

Attachment No. 4
Regional Board Comment Letter
Dated May 30, 2008



California Regional Water Quality Control Board San Diego Region



Linda S. Adams
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Environmental Protection

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May 30, 2008

Mr. Mike Mercereau
Director of Public Works
City of San Marcos
201 Mata Way
San Marcos, CA 92069-2949

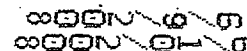
Dear Mr. Mercereau:

**RE: REGIONAL BOARD COMMENTS: REPORT OF WASTE DISCHARGE FOR THE
BRADLEY PARK / OLD LINDA VISTA LANDFILL: SAN MARCOS, CA**

On January 30, 2008, the California Regional Water Quality Control Board, San Diego Region, (Regional Board) received the subject report of waste discharge (RoWD) from the City of San Marcos in response to Directives in Water Quality Investigative Orders No. R9-2006-0044 and No. R9-2007-0041. The Bradley Park Landfill is regulated under the California Code of Regulations (CCR) Title 27, for monitoring and maintenance. These regulations require that when there is evidence of a release, in this case the presence of landfill-related constituents in ground water and a seep into surface waters, the Discharger must submit an updated RoWD for the purposes of updating site conditions and proposing corrective action alternatives in the event that corrective actions need to be implemented at the site. In a meeting with representatives from the City of San Marcos and the County of San Diego on September 26, 2007, the City requested a time extension so that the reports required under each of the Investigative Orders could be submitted as a single report, in this case, a RoWD. The Regional Board did not agree to the time extension, but agreed that the required information could be submitted in one document, the RoWD. The Regional Board has completed a review of the RoWD. The RoWD is incomplete and does not satisfy the requirements established in the two investigative orders. General and specific comments are provided in the attached document.

Following is a list of deficiencies that need to be corrected by the City of San Marcos to make the RoWD complete and to comply with the Orders:

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1. The RoWD must include maps indicating the location and extent of contaminant source zones. Source zones for all Constituents of Potential Concern (COPCs) should be identified on site maps.
2. The RoWD must include a map delineating the lateral extent of each COPC in ground water.
3. The RoWD must include an identification of background levels for all COPCs. The methodology for the determination of background shall be consistent with protocols approved by the Regional Board.
4. The RoWD must include an assessment of the effects of discharge of rock material, used for channel armoring, into the creek on the functions and values of the creek.
5. The RoWD must include an assessment of the effects of the construction of check dams within the creek on the functions and values of the creek.
6. The RoWD must include a map showing areas where vegetation in the area of the creek should be restored and where rock fill has been deposited.
7. References to chemical concentrations must be supported by:
 - a. Identification of the chemical being referred to, and
 - b. The chemical concentration that is being referred to.
8. References to Best Management Practices (BMPs) should identify the BMPs being referred to.
9. The RoWD should be revised to identify the actual period during which check dams were installed.
10. The ground-water migration pathway that includes potential COPC impacts to the creek must be included.
11. Supporting data and rationale must be presented for technical conclusions. The specific conclusions that will require such supporting data and rationale include:
 - a. The RoWD states that, "ground-water recharge occurs along the upper portion of the site."
 - b. The RoWD indicates that there is an increasing trend in ground water elevations in monitoring wells SM-3 and SM-5.

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- c. The RoWD includes a discussion of the water balance at the site in which is stated that, "the annual evapotranspiration rate at the landfill far exceeds the precipitation rate, thus inhibiting rainfall infiltration and potential leachate production within the landfill." The rationale should explain why it is meaningful to compare *annual* evapotranspiration with discrete precipitation events that typically occur during periods when evapotranspiration is low. In addition, the statement should be clarified to explain why irrigation inputs are not included.
 - d. The RoWD concludes that there is no NAPL at the site. If the City concludes in the revised RoWD that NAPL is not present at the site based on the 1 percent rule, a discussion that considers the proximity of wells to contaminant source-zones should be included.
 - e. The RoWD states that either leachate or landfill gas is the source of ground-water impacts. Such a conclusion will require additional supporting rationale.
 - f. The RoWD includes a determination that, "surface water is not impacted by upgradient sources nor by landfill constituents potentially infiltrating into the creek", but fails to include a rationale or references to specific data to support the claim.
 - g. It is indicated in the RoWD that, flows in the creek "appear to be on the order of 10 gallons per minute." Additional rationale and supporting data is needed if this claim is to be repeated in the revised RoWD.
- 12. The results from appropriate aquifer tests to support ground-water fate and transport calculations should be included.
 - 13. Ground-water cleanup levels that were established at the former BAE cleanup site are not appropriate at Bradley Park. These levels should not be cited in the RoWD.
 - 14. ESLs (Environmental Screening Levels) are not appropriate for use at Bradley Park and should not be included in the revised RoWD.



Mr. Michael Mercereau
Regional Board Comments:
Report of Waste Discharge for the
Bradley Park Landfill

-4-

May 30, 2008

Questions pertaining to the attached comments should be directed to Ms. Amy Grove at (858) 637-7136, or via e-mail at agrove@waterboards.ca.gov; or to Mr. Peter Peuron at (858) 637-7137, or via e-mail at Ppeuron@waterboards.ca.gov. Written correspondence should be directed to the following address:

Ms. Julie Chan
Supervising Engineering Geologist
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340
Attn: Mr. Peter Peuron and Ms. Amy Grove

Julie Chan
Julie Chan
Supervising Engineering Geologist

May 30, 2008
Date

Attachment: Technical comments for the Report of Waste Discharge

- cc: Ms. Rebecca Lafreniere, County of San Diego Local Enforcement Agency, 9325 Hazard Way, San Diego, CA 92123
- Ms. Vicki Gallagher, County of San Diego, Department of Public Works, 5201 Ruffin Road, Suite D, San Diego, CA 92123
- Mr. Richard Opper, Esq. Opper and Varco, LLP, 225 Broadway, Suite 1900, San Diego, CA 92101
- Mr. James O'Day, Esq. County of San Diego, County Administration Center, 1600 Pacific Highway, Room 355, San Diego, CA 92101
- Mr. Garth Koller, City of San Marcos, 1 Civic Center Drive, San Marcos, CA 92069-2949
- Mr. David Boyers, Senior Staff Counsel, State Water Resources Control Board Office of Enforcement, 1001 I Street, 16th Floor, Sacramento, CA 95814



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RE: REGIONAL BOARD COMMENTS ON THE REPORT OF WASTE DISCHARGE FOR THE BRADLEY PARK/OLD LINDA VISTA LANDFILL, SAN MARCOS, CA

General Comments

1. In many cases, site specific details that are necessary in order to support the substance of a claim or conclusion are not provided (e.g., references to chemicals exceeding particular standards without specifying the chemical or the standard).
2. In addition to omitting relevant necessary factual detail, there are serious omissions of major site issues. For example, the migration pathway for ground-water moving from contaminant source zones (such as the source areas for volatile organic constituents (VOCs)) to the creek was not included in the site conceptual model. This apparently led to the omission of this pathway in the discussion of corrective action alternatives.
3. Supporting rationale is not provided for the use of various methods or criteria including statistical methods, default cleanup standards and assumptions pertaining to risk assessment.
4. In some cases, technical conclusions are made without supporting rationale.
5. Standard regulatory protocols (as described in Title 27 and Resolution 92-49) are not adhered to. Specifically, the report included a proposal for corrective action and cleanup levels even though site assessment has not been completed and the feasibility of cleanup to background has not been addressed.

Specific Comments

1. The RoWD failed to demonstrate compliance with Directive 2.A.11 of Order No. 2007-0041. This directive required the City to perform *"an assessment of the effects of discharge of rock material, used for channel armoring, into the creek on the functions and values of the creek and waters downstream of the creek."* The table found in Section 1 of the RoWD (pages 1 – 3) list the specific directives covered by the report. The table does not cite any section of the report that addresses Directive 2.A.ii and instead provides a comment to the effect that the rock material was placed in the creek in order to provide protection against erosion. The response does not address the requirement of the directive for an assessment of the effects of the discharge on the functions and values of the creek and downstream areas.
2. The RoWD failed to demonstrate compliance with Directive 2.A.111 of Order No. 2007-0041. This directive required the City to perform *"an assessment of the effects of the construction of check dams within the creek on the functions and values of the creek and water downstream of the creek,"* The table in Section 1 of the RoWD (pages 1 – 3) did not cite any section of the report that addresses this

directive and instead provides a comment to the effect that the rock material was placed in the creek in order to provide protection against erosion. The response did not address the requirement of the directive for an assessment of the effects of the discharge on the functions and values of the creek and downstream areas.

3. Directive 2.A.iv of Order No. 2007-0041 required the City to provide, "A map showing areas where vegetation should be restored and where rock fill material has been deposited." The RoWD did not include such a map.
4. Section 2 of the RoWD contained a number of statements which lack sufficient detail. Examples of missing information include the actual, specific pollutants that were detected in seeps and identification of the specific BMPs that were employed in the creek.
5. The statement in Section 2.2.2 to the effect that check dams (which were among other BMPs mentioned) were constructed in the fall of 2007 is not consistent with the Regional Board record. On January 5, 2007 Mr. Pete Peuron and Mr. Ben Neill of the Regional Board's Central Watershed Unit inspected Bradley Park and observed five check dams that had been constructed within the creek. A copy of the inspection report, as well as the associated photographs, can be found in the Regional Board file. Therefore, the check dams had to have been constructed well before "the fall of 2007" as stated in the RoWD.
6. The following statement in the RoWD (Section 3.1, page 27) was not supported with data or rationale:

"Observation of ongoing dry season flows from a double culvert located beneath Rancho Santa Fe Road and water data from piezometers installed along the drainage support that ground-water recharge occurs along the upper portion of the site."

The conclusion that recharge occurs in the upper portion of the site (actually referring to the upper portion of the creek) is an important assertion because a discussion of remediation goals included in the Engineering Feasibility Analysis specifies the need to mitigate the pollution caused by such recharge. Such a finding is significant and therefore requires compelling supporting data. Not only is supporting data lacking, but the statement (which is the entirety of the argument presented in the RoWD) fails to even constitute a rationale. No logical connection between "dry season flows from a double culvert" and recharge is offered, nor is there an explanation of the relationship between the unspecified piezometric data and recharge.

7. Section 3.1.1 (page 27) of the RoWD indicated that there are increasing trends in ground-water elevations within ground-water monitoring wells SM-3 and SM-5, though the reason for the trend was not determined.

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8. In Sections 3.2.1 and 3.2.2 (pages 28 and 29) there is a discussion of the consumptive use of water at Bradley Park (i.e., the water balance which is primarily a function of evapotranspiration and the actual supplied water from irrigation and rainfall). Section 3.2.1 (page 29) concluded that, *"the annual evapotranspiration rate at the landfill far exceeds the precipitation rate, thus inhibiting rainfall infiltration and potential leachate production within the landfill."* This statement is not compelling given that,

- The water available for leaching includes both rainfall and irrigation. Therefore, comparing the annual evapotranspiration rate with precipitation does not account for all potential leachate and is, in fact, an incomplete representation of the water balance.
- Leachable water resulting from rainfall cannot be assessed by comparing annual evapotranspiration and annual rainfall. Evapotranspiration occurs in the summer and most rainfall occurs in the winter. Therefore, the total amount of potential evapotranspiration does not balance the actual rainfall amount. Note that without having accounted for the soil's effective water holding capacity and permeability, any given rainfall event has the potential to produce ground-water recharge and leachate simply because the rain event occurs over a short period of time during which only negligible evapotranspiration is occurring. The annual evapotranspiration rate does not account for this.

The analysis in Section 3.2.2 of the balance between applied irrigation water and evapotranspiration is also incomplete because evapotranspiration is compared to irrigation water without including rainfall inputs. Note that the report in which consumptive use is evaluated (included in Appendix A, entitled "Preliminary Irrigation Analysis", dated January, 2007) clearly identifies numerous months during which both rainfall and irrigation are in excess of the water usage that is determined based on evapotranspiration.

9. Section 3.4 (page 30) of the RoWD provided a list of constituents of potential concern for the ground-water at the Site. The number of constituents of concern as well as their concentrations, may be greater than what is provided in the report because several of the wells are not screened at an appropriate interval to collect samples representative of actual ground-water conditions at the Site. The City needs to assess the validity of each monitoring well and provide justification for each assessment, which shall be signed by a Professional Engineer (PE) or Professional Geologist (PG). If the City determines that the monitoring wells are improperly screened, then a work plan for the development of new monitoring wells, as well as the proposed locations, should be provided to the Regional Board.

10. In Section 3.4 (page 31) of the RoWD, the City concluded that:



"All VOCs detected in ground water samples had concentrations lower than 0.01 percent of their solubility. The percentage of product solubility is used as a possible indicator of the presence of non-aqueous phase liquids (NAPLs) in the vicinity of the monitoring well, with 1 percent considered to be the most conservative threshold indicating potential presence of NAPL (Pankow and Cherry, 1996). These data indicate that NAPLs are not present at the landfill."

The conclusion that there are no NAPLs *anywhere* on the landfill based on the concentrations of contaminants found in the wells and on the 1 percent rule is unfounded. This approach is useful for assessing the presence of NAPL "in the vicinity of the monitoring well." There are locations at the landfill that are impacted or potentially impacted with waste that are located hundreds of feet away from any monitoring well. NAPL-impacted zones can produce ground-water plumes much less than a few hundred feet in length or width, and therefore, the well data cannot be used to conclude that there is no NAPL at the landfill. Furthermore, for compounds such as gasoline, the individual constituents such as benzene should be assessed according to their *effective* solubility (a much lower threshold that indicates the existence of NAPL) rather than the pure phase solubility.

11. Section 3.4 (page 31) stated:

"Geosyntec performed a preliminary analysis of the relationship of chloride concentrations versus total VOC concentrations, which can be used to evaluate the source of VOC impacts at the landfill (Geosyntec, 2004). . . However, while a loose relationship was observed, the correlation coefficient of this relationship was very low and therefore did not warrant further evaluation at this time."

As part of the City's evaluation of the potential sources of impacts to ground-water, as well as delineation of leachate and landfill gas (LFG) impacts to the entire site, and the potential constituents of concern, a comprehensive analysis of the relationship between leachate and landfill gas should have been completed at the Site. The information provided is vague and does not substantiate the source of ground-water impacts or explain the theoretical basis for, or the analytical data used in, the City's determination that either leachate or landfill gas is the source of ground-water impacts at the various ground-water monitoring wells. As the City states in the report, the correlation coefficient is low, indicating that a demonstration of the relationship between landfill gas and leachate versus ground-water impacts cannot be made at this time.

12. Directive C.1.a of Order No. R9-2006-0044 required the City to assess the nature and extent of the discharge of waste from the Site into surface waters, ground-water, and the vadose zone (via landfill gas or soil vapors). According to the RoWD (Section 3.5, page 32), *"The sampling results from off-Site downgradient well SM-8 show that VOC concentrations have not been detected above the laboratory*

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reporting limit and support the downgradient delineation of VOCs." One round of sampling from the new well does not constitute an adequate assessment of the extent of downgradient ground-water impacts. Furthermore, there are no landfill gas wells located downgradient of the Landfill, and therefore, the vadose zone has not been adequately characterized for off-site migration.

Based on the figures provided in the RoWD, the City has not fully delineated the source zone, including the presence of burn ash at the Landfill. Figures 2 through 13 show approximate limits of waste, and do not indicate the presence of waste or burn ash in the Bradley Park Creek. According to the RoWD, as well as inspections conducted by the Regional Board, waste and burn ash are present in the creek.

13. Section 3.6.2 (page 33) considered the surface water pathway, and Section 3.6.3 (page 34) considers the ground-water pathway at the Site. The latter discussion did not account for ground-water as a pathway for pollutants located away from the creek to migrate to the creek. The only reference to migration of pollutants in ground-water in Section 3.6.3 is to the effect that migration might occur to the southeast. Clearly (i.e., as the RoWD demonstrated) ground water recharges the creek and therefore, ground-water pollution is potentially migrating from any given contaminant source zone to the creek. The conceptual site model should be revised to include explicit consideration of migration of pollutants toward and into the creek.
14. Section 3.6.2 (page 34) indicated that based on analysis of surface water samples OSMSP-1 and OSMSP-2, *"surface water is not impacted by upgradient sources nor by the landfill constituents potentially infiltrating into the creek."* This conclusion is not supported by a statistical analysis or rationale. The City should provide a detailed discussion including a reference to the specific sampling data used in the analysis, to support the assertion that surface water has not been affected by upgradient sources or by the landfill. Any use of statistics should include a discussion of the justification for using the chosen statistical methodology.
15. Section 3.6.3 (page 34) of the RoWD stated that:

"Aquifer tests have not been conducted at he landfill to determine the hydraulic properties of the soils beneath the landfill; therefore, data should be collected so that constituent transport rates can be estimated, or estimated based on the hydraulic properties of the subsurface materials that comprise the uppermost aquifer."

Aquifer testing and analysis should have been completed during the updating of the conceptual site model. Comprehensive aquifer testing, including methodologies, and/or analytical methods, as well as the justification and/or rationale for using these test mechanisms should be completed at the Site.



16. The rationale or discussion regarding the observations employed to conclude that flows in the creek during the dry season "*appear to be on the order of 10 gallons per minute*" (Section 3.7.2, page 36) was not included in the RoWD.
17. In a summary of Section 3 (page 38), the following conclusion was presented: "*Background surface water for both dry and wet season flows exceed RWQCB basin standards.*" The RoWD did not provide a list of the constituents found to exceed Basin Plan standards, or a reference to the standards themselves.
18. Directive C.1.c of Order No. R9-2006-0044 required the City to propose Water Quality Protection Standards (WQPS) for each proposed Constituent of Concern in accordance with CCR Title 27, section 20390, and provide the data to support each limit. According to Section 4.0 (page 40), WQPS for the Site were developed, in part, using ground-water data collected from background monitoring wells SM-1 and SM-6. The Regional Board previously informed the City that the use of data collected from the aforementioned wells is inappropriate since these wells have shown contamination sporadically since 1991, and are therefore invalid for use as background wells. It was for this reason that the Regional Board informed the City that a new upgradient well was necessary for the purposes of establishing background concentrations at the site. An insufficient number of samples were collected from upgradient well SM-9 to establish a sampling population from which WQPS, representative of upgradient ground-water conditions, can be determined.
19. The RoWD proposed the use of tolerance limits (with 95 percent confidence and 95 percent coverage) for determination of background for inorganic chemicals in ground-water, while using the 95 percent upper confidence level for determination of background for surface water (within the creek). No rationale was presented to support the use of either criterion, and therefore, why either approach provides an appropriate method for determining background levels is unclear. Furthermore, tolerance limits and confidence levels are statistical methods that can only be used when the data are known to be normally distributed. The RoWD includes no demonstration (e.g., normality test results with accompanying rationale) that the data are normally distributed.
20. Table 5 of the RoWD listed the 95 percent upper confidence limits (UCLs) for inorganic chemicals. A total of five samples are used to calculate the 95 percent UCL for total dissolved solids (TDS), chloride, and sulfate, while four samples are used for the other inorganic constituents. There are two problems with such a limited set of data. First, when the number of samples (N) is low, normality testing produces a result in which confidence is low. Second, a low "N" value produces unnecessarily high upper confidence limits. When the 95 percent UCL errs on the high side for a background calculation, the result is less protective of beneficial uses. Moreover, the 95 percent UCL will likely decline with the collection of additional data. Additional upgradient data should be collected and the analysis rerun.

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21. The RoWD, Section 4.4 (page 44), states:

"The WQPS proposed here are generally less (more conservative) than site-specific cleanup levels developed at the neighboring Singer site, a site that is relevant because it is located approximately 800 feet downgradient of the landfill, and VOC levels from that site are relevant for consideration at Sam Marcos I Landfill."

Table 9 of the RoWD is referenced to show that the cleanup levels that were specified for the Singer site (currently known as the BAE site) are generally higher than cleanup levels proposed for Bradley Park. The report noted that the cleanup levels at BAE were based on a risk assessment that considered various possible pathways and receptors. The comparison between the BAE site and Bradley Park is inappropriate for the following reasons:

1. Directive A of Addendum No. 1 to Cleanup and Abatement Order (CAO) No. 88-89, (in which the cleanup levels for the former BAE site were set) stated:

"The California Toxics Rule (CTR) provides water quality criteria that address the bioaccumulation pathway. Cleanup levels specified in Directive A.1 must result in attainment of CTR water quality criteria in Sam Marcos Creek."

The Technical Analysis for the CAO included an explanation of how the CTR was applied. Some of the factors unique to the former BAE site that do not apply at Bradley Park are listed below:

- At the former BAE site, a cleanup level greater than background was appropriate because it had been demonstrated that cleanup to background was demonstrated to not be feasible (in accordance with Resolution No. 92-49). This demonstration included empirical data such as the fact that extensive excavation had been performed in the contaminant source zone and eight years of pumping and treating of ground-water had been performed. That cleanup to background at Bradley Park is infeasible has not yet been demonstrated.
- Source zone impacts at the former BAE site were located about 600 feet from San Marcos Creek. This proved to be a significant factor in the overall risk to the creek. Note that the extent of source zone impacts have not yet been delineated at Bradley Park.
- At the former BAE site, over 12 years of monitoring data had been collected, showing that the contaminant plume was stable and that it had attenuated significantly with distance, away from the source zone. Since the extent of the ground-water plume has not been characterized, plume stability has not been demonstrated.

- At the former BAE site, site-specific modeling was performed to derive risk-based cleanup levels based on the site's unique circumstances (including soil type, ground-water migration rate, location of the contaminant source zone, etc.) to arrive at cleanup levels that were based on that particular environment. For example, determination of vapor risk was based, to a significant degree, on the specific soil type found at the BAE site. These same conditions do not exist at Bradley Park, and therefore, the risk-based cleanup levels do not apply to Bradley Park.
- The discharger at the former BAE site was required to perform fate and transport modeling to demonstrate that the impacts to soil and ground-water *would not result in contaminant concentrations greater than the levels specified in the California Toxics Rule (CTR)*. As such, the only appropriate criteria that can be applied to both sites are the levels from the CTR. Modeling has not been performed at the Bradley Park site to assess whether landfill waste might result in pollutant concentrations in surface water that exceed the CTR criteria.

Based on the above considerations, CTR criteria applies to the surface water in the Bradley Park creek. Applying ground-water cleanup levels from the former BAE site to Bradley Park is not appropriate because the levels that were set at the former BAE site were based on the unique circumstances of that site, including its remediation history, distance from the source zone to receiving water, contaminant attenuation rate, etc.

22. The RoWD proposed to use Environmental Screening Levels (ESLs) as Water Quality Protection Standards for organics. ESLs are screening level values that were developed and are still being developed by the California Regional Water Quality Control Board, San Francisco Region. An Interim Final guidance document entitled, "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater" (November 2007) discusses the appropriate use of the ESL approach. Page ES-2 of this document notes that,

"The Tier 1 ESLs presented in the lookup tables are NOT regulatory cleanup standards. Use of the ESLs in this document in general is intended to be entirely optional on the part of the regulated facility and subject to approval of the case manager in the overseeing regulatory agency."

On Page ES-3 of the guidance document, a significant limitation of the model is discussed:

"Reliance on only the Tier 1 ESLs to identify potential environmental concerns may not be appropriate for some sites. Examples include sites that require a detailed discussion of potential risks to human health, sites where physical conditions

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substantially differ from those assumed in development of the ESLs (e.g., mine sites, landfills, etc., with high or low pH) and sites where impacts pose heightened threats to sensitive ecological habitats. The latter could include sites that are adjacent to wetlands, streams, rivers, lakes, ponds, marine shorelines, or sites that otherwise contain or border on areas where protected or endangered species may be present."

Some of the conditions found at Bradley Park do in fact warrant a higher level of environmental concern based on heightened sensitivity. Some of the factors listed above that were not accounted for in ESL modeling and which exist at Bradley Park include its proximity to both a stream (the creek) and a sensitive ecological habitat (the wetlands area east of the site). Also, because Bradley Park is a landfill site that is co-located with a stream, attenuation factors that would normally apply in fate and transport modeling (a key assumption in the type of modeling that was performed in deriving ESLs) do not apply. Also important is that the procedure for applying ESLs is still under development. A revised draft version of the ESL approach which includes the use of much more site-specific data is currently being tested. As such, the method proposed (using default ESLs from a lookup table) is deficient in that it does not adequately account for site-specific variables, particularly those site factors discussed above that are not appropriately accounted for in a Tier 1 evaluation. Since the site has not been assessed, to propose either cleanup levels or cleanup for the Bradley Park site is premature. ESLs are not acceptable as cleanup criteria. In addition, establishing that cleanup to background is not feasible prior to proposing cleanup levels that exceed background will be necessary.

23. Section 5.0, et seq., (page 45) presented an engineering feasibility analysis for proposed corrective action alternatives for the Bradley Park landfill. Corrective action alternatives cannot be evaluated at this time, primarily because a comprehensive site assessment must be completed prior to the proposal of corrective action alternatives. Because the site conceptual model must be modified, and proposed cleanup levels re-evaluated, there will be other factors that are currently unknown, which must be taken into account when proposing corrective action alternatives. Note for example, that mitigation of pollutants migrating in ground-water from contaminant source zones to the channel was not considered as a corrective action objective (probably because it was not addressed in the conceptual site model). Also, the City did not propose the use of a landfill gas extraction system, other than passive ventilation. If the City's contention is that landfill gas is impacting ground-water, and possibly surface water (via contact with ground-water), then a more aggressive landfill gas extraction system may be warranted for the Site.

24. In Section 5.2.1 (page 50), the following statement appeared:

"For approximately the same construction and permitting costs, onsite disposal is possible. This would be achieved by removal of landfill cover in the southeastern



portion of the site, placement of excavated waste, and replacement of the existing soil cover."

On-site disposal is not an option for the waste removed under any corrective action alternative. The Bradley Park Landfill is a closed landfill, and therefore, any waste that is excavated as part of the remediation process must be disposed of off-site. The City will be required to perform a waste characterization analysis on all materials excavated at the site in order to determine the type of facility that is appropriate for disposal (i.e., non-hazardous Class III landfill, or a hazardous waste Class I landfill). The Regional Board will require a copy of disposal logs and receipts for all materials removed from the site.

The City will also need to re-compute the costs associated with the various corrective action alternatives in order to account for the waste characterization analysis and off-site disposal of all materials removed during remedial activities.

25. Section 6.0 (page 59) presented the preferred corrective action alternative for the Bradley Park landfill. The pathway wherein polluted ground-water migrates to the creek was not included in the site conceptual model and therefore was not included in the listed corrective action objectives. This corrective action objective should be included along with appropriate corrective action alternatives once a comprehensive site assessment has been completed.

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 Mr. Mike Mercereau
 201 Mata Way
 San Marcos, CA 92069-2949

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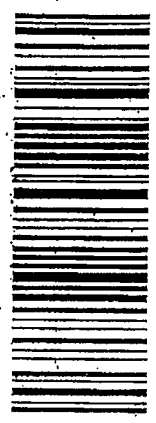
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Sent To: Mr. Mike Mercereau
 Street, Apt. No., or PO Box No.: 201 Mata Way
 City, State, ZIP+4: San Marcos, CA 92069-2949

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