

**STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION**

**STAFF REPORT FOR REGULAR MEETING OF JULY 13-14, 2017**  
Prepared on June 20, 2017

**ITEM NUMBER:** 10

**SUBJECT:** Cambria Community Services District, Emergency Water Supply Project, Cambria, San Luis Obispo County, Consideration of Cease and Desist Order No. R3-2017-0016

**Staff Contact:** John Robertson, [John.Robertson@waterboards.ca.gov](mailto:John.Robertson@waterboards.ca.gov)

**KEY INFORMATION**

Location: 990 San Simeon-Monterey Creek Road, Cambria CA 93428  
Type of Discharge(s): Reverse osmosis residual and other wastes  
Design Capacity: 57,000 gallons per day  
Treatment: Evaporation  
Disposal: Class II Surface Impoundment  
Reclamation: None  
Existing Orders: R3-2014-0047  
Owner/Operator: Cambria Community Services District

**This Action:** Cease and Desist Order No. R3-2017-0016

**SUMMARY**

The Cambria Community Services District (Discharger or CCSD) is authorized by Waste Discharge Requirements (WDRs) Order No. R3-2014-0047 to discharge reverse osmosis residual and other wastes emanating from its Emergency Water Supply (EWS) system into a Class II surface impoundment. The WDRs require the Discharger to maintain compliance with applicable provisions of California Code of Regulations Title 27 for designated waste. The surface impoundment has a design capacity of approximately 6 million gallons and is required to maintain two feet of freeboard plus sufficient capacity to contain a 1,000-year, 24-hour storm, which means a total of 34.2 inches of freeboard is required.

Since it became operational in early 2015, the Prosecution Team alleges that the surface impoundment has experienced multiple challenges, including:

- Flooding
- Deer observed inside the facility's fence line;
- Gophers burrowing in the surface impoundment's berms, potentially compromising the berms' structural and waste containment integrity; and
- Aerosolized brine drifting outside of the surface impoundment's confines.

Further, during a heavy rain event in early 2017, the Prosecution Team alleges that the surface impoundment was inundated with stormwater originating from a field immediately to the north of the facility. The Prosecution Team also alleges that heavy rains and associated flooding revealed multiple design flaws of the surface impoundment, and in response to these allegations, the Prosecution drafted a tentative cease and desist order. (See Attachment 1).

## **DISCUSSION**

### **Background**

On January 17, 2014, and April 25, 2014, the Governor issued executive orders allowing projects related to the drought emergency to avoid the normal California Environmental Quality Act (CEQA) review in order to make water supplies available to the public more quickly.

The CCSD declared a Stage III drought emergency on January 30, 2014, and applied for expedited permitting for an EWS system, pursuant to the Governor's emergency order. The EWS system is designed to draw brackish water from beneath the town's wastewater percolation ponds, treat it with advanced water treatment processes, and reinject the treated water into the San Simeon basin aquifer, west of the three San Simeon municipal water wells.

The EWS system design also required expedited permitting for a Title 27 Class II surface impoundment to contain reverse osmosis residual and other wastes from the EWS advanced water treatment system. The surface impoundment was designed to operate as an evaporation pond and was proposed at the site of a then-existing percolation pond, which was undersized for the task given the maximum anticipated residual discharge rate and estimated evaporation rates. To compensate for the undersized pond, the EWS system was designed and permitted allowing the use of repurposed snow blowers to increase the effective evaporation rate by aerosolizing waste and evaporating it above the lined pond.

The Discharger's primary consultant for this project produced technical memorandums in support of the surface impoundment design and permit adoption. (See Attachment 3, Exhibits 10-12.) Key excerpts from those memorandums and studies include the following:

- "Technical Memorandum 2: Physical Characteristics and Waste Characterization" revised August 1, 2014, section 2.2, Runoff Volume/Pattern states:  
"It is estimated that a 100 year, 24 hour storm (equivalent to 7.15 inches) will produce a runoff volume of approximately 5,400 cubic feet (40,400 gallons), from an impermeable drainage area of approximately 9,070 square feet, which would eventually enter San Simeon Creek. There is no anticipated stormwater flow into the evaporation pond."
- "Technical Memorandum: Evaluation of Brine Evaporation Pond for Inundation from the 0.1-Percent Annual Exceedance Probability Storm Event" dated November 11, 2014, section 3.0, Conclusion states:  
"This hydraulic analysis of the surface impoundment and associated drainage control facilities surrounding the surface impoundment shows that a 1,000-year 24-hour precipitation event and the resulting rise in water elevations in Van Gordon Creek will not cause inundation, erosion, slope failure, washout, and overtopping of the surface impoundment during such an event."

- “Assessment of Depth to Groundwater at Van Gordon Creek” dated June 26, 2014, states:  
“The site data support a conclusion that high water levels beneath the northern extent of the Van Gordon reservoir are anticipated to remain below approximately elevation 25 feet. This indicates that the reservoir meets the regulatory criteria of a separation of a minimum of 5 feet between the base of the reservoir and the high water table.”

The Water Board adopted Order No. R3-2014-0047 on November 14, 2014, and the surface impoundment became operational on January 20, 2015.

### **Groundwater Quality**

The CCSD surface impoundment is located within the San Simeon Hydrologic Sub-Area of the Estero Bay Hydrologic Unit. The Basin Plan lists groundwater quality objectives in this area and groundwater beneficial uses are listed as Municipal and Domestic Supply (MUN) and Agricultural Supply (AGR).

### **Class II Surface Impoundment Liner System**

The Class II surface impoundment as constructed ranges in depth from 8 to 13 feet and is approximately three acres in size with a facility boundary that encompasses approximately six acres. State Parks campgrounds are located to the west and southeast of the facility.

The surface impoundment employs three liners, including:

1. A primary 60-mil thick high-density polyethylene (HDPE) geomembrane.
2. A secondary 60-mil thick HDPE geomembrane with embedded drainage layer.
3. A geosynthetic clay liner.

The surface impoundment employs a leachate collection and recovery system (LCRS) between liners 1 and 2, as well as a pan lysimeter known as the vadose zone monitoring system (VZMS) underlying the liner system detailed above.

### **Recent Violations**

Based on the following observations and allegations, the Prosecution team issued multiple Notices of Violation (NOVs):

- Beginning on January 9, 2017, stormwater flowed across San Simeon Creek Road and flooded the surface impoundment and reducing the available capacity and freeboard. On February 3, 2017, the Discharger reported that 33.5 inches of freeboard remained, less than the required 34.2 inches of freeboard. (See photos in Attachment 2.)
- The Discharger began sending daily reports of freeboard measurements to Water Board staff on March 6, 2016, and on March 26, 2017, reported 23 inches of freeboard, the lowest reading of the 2016/2017 rainy season.
- In response to a Water Code section 13267 order for technical information from the Central Coast Water Board, the Discharger forwarded copies of the surface impoundment inspection logs dated from December 31, 2016, through February 27, 2017 (See Attachment 3, Exhibit 5.). A review of those logs revealed that liquid was

detected in the vadose zone monitoring system (VZMS) pan lysimeter beginning on January 24, 2017. The presence of liquid in the VZMS is a signal that a potential leak in the surface impoundment liner system may have occurred. The Prosecution Team alleges that this observation of the presence of liquid should have triggered notifications to the Water Board of a potential leak. Based on the inspection logs, water was also detected in the VZMS on February 6, 2017, February 14, 2017, and February 21, 2017. The Prosecution Team indicates that CCSD personnel did not provide notification to Central Coast Water Board staff in response to any of these inspection/detection VZMS events, despite a requirement in the WDRs to do so.

- In an email dated March 14, 2017, the Discharger's Engineer, Bob Gresens, notified Central Coast Water Board staff that depth to groundwater measurements in the three monitoring wells surrounding the surface impoundment revealed that two of the three wells had groundwater levels at elevations which intruded into the required five feet of separation between the groundwater surface and the bottom of the surface impoundment in violation of Title 27 section 20240 (Attachment 3, Exhibit 6.) The Prosecution Team alleges that monitoring well No. 3 recorded a negative distance between groundwater and the lowest point of the surface impoundment, suggesting that the water table rose above the bottom of the liner and was in constant contact with the liner. Monitoring well measurements taken on March 14, 2017, and May 2, 2017, revealed that groundwater elevations, although receding, remained at less than the required five feet of separation in two of the three wells.

### **Facility Inspections**

Water Board staff inspected the Discharger's surface impoundment facility 13 times between when construction began in October 2014 and after it was inundated in March 2017.

### **Notices of Violation**

On February 9, 2017, the Water Board issued multiple notices of violation (NOV) to the Discharger related to the facility's flooding. (Attachment 3, Exhibit 4.)

The first NOV cited:

- The failure of the Discharger to submit a Wet Weather Preparedness Report (due October 1, 2016)
- The Discharger's chronic failure to submit timely and complete reports

The second NOV cited:

- Failure to notify the Water Board Executive Officer within 24 hours of identifying flooding that could impair the surface impoundment's integrity and failing to provide a written report of the incident within 14 days (Provision E.26.b)
- Failure to construct and maintain the surface impoundment and related containment structures "to prevent inundation, erosion, slope failure, washout, and overtopping under 1,000-year, 24-hour precipitation conditions."

### **Tentative Cease and Desist Order**

The alleged failure to design, construct, and operate the surface impoundment to ensure a minimum five-foot separation between wastes and the highest anticipated elevations of groundwater, and the alleged failure to anticipate the flooding that resulted in prolonged freeboard violations, indicate flaws in the design and operation of the surface impoundment according to the Prosecution Team and lead them to propose the subsequent Cease and Desist Order.

On April 18, 2017, Water Board Prosecution Team staff transmitted tentative Cease and Desist Order (CDO) No. R3-2017-0016 to the Discharger. (See Attachment 1.) This tentative CDO cites the alleged events surrounding the flooding in January 2017 and the rise of groundwater beneath the surface impoundment to the point of contact with the liner system as evidence that a discharge of waste is taking place, or threatening to take place, in violation of requirements or discharge prohibitions prescribed by the Water Board.

The tentative CDO provides the Discharger with two options going forward: 1) rehabilitate the surface impoundment before recommencing waste storage operations or 2) discontinue use of the surface impoundment for waste storage.

#### Discharger's Response

The Discharger has communicated to Water Board Prosecution Team that it will not contest the tentative CDO and intends to proceed with option 2, repurposing the surface impoundment into a raw potable water storage basin.

### CONCLUSION

During the hearing, the Central Coast Water Board can ask questions of either party and will hear comments from both sides and other interested parties prior to deliberating on the tentative CDO.

The Discharger has agreed not to contest the tentative CDO and intends to repurpose the surface impoundment into a raw potable water storage basin.

### RECOMENDATION FROM THE ADVISORY TEAM

Pending

### ATTACHMENTS

- Attachment 1: Tentative Cease and Desist Order No. R3-2017-0016
- Attachment 2: Photos of surface impoundment before and after flooding
- Attachment 3: Exhibit List (Exhibits are provided by reference with a hyperlink)

ECM # 1000006221

r:\rb3\shared\wdr\wdr facilities\san luis obispo co\cambria wwtp\emergency water supply project\enforcement\cdo\staff report cambria surface impoundment cdo.doc