is associated with oils used at the facility (e.g. cutting oils and capacitor/transformer oils) and from building materials made with PCBs (e.g. concrete expansion joint compound and paints). The PCB found beneath building foundations are associated with oils and should be relatively easy to identify (e.g. olfactory or visual). Representative sampling will be conducted as part of the Site-wide Post Remediation Risk Assessment.
27		-Hydrocarbon staining is no guarantee that PCBs will be associated with that staining. The color of pure PCB products can range from pale yellow to dark brown and can be masked by naturally occurring soil color. Visually, soils can look relatively unimpacted, but contain very high PCB concentrations.	
28		-The collection of only nine samples, seven from Building 120, and one sample each from Buildings 166 and 121 does not adequately represent potential subsurface soil conditions.	

City of San Diego - Comments on PCB characterization Report

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
5. Description of Planned Site Demolition			
29	Technical Report Section 5.1; Page 95 - Scope of Site Demolition Activities	**No discussion regarding the sampling of areas potentially containing contaminated soil or groundwater. No discussion regarding the management of any contaminated soil or water encountered during site demolition.** -Discussion should be included in this section regarding what contingencies have been developed in the event contaminated soils and groundwater are encountered after the removal of all site infrastructure.	TDY's Contingency Plan addresses how previously inaccessible areas will be assessed and remediated. This information will be included in the Final Cleanup and Abatement Completion Report (Directive No. 7).
30	Technical Report Section 5.2; Page 95 - Post Demolition Site Condition, Fourth Sentence	**"…or suitable surface treatment that will help protect the Project site from stormwater runoff…"** -This general mitigation technique has been shown to be ineffective at the GD property. Significant amounts of surface sediments have reportedly migrated through the SWCS (Figure 2, Geosyntec May 2007). Detectable levels of PCBs were reported on the GD property through 2009, which is currently covered with a gravel material.	Section 2.1.4.7 of the Port District's Final EIR describes the final site disposition, which includes importing about 6,300 cubic yards of presumably clean fill in order to bring the area up to grade. In addition, upon completion of earthwork grading, a 1.5 to 2-inch asphalt overlay or other suitable surface treatment will be installed by the Airport Authority on the graded area to ensure proper site drainage, and to reduce soil runoff and fugitive dust once demolition activities have ceased. Unlike the TDY site where the concrete slabs will be removed from the site, at the GD property the concrete slabs were crushed up and used as sub base at the GD property without PCB screening.

City of San Diego - Comments on PCB characterization Report

Comment No.	Page No. and Section Title/Topic	Reason for Proposed Changes/Comments -Comments/Proposed Changes	Response
31	Technical Report Section 5.2; Page 95 - Post Demolition Site Condition	**No discussion on follow up sampling protocol during demolition activities.** -Language should be added to this section discussing post demolition sampling techniques that may be used to delineate sources discovered during demolition.	This concern is addressed in TDY's Contingency Plan and will be included in the Final Site-Wide Post Remediation Risk Assessment.