
San Diego Regional Water Quality Control Board

June 28, 2022

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Sent by email: CDale@oceansideca.org

In reply refer to / attn:
255386:BBushnell

Subject: Amendment to the Monitoring and Reporting Program for Order No. R9-2021-0100, Constituents of Emerging Concern, 1,4-Dioxane

Cari Dale:

This letter serves to inform the City of Oceanside (City) that the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), is modifying Attachment E - Monitoring and Reporting Program (MRP) of Order No. R9-2021-0100, *Waste Discharge and Water Reclamation Requirements for the City of Oceanside, Advanced Water Purification Facility, Indirect Potable Reuse for Groundwater Recharge, San Diego County* (Order No. R9-2021-0100).¹ The San Diego Water Board is modifying the MRP in response to the City's January 2022 request by email. The City requested the MRP be revised to allow it to collect grab samples instead of composite samples from monitoring well MW-A-1 to analyze the groundwater for 1,4-dioxane.

The City's request explains that monitoring well MW-A-1 is in the middle of a street, making the collection of a composite sample logistically difficult and expensive in comparison to the collection of a grab sample. The City's request also provides that the collection of a composite sample is unnecessary to accurately quantify the concentration of 1,4-dioxane in groundwater, because groundwater concentrations are not expected to vary over a 24-hour period.

The State Water Resources Control Board's Water Quality Control Policy for Recycled Water (Recycled Water Policy) requires monitoring of constituents of emerging concern (CECs), including 1,4-dioxane, for the production and use of recycled water for groundwater recharge. Section V of the MRP includes monitoring requirements for 1,4-

¹ Link to Order No. R9-2021-0100:

https://www.waterboards.ca.gov/sandiego/board_decisions/adopted_orders/2021/r9_2021_0100.pdf

dioxane consistent with the Recycled Water Policy.² Tables E-12, E-14, and E-16 of the MRP require that the sample type for 1,4-dioxane be a 24-hour composite sample. The Recycled Water Policy, however, does not specify the sample type for the monitoring of 1,4-dioxane.

Monitoring well MW-A-1 is a groundwater monitoring well located down gradient of the groundwater recharge injection wells. Since the Recycled Water Policy does not specify the sample type of 1,4-dioxane, it is appropriate to modify the sample type for 1,4-dioxane at monitoring well MW-A-1 from a 24-hour composite sample to a grab sample based on the information provided by the City. Modifying the sample type to grab samples at the monitoring well will allow the City to monitor for 1,4-dioxane in an efficient and economical manner while still protecting water quality because groundwater monitoring at MW-A-1 is expected to have less variability.

In response to the City's request and in accordance with finding I.B of the MRP, the San Diego Water Board Executive Officer is modifying Tables E-12, E-14, and E-16 of the MRP and changing the required sample type for 1,4-dioxane to a grab sample at monitoring well MW-A-1. Attachment A of this letter provides revised MRP Tables E-12, E-14, and E-16, and the changes are indicated in underline-strikethrough format.

In the subject line of any response, please include the reference **255386:BBushnell**. For questions or concerns regarding this letter, please contact Mr. Brandon Bushnell by phone at (619) 521-8044, or by email at Brandon.Bushnell@waterboards.ca.gov.

Respectfully,

David W. Gibson
Executive Officer

DWG:kkd:vmv:rm:bn:bb

Enclosure: Attachment A – Revised Tables E-12, E-14, and E-16 for the MRP to Order No. R9-2021-0100

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² Link to Recycled Water Policy:

https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2018/121118_7_final_amendment_oal.pdf

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Order No: R9-2021-0100

Table E-12. CEC Baseline Monitoring: Health, Performance, and Surrogates

Parameter	Units	Relevance	Sample Type	Minimum Sample Frequency	Reporting Limit	Monitoring Location(s)
1,4-Dioxane	ug/L	Health	24-Hour composite	Quarterly	0.1	M-008, MW-A-1
<u>1,4-Dioxane</u>	<u>ug/L</u>	<u>Health</u>	<u>24-Hour composite</u>	<u>Quarterly</u>	<u>0.1</u>	<u>M-008</u>
<u>1,4-Dioxane</u>	<u>ug/L</u>	<u>Health</u>	<u>Grab</u>	<u>Quarterly</u>	<u>0.1</u>	<u>MW-A-1</u>
NDMA ¹	ug/L	Health/ Performance	Grab	Quarterly	0.002	MFE, M-008, MW-A-1
N-Nitrosomorpholine (NMOR)	ug/L	Health	Grab	Quarterly	0.002	M-008, MW-A-1
PFOS	ug/L	Health	Grab	Quarterly	0.0065	M-008, MW-A-1
PFOA	ug/L	Health	Grab	Quarterly	0.0007	M-008, MW-A-1
Sucralose ¹	ug/L	Performance	Grab	Quarterly	0.1	MFE, M-008, MW-A-1
Sulfamethoxazole	ug/L	Performance	Grab	Quarterly	0.01	M-008, MW-A-1
Electrical Conductivity	millimho per centimeter (mmho/cm) or decisiemens per meter (dS/m)	Surrogate	Grab	Quarterly	-	M-008
UV Light Absorbance	%	Surrogate	Grab	Quarterly	-	M-008

¹Section VII.C of the WRRs requires more frequent monitoring.

Table E-14. CEC Initial Assessment Monitoring: Health, Performance, and Surrogates

Parameter ¹	Units	Relevance	Sample Type	Minimum Sample Frequency	Reporting Limit	Monitoring Location(s)
1-4, Dioxane	ug/L	Health	24-Hour composite	Once per 6 months²	0.1	M-008, MW-A-4
<u>1,4-Dioxane</u>	<u>ug/L</u>	<u>Health</u>	<u>24-Hour composite</u>	<u>Once per 6 months²</u>	<u>0.1</u>	<u>M-008</u>
<u>1,4-Dioxane</u>	<u>ug/L</u>	<u>Health</u>	<u>Grab</u>	<u>Once per 6 months²</u>	<u>0.1</u>	<u>MW-A-1</u>
NDMA ⁴	ug/L	Health/ Performance	Grab	Once per 6 months ²	0.002	MFE, M-008, MW-A-1
NMOR	ug/L	Health	Grab	Once per 6 months ²	0.002	M-008, MW-A-1
PFOS	ug/L	Health	Grab	Once per 6 months ²	0.0065	M-008, MW-A-1
PFOA	ug/L	Health	Grab	Once per 6 months ²	0.0007	M-008, MW-A-1
Sucralose ⁴	ug/L	Performance	Grab	Once per 6 months ²	0.1	MFE, M-008, MW-A-1
Sulfamethoxazole	ug/L	Performance	Grab	Once per 6 months ²	0.01	M-008, MW-A-1
Electrical Conductivity	mmho/cm or dS/m	Surrogate	Grab	TBD ³	-	M-008
UV Light Absorbance	%	Surrogate	Grab	TBD ³	-	M-008

¹The San Diego Water Board may remove or add parameters based on the findings of the initial assessment monitoring phase.

²More frequent monitoring may be required if a threshold described in Table E-19 of this MRP is exceeded.

³Frequency will be specified by the San Diego Water Board after reviewing the monitoring results from the initial assessment phase.

⁴More frequency monitoring required by section VII.C of the WRRs in Attachment D of the Order.

Table E-16. CEC Standard Operation Monitoring: Health, Performance, and Surrogates

Parameter	Units	Relevance	Sample Type	Minimum Sample Frequency	Reporting Limit	Monitoring Location(s)
1,4-Dioxane	ug/L	Health	24-Hour composite	Once per 6 months²	0.1	M-008, MW-A-1
<u>1,4-Dioxane</u>	<u>ug/L</u>	<u>Health</u>	<u>24-Hour composite</u>	<u>Once per 6 months²</u>	<u>0.1</u>	<u>M-008</u>
<u>1,4-Dioxane</u>	<u>ug/L</u>	<u>Health</u>	<u>Grab</u>	<u>Once per 6 months²</u>	<u>0.1</u>	<u>MW-A-1</u>
NDMA ⁴	ug/L	Health/ Performance	Grab	Once per 6 months ²	0.002	MFE, M-008, MW-A-1
NMOR	ug/L	Health	Grab	Once per 6 months ²	0.002	M-008, MW-A-1
PFOS	ug/L	Health	Grab	Once per 6 months ²	0.0065	M-008, MW-A-1
PFOA	ug/L	Health	Grab	Once per 6 months ²	0.0007	M-008, MW-A-1
Sucralose ⁴	ug/L	Performance	Grab	Once per 6 months ²	0.1	MFE, M-008, MW-A-1
Sulfamethoxazole	ug/L	Performance	Grab	Once per 6 months ²	0.01	M-008, MW-A-1
Electrical Conductivity	mmho/cm or dS/m	Surrogate	Recorder	TBD ³	-	M-008
UV Light Absorbance	%	Surrogate	Grab	TBD ³	-	M-008

¹The San Diego Water Board may remove or add parameters based on the findings of the initial assessment monitoring phase.

²More frequent monitoring may be required if a threshold described in Table E-19 of this MRP is exceeded.

³Frequency will be specified by the San Diego Water Board after reviewing the monitoring results from the initial assessment phase.

⁴Section VII.C of the WRRs requires more frequent monitoring.