



# County of San Diego

SAN DIEGO REGIONAL  
WATER QUALITY  
CONTROL BOARD

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## DEPARTMENT OF PUBLIC WORKS

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March 23, 2012

Mr. David W. Gibson  
California Regional Water Quality Control Board, San Diego Region  
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### **FORMAL RESPONSE TO TENTATIVE GENERAL WASTE DISCHARGE REQUIREMENTS ORDER NO. R9-2012-0001, MONITORING AND REPORTING PROGRAM NO. R9-2012-0002, AND MONITORING AND REPORTING PROGRAM NO. R9-2012-0003**

Dear Mr. Gibson:

On November 1 and December 6, 2011, the County of San Diego, Department of Public Works, Landfill Management (County) and other interested parties attended informal workshops conducted by the California Regional Water Quality Control Board, San Diego Region (RWQCB) to discuss Tentative Order No. R9-2012-0001, -0002, and -0003 (Tentative Orders). The RWQCB encouraged interested parties to document workshop discussions and their specific comments and provide them to the RWQCB for consideration. The County would like to thank the RWQCB for the opportunity to attend the informal meeting sessions and for the RWQCB staff efforts to address the comments and concerns in the Tentative Orders of all interested parties.

As discussed during the informal workshops, the County and other stakeholders outlined the rationale for revision of the Tentative Orders to place greater emphasis on long-term landfill and burn dump maintenance (aka source control) and assessment of the significance of releases from CAI Units with respect to human health and the environment. The draft Tentative Orders focus on a prescriptive and onerous sequence of procedures to confirm whether a release has occurred at inactive landfills with long histories of well documented, generally stable concentration trends in groundwater.

Resolution 92-49 and the Porter Cologne Water Quality Control Act allow the RWQCB flexibility in achieving and maintaining a high level of water quality in the State, and it is our interpretation that Title 27 allows for less prescriptive requirements than those currently listed in the Tentative Orders. Since all of the landfills subject to the Tentative Orders are

already regulated under existing Order 97-11 and no new sites are currently being considered, there is not presently an urgent need for updated Waste Discharge Requirements (WDRs) and Monitoring and Reporting Programs (MRPs) for these sites.

The County encourages the SWRCB and RWQCB to consider the fundamental concepts of numerous State and Federal guidance documents to develop a risk-based approach for long-term maintenance and monitoring at low-threat CAI Units. Utilizing risk-based processes has become standard practice to assess and clean up Superfund sites, RCRA facilities, dry cleaners, gas stations, and numerous other types of facilities which commonly result in environmental impairment. Similar to those facilities, landfills and their associated environmental impacts and associated risks to water quality and human health have become well understood based on decades of assessment, corrective action, and routine monitoring. As a result, the prescriptive landfill groundwater monitoring requirements developed in the 1980s as outlined in Title 27 and incorporated into the Tentative Orders no longer represent the "state of the practice" regarding characterization, monitoring, and corrective action, and result in collection of redundant data which does little to protect water quality.

The County encourages the RWQCB to continue working with the State Water Resources Control Board (SWRCB) and stakeholders to streamline the Tentative Orders with performance-based triggers to develop more effective WDRs and MRPs. The County's focus is to effectively use resources for conditions that pose a more significant risk to water quality than these low-risk CAI Units and former burn dumps. Instead of placing a disproportionate focus on compliance with unwarranted prescriptive monitoring and reporting requirements, the streamlined orders will promote long-term management and maintenance of these low-threat inactive sites.

### **Background**

Three County inactive landfills (Hillsborough, Gillespie, and Encinitas II) and three County former burn sites (Cactus Park, San Pasqual North Burn Area, and Alpine II) are currently enrolled in RWQCB Order 97-11 (existing Order). These sites were enrolled in Order 97-11 because of their similarity, period of operations, and anticipated low threat to water quality and public safety. Robust data sets based on nearly 15 years of groundwater data collected at the Hillsborough, Gillespie, and Encinitas II landfills demonstrate that groundwater impacts attributable to the landfills are generally stable or show improving water quality trends. Groundwater monitoring performed at the San Pasqual North Burn Area showed that no significant groundwater impacts have occurred as a result of the burn dump, and that data has been used to demonstrate that groundwater monitoring programs are unnecessary at most burn dumps in San Diego County.

With relatively insignificant residual water quality impacts associated with these low-threat landfills and burn dumps, and no allowable downscaling of monitoring and reporting requirements indicated by the RWQCB, the County has concerns that adoption of the Tentative Orders will result in significant additional effort and costs to indefinitely monitor these sites without a corresponding improvement to relatively benign water quality impacts which have not impaired beneficial groundwater uses.

Following the initial workshops, the RWQCB issued the Tentative Orders for public comment. The County has drafted the following sections to provide the RWQCB with

general comments on the Tentative Orders with respect to the magnitude of changes from RWQCB Order 97-11 and to present alternatives to the RWQCB's current approach to regulate low-threat Inactive Waste Management Units (CAI Units) when compared to other California State Water Resource Control Board (SWRCB) programs, resolutions, and Federal guidelines. The County has also provided additional specific comments on pertinent sections of the Tentative Orders as attachments.

### **General Comments**

- 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 the 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.
- 2) **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 of inactive CAI units. 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 be significantly greater than any benefit related to improvement of water quality, and protection to 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, relative stability of the landfills as evidenced 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.

- 3) **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 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.
- 4) **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 reports to be prepared. As stated in previous comments, groundwater monitoring data collected by the County at the Encinitas II, Gillespie, and Hillsborough inactive landfills demonstrate relatively insignificant water quality impacts which do not warrant a significantly more stringent monitoring and reporting program.

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 releases 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.

- 5) **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.
- 6) **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 of 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 or investigative activities that are unlikely to result in corresponding improvement in water quality or public safety.
- 7) **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:

- ***SWRCBs 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 (ITRCs) 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; CalRecycle:** 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, with subsequent use for site closure. Findings are provided that indicate 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, within 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.

### **Summary**

As discussed during the November 1, 2011 and December 6, 2011 workshops, the County reiterates its request for further revision of the Tentative Orders to place greater emphasis on long-term landfill and burn dump maintenance (aka source control) and assessment of the significance of releases from CAI Units with respect to human health and the

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environment. Streamlining the Tentative Orders with performance-based triggers will yield more useful WDRs and MRPs, and will allow the County and other enrollees to better utilize resources for conditions that pose a more significant risk to water quality than these low-risk CAI Units and former burn dumps. The County believes this would yield a reasonable and more valuable monitoring and reporting program that is consistent with the Porter Cologne Water Quality Control Act, and the objectives of the San Diego Basin Plan.

The County appreciates the opportunities to attend the workshop(s) and to provide comments on these Tentative Orders. If you have questions regarding this letter or the attached documents, please call me at (858) 694-2691 or Candace Gibson at (858) 495-5447.

Sincerely,



Michele Stress, REHS  
DPW Unit Manager  
Landfill Management

cc:

Tom Gardner, Republic Industries  
Patti Henshaw, Orange County Waste and Recycling  
KariLyn Merlos, County of San Diego LEA  
Bill Prinz, City of San Diego LEA  
Ray Purtee, City of San Diego Environmental Services  
Scott Walker, CalRecycle  
Michael Pound, NAVFAC Southwest  
Bryan Forward, City of Oceanside  
Eric Greenwood, County of Kern

#### Attachments

- 1) Draft Information Sheet, Specific Comments - County of San Diego, DPW, Landfill Management
- 2) Tentative Order R9-2012-0001, Specific Comments - County of San Diego, DPW, Landfill Management
- 3) Tentative Order R9-2012-0002, Specific Comments - County of San Diego, DPW, Landfill Management
- 4) Tentative Order R9-2012-0003, Specific Comments - County of San Diego, DPW, Landfill Management



**Part III Tentative General Order No. R9-2012-0001 for CAI Units**

**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 waste, have undergone extensive investigations under the direction of the RWQCB, and have established routine groundwater monitoring programs that 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. 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.

**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.

**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.

**Part IV TENTATIVE MONITORING AND REPORTING PROGRAM NO.R9-2012-0002**

**Section A. Purpose.** This section provides the Title 27 reference documenting the RWQCB has the authority to issue monitoring and reporting requirements to CAI units on the basis that the site conditions indicate that water quality has been impaired and that beneficial uses have been impacted. As noted by the RWQCB in this section, most CAI Units subject to the Tentative Orders have had past releases. However, the Tentative Orders fail to acknowledge that monitoring programs for most of these sites were established in the 1990s and that robust data sets developed since that time generally indicate these landfills are relatively stable, and that relatively minor water quality impacts have been investigated, are well understood, and will continue to attenuate in the future.

**Section B. Detection Monitoring Program.** As noted in the response to section A above, the requirements in section B fail to account for the robust groundwater data sets which exist for these sites and demonstrate that relatively stable and minor water quality impacts at these landfills do not warrant a more stringent and prescriptive monitoring and reporting program with onerous statistical data evaluation requirements more appropriate for detecting a new release for an operating or recently closed landfill instead of a landfill which hasn't received any waste in 35 to 50 years.

**Section C. Comparison to Background.** As with existing Order 97-11, comparison to background is required to identify whether a release has occurred; as noted previously, releases have occurred at most if not all of the inactive landfills enrolled in Order 97-11. The past releases have been thoroughly assessed under the direction of the RWQCB, and in most cases, relatively minor water quality impacts are being addressed by a combination of source control (cover maintenance, operation of a LFG control system, and maintenance of surface water conveyance systems) and monitored natural attenuation for groundwater. Although risk-based programs have been developed to characterize, remediate, and monitor Superfund sites, and nearly every other type of facility which may have impacted water quality or the environment other than landfills, there is significant regulatory inconsistency in the way landfills are regulated with respect to impacts to water quality and the environment. To make Title 27 requirements more consistent with regulation of environmental investigations at any facility other than a landfill would require the SWRCB to modify the maintenance, monitoring and reporting requirements associated with CAI Units in a manner which allows greater flexibility and more performance and risk-based programs.

**Section F. 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.

**Tentative Order R9-2012-0001 Specific Comments  
County of San Diego, DPW, Landfill Management**

**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 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.

**Finding A.10. Water Quality Control Plan.** Tables 1 and 2 list the 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 with more significant water quality impacts but located in non-beneficial use areas.

**CAI UNIT MAINTENANCE SPECIFICATIONS**

**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 [§21090(b) and (c)] do not mention this periodic assessment nor do 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.

**Tentative Order R9-2012-0001 Specific Comments  
County of San Diego, DPW, Landfill Management**

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.

**REPORTING REQUIREMENTS**

**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.

**Tentative Order R9-2012-0002 Specific Comments  
County of San Diego, DPW, Landfill Management**

**Finding 4. Basis for Groundwater Detection Monitoring.** This section cites the potential for the unlined MSW units to present a potential threat to ground/surface waters, and that these requirements are the minimum for Detection Monitoring Program (DMP) sites. Most 97-11 sites have been monitored for 15 years or more and have a robust background data set to demonstrate stable conditions and little risk to water quality or the communities near the landfills. Therefore, the prescriptive requirements in the MRP are unnecessarily burdensome when the sites have been well managed and regulated under 97-11. As written, it is likely that many sites with relatively minor groundwater impacts will be unnecessarily escalated into Evaluation Monitoring Program (EMP) mode without consideration of the site-specific conditions or consideration of the significance of the impacts. 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 resources can be directed to effective management rather than unwarranted studies, redundant monitoring and analyses, and reporting.

**Finding 5. Basis for Requiring Technical and Monitoring Reports.** 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 COCs in groundwater as 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.

**PART I Section A COMPLIANCE REPORTING**

**Section A. 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.

As demonstrated by a study performed for the Encinitas II landfill in 2007, the inactive County landfills currently enrolled in Order 97-11 are likely good candidates for annual groundwater monitoring programs. In a recent meeting with the RWQCB to informally discuss the Tentative Orders, it was indicated that monitoring at CAI units not formally closed is indefinite. The County feels that they (along

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with other government agencies) have a fiduciary responsibility to wisely manage public funds for the lifetime of these units. The County feels there should be language in the WDR/MRP encouraging dischargers to evaluate modifications to the monitoring systems as warranted since these are generally low-threat sites and resources should be managed appropriately (similar to UST funds where there is a concerted effort on behalf of the regulatory agencies and the dischargers to reduce or eliminate monitoring at low-threat sites so limited resources can be focused on sites with greater potential threat to water quality). The WDR/MRP requirements should be performance based, and if the data supports downgrading the monitoring frequency, then the RWQCB should consider approving requests for annual monitoring when warranted by the data.

**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?

**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 listed in R9-2012-0001.

**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 the management of stockpiles.

**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 requirement is unnecessary, and it should be removed from the MRP.

**Part I Section B Annual Groundwater Summary Report**

**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 investigations, the concentrations of the COCs should be considered when assessing the significance of potential impacts with respect to regulatory standards (such as MCLs and CDPH notification 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

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groundwater impacts are stable to improving. Therefore, what is the rationale for significantly altering the monitoring and reporting programs for these low-threat sites?

**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.

**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.

**Section B.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?

**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.

**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.

**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 the MRP, and not require stockpiles to be stored on a "temporary basis" subject to work plan approval by the RWQCB.

**Section E.1.** Submission Procedures. Currently figures up to 11x17 are submitted electronically.

**PART II SAMPLING AND ANALYSIS**

**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.

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**Section 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.

**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.

**Section A.9.g.** Laboratory Quality Assurance Results. The request for response factors is not part of a Level II data 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.

**Section A.10.j.** The requests for identification of 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.

**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 conductivity. 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.

**Section B.2.b.** See comment on Section A.6 above.

**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 documenting 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.

**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



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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.

**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).

**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 that 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 these 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.

**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 an 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.

**Section A.2.c.ii.** Rarely Qualified 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.

**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.

**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. Simple retests of the indicated parameters can accomplish this.

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

**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.

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

**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.

**Section B.2.c.** Once the retesting is performed there will be multiple sets of data to discuss in tables and text. If a 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?

**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.

**PART IV CONTINGENCY REPORTING**

**Section B.** Evaluation of a 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 have 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.

**PART V PROVISIONS**

**Section C.** The County requests that the RWQCB include provisions for providing the RWQCB with reports in support of reducing or eliminating detection monitoring at CAI units where the data supports such a change. The County feels that indefinite semi-annual monitoring for low-threat CAI units is not a responsible use of public funds.

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**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 RWQCB 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.

**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.