

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

WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2014-0047
Waste Discharger Identification No. 3 400914531

For

**CAMBRIA COMMUNITY SERVICES DISTRICT
CLASS II SURFACE IMPOUNDMENT
SAN LUIS OBISPO COUNTY**

The California Regional Water Quality Control Board, Central Coast Region (Water Board), finds that:

SITE OWNER AND LOCATION

1. The Cambria Community Services District (Discharger) plans to construct and operate the Cambria Community Services District Class II Surface Impoundment (surface impoundment). The Discharger proposes to construct and operate the Class II surface impoundment to receive brine discharge from a newly constructed advanced water treatment plant.
2. The surface impoundment is located at 990 San Simeon-Monterey Creek Road, approximately two miles north of Cambria and half a mile from the ocean in San Luis Obispo County, **Figure 1**.
3. The Discharger will build an advanced water treatment plant (AWTP) to supply treated water for injection to the groundwater basin near the Discharger's San Simeon well field. The Discharger will treat brackish groundwater extracted from well 9P7 in the AWTP utilizing membrane ultrafiltration and reverse osmosis. The reverse osmosis system will produce and discharge approximately 57,000 gallons of brine per day to the surface impoundment. The water treatment and disposal process flow diagram is shown in **Figure 2**. The surface impoundment is shown in **Figure 3**. The surface impoundment will cover approximately three acres, comprised of Assessor's Parcel No. 013-051-024 and 013-051-008 with a latitude of 35° 35' 53" and a longitude of 121° 07' 04".

PURPOSE OF ORDER

4. The Discharger submitted a Report of Waste Discharge (ROWD) on August 29, 2014, to facilitate issuance of Waste Discharge Requirements (WDR) for the surface impoundment. The Discharger submitted supplemental information and several amendments to the report of waste discharge on September 2, 2014, September 8, 2014, September 12, 2014, and September 16, 2014.
5. These WDRs classify the evaporation pond as a Class II surface impoundment in accordance with Title 27, CCR Section 20005, et seq. (Title 27).

6. The maximum brine flow to the surface impoundment will be approximately 57,000 gallons per day (gpd).

FACILITY SITE DESCRIPTION

7. The surface impoundment's facility boundary encompasses approximately six acres and includes the surface impoundment and a blower system designed to enhance natural evaporation. The surface impoundment is approximately three acres in size and will range in depth from 8 feet to 13 feet.
8. Land use in the area is predominately agricultural and recreational. Agricultural lands are located to the north and east of the surface impoundment. Campgrounds are located to the west and south of the surface impoundment.
9. The Discharger proposes an engineered alternative to the prescriptive liner requirements of Title 27 for the Class II surface impoundment. The engineered alternative consists of the following from top down:
 - A. A primary 60-mil thick high density polyethylene (HDPE) geomembrane.
 - B. A secondary 60-mil thick HDPE geomembrane with embedded drainage layer.
 - C. A geosynthetic clay liner.
10. Title 27 CCR Section 2080(b) allows the Water Board to consider the approval of an engineered alternative to the prescriptive standard. In order to approve an engineered alternative, the Discharger must demonstrate that the prescriptive design is unreasonable and unnecessarily burdensome and will cost substantially more than an alternative, which will meet the criteria contained in Title 27 CCR Section 20800(b) or would be impractical and would not promote attainment of applicable performance standards. The Discharger must also demonstrate that the proposed engineered alternative liner system is consistent with the performance goal addressed by the particular prescriptive standard, and provides protection against water quality impairment equivalent to the prescriptive standard in accordance with Title 27 CCR Section 20800(b)(2). The performance of the alternative liner system is equal to, or exceeds, the waste containment capability of the regulatory prescriptive design. For the surface impoundment, the equivalence demonstration was based on the engineered alternative demonstrations made for other facilities. There are no significant differences in the characteristics of already approved engineered alternative liners and the liner system proposed for the Cambria Community Services District surface impoundment.

The engineered alternative for the surface impoundment is a triple-layer liner system. The liner includes a layer of geosynthetic clay liner, and two layers of 60-mil HDPE, which are expected to mitigate downward migration of water from the surface impoundment. The geosynthetic clay liner is comprised of a powdered sodium bentonite mat with backing of geotextiles on both sides to provide a hydraulic conductivity of 5×10^{-9} cm/sec. The surface impoundment will be equipped with a leachate collection and recovery system (LCRS), which is a lined sump installed below the lowest portions of the primary liner. The LCRS allows for detection of the vertical migration of liquids and removal of a water sample for testing. Additionally, the surface impoundment will be equipped with a pan lysimeter below the LCRS to allow for additional monitoring of any vertical migration of liquids below the

surface impoundment. The pan lysimeter will serve as the vadose zone monitoring system for the surface impoundment.

Water Board staff has evaluated the proposed alternative. The alternative meets the Title 27 requirements, is consistent with the performance goal of the prescriptive standards, and affords equivalent protection against water quality impairment.

11. Side slope liners will be constructed using the same material and in the same sequence and manner as the base liner system. The liner subgrade will be prepared using acceptable engineering and construction practices to provide a smooth surface free from material that could damage the geosynthetic clay liner. The Discharger will install and certify the liner in accordance with this Order and an Executive Officer-approved construction quality assurance (CQA) plan.
12. The Discharger will construct the surface impoundment with an inboard slope of 4:1 and outside slopes of 3:1. The berm width at the crest will be approximately 14 feet.
13. The surface impoundment will have a drainage geomembrane LCRS across the entire lined area below the primary liner.
14. The Discharger will install a pan lysimeter under the LCRS collection sump that will serve as an engineered alternative to the prescriptive vadose zone monitoring system requirement of Title 27, CCR Section 20415(d).
15. The depth to highest anticipated groundwater is approximately nine feet below the bottom of the LCRS sump. Title 27, CCR Section 20240(c) requires a minimum separation of five feet between waste (bottom of the LCRS sump) and the highest anticipated groundwater elevation.
16. Waste will enter the surface impoundment from a pipe located at the northeast corner of the surface impoundment. The pipe carrying brine from the AWTP to the surface impoundment will be equipped with secondary containment to help prevent potential impacts to surface waters due to pipe leakage or failure.
17. Blowers will be utilized to enhance natural evaporation. An on-site weather station will be connected to the blowers to prevent mist drift outside of the surface impoundment. The weather station will be used to measure local weather conditions, including wind velocity, wind direction, humidity and temperature. The blowers will shut down when weather conditions could allow off-site drift of evaporative mist. Examples of such conditions include high wind events and wind directions that would blow mist away from the surface impoundment. Linking the blowers to a weather station will limit drift to within the surface impoundment.

WASTE TYPE & CLASSIFICATION

18. The wastewater consists of concentrated brine from the reverse osmosis (RO) water treatment plant, waste water from analytical instruments, and spent membrane cleaning solutions. The Discharger developed the brine waste characteristics based on feed water quality, RO treatment removal efficiency, finished water quality, and resulting mass balance.

The estimated concentrations in the waste discharged to the surface impoundment are as follows:

<u>Parameter</u>	<u>Concentration (mg/L¹)</u>
Total Dissolved Solids	17,376
Chloride	4,899
Nitrate (as Nitrogen)	50.8
Sulfate	1,997
Calcium	1,036
Iron	1.5
Potassium	348
Magnesium	835
Sodium	3,305
Barium	1.9
Boron	0.43
Copper	0.04
Lead	0.003
Manganese	0.094
Nickel	0.04
Strontium	7.8

¹ milligrams per liter

19. Designated waste is identified in Title 27, Section 20210, as a nonhazardous waste, which consists of, or contains pollutants which, under ambient environmental conditions at the waste management unit, could be released at concentrations in excess of applicable water quality objectives, or that could reasonably be expected to affect beneficial uses of waters of the state.
20. The discharge poses a significant threat to water quality. Therefore, the discharge is a designated waste and, as such, must be discharged to a Class II surface impoundment as required by Title 27.
21. The dissolved solids concentration in the surface impoundment will increase over time. The Discharger will evaluate solids build up in the surface impoundment and will remove waste as a slurry utilizing submersible pumps as needed to maintain surface impoundment holding capacity. Brine slurry removal is expected to occur once every ten years depending on the frequency of surface impoundment use and capacity.

GEOLOGY

22. The surface impoundment is located in an area with alluvial and terrace deposits, which primarily consist of silt and clay with some weathered bedrock consisting of dense to very dense clayey sand.
23. **Faulting/Seismicity** – There is no evidence of Holocene-age faulting within 200 feet of the surface impoundment. There are three Holocene active faults in San Luis Obispo County that are zoned under the State of California Alquist-Priolo Earthquake Fault Zoning Act: the San Simeon–Hosgri Fault, the San Andreas, and the Los Osos Fault. Other faults that have the potential to affect the surface impoundment include the Cambria Fault, Oceanic Fault and the

Nacimientto Fault.

The Discharger must complete geotechnical work necessary to verify compliance with Title 27 stability analysis requirements. The Discharger must complete all seismic and stability analyses and demonstrate compliance with Title 27 Section 20370. The Executive Officer must concur with the Discharger's analyses prior to discharge into the surface impoundment.

24. **Hydrogeology** – Groundwater beneath the surface impoundment occurs in the alluvial aquifer. Depth to the highest anticipated groundwater is estimated to be approximately nine feet below the bottom of the LCRS sump. Groundwater flow direction has not been established but the flow is expected to be generally towards the south in the vicinity of the surface impoundment. However when the Discharger operates extraction well 9P7 to supply the AWTP, groundwater gradients near the surface impoundment may be impacted. The Discharger expects groundwater gradients to shift towards extraction well 9P7 during pumping. The 9P7 pumping impacts on gradients near the surface impoundment are not well established and will require additional groundwater elevation data to fully evaluate.

GROUNDWATER, STORMWATER, AND SURFACE WATER

25. **Groundwater Quality** – The Discharger collected one groundwater sample from each of the three groundwater monitoring wells around the surface impoundment. The limited data indicates sodium and chloride concentrations exceed their respective Basin Plan water quality objectives for agricultural supply. Once the surface impoundment is constructed the Discharger will collect additional groundwater samples from the monitoring wells located upgradient and downgradient of the surface impoundment.
26. **Supply Wells** – Municipal supply wells in the area include San Simeon Wells 1, 2, and 3. The Discharger provided a map indicating there are twelve irrigation supply wells, four domestic supply wells, and one public supply well within one mile of the surface impoundment.
27. **Extraction Wells** - Onsite well 9P7 will extract groundwater for treatment in the AWTP.
28. **Surface Water** – The surface impoundment is bordered by Van Gordon Creek to the east and San Simeon Creek to the south. Van Gordon and San Simeon Creeks are ephemeral streams that flow during the rainy season. Van Gordon Creek flows into San Simeon Creek which flows to San Simeon Creek lagoons and eventually empties to the Pacific Ocean.
29. **Stormwater** – The Discharger routes surface drainage around the surface impoundment. The drainage system will be designed to handle the runoff from a 1,000-year, 24-hour storm consistent with CCR Title 27, Section 20365.
30. **Precipitation** – According to San Luis Obispo County Public Works Department data, the area receives an average of 19.63 inches of rain per year primarily between the months of November and April. The highest average monthly rainfall is approximately 4.12 inches in February. The 1,000 year, 24-hour storm event is estimated to be 10.2 inches.
31. **Floodplain** – The Federal Emergency Management Agency Flood Insurance Rate Maps show that the surface impoundment is outside the 100-year flood plain.

32. **Groundwater Separation** – Proposed and existing excavation grades and liner designs provide separation between groundwater and the surface impoundment, thus meeting the Title 27 requirement for maintaining a minimum five-foot separation.

CONTROL SYSTEMS/MONITORING PROGRAMS

33. **Leachate Management System** – The LCRS design for the surface impoundment includes a leachate collection sump lined with a 60-mil HDPE geomembrane. The sump will contain a leachate collection pipe covered with gravel and wrapped with geotextile fabric.
34. **Vadose Zone Monitoring System** – A vadose zone monitoring system will be installed under the LCRS trench. The system will include a 60-mil HDPE liner designed to detect leaks from the liner system and will be connected to a leak detection monitoring well.
35. **Monitoring and Reporting Program (MRP)** – Monitoring systems are outlined in the attached MRP No. R3-2014-0047 and include visual inspections, groundwater monitoring, and leak detection monitoring. Finding 35 documents the groundwater monitoring well network.
36. **Groundwater Monitoring** – The current groundwater monitoring well network for the surface impoundment consists of three monitoring wells at the locations shown in **Figure 3**. Additional groundwater monitoring wells may be required to properly evaluate groundwater gradient in the area around the surface impoundment.
37. **Surface Water Monitoring** – No surface water monitoring is required. All waste must be contained within the surface impoundment.

BASIN PLAN

38. The California Water Resources Control Board, Central Coast Region (Central Coast Water Board) adopted a Water Quality Control Plan for the Central Coast Region (hereinafter the Basin Plan) first in 1975, with the most recent update approved on June 8, 2011, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for receiving waters addressed through the plan. Requirements in this Order implement the Basin Plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.
39. Van Gordon Creek flows to San Simeon Creek which flows to the Pacific Ocean. The Basin Plan identifies the following present and anticipated beneficial uses of Van Gordon Creek:
- a. Municipal supply;
 - b. Domestic supply;
 - c. Water contact recreation;
 - d. Non-contact water recreation;
 - e. Wildlife habitat;
 - f. Cold fresh-water aquatic habitat;
 - g. Migration of aquatic organisms;

- h. Spawning, reproduction, and/or early development;
 - i. Warm fresh-water aquatic habitat;
 - j. Preservation of biological habitats of special significance;
 - k. Rare, threatened, or endangered species;
40. Present and anticipated beneficial uses of groundwater in the surface impoundment vicinity include
- a. Agricultural supply;
 - b. Municipal and domestic supply;
 - c. Industrial use.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

41. By proclamations dated January 17, 2014, and April 25, 2014, the Governor declared a state of emergency in California due to the ongoing extraordinary drought. Each proclamation included a directive that suspended the environmental review required by the California Environmental Quality Act (CEQA) to allow certain directive from the Governor to take place as quickly as possible. The project is consistent with the following directive from the April 25, 2014, proclamation: Directive 12: The State Water Resources Control Board Department of Drinking Water (DDW), the Office of Emergency Services, and the Office of Planning and Research will assist local agencies that the Department of Public Health has identified as vulnerable to acute drinking water shortages in implementing solutions to those water shortages. Under Directive 19 of the April 25, 2014 Proclamation, environmental review required by CEQA is suspended for actions taken pursuant to Directive 12, and for all necessary permits needed to implement those actions, when the Office of Planning and Research “concurs that local action is required.”

DDW has identified the Cambria Community Services District (district) as having critical drinking water shortages, meaning that the city will deplete its available supplies within 60 to 90 days. The Office of Emergency Services has indicated that the project described in the attached Notices of Exemption is necessary to solve this critical drinking water shortage. The Office of Planning and Research concurred that local action is required on September 12, 2014. Therefore, the project is exempt from CEQA because the Governor suspended CEQA for this project pursuant to Directives 19 and 12 of the April 25, 2014 proclamation.

The project is also consistent with the statutory exemption for an emergency project. CEQA defines emergency as follows: “‘Emergency’ means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. ‘Emergency’ includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage.” [Public Resources Code Section 21060.3.] Specific actions necessary to prevent or mitigate an emergency are exempt from CEQA. Emergency activities do not include long-term projects undertaken for the purpose of preventing or mitigating a situation that has a low probability of occurrence in the short-term. [Title 14 California Code of Regulations, Section 15269(c).] The basis for the exemption is that the Discharger’s water situation is dire. The District currently has less than a six month drinking water supply. The Emergency Water Supply Project will avoid potentially disastrous consequences from not having adequate water for health, safety, sanitation, and fire protection. These impacts are likely to occur in the very near future and

continue as long as drought conditions persist. The project is necessary to prevent or mitigate a water shortage emergency, prevent seawater intrusion that could make current supplies unusable, and will otherwise mitigate the effects of the drought emergency declared by the Governor and emergencies that result from future critical water shortages.

GENERAL FINDINGS

42. In accordance with California Water Code (CWC) §13263(g), no discharge into waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, must create a vested right to discharge. All discharges of waste into waters of the state are privileges, not rights. Authorization to discharge waste is conditioned upon the Discharger complying with provisions of Division 7 of the CWC and with any more stringent limitations necessary to implement the Basin Plan, to protect beneficial uses, and to prevent nuisance. Compliance with Order No. R3-2014-0047 should assure conditions are met and mitigate any potential changes in water quality attributed to the surface impoundment.
43. The surface impoundment meets the criteria of Title 27 for a Class II surface impoundment suitable to receive brine. Order No. R3-2014-0047 implements, but is not limited to, the prescriptive standards and performance goals of Title 27.
44. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all applicable requirements of the Endangered Species Act.
45. **Antidegradation** – State Water Board Resolution No. 68-16 Statement of Policy with Respect to Maintaining High Quality of Waters in California (Resolution No. 68-16) requires Water Boards, in regulating the discharge of waste, to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with the maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in Water Board's policies (e.g., quality that exceeds applicable water quality standards). Resolution No. 68-16 also states, in part:

“Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in best practicable treatment and control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained”.
46. The discharges regulated by this Order are required to comply with the land disposal regulations contained in Title 27, which are intended to prevent discharges of waste to waters of the state, preventing degradation of waters of the state. The discharge is subject to waste discharge requirements, which will result in best practicable treatment or control.

47. On **September 17, 2014**, the Water Board notified the Discharger and interested agencies and persons of its intention to issue the Waste Discharge Requirements and has provided an opportunity to review a copy of the proposed Order and submit views and comments.
48. After considering all comments pertaining to this discharge during a public hearing on **November 14, 2014**, this Order was found consistent with the above findings.

IT IS HEREBY ORDERED pursuant to authority in Sections 13263 and 13267 of the California Water Code, the Cambria Community Services District, its agents, successors, and assigns may discharge wastes at the Cambria Community Services District Class II Surface Impoundment, providing compliance is achieved and maintained with the following:

A. COMPLIANCE WITH OTHER REGULATIONS, ORDERS AND STANDARD PROVISIONS

1. Discharge of waste, operations, and monitoring shall comply with all applicable requirements contained in Title 27. If any applicable regulation requirements overlap or conflict in any manner, the most water quality protective requirement must govern in all cases, unless specifically stated otherwise in this Order, or as directed by the Executive Officer.

B. PROHIBITIONS

1. Discharge of waste to areas outside the approved and permitted Class II surface impoundment as illustrated in **Figure 3** is prohibited, unless approved by the Executive Officer. This includes drift from mechanical blowers designed to increase surface impoundment evaporation efficiency. No material from the surface impoundment shall be allowed to drift, drain, or otherwise discharge to any area other than within the surface impoundment.
2. Discharge of waste or leachate to ponded water, drainage way(s), or waters of the State, including groundwater, is prohibited.
3. Discharge of hazardous waste to the surface impoundment or the generation of hazardous waste due to evaporation in the surface impoundment is prohibited. For the purposes of this Order, the term hazardous waste is as defined in Title 23, California Code of Regulations, Section 2510 et seq.
4. Disposal of wastes within five (5) feet of the highest anticipated elevation of underlying groundwater, including the capillary fringe, is prohibited, except as allowed under Title 27, §20080 (b) and (c). The bottom of waste for the surface impoundment is defined as the lowest part of the LCRS.
5. Discharge of waste to any Class II surface impoundment is prohibited until the following tasks are completed and approved by Water Board staff:
 - a. Installation of a background groundwater monitoring system.
 - b. Installation of an approved groundwater quality monitoring system.
 - c. Establishment of suitable Financial Assurance funds for corrective action, unit closure, and post-closure maintenance as required by Title 27.
 - d. Submittal and approval of a construction quality assurance report for the surface impoundment construction.

- e. Submittal and approval of complete seismic design and stability analyses as required by Title 27.

C. SPECIFICATIONS

1. Discharge of waste must not cause a condition of pollution or contamination to occur through a statistically significant release of pollutants, contaminants, and/or waste constituents, as indicated by the most appropriate statistical [or non-statistical] data analysis method and retest method described in MRP No. R3-2014-0047.
2. Discharge, collection, and treatment of waste must not create nuisance, as defined by CWC §13050(m).
3. Annually, prior to the anticipated rainy season, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the site.
4. The Discharger must maintain a minimum of two feet of freeboard in the surface impoundment. Freeboard is defined as the distance between the water surface within the impoundment and the top of the lined impoundment. The surface impoundment must be constructed to contain the waste and the volume of rain which falls onto the surface impoundment areas in a 1,000-year, 24-hour storm event, while maintaining two feet of freeboard.
5. The surface impoundment and related containment structures shall be constructed and maintained to prevent inundation, erosion, slope failure, washout, and overtopping under 1,000-year, 24-hour precipitation conditions.
6. Wastes discharged in violation of this Order, must be removed and relocated.
7. Both the bottom liner and side slope liners for the Class II surface impoundment shall be constructed in accordance with the following engineered alternative that is comprised of the following from top to bottom:
 - a. A primary 60-mil thick high density polyethylene (HDPE) geomembrane.
 - b. A secondary 60-mil thick HDPE geomembrane, with embedded drainage layer.
 - c. A geosynthetic clay liner.
8. The Discharger may propose changes to the liner system design prior to construction, provided that approved components are not eliminated, the engineering proportions of the components are not substantially reduced, and the proposed liner system results in the protection of water quality equal to or greater than the design prescribed by Title 27 and this Order. The proposed changes may be made following approval by the Executive Officer. Substantive changes to the design require reevaluation as an engineered alternative and concurrence by the Executive Officer.

9. The Discharger must complete all seismic design and stability analyses as required by Title 27, including obtaining Executive Officer approval, prior to the discharge of waste into the surface impoundment.
10. The vadose zone monitoring system shall be capable of identifying the earliest possible detection of a release from the surface impoundment.
11. The LCRS shall be designed, constructed, and maintained to prevent the buildup of hydraulic head on the underlying liner at any time. The depth of the fluid in any LCRS sump shall be kept at the minimum needed for safe pump operation and at no time shall it exceed 12 inches of head in the LCRS.
12. Any pipeline or brine conveyance from the AWTP to the surface impoundment shall be equipped with secondary containment. Any piping or brine conveyance located outside of the surface impoundment liner system shall be equipped with secondary containment.
13. Any direct-line discharge to a surface impoundment shall have fail-safe equipment or operating procedures to prevent overfilling.
14. The surface impoundment shall be designed, constructed, and maintained to prevent scouring and/or erosion of the liners and other containment features at points of discharge to the impoundment and by wave action at the water line.
15. If leachate is detected in the LCRS sump or the vadose zone monitoring system of a surface impoundment (indicating a leak in the containment structures) the Discharger shall either implement an Executive Officer approved Response Action Plan or shall:
 - a. Immediately cease discharge of waste, excluding leachate to the surface impoundment, until the leaks can be found and repaired.
 - b. Immediately collect a grab sample of the leachate and analyze it for constituents listed in Table 3 of Monitoring and Reporting Program R3-2014-0047.
 - c. Verbally notify Water Board staff that the containment structures have failed within 24 hours.
 - d. Submit written notification of the release to Water Board staff within seven days, the notification should include plans for corrective measures and a time schedule to repair the containment structures.
 - e. The discharge of wastes to the surface impoundment shall not resume until the Executive Officer has determined that repairs to the liners are complete and there is no further threat to water quality.

If the leak is determined to be significant according to the Response Action Plan, or if the Discharger does not have an Executive Officer approved Response Action Plan, the Discharger shall implement a – e above.

16. Leachate removed from a surface impoundment's primary LCRS or vadose zone monitoring system shall be discharged back into the impoundment. If the surface impoundment liner is being repaired, the discharger may discharge leachate into an Executive Officer approved containment structure or may discharge leachate as outlined in an Executive Officer approved Response Action Plan.

17. If the Discharger needs to remove the solids that accumulate in the surface impoundment to maintain minimum freeboard requirements and to maintain adequate capacity, sufficient samples shall be taken for their characterization and classification pursuant to Article 2, Subchapter 2, Chapter 3, Division 2 of Title 27. The rationale for the sampling protocol used, the results of this sampling, and a rationale for classification of the solids shall be submitted to Water Board staff for review. Before any disposal of solids, the Discharger must obtain concurrence on the disposal method from Water Board staff.
18. If solids in the surface impoundment need to be removed, the Discharger must submit a solids removal plan to Water Board staff for review. The plan must include provisions for removing solids without causing liner damage. Prior to removing any solids from the surface impoundment, the Discharger must receive written approval from the Executive Officer.
19. The Discharger may only proceed with construction after the Executive Officer approves all applicable construction quality assurance plans.
20. At closure, the surface impoundment must be closed in accordance with a Final Closure Plan approved by the Executive Officer.
21. The closure of the surface impoundment shall be under the direct supervision of a California registered civil engineer or certified engineering geologist.
22. At closure of the surface impoundment, all residual wastes, including liquids, sludges, precipitates, settled solids, liner materials, and adjacent natural geologic materials polluted by wastes, shall be completely removed and discharged to a waste management unit approved by Water Board staff. If after reasonable attempts, the Discharger demonstrates the removal of all remaining contamination is infeasible, the surface impoundment shall be closed as a landfill.

D. WATER QUALITY PROTECTION STANDARDS

1. The discharge of waste must not cause a statistically significant difference in water quality over background concentrations for proposed concentration limits for each monitoring parameter (per MRP No. R3-2014-0047) at the point of compliance. The Discharger must maintain concentration limits for as long as the waste poses a threat to water quality. Discharge of waste must not adversely impact the quality of State waters.
2. Pursuant to CCR Title 27 §20400, the Water Board must specify concentration limits in waste discharge requirements. The Water Board complies with the intent of CCR Title 27 §20400 by requiring the Discharger to establish and review concentration limitations on an annual basis in accordance with MRP No. R3-2014-0047.
3. Pursuant to CCR Title 27 §20405, the point of compliance is a vertical surface located at the hydraulically downgradient limit of a surface impoundment that extends through the uppermost aquifer underlying the surface impoundment.

4. Discharge of waste must not cause concentrations of chemicals and radionuclides in groundwater to exceed the State Department of Public Health's latest recommended Drinking Water Action Levels or Maximum Contaminant Levels of CCR Title 22, Division 4, Chapter 15, Article 5.5.
5. Discharge of waste must not cause a violation of any applicable water quality standard for receiving waters adopted by the Water Board or the State Water Resources Control Board.
6. Discharge of waste must neither cause nor contribute to any surface water impacts.
7. Monitoring parameters for groundwater are listed in MRP No. R3-2014-0047. Monitoring points and background monitoring points must be those specified in MRP No. R3-2014-0047.
8. The compliance period, pursuant to CCR Title 27 §20380(d)(1) and §20410, is estimated to be until the year 2035, based on the surface impoundment estimated closure date of 2034 plus 1 year to clean close the surface impoundment.

E. PROVISIONS

1. The Discharger is responsible for waste containment, monitoring, and correcting any problems resulting from the discharge of waste for as long as the waste poses a threat to water quality.
2. The Discharger must comply with MRP No. R3-2014-0047, as specified by the Executive Officer.
3. The Discharger must evaluate and field validate the operating assumptions for the surface impoundment (brine evaporation rates, brine drift, blower shutoff triggers for wind speed and direction, and blower downtime) and compare the pre-project assumptions to documented operating data. The Discharger must submit a report detailing differences between documented operating values and assumed evaporation efficiencies, drift patterns, wind speed and directional blower cutoffs, and blower operating downtime. The report must be submitted within **30 days** following the first **90 days** of surface impoundment operation. Surface impoundment operation begins with the first discharge of waste into the surface impoundment.
4. **By October 1 of each year**, the Discharger must complete all necessary runoff diversion and erosion prevention measures (except for planting vegetation). The Discharger must complete all necessary construction, maintenance, or repairs of precipitation and drainage control facilities to prevent erosion. The Discharger must repair erosion rills greater than six-inches deep immediately after storm events that cause the erosion, if it is safe to do so.
5. Should additional data become available through monitoring or investigation that indicates compliance with this Order is not adequately protective of water quality, the Water Board will review and revise this Order as appropriate.
6. If the Discharger or the Water Board determines, pursuant to CCR Title 27, §20420, that there is evidence of a release from any portion of the surface impoundment, the Discharger

must immediately implement the procedures outlined in CCR Title 27 §20380, §20385, §20430, and MRP No. R3-2014-0047.

7. This Order does not authorize commission of any act causing injury to the property of another, does not convey any property rights of any sort, does not remove liability under federal, state, or local laws, and does not guarantee a capacity right.
8. The Water Board must be allowed, at any time and without prior notification:
 - a. Entry upon the surface impoundment area or where records are kept under the conditions of this Order and MRP No. R3-2014-0047.
 - b. Access to a copy of any records that must be kept under the conditions of this Order and MRP No. R3-2014-0047.
 - c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order and MRP No. R3-2014-0047 including the advanced water treatment plant and piping associated with the brine discharge.
 - d. To photograph, sample, and monitor for the purpose of showing compliance with this Order.
9. The Discharger must take all reasonable steps to minimize or correct adverse impacts on the environment resulting from non-compliance with this Order.
10. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - a. Violation of any term or condition contained in this Order.
 - b. Obtaining this Order by misrepresentation, or by failure to disclose fully all relevant facts.
 - c. A change in any condition or endangerment to human health or environment that requires a temporary or permanent reduction or elimination of the authorized discharge.
 - d. A material change in character, location, or volume of the waste being discharged to land.
11. **Two-weeks** prior to constructing each phase of a surface impoundment (e.g., preparing foundation, installing liner, installing leak detection system, etc.), the Discharger must notify Water Board staff.
12. Prior to liner construction, a third party (e.g., unrelated to the Discharger, project designer, contractor) must prepare a Construction Quality Assurance (CQA) Plan. The Executive Officer must approve the CQA Plan. The third party must implement the CQA Plan and provide regular construction progress reports to the Executive Officer.
13. Prior to beginning discharge of waste into any newly constructed surface impoundment, the Discharger must receive a final inspection and written approval from the Executive Officer.
14. Prior to discharging waste to the surface impoundment, the Discharger must submit and receive Executive Officer approval for a blower and weather station operations and maintenance plan.

15. The Discharger must obtain and maintain Financial Assurance Instruments (Instruments), which comply with CCR Title 27 (§22207 [Closure Fund], §22212 [Post Closure Fund], and §22220 et seq. [Corrective Action Fund]). Pursuant to CCR Title 27 §20380(b), the Discharger must obtain and maintain assurances of financial responsibility, naming the Water Board as beneficiary, for initiating and completing corrective action for all known or reasonably foreseeable releases. As surface impoundment conditions change, and upon the Water Board's request, the Discharger must submit a report proposing the amount of financial assurance necessary for corrective action for the Executive Officer's review and approval. The Discharger must demonstrate compliance with all financial instruments to the Water Board at a minimum of every five years.

REPORTING

16. All reports must be signed as follows:

- a. By either a principal executive officer or ranking elected official.
- b. Their "duly authorized representative."
- c. A California Registered Civil Engineer or Certified Engineering Geologist must sign engineering reports.

17. Any person signing a report makes the following certification, whether its expressed or implied:

"I certify under penalty of perjury I have personally examined and am familiar with the information submitted in this document and all attachments and, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of a fine and imprisonment."

18. Except for data determined to be confidential under §13267 (b)(2) of the CWC, all reports prepared in accordance with this Order must be available for public inspection at the Water Board office. Records must be uploaded to the State Water Resources Control Board GeoTracker database. Surface impoundment waste discharge requirements, monitoring and reporting program, and monitoring data will be posted on the GeoTracker database. The public access to the GeoTracker database is located at <http://geotracker.waterboards.ca.gov/>.

19. The Discharger must submit written reports in advance of any planned changes in the permitted surface impoundment or in an activity, which could potentially or actually result in noncompliance. Any planned changes must be approved by the Executive Officer prior to implementation.

20. By **October 1** of each year, the Discharger must submit a Wet Weather Preparedness Report (WWPR). The WWPR must describe compliance with **Provisions E.4** above. The report must also detail preparedness actions taken to ensure discharges to surface or groundwater do not occur during the impending rainy season, and ensure compliance with all other relevant CCR Title 27 criteria. The report must include photographs of all wet weather preparedness measures implemented.

21. The Discharger must notify the Water Board with a written request of any proposed change in ownership or responsibility for construction or operation of the surface impoundment in accordance with CCR Title 27, §21710 (c)(1). The written request must be given at least 90-days prior to the effective date of change in ownership or responsibility and must:
 - a. Be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate continued compliance with these Waste Discharge Requirements.
 - b. Contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Water Board.
 - c. Contain a statement indicating that the new owner or operator assumes full responsibility for compliance with this Order.
22. Request for change in ownership or responsibility may be approved or disapproved in writing by the Executive Officer. In the event of any change in ownership of this surface impoundment, the Discharger must notify the succeeding owner or operator, in writing, of the existence of this Order. A copy of that notification must be sent to the Executive Officer.
23. The Discharger must furnish, within a reasonable time, any information the Executive Officer may request to determine compliance with this Order or to determine whether cause exists for modifying or terminating this Order.
24. The Discharger or persons employed by the Discharger must comply with all notice and reporting requirements of the State Department of Water Resources, San Luis Obispo County, and other applicable permitting agencies with concurrence of the Executive Officer regarding the permitting, construction, alteration, inactivation, destruction, or abandonment of all monitoring wells used for compliance with this Order or with MRP No. R3-2012-0047, as required by §13750.5 through §13755 and §13267 of the CWC.
25. Should the Discharger discover that it failed to submit any relevant facts or that it submitted incorrect information, it must promptly submit the missing or corrected information.
26. The Discharger must notify the Executive Officer, within 24 hours by telephone and within 14 days in writing, of:
 - a. Any noncompliance that potentially or actually endangers health or the environment. Reports of noncompliance must include a description of;
 - i. The reason for non-compliance;
 - ii. A description of the non-compliance, including photo documentation;
 - iii. Schedule of tasks necessary to achieve compliance; and,
 - iv. An estimated date for achieving full compliance.
 - b. Any flooding, equipment failure, slope failure, or other change in surface impoundment conditions which could impair the integrity of waste containment facilities or of precipitation and drainage control structures;
 - c. Leachate leaks(s) occurring on or in proximity to the surface impoundment;
 - d. Violation of a discharge prohibition; and,
 - e. Violation of any treatment system's discharge limitation.

27. Reports of compliance or noncompliance with, or any progress reports on, final requirements contained in any compliance schedule must be submitted within 14-days following each scheduled date. If reporting noncompliance, the report must include a description of:
- a. The reason for non-compliance.
 - b. A description of the non-compliance.
 - c. Schedule of tasks necessary to achieve compliance.
 - d. An estimated date for achieving full compliance.
28. The Discharger must promptly correct any noncompliance issue that threatens the surface impoundment's containment integrity. Correction schedules are subject to the approval of the Executive Officer, except when delays will threaten the environment and/or the surface impoundment's integrity (i.e., emergency corrective measures). For emergency corrective measures, the Discharger must report details of the corrections in writing within seven (7) days of initiating correction.
29. By **May 10, 2019**, the Discharger must submit a Report of Waste Discharge (ROWD) that includes the following information:
- a. Updated information on waste characteristics, geologic, and climatologic characteristics of the waste management facility and the surrounding region, installed features, precipitation and drainage controls, and closure and post closure maintenance plans, in accordance with CCR Title 27 §21740, §21750, §21760, and §21769.
 - b. Discuss whether, in the Discharger's opinion, there is any portion of this Order that is incorrect, obsolete, or otherwise in need of revision.
 - c. Include any other technical documents needed to demonstrate continued compliance with this Order and all pertinent State and Federal requirements.
 - d. Include detailed updated information regarding regulatory considerations, operating provisions, environmental monitoring, and closure and post closure.
30. By **May 10, 2019**, or earlier as needed, submit for the Executive Officer's review and approval an updated report on a reasonably foreseeable release, along with adjustments to financial assurances (as necessary).
31. The Discharger must file with the Water Board a ROWD (in accordance with **Provision E. 29** of this Order) or secure a waiver from the Executive Officer at least **120-days** before making any material change or proposed change in the character, location, or volume of the waste being discharged to land.

ENFORCEMENT

32. The Discharger must comply with all conditions of this Order. Non-compliance violates state law and is grounds for enforcement action or modification of the Order.
33. Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of §13267 of the CWC, or falsifying any information provided therein, is guilty of a misdemeanor.

34. The Discharger and any person who violates Waste Discharge Requirements and/or who intentionally or negligently discharges waste or causes or permits waste to be discharged into surface waters or groundwater of the state may be liable for civil and/or criminal remedies, as appropriate, pursuant to §13350, §13385, and §13387 of the CWC.
35. Provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order must not be affected.
36. The Water Board requires all technical and monitoring reports pursuant to this Order in accordance with §13267 of the CWC. Failure to submit reports in accordance with schedules established by this Order, attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer may subject the Discharger to enforcement action pursuant to §13268 of the CWC.
37. The Discharger must comply with all conditions of these Waste Discharge Requirements. Violations may result in enforcement actions, including Water Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Water Board. (CWC §13261, §13267, §13263, §13265, §13268, §13300, §13301, §13304, §13340, §13350).
38. No provision or requirement of Order No. R3-2014-0047 or MRP No. R3-2014-0047 is a limit on the Discharger's responsibility to comply with other federal, state and local laws, regulations, or ordinances.
39. The Discharger must comply with the following submittal and implementation schedule for all tasks and/or reports required by this Order.

REPORT AND IMPLEMENTATION DATE SUMMARY

TASK	IMPLEMENTATION DATE
Runoff diversion and erosion prevention [Provision E.4]	October 1, of each year
Notify Water Board staff [Provision E.11]	Two-weeks prior to constructing each phase
Wet Weather Preparedness Report [Provision E.20]	October 1, of each year
ROWD Amendment [Provision E.29]	May 10, 2019
Update Report on Reasonably Foreseeable Release [Provision E.30]	May 10, 2019, or sooner, as necessary

I, Kenneth A. Harris, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on **November 14, 2014**.

Executive Officer

Attachments:

Figure 1 - Location Map

Figure 2 - Process Flow Diagram

Figure 3 - Site Map

Monitoring and Reporting Program No. R3-2014-0047

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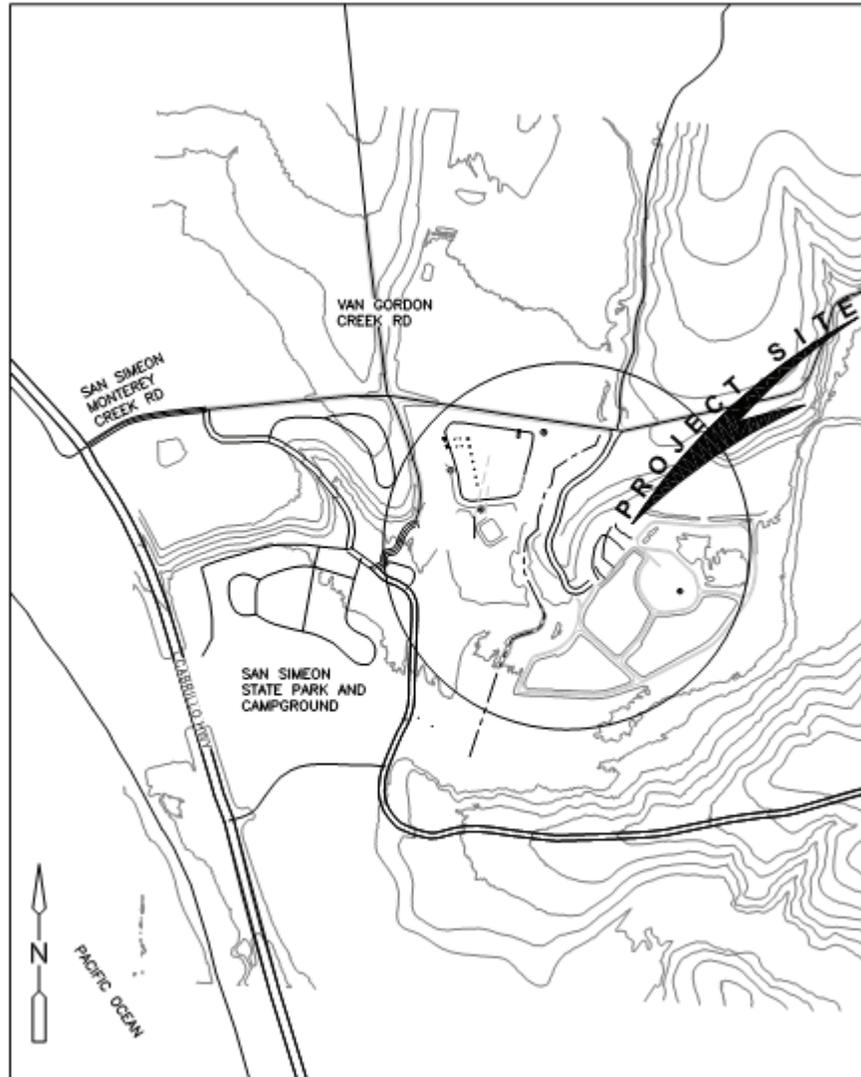
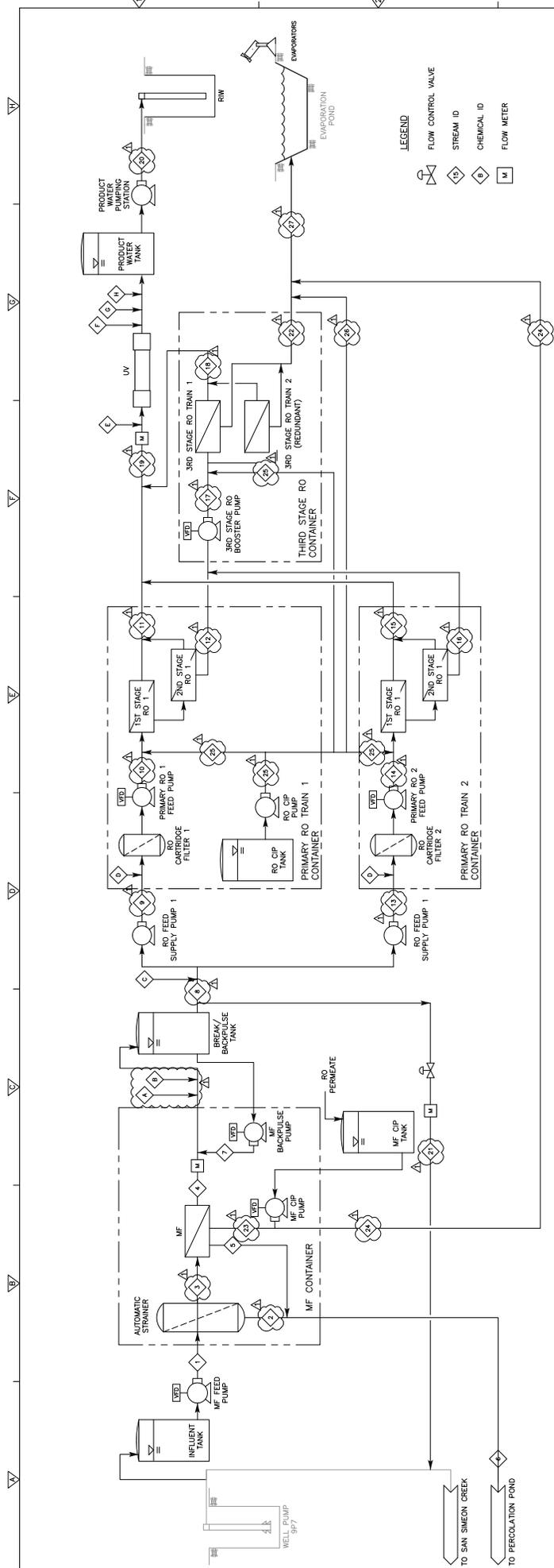


Figure 1 Vicinity Map



FLOW BALANCE

AUTOMATIC STRAINER RECOVERY	99%
MF RECOVERY	95%
PRIMARY RO RECOVERY	88%
THIRD STAGE RO RECOVERY	55%
OVERALL RO RECOVERY	92%

FLOW STREAM	AMTP FEED	MF FEED	MF AND AUTOMATIC STRAINER COMBINED WASTE	MF BACKWASH WASTE (NOTE 1)	TOTAL RO FEED	PRIMARY RO 1 FEED SUPPLY	PRIMARY RO 1 FEED	PRIMARY RO 1 PERMEATE	PRIMARY RO 1 CONCENTRATE	PRIMARY RO 2 FEED SUPPLY	PRIMARY RO 2 FEED	PRIMARY RO 2 PERMEATE	PRIMARY RO 2 CONCENTRATE	THIRD STAGE RO FEED	THIRD STAGE RO PERMEATE	THIRD STAGE RO PERMEATE/ COMBINED RO PERMEATE/ U/F FEED	PRODUCT WATER TO RECHARGE INJECTION WELL (RW)	MF FILTRATE TO SAN SIMON CREEK LAGOON	THIRD STAGE RO CONCENTRATE	MF CIP FEED (NOTE 1)	MF CIP WASTE (NOTE 1)	RO CIP FEED (NOTE 1)	RO CIP WASTE (NOTE 1)	EVAPORATION POND INFLUENT		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
692	692	692	594	31	38	31	494	247	205	42	247	205	42	84	44	465	452	300	39	2	2	1	1	42		
796	20	736	699	1,606	1,626	1,606	504	252	210	43	85	45	464	464	300	40	760	468	200	200	468	200	200	200		
40	5	30	5	5	5	30	30	30	150	15	104	156	15	15	30	30	30	20	20	20	20	45	20	20		
1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,385	1,385	307	7,985	1,365	307	7,985	2,465	1,517	245	245	1,374	14,246	24	24	45	20		
1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,385	1,385	307	7,985	1,365	307	7,985	2,465	1,517	245	245	1,374	14,246	24	24	45	20		

- NOTES**
- INTERMITTENT FLOW.
 - ALL CHEMICAL DOSING SKIDS EXCEPT THRESHOLD INHIBITOR WILL BE INSTALLED IN CHEMICAL CONTAINER (NOT SHOWN). THRESHOLD INHIBITOR DOSING SKIDS WILL BE INSTALLED IN PRIMARY RO TRAIN 1 AND PRIMARY RO TRAIN 2 CONTAINERS.
 - RO FLOW CONDITIONS ARE BASED ON AN AVERAGE MEMBRANE AGE OF 3 YEARS.

CHEMICAL	CHEMICAL STREAM ID	A	B	C	D	E	F	G	H
AQUEOUS AMMONIA		5.7 gpd	26 gpd	24 gpd	0.6 gpd	7.7 gpd	8 gpd	4 gpd	7 gpd
SODIUM HYPOCHLORITE		19%	12.5%	93%	100%	25%	32.5%	34.7%	25%
SULFURIC ACID		1.0 mg/L	14.0 mg/L	30 mg/L	2.0 mg/L	3.0 mg/L	15 mg/L	30 mg/L	33 mg/L
THRESHOLD INHIBITOR									
HYDROGEN PEROXIDE									
SODIUM HYPOCHLORITE									
CALCIUM CHLORIDE									
SODIUM HYDROXIDE									

DESIGNED BY: E. YOU
 DRAWN BY: O. NHAHAS
 SHEET CHK'D BY: R. CHALMES
 CROSS CHK'D BY: E. YOU
 APPROVED BY: S. JENSEN
 DATE: JULY 23, 2014

REVISIONS

REV.	DATE	DESCRIPTION	REMARKS
1	8/2/14	REVISED TO UPDATE FLOWS	

CDM Smith
 111 Academy Way, Suite 100
 Irvine, California 92617
 Tel: (949) 259-9200

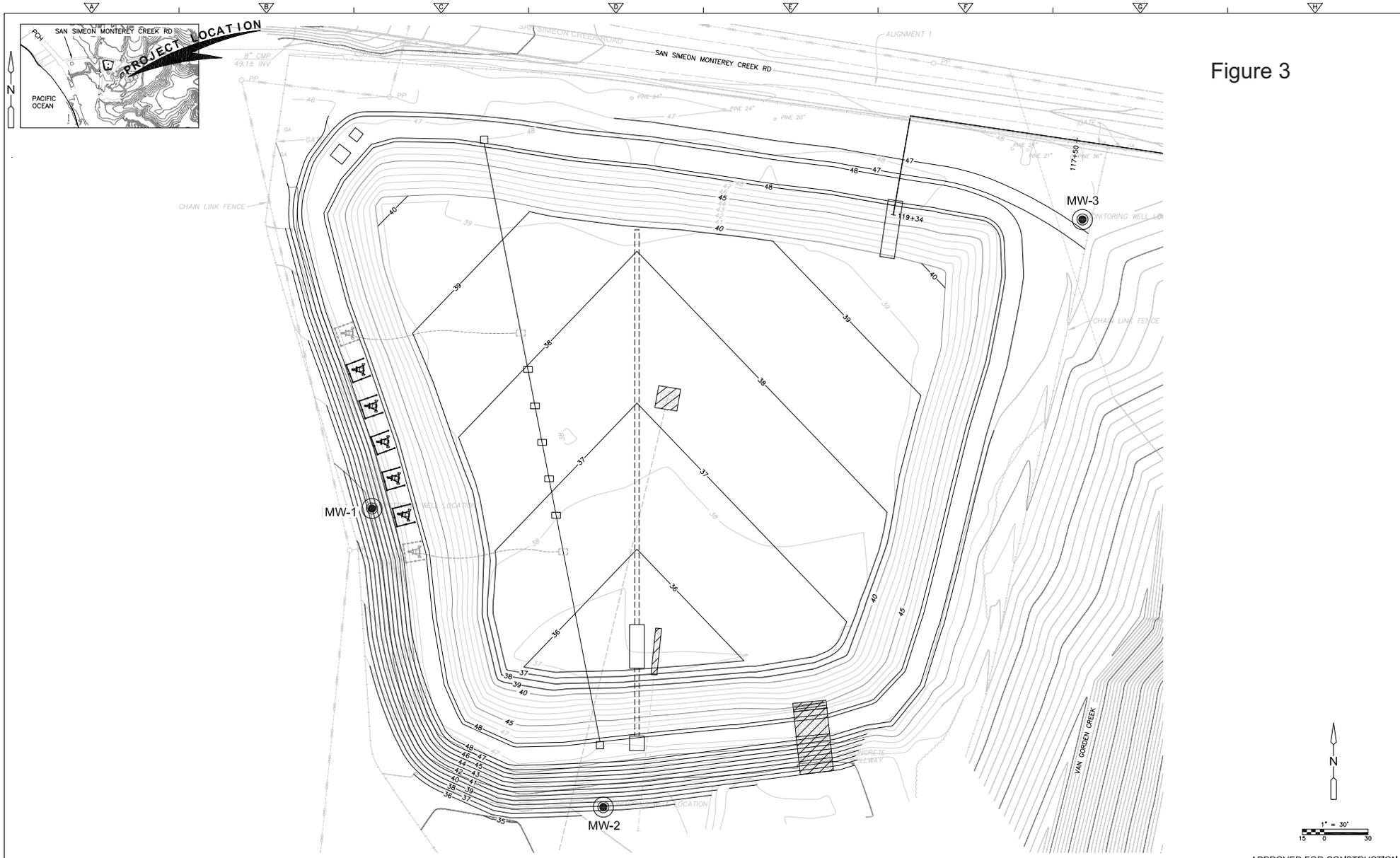
WARNING
 IF THIS BAG SCALE DOES NOT MEASURE WEIGHT, IT HAS NOT BEEN REDUCED TO SCALE ACCURACIOUSLY

CAMBRIA EMERGENCY WATER SUPPLY PROJECT
 CAMBRIA COMMUNITY SERVICES DISTRICT

APPROVED FOR CONSTRUCTION
 PROJECT NO. 139760-104133
 SHEET: 3 OF 37

FIGURE 2
 PROCESS FLOW DIAGRAM

Figure 3



XREFs: [CDMS_2234_CMB-MF-05SH_CMB-MF-05-Road] Imagery: []
 Last saved by: MARISSA Time: 5/15/2014 8:08:00 PM
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 REUSE OF DOCUMENTS, RESERVATIONS, REVISIONS AND DESIGNS PROVIDED BY PROFESSIONAL SERVICE, INCORPORATED HEREIN, ARE THE PROPERTY OF CDM SMITH AND ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CDM SMITH.

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	8/5/14	O.N.	E.Y.	REVISED PER TITLE 27 TMD

DESIGNED BY: E. SMITH
 DRAWN BY: O. NAHAS
 SHEET CHK'D BY: R. CHALMERS
 CROSS CHK'D BY: E. YOU
 APPROVED BY: S. NEDIC
 DATE: JULY 23, 2014

WARNING
 0 1/2" 1"
 IF THIS BAR SCALE DOES NOT MEASURE 1" THIS DWG HAS BEEN REDUCED SCALE ACCORDINGLY



CAMBRIA EMERGENCY WATER SUPPLY PROJECT
 CAMBRIA COMMUNITY SERVICES DISTRICT

BRINE EVAPORATION POND PLAN

APPROVED FOR CONSTRUCTION

PROJECT NO. 138760-104133
 SHEET: 8 OF 37
 DRAWING NO. C-05