

Appendix C

STAFF'S RESPONSE TO COMMENTS RECEIVED

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

RESPONSE TO WRITTEN COMMENTS FOR ITEM 6

On the Adoption of Site Cleanup Requirements for
Guadalupe Rubbish Disposal Co., Inc., Guadalupe Mine, San Jose, Santa Clara County

Contents

Introduction

Response to comments from: Guadalupe Rubbish Disposal Co., Inc. (comments from legal counsel Reed Smith LLP)

Response to comments from: Guadalupe Rubbish Disposal Co., Inc. (comments from consulting engineer Golder Associates)

Citations

Introduction

Two comment letters on the tentative order circulated on April 12, 2013, were received. Both were from the Discharger, Guadalupe Rubbish Disposal Co., Inc. (GRDC). The first letter is from GRDC's legal counsel, Reed Smith LLP, and the second letter is from GRDC's consulting engineer, Golder Associates.

GRDC has several key comments, which we review in this introduction. After the introduction, we respond to individual comments from each letter. Our responses provide a summary of each comment (often quoted in italics and sometimes paraphrased for brevity) followed by Water Board staff's (Staff's) response. Many comments have been repeated within each letter and included in both letters. Where that is the case, we refer back to our initial response.

For the full context and content of each comment, refer to the original comment letters in Appendix B. In each letter, individual comments have been labeled by comment number.

GRDC'S key comments are as follows:

1. The Water Board should not issue a Water Code section 13304 Order and should instead continue to address mercury contamination at the Mine site using Water Code section 13267 authorities and the statewide industrial stormwater NPDES general permit, for which GRDC currently has coverage.
2. It is inconsistent and unfair to apply Water Code section 13304 only to GRDC, while not contemporaneously regulating other dischargers under section 13304.
3. The tentative order is not consistent with State Water Board Resolution No. 92-49.
4. The tentative order does not find that there is a discharge or potential for discharge of waste to waters of the State.

Key Comment 1

The Water Board should not issue a 13304 Order and should instead continue to address mercury contamination at the Mine site using Water Code section 13267 and GRDC's coverage under the statewide industrial stormwater NPDES general permit.

GRDC requests the Water Board continue to regulate mercury mining waste on the Site using orders issued pursuant to Water Code section 13267 and GRDC's coverage under the statewide industrial stormwater NPDES general permit and states that it has and will continue to adequately address mercury mining wastes on its property under these tools.

Response to Key Comment 1

Issuance of a Water Code section 13304 order is appropriate at this time. The key distinction between Water Code section 13267 and 13304 orders is that the Water Board can require cleanup under section 13304. The Board's authority under section 13267 is limited to requiring investigative or inspection activities. The primary objective of the tentative order is for GRDC to implement a revised remedial action plan (Task 3). It is not appropriate for the Board to require this work via a 13267 order.

The use of section 13304 allows the Board to use its discretion more broadly in overseeing cleanup. In the absence of a section 13304 order, GRDC would be required to fully implement Title 27's prescriptive requirements, including, for example, the requirement to line and cap the mining waste (See, e.g., Cal. Code Regs., tit. 27, 20310 *et seq.*, [Waste Management Unit Construction Standards]). Under Title 27, section 20090, if GRDC performs remedial actions at the direction of the Board (under a section 13304 order), the Board may exempt GRDC from some Title 27 requirements that may not be necessary in order to protect water quality.

In addition, the tentative order will provide regulatory certainty to GRDC as it describes the full scope of requirements including the investigation, design, construction, and monitoring phases. The tentative order also will provide clear enforcement authority over the remaining investigation, construction, and monitoring tasks, helping to ensure full implementation of effective controls.

Separately, the statewide industrial stormwater NPDES general permit is not an appropriate tool through which to implement the cleanup. It is intended to address ongoing industrial operations, not projects to clean up past discharges of waste. The general permit is written generally, to apply to broad classes of industrial facilities statewide, with a focus on pollution in stormwater runoff, and lacks the specific, structured requirements necessary for this cleanup. Once the cleanup has been completed, it may be appropriate to use GRDC's coverage under the general permit to monitor the status of the cleanup actions (e.g., whether erosion control BMPs are functioning effectively), and Staff has indicated willingness to consider this option when the cleanup reaches an appropriate stage.

Finally, issuance of the tentative order would be consistent with the Board's approach to other cleanups. One example is the Leona Heights Sulfur Mine cleanup for which the Board adopted a revised Water Code section 13304 order at its May 8, 2013, meeting.

Key Comment 2

It is inconsistent and unfair to apply section 13304 only to GRDC and not contemporaneously issue 13304 orders to other dischargers in the watershed.

GRDC is concerned that it is inconsistently and unfairly being singled out. GRDC does “*not understand why the [Water Board] chose to issue its first Site Cleanup Requirements Order to GRDC, nor why the [Water Board] failed to issue a similar order to...*” others.

Response to Key Comment 2

Staff disagrees that GRDC is being unfairly or inconsistently singled out. Rather, the tentative order is the next logical step in the Board’s work with GRDC to clean up mercury mining waste and is consistent with our work on other sites. The use of section 13304 orders is not intended to be punitive, but a necessary course of action in overseeing cleanup of a contaminated site. As appropriate, Staff will consider 13304 orders (i.e., site cleanup requirements) for other sites in the watershed. However, at present, other sites are either subject to similarly restrictive approaches (e.g., grant-funded work that must be completed per the Board’s direction in order to receive funding), or have not yet reached a stage at which 13304 orders may be appropriate (e.g., reservoir work for which initial investigation is ongoing). These projects are briefly described below.

The Water Board is relying on a mix of authorities to implement the Guadalupe River Watershed Mercury TMDL, including Water Board and U.S. EPA grant contracts for the other two mine owners in the watershed and, at present, a voluntary compliance program for reservoirs. The two other mine owners are the Midpeninsula Regional Open Space District (Midpeninsula) and the Santa Clara County Parks (County Parks). Midpeninsula owns a small portion of the New Almaden mine, for which cleanup it applied for and received a 319(h) Nonpoint Source grant from the State Water Board. This grant contract provides the Water Board with a level of oversight authority consistent with that in section 13304. Additionally, the grant gives the Water Board control over the funding. Midpeninsula’s design and permitting are complete and construction is scheduled for later this year. Consequently, a section 13304 order for Midpeninsula would be duplicative and unnecessary.

County Parks owns nearly all of New Almaden Mercury Mining District. It previously cleaned up the five worst sites in Almaden Quicksilver County Park under a Remedial Action Order from the State Department of Toxic Substances Control (DTSC). Calcines were excavated and transported to an onsite landfill and the excavated areas and landfill were covered with clean fill and vegetated. Separately, as noted in the Guadalupe River Watershed Mercury TMDL Staff Report, the cleanups completed under DTSC oversight, such as those performed by County Parks, were to be excluded from Water Code section 13267 and 13304 Orders (Staff Report, Section 9.3). GRDC’s cleanup was not excluded.

Additionally, in anticipation of the TMDL, County Parks applied for and received a grant from the U.S. EPA for cleanup of the Senador Mine. In response to the TMDL and a section 13267 order, County Parks completed an inventory of remaining mercury mining wastes on its property. The highest priority is roads paved with calcines. County Parks is developing engineering designs to address calcine-paved roads in anticipation of applying for another grant. In the future, we may consider directing County Parks’ upcoming work under a section 13304 Order, but the project is not far enough along for Staff to provide a recommendation on the regulatory framework needed to oversee this project.

Finally, the Santa Clara Valley Water District is studying how to increase oxygen levels at strategic locations in its reservoirs to reduce methylation of mercury. This highly innovative work will likely receive direction from the developing Statewide Reservoir Mercury TMDL project, and Staff is waiting until studies are further along before considering whether to impose cleanup requirements.

Key Comment 3

The tentative order is not consistent with State Water Board Resolution No. 92-49.

GRDC asserts that the Tentative Order is inconsistent with [Resolution No. 92-49](#) because it:

- (a) relies on section 13304 for investigative work
- (b) fails to name other responsible parties
- (c) fails to consider the costs of the required work
- (d) most of the work required is unrelated to site cleanup, and
- (e) the purposes are to “clarify” erosion control requirements.

Response to Key Comment 3

- a. The tentative order is consistent with Resolution No. 92-49. The Resolution explicitly acknowledges similarities in procedures and policies for investigations and cleanup and abatement. The Resolution’s introductory text explicitly states that the Resolution’s policies and procedures shall apply to all investigations and cleanup and abatement activities and lays out a progressive sequence without distinguishing between Water Code section 13267 or 13304. Resolution No. 92-49 does not preclude incorporating requirements to complete investigatory work into section 13304 orders. In fact, Resolution No. 92-49 explicitly acknowledges the integration of investigations and cleanup and abatement.

Citation from Resolution 92-49 (WC means Water Code):

WHEREAS:

13. In order to clean up and abate the effects of a discharge or threat of a discharge, a discharger may be required to perform an investigation to define the nature and extent of the discharge or threatened discharge and to develop appropriate cleanup and abatement measures;

THEREFORE BE IT RESOLVED:

These policies and procedures apply to all investigations, and cleanup and abatement activities, for all types of discharges subject to Section 13304 of the WC.

II. The Regional Water Board shall apply the following procedures in overseeing: (a) investigations to determine the nature and horizontal and vertical extent of a discharge and (b) appropriate cleanup and abatement measures.

A. The Regional Water Board shall:

1. Require the discharger to conduct investigation, and cleanup and abatement, in a progressive sequence ordinarily consisting of the following phases...:

- a. Preliminary site assessment...*
- b. Soil and water investigation...*

- c. *Proposal and selection of cleanup and abatement action...*
- d. *Implementation of cleanup and abatement action...*
- e. *Monitoring...*

C. Require one or more persons identified as a discharger ... subject to WC Section 13304 to undertake an investigation....

This reading of section 13304 is consistent with other authorities that note the integral nature of investigation as part of remediation (e.g., *Wicklind Oil Terminals v. ASARCO, Inc.* (9th Cir. 1986) 792 F.2d 887, 892 [rejecting a distinction between investigatory costs and onsite cleanup costs]. See also, 40 C.F.R. § 300.430(a)(2) [“The purpose of the remedial investigation/feasibility study is to assess site conditions and evaluate alternatives to the extent necessary to select a remedy”]).

- b. In Finding 1, the tentative order describes how other responsible parties may be added to the tentative order. Staff is willing to consider proposing other responsible parties to the order, if GRDC provides information supporting the identification of such dischargers. GRDC appears to suggest that it would be appropriate to add reservoir owners to this tentative order. This tentative order, however, addresses only the control of erosion at the GRDC site. It would be inappropriate to ask reservoir owners, who do not have reservoirs on the GRDC site, to contribute to the costs of controlling erosion on the GRDC site because they have no (and have never had any) ownership or control over the GRDC site, two prerequisites to naming dischargers.
- c. Staff has appropriately considered the potential costs of the work required under the tentative order. This is accomplished via the order’s citation of the Guadalupe Watershed Mercury TMDL and its accompanying Staff Report. Staff Report sections 9 and 10.5 step through expected implementation actions and costs under the TMDL. The implementation actions that are likely to be required under the tentative order are the same as those considered in the Staff Report. Tentative order finding 23 finds affirmatively that the “...order and its requirements are consistent with the provisions of Resolution No. 92-49, as amended.” Moreover, Resolution No. 92-49 requires that the Water Board ensure that “dischargers shall have the opportunity to select cost effective methods ... for cleaning up” discharges. This is something that will occur in conjunction with Task 2 when GRDC submits a revised *Workplan*.

In response to this comment, Staff has revised finding 18 to read, in part: “(...) Stormwater erosion control BMPs are appropriate, available, and cost effective technology used to reduce or control mercury loads from mining waste. (...) Additional remedial actions may be necessary in some cases, such as “excavate, stockpile, haul, and consolidate mercury mining waste in engineered, onsite capped/covered waste management units” (TMDL Staff Report, Table 9.2, p. 9-12). The Water Board will work with the Discharger to evaluate the effectiveness, feasibility, and relative costs of alternative methods of cleaning up the mining waste.”

- d. All of the work required by the tentative order is directly related to site cleanup. This includes finishing site investigation, completing remedial designs, implementing the designs, and monitoring and maintaining the implemented cleanup to ensure its effectiveness.

- e. In response to this comment, Staff has made the following changes to finding 3 (note that findings are renumbered in revised tentative order to 16, 17, 18, and 19):

The objective of this Order is to abate discharges of mercury mining waste ~~address discharges of mercury mining waste, specifically to clarify erosion control requirements for mining waste on the Discharger's property.~~ This Order implements the Guadalupe River Watershed Mercury TMDL, adopted October 8, 2009 (see findings 17, 18, 19, and 20). The TMDL and its associated Staff Report describe the threat to water quality and beneficial uses posed by mercury, such as discharges of mercury from the Discharger's property (see Finding 18).

The Discharger has been working with the Water Board to minimize the discharge of mining wastes from the Site into the creek. However, these Site Cleanup Requirements are necessary to clarify the cleanup process and applicable Title 27 requirements ~~erosion control requirements for mining waste.~~

This Order does not preclude the possibility that the Water Board may determine that the Discharger must take additional mercury cleanup actions as necessary to protect water quality ~~to address historically or newly deposited mine waste in Guadalupe Creek and other surface waters in the future.~~

In response to this comment, Staff has also made the following changes to finding 6:

The Mine operated between the mid-1800s and mid-1900s with possible intermittent, sporadic operations until approximately 1975. Mining waste at the Site has a potential to ~~Mine continues to~~ erode and discharge potentially mercury-laden sediment to Guadalupe Creek and its tributary streams. Mining wastes have eroded from the Site and been transported by stormwater and creek flow downstream. Some of these mining wastes are visually apparent in the creek bed and banks for 300 feet downstream of the U-frame channel in Guadalupe Creek and may extend to the southwest on property owned by Midpeninsula Regional Open Space District. The Discharger has been working with the Water Board to minimize the discharge of mining wastes from the Site into the creek. However, these Site Cleanup Requirements are necessary to clarify the cleanup process and schedule. In the future, revisions to these Site Cleanup Requirements may be necessary to address mining wastes in Guadalupe Creek and other surface waters.

In response to this comment and Comment 3.c, Staff has changed the wording from “stormwater erosion control BMPs” (and similar wording) to “remedial actions for erosion control” or “remedial actions” in the following sections: findings 19, 28(c), 28(d), 30; B. Tasks; and C. Provisions. Staff expects that the focus of work will be on erosion control BMPs, but the change clarifies that investigation could identify mercury mining waste for which other actions may be appropriate.

Key Comment 4

GRDC states the tentative order does not find that there is a discharge or potential for discharge of mercury via erosion from GRDC's property.

Response to Key Comment 4

Staff disagrees. The tentative order appropriately finds that there is a discharge, or potential for discharge, of waste to waters of the State. Staff's past and recent inspections of the Site and GRDC's submittals found existing and threatened discharges of waste to State waters. On October 18, 2007, Staff inspected the Mine and observed mercury mining waste piles with steep, unvegetated, raveling slopes above Guadalupe Creek. Some of the waste piles are composed of calcines. In April 2008, GRDC submitted a *Work Plan for Stormwater Best Management Practices* to the Board that includes photographs of these actively eroding slopes. At Staff's March 28, 2013, site inspection, an area where erosion control BMPs had previously been installed was found to be raveling, with the potential for discharge of mining waste to Guadalupe Creek.

GRDC has installed erosion control BMPs in the areas identified by their consultant as needing erosion control. There are additional areas of mining waste present on the Site, however, such as areas of waste overhanging and behind the concrete flume walls at Guadalupe Creek, and areas where waste may be in or adjacent to Guadalupe Creek and ponds on the Site, for which appropriate measures effective over the long term must be implemented to appropriately minimize discharges of mining waste to waters of the State. Further, ongoing maintenance of implemented BMPs remains necessary.

In response to this comment, Staff made the following changes to finding 3. (The changes shown here build upon changes previously proposed in response to key comment 3(e).)

The objective of this Order is to address discharges of mercury mining waste, specifically to prevent erosion of mining wastes on the Discharger's property into surface water. This order implements the Guadalupe River Watershed Mercury TMDL, adopted October 8, 2009 (see findings 17, 18, 19, and 20). The TMDL and its associated Staff Report describe the threat to water quality and beneficial uses posed by mercury, such as discharges of mercury from the Discharger's property (see Finding 18). Mercury mining waste is present on the Discharger's property and is discharging, or threatening to discharge, to waters of the State. On October 18, 2007, Water Board staff inspected the Mine and observed mercury mining waste piles with steep, unvegetated, raveling slopes above Guadalupe Creek. In April 2008, GRDC submitted a *Work Plan for Stormwater Best Management Practices* to the Water Board that includes photographs of these actively eroding slopes. (...)

In addition in response to this comment, Staff added the following sentence to the end of finding 18: "Calcines are present at the Site and pose a threat to the beneficial uses of Guadalupe Creek."

Guadalupe Rubbish Disposal Co., Inc. (comments from legal counsel Reed Smith LLP)

Executive Summary

GRDC provides “an executive summary of the comments and objections, followed by a more detailed analysis and explanation of these main points.”

We respond to the more detailed comments with our responses to subsequent sections of GRDC’s letter.

Background Part I. Site History

In this section, GRDC provides a brief overview of its property and history of the Mine.

Staff has corrections to two points made in the third paragraph and last sentence, respectively.

Comment 1

“...re-working of the calcine piles resulted in further reduction of any residual amounts of mercury in the calcine piles, reducing the risk of mercury-laden sediments migrating from the calcine piles towards Guadalupe Creek, which runs along the bottom of the hill.”

Response to Comment 1

Staff disagrees that reworking of the calcine piles is likely to have removed the threat of discharge of mercury to waters of the State. Calcine piles are piles of heat-processed mercury mining waste. They typically have significantly higher concentrations of mercury than other mining wastes. Reworking necessarily involves excavation of the piles, sorting, heat-processing economically viable ore, and disposal of wastes. Consequently, re-working at the GRDC site likely involved removal of any vegetation that provided erosion control and disturbed the calcine piles, which are actions that increased the susceptibility of calcines to stormwater erosion and transport to surface waters. While reworking may have resulted in a reduction in the amount of mercury remaining in the piles, it did not eliminate the mercury, and the piles, if mobilized, remain a significant threat to waters of the State.

Comment 2

There is a concrete flume through which Guadalupe Creek runs along a portion of the Site. “... the walls of the flume also minimize sediments in stormwater from the mining areas from entering Guadalupe Creek.”

Response to Comment 2

Staff’s inspections have found that the flume helps reduce, but does not eliminate, threatened discharges of mining waste from a portion of the Site to waters of the State. In some cases, it may facilitate such discharges, as described below.

Staff has observed mining waste overhanging the wall of the flume. Where mining waste overhangs, it may discharge directly to Guadalupe Creek. Where the elevation of the mining waste is below the flume wall, the wall may prevent mining waste from being carried over the top of the wall and into the Creek. However, stormwater runoff may erode mining waste and transport it to behind the wall, then flow downstream until the end of the wall and into the Creek. The flume wall may, in effect, provide a pathway facilitating the discharge of mining waste to the Creek. The walls of the flume alone are insufficient to prevent mining waste from entering surface waters.

Background Part II. Regulatory History

Comment 3

“GRDC has a long history of cooperating with RWQCB Staff in investigating potential mercury problems related to former mining activities at the Property, as noted in the tentative Order. For example, GRDC has complied with similar previous orders issued by the RWQCB pursuant to Section 13267 of the Water Code.... GRDC’s investigation, monitoring, reporting, and erosion-control activities at the Property demonstrate that the company is committed to addressing problems associated with past mining activities. To that end, GRDC has strived to work cooperatively with RWQCB Staff and to prevent discharges from the property.”

Response to Comment 3

Comment noted. Staff appreciates GRDC’s significant work to date, including its investigation and implementation of erosion control measures. However, GRDC has, at times, been reluctant to cooperate. As one example, Waste Management’s (GRDC’s parent corporation’s) letter of June 10, 2003, stated “...we are not aware of any storm water discharges associated with mining activities on the property.” A subsequent Waste Management letter of August 25, 2006, argued that “discharged storm water does not come into contact with mining materials.” Ultimately, on April 24, 2007, the Water Board Executive Officer issued a Notice of Violation to GRDC for the following violations of the general permit: failure to identify mercury as a pollutant on the Site; not identifying inactive mercury mines in appropriate locations in the facility’s Storm Water Pollution Prevention Plan; and failure to include a Site Map in the Pollution Prevention Plan that showed all stormwater drainage areas on the Site, how water drains from the Site, and areas where materials are directly exposed to precipitation.

As noted in our response to Key Comment 4, during site inspections on October 18, 2007, and March 28, 2013, Staff identified areas of eroding or potentially eroding mining waste with a potential to discharge to Guadalupe Creek. These observations ran counter to GRDC’s earlier statements that stormwater did not come into contact with mining materials. This tentative order will encourage GRDC’s continued cooperation to survey and improve site conditions to avoid future discharges.

Comment 4

“As noted in the tentative Order, GRDC has complied with the 2009 order by submitting all of the required reports... GRDC is not aware of any remaining issues with any of these reports or that the Board Staff has found any of them lacking.”

Response to Comment 4

Staff appreciates the significant work GRDC has completed to date. We note that the additional investigative work described in the tentative order remains outstanding and is necessary to ensure that appropriately-protective cleanup measures will be implemented.

Comment 5

“... GRDC has accomplished the objective of inventorying mining wastes at the Property.”

Response to Comment 5

Staff disagrees that the inventory is complete. While much mapping work has been done, significant

characterization work remains, including characterizing the likely amounts of mercury in mining wastes, stream sediments, and sediment in ponds on the Site. This characterization is necessary to determine the appropriate level of remedial action necessary at each impacted area. The tentative order includes tasks to complete this work.

Comment 6

“...GRDC conducts site inspections at the Property to ensure the proper functioning of installed storm water management best management practices (“BMPs”) and to determine whether erosion has occurred.”

Response to Comment 6

Staff disagrees that GRDC’s current inspections and subsequent maintenance have been effective at fully controlling mining waste discharges. During Staff’s March 28, 2013, site inspection, Staff observed raveling on a portion of the slope at Area 5, indicative of erosion problems. This is one of the areas that GRDC had previously addressed and did not propose to revisit. During the inspection, Staff brought these conditions to GRDC’s attention. Staff is concerned that there may be opportunities for improvement in GRDC’s inspection and maintenance procedures, and we intend to address this by working with GRDC on the monitoring plan required by Task 5.

Comment 7

“GRDC has also participated in watershed-wide monitoring and investigation activities as a member of the Guadalupe River Coordinated Mercury Monitoring Program (“Program”).”

Response to Comment 7

Staff commends GRDC for its cooperation with other responsible parties in forming and conducting a coordinated mercury monitoring program for the Guadalupe River watershed. This monitoring program, however, is directed at answering questions about the effects of mercury in reservoirs, loads to San Francisco Bay, and receiving water quality. It is different from the site-specific investigative and cleanup work needed for the Site.

Comment 8

The Tentative Order “...is essentially an extension of the orders issued by the RWQCB, however, and is meant to require additional investigation and inventory work that was purportedly not included within the scope of earlier orders.”

Response to Comment 8

Staff agrees that the tentative order is the next logical step in the Water Board’s regulation of existing and threatened discharges of mining waste from the Site. The approach is consistent with that used by the Board in numerous other cleanup cases: initial investigation is completed under a Water Code section 13267 order, and final investigation, cleanup, and related work are completed under a Water Code section 13304 Order.

Comment 9

GRDC “...opposes the shift to a new and administratively burdensome and counter-productive regulatory process.”

Response to Comment 9

Comment noted. The tentative order will not impose significant new administrative burdens. Rather,

consistent with the Water Board’s general approach working with cooperative parties on cleanup cases, it will help provide regulatory certainty to GRDC by describing the path forward through the investigation, design, construction, and monitoring phases of mining waste cleanup. Please see also our response to Key Comment 1.

Objections to the Order: GRDC provides three primary reasons for which it objects to the tentative order: I. No legal basis; II. No findings of threatened discharge; and III. Inconsistent treatment.

Comment 10

(I.A) The use of a Section 13304 Order is inconsistent with State Water Resources Control Board Resolution No. 92-49.

Response to Comment 10

Staff disagrees. Please see our response to Key Comment 3.

Comment 11

The Water Board “...has found that reservoirs controlled by other responsible parties are the primary contributors to methylmercury contamination and that reducing contamination from those reservoirs likely will accomplish the goals of the TMDL.”

Response to Comment 11

Staff disagrees that the TMDL finds that solely reducing mercury from reservoirs will accomplish the goals of the Guadalupe River Watershed Mercury TMDL. Rather, an important aspect of the TMDL is to control ongoing and potential sources of mercury to Guadalupe Creek and thence downstream to San Francisco Bay. The tentative order is consistent with this goal. See our response to Key Comment 3(b).

Comment 12

(I.B.) The Order does not satisfy the requirements of Water Code section 13304

“The tentative Order does not comply with the requirements of Section 13304 because it does not find that there is currently a material threat of a discharge of mercury via erosion from the Guadalupe Mine or from GRDC’s stormwater BMPs. Rather, the Order merely cross-references general findings in the TMDL, findings that would be equally applicable to most other properties in the area. ... Site Cleanup Requirements are necessary to clarify erosion control requirements... The Order does not explain, however, why GRDC’s current efforts are insufficient or why clarification is “necessary.””

Response to Comment 12

Please see our response to Key Comments 1, 3, and 4, including our proposed changes to finding 3.

Comment 13

“...the tentative Order must provide findings ... that the measures required in the Order will prevent that threatened discharge.”

Response to Comment 13

Tentative order finding 3, and the order's citation to the Guadalupe River Watershed Mercury TMDL and its associated staff report, explain that the measures required in the order will appropriately prevent and minimize discharges of mercury to waters of the State.

Comment 14

GRDC repeats previous comments, and then states that the Tentative Order “...*does not provide a basis for expanding the scope of the existing Workplan under Section 13304 when that work could be conducted more efficiently in the course of the existing regulatory process under Section 13267.*”

Response to Comment 14

Staff disagrees. Please see our response to Key Comment 1.

Comment 15

GRDC asserts that Water Code section 13304 “...*does not provide the [Water Board] with authority to implement TMDLs through site cleanup orders. Rather, TMDLs are implemented through NPDES permits and other mechanisms.*”

Response to Comment 15

Staff disagrees that the presence of language regarding TMDLs is needed in Water Code section 13304 to issue a 13304 order addressing the mercury mining waste at GRDC's site. Such language is not needed; nothing precludes the Water Board from using various Water Code authorities to implement TMDLs. Further, because of GRDC's active participation in the public review process for the Guadalupe River Watershed Mercury TMDL, GRDC has long known which authorities the Water Board planned to use (they are specified in the TMDL's Basin Plan amendment (see findings 16–19 in revised tentative order), as well as in the implementation plan section of the [TMDL Staff Report](#)). During the TMDL adoption process, GRDC did not object to the proposed future use of orders under section 13304.

Comment 16

GRDC expands upon previous comments and asserts that Water Code section 13304 “... *does not provide the [Water] Board with authority to issue orders to “clarify” existing erosion-control efforts, especially when those current actions are already being undertaken pursuant to other authorities.*” GRDC restates that a 13304 Order is unnecessary and will only create additional administrative burdens.

Response to Comment 16

Please see our response to Key Comment 1, including our proposed changes to finding 3.

Comment 17

GRDC repeats previous comments “...*not intended to prevent a threatened release... [the Water] Board does not know whether there is currently a threat of a discharge...*” and expresses concern regarding the use of Water Code section 13304 authorities for investigation.

Response to Comment 17

Please see our response to Key Comments 1, 3, and 4.

Comment 18

“GRDC disagrees with findings related to the scope of previous work because the requested work has largely already been completed during the course of GRDC’s ongoing efforts... The RWQCB has previously considered GRDC’s assessment complete in a prior order. ...the footprint of the Mine area has been effectively established....”

Response to Comment 18

Staff agrees that GRDC has largely already completed tentative order Task 1(a)(i) – map all eroding or potentially eroding mercury mining wastes on the Site. The Task’s wording reflects GRDC’s work. For example, it notes that required submittals will “supplement the previous investigations and reports.”

Staff disagrees that we previously considered GRDC’s investigation complete. We disagree, further, that the footprint of the Mine area has been fully delineated. As an example, in our letter of February 23, 2011, commenting on the December 2010 *Technical Report on Erosion of Mercury Mining Wastes at Guadalupe Mercury Mine*, Staff stated concerns that review of documents showing the footprint dating from the 1940s is inadequate for Guadalupe Mine, because the Mine was operated into the 1970s.

Comment 19

GRDC asks: “instead of cleanup requirements under Water Code 13304 authority, why not issue another investigation order under Water Code 13267 or request additional work in the BMP workplan under [statewide] industrial stormwater NPDES general permit authority?”

Response to Comment 19

Please see our response to Key Comment 1.

Comment 20

GRDC expands upon previous comments and asserts that cleanup requirements under section 13304 authorities are unnecessary and counterproductive given GRDC’s history of cooperation and comparatively small contribution to mercury contamination in the watershed from erosion of Guadalupe Mine, especially considering that GRDC already implemented erosion control BMPs.

Response to Comment 20

Staff disagrees that the tentative order is unnecessary (please see response to Key Comment 1) and counterproductive (please see response to comment 3). Staff acknowledges that the Guadalupe Mine produced much less mercury than New Almaden, by about a factor of 10 (see Section 3.4, Principal New Almaden Mines, in the [TMDL Staff Report](#)). However, to add perspective, only four other mines in the world have ever extracted more mercury than New Almaden. Thus, the amounts of mercury from the Guadalupe Mine remain significant. At the Guadalupe Mine, calcines were piled along the banks of Guadalupe Creek. Much of this waste is still evident, as can be seen in the following historic photographs.



1883. Photo 1 from Archeological Survey

Report prepared by TRA Environmental Sciences, Inc. for GRDC, April 2011

Caption from Archeological Survey: An 1883 photograph of Guadalupe mines with the processing area in foreground, the main shaft in center, and town of Guadalupe at left; from southeast boundary looking northwest (Babcock 1883).

Note piles of mining waste in the center of the photograph on banks of and adjacent to Guadalupe Creek (typical for the time)



1918. Photo 4 from Archeological Survey

Report prepared by TRA Environmental Sciences, Inc. for GRDC, April 2011

Caption from Archeological Survey: A 1918 overview of Guadalupe Mines with the furnaces in the foreground, old vertical shaft house in middle distance south of Guadalupe Creek, and main working of incline shaft at extreme right (Bradley 1918). Note changes between 1883 view with more buildings and structures, and turn-of-the 19th-century remodeling of the furnace area. View to northwest.

Note piles of mining waste on banks of Guadalupe Creek in lower left corner

Furthermore, there is clear evidence of a water quality impact that the TMDL is intended to address. For instance, small prey fish at the downstream end of Guadalupe Creek at Meridian Avenue had the highest mercury levels of any creek fish sampled in the watershed, half again as high as the next site (Figure 2.1 in [TMDL Staff Report](#), and Table 3-8 in [Final Conceptual Model Report](#)). Given the eroding state of the mining waste and mercury levels in fish tissue immediately downgradient, requiring GRDC to complete the program it has already begun is an appropriate course of action.

III. There is no adequate basis for treating GRDC inconsistently compared to other responsible parties

Comment 21

GRDC states that it does not understand why it would be the first party under this TMDL to be regulated by section 13304, and repeats previous comments pertaining to unfairness, GRDC's history of cooperation, and the Mine being a relatively small contributor to contamination.

Response to Comment 21

Staff disagrees that the tentative order is an inappropriate tool for the cleanup or that the Water Board has acted unfairly. Please see the "response to key comments" section, especially Key Comment 2, and our response to comments 3 and 20.

Comment 22

GRDC asserts that "*reservoirs are the largest sources of methylmercury contamination and that reducing methylmercury from reservoirs would achieve the objectives of the TMDL,*" and hence they do not understand why they are being singled out.

Response to Comment 22

Staff disagrees that reducing methylmercury production from reservoirs would achieve the objectives of the TMDL, for reasons provided in our response to Comment 11. See also response to Key Comment 3(b).

Comment 23

GRDC reminds the Board that the TMDL "*requires that mercury mining waste control actions to be implemented in a 'phased' manner 'so that mercury discharges from upstream will be eliminated or significantly reduced before downstream projects are undertaken.'*" GRDC asserts that its property "*...is downstream from virtually all of the other mines in the New Almaden Mining District, including larger mines that have also been shown to have contributed to mercury contamination in Guadalupe Creek.*" Therefore, GRDC feels they are being singled out unfairly.

Response to Comment 23

GRDC is correct that the TMDL requires phasing of implementation. However, there is a significant difference in the meaning of "downstream" between GRDC's usage in this comment and its usage in the Guadalupe River Watershed Mercury TMDL. In the TMDL, mines are upstream sites located on the landscape and considered to be the primary pollutant source areas, and "downstream" means in-stream projects to address fluvial deposits of mercury and restore

habitat. Thus, the tentative order appropriately addresses GRDC's upstream site as envisioned by the TMDL.

The TMDL separates implementation activities into two phases. Phase 1 is the first 10 years of implementation, where the TMDL envisions starting at the top of the watershed, with erosion control for mercury mining wastes on the landscape. Phase 2 is the second 10 years of implementation, where the TMDL envisions in-stream and floodplain projects to address mercury that has been transported into and down creeks and the Guadalupe River. Consequently, the tentative order is consistent with the TMDL's phasing of implementation.

The TMDL's phasing is intended to ensure that landscape sources of mercury mining waste are controlled before in-stream projects are constructed. This minimizes the chance that restored reaches of creek will be re-contaminated by mercury mining waste.

Finally, strictly speaking, it is not correct that the Mine is located downstream from virtually all of the other mines and their associated wastes in the New Almaden Mining District. Guadalupe is the primary mine located on Guadalupe Creek. In contrast, most of New Almaden and importantly Hacienda Furnace Yard, where most of the ore from New Almaden was processed, drain to Alamitos Creek (see Section 3.4, Principal New Almaden Mines, in the [TMDL Staff Report](#)).

Comment 24

GRDC reminds the Board that the Tentative Order does not explain why other responsible parties are not also being regulated by Water Code section 13304.

Response to Comment 24

Please see the "response to key comments" section, and especially the response to Key Comment 2.

Comment 25

GRDC asserts that the Water Board does not have a valid basis for treating GRDC differently compared to other parties that also have mining waste (including calcine piles) on their property for the following reasons:

- there is no reason the Water Board could not issue Water Code section 13304 Site Cleanup Requirements to address contamination from a reservoir or a mine site without calcine piles
- no explanation is provided for why calcine piles justify inconsistent treatment when they currently are not demonstrated to be major contributors to quantities of methylmercury in the watershed; other mine sites have calcine piles.

Response to Comment 25

Please see the "response to key comments" section, and especially the response to Key Comment 2.

Section III. Conclusion and Requested Relief

GRDC's conclusion largely consists of a summary of the comments and objections that were presented in more detail in the section of its comment letter titled "objections to the order".

Here, we respond to comments in the conclusion that do not appear elsewhere in the letter.

Comment 26

GRDC proposes to work with Water Board staff outside the framework of the tentative order to determine if mercury-laden sediments are migrating from calcine piles or other mining wastes into surface waters.

Response to Comment 26

Staff disagrees. The tentative order is a clear and reasonable approach, it is consistent with the relevant TMDL and the Board's approaches to other cleanup cases, and it will allow GRDC to cost-effectively complete its investigation and needed cleanup and maintenance work. See also our response to Key Comment 1.

Comment 27

If the Board does not deny the tentative order, then GRDC requests that the Board stay the tentative order until the investigation is complete, and not before March 2017. (The March 2017 date corresponds to the final report due date for the Guadalupe River coordinated mercury monitoring program.)

Response to Comment 27

Staff disagrees. Please see our response to Key Comment 1. Additionally, March 2017 is an unreasonably long time to complete the investigation; in GRDC's comment on the proposed schedule for Task 2, which requires the investigation, it requested a date more than two years earlier (December 30, 2014). The tentative order's schedule and the Guadalupe River coordinated mercury monitoring program schedule need not coincide, because the tasks required for the coordinated mercury monitoring program are unrelated to the tasks required for the Mine.

Comment 28

In closing, GRDC affirms its commitment to work cooperatively with the Water Board and Staff.

Response to Comment 28

Comment noted.

Guadalupe Rubbish Disposal Co., Inc. (comments from consulting engineer Golder Associates)

Comment 29

GRDC requests the following changes to finding 1:

Guadalupe Rubbish Disposal Company, Inc. (hereinafter called the Discharger) is named as a discharger because it is ~~the a~~ current property owner of the at the Guadalupe Mine and there is mercury mining waste on the property ~~an ongoing discharge of pollutants, it has knowledge of the discharge or the activities that caused the discharge, and it has the legal ability to control the discharge, in accordance with California Water Code (Water Code) section 13304. ...~~

Response to comment 29

Staff disagrees. The finding, as written, is correct. Please see our responses to Comment 2 and to the Key Comments, including our response to Key Comment 4, which cites the findings of Staff's inspections of the Site.

Comment 30

GRDC requests the following changes to Finding 2:

Location: Portions of the Guadalupe Mine are ~~The Guadalupe Mine (the Mine)~~ is located at 15999 Guadalupe Mines Road, in south San Jose, approximately four miles southeast of the City of Los Gatos. ...

Response to comment #30

Staff disagrees. Nearly the entire extent of the Guadalupe Mine is located on GRDC's property, and this is well documented in the historical record. The tentative order's language appropriately reflects the Mine's location.

Comment 31

GRDC comments several times on finding 3, and asserts that there is insufficient data to support that discharges of mercury mining waste are currently occurring. GRDC requests several changes to wording of finding 3.

Response to comment 31

Staff disagrees. Please see our response to Key Comment 4 and to Comment 2.

Comment 32

GRDC requests, in finding 5, that the location of mine-related facilities be changed from "*on the Site*" to "*on the southeastern portion of the Site.*"

Response to comment 32

Staff agrees that the Mine is primarily, but not entirely, located on the southeastern portion of the Site. In this comment letter, GRDC indicates knowledge of mining shafts and air tunnels on the northeast side of the property, stating "[m]ining shafts and air tunnels on the northeast side of Los Capitancillos Ridge were previously assessed..." (Golder Associates comment letter, p.3).

In response to this comment, Staff has made the following changes to finding 5:

Numerous mine-related facilities are present on the 411-acre Site, primarily on the southeastern portion of the Site, including, but not limited to, standing buildings and structures; mining shafts, tunnels, and roads; a concrete flume (also known as the U-frame channel); and piles of mercury mining wastes ...

Comment 33

GRDC asserts that not all the beneficial uses described in finding 11 are applicable to the ponds in the mining area, and requests that only the beneficial uses for Guadalupe Creek be included.

Response to comment 33

Staff disagrees. We deliberately wrote this finding in general terms, so that it summarizes the beneficial uses supported by waters at the Site. However, it neither lists all the named and unnamed water bodies at the Site, nor describes exactly which beneficial uses apply to each water body. Such specificity is not needed to accomplish the goals of this tentative order.

Comment 34

Commenting on finding 12, GRDC asserts that the presence of mine works at or over the top of Los Capitancillos Ridge is not in question, because GRDC has already completely investigated and documented the extent of the Mine and any potential erosion of mercury mining wastes. Additionally, GRDC repeats previous comments that the scope of work in Task 1 is redundant and overly burdensome.

Response to comment 34

Staff disagrees. Please see our responses to comments 5 and 9.

Comment 35

GRDC disagrees with the statement in finding 15 that the *Workplan* does not include the entire footprint of the Mine area.

Response to Comment 35

Staff disagrees. Please see our response to comment 5.

Comment 36

Commenting on finding 25, GRDC repeats its request to use section 13267, not 13304.

Response to comment 36

Staff disagrees. Please see our response to Key Comment 1.

Comment 37

Commenting on finding 28.c, GRDC states protecting mercury mining waste from 100-year peak stream flows using erosion control best management practices is overly burdensome and likely infeasible.

Response to comment 37

In response to this comment, Staff has made changes to the Order. Staff added “to the extent feasible,” to findings 28.c and 28.d, reflecting the requirements at Title 27, California Code of Regulations, section 20090(d). The new text reads as follows:

Finding 28.c: “Title 27 siting requirements require that the stormwater BMPs shall be designed to protect from 100-year peak streamflow in Guadalupe Creek, to the extent feasible (Cal. Code Regs., tit. 27, § 22470(a), Table 1.1, Table 1.2, ~~and~~ § 22490(b), and § 20090(d).)

Finding 28.d: “Title 27 construction requirements state that stormwater BMPs shall be designed to provide precipitation and drainage controls for one 10-year, 24-hour storm, to the extent feasible (Cal. Code Regs., tit. 27, § 22470(a), Table 1.1, ~~and~~ § 22490(h), and § 20090(d).)

Mercury discharges associated with erosion and mass wasting of mercury mining waste during high flow events can be significant. Thus, it is important to consider appropriate, protective measures. At this time, specific measures have not yet been proposed for much of the Site. Should such measures prove to be infeasible, Staff will work with GRDC to consider alternative approaches or amend the SCRs, as appropriate. The tentative order would allow GRDC to implement alternate means of compliance as long as they are as effective as Title 27’s prescriptive requirements “to the extent feasible” (Cal. Code Regs., tit. 27, § 20090(d)). The Water Board must ensure that, to the extent feasible, alternatives are consistent with the performance goal addressed by the prescriptive standard and afford equivalent protection against water quality impairment.

Comment 38

GRDC, commenting on finding 30, notes that the Mitigated Negative Declaration prepared and recently certified by the City of San Jose Planning Department did not contemplate “yet-determined future orders from the Water Board.”

Response to comment 38

The CEQA finding correctly describes the Water Board’s and City of San Jose’s compliance with CEQA. Staff notes that the tentative order itself is exempt from CEQA (see finding 29). The City of San Jose Planning Department has evaluated the potential for significant environmental effects of the remedial activities contemplated by the tentative order and have prepared and certified a Mitigated Negative Declaration.

In response to this comment, Staff made the following changes to finding 30:

In addition, the City of San Jose Planning Department prepared and certified a Mitigated Negative Declaration (State Clearinghouse Number 201211037) on March 29, 2013 , for the Discharger’s Guadalupe Mines Landfill Creek Bank Stabilization Project (City project No. PDA93-018-02). This SCR requires construction of remedial actions necessary to minimize the discharge of mercury mining wastes into surface water. ~~of stormwater BMPs at the six sites that~~ These construction activities are subject to San Jose permits and have been evaluated in the Mitigated Negative Declaration. The ~~Regional~~ Water Board, as a responsible agency under CEQA, finds that all environmental effects have been identified for project activities that it is required to approve, and that the Project will not have significant adverse impacts on water quality provided that the activities in this SCR and associated monitoring is carried out as conditioned in this Order.

Comment 38

Commenting on page 10 of the tentative order, GRDC repeats its request to use Water Code section 13267, not 13304.

Response to comment 38

Staff disagrees. Please see our response to Key Comment 1.

Comment 40

GRDC requests removal of Prohibition 1, “[t]he discharge of wastes or hazardous substances in a manner that will degrade water quality or adversely affect beneficial uses of waters of the State is prohibited,” because the waters are already designated as impaired by mercury.

Response to comment 40

Staff disagrees. This is an important requirement and aligns with the goals of the TMDL. The presence of an existing impairment does not mean that further discharges of wastes or hazardous substances should be allowed.

Comment 41

GRDC again asserts that the scope of work in Task 1 is redundant and overly burdensome, and goes well beyond “only one” outstanding question. GRDC comments that it is unclear how the requirements of Task 1(a) were developed or why they are being imposed, and provides a list of information they submitted previously. (Refer to GRDC’S comments on findings 12 and 15.)

Response to comment 41

Please see our responses to comments 5 and 9.

Comment 42

GRDC asserts that Task 1, an investigation task that includes mapping amounts of mining waste and calcines adjacent to Guadalupe Creek, would require extensive subsurface exploration that would release mercury mining waste and it is unclear to GRDC how this would provide useful data for erosion control of mercury mining waste.

Response to comment 42

Staff disagrees that extensive subsurface exploration would be necessary to accomplish this task. Rather, this investigation is likely to require, at most, minor brush removal to facilitate collection of grab surface soil samples. Staff will work with GRDC to develop an appropriate scope of work for this task. This information would be used to ensure the appropriate design of erosion control measures and, if necessary, other remedial actions.

Comment 43

GRDC states that Task 1 should be modified to focus on erosion control requirements and site runoff, and not include sub-tasks regarding the location of mercury mining waste, and suggests the following wording changes to Task 1:

1. WORKPLAN TO EVALUATE SITE SOURCES OF MERCURY TO SURFACE WATERS

COMPLIANCE DATE: September 30, 2013

The Discharger shall develop a Site Drainage and Sediment Transport Mercury Sources Workplan, acceptable to the Executive Officer, to evaluate site drainage and potential

erosion of mercury-bearing sediment ~~the sources of mercury~~ from mining wastes, in particular from calcines, to surface waters. The ~~Mercury Sources~~ Workplan shall supplement the previous investigations and reports (see Finding 12). The purpose of the Site Drainage and Sediment Transport ~~Mercury Sources~~ Workplan is to revise the Workplan for Storm Water Best Management Practices (Workplan, see Finding 14). The Site Drainage and Sediment Transport ~~Mercury Sources~~ Workplan must include, but shall not be limited to:

- (a) A plan to map site drainage paths and potential transport of sediment from mine waste sources of mercury to surface waters: The plan must include the scope for preparing:
 - (i) A map of surface water flow paths with the potential to erode all eroding or potentially eroding mercury mining wastes on the Site, with background graphics of former mining operations, waste piles, and facilities similar to Figure 3 from Stantec 2010 on a figure that shows all of the Site, similar to Figure 2, and provides over background graphics of former mining operations, waste piles, and facilities similar to Figure 3. The map of surface runoff should be prepared using current topography with subsequent field verification of the identified flow paths, and all stormwater control measures and BMPs. The map should also include the existing system of sedimentation and infiltration ponds and identify drainage pathways (i.e., channelized flow) from surface water contact with mining waste to discharge points along Guadalupe Creek. The surface drainage map would be overlain with the existing geologic maps showing the location of mine wastes, and cultural mapping of former mining operations, waste piles, and facilities. This task should also include updated field inspection and mapping of identified areas of excessive erosion, or potential areas of erosion, in areas of mapped mine waste and calcines in particular. The map must also provide an associated narrative sufficient to describe and support the map. Additionally, the map and associated narrative should resolve whether the Mine extends over the top of Los Capitancillos Ridge down to the northeastern portion of the Site (see Finding 12). Additionally, the map and associated narrative must include mining areas within the landfill footprint, describe current site conditions, and discuss whether there is cause for concern that these mercury mining wastes are eroding or have potential to erode and be transported by stormwater to surface waters. (see Figure 1);
 - (ii) ~~Discuss the characterization and mapping of streambank materials on the eastern bank of Guadalupe Creek, from upstream to downstream, and from the center line of the Creek to the top of the eastern bank on or contiguous to the Site. Segments must be denoted each time there is a change in material along the creek or up the bank. Within each segment, the percentage of native stream terrace deposits and/or mining waste must be estimated, and if mining waste is identified, then the approximate percentage of calcines [i.e., heat processed ores] in the waste must be estimated (see Finding 18). Also within~~

~~each segment, the potential for mercury mining wastes to erode (e.g., gullies and surface erosion from stormwater, discharge from seeps, slumps, or landslides) into surface waters must be evaluated. If there is cause for concern that mercury mining wastes located within the landfill footprint may be eroding or have potential to erode, then the plan must characterize these materials using similar procedures as for streambank materials. Characterize mercury mining wastes on the Site for total mercury concentration (see Finding 18). Collect surface grab samples of soil and sediment and analyze fines less than 63 microns in diameter for total mercury concentration;~~

- (b) An evaluation of whether Ponds are a source of mercury to downstream waters (see Finding 9). This must include, but should not be limited to:
 - (i) Characterization of the mercury concentration(s) of sediments in Ponds A – F. Collect surface grab samples of sediment and analyze fines less than 63 microns in diameter for total mercury concentration;
- (c) A schedule for implementation of the Site Drainage and Sediment Transport Mercury Sources Workplan.

Response to comment 43

Staff thanks GRDC for a clear, concrete proposal and agrees with several of these changes. Staff disagrees that there are no outstanding questions as to where onsite mercury mining waste is located or that the investigation is complete, as explained in our response to Comment 5. Additionally, we believe it is appropriate to leave the title and nature of the Mercury Sources Workplan as-is, because those appropriately recognize that remedial actions, while likely to be dominated by erosion control measures, may include additional or alternative measures, depending on the threat posed by specific areas of mining waste. Staff made the following changes to Task 1, including the change to compliance date as requested by GRDC in comment 42:

1. WORKPLAN TO EVALUATE SITE SOURCES OF MERCURY TO SURFACE WATERS

COMPLIANCE DATE: ~~December~~ September 30, 2013

The Discharger shall develop a Mercury Sources Workplan, acceptable to the Executive Officer, to evaluate all mercury sources, including the various forms of mining waste present at the Site, and potential discharge pathways ~~the sources of mercury from mining wastes, in particular from calcines, to surface waters~~. The Mercury Sources Workplan shall supplement the previous investigations and reports (see Finding 12). The purpose of the mercury sources evaluation work is to inform ~~Workplan is to revise the Workplan for Storm Water Best Management Practices (Workplan, see Finding 14)~~. The Mercury Sources-Workplan must include, but shall not be limited to:

- (a) A plan to map sources of mercury to surface waters, including site drainage paths and potential transport of sediment from mining waste. The plan must include the scope for preparing:
 - (i) A map of (a) surface water flow paths, including those with the potential to erode mercury mining wastes on the Site, (b) all eroding or potentially eroding

mercury mining wastes on the Site, with background graphics of former mining operations, waste piles, and facilities similar to Figure 3 from Stantec 2010. on a figure that shows all of the Site, similar to Figure 2, and provides over background graphics of former mining operations, waste piles, and facilities similar to Figure 3. The map of surface runoff should be prepared using current topography with subsequent field verification of the identified flow paths and all stormwater control measures and BMPs. The map should also include the existing system of sedimentation and infiltration ponds and identify drainage pathways (i.e., channelized flow) to discharge points into Guadalupe Creek, McAbee Creek, and ephemeral, unnamed tributaries (see Finding 9). The surface drainage map would be overlain with the existing geologic maps showing the location of mining wastes, and cultural mapping of former mining operations, waste piles, and facilities. This task should also include updated field inspection and mapping of identified areas of excessive erosion, or potential areas of erosion, in areas of mapped mining waste and calcines in particular. The map must also provide an associated narrative sufficient to describe and support the map. Additionally, the map and associated narrative should resolve whether the Mine extends over the top of Los Capitancillos Ridge down to the northeastern portion of the Site (see Finding 12). Additionally, the map and associated narrative must include mining areas within the landfill footprint, describe current site conditions, and discuss whether there is cause for concern that these mercury mining wastes are eroding or have potential to erode and be transported by stormwater to surface waters (see Figure 1);

- (ii) ~~Discuss the characterization and mapping~~ A map of streambank materials on the eastern bank of Guadalupe Creek, from upstream to downstream, and from the center line of the Creek to the top of the eastern bank on or contiguous to the Site. Segments must be denoted each time there is a change in material along the creek or up the bank. Within each segment, the percentage of native stream terrace deposits and/or mining waste must be estimated, and if mining waste is identified, then the approximate percentage of calcines [i.e., heat processed ores] in the waste must be estimated (see Finding 18). Also within each segment, the potential for mercury mining wastes to erode (e.g., gullies and surface erosion from stormwater, discharge from seeps, slumps, or landslides) into surface waters must be evaluated. If there is cause for concern that mercury mining wastes located within the landfill footprint may be eroding or have potential to erode, then the plan must characterize these materials using similar procedures as for streambank materials. Characterize mercury mining wastes on the Site, by segment, to verify that Group B mining waste classification is appropriate for total mercury concentration (see Finding 18). Collect surface grab samples of soil and sediment and analyze fines less than 63 microns in diameter for total mercury concentration;

- (b) An evaluation of whether Ponds are a source of mercury to downstream waters (see Finding 9). This must include, but should not be limited to:
 - (i) Characterization of the mercury concentration(s) of sediments in Ponds A – F. Collect surface grab samples of sediment and analyze fines less than 63 microns in diameter for total mercury concentration; and
- (c) A schedule for implementation of the Mercury Sources Workplan.

Comment 44

GRDC requests the following changes to compliance dates:

- Task 2 (revised workplan):
from September 30, 2014, to December 30, 2014
- Task 3 (complete cleanup/BMP installation):
from December 31, 2015 to December 31, 2018
- Task 4 (cleanup/BMP installation completion report):
from March 30, 2016, to March 30, 2017

Response to comment 44

Staff agrees with the proposed change to schedule for Task 2, but not tasks 3 and 4. It is too soon to know whether time extensions are needed for tasks 3 and 4 and what revised schedule would be reasonable. Task 6 provides a process for the Discharger to propose time extensions.

In response to this comment, Staff made the following change to Task 2:

- 2. REPORT RESULTS OF EVALUATION AND REVISE WORKPLAN FOR STORM WATER BEST MANAGEMENT PRACTICES**
COMPLIANCE DATE: ~~December~~ September 30, 2014

Comment 45

GRDC requests the following edit to Task 2(a):

- (a) Revised or new designs for stormwater BMPs, if needed, for erosion control of mercury mining wastes and, if needed, to minimize discharges of mercury from Ponds as follows:

Response to comment 45

In response to this comment, Staff made the following minor changes to Task 2 (incorporating compliance date change per response to Comment 44 and change to “remedial actions” from response to Key Comment 3):

- 2. REPORT RESULTS OF EVALUATION AND REVISE WORKPLAN FOR STORM WATER BEST MANAGEMENT PRACTICES**
COMPLIANCE DATE: ~~December~~ September 30, 2014

Submit a report, which details the results of Task 1 and proposes as needed revisions to the *Workplan* to ~~minimize~~ control the discharge of ~~mercury mining waste~~ to surface waters, and address any additional sites identified in Task 1. The revised *Workplan* must include, but should not be limited to:

- (a) Revised or new designs for stormwater BMPs, as appropriate, for ~~erosion~~ control of mercury mining waste discharges and, if needed, to minimize control discharges of mercury from Ponds ~~as follows~~.

Comment 46

GRDC requests removal of Title 27 siting and construction requirements described in findings 28(c) & (d), and corresponding Task 2(a)(i) & 2(ii), because it may not be technically feasible to meet the 100-year peak streamflow requirement of finding 28(c), and both may be economically burdensome. Additionally, GRDC asserts that regulatory agencies may not be willing to issue necessary permits given sensitive biological resources and anticipates resistance from a large number of stakeholders.

Response to comment 46

Please see our response to Comment 37.

Additionally, Staff asserts that it is likely feasible to do this work in this watershed. Nearby, County Parks undertook similar work in 2000 along the banks of Alamitos Creek at Hacienda Furnace Yard, and it is currently developing designs and working to obtain permits for a second project also along the banks of Alamitos Creek at Hacienda Furnace Yard. Staff suggests that GRDC contact County Parks for additional information. Under the tentative order, Staff will work with GRDC to ensure appropriate, protective, and feasible remedial actions are selected.

Comment 47

GRDC, commenting on Task 2(b), questions whether the Water Board has regulatory authority to require a plant survival performance goal, where vegetation is used as an essential component of erosion control.

Response to comment 47

Performance goals are necessary to provide measurable objectives and, hence, ensure the success of remedial measures. The Water Board has clear regulatory authority where vegetation is an important component of erosion control. For example, plant survival performance goals are commonly incorporated into Board-issued Clean Water Act section 401 certifications where vegetation is an important component of a mitigation or erosion control measure and, in a similar vein, a percent vegetated cover goal is present in the statewide Construction Stormwater NPDES General Permit.

Comment 48

GRDC, commenting on the schedule set forth in Task 3, expresses concern about being held to a rigid completion date for projects that are yet undefined and that could include permitting through other government agencies before the work can be implemented. GRDC proposes delaying the Task 3 due date by three years, to December 31, 2018, from December 31, 2015.

Response to comment 48

Staff disagrees with the proposed change. We recognize there is uncertainty inherent in any project that is not yet fully defined. However, the schedule, which allows approximately 1¼ years to implement the revised workplan after it has been accepted by the Executive Officer, makes some allowance for uncertainty, while supporting reasonably quick completion of

required tasks. Additionally, Task 6 of the tentative order provides means for GRDC to request an extension, should GRDC be delayed in fully implementing the revised workplan.

Citations

State Water Board Resolution No. 92-49 (As Amended on April 21, 1994 and October 2, 1996), Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 1330. Available at: http://www.waterboards.ca.gov/water_issues/programs/land_disposal/resolution_92_49.shtml

TMDL Staff Report: California Regional Water Quality Control Board, San Francisco Bay Region, *Guadalupe River Watershed Mercury Total Maximum Daily Load (TMDL) Project, Staff Report for Proposed Basin Plan Amendment*, September 2008. Available at: http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/guadalupe/mercurytml.shtml