The following comments and responses have been deleted from this table because the letter from the RWQCB dated September 8, 2010 concluded that the response was complete.

- General Comment number 2
- Specific Comments: 1, 4, 5, 7, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27

# Comments on Permanente Creek Long-Term Restoration Plan (Nov. 12, 2009, CAO 99-018)

General Comment	Draft 1 Page	Draft 1 Section	Topic	
1	4-1	NA	NA	
Water B				

The Restoration Plan does a fairly good inventory of current creek conditions. However, the discussion of Restoration Recommendations lacks sufficient detail. Reach-specific recommendations are only presented in an abbreviated form in Table 4-2. Chapter 4 should be expanded to include a discussion of restoration options for each of the reaches discussed in Section 2.3 of the Restoration Plan.

Each reach-specific discussion should present all of the restoration options that were considered for the reach, and explain the reason why some options were not considered further for the reach. The discussion should also include an alternatives analysis that explains why some options were discarded and the restoration option presented in Table 4-2 was selected. Sufficient detail should be provided to allow Water Board staff to determine whether or not they concur with the recommended restoration option for each reach. In addition, each reach-specific discussion should expand upon the information summarized in each column of Table 4-2.

## **URS Initial Response**

Detail has been added to Section 4 identifying restoration options and alternatives, and reasoning for identifying the preferred restoration option.

Water Board Reply Comment (September 8, 2010)

# Water Board Comment on the Response to General Comment 1 in the Revised Plan (divided into sub-comments for ease of referencing).

**1-1:** The level of detail in Section 2.3 has been expanded, both by an increase in the number of reaches and in the level of detail in which some of these reaches are discussed. However, the Revised *Permanente Creek Long-Term Restoration Plan* (Revised Plan) (URS Corporations, March 10, 2010), does not include the reach-specific discussions of restoration options that we requested in our November 12, 2009 letter of comment on the *Permanente Creek Long-Term Restoration Plan*. The current version of Table 4-2 in the Revised Plan does not provide sufficient detail to clearly present the recommended restoration actions and the reasons for rejecting alternative restoration actions. For example, in the row for Reach 2, the installation of step pools or cross vanes is proposed. But there is no discussion of the relative suitability of each restoration technique in Reach 2. The discussion for Reach 6, Trapezoidal Concrete Channel, should include some discussion of the channel dimensions (e.g., bankfull channel dimensions, meander radius, sinuosity, etc.) that may be appropriate to restoring a natural channel in this reach. Please provide the explanatory text for all reaches that we requested in our November 12, 2009 letter.

**1-2:** The fifth column in Table 4-2 is labeled, "Potential Restoration Measures and Selected Techniques\*". The asterisk following the column heading does not appear to reference a footnote anywhere in the table.

**1-3:** Most of the illustrations of restoration techniques in Appendix E represent low gradient, high order channels. The illustrations would be more useful to the Revised Plan if they illustrated conditions on the high

gradient lower order channels that are actually present at the Permanente Quarry, the aggregate plant, and cement plan (collectively, the Facility ).

**1-4:** Restoration Technique E.2, Floodplain/Bankfull Bench Creation. The text describing Floodplain/Bankfull Bench Creation would be improved by clarifying that this technique can involve either fill or excavation to create a floodplain/bankfull bench. The illustration in Figure E-2 shows an instance of fill used to create a bankfull bench, and the phrase "addition of a bankfull bench" implies that fill is involved. In Table 4-2, the summary for Reach 2 does correctly note that excavation would be needed in this reach to establish a bankfull channel. Excavation is much more likely to be a feasible means of restoring bankfull benches at the Facility.

**1-5:** Restoration Technique E.4, Step Pools. The discussion of this restoration technique should include guidance on the spacing and height of step pools in high gradient, low order channels. Design guidance for step pools is available for these channels and should be referenced.

**1-6:** Restoration Technique E.8, Lunkers. This technique is not actually proposed in the Revised Plan and is not likely to persist over time at most creek reaches at the Facility. This technique should probably be dropped from the Revised Plan.

**1-7:** Restoration Technique E.9, Culvert Modification. It appears that this technique may be appropriate at Reach 9, if the culvert in this reach is necessary for post-quarrying site access. Please evaluate adding this technique to Reach 9.

**1-8:** Restoration Technique E.10, Cribwalls. This technique does not appear to be proposed in Table 4-2. Please explain why cribwalls have not been proposed at any areas of steep banks adjacent to the creek channel.

**1-9:** Restoration Technique E.11, Fascines. This technique does not appear to be proposed in Table 4-2. Please clarify if there are any reaches along the creek that are potentially suitable for this technique.

**1-10:** Restoration Technique E.13, Brush Layering/Mattress/Wattles. This technique does not appear to be proposed in Table 4-2. Please explain if there are any reaches along the creek that are potentially suitable for this technique.

**1-11:** Restoration Technique E.14, Vegetated Rock Riprap. This technique does not appear to be proposed in Table 4-2. Please explain why vegetated rock riprap has not been proposed at any areas that may require bank armoring.

**1-12:** Restoration Technique E.17, Slope Drains. This technique does not appear to be proposed in Table 4-2. Please clarify if there are any reaches along the creek that are potentially suitable for this technique.

**1-13:** Restoration Technique E.19, Erosion Control Mat. Please delete any reference to the use of synthetic fibers or filaments at the Facility. Synthetic filaments can create entrapment hazards for some reptiles.

**1-14:** Restoration Technique E.20, Geosynthetic Reinforced Slopes. Please delete this technique from the Revised Plan. Creek restoration should be implemented using natural materials.

**1-15:** In Section 1.4, *Plan Limitations*, of the Revised Plan, the final bullet in the section contains the following text, "Some restoration measures, recommendations, or schedules may require the Operator to obtain permits from governmental agencies. To the extent that such permits cannot be obtained, or cannot be obtained without an unreasonable undertaking of time or expense (including mitigation requirements), in Operator's sole but reasonable discretion, the Plan does not obligate the Operator to implement such measures, recommendations, or schedules." Since the interpretation of "unreasonable" is left to the "Operator's sole but reasonable discretion" this sentence invalidates the utility of the Revised Plan. The Water Board does not have

a history of requesting unreasonable mitigation for restoration actions. Please remove this bullet from the Revised Plan.

## URS Reply Response (December, 2010)

**1-1:** A reach by reach discussion of is now included in Section 4 and covers each of the Reach/Location Descriptions provided in Table 4-2. This discussion includes:

- a. Alternative restoration methods for each location/reach with key benefits and pitfalls for each alternative.
- b. Preferred alternative and reasoning for selection

Key details of the restoration (e.g. approximate channel dimensions, sinuosity, wavelength, belt width, etc.) would be more appropriately left to a design report. These measurements will ultimately be scaled from detailed reference reach surveys and/or from other empirical equations and analytical modeling. Because the stream channel and conditions that affect the ultimate restoration of the property will likely change before the closure of the facility, such efforts to provide design related information would be inappropriately spent.

1-2: Asterisk was missing from a comment at bottom of Table 4-2. Asterisk has been added.

**1-3:** Some illustrations in Appendix E may depict lower gradient systems, however are applicable to the project and would have a similar design to what is shown in the photographs.

**1-4:** The text has been modified to include clarification that installing a bankfull bench may involve excavation or fill material to correctly establish a bench at the appropriate bankfull elevation.

**1-5:** Design guidance for step pool spacing and drop height has been added to Appendix E Restoration Technique E.4

**1-6:** The restoration technique, Lunkers, has been removed from Appendix E.

**1-7:** Text in Reach 9 (culvert crossing adjacent to the conveyor belt) has been modified to recommend near-term culvert modification/replacement or a bridge, otherwise recommend culvert removal in the long-term, post quarry facility closure.

1-8: The restoration technique, Cribwalls has been removed from Appendix E.

**1-9:** Restoration Technique, Fascines has been added to appropriate locations in Table 4.2.

1-10: Restoration Technique, Brush Layering/Mattress/Wattles has been removed from Appendix E.

**1-11:** Areas suitable for vegetated riprap have been added to the site specific alternative analysis Section 4 and Table 4.2.

**1-12:** Areas suitable for slope drains have been added to the site specific alternative analysis Section 4 and Table 4.2.

**1-13:** References to matting with synthetic fibers has been deleted, and text has been modified to state the use of only natural biodegradable fibers for erosion control materials to prevent or reduce potential for animal entrapment.

1-14: Technique, Geosynthetic Reinforced Slopes has been removed from Appendix E.

1-15: Section 1.4, The Paragraph in *Plan Limitations* has been deleted as requested.

Specific Comment	Draft 1 Page	Draft 1 Section	Topic	
2	1-7	1.6	Updates from the P	hase 1 Report
Water Board Initial Comment				

The figure comparing the Phase 1 reach inventory stream reaches with the 2009 stream reaches in the Restoration Plan is useful, but it would also be useful to add another row to the figure in Section 1.6 that links the reaches to the figures in Appendix A. In Appendix A, the onsite channel of Permanente Creek is presented in 14 figures. It's awkward to cross-reference the 17 creek reaches discussed in the 2009 Restoration Plan with the 14 topographic aerial photographs in Appendix A. Table 4.2 further complicates the description of locations along the creek, since future restoration sites are labeled [A] through [R].

## **URS** Initial Response

A new reference system has been simplified. The revised Long-Term Restoration Plan includes cross referencing of the 14 aerial photographs in Appendix A with a new reach designation system. The location nomenclature formerly used in the previous draft, [A] through [R], is no longer used. Please see Table 4-2 and Figure 1-3, where these changes have been implemented. In addition, a new appendix (Appendix B) has been added that correlates the reach nomenclature from the Phase I Report with that of the revised Plan.

## Water Board Reply Comment (September 8, 2010)

The Revised Plan uses a revised nomenclature system to identify the reaches of the creek within the Facility boundaries. Appendix C to the Revised Plan provides a table that facilitates comparison of Phase I reach nomenclature and the nomenclature in the Revised Plan. However, some reach identifications that were used in previous documents (e.g., Reaches G and L) are not included in Appendix C. Please add these reaches to the table in Appendix C.

## URS Reply Response (December, 2010)

New comment: Reach G was added to the Appendix C table and subsequent reach labeling was corrected according to the Phase 1 report. The Phase 1 Report stationing did not include a Reach H or Reach L mentioned in the comment above. Other edits have been made to Appendix C - Phase 1 and Phase 2 Reach Designations in order to more clearly describe the crosswalk between the Phase I, Draft Phase II, and Final Phase II reports.

Specific Comment	Draft 1 Page	Draft 1 Section	Topic	
3	2-6	2.3	[1] Pond 14 Outfall	Channel.
Water B	oard Initial Comment			

Text in this section refers to an eight-foot high headcut in this channel. However, the Restoration Plan does not state whether or not this headcut was present in 2000. If the headcut was present in 2000, the Restoration Plan should describe if it has migrated appreciably in the intervening years and if it is still actively migrating. Also, the text should describe whether or not the headcut threatens the berm that creates Pond 14. The assessment in the revision of Section 4 should discuss potential triggers of the headcut and propose means to stop the progression of the headcut.

## **URS Initial Response**

Insufficient documentation is available to determine whether or not the headcut was present below Pond 14 in 2000. This headcut could threaten the Pond 14 embankment and weir in the near future if four mature trees that support the channel bed and banks are undercut and fail into the channel. Two of the trees are currently being undermined by the headcut. The remaining two willow trees are approximately 15 feet away from the headcut

close to the pond weir. The Long-Term Restoration Plan has been updated to further describe this location and recommends near and long-term solutions to protect Pond 14 and stabilization of the downstream channel banks. See revised text in Section 4, Table 4-2.

# Water Board Reply Comment (September 8, 2010)

The Revised Plan does not directly discuss the history of the headcut, but the response to comments provided by Lehigh states that the year 2000 survey did not contain sufficient information to determine whether or not the headcut was present in 2000. The Revised Plan does note that the headcut may threaten the stability of the sluice gate at the outfall from Pond 14, and that four trees are currently stabilizing the channel between the headcut and the sluice gate. The requested discussion of potential triggers of the headcut has not been provided in the requested revision of Section 4. Please provide the requested information.

# URS Reply Response (December, 2010)

A potential trigger for the headcut is likely the result of clear water discharge from Pond 14 flowing down an over-steepened hillside/bank that was not a former stream channel (thus lacked any sediment/gravel sorting or channel armoring). Combined with a nickpoint or break in slope between the pond outlet and the confluence with the main channel this flow could easily cause a headcut and channel degradation. Clear water discharge (lacking sediment and bedload) from the pond has a higher capacity to erode and carry away sediment than water transporting and replacing the full gradation of streambed particles that maintain the channel roughness and integrity. Section 2.4 (not Section 4 as recommended above) has been updated to describe the above potential triggers for the channel erosion. Restoration recommendations are presented in Section 4.

Specific Comment	Draft 1 Page	Draft 1 Section	Торіс
6	2-9	2.3	[-] Concrete Trapezoidal Channel
Water Bo	pard Initial Comment		

Section 4.3.2 states that the 1899 Palo Alto USGS 15-minute topographic map indicates that the creek was located in the middle of the valley, where the railroad tracks are now located. The Restoration Plan assumes that no changes can be made to this reach because of the presence of Union Pacific (UP) property in the former floodplain of the channel. Since this plan is a Long-Term Restoration Plan, it should not be restricted to current land uses and land ownership. When the quarry closes, there will be no economic need for the railroad tracks to the facility. The proximity of the creek, listed species, and constrained topography in the creek valley is likely to severely limit future commercial development of the UP Property. In addition, the shortage of viable mitigation sites in the South Bay area may create financial incentives for selling the property for use as a riparian mitigation site, or UP may be able to use the land to provide mitigation for UP projects in the South Bay. The Restoration Plan should evaluate the amount of land that would be needed to create a stable, unlined channel in this reach. If Lehigh can provide us with points of contact at UP, Water Board staff are interested in establishing a dialogue with UP about long-term planning for their property at the quarry. This reach should also be assigned a number and evaluated in detail in the revision of Section 4.

## URS Initial Response

We understand the Board's rationale and have made changes to the Long-Term Restoration Plan based on this comment. The Plan has been revised to include restoration alternatives that involve removal of the UP rail line and trapezoidal channel, and the creation of a meandering channel with a floodplain in that location (see Section 4, Table 4-2). Figure 1-3 (Appendix A) now includes potential boundaries of the floodplain creation area and meandering channel. Additionally, we are providing the requested contact information to the Board so that a dialogue may be established with the rail line landholder.

The requested UP contact information is provided below:

Wes Lujan, Director of Public Affairs 916.789.5957 office 916.792.9160 cell 402.997.3540 fax wjlujan@up.com

## Water Board Reply Comment (September 8, 2010)

In Section 1.4, *Plan Limitations*, of the Revised Plan, the Revised Plan acknowledges that Union Pacific Railroad (UP) property at the facility may be available for restoration activities following Facility closure, since there would no longer be a need for a rail line to the facility. Therefore, the Revised Plan treats UP property as potentially available for restoration activities, while acknowledging that actual restoration work on UP property would require approval from UP. The response to comments also provides a point of contact for UP. However, the Revised Plan does not address the second portion of Specific Comment 6, by providing an estimate of the land area that would be necessary to recreate a meandering channel in this reach.

## URS Reply Response (December, 2010)

The potential land area that the channel and floodplain restoration through the UP property would occupy is shown in Figure 1-3.1-3. The acreage of UP property within the restoration area has been calculated and added to Section 4.5.

Specific Comment	Draft 1 Page	Draft 1 Section	Topic	
8	2-12	2.3	[8] Parallel Buried	Culvert to Full Culvert
Water Bo				

Since the 2000 assessment of this reach, an eroded bank on the south side of the Creek near Station 75+00 has become stable and vegetated, and no longer appears to be a significant sediment source (See General Comment 2). The discussion of this reach in the revision of Section 4 should be expanded to evaluate options for using the footprint of the old culvert as an opportunity for stabilizing the creek by adding length to the creek channel. The Restoration Plan should also discuss whether or not the channel could return to the path through the old culvert in future meanderings of the channel. Further efforts should be made to locate the inlet of the old culvert. The Restoration Plan should consider removing or crushing the old culvert to prevent future channel avulsions from being captured in the culvert.

#### URS Initial Response

Additional discussion was added to Section 2, page 2-24 in regards to the vegetated bank on the south side of the creek at Station 75+00. During a follow-up site visit on Jan. 19, 2010, the probable location of the inlet of the abandoned culvert in question was determined. Figure 1-3 and Section 2 (page 2-24) have been revised to reflect these observations. Section 4 has been expanded to provide options for the removal and restoration of the reach including the parallel-buried culvert. The restoration options utilize the area occupied by the culverts in the restoration of the valley floodplain.

#### Water Board Reply Comment (September 8, 2010)

The description of the buried culvert has been expanded in the Revised Plan. However, the expanded discussion requested for Section 4 has not been provided.

## URS Reply Response (December, 2010)

The portions of the buried culvert that are currently exposed at or near the surface may be removed during restoration, however some portions may need to be left in place as the hillside above the culvert has become stable and vegetated. Removing the entire culvert may destabilize the toe of the hillside and lengthen the

recovery time. The channel through this reach could easily be realigned to where the existing access road and conveyor currently exist. This would decrease the channel slope. The channel could be realigned away from the buried culvert to prevent any potential for channel avulsion through the remaining culvert. Section 4.5 includes a discussion of this and other restoration options.

Specific Comment	Draft 1 Page	Draft 1 Section	Topic	
9	2-13	2.3	[-] Full Culvert, Ha	If-Culvert, and Pond 13
Water Bo	pard Initial Comment			

This discussion should be revised to describe whether or not the 1899 topographic map can be used to assess how much the full and half culverted stream reaches downstream of Pond 13 have been altered from their historical elevations. The 1899 topographic map may provide sufficient detail to determine if the stream gradient was fairly steep throughout these reaches before quarrying activities impacted the site. It would also be useful in the evaluation of restoration options for this reach to know if these culverts are essentially constructed directly over bedrock. This information may be useful in designing a creek channel after the culverts are removed.

This reach appears to be in a narrower Canyon than the rest of Permanente Creek at the facility. It may be appropriate to establish a separate reference creek for this reach, since Upper Stevens Creek does not appear to be an appropriate reference for this portion of the creek.

Text in this section of the Restoration Plan states that excavated side slopes along the non-inundated portion of Pond 13 remain steep and mostly unvegetated, but that the Creek appears to be mostly unaffected by these side slopes. The text should be revised to clarify if these side slopes are no longer major sources of sediment to the creek (See General Comment 2).

Restoration options for this reach (Station 76+00 to 90+00) are summarized in Table 4-2, in which the reach is subdivided into Locations [M] (Full Culvert), [N] (Half Culvert), and [O] (Pond 13). This is an example of the confusing nomenclature system used in the Restoration Plan.

## **URS** Initial Response

A more detailed discussion of the channel alteration at the full culvert, half culvert, and adjacent hillslope areas has been included in Section 2 of the Long-Term Restoration Plan. Further analysis of the 1899 historic topo suggests that the creek had a steep gradient prior to the installation of the culverts most likely the result of bedrock in the channel bed. The 1949 aerial image indicates that the stream alignment was confined against the southern side of the canyon.

The canyon was narrow in this reach due to the protrusion of the southern ridgeline and the likely presence of bedrock, but does not warrant establishing a separate reference reach at this time. Given the valley width to work with and the assumption that the entire length of the reach would not be bedrock controlled at the time of restoration the proposed channel could be designed as a B4 channel type similar to upstream and downstream reaches, just with more roughness added (rock) and a steeper slope.

Text in Section 2 of the Long-Term Restoration Plan has been added to clarify the limited sediment contribution to the creek from the relatively un-vegetated slopes on the south side of the creek above the inundated portion of Pond 13.

The confusing nomenclature for restoration options for this reach and other reaches has been resolved in the Long-Term Restoration Plan (see Section 4 and Figure 1-3).

## Water Board Reply Comment (September 8, 2010)

# Water Board Comment on the Response to Specific Comment 9 in the Revised Plan (divided into subcomments for ease of referencing).

**9-1a:** During preparation of the Revised Plan, the 1899 USGS topographic map was geo-rectified using identifiable landscape features. The geo-rectified topographic map was used to compare historical bed slope in this reach with the current bed slope. Figures 2-3 and 2-4 in the Revised Plan show that, sometime after 1948, construction of the Half Culvert, immediately downstream of current Pond 13, and the Full Culvert, downstream of the Half Culvert, significantly shortened the length of Permanente Creek in this reach. However, the shortening of the channel does not appear to have significantly changed the overall channel slope through this reach (Illustrated in Figure 2-7 of the Revised Plan); this suggests that some level of bedrock control of slope was present in this reach prior to 1948. The 1948 channel alignment in this reach is now below active quarrying activities. The discussion in Section 4 should be expanded to discuss if there is any possibility of returning the creek to its 1948 alignment at the end of quarrying activities. This discussion should examine if restoring the creek to its approximate pre-1948 alignment would require excavation or fill along the historic alignment, or the placement of bridges over a restored historic alignment in order to support the access road.

**9-1b:** This reach appears to be in a narrower Canyon than the rest of Permanente Creek at the facility. It may be appropriate to establish a separate reference creek for this reach, since Upper Stevens Creek does not appear to be an appropriate reference for this portion of the creek.

**9-1c:** Text in this section of the Restoration Plan states that excavated side slopes along the non-inundated portion of Pond 13 remain steep and mostly unvegetated, but that the Creek appears to be mostly unaffected by these side slopes. The text should be revised to clarify if these side slopes are no longer major sources of sediment to the creek (See General Comment 2).

**9-2:** The Revised Plan explains why the side slopes above Pond 13 are not likely to be major sources of sediment to the creek. This portion of Specific Comment 9 is appropriately addressed in the Revised Plan

Restoration options for this reach (Station 76+00 to 90+00) are summarized in Table 4-2, in which the reach is subdivided into Locations [M] (Full Culvert), [N] (Half Culvert), and [0] (Pond 13). This is an example of the confusing nomenclature system used in the Restoration Plan.

**9-3:** As noted elsewhere, the nomenclature for identifying the various creek reaches at the Facility has been significantly improved in the Revised Plan. This portion of Specific Comment 9 is appropriately addressed in the Revised Plan.

## URS Reply Response (December, 2010)

**9-1a:** Figure 1-3.6 shows a proposed hypothetical realignment of the creek along the former 1948 alignment that would require substantial excavation to remove the rock pile, buried culvert, and access road. Sections 4.4 and 4.5 include further discussion of this and other restoration options.

**9-1b:** A steeper B1a/B3a or A1/A3 reference reach stream with a gradient of 4 - 10% may be more appropriate for this narrow, steep area. In November 2010, a new portion of Upper Stevens Creek was surveyed as a potential reference creek for this reach. Reaches on several other streams were also explored for suitability as reference creeks. Text in Section 3.3.3 and Section 3.3.4 describes the findings of this effort.

9-1c: The text has been clarified to state that the slope below the stagecoach road no longer provides a major

source of sediment to the creek.

**9-2:** The revised Table 4-2 and report no longer have the confusing nomenclature system (e.g. Locations [M] (Full Culvert), [N] (Half Culvert), and [O] (Pond 13). This comment appears to be a copy/paste error

9-3: Board satisfied.

Specific Comment	Draft 1 Page	Draft 1 Section	Торіс	
25	NA	Table 4-2	Locations [G], [H],	and [I]
Water B				

For Locations [G], [H], and [I], any non-essential culverts should be identified at these locations. Removal of non-essential culverts may provide mitigation for sediment removal projects at the quarry ponds.

We concur with the recommendation to remove the culvert at location [H] (96" culvert without road crossing; Station 48+50 to 48+75) in the near future. This may be an appropriate mitigation measure for some of the sediment removal work

#### **URS** Initial Response

Please see the above response to comment #19. All non-essential culverts have been identified in the Long-Term Restoration Plan as Category I recommendations. This only includes the culvert at Station 48+50 to 48+75.

#### Water Board Reply Comment (September 8, 2010)

It is difficult to determine if the Revised Plan addresses the culvert in Reach G, since Reach G is not referenced to the new nomenclature system in Appendix C to the Revised Plan.

#### URS Reply Response (December, 2010)

The culvert at former Location [G] (STA 41+75 - 42+50) near the Dinky shed is essential to operations and will be removed following facility closure. When the culvert is removed, the channel and floodplain will be restored to appropriate dimensions for the valley width and slope. (There is no culvert in Reach G as defined in the Phase I report, we assume the culvert referred to is at Location G in the Draft Phase II report.)

Appendix C - Phase 1 and Phase 2 Reach Designations, has been updated to include Reach G from the 2000 Phase 1 report.

Specific Comment	Draft 1 Page	Draft 1 Section	Topic	
26	NA	Table 4-2	Location [L]	
Water B	pard Initial Comment			

At Location [L], please explain why the removal of concrete and riprap on the East Bank of the creek cannot be placed in Category I. This is another project that may provide mitigation for future quarry projects with impacts on the creek.

#### **URS** Initial Response

Removal of the riprap in question would threaten the stability of the existing access road that parallels that reach of the creek. Since the Phase I report, the natural recruitment of alders on the riprap slope has occurred. Removal of the riprap would require removal of these trees, and the east bank could not be set back until the access road is no longer needed. As a result of these factors, the removal of riprap in this location should be considered a Category II restoration activity.

#### Water Board Reply Comment (September 8, 2010)

This comment does not appear to have been addressed. However, Reach L is not referenced to the new nomenclature system in Appendix C, so it is difficult to verify what recommendations are made for Reach L in the Revised Plan.

## URS Reply Response (December, 2010)

As shown in Appendix C - Phase 1 and Phase 2 Reach Designations, there is no Reach L in the Phase 1 report. Location [L] of the 2009 Phase 2 report corresponds with STA 75+00 or Reach 10 of the 2010 Revised Phase 2 report. Restoration options are discussed for this location in Section 4.5. Riprap would be removed and a step pool channel with a bankfull bench would be installed. There is the option to realign the channel to add length, if necessary.