

**California Regional Water Quality Control Board
San Diego Region**

Response to Comments Report

**Tentative General Order No. R9-2012-0001, Tentative Monitoring
and Reporting Program No. R9-2012-0002, and Tentative
General Order No. R9-2012-0003, General Waste
Discharge Requirements for Closed, Abandoned,
Or Inactive Nonhazardous Solid Waste Units
and Burn Sites in the San Diego Region**

April 26, 2012

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INTRODUCTION I

In accordance with California Code of Regulations (CCR) Title 27, section 21730, the San Diego Water Board provided a 45-day public comment period for tentative General Orders Nos. R9-2012-0001 and R9-2012-0003, and tentative Monitoring and Reporting Program (M&RP) No. R9-2012-0002. Comments were received from the County of San Diego Department of Public Works, and Orange County Waste and Recycling. This response to comments document provides a copy of the comments received, and the associated responses. In this document comments are organized by topic, and some have been paraphrased to avoid duplication. Comments received from the County of San Diego Department of Public Works are listed first, followed by the comments received from Orange County Waste and Recycling. When appropriate, the tentative General Orders and/or M&RP were modified to incorporate the changes proposed by stakeholders.

COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS

1. ***Overly Prescriptive Groundwater Monitoring and Reporting Requirements.*** *The groundwater monitoring and reporting requirements in the tentative Orders are more prescriptive and stringent than Title 27 requirements. Examples include, mandatory structure of time-series plots, requirement to include time-series plots semi-annually requiring dischargers to provide multiple years of tabulated data in each semi-annual report, and prescribing the methods of statistical analysis to evaluate data, when Title 27 provides alternatives. The CAI Units have been inactive for 30 to 50 years, many with robust groundwater data sets comprising 10 to 20 years of routine monitoring. Compliance with additional monitoring and reporting requirements proposed in the tentative orders dictates more “monitoring for the sake of monitoring” with no potential for corresponding improvement to water quality. This will reduce effective use of resources to maintain the inactive landfills cover systems and gas control systems which are proven methods of reducing potential for groundwater impacts. The County believes it would be more appropriate for the RWQCB to promote utilizing the data obtained throughout the years of effort by the dischargers to document the low-threat nature of the CAI Units. This should be the basis for allowing the de-escalation of monitoring and reporting requirements, and the implementation of performance-based programs.*

The tentative Orders hold dischargers whose facilities were designed, operated, and informally closed (per standards consistent with the state of practice protocols during their operation) to the higher compliance standards of modern day landfills specifically designed for operation and post-closure care in accordance with the existing Title 27 regulatory framework. While not designed to current landfill standards, formal closure for CAI Units currently enrolled under Order 97-11 is not

required. Costs for pursuing or obtaining closure at inactive CAI Units would not be significantly greater than any benefit related to improvement of water quality, and protection of public health, and the environment. The County believes that indefinite semi-annual monitoring, with no performance based or site specific criteria for reducing the monitoring and reporting frequencies is inappropriate due to the low-threat nature of the enrolled sites (currently all County sites to be enrolled in the tentative Orders have the lowest threat and complexity ranking).

The three County landfills currently enrolled in Order 97-11 stopped accepting waste in 1962 (Hillsborough), 1964 (Gillespie), and 1977 (Encinitas II). Based on the age of the landfills, the relative stability of the landfills as evidence by over 15 years of monitoring data and low risk posed to water quality and surrounding communities, less stringent and less costly monitoring programs are warranted and would be more appropriate.

Requirements in the tentative Orders will significantly increase the cost for maintaining compliance, with no feasible exit strategy or mechanism to reduce the future costs. The County believes that annual groundwater monitoring and reporting should be considered in accordance with the Allowable Engineering Alternatives described in Title 27, section 20380(e), and approved as long as the proposed monitoring achieves the goals of the water quality monitoring program which are to detect, characterize, and respond to releases from the unit. The County voluntarily performed a Long-Term Monitoring Optimization (LTMO) at the Encinitas II Landfill to evaluate the performance of the groundwater monitoring program. The results of this study were presented to the RWQCB and demonstrated that an annual monitoring frequency was warranted and would not compromise the goals of the monitoring program. There is at least one inactive landfill in Orange County which has been granted RWQCB approval for an annual groundwater monitoring and reporting frequency. The County believes that a reduction to an annual groundwater monitoring and reporting frequency is warranted for each of its three landfills currently enrolled in Order 97-11 and subject to the requirements described in the tentative Orders.

The County put forth additional comments on the need for a risk-based approach to justify decreased monitoring regarding several specific sections of the information sheet and tentative M&RP including; 1) Information Sheet, Part IV, section A – Purpose; 2) Information Sheet, Part IV, section B - Detection Monitoring Program; 3) Information Sheet, Part IV, section C - Comparison to Background; 4) M&RP Finding No. 4 - Basis for Groundwater Detection Monitoring; 5) M&RP Part I - Compliance Reporting; and 6) M&RP Part V - Provisions.

Response:

Groundwater monitoring at landfills falls into three general categories; detection, evaluation, and corrective action monitoring. Detection monitoring programs are designed to identify new releases, and for this tentative M&RP, to evaluate the effectiveness of monitored natural attenuation to restore water quality at CAI Units that have leaked in the past. According to the landfill regulations, if the results of detection monitoring indicate that there is statistically significant evidence of a release, then the Discharger must implement the requirements of an evaluation monitoring program. In evaluation monitoring, the Discharger verifies the release, completes a thorough site investigation to determine the nature and extent of the release, completes an engineering feasibility study for proposed corrective action measures, and submits this information in an updated Report of Waste Discharge. Once the proposed corrective action measures have been approved by the San Diego Water Board, the Discharger is issued a site-specific corrective action monitoring and reporting program. In a corrective action monitoring program, the Discharger must implement the preferred remedial alternative, and conduct groundwater, surface water, and vadose zone monitoring, provide data to evaluate compliance with water quality objectives and to evaluate the effectiveness of the corrective action program.

Under General Order No. 97-11, Dischargers were required to implement a detection monitoring program. The tentative M&RP continues this requirement; however, Dischargers now must also comply with the requirements found in CCR Title 27.

Unfortunately, most of the CAI Units within the San Diego Region have leaked to some degree because they are unlined. As noted by the County, however, historic monitoring results show that for almost all CAI Units, waste constituent concentrations in groundwater are stable or decreasing. The San Diego Water Board does not plan to require the more burdensome evaluation/corrective action monitoring at CAI Units for these “historic” releases. Rather, detection monitoring in the tentative M&RP requires semi-annual monitoring with annual reporting to ensure that a second release has not occurred, and to document that waste constituents are naturally attenuating. If detection monitoring results document a second release from a CAI Unit, the San Diego Water Board would require evaluation/corrective action monitoring at that time.

The County proposes to replace the detection monitoring requirements in the tentative M&RP with a “risk-based” approach where monitoring frequency depends on the threat to water quality posed by a release from the CAI Unit. Decreasing semi-annual monitoring requirements in situations where a “low threat” release has occurred might be reasonable in some situations, but this approach does not conform with CCR Title 27 requirements. At this time, there are no provisions in the regulations to allow implementation of a risk-based monitoring approach. The San Diego water Board Land Discharge Unit is willing to coordinate with the County and State Water Resources Control Board to explore rulemaking to allow a risk-based monitoring approach at CAI Units in the future.

As noted by the County, CCR Title 27, section 20380(e) allows the Discharger to propose an engineered alternative to the prescriptive monitoring and reporting standards outlined in the regulations. To be eligible for the engineered alternative provision, a CAI Unit must be in compliance with all of the goals prescribed for each of the three monitoring programs; detection, evaluation, and corrective action. Because most of the CAI Units have leaked, they have not met the goals of corrective action monitoring, and are therefore not eligible for an allowable engineered alternative to the monitoring requirements in the tentative M&RP.

2. ***Information Sheet – Statistical Analysis.*** *This section prescribes Intra-well data comparisons, which are commonly used in Corrective Action Monitoring Programs, or in areas where spatial variability exists such that releases downgradient could be masked by comparing constituents to inter-well values. The County suggests removing this prescriptive requirement, instead allowing the discharger to utilize the most suitable method for data comparison (i.e., inter-well or intra-well) based on site-specific data.*

M&RP Part III. Statistical Analysis. *Most 97-11 sites have been monitored for 15 years or more, have documented releases which have resulted in relatively minor groundwater impacts, and have robust data groundwater data sets document COC concentration trends which show relatively minor groundwater impacts are stable to improving. Therefore, the need for more onerous statistical evaluation for these low-threat landfills does not appear to be warranted when a less prescriptive and simpler method can be used to evaluate changes in water quality.*

Response:

CCR Title 27 requires a statistical analysis on all sampling data prior to providing this data to the Regional Water Boards. Dischargers currently submit monitoring reports, including analyses of sampling data, on a semi-annual basis. Under the tentative M&RP, Dischargers will be required to complete a statistical analysis of sampling data, and submit the results on an annual basis.

The primary difference between the detection monitoring and reporting requirements in General Order No. 97-11 and tentative M&RP No. R9-2012-0002 is the addition of a statistical analysis used to determine whether there has been evidence of a release from the site [CCR Title 27, section 20415(e)(7)]. The specifications for the statistical analysis in the tentative M&RP are more prescriptive than the requirements found in CCR Title 27. CCR Title 27 provides alternative methods for completing the statistical analysis required for groundwater monitoring programs, however, in order to create a uniform approach to statistically analyzing groundwater data, the tentative M&RP requires the Dischargers of CAI Units to conduct their analyses using intra-well prediction limits. The tentative M&RP has provisions for the San Diego Water Board to approve the use of alternative statistical methods if the Discharger provides a demonstration that the alternative method will provide the earliest possible detection of a release, consistent with CCR Title 27 requirements.

- 3. *M&RP Part I, Compliance Reporting.*** *Semi-annual Monitoring and Maintenance Report: Generally, all groundwater monitoring components are satisfied with the County's current reports, excluding Time Series Plots (TSPs) for each semi-annual report. Based on the age and stability of the landfills to be covered by this order, significant changes in water quality that would warrant semi-annual preparation and presentation of TSPs are unlikely. GeoTracker allows the caseworker to create TSPs if there are concerns, so additional data presentation in the reports is unwarranted.*

M&RP Part I. Section B.1. *There appears to be unnecessarily prescriptive detail regarding the time series plots. Site-specific conditions and data sets should be used to determine the most appropriate method for data presentation, and conditions may be encountered where alternative data presentations may be appropriate. This section also indicates that the RWQCB will base their determination to order further investigations for releases on the trends in data. Trends alone should not be used as the basis for requesting detailed investigation, the concentrations of the COCs should be considered when assessing the significance of potential impacts with respects to regulatory standards (such as*

MCLs and CDPH notifications levels). Most 97-11 sites have been monitored for 15 years or more, and have documented releases which have resulted in relatively minor groundwater impacts. In many cases, minor groundwater impacts are stable to improving. Therefore, what is the rationale for significantly altering monitoring and reporting programs for these low-threat sites?

Response:

The County is correct that the tentative M&RP prescribes specific information to be presented in the annual reports. While CCR Title 27 does allow alternatives, the San Diego Water Board is attempting to standardize the reports, so that all Dischargers with sites enrolled in the tentative M&RP will present the data uniformly, in a format that facilitates the review by the San Diego Water Board. The specific issues raised in the comments pertain to the presentation of data and should not significantly increase the cost of preparing the reports. The standardization of the reports will however, reduce the San Diego Water Board staff's time needed to review the reports. This will allow the San Diego Water Board to more effectively utilize available resources.

- 4. **M&RP Part I. Section A.2.** It appears that the tentative Order will require a separate report to be prepared semi-annually documenting site conditions. Site Inspection Reports which document site conditions and include pertinent information required by Title 27 are currently included in a less formal format as an appendix in semi-annual groundwater monitoring reports. These documents should be sufficient to document the conditions at inactive sites during the monitoring period. Additionally, the name of the report in the MRP differs from that list in R9-2012-0001.*

Response:

The language in the tentative M&RP has been corrected to mirror the language found in tentative General Order No. R9-2012-0001 for the annual Site Conditions Certification Report. The documents currently submitted (i.e. inspection reports) are sufficient to satisfy this reporting requirement. There is no need for additional report submittals.

- 5. **M&RP Section A.2.** Please cite the section of Title 27 where this is required. If not required, this request appears unwarranted. Additionally, the MRP implies a "Moving" window approach where once new data are tested for the purpose of adding to background, the previous two years of data are dropped. Particularly in the case of intrawell analyses, unless there is a reason or mandate that requires the*

older data be removed, generally an increased background sample size is preferred to reduce the risk of false positives as well as provide limits that characterize the true background (i.e. higher statistical power).

Response:

The requirements for the background data set are based on requirements found in CCR Title 27, section 20415(e)(6) and (e)(10). The tentative M&RP was worded so that the Discharger “may retire” the oldest two years of background data. While a larger data set is typically beneficial, there are special cases, (such as changing background chemistry due to changes in nearby farming practices), that may make a smaller, recent data set more appropriate for the site. This section allows the Discharger to choose whether to retire the oldest data for the site.

6. ***M&RP Section A.2.c.i. Commonly Qualified Constituents.*** *This section should provide an example of these constituents similar to section ii. (i.e. general chemistry or select metals parameters). Also this section indicates that interwell analyses must be used for the well if the median of the well’s data is greater than the pooled background data when compared through Box Plots. It would be worth evaluating the constituent among upgradient wells through something like ANOVA to determine if there are differences among the upgradient wells, which could indicate spatial variation. Some constituents will demonstrate that while others will not.*

Response:

Commonly quantified constituents include total dissolved solids, chloride, sulfate, and nitrate which are all typically detected in background samples. CCR Title 27 provides a general framework to be implemented in site-specific WDRs. The tentative General Orders and tentative M&RP require a specific method within this framework to establish consistency among multiple sites in the Region. The San Diego Water Board will consider alternative approaches if proposed and substantiated. The County may conduct any additional analysis that it deems reasonable or necessary.

7. ***M&RP Section B.1.a.*** *Section A.4 indicates that two retests must to be performed and that this retest method is capable of providing a determination of a measurably significant detection. What is the purpose of further analysis by using the results from retests to evaluate the two triggers in section B.1? This requirement appears redundant if performing simple retests on select constituents can confirm measurably significant detections.*

Response:

The requirement for intra-well data comparisons is the default provided in CCR Title 27. This criterion was specified so that all sites enrolled under the tentative General Order would analyze the data in a similar manner. This approach streamlines the process and minimizes the overhead cost because contractors will not have to review numerous site-specific requirements. This section also includes language that allows an alternate statistical analysis method to be used if the Discharger demonstrates that an alternative method is more appropriate based on site-specific conditions.

The purpose of the two triggers used in the statistical analysis is to address the uncertainty associated with “trace” values between the detection limit and quantification limit. Without this section, if a single “trace” value was detected a retest would be required. However, these trace detections are often laboratory contamination or other artifacts not associated with an actual release. The two trigger retest meets the performance criteria in Title 27, section 20415(e)(9). If a demonstration is made that a simple retest method will meet the performance criteria, it can be considered for approval by the San Diego Water Board. The two-trigger retest minimizes the likelihood of a “false positive” (i.e. identifying a release when no release has actually occurred).

8. ***Overly Burdensome Laboratory Requirements.*** The County had specific comments regarding the laboratory requirements specified in the tentative M&RP. The County’s specific comments on this issue are as follows.

M&RP Part I. Section C.1. *Most 97-11 sites have been monitored for 15 years or more and have a robust background data set to demonstrate relatively stable conditions and little risk to water quality or the communities near the landfills. In many cases, a reduction in monitoring from semi-annual to annual is warranted (e.g., Encinitas II). Additionally, most if not all sites have had SWATs performed to characterize the nature of discharges from the landfill. Therefore, it is unlikely that the effort associated with collecting the data and preparing a 5 year COC report will improve the protection of water quality.*

M&RP Part II. Section A.3. *This section requires the laboratory director signature. The County’s current lab meets this requirement by a statement in the case narrative provided with each data package provided to the RWQCB. The RWQCB has indicated in the Information Sheet for these tentative Orders that the data packages currently provided are sufficient. To remain consistent, the RWQCB should provide*

a statement to allow laboratory personnel designated by the Laboratory Director to certify analytical reports.

M&RP Part II.A.6. *This section requires all sampling to be performed in accordance with a RWQCB approved sampling and analysis plan. These sites have been monitored for 15 years or more. Therefore, this requirement should only apply to newly enrolled sites where monitoring has yet to be started.*

M&RP Part II. Section A.9.d. *This section is unnecessarily prescriptive and requires laboratory reports to provide the identity and volume of reagents used. The standard operating procedure (SOP) for the method used provides the identity and volume of reagents applicable to the method. Reference to the method is sufficient. The inclusion of this data provides no additional benefit or value to the monitoring and reporting program and is unwarranted.*

M&RP Part II. A.9.g. *Laboratory Quality Assurance Results. The request for response factors is not part of a Level II package and can only be obtained through a Level III data package which provides quantification reports and chromatographs. As most of these sites are low-risk sites the request for this additional information is not warranted, nor does it bear reasonable benefit to the additional cost to provide this data. This would result in a greater than 20% increase in analytical costs. The inclusion of this data provides no additional benefit or value to the monitoring and reporting program and is unwarranted.*

M&RP Part II. Section A.10.i. *The requests for identification TICs in 5 year COC reports do not bear reasonable benefit at these low-threat landfill sites. Additionally, the supplemental QA/QC procedures being required by the RWQCB should be at the discretion of the discharger to perform.*

Response:

The requirements found in this section of the tentative M&RP are not substantially changed from the requirements prescribed in the M&RP for General Order No. 97-11. The requirement to provide the laboratory director's signature, to list the reagents used during the laboratory analysis, and to provide the quality assurance results are unchanged from what the County is currently required to provide in its semi-annual groundwater monitoring reports. Nonetheless, this section of the tentative M&RP has been modified to only require the laboratory director's signature and, upon request by the San Diego Water Board, the list of reagents used during the analysis.

The 5-year constituents of concern (COC) scan is a minimum standard required by CCR Title 27, section 20420(g); however, the analyte list is not prescribed. The San Diego Water Board will allow the discharger to use the same analyte list for the semi-annual monitoring as for the 5-yearly COC scan. This eliminates any additional analysis or reporting.

The requirements for identification of tentatively identified compounds (TICs) in the 5-year COC scan was also required in the I M&RP for General Order No. 97-11, though this requirement has been relaxed in that a separate report no longer needs to be submitted by the Discharger. The identification of TICs is necessary to verify whether previously unidentified waste constituents are present in groundwater at concentrations that impair water quality. If a new constituent of concern is verified through this procedure, the COC list for that CAI Unit will be modified to incorporate this new information. The comment did not explain the difference between a Level II and Level III laboratory data package, however, if the Level III package is the only way to identify unknown chromatographic peaks (i.e., TICs), then it is a necessary component of the five-year COC scan. Because this information is only required once every five years, the County should not incur a significant increase in the routine costs associated with groundwater sampling and analysis.

The previously approved sampling and analysis plans (SAP) will meet the requirements in the tentative M&RP, as long as they have been updated to reflect current methodologies and sampling protocols, and are updated appropriately when needed. Having this requirement allows new sites to be enrolled in the tentative General Order, should a new CAI Unit be identified in the Region.

9. **Overly Burdensome Maintenance Requirements.** The County also had a number of comments regarding the Maintenance Specifications found in tentative Orders Nos. R9-2012-0001 and R9-2012-0003. The County's specific comments are as follows.

No Reduction/Exit Strategy for Maintenance and Monitoring. *With the exception of clean closure or entering into the final closure process, the current regulations and tentative Orders provide no de-escalation alternatives for maintenance and monitoring at inactive CAI Units.*

Overly Prescriptive Maintenance Requirements. *The County believes it is unwarranted for the RWQCB to request closure and post-closure type maintenance requirements at sites where no formal closure process is required. The County and the LEA perform quarterly inspections of the inactive landfills. Any issues identified during these inspections are promptly addressed with as-needed and routine cover maintenance to ensure the covers are performing as required by Title 27. The*

prescriptive cover monitoring and maintenance requirements presented in the tentative Order No. R9-2012-0002 are unwarranted for these inactive landfills and should be limited to the performance standards specified in Title 27, which do not require cover certification reports, or laboratory analysis of cover materials.

Diversion of Funding. *The County has concerns that compliance with the unnecessarily stringent tentative Orders will divert funding away from long-term maintenance, monitoring, reporting, and regulatory compliance at the County's inactive landfills and burn dumps. The County is proud of its record of inactive landfill maintenance and monitoring over the past 20 years, and had anticipated less onerous regulatory requirements based on the age and relatively insignificant water quality impacts associated with these inactive landfills. Compliance with the requirements presented in the tentative Orders will result in unnecessary or redundant data collection and evaluation, and unwarranted studies that will consume public funds on monitoring and investigative activities that are unlikely to result in corresponding improvement in water quality or public safety.*

Information Sheet - Section H. CAI Unit Maintenance Specifications. *It appears that the RWQCB is using the example of CAI Units with potential to discharge significant amounts of leachate and/or landfill gas that are not equipped with leachate or LFG control system to justify the need for issuing the tentative Orders. The County feels that the description provided by the RWQCB is not a fair representation of the inactive landfills to be enrolled in the tentative Orders. Currently, the County's inactive CAI Units to be enrolled are equipped with LFG control systems, have well maintained cover systems, and have been assigned the lowest threat and complexity ranking given by the RWQCB. The County feels that the RWQCB should not hold CAI Units with established LFG control systems and well maintained cover systems (and low threat and complexity rankings) to the same monitoring and reporting as poorly maintained facilities with higher threat and complexity rankings.*

CAI Unit Order - Finding A.4. Threat to Water Quality. *As discussed at length during the 1 November 2011 workshop, the County understands that the RWQCB acknowledged that the inactive landfills currently enrolled in 97-11 have been investigated, monitored, and maintained for 15 years or more. As demonstrated by the robust monitoring datasets for these inactive landfills, water quality impacts are relatively minor, show stable to improving water quality trends, and that routine cover maintenance and operation of landfill gas management and control systems (at many of the landfills) are effectively managing the potential water quality impacts associated with these inactive landfills. It is also understood that most of these*

inactive landfills have been assigned a threat complexity ranking of “3C,” which is the lowest threat ranking that can be assigned. Therefore, the updated WDRs and M&RP should reflect the potential water quality impacts associated with these inactive “low risk” landfills, and allow for a more streamlined, flexible, and efficient program to be developed so that limited resources can be directed to effective management rather than unwarranted studies, redundant monitoring and analyses, and reporting.

CAI Burn Site Order - Finding A.4. *As discussed during the 1 November 2011 workshop, the County understands that the RWQCB noted that the burn dumps currently enrolled in Order 97-11 have been assigned at threat complexity ranking of “3C.” In addition, data collected at burn dumps already enrolled in Order 97-11 and other burn dumps in San Diego County indicate these sites do not pose a significant threat to water quality when properly covered and maintained. The County and LEA perform routine inspections of the burn Dumps currently enrolled in Order 97-11, and routine cover maintenance has been demonstrated to be the most effective means of managing the former burn dumps. Therefore, the County requests that the RWCB consider revising the language in the tentative orders to reflect the low-threat nature of these burn dumps, and streamline the requirements to reduce or eliminate items that add little if any value to the protection of water quality.*

CAI Unit Order - Section C.3. Site Conditions Certification Report.

Inconsistencies between the WDR and MRP exist regarding the title and components of the report to document site conditions. While the WDR lists the Site Conditions Certification Report which includes general performance standards for the cover system, the MRP requires a Cover Assessment Certification Report be submitted, which includes data pertaining to the thickness, permeability, and engineering properties of the cover.

As discussed during the 1 November 2011 workshop, ongoing maintenance performed in accordance with 97-11 has likely resulted in increasing cover thickness at these landfills since routine monitoring and maintenance was initiated in the early 1990s. Quarterly inspections are currently performed by the County and LEA to document site conditions and identify areas requiring repair or maintenance. The county believes this is a far more useful means of assessing cover performance and identifying necessary modifications to the maintenance program than an annual cover certification report.

Post-closure maintenance requirements in 27 CCR [§2 1090(b) and (c)] do not mention this periodic assessment nor to 20695, 20700 and 20705 that address interim covers and performance standards for interim covers. If the existing covers

are adequately performing and protecting water quality then investigations to periodically investigate and characterize the physical properties of the cover would be unnecessary and unwarranted. The County agrees with performance-based criteria and triggers for cover performance as documented in the WDRs, but the language in this section of the WDRs conflicts with the requirements of the Cover Assessment Certification Report included MRP section C.3. The County believes Section C.3 of the MRP should be revised to be less prescriptive and consistent with Section C.3 of the WDRs.

Additionally, thickness measurements as prescribed will result in significant cost and effort and could damage integrity of landfill cover system, damage vegetation and habitat regulated by various resource agencies, and expose waste that would require special handling. The County believes that the cover certification requirements should be limited to maintenance and performance, with the performance of the cover systems being evaluated against data collected from routine groundwater monitoring. If there are no adverse water quality impacts attributable to a deficient cover, then the need for prescriptive cover assessment requirements would be eliminated.

M&RP Part I. Section C.3. *Regarding the Cover Assessment Certification Report, the County understood the prescriptive specifications in this section would be replaced with requirements for a performance-based Site Conditions Certification Report as outlined in R9-2012-0001 and -0003, which will also serve to meet stormwater requirements. This section should be revised to be consistent with the other tentative Orders.*

Response:

As requested by the County, the language in the tentative M&RP was modified to mirror the requirements found in Tentative Order No. R9-2012-0001. Therefore, a cover certification report, which included thickness measurements and laboratory analysis of cover materials, is no longer required.

With these changes, the maintenance requirements place no new burdens on the Dischargers. The quarterly inspections performed by the Discharger are currently required by General Order No. 97-11, and therefore the inspection reporting requirements found in tentative General Order Nos. R9-2012-0001 and R9-2012-0003 are consistent with current practice.

The tentative General Orders also provide some cost savings to the County. For example, industrial storm water controls are included in the tentative General Orders so that CAI Units and Burn Sites no longer need to enroll in the Industrial Storm

Water Permit, pay the annual fee, or submit separate storm water reports. Additional savings will come from the reduction in reporting from a semi-annual to an annual basis.

The County erroneously states that CAI Units have been assigned a ranking of 3C, the lowest ranking for threat to water quality and complexity. In fact, all CAI Units in the San Diego Region enrolled in General Order No. 97-11 are assigned the second highest ranking of 1B. These rankings determine the enrollment fees paid annually by the Dischargers for regulation of their CAI Units. The 1B ranking-s were assigned at the time the units were enrolled in General Order No. 97-11 based on the definitions provided in CCR Title 23, section 2200, and on the following facts: (1) CAI Units were not closed in accordance with either the current or former landfill regulations; (2) they are unlined, (3) they are leaking, and (4) in most cases, there are inadequate records regarding the types and quantities of wastes in the landfills.

While in many cases the concentrations of the wastes in groundwater do not violate the water quality objectives in the Basin Plan, these sites will continue to pose a risk to water quality for as long as the wastes remain in place. For example, groundwater data collected from the South Chollas Landfill, indicated that a release of landfill-related waste constituents occurred ten years ago, and that the constituent concentrations stabilized. Groundwater monitoring results for 2004, however, indicated that a new release from the South Chollas Landfill had occurred. The South Chollas Landfill ceased operation more than 30 years ago, did not formally close in accordance with current regulations, and up until a few years ago, appeared to have stable concentrations of waste constituents in groundwater. The South Chollas Landfill is a good example of how CAI Units remain a threat to water quality, even after appearing stable for many years.

The tentative Orders are general orders issued pursuant to Water Code section 13263(i). As general orders, they are intended to provide requirements for a number of sites with a variety of site-specific conditions. Not all CAI Units enrolled in General Order No. 97-11 are equipped with a landfill gas extraction system, and therefore, it is appropriate to require all CAI Units to be well maintained and monitored to ensure the protection of water quality. If the County's sites are already well maintained and have operational landfill gas extraction systems, then the County should have very little, if any, further work to do to maintain compliance with the conditions of the tentative General Orders.

10. ***No Demonstration that tentative Orders are Needed.*** Section 13267(b)(1) of the Porter Cologne Water Quality Act indicates that in requesting dischargers to furnish technical reports, the RWQCB shall provide a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring these

report to be prepared. Due to the general low-threat to the public and the environment that the County's sites represent, the significant additional costs associated with the more stringent monitoring and reporting requirements of R9-2012-0002 do not bear a reasonable relationship to the value of data that will be gathered. Most of the sites regulated under Order 97-11 do not show an apparent need for more stringent monitoring and reporting requirements. The RWQCB should allow for dischargers to demonstrate that less prescriptive and less frequent monitoring programs are more suitable for low-threat sites (e.g., studies performed at Encinitas II and Paradise Hills Park Landfills). Similarly, numerous industrial sites and UST fund projects are commonly closed with far higher concentrations of the same or similar COS in groundwater at those found in low-risk landfill setting. There are apparent inconsistencies in the regulation of the same constituents reported in the same groundwater resources throughout the region.

While the RWQCB provided information on how many CAI Units had reported indications of a release, there was no assessment provided regarding the significance of the release with respect to adversely affecting the beneficial uses of groundwater. In addition, no technical justification was provided to demonstrate how the implementation of the tentative Orders would be more protective of water quality, human health, or the environment than the existing Order No. 97-11.

Information Sheet - Section C. Need for Updated Requirements. *This section acknowledges that the CAI units subject to the requirements of the tentative Orders are already regulated by General order 97-11, and that the tentative Orders will provide consistency with other WDRs issued by the San Diego RWQCB, and performance-based requirements. However, as discussed during the workshops and prior correspondence regarding these orders, the tentative Orders fail to distinguish the differences between modern landfills and inactive landfills which stopped accepting waste more than 30 years ago. The inactive landfills subject to the tentative Orders have been adequately maintained since they stopped accepting wastes, have undergone extensive investigations under the direction of the RWQCB, and have established routine groundwater monitoring programs than began in the 1990s. As such, the nature and extent of impacts from these inactive landfills are well understood, and concentration trends in groundwater indicate they are relatively stable and present a low risk to water quality and the nearby communities. However, rather than develop streamlined procedures focused on maintaining low-risk landfills, the tentative Orders actually escalate the monitoring and reporting requirements, provide more prescriptive requirements than those currently included in Order 97-11, and contain numerous requirements that are more appropriate for detecting a new release from an operating or recently closed landfill. The County*

believes the updated requirements will not result in greater protection of water quality, and will actually increase the strain on available resources by focusing more emphasis on costly and redundant monitoring and reporting.

Response:

Water Code section 13263(e) states that all requirements shall be reviewed periodically and updated as needed. The State Water Resources Control Board (State Water Board) Administrative Procedures Manual (Manual) provides a schedule for the review and update of WDRs. According to the Manual, WDRs should be reviewed and updated, if necessary, every five, ten, or fifteen years depending on the threat to water quality and complexity ranking given to a site. The CAI Units enrolled in General Order No. 97-11 are ranked as “1B” for threat and complexity, meaning that every five to ten years the San Diego Water Board should review the Order and make any necessary changes.

In 2003, the San Diego Water Board adopted Addendum No. 3 to General Order No. 97-11, stipulating that those pertinent sections of CCR Title 23, Chapter 15 relating to discharges of non-hazardous waste to landfills were replaced by CCR Title 27, which is the current body of regulations governing the discharge of wastes to land. In 2011 the San Diego Water Board reviewed General Order No. 97-11 as amended, and decided to issue updated waste discharge requirements for CAI Units and Burn Sites rather than amend the General Order for a seventh time.

Tentative General Orders Nos. R9-2012-0001 and R9-2012-0003 provide clarity by consolidating all of the provisions and discharge specifications found in General Order No. 97-11, as amended, adding language regarding the enrollment procedures, delegating authority to the Executive Officer for enrolling or terminating the enrollment of a Discharger, terminating enrollment of CAI Units under the statewide General Industrial Stormwater permit, and requiring Dischargers of CAI Units or Burn Sites to self-certify annually that their sites are well maintained and ready for the rainy season. Further, all CAI Units enrolled in tentative Order No. R9-2012-0001 must comply with tentative M&RP No. R9-2012-0002, which implements the minimum monitoring requirements found in CCR Title 27. The issuance of a stand-alone monitoring and reporting program, along with the delegation of authority to the Executive Officer, allows for minor changes to be made to the tentative M&RP without bringing such changes to the Board for consideration.

The tentative M&RP will be issued by the San Diego Water board pursuant to Water Code section 13267. The information required by the tentative M&RP is necessary to evaluate compliance with the provisions of the tentative General Order, and is needed to ensure that the Discharger’s maintenance practices are protective of

water quality and beneficial uses. The majority of the information required in the tentative M&RP is the same as that required by General Order No. 97-11. Any requirements that have been added are necessary to make the tentative M&RP consistent with the minimum reporting requirements of CCR Title 27 for CAI Units. The costs associated with reporting the requested information are reasonable, and should be decreased due to the reduction in reporting frequency provided by the tentative M&RP. To ensure the CAI Units are properly maintained and wastes contained in the units do not leach out in concentrations that could impact ground and surface waters, it is imperative that the Discharger provide this information to the San Diego Water Board on at least an annual basis.

11. ***Overlapping and Duplicative Regulatory Requirements.*** *The tentative Orders include overlapping or duplicative regulatory requirements where another agency currently has primary regulatory responsibility. By requesting landfill gas (LFG) and cover information currently being reported to the LEA, for example, the Orders are being overly prescriptive and attempt to regulate areas where existing agencies have primary jurisdiction. The RWQCB should be more clear on what instances would mandate dischargers to provide LFG data, or request them on a case by case basis.*

Response:

Landfill gas data provides additional information relative to the potential threat to water quality and allows the San Diego Water Board the opportunity to evaluate a site in its entirety rather than relying strictly on groundwater data. This information will be used to assess the overall site conditions and evaluate whether or not any landfill gas production or release could impact water quality. Therefore, the requirement for CAI Units with landfill gas collection systems to report landfill gas data is appropriate.

12. ***Need for Updated Requirements.*** *The tentative Orders do not adequately account for the risk presented by these inactive landfills, and the County believes the regulatory framework for CAI Units needs to be modified to develop appropriate performance-based monitoring and reporting programs for CAI Units based on their threat and complexity ranking, and in consideration of the data collected from 15+ years of routine monitoring.*

Regulatory Inconsistency. *Regulatory trends over the past 10 years have resulted in the USEPA, California EPA, SWRCB, RWQCB, and other agencies developing risk-based policies and procedures for characterizing a broad range of facilities including Superfund sites, RCRA facilities, dry cleaners, gas stations, and numerous other types of facilities which have discharged a broad variety of constituents to the*

environment. Following decades of assessment and technological advancement, there is a significantly greater understanding of how impaired facilities are best characterized, remediated, and mitigated. As such, the procedures and regulatory processes have become efficient and streamlined through implementation of risk-based cleanup policies.

During this same period, landfills and their associated environmental impacts and risks to water quality and human health have become well understood. However, in California, the procedures described in title 27 as applied to these CAI Units subject to the tentative Orders do not allow for a risk-based approach for characterization and monitoring. The County requests that the RWQCB work with the SWRCB to revise Title 27 (or draft a resolution) to acknowledge the low-threat nature of the CAI Units and adopt the fundamental concepts for adaptive monitoring and maintenance strategies and low-threat closure policies which are prevalent throughout current regulation/guidance. Excerpts and/or references to pertinent documents/guidance in support of these concepts are provided below:

- ***SWRCB Draft Low-Threat UST Closure Policy:*** *Similar criteria could be developed for CAI Units, and the County urges the RWQCB and SWRCB to implement performance-based criteria in the spirit of this policy for low-threat inactive CAI Units throughout the state of California. The Preamble of this document very succinctly describes the rationale for implementing the policy, where UST sites and CAI Units share many similarities, including:*
 - *The SWRCB recognizes that the technical and economic resources available for environmental restoration are limited, and that the highest priority for these resources must be the protection of human health and environmental receptors.*
 - *The residual contaminant mass (similar to low-level concentrations observed in CAI Unit settings) usually remains after the investment of reasonable effort (i.e., corrective action), and that this mass is difficult to completely remove regardless of the level of additional effort and resources invested.*
 - *It has been well-documented in the literature and through experience at individual UST release sites (and also in landfill settings) that petroleum fuels (as well as the associated products listed in the policy, i.e. solvents, oils, and oxygenates, etc.) naturally attenuate in the environment through adsorption, dispersion, dilution, volatilization, and biological degradation. This natural*

attenuation slows and limits the migration of dissolved plumes in groundwater.

- **SWRCB Resolution 92-49:** *Finding 7 of the Resolution concedes that “Regardless of the type of discharge, procedures and policies applicable to investigation, and cleanup and abatement activities are similar. It is in the best interest of the people of the state for the State Water board to provide consistent guidance for Regional Water Boards to apply to investigation, and cleanup and abatement.” While the mechanism for which discharges occur between UST sites and low-risk CAI Units differ, many of the contaminants impacted media, investigation methods, and remediation alternatives are shared. The concentrations of contaminants at low-risk CAI Units are commonly significantly lower than residual contaminants typically attributable to leaking USTs. Resolution 92-49 also incorporates language for RWQCBs to take into account financial and technical resources available during the decision making process. Water Code section 13267 indicates that, when required by the RWQCB, the burden and costs of performing monitoring and preparing reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The County believes the increased effort and costs associated with the monitoring and reporting requirements in the tentative Orders do not bear a reasonable relationship to any realized benefits since they are primarily administrative procedures which will do little or nothing to improve or protect water quality.*
- **Technical/Regulatory Guideline: Evaluating, Optimizing, or Ending Post-Closure Care at Municipal Solid Waste Landfills based on Site Specific Data Evaluations:** *The Interstate Technology Regulatory Council’s (ITRC’s) September 2006 guidance document provides scenarios where site specific assessments can be used to demonstrate the potential for a CAI Unit to threaten public health or the environment, and shows how performance-based methodologies can be implemented to scale back post-closure care or monitoring at sites where data support such changes. SWRCB personnel (Ed Wosika) contributed to the development of this document which presents a detailed decision process for performance-based evaluation of post-closure care that can demonstrate when a landfill no longer poses a significant threat to water quality, human health, or the environment. This document outlines a process for a step-wise reduction in groundwater monitoring requirements when it can be demonstrated that the modifications will not compromise the effectiveness of the monitoring program.*

- **Financial Assurance Post-Closure Maintenance Step-Down Criteria:** *The CalRecycle criteria further supports performance-based adaptive monitoring requirements and provides details on how proactive monitoring programs can be used to regulate closed landfills. Included are allowances for periodic review and the escalation or reduction in monitoring and post-closure care, based on the review findings. These are concepts which can be expanded to evaluate and regulate inactive CAI Units.*
- **Assessment Tool for Closure of Low-Threat Chlorinated Solvent Sites; San Francisco Bay RWQCB, Draft Final 31 July 2009:** *The structure of the SFRWQCB echoes the ITRC document in that site-specific and health-based criteria can be used to validate a site's low-risk designation, which subsequent use for site closure. Finds are provided that indicates 96% of solvent cases were closed with concentrations greater than 10 times the maximum contaminant level (MCL) for tetrachloroethene (PCE), concentrations far greater than typically documented in groundwater at inactive CAI Units. This assessment tool uses additional concepts such as the "substantial likelihood" to achieve cleanup standards, which a "reasonable timeframe." And considers what remedial alternatives are "technologically and economically feasible" in determining when site closure is warranted. It should be noted that several decades have been considered "reasonable timeframes" based on site-specific characteristics, the quality of the groundwater, and the likelihood that the affected groundwater will be utilized as a resource in the future.*

The policies, resolutions, and guidance documents cited above support development of performance-based standards and consideration of site-specific conditions to validate any proposed changes to the monitoring program. The concepts described also acknowledge that while preserving and restoring groundwater quality to background concentrations is primary, alternative strategies for compliance can be adopted by the RWQCB. The County believes the data collected at many inactive CAI sites demonstrate that these sites present a low-risk threat to water quality, human health, and the environment, and that development of performance-based groundwater monitoring programs are warranted. Indefinite semi-annual groundwater monitoring at low-risk CAI sites, with no allowable exit strategy (excluding formal closure), is unwarranted at many sites, and does not result in effective use of financial resources to improve water quality.

Response:

As acknowledged in the comment, CCR Title 27 regulations preclude the San Diego Water Board from implementing a risk-based approach for characterization and

monitoring at CAI Units. The San Diego Water Board Land Discharge Unit is willing to coordinate with the County and State Water Board to explore rulemaking to allow a risk-based characterization and monitoring approach at CAI Units.

Comparing CAI Units to underground storage tanks (USTs) is not appropriate, specifically in regards to the “Draft Low-Threat UST Closure Policy.” Unlike at a UST site and other cleanup sites where the source of the release (i.e. waste) and contaminated materials can be removed, the source of the threat posed by a CAI Unit remains in place for perpetuity. Further, the CalRecycle criteria for “Post-Closure Maintenance: Step Down Criteria” is not applicable to CAI Units because they ceased operation prior to the promulgation of CCR Title 27, and received all their wastes prior to October 1991 (the cut-off date for applicability of these regulations).

Performance-based standards and consideration of site-specific conditions to validate any proposed changes to the monitoring program is reasonable for CAI Units, but is precluded by CCR Title 27 regulations when a release has occurred from the CAI Unit.

13. **Information Sheet - Section K. Reporting Requirements.** *This section is inconsistent with Part I Section B.8 of R9-2012-0001, which states that SWPPPs must be provided to the RWQCB. If the enrollees in the tentative Order will no longer be required to enroll in the State’s Industrial Storm Water General permit, the County agrees that a SWPPP will no longer be required. Additionally, there are three different report terms used throughout the tentative Orders including, the Site Conditions Certification Report, Site Conditions Maintenance Certification Report, and the CAI Unit Conditions and Maintenance Report.*

Response

Part I, section B.8 of tentative M&RP No. R9-2012-0002 has been modified to include the reporting requirements for the Site Conditions Certification Report and references to the report have been corrected throughout the Orders. For those CAI Units or Burn Sites that may remain enrolled in the Statewide Industrial Stormwater Permit, the annual submittal of a Storm Water Pollution Prevention Plan (SWPPP), or updates to the SWPPP, will still be required.

14. **CAI Units Order - Finding A.10. Water Quality Control Plan.** *Tables 1 and 2 list the beneficial groundwater and surface water designations that could be impaired by release. The finding does not state that these designations are not applicable throughout the basin, and potential exists for unwarranted enforcement at sites with relatively minor water quality impacts in beneficial use areas as opposed to sites with more significant water quality impacts but located in non-beneficial use areas.*

CAI Burn Site Orders - Finding A.10. *Water Quality Control Plan, similar to R9-2012-0001, Tables 1 and 2 list beneficial groundwater and surface water designations that could be impaired by releases. The finding does not state that these designations are not applicable throughout the basin, and the potential exists for unwarranted enforcement at sites with relatively minor water quality impacts in beneficial use areas as opposed to sites located in non-beneficial use areas.*

Response:

The explanation provided in Finding A.10 of tentative Order No. R9-2012-0001 states “...*impairing one or more of the beneficial uses listed below, depending on the site and where it is located.*” This language means that all beneficial uses listed may not apply at all sites. The County should also be aware that the Basin Plan establishes protection for potential beneficial uses. If a beneficial use is identified for a basin, the designation is applicable throughout the basin. For example, if the basin plan designates municipal supply as a beneficial use for a basin, all groundwater within that basin must be protected to this standard. This ensures the groundwater is available for this specific use anywhere in the basin.

15. **M&RP Section F.1.** *Will RWQCB staff be making the determination when an Evaluation Monitoring Program is required, or will Dischargers be required to “self-report,” or propose escalated monitoring programs? Trends in data alone should not be used as triggers for enforcement action, rather the significance of COCs detected, the significance of the impacts to water quality, and a reasonable response to those detections should be considered without the need for costly EMP if not warranted by the data. As noted previously, the robust monitoring datasets for these inactive landfills demonstrate that water quality impacts are relatively minor, show stable to improving water quality trends, and that source control (routine cover maintenance, operation of landfill gas management and control systems, and maintenance of surface water conveyance systems) and monitored natural attenuation for groundwater are the most feasible means of effectively managing the relatively minor water quality impacts associated with these inactive landfills. Therefore, the updated WDRs and MRPs should reflect the potential water quality impacts associated with these inactive “low risk” landfills, and allow for a more streamlined, flexible, and efficient program to be developed so that limited resources can be directed to effective management rather than unwarranted studies, redundant monitoring and analyses, and reporting.*

Response:

The need for an updated report of waste discharge in response to statistically significant evidence of a release is found in Part IV.B.1 of the tentative M&RP, which

requires an evaluation monitoring program to be initiated if a new release has been confirmed per CCR Title 27. This action would be triggered by the Discharger's self-monitoring and reporting. Part I.B.1 requires the tracking of trends for monitoring well/MPar pairs with known releases. The San Diego Water Board could require that the Discharger implement an evaluation monitoring program (EMP) based on the trend analyses presented in each year's Annual Monitoring Report. An EMP is not considered an enforcement action in CCR Title 27. The purpose of detection monitoring is to identify whether a new release has occurred at the site. The consideration of the significance of the impacts does not occur until an EMP is completed. For sites such as the CAI Units with "robust" data sets, implementation of an EMP need not be costly. If sufficient data exists to propose corrective action (such as monitored natural attenuation), and is available to screen corrective action alternatives, then additional sampling may not be necessary.

16. ***M&RP Part I. Section A.1.g.*** *Title 27 Section 20415(e)(14) specifies that graphical data is provided to the RWQCB annually. What is the basis for the requirement to include Time Series Plots in each semi-annual report?*

Response:

The quoted section of CCR Title 27 actually states that these reports are to be submitted "at least annually." The reporting requirements in the tentative M&RP have been reduced to annual reporting, the minimum standards allowable under CCR Title 27.

17. ***M&RP Part I. Section A.2.c.*** *As previously indicated and as discussed during the 1 November 2011 workshop, the County believes that the detail in Section D of Order R9-2012-0001 is overly prescriptive in its requirements, especially related to management of stockpiles.*

Response:

The reference in this section has been corrected to refer to Section C of tentative General Order No. R9-2012-0001. The language in the tentative General Order captures the intent of the Statewide Industrial Stormwater Permit. If the requirements of Section C were removed, the CAI Units enrolled in this Order will need to be able to terminate their enrollment under the Statewide Industrial Stormwater Permit.

18. ***M&RP Part I. Section A.2.d.*** *"The volume of liquids collected at any secondary containment structure recorded on a quarterly basis (minimum)." What is the basis for recording/reporting this information and how will it be used? If the mere presence of ponding water can identify a deficiency in the cover system, and*

groundwater data is collected to assist in determining the effectiveness of the cover performance, what is the rationale for collecting volumetric data? Many sites contain de-silting basins or other BMP features that have the capability to slow or retain storm water during a rain event, with no potential adverse effects to groundwater. In these cases, that is the function of their presence. The County believes this requirements in unnecessary, and it should be removed from the MRP.

Response:

Appropriate management of stormwater and other liquids at landfill sites is needed to minimize the potential for leachate generation. This section requires an estimation of the volume of liquids captured by any containment structure. Containment structures may include settling ponds, or other structures designed to manage stormwater run-on and run-off, or leachate capture. This information provides evidence that stormwater structures are being maintained and monitored regularly and are functioning as designed.

19. ***M&RP Part I. Section B.5.*** *The County requests clarification on how many monitoring events the RWQCB is requesting data for. Currently dischargers are required to upload data semi-annually (or more frequent in some instances) to GeoTracker, where the data can be accessed as-needed without requiring the dischargers to provide excess data. The County believes this requirement is redundant since this data is already provided to GeoTracker and accessible by the RWQCB.*

Response:

This section requires data for two years total (i.e., four semi-annual monitoring events). Preparing a data table is a reasonable and normal step in evaluating the data from all environmental sites.

20. ***M&RP Part I. Section B.8.*** *This section is inconsistent with the Section K of the information sheet provided by the RWQCB. Section K indicates that the Site Conditions Certification Report will replace the Storm Water Pollution Prevention Plan (SWPPP) currently required under the Industrial Storm Water General Permit. Therefore this section of the MRP should be revised.*

Response:

The language in this section is correct. See response to Specific Comment 10 above.

21. **M&RP Part I. Section C.4.** *This section of the MRP requires dischargers to provide the RWQCB with a work plan for significant maintenance activities; of which importing fill material is specified. The County requests a revision to make this section more consistent with Section C.4 of Order R9-2012-0001, and not require stockpiles to be stored on a “temporary basis” subject to work plan approval by the RWQCB.*

Response:

The language in this section of the tentative M&RP has been modified to be consistent with the requirements for stockpiling imported soils in the tentative General Order. The Discharger is only required to provide this information in the annual Site Conditions Certification Report.

22. **M&RP Part I. C.10.** *This section needs clarification. IS the CAI Unit Cover Maintenance Certification Report the same as the Site Conditions Certification Report detailed in the WDR?*

Response:

Yes, the two reports are the same. The title in this section of the tentative M&RP has been corrected.

23. **M&RP Part I. Section E.1.** *Submission Procedures. Currently figures up to 11x17 are submitted electronically.*

Response:

This is the San Diego Water Board's current business practice. This section documents that paper copies of reports are no longer required, however, documents larger than 11 x 17 are needed in paper format. This requirements should reduce the costs needed to produce and submit reports.

24. **M&RP Part II. Section B.1.a through e.** *The County requests the RWQCB elaborate on the methods to determine existing monitor wells are in the highest zones of productivity. The monitoring networks are already established at these landfills, so it should be clear that this applies to new sites or new wells installed at existing sites.*

Response:

This is standard language in CCR title 27 regarding monitoring networks and it applies to all landfills. Older sites with established monitoring programs should already be in compliance with these requirements. Should conditions change such

that the monitoring program at an older site is found to no longer be appropriate, this section would require that the monitoring network be updated.

25. **M&RP Part III. Section A.1.** *How will sites with documented detections be treated (such as most of the sites currently enrolled in 97-11), and what is going to be considered baseline? Most general chemistry parameters and metals are naturally occurring so the intrawell comparison for increases seems fitting. For VOCs the mere presence should not trigger a violation, rather the MCLs listed in the San Diego Basin Plan should serve as the compliance threshold for VOCs with the goal of attaining “background.” Additionally, the county requests that the RWQCB also consider CDPH notification levels for more benign parameters without established MCLs to allow the significance of detections to be assessed. With little to no use of groundwater resources in the vicinity of these low risk sites, and unlikely future use, dischargers should not be held to a higher standard than those providing water specifically intended for human consumption.*

Response:

Tracking mode will be used for all well MPar pairs with known releases. The time series plot of historic data will be the "baseline." A release is not necessarily a "violation," though failure to take appropriate actions to address the release may result in a "violation." The purpose of detection monitoring is to determine *if* a release has occurred, not the significance. Clean up standards are not addressed in this order. Using health based action levels would be considered to be establishing a CLGB.

26. **M&RP Section A.2.a.** *For the accelerated background data collection, the MRP recommends monthly sampling. Sampling that frequently, unless in an area with fast moving water, could be highly correlated, so analytical results would need to be tested for serial correlation using a method such as the Rank Von Neumann. Otherwise, the Unified Guidance recommends quarterly sampling to remove the possibility, and in most cases, will not introduce this problem. A minimum of 8 background samples is normally recommended to begin performing statistics (comparing the 9th event to background). Since these sites have been routinely monitored for 15 years or more, and relatively minor residual groundwater impacts attributable to the landfills exist, it is highly unlikely that a “new release” would be identified through the use of more stringent statistical analyses. Therefore, the MRP should consider the low-threat nature of the landfills and be less prescriptive in the statistical requirements when acceptable methods and alternatives are provided in Title 27. The County requests that acceptable alternatives be referenced in the Order.*

Response:

Since these sites have been monitored for an extended period of time, this section will only apply to new wells. This section already allows the Discharger to submit an alternate sampling plan to the San Diego Water Board for approval. As such, the County's concerns may be addressed on a case-by-case basis, as appropriate.

27. **M&RP Section A.2.c.ii. Rarely Qualified(sic.) Constituents: Section ii.** *The use of "background" data to limit the range of values included in downgradient intrawell background data sets does not seem to be consistent with the principles or purpose of having intrawell comparisons, especially in areas where natural spatial variability in groundwater chemistry exists.*

Response:

This section allows the intra-well background data set to be updated. If an organic constituent is detected in a downgradient well, the data may be included in the background data set if the concentration is less than the maximum concentration detected in any upgradient well.

28. **M&RP Section A.4.** *It would add value to refer to the Section of T27 that references the post-purge sampling procedure to ensure that independent samples are collected for re-tests.*

Response:

CCR Title 27, section 20415(e)(12) is only relevant if the statistical sample will require more than one water quality data point to represent a single monitoring point at a single time. As the retest is to be conducted after the initial sample is analyzed by the laboratory, this section is not relevant. The well would need to be repurged prior to sampling. Post-sampling purge should not need to be conducted.

29. **M&RP Section A.5.** *This section should be revised to indicate that only the constituents reported in the initial sample potentially indicative of a release should be retested. Dischargers should not be required to collect redundant data that is not mandatory to confirm a release from the unit. Sample retests of the indicated parameters can accomplish this.*

Response:

This section of the tentative M&RP only requires retesting of the indicated parameters. A full analyte list is not required. However, if the laboratory uses a full analyte list for VOCs, the discharger should report all data. The additional data will not be used to determine if a new release has occurred, but may be useful for tracking constituents in known releases.

30. **M&RP Section A.6.a.** *Dischargers should base the method for determining intra vs. inter well prediction limits on a method, such as the proposed in Section A.c.i, or by the determination that the use of one method will provide a reliable indication that a release has occurred. These are sites specific determinations and should not be mandated by the RWQCB.*

Response:

The tentative M&RP includes language to allow the Discharger to specify an alternate method. This is standard language provided to streamline the statistical analysis. The Discharger does not need to substantiate that an alternate statistical analysis method is appropriate if the default is used.

31. **M&RP Section B.2.a.** *This section includes an incorrect reference; there is no Part III.B.1.b.ii in the MRP.*

Response:

The reference has been corrected to Part III.B.1.

32. **M&RP Section B.2.b.** *This section should be revised to remove the requirement to analyze all constituents. If retesting only the constituents initially indicative of a potential release can confirm a detection, and the added costs and effort to collect and manage redundant data is unwarranted.*

Response:

This section does not include a requirement to analyze all constituents. This section states: “the Discharger shall include, in the retest analysis, only the laboratory analytical results for those constituents indicated in that well’s original test.” Only the “indicated” MPars must be included in the retest. When applying a similar requirement at the Bonsall Landfill (a CAI Unit in the cost recovery program for an offsite release), the County of San Diego and the San Diego Water Board agreed that for VOC analysis, constituents in tracking mode should also be included in the retest analysis to provide additional data for trend analysis, as the additional analytical costs would be minimal.

33. **M&RP Section B.2.c.** *Once the testing is performed there will be multiple sets of data to discuss in tables and text. If measurably significant increase or detection is confirmed which value is added to the background data set as shown on the TSPs as the compliance value for the monitoring period?*

Response:

If a release is confirmed, the well/MPar pair is moved from detection mode to tracking mode. For well/MPar pairs in tracking mode, all analytical data should be presented in the time series plots, included in the data tables, and discussed within the text of the annual groundwater monitoring report.

34. **M&RP Section E.** *The County requests that the RWQCB also provide a procedure for reducing or eliminating the 5-year COC scan sampling and reporting procedures for low-risk sites with robust data sets comprising 15+ years of routine monitoring data.*

Response:

CCR Title 27, section 20420(g) requires a constituents of concern (COC) scan to be performed every five years; however, the list of analytes to be included in the scan is not stipulated. Code of Federal Regulations (CFR) Title 40, Part 258 specifies that landfills which received waste after October 1991 must analyze for all constituents found in Appendix II of these regulations. As these are CAI Units and stopped received waste well before the cutoff date for applicability, Dischargers responsible for these sites are not required to complete an Appendix II scan. Dischargers will however, continue to be required to scan for all volatile organic compounds (VOCs) for all sampling events, which is consistent with the sampling and analysis protocols required under General Order No. 97-11.

35. **M&RP PART IV CONTINGENCY REPORTING Section B. Evaluation of Release.** *Releases at these sites have occurred, have been assessed during prior characterizations of the landfill sites, and have been monitored for 15+ years. The County has concerns about using data trends alone as indications of a release, when these trends would likely be identifying natural variability in water quality related to existing releases that has been extensively monitored. Furthermore, the County believes that statistically-based data trends alone should not be used as triggers for enforcement action, but rather that the values of COCs detected and the significance of the impacts related to established water quality standards would be more appropriate to be used in conjunction with trend analysis.*

Response:

Statistical analysis of trends is not required by this tentative M&RP. Only a visual inspection of the trend is required. Identification of a new release for a monitoring parameter which has previously been detected in a given well would be based on a visual inspection of the concentration versus time plot, and as such, will take into account the history of monitoring at the site.

ORANGE COUNTY WASTE AND RECYCLING

36. **Designation of Discharger.** *As the Regional Board is well aware, assigning responsibility for maintenance of a closed landfill and specifically naming the responsible discharger(s) can be legally complex given the long history a site may have involving multiple parties. As indicated in the Information Sheet, Title 27 of the California Code of Regulations provides broad authority for the Regional Board to designate the discharger/operator, which can include current and former owners, current and former operators, and entities that are legally responsible through various agreements for maintenance of the landfill in accordance with federal, state, and local requirements. In determining the discharger designation, we would ask the Regional Board to also recognize settlement agreements, cooperative agreements, and similar court-like agreements that have been litigated or negotiated between the affected parties. Our utmost concern is that this Tentative Order or the issuance of individual Orders not usurp these agreements and undermine the lengthy efforts to ensure these disposal sites are being properly cared for or re-assigning the responsibilities that have been previously agreed to by the involved parties. In many of these agreements, the responsibilities have been clearly delineated, and in some cases, one or more parties may have been relieved of responsibility based on the terms and conditions of that agreement. These agreements should be upheld and incorporated into all regulatory permits until such agreements have been nullified, superseded, or one or more parties cease to exist; to do otherwise could compromise the long term effectiveness of maintaining the landfill.*

Response:

The San Diego Water Board has the authority and duty to name all appropriate Dischargers to ensure that CAI Units and Burn Sites are properly managed and monitored. The San Diego Water Board acknowledges legal agreements exist between owners and former operators at many landfills regulated within the region. The San Diego Water Board is not a party to these agreements, and though the agreements are considered when naming Dischargers as responsible parties, the San Diego Water Board is not bound by them.

As stated in the Information Sheet, the definition provided in the regulations is broad and allows the Regional Water Boards the flexibility to name the owner, the operator, or both when one or both can be identified. Each site regulated by the San Diego Water Board is evaluated on an individual basis to determine the appropriate responsible party(ies) to name. In the past, the practice of the San Diego Water Board has been to only enroll the primary owner or operator when one can be identified, or both. Secondarily responsible parties such as a property owner would

only be held responsible if the facility owner or operator could not be found. For the purposes of the tentative General Orders, there are no proposed changes to the named Dischargers.

37. Section F. Annual Fees. *As indicated in the Information Sheet, landfills covered under the Tentative Order or issued an individual Order are subject to an annual fee pursuant to Section 2200, Title 23, Division 3, Chapter 9, Article 1 of the California Code of Regulations. Each landfill is ranked based on a Threat to Water Quality (TTWQ) and Complexity (CPLX) rating as determined by the Regional Board. With the issuance of a new Tentative Order, we are requesting that the Regional Board provide the scoring criteria used to categorize the landfills within the region. Making the scoring criteria available to the public ensures consistency and transparency in how these sites are being ranked and helps identify the water quality issues of concern for each site. As such, the scoring criteria used by the Regional Board can also be used to help dischargers work toward developing strategies to minimize the disposal site's potential threat to water quality and to traverse from one tier to another based on the site conditions evaluated using the scoring criteria. Without this information, dischargers would be at a disadvantage as to how these disposal sites are to be maintained under postclosure maintenance.*

Response:

The threat to water quality and complexity ranking assigned to each facility is based on the definitions found in CCR Title 23, section 2200. The CAI Units and Burn Sites were ranked at the time they were enrolled in General Order No. 97-11. Since then the rankings were reviewed with CAI Units re-ranked as 1B and Burn Sites re-ranked as 3C when General Order No. 97-11 was amended in 2007. Reviewing and potential re-rankings CAI Units and Burn Sites is beyond the scope of this project. The State Water Resources Control Board (State Water Board) recognizes that the current definitions are difficult to apply uniformly in all Regions statewide, and therefore, the State Water Board has been working in conjunction with stakeholders to develop new criteria to be used to rank all landfills within the state. The San Diego Water Board will continue to provide input to the State Water Board and stakeholders in this effort.

Specific Comments for Monitoring and Reporting Program No. R9-2012-0002

38. Part I: Annual Groundwater Summary Report. *Within the M&RP, two Semi-annual Monitoring and Maintenance Reports are required to be submitted on a yearly basis, along with an Annual Groundwater Summary Report. The requirements for the Annual Groundwater Summary Report are very similar to the year-end Semi-Annual Monitoring and Maintenance report. We suggest consolidating the requirements of the Annual Groundwater Summary Report and the year-end Semi-annual Monitoring and Maintenance Report into a single report.*

Preparing these reports is a costly expense and many of these landfills are no longer generating revenue, so the funds to maintain these landfills will be limited. To the extent possible, the number of reports should be reduced where information can be found in other reports filed with the Regional Board.

Response:

The regulations afford the San Diego Water Board the discretion to allow semi-annual monitoring results to be submitted on either a semi-annual or annual basis. Based on the groundwater results submitted in accordance with General Order No. 97-11, the San Diego Water Board has determined that the costs associated with producing semi-annual monitoring reports, in conjunction with the concentration of constituents of concern in groundwater at most CAI Units, does not merit a semi-annual reporting frequency. Therefore, the requirement for the submittal of groundwater data and information regarding the maintenance of CAI Units has been reduced to annual reporting. Dischargers responsible for CAI Units will not be required to submit one annual report, due by October 30th of each year, which will include all groundwater and/or surface water sampling data, landfill gas data (when applicable), and the Site Conditions Certification Report (as described in Section C.4 of tentative General Order No. R9-2012-0001). However, the San Diego Water Board does not have the authority to reduce the monitoring and sampling frequency to something less than what is prescribed in CCR Title 27, section 20385 and 20415.

39. ***Constituents of Concern Report/Five Year COC Scan.*** *Within the M&RP, a Constituents of Concern (COC) Report is required to be submitted every five years for all monitoring and background points for all constituents identified in Table 2, Part II.B of the M&RP and Appendix II of the Code of Federal Regulations, Title 40, Part 258. The requirement for an initial COC Report and follow-up COC testing every five years is burdensome, costly, and duplicative of previous historic and current groundwater monitoring data collected at these closed landfills. The identification of site-specific COCs was performed as part of the initial Solid Waste Assessment Test (SWAT) investigation conducted at many closed landfills throughout the state in the late 1980's. The identified COCs have been monitored continuously since then as monitoring parameters (MPars), as approved by the Regional Board, generating a database of the COCs and MPars spanning a period of over 20 years.*

In addition, the Appendix II COC list referenced in the Code of Federal Regulations, Title 40, Part 258 only applies to municipal solid waste landfills that received waste after October 9, 1991. For purposes of this Tentative Order, all landfill sites have been identified as "waste management units that were closed, abandoned, or inactive prior to November 27, 1984." These landfills are subject to Part 257 of Title 40 which does not make reference to Appendix II of Part 258.

Given that these landfills have ceased accepting waste long ago and the historical groundwater data collected, the contaminants that have been released are already known. Furthermore, many of these releases are posing a minor threat to water quality standards or are in the process of being remediated through environmental control measures. We suggest that the COC Report only be required in situations where a new release has occurred, or there is a change in land use where the containment of the waste may be compromised which could lead to a release and therefore warrant a full COC scan.

Response:

CCR Title 27, section 20420(g) requires a constituents of concern (COC) scan to be performed every five years; however, the list of analytes to be included in the scan is not stipulated. Code of Federal Regulations (CFR) Title 40, Part 258 specifies that landfills which received waste after October 1991 must analyze for all constituents found in Appendix II of these regulations. As these are CAI Units and stopped receiving waste well before the cutoff date for applicability, Dischargers responsible for these sites are not required to complete an Appendix II scan. Dischargers will however, continue to be required to scan for all volatile organic compounds (VOCs) for all sampling events, which is consistent with the sampling and analysis protocols required under General Order No. 97-11.

40. **Part IV: Evaluation of a Release.** *The M&RP prescribes a protocol in the event a release is detected; dischargers are required to submit a proposed evaluation monitoring program/engineering feasibility study which could lead to a corrective action program. There should be recognition within this Tentative Order that many landfill sites have landfill gas control systems which serve as dual purposes: (1) to control gas migration and (2) to serve as groundwater corrective action. It has long been recognized that groundwater impacts associated with landfills are the result of landfill gas migration. Thus, if a landfill gas control system is in operation, the infrastructure is already in place to remediate any impacts to groundwater caused by landfill gas contamination. The requirements for an evaluation monitoring program should be bypassed due to its burdensome and costly requirements for landfill sites with landfill gas control systems. In most cases, operation of the landfill gas control system is sufficient to remediate the groundwater impact release. This strategy has been very effective for OC Waste & Recycling sites to clean up the groundwater and has proven cost effective. An evaluation monitoring program should only be warranted in those situations where a release has occurred for which the landfill gas control system cannot remediate or if a landfill gas control system does not exist.*

Response:

The protocols provided in the tentative M&RP are consistent with the requirements found in CCR Title 27, section 20425, which requires the Discharger to submit a proposed evaluation monitoring program and engineering feasibility study within 90 days of determination that a release has occurred. CAI Units ceased operation prior to the promulgation of CCR Title 27, and are therefore not required to be equipped with landfill gas collection systems, unless one is proposed as a corrective action measure. A landfill gas collection system is used at many CAI Units to mitigate for volatile organic compounds (VOCs) in groundwater. Landfill gas collection systems are not considered containment structures, but rather a tool used to manage a potential source of impacts to water quality. The county's comment implies that all potential impacts to water quality are derived from the production of landfill gas through the degradation of waste over time. The threat to water quality does not necessarily disappear with the installation of a landfill gas collection system; leachate remains a potential source of impacts to water quality for as long as the waste within the CAI Unit continues to degrade. While the San Diego Water Board applauds the County for its effort to diminish the potential impacts to water quality brought about by landfill gas, the efforts do not preclude the need for an evaluation monitoring program should a CAI Unit demonstrate that a new release has occurred.