

RESPONSE TO WRITTEN COMMENTS
on Tentative Order for
**Water Recycling Requirements for Russell City Energy Center Recycled Water Facility,
3862 Depot Road, Hayward, Alameda County**

The Water Board received written comments on the tentative order circulated for public comment from the following:

1. California Department of Public Health, and
2. Russell City Energy Company, LLC (Discharger)

This response to comments summarizes each comment in *italics*, followed by Water Board staff response. For the full content and context of each comment, refer to the written comments. All revisions to the tentative order are shown with underline for additions and ~~striketrough~~ for deletions.

California Department of Public Health

California Department of Public Health (CDPH) commented about one issue, by email to Water Board staff on November 13, 2012.

Reference:

Tentative Order Finding 20. Supplemental Water Supply, Potable Water Supply and Cross-Connection Control; 2nd paragraph, 2nd sentence.

Comment:

California Department of Public Health (CDPH) advised to correct the technical term used for a public water supply backflow prevention device at one place in the Tentative Order. The Tentative Order used the term, "reverse-pressure -principle (RPP)". CDPH recommended that the term should be, "reduced pressure backflow preventer device".

Response:

We agree. We revised Finding 20 as suggested.

Russell City Energy Company, LLC (Discharger)

Discharger Comments - General

The Discharger commented on several issues, by letter dated December 6, 2012, and provided, with its comment letter, an attached marked-up version of the tentative order with suggested revised language. The letter highlighted three issues of concern. Additional issues were addressed by suggested revisions in the marked-up tentative order. Here below we address the three issues of concern highlighted by the Discharger, followed by the other suggested revisions, in the order of occurrence in the tentative order.

1. Certified Operators and Employee Training

Reference:

Tentative Order Finding 18. Operators and Employee Training.

Comment:

The Discharger commented that the facility is a privately owned and operated recycled water facility that does not have a WDR for the treatment or reclamation of sewage, and accordingly, is not

subject to the provisions of Title 23 of California Code of Regulations requiring certain qualifications for operators of wastewater treatment plants. The discharger proposed revisions to Finding 18 of the Tentative Order to address the facility current staffing plan.

Response:

The Discharger's comments and suggested revisions to the tentative order reflect two issues of concern regarding facility operators.

One issue is an updated description of the Discharger's plan for employing and training facility operators. The plans described in the tentative order were derived from the Report of Waste Discharge, but the plans have since been updated and refined. We found the Discharger's suggested revisions that address updated description of the plans for operator and employee training to be acceptable. We revised the tentative order to include the suggested language and to state in full at each occurrence, "Recycled Water Facility" and "Grade III Chief Plant Operator".

The second issue is about whether or not State-certified operators are required. The Discharger's comments assert that State-certified operators as specified in CCR Title 23 are not required because the facility is a privately owned and operated facility that does not have waste discharge requirements. The Discharger is correct that State-certified operators are not currently required for this Facility, although the reason is different than asserted. The reason is because the State Water Board has not yet adopted regulations needed to allow the State-certified operator program, currently applicable only to publicly-owned facilities, to also apply to private facilities.

The Discharger previously informed the Water Board, during development of the tentative order, that even though State-certified operators are not yet required, the Discharger intends to employ State-certified operators and will follow the operator certification program when the regulations are adopted and the program is available for private facilities.

We revised the tentative order to include discussion of the current status of privately owned facilities and State-certified operators, as well as the Discharger's updated plans for operators and employee training. We revised Finding 18 as follows:

"18. Operators and Employee Training

The Recycled Water Facility will be operated and maintained by State-certified Wastewater Treatment Operators (Operators) of appropriate grade. The Recycled Water Facility is a privately owned and operated facility. The Operator certification program is not yet required for privately owned facilities, pending adoption of regulations by the State Water Resources Control Board (State Water Board). The Discharger intends complete participation in and compliance with the Operator certification program when the regulations are adopted and the program is available to this facility. Meanwhile, the Discharger will use certified Operators in accordance with the following plans:

Operation and maintenance will be under the direction of the current Grade III Chief Plant Operator. The Grade III Chief Plant Operator is expected to obtain Grade IV certification in 2013.

Currently the Recycled Water Facility has two Grade II Operators who will be taking their Grade III examinations in 2013. The remaining five Recycled Water Facility operators and any new

hires going forward will be enrolled in the State's Operator in Training Program with the goal of having all Recycled Water Facility operators qualified at the Grade III level.

The Grade III Chief Plan Operator and two other site employees have completed the State-required Recycled Water Site Supervisor Training to meet the certification requirements established by the American Water Works Association (AWWA) *Guidelines for On-site Retrofit of Facilities Using Disinfected Tertiary Recycled Water* and the AWWA *Guidelines for Distribution of Non-potable Water*. To date, Recycled Water Users training has been administered to all Russell City Energy Center site operators by the Grade III Chief Plant Operator.

The Grade III Chief Plan Operator currently possesses the necessary State documentation to allow him to inspect and certify backflow devices in potable and recycled water systems. In the future, the Grade III Chief Plant Operator will be enrolling in the State's Cross Connection Inspection Specialist course recommended by AWWA.

This arrangement complies with the criteria for personnel given in Title 22 Water Recycling Criteria section 60325.

~~The Recycled Water Facility will be operated and maintained by state-certified Wastewater Treatment Operators (Operators) of appropriate grade. The Discharger will use three Operators on a full-time basis to operate the Recycled Water Facility. At present, this crew of Operators includes one each of certification Grade 3, 2 and 1. The Grade 3 Operator is working toward Grade 4 certification.~~

~~The Grade 3 Operator is also being trained to be the Russell City Energy Center Use Area Supervisor. This Operator will be trained to meet the certification requirements established by the American Water Works Association (AWWA) *Guidelines for On-site Retrofit of Facilities Using Disinfected Tertiary Recycled Water* and the AWWA *Guidelines for Distribution of Non-potable Water*. This Operator will also be trained on cross-connection testing procedures recommended by AWWA.~~

~~After completing the training, the Russell City Energy Center Use Area Supervisor will train the other two Operators before they begin work in the recycled water use area. This arrangement complies with the criteria for personnel given in Title 22 Water Recycling Criteria section 60325."~~

2. Use Area Buffer Zone Requirements for Domestic Wells

Reference:

Tentative Order Finding 19. Use Area Buffer Zone Requirements for Domestic Wells.

Comment:

The Discharger noted that the domestic well formerly located near the north fence line has already been abandoned and thus the Tentative Order discussion can be changed from future tense to past tense. The Discharger also noted that another well discussed in the TO is a monitoring well, not a domestic supply well, and thus not relevant to this finding.

Response:

We agree with the Discharger's comments. We revised Finding 19 as follows:

"19. Use Area Buffer Zone Requirements for Domestic Wells

There are ~~two~~ no known domestic water supply wells within 1000 feet of the Facility site. An existing well south of the Facility's north fence line was ~~will be~~ abandoned and filled in accordance with a Well Abandonment Permit from the Alameda County Environmental Health Department, ~~prior to recycled water use. An existing monitoring well located about 250 feet north of the Facility's north fence line will be relocated at least 500 feet from the closest recycled water use area. These measures will comply~~ This complies with the criteria for a minimum setback distance of fifty feet between domestic wells and recycled water use areas given in Title 22 Water Recycling Criteria section 60310(a). "

3. Recycled Water Pipeline Construction Requirements

Reference:

Tentative Order Finding 21. Water Main Separation and Recycled Water Pipeline Construction Requirements.

Comment:

The Discharger comments that the facility is a privately owned industrial facility with restricted public access. For this type of facility, alternate means of marking and labeling recycled water pipe, other than typical purple pipe, may be used.

Response:

We agree. CCR Title 22 Water Recycling Criteria and California Health and Safety Code include requirements for recycled water pipe. One requirement is to be able to identify recycled water pipe versus any other type of water. The classic and standard method in California is to use purple-colored pipe or to wrap the pipe with purple tape. The Discharger originally planned to follow this method, and Finding 21 restated that. The Discharger has now noted that the Health and Safety Code also allows an alternate means of labeling, for select circumstances, such as an industrial facility with restricted public access. The Discharger wants to follow this alternate method and suggested revised language to accommodate this. We found the Discharger's proposal to be acceptable.

We revised Finding 21 to include the Discharger's suggested revisions, with a few additional minor word changes to fit existing sentences, as follows:

"21. Water Main Separation and Recycled Water Pipeline Construction Requirements

All water mains that supply the Facility comply with the following separation criteria: 10 feet horizontal and 1 foot vertical separations between water mains and sanitary sewer pipelines, and 4 feet horizontal and 1 foot vertical separations between water mains and disinfected tertiary recycled water pipelines. This satisfies the requirements for separation of water mains and non-potable pipelines given in California Code of Regulations Title 22 section 64572. (Cal. Code Regs., title 22, §64572.)

All recycled water mains will be ~~are~~ constructed with CDPH-approved materials and will be either (a) colored purple or wrapped with purple tape, and labeled as Recycled Water- Do Not Drink, or (b) constructed in accordance with an established labeling or marking system for recycled water that clearly distinguishes recycled water from potable water to comply with Health and Safety Code section 116815. (Health & Saf. Code §116815.)

Specifically in compliance with the foregoing, all underground recycled water mains shall implement a marking system that is a combination of the following: (a) markers that identify the location of all underground recycled water pipe will be placed above the recycled water pipe to indicate changes in pipe direction and at intervals along straight runs of pipe, and will be durable, in-ground, flush mounted markers; and (b) as-built piping composite drawings available at all times at the Facility that clearly provide pipe identification, plant coordinate location, and elevation of all recycled water pipe."

4. Add a Comma to the Discharger's Name

Reference:

At four locations in the Tentative Order, at each occurrence of the Discharger's full name:

- 1. Order heading,*
- 2. Finding 1, first paragraph, first sentence,*
- 3. Finding 1, second paragraph, first sentence, and*
- 4. Monitoring and Reporting Program title.*

Comment:

Add a comma to the Discharger's name, e.g., "Russell City Energy Company, LLC".

Response:

We agree and have revised the tentative order as suggested, in all four locations.

5. Description of Source Water Used to Produce Recycled Water

Reference:

Tentative Order Finding 15. Recycled Water Facility Treatment Process.

Comment:

Change "disinfected" to "undisinfected", at multiple locations in the finding.

Response:

We agree. We revised the tentative order as suggested.

6. Description of Secondary-Level Treated Wastewater

Reference:

Tentative Order Finding 15. Recycled Water Facility Treatment Process; in two places, at the first sentence, and in paragraph "a" at the first sentence.

Comment:

Change "secondary treated effluent" to "secondary effluent".

Response:

We concur with the Discharger's intent to provide a more descriptive phrase. Instead of either the original or the Discharger's suggestion, we revised the tentative order to use the term, "secondary-level treated wastewater," in both places noted.

7. Manufacturer's Equipment Name Correction

Reference:

Tentative Order Finding 15. Recycled Water Facility Treatment Process, second sentence.

Comment:

Change equipment name from incorrect "Lamina" to correct "Lamella".

Response:

We agree. We revised the tentative order as suggested.

8. Clarifications about Sampling and Monitoring Practices

Reference:

Tentative Order at:

(a) Finding 17. Sampling and Analysis Requirements for Turbidity, CT and Total Coliform; and (b) Provision D.10. Recycled Water Facility Monitoring.

8.a. Sampling Separate Treatment Trains

Comment:

At Finding 17, clarify that sampling occurs for each treatment train separately, not at the downstream point of combined flows. At Finding 17, 1st sentence, delete "combined" and add "of each train".

Response:

We agree. The facility has multiple parallel treatment trains. After treatment, the flows from each train are combined. The tentative order stated that sampling occurs on the combined flow. Actually, sampling is required to be conducted on each separate treatment train, prior to being combined. The suggested changes appropriately address the correct sampling regime. We revised the tentative order as suggested.

8.b. Continuous Sampling

Comment:

At Finding 17, clarify that sampling occurs by continuous sampling, not composite sampling. At Finding 17, second sentence, change "composite" to "continuous".

Response:

We agree. The monitoring in discussion here occurs continuously, not by a "composite" sampler. We revised the tentative order as suggested.

8.c. Total Coliform Sampling

Comment:

At Finding 17, change existing second sentence into two shorter sentences, a new second and third sentence, so that the second sentence addresses disinfection CT monitoring, and the third sentence addresses coliform monitoring. Also, add clarification to new third sentence that Total Coliform is monitored by daily grab samples.

Response:

We agree. The proposed suggestions afford better description of monitoring practices. We revised the tentative order as suggested.

8.d. Sampling of each treatment train

Comment:

At Provision D.10, Recycled Water Facility Monitoring, Part a, change "combined filter effluent" to "filter train effluent", to address the issue of sampling each separate filter train, not the combined flows.

Response:

We agree. We revised the tentative order as suggested.

9. "Backflow Assembly Tester"

Reference: *At two places in the Tentative Order:*

(a) Provision D.11. Cross Connection Control Testing Requirements, Part b, and

(b) Monitoring and Reporting Program, Part VI, B. Cross Connection Control Practices, Part 2.

Comment:

The Discharger suggested clarifying the applicable trained employee position, by deleting "cross connection control specialist" and replacing with "Backflow Assembly Tester".

Response:

We agree. We revised the tentative order as suggested.

10. Disinfection Contact Time

Reference:

Monitoring and Reporting Program

V. Monitoring Schedule

*Table 3 - Schedule for Recycled Water Monitoring,
5th line, for the Parameter "Contact Time"*

Comment:

Tentative Order Table 3 specifies the monitoring schedule for various parameters.

The Table includes the parameter "Contact Time", and identifies the sampling frequency as "continuous". The Discharger suggested that this should be revised to clarify that monitoring for this parameter, modal contact time, is conducted by a one-time special tracer study of the chlorine contact basins and there is no on-going measurement testing.

Response:

We agree that the matter should be clarified. The Discharger suggested revised language for the Table 3 specifications for Contact Time. We revised the tentative order to do that, and we also addressed the issue by a narrative requirement added to the Monitoring Program, as Part VI.A.6., *Disinfection Contact Time*, copied below.

Reference: Monitoring and Reporting Program, Part VI.A.6.

VI. Monitoring Specifications

A. Monitoring and Reporting Details

6. Disinfection Contact Time.

"6. Disinfection Contact Time

The disinfection contact time is to be determined and documented by a tracer study of the chlorine contact basin flows. This study will be conducted during initial startup of the Recycled Water Facility and prior to distribution of recycled water to end uses. The Discharger will submit to the Water Board a completed report of the tracer study no later than thirty days after completion of the study test procedures."

11. Transmittal letter signature

Reference:

Monitoring and Reporting Program
VII. Reports to be Submitted to the Water Board
A. Monitoring Reports
2. Transmittal Letter
d. Transmittal Letter Signature.

Comment:

This section requires reports to be signed by particular authorized agents. The Discharger suggested the following change to clarify the designated signatory person: delete "recycled water facility plant manager", and insert instead, "Russell City Energy Center plant manager".

Response:

We agree with the suggestion. We revised the tentative order as suggested.

12. Precipitation Monitoring -- Clarification

Reference:

Monitoring and Reporting Program
VI. Monitoring Specifications
A. Monitoring and Reporting Details
5. Precipitation

Comment:

The uncertainty here was if rainfall data needs to be collected onsite, or if data from a nearby standard weather station is also acceptable. The answer is the latter. The Discharger did not explicitly comment on this issue in writing, but the question had been raised in the course of conversations between Discharger and Water Board staff about other issues, and Water Board staff considered the issue worth addressing.

Response:

We revised the tentative order to clarify that rainfall data from a nearby offsite certified weather monitoring station is acceptable. The revised requirement language is given below:

"5. Precipitation

Precipitation (rainfall) monitoring shall be continuous and recorded and reported as total rainfall for each calendar ~~day~~ and as the total for each calendar month. Precipitation monitoring shall be representative of precipitation falling on recycled water use areas. The use of data from a certified weather monitoring station in the vicinity of the Facility and representative of rainfall at the Facility is acceptable. "