

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER R5-2019-0059

WASTE DISCHARGE REQUIREMENTS  
FOR  
SMUCKER NATURAL FOODS, INC.  
BUTTE COUNTY

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

1. On 15 December 2017 Smucker Natural Foods, Inc. submitted a Report of Waste Discharge (ROWD) to update Waste Discharge Requirements (WDRs) for an existing fruit juice processing facility (Facility) that discharges treated process wastewater to land located in Chico, Butte County. A revised ROWD was submitted on 9 January 2018.
2. Smucker Natural Foods, Inc. (Discharger) owns and operates a fruit juice processing and sprouted grains facility that generates process wastewater that is discharged to land owned by the Discharger and is responsible for compliance with these WDRs.
3. The Facility is located at 37 Speedway Avenue in Chico, Butte County (Section 6, T21N, R2E, MDB&M). The Facility occupies Assessor's Parcel Numbers (APN) 040-310-093-000 and 040-310-094-000, as shown on **Attachment A**, which is attached hereto and made part of this Order.
4. WDRs Order 98-050, adopted by the Central Valley Water Board on 27 February 1998, prescribes requirements for the discharge of treated process wastewater from its juice processing facility located in Chico. Order 98-050 allows a monthly average wastewater flow of up to 50,000 gallons per day (gpd). Current WDRs are over 20 years old and due for an update. Therefore, Order 98-050 will be rescinded and replaced with this Order.

**Existing Facility and Discharge**

5. The Discharger produces fruit juice and sprouted grains in an approximately 24,000 square foot facility. The Facility processes approximately 14,600 tons of fruit yearly and sprouts approximately 1,409,700 pounds of grains yearly.
6. Wastewater is generated during juice processing, fruit rinsing, fruit processing, boiler, clean in place, and all floor drains at the Facility.
7. Water is supplied to the Facility using two onsite groundwater wells. A sampling event was performed for the preparation of the ROWD, results are provided in **Table 1**.

Table 1: Smucker's Source Water Characteristics

Constituent	Units	Results
<b><u>Well 1</u></b>		
Total Dissolved Solids (TDS)	mg/L	ND
Electrical Conductivity (EC)	µmhos/cm	226
Total Kjeldahl Nitrogen (TKN)	mg/L	ND
Nitrate as N (NO <sub>3</sub> -N)	mg/L	0.72
Ammonia as N (NH <sub>3</sub> -N)	mg/L	ND
<b><u>Well 2</u></b>		
Total Dissolved Solids (TDS)	mg/L	140
Electrical Conductivity (EC)	µmhos/cm	221
Total Kjeldahl Nitrogen (TKN)	mg/L	ND
Nitrate as N (NO <sub>3</sub> -N)	mg/L	0.530
Ammonia as N (NH <sub>3</sub> -N)	mg/L	ND

8. The Facility uses various chemicals that can enter the wastewater stream; predominantly used for cleaning of both juice processing and sprouted grains process equipment. The chemicals used, their active constituents, and approximate volume used each year are provided in **Table 2**.

Table 2: Chemicals Used at the Facility that can enter the wastewater stream

Trade Name	Active Constituents (Concentrations by Weight)	2018 Volume <sup>1</sup>
Alpet D-2 Surface Sanitizer	Ethanol (66-76%) Isopropyl Alcohol (5-10%)	300 gallons
Alpet D-2 Quat Free	Isopropyl Alcohol (55-75%)	600 gallons
Chlor-A-Foam	Potassium Hydroxide (10-25%) Sodium Hypochlorite (1-10%)	1320 gallons
Hydrogen Peroxide	Hydrogen Peroxide (34%)	1320 pounds
Bioside HS 15%	Hydrogen Peroxide (21.5-22.5%) Peroxyacetic Acid (14.8-15.7%) Acetic Acid (15.8-16.6%)	636 gallons
Melt Down	Nitric Acid (15-25%) Phosphoric Acid (1-10%)	165 gallons

<b>Trade Name</b>	<b>Active Constituents (Concentrations by Weight)</b>	<b>2018 Volume<sup>1</sup></b>
Membrane Cleaner Formula	Glycolic Acid (<2%) Sodium Hydroxide (1-5%) Citric Acid (1-5%)	110 gallons
Membrane Preservative	Sodium Bisulfite (10-25%) Citric Acid (1-10%)	55 gallons
Multi-Chlor	Sodium Hypochlorite (12.5%) Sodium Hydroxide (0.2%)	265 gallons
Orbit Chlorinated Circulation Cleaner	Sodium Hydroxide (25-50%) Potassium Hydroxide (1-10%) Sodium Hypochlorite (1-10%)	8510 gallons
Perason "A" Organic Sanitizer	Hydrogen Peroxide (25-50%) Ethaneperoxoic Acid (1-10%) Acetic Acid (1-10%)	2222 gallons
Tank Brite	Potassium Hydroxide (10-25%) Sodium Hydroxide (10-25%) Sodium Gluconate (1-10%)	880 gallons

<sup>1</sup> Volumes obtained from vendor in 2018

9. Wastewater generated at the Facility is collected and comingled in floor drains within the process and production areas. Wastewater is conveyed through a pretreatment system equipped with an auger, hydrosieve, and oil/water separator for solids and oil removal.
10. After pretreatment, wastewater is conveyed to two approximately 65,000-gallon accumulation tanks that are used for short-term storage and to meter wastewater through the anaerobic digester. From the accumulation tank, wastewater flows into a mix tank where wastewater is dosed with caustic soda to increase the pH to between 6.8 and 7.2 and temperature is maintained between 95-100° F to aid in the digestive process. Wastewater is then pumped through an anaerobic digester.
11. Digester effluent is conveyed to a two-cell aerated pond. Both cells are equipped with a dissolved oxygen (DO) sensor that controls the rate of aeration; the first pond in the series is maintained at a DO concentration of 2 mg/L and the second at 1 mg/L.
12. After aeration, wastewater gravity flows into a clarifier to settle activated sludge. Return activated sludge is returned to the treatment system and waste activated sludge is gravity fed into three underground storage tanks. The waste sludge is pumped approximately three times a year by Nor Cal Environmental Solutions and is disposed of offsite at an appropriately permitted disposal facility.
13. Clarified effluent flows into an asphalt covered leach field. The leach field is comprised of six leach lines, three are approximately 300-feet long, the remaining three are approximately 275-feet long. The leach field has a discharge capacity of 3,880 gallons per day, the remaining effluent is pumped to a 5.5-acre spray field equipped with six sprinkler heads, each with a spray radius of 100-feet.

14. The spray field is designed for tailwater to be retained, sloping towards the center to keep all treated effluent and stormwater that falls on the spray field retained.
15. Stormwater at the Facility is conveyed to various stormwater ponds for percolation and evaporation.
16. The Facility has a peak and dry weather design capacity of 75,000 gpd. Since 2011, the daily average wastewater flow has been approximately 33,000 gpd; the Facility has exceeded its design capacity once since 2011 at 83,241 gpd.
17. Wastewater treatment facility influent and effluent is sampled monthly. Average influent and effluent quality from 2011-July 2018 are summarized in **Table 3**.

Table 3: Average Wastewater Influent and Effluent Quality<sup>1</sup>

Constituent	Units	Influent	Effluent
Biochemical Oxygen Demand	mg/L	4460.8	46.2
Chemical Oxygen Demand	mg/L	6153.3	279.3
Total Dissolved Solids	mg/L	1270.5	1974.1
Total Suspended Solids	mg/L	406.6	182.2
Nitrate + Nitrite as N	mg/L	2.05	11.02

1. Average calculated from 89 sampling events from January 2011 – July 2018

18. Solids produced at the Facility are generated at the auger/hydroseive and clarifier. 4-8 cubic feet of solids are removed daily from the auger/hydroseive and are transported to North State Rendering located in Oroville. The clarifier produces sludge, the Facility employs an activated sludge system; return activated sludge is returned to the treatment system and waste activated sludge is fed into storage tanks that are pumped approximately three times a year by Nor Cal Environmental Solutions and are transported to Recology Landfill in Lincoln for final disposal.
19. Domestic wastewater from the Facility is discharged to a separate onsite leach field.

### Site-Specific Conditions

20. The Facility is approximately 200 feet above mean sea level. Surface topography is relatively flat, but slopes slightly to the southwest. Surface water drains to Comanche Creek, a tributary of the Sacramento River.
21. The Federal Emergency Management Area (FEMA) designates the location of the Facility as Zone X, which indicates that the Facility is outside the 500-year floodplain, with a minimal risk of flooding.

22. Soils underlying the Facility are classified as Chico loam, which is well drained with very low runoff according to the U.S. Department of Agriculture's Natural Resources Conservation web soil survey.
23. The Facility is in a Mediterranean climate characterized by dry summers and wet winters; the rainy season is typically from November through April. Average annual pan evaporation is about 67.19 inches in Chico according to data in the *Technical Report NWS 34, Mean Monthly, Seasonal, and Annual Pan Evaporation for the United States*, which is published by the U.S Department of Commerce, National Oceanic and Atmospheric Administration. The average annual precipitation in Chico is 31.65 inches and the 100-year annual precipitation is 54.35 inches.
24. Land uses in the area are urban and agricultural according to the Department of Water Resources online land use viewer. The land application area is made up of native grasses.

### **Groundwater Conditions**

25. The Facility is underlain by the upper member of the Modesto Formation, which is the youngest unit of the Pleistocene alluvium. The upper member of the Modesto Formation is characterized by unconsolidated, unweathered gravel, sand, silt, and clay. Soil in the area is Chico loam and has layers of clay loam from 5-32 inches below ground surface (bgs), loam from 32-80 inches bgs, and a restrictive layer at 80 inches bgs.
26. Groundwater monitoring results from 2011-2017 indicates that the depth to groundwater ranges from approximately 5.5-19.7 feet below ground surface (bgs); groundwater elevation ranges from approximately 185.87-202.9 feet above mean sea level (MSL). The regional shallow groundwater gradient is approximately 0.001-0.012 feet/foot and flows towards the southwest.
27. The Facility has six groundwater monitoring wells (MW-1 through MW-6) and currently performs groundwater monitoring on a yearly basis, Monitoring and Reporting Program (MRP) **R5-2019-0059** requires quarterly groundwater monitoring for at least two years, yearly data is not sufficient to determine underlying groundwater quality.

### **Basin Plan, Beneficial Uses, and Regulatory Considerations**

28. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, 5th Ed., rev. May 2018* (Basin Plan) designates beneficial uses, establishes water quality objectives (WQOs), contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. Pursuant to Water Code section 13263, subdivision (a), WDRs are required to implement the Basin Plan.
29. Local drainage is to Comanche Creek, a tributary of the Sacramento River. The beneficial uses of the Sacramento River as stated in the Basin Plan include

agricultural supply (AGR); groundwater recharge (GWR); fresh water replenishment (FRSH); navigation (NAV); hydropower generation (POW); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); wildlife habitat (WILD); and migration of aquatic organisms including spawning, reproduction, and/or early development (SPAWN).

30. The beneficial uses of underlying groundwater as set forth in the Basin Plan are municipal and domestic supply (MUN), AGR, industrial service supply (IND) and industrial process supply (PRO).
31. The Basin Plan establishes narrative WQOs for chemical constituents, tastes and odors, and toxicity in groundwater. It also sets forth a numeric WQO for total coliform organisms.
32. The Basin Plan's numeric WQO for bacteria requires that the most probable number (MPN) of coliform organisms over any seven-day period shall be less than 2.2 per 100 mL in MUN-designated groundwater.
33. The Basin Plan's narrative WQO for chemical constituents, at a minimum, require MUN-designated waters to meet the MCLs specified in California Code of Regulations, title 22 (Title 22). The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.
34. The narrative toxicity WQO requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, animal, plant, or aquatic life associated with designated beneficial uses.
35. Quantifying a narrative WQO requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses. The Basin Plan states that when compliance with a narrative WQO is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations in order to implement the narrative WQO.
36. In the absence of specific numerical water quality limits, the Basin Plan methodology is to consider any relevant published criteria. General salt tolerance guidelines, such as *Water Quality for Agriculture* by Ayers and Westcot and similar references indicate that yield reductions in nearly all crops are not evident when irrigation water has an EC less than 700  $\mu\text{mhos/cm}$ . There is, however, an eight- to ten-fold range in salt tolerance for agricultural crops and the appropriate salinity values to protect agriculture in the Central Valley are considered on a case-by-case basis. It is possible to achieve full yield potential with waters having EC up to 3,000  $\mu\text{mhos/cm}$  if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop.

37. The Central Valley Water Board is developing amendments to the Basin Plan to incorporate new strategies for addressing ongoing salt and nitrate accumulation in the waters and soils of the Central Valley. Strategies currently under consideration may:
- a. Alter the way the Board calculates available assimilative capacity for nitrate, which could result in new or modified requirements for nitrate management;
  - b. Require dischargers to implement actions identified under an interim salinity permitting approach; and/or
  - c. Establish alternate compliance approaches that would allow dischargers to participate in efforts to provide drinking water to local communities in consideration for longer compliance time schedules.

Should the Board adopt amendments to the Basin Plan to effectuate such strategies, these waste discharge requirements may be amended or modified to incorporate any newly-applicable requirements.

38. For the purpose of this Order, saline waste is defined as wastewater that contains high concentrations of fixed dissolved solids. Because salts occur naturally in all waters, and because the naturally occurring salt concentrations vary depending on the water supply, it is not practical to define saline waste region-wide as that which exceeds a certain FDS concentration. Generally speaking, saline waste is that for which the FDS concentration is more than 300 mg/L higher than the TDS concentration of the water supply. Although there are many individual ions that can impact the beneficial uses of groundwater, nitrate, sodium and chloride are the predominant salts of concern in the Central Valley Region.
39. For some industrial wastewaters, particularly food processing waste, sodium concentrations may be reduced or controlled by changing from sodium-based cleaning solutions (e.g., sodium hydroxide) to potassium-based solutions (e.g., potassium hydroxide). Because potassium is a plant nutrient, land application systems can be designed maximize potassium uptake by the crop.

### **Antidegradation Analysis**

40. The State Water Board's Statement of Policy with Respect to Maintaining High Quality Waters of the State, Resolution 68-16 (Antidegradation Policy) prohibits degradation of groundwater unless it has been shown that:
- a. The degradation is consistent with the maximum benefit to the people of the state.
  - b. The degradation will not unreasonably affect present and anticipated future beneficial uses.

- c. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives, and
- d. The discharger employs best practicable treatment or control (BPTC) to minimize degradation.

41. Degradation of groundwater by some of the typical waste constituents associated with discharges from a fruit juice and sprouted grain production facility, after effective source control, treatment, and control measures are implemented, is consistent with the maximum benefit to the people of the state. The Discharger’s operation provides 95 full time jobs. The economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State, and provides sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this Order.
42. The Discharger has been monitoring groundwater quality at the site since 1985. Based on the data available, it is not possible to determine pre-1968 groundwater quality. Therefore, determination of compliance with the Antidegradation Policy for this facility must be based on existing background groundwater quality.
43. Constituents of concern that have the potential to degrade groundwater include organics, nutrients, and salts, the table below shows average groundwater concentrations from monitoring between 2011-2018:

Constituent	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6
EC (µmhos/cm)	197	1058	196	270	556	1199
Nitrate as N (mg/L)	2.29	1.67	2.18	3.06	4.21	6.01
pH	6.54	7.09	6.51	6.61	6.89	7.14

Each constituent is discussed below:

- a. **Specific Conductance.** MW-2, which is down gradient of the leach field shows exceedances of WQOs for approximately half of the monitoring events since 2011. MW-6, which is downgradient of both the spray field and leach field shows exceedances of WQOs in all but one monitoring event since 2011. The background water quality is unknown given there are two cross gradient groundwater wells to the leach field, which is upgradient of the leach field and no true background groundwater monitoring well.
- b. **Nitrate.** For nutrients such as nitrate, the potential for groundwater degradation depends on wastewater quality; crop uptake, and the ability of the vadose zone below the Land Application Areas (LAAs) to support nitrification and denitrification to convert the nitrogen to nitrogen gas before it reaches the water table. Most of the nitrogen in the process wastewater is present as TKN, which can readily mineralize and convert to nitrate (with some loss via ammonia volatilization) in the LAAs. Background groundwater quality is unknown given no true background



monitoring well on site. Groundwater monitoring since 2011 indicates low nitrogen concentrations in the cross-gradient monitoring wells (MW-1 and MW-3) and low concentrations in MW-3 downgradient of the leach field. Monitoring of the spray field shows one exceedance of WQOs in MW-5, which is upgradient of the spray field and down gradient of the leach field and also one exceedance of WQOs in down gradient MW-6.

c. **pH.** Groundwater monitoring data from 2011-2018 shows that cross gradient groundwater monitoring wells MW-1 and MW-3 have pH levels lower than the lower pH limit of 6.5. Additionally, down gradient monitoring well MW-4 shows pH levels lower than the limit of 6.5. Both monitoring wells MW-3 and MW-4 exceed that lower limit WQOs for pH in most of the groundwater monitoring that has been performed since 2011.

44. An upgradient, background monitoring well is required to establish if the discharger is degrading groundwater quality at the site.
45. This Order establishes effluent and groundwater limitations for the Facility that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds Basin Plan WQOs:
  - a. Limited groundwater data indicated that groundwater may have been degraded beyond background water quality by the previous discharge and the discharge could pose a threat of degradation in the future. The requirements of this order do not allow degradation to occur above applicable water quality standards.
  - b. However, no true background monitoring well has been established at the site; degradation downgradient has been observed in MW-6.

### **Other Regulatory Considerations**

46. Pursuant to Water Code section 106.3, subdivision (a), it is “the established policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.” Although this Order is not necessarily subject to Water Code section 106.3 because it does not revise, adopt or establish a policy, regulation or grant criterion (see § 106.3, subd. (b)), it nevertheless promotes that policy by requiring discharges to meet MCLs designed to protect human health and ensure that water is safe for domestic use.
47. Based on the threat and complexity of the discharge, the facility is determined to be classified as 2B as defined below:
  - a. Category 2 threat to water quality: “Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance.”

- b. Category B complexity, defined as: “Any discharger not included [as Category A] that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal) or any Class 2 or Class 3 waste management units.”
48. The wastewater discharges authorized under this WDRs Order are exempt from the prescriptive requirements of California Code of Regulations, title 27 (Title 27) because the wastewater discharges will comply with applicable plans and policies, and the wastewater does not need to be managed as “hazardous waste” under Title 22, Division 4.6, Chapter 11. (See Title 27, § 20090, subd. (b).)
49. The statistical data analysis methods in the USEPA’s 2009 *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* (Unified Guidance) are appropriate for determining whether the discharge complies with Groundwater Limitations of this Order.
50. The State Water Board’s National Pollutant Discharge Elimination System General Permit for Storm Water Dischargers Associated with Industrial Activities (Industrial General Permit), Order 2014-0057-DWQ (NPDES General Permit CAS000001) prescribes WDRs for discharges of storm water associated with industrial activities; and requires submittal of a Notice of Intent by all affected industrial dischargers. The Discharger has submitted a Notice of Non-Applicability (NONA) exempting coverage under Industrial General Permit.
51. Water Code section 13267, subdivision (b)(1) states:
- [T]he regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region ... shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports.
- The technical reports required by this Order and the attached Monitoring and Reporting Program **R5-2019-0059** are necessary to ensure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.
52. The California Department of Water Resources (DWR) sets standards for the construction and destruction of groundwater wells (DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 74-81* (December 1981). These standards, and any more stringent standards adopted by the state or county pursuant to Water Code

section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.

53. This Order revises WDRs for the continued operation an existing facility (i.e., wastewater mgmt. systems) for the protection of the waters of the State, and does not authorize an expansion of existing uses. Accordingly, the adoption of this Order is exempt from the substantive provisions of the California Environmental Quality (CEQA), Public Resources Code section 21000 et seq., in accordance with section 15301 of the CEQA Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.).
54. Pursuant to Water Code section 13263(g), the continued ability to discharge waste is a privilege, not a right, and adoption of this Order does not create a vested right to continue such discharges.

### **CV-SALTS Reopener**

55. The stakeholder-led Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative has been coordinating efforts to implement new salt and nitrate management strategies. The Board expects dischargers that may be affected by new salt and nitrate management policies to coordinate with the CV-SALTS initiative.
56. The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting. These programs, once effective, could change how the Central Valley Water Board permits discharges of salt and nitrate. For nitrate, dischargers that are unable to comply with stringent nitrate requirements will be required to take on alternate compliance approaches that involve providing replacement drinking water to persons whose drinking water is affected by nitrates. Dischargers could comply with the new nitrate program either individually or collectively with other dischargers. For salinity, dischargers that are unable to comply with stringent salinity requirements would instead need to meet performance-based requirements and participate in a basin-wide effort to develop a long-term salinity strategy for the Central Valley. Should the Board adopt amendments to the Basin Plan, this Order may be amended or modified to incorporate any newly-applicable requirements.

### **Public Notice**

57. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.
58. The Discharger and interested agencies and persons have been notified of the Central Valley Water Board's intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity to submit written comments and an opportunity for a public hearing.

59. All comments pertaining to the discharge were heard and considered in a public hearing.

**IT IS HEREBY ORDERED** that Order 98-050 is rescinded, and pursuant to Water Code sections 13263 and 13267, Smucker Natural Foods, Inc. (Discharger) their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted hereunder, shall comply with the following:

**A. Discharge Prohibitions**

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Discharge of waste classified as 'hazardous', as defined in Title 22, section 66261.1 et seq., is prohibited.
3. Discharge of waste classified as 'designated', as defined in Water Code section 13173, in a manner that causes violation of groundwater limitations, is prohibited.
4. Treatment system bypass of untreated or partially treated waste is prohibited, except as allowed by Standard Provision E.2 of the Standard Provisions and Reporting Requirements for WDRs date 1 March 1991 (SPRRs or Standard Provisions).
5. Discharge of waste at a location or in a manner different from that described in the Findings is prohibited.
6. Discharge of toxic substances into any wastewater treatment system or land application area such that biological treatment mechanisms are disrupted is prohibited.
7. Discharge of domestic wastewater to the process wastewater treatment system is prohibited.
8. Discharge of process wastewater to the domestic wastewater treatment system (septic system) is prohibited.
9. Discharge of domestic wastewater to the process wastewater ponds, land application area or any surface waters is prohibited.
10. Surfacing of waste within or downgradient of the leach fields is prohibited.
11. Surfacing of wastewater from the leach field is prohibited.
12. Presence of leachate within one foot of ground surface elevation of the lowest finished disposal field is prohibited.

13. Application of residual solids to the land application area is prohibited.

## B. Flow Limitations

1. **Effectively immediately**, influent flows to the wastewater treatment system shall not exceed the following limits:

Flow Measurement	Flow Limit
Total Annual Flow <sup>1</sup>	18.25 MG
Maximum Average Daily Flow <sup>2</sup>	0.05 MGD

<sup>1</sup> As determined by the total flow for the calendar year.

<sup>2</sup> As determined by the total flow during the calendar month divided by the number of days in that month.

## C. Discharge Specifications

1. No waste constituent shall be released, discharged, or placed where it will cause a violation of the Groundwater Limitations of this Order.
2. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.
3. The discharge shall remain within the permitted waste treatment/containment structures and land application areas at all times.
4. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.
5. All conveyance, treatment, storage, and disposal systems shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
6. Objectionable odors shall not be perceivable beyond the limits of the property where the waste is generated, treated, and/or discharged at an intensity that creates or threatens to create nuisance conditions.
7. As a means of ensuring compliance with Discharge Specification C.8, the dissolved oxygen (DO) content in the upper one foot of any wastewater treatment or storage pond shall not be less than 1.0 mg/L for three consecutive sampling events. Notwithstanding, the DO monitoring frequency specified in the monitoring and reporting program, if the DO in any single pond is below 1.0 mg/L for any single sampling event, the Discharger shall implement daily DO monitoring of that pond until the minimum DO concentration is achieved for at least three consecutive days. If the DO in any single pond is below 1.0 mg/L for three consecutive days, the Discharger shall report the findings to the Regional Water Board in accordance with General Reporting Requirement B.1 of the

Standard Provisions. The written notification shall include a specific plan to resolve the low DO results within 30 days of the first date of violation.

8. The Discharger shall design, construct, operate, and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. The operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard.
9. Wastewater treatment, storage, and disposal ponds or structures shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring continuous compliance with all requirements of this Order. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
10. On or about **1 October** of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specifications C.8 and C.9.
11. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. Specifically:
  - a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.
  - b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.
  - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
  - d. The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.
12. Newly constructed or rehabilitated berms or levees (excluding internal berms that separate ponds or control the flow of water within a pond) shall be designed and constructed under the supervision of a California Registered Civil Engineer.
13. Wastewater contained in any unlined pond shall not have a pH less than 6.0 or greater than 9.0.
14. The Discharger shall monitor sludge accumulation in the wastewater treatment/storage ponds at least every five years beginning in 2019, and shall

periodically remove sludge as necessary to maintain adequate storage capacity. Specifically, if the estimated volume of sludge in the reservoir exceeds five percent of the permitted reservoir capacity, the Discharger shall complete sludge cleanout within 12 months after the date of the estimate.

15. Storage of residual solids, including pomace and/or diatomaceous earth on areas not equipped with means to prevent stormwater infiltration, or a paved leachate collection system is prohibited.
16. All stockpiled products shall be managed to prevent erosion that causes discharge of sediment to surface water drainage courses.

#### **D. Groundwater Limitations**

Release of waste constituents from any portion of the facility shall not cause groundwater to:

1. Contain constituents in concentrations statistically greater than current background water quality or that exceed the Primary or Secondary MCLs established in Title 22, whichever is greater.
2. Contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.
3. Compliance with these limitations shall be determined annually based on comparison of groundwater concentrations to applicable water quality objectives.

#### **E. Land Application Area Specifications**

1. Native grasses shall be grown in the LAAs.
2. Land application of wastewater shall be managed to minimize erosion.
3. The LAAs shall be managed to prevent breeding of mosquitoes or other vectors.
4. LAAs shall be designed, maintained, and operated to comply with the following setback requirements:

<b>Setback Definition</b>	<b>Minimum Irrigation Setback (feet)</b>
Edge of LAA to property boundary	25
Edge of LAA to manmade or natural surface water drainage course	25
Edge of LAA to domestic water supply well	100

5. Irrigation of the LAAs shall occur only when appropriately trained personnel are on duty.

6. LAAs shall be inspected periodically to determine compliance with the requirements of this Order. If an inspection reveals noncompliance or threat of noncompliance with this Order, the Discharger shall temporarily stop recycled water use immediately and implement corrective actions to ensure compliance with this Order.
7. Spray irrigation with wastewater is prohibited when wind speed (including gusts) exceeds 30 mph.
8. Sprinkler heads shall be designed, operated and maintained to create a minimum amount of mist.
9. Any irrigation runoff (tailwater) shall be confined to the LAAs and shall not enter any surface water drainage course or stormwater drainage system.
10. Discharge of stormwater runoff from the LAAs to off-site land or surface water drainage courses is prohibited
11. All stormwater runoff from the LAA shall be contained within the LAA.
12. Grazing of animals on the land application area is prohibited.

#### **F. Solids Disposal Specifications**

For the purposes of this Order, “sludge” means the solid, semisolid, and liquid organic matter removed from wastewater treatment, settling, and storage vessels or ponds; “solid waste” refers to solid inorganic matter removed by screens and soil sediments from washing of unprocessed fruit or vegetables; and “residual solids” mean organic food processing byproducts such as culls, pulp, stems, leaves, and seeds that will not be subject to treatment prior to disposal or land application (solids originating from meat processing are excluded from this definition).

1. Sludge and solid waste shall be removed from screens, sumps, ponds, and clarifiers as needed to ensure optimal operation and adequate storage capacity.
2. Any handling and storage of sludge, solid waste, and residual solids shall be controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate the groundwater limitations of this Order
3. If removed from the site, sludge, solid waste, and residual solids shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27, division 2. Removal for reuse as animal feed, or land disposal at facilities (i.e., landfills, composting facilities, soil amendment sites operated in accordance with valid waste discharge requirements issued by a Regional Water Board) will satisfy this specification.



4. Any proposed change in solids/sludge use or disposal practice shall be reported in writing to the Executive Officer at least **90 days** in advance of the change.

## G. Provisions

1. The following reports shall be submitted pursuant to CWC section 13267 and shall be prepared as described in **Provision G.5**:
  - a. By **1 November 2019**, the Discharger shall submit a *Groundwater Monitoring Well Installation Work Plan* that proposes at least one additional monitoring well for adequate monitoring upgradient of the leach field, or a *Groundwater Monitoring Well Network Analysis Report* using existing monitoring wells that were installed adjacent to the Facility in support of a site cleanup project. The *Groundwater Monitoring Well Installation Work Plan* shall be prepared in accordance with, and include the items listed in the first section of Attachment D: "Requirements for Monitoring Well Installation Workplans and Groundwater Sampling and Analysis Plan", which is attached hereto and made part of this Order by reference. The groundwater monitoring well(s) shall be designed to yield samples representative of the uppermost portion of the first aquifer. The *Groundwater Monitoring Well Installation Work Plan* must include a timeline that includes a monitoring well installation date to not exceed 90 days from the Central Valley Water Board's approval of the *Groundwater Monitoring Well Installation Work Plan*. The *Groundwater Monitoring Well Network Analysis Report* should evaluate the adequacy of the site cleanup monitoring well network to supplement the Facility's current monitoring well network.
  - b. By **1 June 2020**, the Discharger shall submit a *Salinity Minimization Plan* with source control reduction goals and an implementation time schedule. The Plan shall identify any additional methods that could be used to further reduce the salinity of the discharge to the maximum extent feasible. The discharger shall implement the plan in accordance with the approved time schedule.
  - c. By **1 January 2022**, the Discharger shall submit a *Water Quality Assessment Report* after two years, or eight sampling events of quarterly groundwater monitoring. The Report shall determine background water quality; groundwater flow direction and how it may change seasonally; and Stiff diagrams plotted on a water table and TDS isoconcentration contour map.
2. In accordance with Business and Professions Code sections 6735, 7835 and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for investigations and studies, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly

stated. Each technical report submitted by the Discharger shall bear the professional's signature and stamp.

3. The Discharger shall submit the technical reports and work plans required by this Order for consideration by the Executive Officer and incorporate comments the Executive Officer may have in a timely manner, as appropriate. Unless expressly stated otherwise in this Order, the Discharger shall proceed with all work required by the foregoing provisions by the due dates specified.
4. The Discharger shall comply with Monitoring and Reporting Program **R5-2019-0059** which is part of this Order, and any revisions thereto as ordered by the Executive Officer. The submittal dates of Discharger self-monitoring reports shall be no later than the submittal date specified in the MRP.
5. The Discharger shall comply with the attached Standard Provisions, which are incorporated herein.
6. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports. On or before each report due date, the Discharger shall submit the specified document to the Central Valley Water Board or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharger shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board in writing when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
7. The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger when the operation is necessary to achieve compliance with the conditions of this Order.
8. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with this Order.
9. As described in the Standard Provisions, the Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.
10. In the event that the Discharger reports toxic chemical release data to the State Emergency Response Commission (SERC) pursuant to section 313 of the

Emergency Planning and Community Right to Know Act (42 U.S.C. § 11023), the Discharger shall also report the same information to the Central Valley Water Board within 15 days of the report to the SERC.

11. The Discharger shall not allow pollutant-free wastewater to be discharged into the wastewater collection, treatment, and disposal systems in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.
12. At least **90 days** prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.
13. In the event of any change in control or ownership of the facility, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.
14. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must 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 Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the CWC. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.
15. A copy of this Order including the MRP, Information Sheet, Attachments, and Standard Provisions, shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
16. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the

violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. The State Water Board must receive the petition by 5:00 p.m. on the 30th day after the date of this Order; if the 30th day falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions are available on the Internet (at the address below), and will be provided upon request.

[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality)

I, PATRICK PULUPA, Executive Officer, do hereby certify that the foregoing is a full true, and correct copy of an Order adopted by the California Regional Water Quality Control Board on 7 June 2019.

  
\_\_\_\_\_  
PATRICK PULUPA, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2019-0059  
FOR  
SMUCKER NATURAL FOODS, INC.  
BUTTE COUNTY

This Monitoring and Reporting Program (MRP) is issued pursuant to Water Code section 13267. The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts, or the Executive Officer issues, a revised MRP.

Section 13267 of the Water Code states, in part:

[T]he regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region ... shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports.

Section 13268 of the Water Code states, in part:

- (a) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267 or failing or refusing to furnish a statement of compliance as required by subdivision (b) of Section 13399.2, or falsifying and information provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b).
- (b)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars (\$1,000) for each day in which the violation occurs.

The Smucker Natural Foods, Inc. owns and operates the facility that is subject to the WDRs cited herein, and the monitoring reports are necessary to determine compliance with the WDRs.

Pursuant to Section 13267 of the Water Code, the Discharger shall implement this MRP and shall submit the monitoring reports described herein.

A glossary of terms used in this MRP is included on the last page.

## I. GENERAL MONITORING REQUIREMENTS

### A. FLOW MONITORING

Hydraulic flow rates shall be measured at the monitoring points specified in this MRP. Central Valley Water Board staff shall approve any proposed changes to flow monitoring locations prior to implementation of the change. All flow monitoring systems shall be appropriate for the conveyance system (i.e., open channel flow or pressure pipeline) and liquid type. Unless otherwise specified, each flow meter shall be equipped with a flow totalizer to allow reporting of cumulative volume as well as instantaneous flow rate. Flow meters shall be calibrated at the frequency recommended by the manufacturer; typically, at least once per year and records of calibration shall be maintained for review upon request.

### B. MONITORING AND SAMPLING LOCATIONS

Samples shall be obtained at the monitoring points specified in this MRP. Central Valley Water Board staff shall approve any proposed changes to sampling locations prior to implementation of the change.

The Discharger shall monitor the following locations to demonstrate compliance with the requirements of this Order:

Monitoring Location Name	Monitoring Location Description
INF	Location where a representative sample of process wastewater enters the wastewater treatment plant can be obtained.
EFF	Location where a representative sample of process wastewater can be obtained prior to discharge to the land application area or leach field.
MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6	Groundwater monitoring well locations
PND	Process wastewater pond

### C. SAMPLING AND SAMPLE ANALYSIS

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. Except as specified otherwise in this MRP, grab samples will be considered representative of water, wastewater, soil, solids/sludges and groundwater.

The time, date, and location of each sample shall be recorded on the sample chain of custody form. All analyses shall be performed in accordance with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as those used to measure pH, electrical conductivity, dissolved oxygen, wind speed, and precipitation) may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are field calibrated at the frequency recommended by the manufacturer;
3. The instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

Laboratory analytical procedures shall comply with the methods and holding times specified in the following (as applicable to the medium to be analyzed):

- *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA);
- *Test Methods for Evaluating Solid Waste* (EPA);
- *Methods for Chemical Analysis of Water and Wastes* (EPA);
- *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA);
- *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and
- *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125).

Approved editions shall be those that are approved for use by the U.S. Environmental Protection Agency or the State Water Board's Environmental Laboratory Accreditation Program (ELAP). The Discharger may propose alternative methods for approval. Where technically feasible, laboratory reporting limits shall be lower than the applicable water quality objectives for the constituents to be analyzed.

If monitoring consistently shows no significant variation in a constituent concentration or parameter after at least 24 months of monitoring, the Discharger may request this MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency. This monitoring program shall remain in effect unless and until a revised MRP is issued.

## II. SPECIFIC MONITORING REQUIREMENTS

### A. INFLUENT MONITORING

Influent shall be monitored as specified below:

Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Flow	GPD	Meter Reading	Daily	Quarterly

**B. EFFLUENT MONITORING**

Effluent samples shall be collected upstream of the point of discharge to the leach field. At a minimum, effluent shall be monitored as specified below:

Constituent/Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Electrical Conductivity (EC)	µmhos/cm	Grab	Monthly	Quarterly
Nitrate (NO <sub>3</sub> ) as N	mg/L	Grab	Monthly	Quarterly
Total Kjeldahl Nitrogen (TKN)	mg/L	Grab	Monthly	Quarterly
Total Dissolved Solids (TDS)	mg/L	Grab	Monthly	Quarterly
Fixed Dissolved Solids (FDS)	mg/L	Grab	Monthly	Quarterly
Chemical Oxygen Demand (COD)	mg/L	Grab	Monthly	Quarterly
Biochemical Oxygen Demand (BOD <sub>5</sub> )	mg/L	Grab	Monthly	Quarterly
pH	S.U.	Grab	Monthly	Quarterly
Standard Minerals <sup>1</sup>	mg/L	Grab	Annually	Annually

<sup>1</sup> Standard minerals shall include, at a minimum, the following elements/compounds: boron, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

**C. LEACH FIELD MONITORING**

The Discharger shall monitor each leach field as specified below:

Parameter	Units	Type of Measurement	Monitoring Frequency	Reporting Frequency <sup>3</sup>
Application Rate <sup>1</sup>	gpd	Meter Reading	Daily	Quarterly
Leach Line Riser Inspection <sup>2</sup>	Inches	Measurement	Daily	Quarterly

<sup>1</sup> The average daily application rate for each leach field determined by dividing the total flow for the month by the net area of the leach field using appropriate unit conversions.

<sup>2</sup> Measure and record the distance from the surface of the liquid in the observation port to the surface of the ground in the active lateral(s). In addition, record when lateral distribution lines are switched.

**D. POND MONITORING**

Ponds used for treatment, storage, or disposal of wastewater shall be monitored as specified below. Dissolved oxygen monitoring applies to any pond containing more than two feet of standing water:

Constituent/Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Dissolved Oxygen <sup>1</sup>	mg/L	Grab	Monthly	Quarterly
Freeboard <sup>2</sup>	0.1 feet	Measurement	Monthly	Quarterly



Constituent/Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
pH <sup>1</sup>	Standard	Grab	Monthly	Quarterly
Odors	--	Observation	Monthly	Quarterly
Berm Condition	--	Observation	Monthly	Quarterly

<sup>1</sup> Samples shall be collected opposite the pond inlet at a depth of one foot.

<sup>2</sup> Freeboard shall be measured vertically from the surface of the pond water to the lowest elevation of the surrounding berm and shall be measured to the nearest 0.1 feet.

In addition, the Discharger shall inspect the condition of the ponds once per week and document visual observations. Notations shall include observations of:

- a. Presence of weeds in the water or along the berm;
- b. Accumulations of dead algae, vegetation, scum, or debris on the pond surface;
- c. Animal burrows in the berms;
- d. Evidence of seepage from the berms or downslope of the ponds

### III. LAND APPLICATION AREA MONITORING

#### A. Daily Pre-Application Inspections

The Discharger shall inspect the LAAs at least once daily prior to and during irrigation events, and observations from those inspections shall be documented for inclusion in the monthly monitoring reports. The following items shall be documented for each check or field to be irrigated on that day:

- a. Evidence of erosion;
- b. Containment berm condition;
- c. Condition of above-ground pipes, flow control valves, sprinklers, and/or drip emitters (as applicable);
- d. Proper use of valves;
- e. Soil saturation;
- f. Ponding;
- g. Irrigation supply and tailwater ditch condition and potential for runoff to off-site areas;
- h. Potential and actual discharge of waste to surface water;
- i. Odors that have the potential to be objectionable at or beyond the property boundary; and
- j. Insects (e.g., flies, mosquitoes).
- k. Any corrective actions taken based on observations made.

A copy of entries made in the log during each month shall be submitted as part of the Quarterly Monitoring Report. If no irrigation with wastewater takes place during a given month, then the monitoring report shall so state.

**B. Land Application Monitoring**

The Discharger shall perform the following routine monitoring and loading calculations for each discrete LAA each day when water is applied.

Constituent/Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Wind Speed	mph	Meter Reading	Daily	Quarterly
Precipitation	inches	Rain Gauge <sup>1</sup>	Daily	Quarterly
Acreage Applied	acres	Calculated	Daily	Quarterly
Wastewater Application Rate	gpd	Meter Reading	Daily	Quarterly

<sup>1</sup> Data obtained from the nearest National Weather Service rain gauge is acceptable.

**IV. GROUNDWATER MONITORING**

The Discharger shall maintain the groundwater monitoring well network. If a groundwater monitoring well is dry for more than four consecutive sampling events or is damaged, the Discharger shall submit a work plan and proposed time schedule to replace the well. The well shall be replaced following approval of the work plan.

**A. Applicability of Groundwater Limitations**

Prior to construction and/or sampling of any groundwater monitoring wells, the Discharger shall submit plans and specifications for approval. Once installed, all new wells shall be added to the groundwater monitoring network. The following table lists all existing monitoring wells:

MW-1	MW-2	MW-3	MW-4	MW-5	MW-6
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**B. Groundwater Sampling and Analysis**

Prior to purging or sampling, the groundwater depth shall be measured in each well to the nearest 0.01 feet. Groundwater elevations shall then be calculated to determine groundwater gradient and flow direction.

Low or no-purge sampling methods are acceptable, if described in an approved Sampling and Analysis Plan. Otherwise, each monitoring well shall be purged of at least 3 to 5 casing volumes until pH, electrical conductivity and turbidity have stabilized prior to sampling. Groundwater monitoring for all monitoring wells shall include, at a minimum, the following:

Constituent/Parameter	Units	Sample Type	Monitoring and Reporting Frequency <sup>4</sup>
Depth to Groundwater <sup>1</sup>	0.01 feet	Measurement	Quarterly
Groundwater Elevation	0.01 feet	Calculation	Quarterly
Gradient	feet/feet	Calculation	Quarterly
Gradient Direction	degrees	Calculation	Quarterly

Constituent/Parameter	Units	Sample Type	Monitoring and Reporting Frequency <sup>4</sup>
pH	standard	Grab	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly
Nitrate as Nitrogen	mg/L	Grab	Quarterly
Total Nitrogen	mg/L	Grab	Quarterly
Chemical Oxygen Demand	mg/L	Grab	Quarterly
Electrical Conductivity	µmhos/L	Grab	Quarterly
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly
Standard Minerals <sup>2</sup>	mg/L	Grab	Annually
CA Title 22 Dissolved Metals <sup>3</sup>	µg/L	Grab	Annually

<sup>1</sup> Groundwater elevations shall be determined based on depth-to-water measurements using a surveyed elevation reference point on the well casing.

<sup>2</sup> Standard Minerals shall include, at a minimum, the following: arsenic, aluminum, boron, calcium, chloride, iron, manganese, magnesium, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

<sup>3</sup> Samples for metals shall be filtered prior to preservation and digestion using a 0.45-micron filter.

<sup>4</sup> Analysis of data by a California licensed professional is required at least annually.

## V. RESIDUAL SOLIDS MONITORING

The Discharger shall monitor the residual solids generated and disposed of on a monthly basis. The following shall be monitored and reported:

- 1 Volume of Solids Generated. Solids may include pomace, seeds, stems, screenings, pond solids, and sump solids, or other material.
2. Volume Disposed of off-site. Describe the disposal method (e.g. animal feed, land application, off-site composting, landfill, etc.); the amount disposed (tons); and the name of the hauling company.
3. Volume Disposed of On-site. Describe the amount disposed (tons); location of on-site disposal (e.g. land application area field); method of application, spreading, and incorporation; application rate (tons/acre), and weekly grab sample analysis for total nitrogen.

## VI. WATER SUPPLY MONITORING

A sampling station shall be established where a representative sample of the process water supply can be obtained. Water supply monitoring shall include at least the following.

Constituent/Parameter	Units	Monitoring Frequency	Reporting Frequency
pH	S.U.	Annually	Annually
Total Dissolved Solids (TDS)	mg/L	Annually	Annually
Nitrate as Nitrogen	mg/L	Annually	Annually

Constituent/Parameter	Units	Monitoring Frequency	Reporting Frequency
Standard Minerals <sup>1</sup>	mg/L	Annually	Annually

<sup>1</sup> Standard Minerals shall include, at a minimum, the following: boron, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness

## VII. REPORTING REQUIREMENTS

All monitoring reports should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to: [centralvalleyredding@waterboards.ca.gov](mailto:centralvalleyredding@waterboards.ca.gov).

Documents that are 50 MB or larger should be transferred to a CD, DVD, or flash drive and mailed to the following address:

Central Valley Regional Water Quality Control Board  
364 Knollcrest Drive, Suite 204  
Redding, CA 96002

To ensure that your submittal is routed to the appropriate staff person, the following information should be included in the body of the email or transmittal sheet:

### Smucker's/Butte/WDR

**A transmittal letter shall accompany each monitoring report.** The letter shall include a discussion of all violations of the WDRs and this MRP during the reporting period and actions taken or planned for correcting each violation. If the Discharger has previously submitted a report describing corrective actions taken and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. Pursuant to Section B.3 of the Standard Provisions and General Reporting Requirements, the transmittal letter shall contain a statement by the Discharger or the Discharger's authorized agent certifying under penalty of perjury that the report is true, accurate and complete to the best of the signer's knowledge.

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, pond, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

Laboratory analysis reports do not need to be included in the monitoring reports; however, all laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3. For a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

In addition to the requirements of Standard Provision C.3, monitoring information shall include the method detection limit (MDL) and the Reporting limit (RL) or practical quantitation limit

(PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated.

All monitoring reports that involve planning, investigation, evaluation or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to Business and Professions Code sections 6735, 7835, and 7835.1.

In the future, the State Water Board or Central Valley Regional Water Board may require electronic submittal of monitoring reports using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>) or similar system. Electronic submittal to CIWQS, when implemented, will meet the requirements of our Paperless Office System.

#### **A. QUARTERLY MONITORING REPORTS**

Quarterly monitoring reports shall be submitted to the Board by the **1st day of the 2nd month** (i.e. the January-March quarterly report is due by **April 1st**). Each Quarterly Monitoring Report shall include the following:

1. Results of Influent Monitoring, including calculated values for total flow and average daily flow for each month, and total annual flow to date
2. Results of Effluent Monitoring
3. Results of Leach Field Monitoring
4. Results of Pond Monitoring.
5. Results of Groundwater Monitoring including:
  - a. A narrative description of all preparatory, monitoring, sampling, and sample handling for groundwater monitoring.
  - b. A field log for each well documenting depth to groundwater; method of purging; parameters measured before, during, and after purging; sample preparation (e.g., filtering); and sample preservation.
  - c. Calculation of the groundwater elevation at each monitoring well, and determination of groundwater flow direction and gradient on the date of measurement.
  - d. Summary data tables of historical and current water table elevations and analytical results.
  - e. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells, surface waters, and groundwater elevation contours referenced to an appropriate datum (e.g., NGVD).

6. Results of and Sludge/Biosolids Monitoring completed during the quarter, and (if applicable) verification of classification of biosolids as nonhazardous per California Code of Regulations, Title 22 (Title 22), Article 11, Criteria for Identification of Hazardous and Extremely Hazardous Waste (California Assessment Manual procedures).
7. Results of Residual Solids Monitoring
8. A comparison of monitoring data to the effluent limitations and discharge specifications and an explanation of any violation of those requirements.
9. For each discrete LAA, a comparison of monitoring data to the loading rate limitations and discharge specifications and an explanation of any violation of those requirements.
10. A copy of inspection log page(s) documenting inspections completed during the quarter.
11. A copy of calibration log page(s) verifying calibration of all hand-held monitoring instruments performed during the quarter.

## **B. ANNUAL MONITORING REPORTS**

An Annual Report shall be submitted by **1 February of each year**, and shall include the following:

1. Total annual influent flow, average monthly flows for each month of the year, and the average dry weather flow compared to the flow limitations of the WDRs.
2. For each discrete LAA irrigation, precipitation, and runoff control operations.
3. Concentration v. time graphs for each monitored constituent using all historic groundwater monitoring data. Each graph shall show the background groundwater concentration range, the MCL, and the Groundwater Limitation as horizontal lines at the applicable concentration.
4. An evaluation of the groundwater quality beneath the site and determination of whether any water quality objectives were exceeded in any compliance well at any time during the calendar year. This shall be determined by comparing the annual average concentration for each well during the calendar year to the corresponding water quality objective specified previously. If any groundwater water quality objectives were exceeded, include acknowledgment that a technical report will be submitted in accordance with the specified reporting schedule, as described in the Groundwater section of this MRP.
5. An evaluation of the groundwater quality beneath the site and determination of Compliance with Groundwater Limitations of the WDRs based on statistical analysis for each constituent monitored for each compliance well in accordance with the approved *Groundwater Limitations Compliance Assessment Plan*. Include all calculations and data input/analysis tables derived from use of statistical software, as applicable.

6. A summary of information on the disposal of sludge and/or solid waste during the calendar year.
7. Analytical results for any annual water supply monitoring. The Discharger's Consumer Confidence Report (or Annual Water Quality Report) may be submitted to comply with this requirement, if applicable.
8. An evaluation of the performance of the WWTF, including discussion of capacity issues, infiltration and inflow rates, nuisance conditions, and a forecast of the flows anticipated in the next year, as described in Standard Provision E.4.
9. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements.
10. Monitoring equipment maintenance and calibration records, as described in Standard Provision C.4.
11. A discussion of any data gaps and potential deficiencies or redundancies in the monitoring system or reporting program.

A letter transmitting the self-monitoring reports shall accompany each report. The letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in Standard Provisions B.3.

The Discharger shall implement the above monitoring program as of the date of this Order.

I, PATRICK PULUPA, Executive Officer, hereby certify that the foregoing is a full true and correct copy of the Order adopted by the California Regional Water Quality Control Board on 7 June 2019.

  
\_\_\_\_\_  
PATRICK PULUPA, Executive Officer

### GLOSSARY

BOD <sub>5</sub>	Five-day biochemical oxygen demand
CaCO <sub>3</sub>	Calcium carbonate
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
NTU	Nephelometric turbidity unit
TKN	Total Kjeldahl nitrogen
TDS	Total dissolved solids
TSS	Total suspended solids
Daily	Every day
Weekly	Once per week.
Twice Monthly	Twice per month during non-consecutive weeks.
Monthly	Once per calendar month.
Quarterly	Once per calendar quarter.
Annually	Once per year.
mg/L	Milligrams per liter
mL/L	Milliliters [of solids] per liter
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
gpd	Gallons per day
mgd	Million gallons per day
MPN/100 mL	Most probable number [of organisms] per 100 milliliters
MTF	Multiple tube fermentation



**Table 1**  
**Priority Pollutants**

<b><u>Inorganics</u></b> <sup>1</sup>	<b><u>Organics</u></b>	3-Methyl-4-Chlorophenol	Hexachlorobenzene
Antimony	Acrolein	Pentachlorophenol	Hexachlorobutadiene
Arsenic	Acrylonitrile	Phenol	Hexachlorocyclopentadiene
Beryllium	Benzene	2,4,6-Trichlorophenol	Hexachloroethane
Cadmium	Bromoform	Acenaphthene	Indeno(1,2,3-c,d)pyrene
Chromium (III)	Carbon tetrachloride	Acenaphthylene	Isophorone
Chromium (VI)	Chlorobenzene	Anthracene	Naphthalene
Copper	Chlorodibromomethane	Benzidine	Nitrobenzene
Lead	Chloroethane	Benzo(a)Anthracene	N-Nitrosodimethylamine
Mercury	2-Chloroethylvinyl Ether	Benzo(a)pyrene	N-Nitrosodi-n-Propylamine
Nickel	Chloroform	Benzo(b)fluoranthene	N-Nitrosodiphenylamine
Selenium	Dichlorobromomethane	Benzo(g,h,i)perylene	Phenanthrene
Silver	1,1-Dichloroethane	Benzo(k)fluoranthene	Pyrene
Thallium	1,2-Dichloroethane	Bis(2-chloroethoxy) methane	1,2,4-Trichlorobenzene
Zinc	1,1-Dichloroethylene	Bis(2-chloroethyl) ether	
Cyanide	1,2-Dichloropropane	Bis(2-chloroisopropyl) ether	<b><u>Pesticides</u></b>
Asbestos	1,3-Dichloropropylene	Bis(2-Ethylhexyl)phthalate	Aldrin
	Ethylbenzene	4-Bromophenyl phenyl ether	alpha-BHC
	Methyl Bromide	Butylbenzyl Phthalate	beta-BHC
	Methyl Chloride	2-Chloronaphthalene	gamma-BHC (Lindane)
<b><u>Dioxin Congeners</u></b>	Methylene Chloride	4-Chlorophenyl Phenyl Ether	delta-BHC
2,3,7,8-TCDD	1,1,2,2-Tetrachloroethane	Chrysene	Chlordane
1,2,3,7,8-PentaCDD	Tetrachloroethylene (PCE)	Dibenzo(a,h)Anthracene	4,4'-DDT
1,2,3,4,7,8-HexaCDD	Toluene	1,2-Dichlorobenzene	4,4'-DDE
1,2,3,6,7,8-HexaCDD	1,2-Trans-Dichloroethylene	1,3-Dichlorobenzene	4,4'-DDD
1,2,3,7,8,9-HexaCDD	1,1,1-Trichloroethane	1,4-Dichlorobenzene	Dieldrin
1,2,3,4,6,7,8-HeptaCDD	1,1,2-Trichloroethane	3,3'-Dichlorobenzidine	alpha-Endosulfan
OctaCDD	Trichloroethylene (TCE)	Diethyl phthalate	beta-Endosulfan
1,2,3,7,8-PentaCDF	Vinyl chloride	Dimethyl phthalate	Endosulfan Sulfate
2,3,4,7,8-PentaCDF	2-Chlorophenol	Di-n-Butyl Phthalate	Endrin
1,2,3,4,7,8-HexaCDF	2,4-Dichlorophenol	2,4-Dinitrotoluene	Endrin Aldehyde
1,2,3,6,7,8-HexaCDF	2,4-Dimethylphenol	2,6-Dinitrotoluene	Heptachlor
1,2,3,7,8,9-HexaCDF	2-Methyl-4,6-Dinitrophenol	Di-n-Octyl Phthalate	Heptachlor epoxide
2,3,4,6,7,8-HexaCDF	2,4-Dinitrophenol	1,2-Diphenylhydrazine	Polychlorinated biphenyls
1,2,3,4,6,7,8-HeptaCDF	2-Nitrophenol	Fluoranthene	Toxaphene
1,2,3,4,7,8,9-HeptaCDF	4-Nitrophenol	Fluorene	
OctaCDF			

<sup>1</sup> With the exception of wastewater samples, samples for metals analysis must first be filtered. If filtering in the field is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain of custody form) to immediately filter then preserve the sample.

<sup>2</sup> Samples to be analyzed for volatile compounds and phthalate esters shall be grab samples; the remainder shall be 24-hour composite samples.

## INFORMATION SHEET

ORDER R5-2019-0059  
SMUCKER NATURAL FOODS, INC.  
BUTTE COUNTY

### **Background**

Smucker Natural Foods, Inc. (Discharger) owns and operates a fruit juicing and sprouted grains production facility (Facility) that is equipped with wastewater treatment plant to treat wastewater from operations. Wastewater is generated during juice processing, fruit rinsing, fruit processing, grain sprouting, boiler water, clean in place water, and all floor drains discharge to the wastewater treatment plant. The wastewater treatment facility is equipped with a pretreatment area, two accumulation tanks, an anaerobic digester, a two celled aerated pond, a clarifier, a leach field, and spray field.

### **Wastewater Disposal**

Wastewater generated at the Facility is collected and comingled in floor drains within the process and production areas. Wastewater is conveyed through a pretreatment system equipped with an auger, hydrosieve, and oil/water separator for solids and oil removal.

After pretreatment, wastewater is conveyed to two approximately 65,000-gallon accumulation tanks that are used for short-term storage and meter wastewater through the anaerobic digester. From the accumulation tank, wastewater flows into a mix tank where wastewater is dosed with caustic soda to increase the pH to between 6.8 and 7.2 and temperature maintained at between 95-100° F to aid in the digestive process. Wastewater is pumped through the anaerobic digester.

Digester effluent is conveyed to a two-cell aerated pond. Both cells are equipped with a dissolved oxygen (DO) sensor that controls the rate of aeration; the first pond in the series is maintained at a DO of 2 mg/L and the second at 1 mg/L.

After aeration, wastewater gravity flows into a clarifier. Activated sludge settles to the bottom of the clarifier. Return activated sludge is returned to the treatment system and waste activated sludge is gravity fed into three underground storage tanks. The waste sludge is pumped approximately three times a year by Nor Cal Environmental Solutions and taken to an approved disposal facility.

Clarified effluent flows into an asphalt covered leach field. The leach field is comprised of six leach lines, three are approximately 300-feet long, the remaining three are approximately 275-feet long. The leach field has a discharge capacity of 3,880 gallons per day, the remaining effluent is pumped to a 5.5-acre spray field equipped with six sprinkler heads, each with a spray radius of 100-feet.

### **Additional Groundwater Considerations**

The Facility is in the Butte Basin Hydrologic Area (No. 520.40) of the Colusa Basin Hydrologic Unit, as depicted on hydrologic maps prepared by the Department of Water Resources (DWR) in August 1986. The average annual precipitation in Chico is 31.65 inches and the 100-year annual precipitation is 54.35 inches.

The DWR Groundwater Information Center Interactive map using data from Spring 2018 shows that the regional depth to groundwater below the Facility ranges from approximately 78-81 feet below ground surface (bgs) and groundwater flows to the southwest with a gradient ranging from 0.001-0.012 feet/foot for groundwater between approximately 27-93 feet bgs.

Monitoring and Reporting Program 98-050 required monitoring of six groundwater monitoring wells. Groundwater monitoring from 2011-2017 indicates that the depth to groundwater is first encountered at approximately 5.5-19.7 feet below ground surface; groundwater elevation ranges from approximately 185.87-202.9 feet above mean sea level.

### **Antidegradation and Additional Regulatory Considerations**

The Discharger has been monitoring groundwater quality at the site since 2011. Based on available data, it is not possible to determine pre-1968 shallow groundwater quality. Therefore, determination of compliance with Resolution 68-16 for this facility must be based on existing background shallow groundwater quality.

Groundwater data from 2011-2017 shows exceedances of water quality objectives (WQOs) of electrical conductivity in groundwater monitoring wells MW-2 and MW-6; MW-2 is downgradient of the leach field, MW-6 is downgradient of both the leach field and land application area.

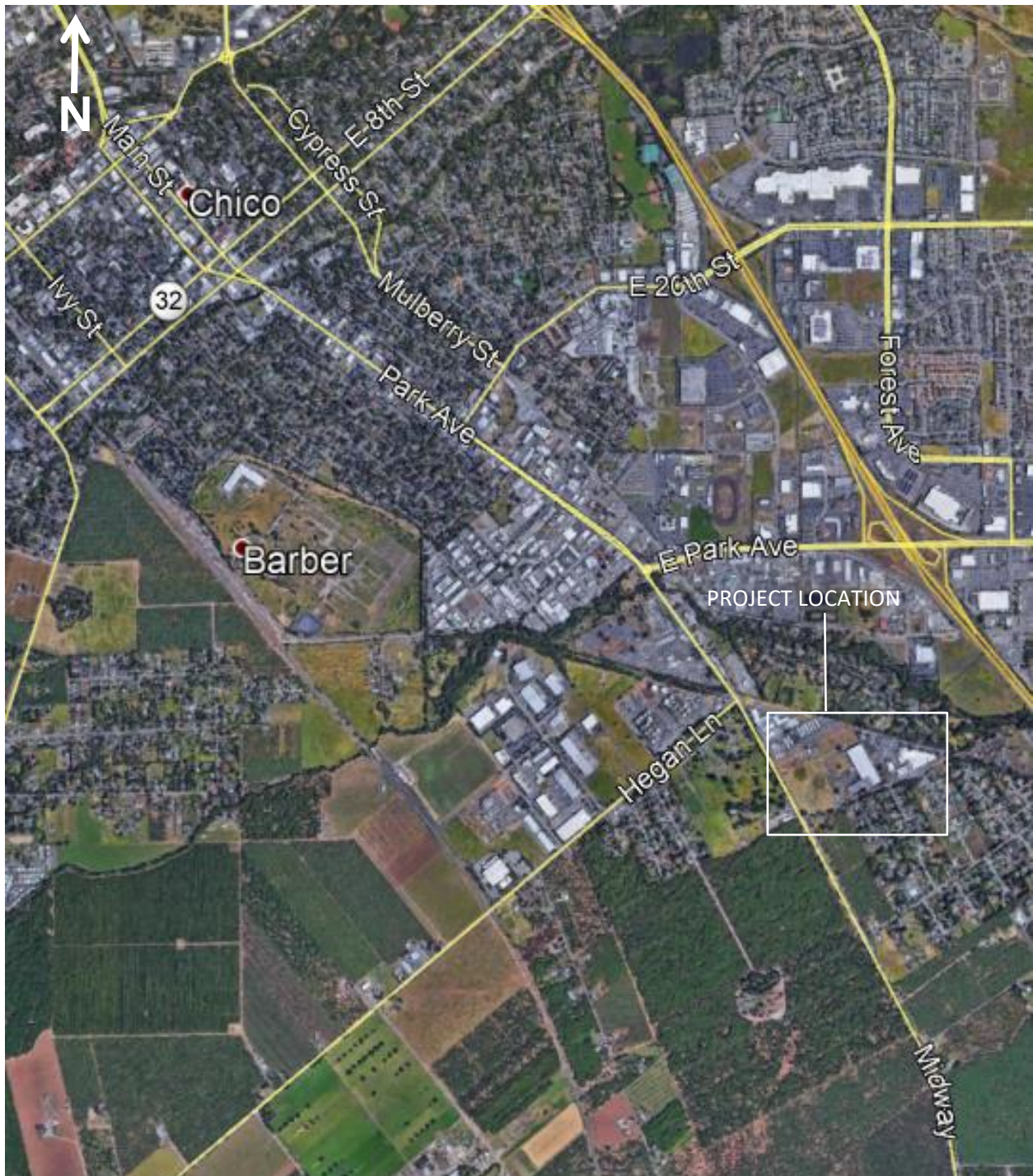
This Order requires the installation of an additional background, upgradient monitoring well for the leach field, which currently has two cross gradient monitoring wells. After two years of quarterly groundwater monitoring with a background groundwater monitoring well this Order requires a *Water Quality Assessment Report* in order to determine background groundwater quality and assess degradation of groundwater quality below the site.

The discharge and the potential for groundwater degradation allowed in this Order is consistent with the Antidegradation Policy since; (a) the limited degradation allowed by this Order will not result in water quality less than the water quality objectives (WQOs) as defined in the Basin Plan, or unreasonably affect present and anticipated beneficial uses, (b) the Discharger has implemented BPTC to minimize degradation, and (c) the limited degradation is of the maximum benefit to the people of the State.

### **Legal Effect of Rescission of Prior WDRs or Orders on Existing Violations**

The Board's rescission of prior waste discharge requirements and/or monitoring and reporting orders does not extinguish any violations that may have occurred during the time those waste discharge requirements or orders were in effect. The Central Valley Water Board reserves the right to take enforcement actions to address violations of prior prohibitions, limitations, specifications, requirements, or provisions of rescinded waste discharge requirements or orders as allowed by law.

**ATTACHMENT A - SITE LOCATION MAP**



DRAWING REFERENCE:  
GOOGLE EARTH  
MAP DATA: © 2018 GOOGLE  
NO SCALE

SITE LOCATION MAP  
SMUCKER NATURAL FOODS, INC.  
BUTTE COUNTY

**ATTACHMENT B - FACILITY MAP**



DRAWING REFERENCE:  
GOOGLE EARTH  
MAP DATA: © 2018 GOOGLE  
NO SCALE

FACILITY MAP  
SMUCKER NATURAL FOODS INC.  
BUTTE COUNTY

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

STANDARD PROVISIONS AND REPORTING REQUIREMENTS  
FOR  
WASTE DISCHARGE REQUIREMENTS

1 March 1991

**A. General Provisions:**

1. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, or protect the Discharger from liabilities under federal, state, or local laws. This Order does not convey any property rights or exclusive privileges.
2. The provisions of this Order are severable. If any provision of this Order is held invalid, the remainder of this Order shall not be affected.
3. 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 failure to disclose fully all relevant facts;
  - c. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge;
  - d. A material change in the character, location, or volume of discharge.
4. Before making a material change in the character, location, or volume of discharge, the discharger shall file a new Report of Waste Discharge with the Regional Board. A material change includes, but is not limited to, the following:
  - a. An increase in area or depth to be used for solid waste disposal beyond that specified in waste discharge requirements.
  - b. A significant change in disposal method, location or volume, e.g., change from land disposal to land treatment.
  - c. The addition of a major industrial, municipal or domestic waste discharge facility.
  - d. The addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.

## Waste Discharge to Land

5. Except for material determined to be confidential in accordance with California law and regulations, all reports prepared in accordance with terms of this Order shall be available for public inspection at the offices of the Board. Data on waste discharges, water quality, geology, and hydrogeology shall not be considered confidential.
6. The discharger shall take all reasonable steps to minimize any adverse impact to the waters of the state resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance.
7. The discharger shall maintain in good working order and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.
8. The discharger shall permit representatives of the Regional Board (hereafter Board) and the State Water Resources Control Board, upon presentations of credentials, to:
  - a. Enter premises where wastes are treated, stored, or disposed of and facilities in which any records are kept,
  - b. Copy any records required to be kept under terms and conditions of this Order,
  - c. Inspect at reasonable hours, monitoring equipment required by this Order, and
  - d. Sample, photograph and video tape any discharge, waste, waste management unit, or monitoring device.
9. For any electrically operated equipment at the site, the failure of which would cause loss of control or containment of waste materials, or violation of this Order, the discharger shall employ safeguards to prevent loss of control over wastes. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.
10. The fact that it would have been necessary to halt or reduce the permitted activity in Order to maintain compliance with this Order shall not be a defense for the discharger's violations of the Order.
11. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the California Water Code, Section 13050.
12. The discharge shall remain within the designated disposal area at all times.

**B. General Reporting Requirements:**

1. In the event the discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the discharger shall notify the Board by telephone at **(916) 464-3291** [*Note: Current phone numbers for all three Regional Board offices may be found on the internet at [http://www.swrcb.ca.gov/rwqcb5/contact\\_us](http://www.swrcb.ca.gov/rwqcb5/contact_us).*] as soon as it or its agents



## Waste Discharge to Land

have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing within **two weeks**. The written notification shall state the nature, time and cause of noncompliance, and shall include a timetable for corrective actions.

2. The discharger shall have a plan for preventing and controlling accidental discharges, and for minimizing the effect of such events.

This plan shall:

- a. Identify the possible sources of accidental loss or leakage of wastes from each waste management, treatment, or disposal facility.
- b. Evaluate the effectiveness of present waste management/treatment units and operational procedures, and identify needed changes of contingency plans.
- c. Predict the effectiveness of the proposed changes in waste management/treatment facilities and procedures and provide an implementation schedule containing interim and final dates when changes will be implemented.

The Board, after review of the plan, may establish conditions that it deems necessary to control leakages and minimize their effects.

3. All reports shall be signed by persons identified below:
  - a. For a corporation: by a principal executive officer of at least the level of senior vice-president.
  - b. For a partnership or sole proprietorship: by a general partner or the proprietor.
  - c. For a municipality, state, federal or other public agency: by either a principal executive officer or ranking elected or appointed official.
  - d. A duly authorized representative of a person designated in 3a, 3b or 3c of this requirement if;
    - (1) the authorization is made in writing by a person described in 3a, 3b or 3c of this provision;
    - (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a waste management unit, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
    - (3) the written authorization is submitted to the Board

Any person signing a document under this Section shall make the following certification:

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

4. Technical and monitoring reports specified in this Order are requested pursuant to Section 13267 of the Water Code. Failing to furnish the reports by the specified deadlines and falsifying information in the reports, are misdemeanors that may result in assessment of civil liabilities against the discharger.
5. The discharger shall mail a copy of each monitoring report and any other reports required by this Order to:

California Regional Water Quality Control Board  
Central Valley Region  
11020 Sun Center Drive, #200  
Rancho Cordova, CA 95670-6114

*Note: Current addresses for all three Regional Board offices may be found on the internet at [http://www.swrcb.ca.gov/rwqcb5/contact\\_us](http://www.swrcb.ca.gov/rwqcb5/contact_us) or the current address if the office relocates.*

### **C. Provisions for Monitoring:**

1. All analyses shall be made in accordance with the latest edition of: (1) *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA 600 Series) and (2) *Test Methods for Evaluating Solid Waste* (SW 846-latest edition). The test method may be modified subject to application and approval of alternate test procedures under the Code of Federal Regulations (40 CFR 136).
2. Chemical, bacteriological, and bioassay analysis shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Board staff. The Quality Assurance-Quality Control Program must conform to EPA guidelines or to procedures approved by the Board.

Unless otherwise specified, all metals shall be reported as Total Metals.

3. The discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to

## Waste Discharge to Land

complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Record of monitoring information shall include:

- a. the date, exact place, and time of sampling or measurements,
  - b. the individual(s) who performed the sampling of the measurements,
  - c. the date(s) analyses were performed,
  - d. the individual(s) who performed the analyses,
  - e. the laboratory which performed the analysis,
  - f. the analytical techniques or methods used, and
  - g. the results of such analyses.
4. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated at least yearly to ensure their continued accuracy.
  5. The discharger shall maintain a written sampling program sufficient to assure compliance with the terms of this Order. Anyone performing sampling on behalf of the discharger shall be familiar with the sampling plan.
  6. The discharger shall construct all monitoring wells to meet or exceed the standards stated in the State Department of Water Resources *Bulletin 74-81* and subsequent revisions, and shall comply with the reporting provisions for wells required by Water Code Sections 13750 through 13755.22

**D. Standard Conditions for Facilities Subject to California Code of Regulations, Title 23, Division 3, Chapter 15 (Chapter 15)**

1. All classified waste management units shall be designed under the direct supervision of a California registered civil engineer or a California certified engineering geologist. Designs shall include a Construction Quality Assurance Plan, the purpose of which is to:
  - a. demonstrate that the waste management unit has been constructed according to the specifications and plans as approved by the Board.
  - b. provide quality control on the materials and construction practices used to construct the waste management unit and prevent the use of inferior products and/or materials which do not meet the approved design plans or specifications.
2. Prior to the discharge of waste to any classified waste management unit, a California registered civil engineer or a California certified engineering geologist must certify that the waste management unit meets the construction or prescriptive standards and performance goals in Chapter 15, unless an engineered alternative has been approved by the Board. In the case of an engineered alternative, the registered civil engineer or a certified engineering geologist must

## Waste Discharge to Land

certify that the waste management unit has been constructed in accordance with Board-approved plans and specifications.

3. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the waste management units.
4. Closure of each waste management unit shall be performed under the direct supervision of a California registered civil engineer or a California certified engineering geologist.

**E. Conditions Applicable to Discharge Facilities Exempted from Chapter 15 Under Section 2511**

1. If the discharger's wastewater treatment plant is publicly owned or regulated by the Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to California Code of Regulations, Title 23, Division 4, Chapter 14.
2. By-pass (the intentional diversion of waste streams from any portion of a treatment facility, except diversions designed to meet variable effluent limits) is prohibited. The Board may take enforcement action against the discharger for by-pass unless:
  - a. (1) By-pass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a by-pass. Severe property damage does not mean economic loss caused by delays in production); and
    - (2) There were no feasible alternatives to by-pass, such as the use of auxiliary treatment facilities or retention of untreated waste. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a by-pass that would otherwise occur during normal periods of equipment downtime or preventive maintenance; or
  - b. (1) by-pass is required for essential maintenance to assure efficient operation; and
    - (2) neither effluent nor receiving water limitations are exceeded; and
    - (3) the discharger notifies the Board ten days in advance.

The permittee shall submit notice of an unanticipated by-pass as required in paragraph B.1. above.

3. A discharger that wishes to establish the affirmative defense of an upset (see definition in E.6 below) in an action brought for noncompliance shall demonstrate, through properly signed, contemporaneous operating logs, or other evidence, that:

## Waste Discharge to Land

- a. an upset occurred and the cause(s) can be identified;
- b. the permitted facility was being properly operated at the time of the upset;
- c. the discharger submitted notice of the upset as required in paragraph B.1. above; and
- d. the discharger complied with any remedial measures required by waste discharge requirements.

In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof.

4. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Board by **31 January**.
5. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to disposal. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
6. Definitions
  - a. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper action.
  - b. The monthly average discharge is the total discharge by volume during a calendar month divided by the number of days in the month that the facility was discharging. This number is to be reported in gallons per day or million gallons per day.

Where less than daily sampling is required by this Order, the monthly average shall be determined by the summation of all the measured discharges by the number of days during the month when the measurements were made.
  - c. The monthly average concentration is the arithmetic mean of measurements made during the month.
  - d. The "daily maximum" **discharge** is the total discharge by volume during any day.

## Waste Discharge to Land

- e. The “daily maximum” **concentration** is the highest measurement made on any single discrete sample or composite sample.
- f. A “grab” sample is any sample collected in less than 15 minutes.
- g. Unless otherwise specified, a composite sample is a combination of individual samples collected over the specified sampling period;
  - (1) at equal time intervals, with a maximum interval of one hour
  - (2) at varying time intervals (average interval one hour or less) so that each sample represents an equal portion of the cumulative flow.

The duration of the sampling period shall be specified in the Monitoring and Reporting Program. The method of compositing shall be reported with the results.

#### 7. Annual Pretreatment Report Requirements:

Applies to dischargers required to have a Pretreatment Program as stated in waste discharge requirements.)

The annual report shall be submitted **by 28 February** and include, but not be limited to, the following items:

- a. A summary of analytical results from representative, flow-proportioned, 24-hour composite sampling of the influent and effluent for those pollutants EPA has identified under Section 307(a) of the Clean Water Act which are known or suspected to be discharged by industrial users.

The discharger is not required to sample and analyze for asbestos until EPA promulgates an applicable analytical technique under 40 CFR (Code of Federal Regulations) Part 136. Sludge shall be sampled during the same 24-hour period and analyzed for the same pollutants as the influent and effluent sampling analysis. The sludge analyzed shall be a composite sample of a minimum of 12 discrete samples taken at equal time intervals over the 24-hour period. Wastewater and sludge sampling and analysis shall be performed at least annually. The discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants which may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto.

- b. A discussion of Upset, Interference, or Pass Through incidents, if any, at the treatment plant which the discharger knows or suspects were caused by industrial users of the system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the industrial user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any

## Waste Discharge to Land

additional limitations, or changes to existing requirements, may be necessary to prevent Pass Through, Interference, or noncompliance with sludge disposal requirements.

- c. The cumulative number of industrial users that the discharger has notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.
- d. An updated list of the discharger's industrial users including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The discharger shall provide a brief explanation for each deletion. The list shall identify the industrial users subject to federal categorical standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent than the federal categorical standards. The discharger shall also list the noncategorical industrial users that are subject only to local discharge limitations. The discharger shall characterize the compliance status through the year of record of each industrial user by employing the following descriptions:
  - (1) Complied with baseline monitoring report requirements (where applicable);
  - (2) Consistently achieved compliance;
  - (3) Inconsistently achieved compliance;
  - (4) Significantly violated applicable pretreatment requirements as defined by 40 CFR 403.8(f)(2)(vii);
  - (5) Complied with schedule to achieve compliance (include the date final compliance is required);
  - (6) Did not achieve compliance and not on a compliance schedule;
  - (7) Compliance status unknown.

A report describing the compliance status of any industrial user characterized by the descriptions in items (d)(3) through (d)(7) above shall be **submitted quarterly from the annual report date** to EPA and the Board. The report shall identify the specific compliance status of each such industrial user. This quarterly reporting requirement shall commence upon issuance of this Order.

- e. A summary of the inspection and sampling activities conducted by the discharger during the past year to gather information and data regarding the industrial users. The summary shall include but not be limited to, a tabulation of categories of dischargers that were inspected and sampled; how many and how often; and incidents of noncompliance detected.

## Waste Discharge to Land

- f. A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of the industrial users affected by the following actions:
- (1) Warning letters or notices of violation regarding the industrial user's apparent noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the federal categorical standards or local discharge limitations;
  - (2) Administrative Orders regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;
  - (3) Civil actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;
  - (4) Criminal actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.
  - (5) Assessment of monetary penalties. For each industrial user identify the amount of the penalties;
  - (6) Restriction of flow to the treatment plant; or
  - (7) Disconnection from discharge to the treatment plant.
- g. A description of any significant changes in operating the pretreatment program which differ from the discharger's approved Pretreatment Program, including, but not limited to, changes concerning: the program's administrative structure; local industrial discharge limitations; monitoring program or monitoring frequencies; legal authority of enforcement policy; funding mechanisms; resource requirements; and staffing levels.
- h. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases.
- i. A summary of public participation activities to involve and inform the public.
- j. A description of any changes in sludge disposal methods and a discussion of any concerns not described elsewhere in the report.

Duplicate signed copies of these reports shall be submitted to the Board and:



Regional Administrator  
U.S. Environmental Protection Agency W-5  
75 Hawthorne Street  
San Francisco, CA 94105

and

State Water Resource Control Board  
Division of Water Quality  
P.O. Box 100  
Sacramento, CA 95812

Revised January 2004 to update addresses and phone numbers

**ATTACHMENT D**  
**REQUIREMENTS FOR MONITORING WELL INSTALLATION WORKPLANS AND**  
**MONITORING WELL INSTALLATION REPORTS**

Prior to installation of groundwater monitoring wells, the Discharger shall submit a workplan containing, at a minimum, the information listed in Section 1, below. Wells may be installed after staff approves the workplan. Upon installation of the monitoring wells, the Discharger shall submit a well installation report which includes the information contained in Section 2, below. All workplans and reports must be prepared under the direction of, and signed by, a registered geologist or civil engineer licensed by the State of California.

**SECTION 1 - Monitoring Well Installation Workplan and**  
**Groundwater Sampling and Analysis Plan**

The monitoring well installation workplan shall contain the following minimum information:

A. General Information:

- Purpose of the well installation project
- Brief description of local geologic and hydrogeologic conditions
- Proposed monitoring well locations and rationale for well locations
- Topographic map showing facility location, roads, and surface water bodies
- Large scaled site map showing all existing on-site wells, proposed wells, surface drainage courses, surface water bodies, buildings, waste handling facilities, utilities, and major physical and man-made features

B. Drilling Details:

- On-site supervision of drilling and well installation activities
- Description of drilling equipment and techniques
- Equipment decontamination procedures
- Soil sampling intervals (if appropriate) and logging methods

C. Monitoring Well Design (in narrative and/or graphic form):

- Diagram of proposed well construction details
  - Borehole diameter
  - Casing and screen material, diameter, and centralizer spacing (if needed)
  - Type of well caps (bottom cap either screw on or secured with stainless steel screws)
  - Anticipated depth of well, length of well casing, and length and position of perforated interval
  - Thickness, position and composition of surface seal, sanitary seal, and sand pack
  - Anticipated screen slot size and filter pack

- D. Well Development (not to be performed until at least 48 hours after sanitary seal placement):  
Method of development to be used (i.e., surge, bail, pump, etc.)  
Parameters to be monitored during development and record keeping technique  
Method of determining when development is complete  
Disposal of development water
- E. Well Survey (precision of vertical survey data shall be at least 0.01 foot):  
Identify the Licensed Land Surveyor or Civil Engineer that will perform the survey  
Datum for survey measurements  
List well features to be surveyed (i.e. top of casing, horizontal and vertical coordinates, etc.)
- F. Schedule for Completion of Work
- G. Appendix: Groundwater Sampling and Analysis Plan (SAP)  
The Groundwater SAP shall be included as an appendix to the workplan, and shall be utilized as a guidance document that is referred to by individuals responsible for conducting groundwater monitoring and sampling activities.

Provide a detailed written description of standard operating procedures for the following:

- Equipment to be used during sampling
- Equipment decontamination procedures
- Water level measurement procedures
- Well purging (include a discussion of procedures to follow if three casing volumes cannot be purged)
- Monitoring and record keeping during water level measurement and well purging (include copies of record keeping logs to be used)
- Purge water disposal
- Analytical methods and required reporting limits
- Sample containers and preservatives
- Sampling
  - o General sampling techniques
  - o Record keeping during sampling (include copies of record keeping logs to be used)
  - o QA/QC samples
- Chain of Custody
- Sample handling and transport

## **SECTION 2 - Monitoring Well Installation Report**

The monitoring well installation report must provide the information listed below. In addition, the report must also clearly identify, describe, and justify any deviations from the approved workplan.

A. General Information:

Purpose of the well installation project  
Brief description of local geologic and hydrogeologic conditions encountered during installation of the wells  
Number of monitoring wells installed and copies of County Well Construction Permits  
Topographic map showing facility location, roads, surface water bodies  
Scaled site map showing all previously existing wells, newly installed wells, surface water bodies, buildings, waste handling facilities, utilities, and other major physical and man-made features.

B. Drilling Details (in narrative and/or graphic form):

On-site supervision of drilling and well installation activities  
Drilling contractor and driller's name  
Description of drilling equipment and techniques  
Equipment decontamination procedures  
Soil sampling intervals and logging methods  
Well boring log

- Well boring number and date drilled
- Borehole diameter and total depth
- Total depth of open hole (same as total depth drilled if no caving or back-grouting occurs)
- Depth to first encountered groundwater and stabilized groundwater depth
- Detailed description of soils encountered, using the Unified Soil Classification System

C. Well Construction Details (in narrative and/or graphic form):

Well construction diagram, including:

- Monitoring well number and date constructed
- Casing and screen material, diameter, and centralizer spacing (if needed)
- Length of well casing, and length and position of perforated interval
- Thickness, position and composition of surface seal, sanitary seal, and sand pack
- Type of well caps (bottom cap either screw on or secured with stainless steel screws)

E. Well Development:

Date(s) and method of development  
How well development completion was determined  
Volume of water purged from well and method of development water disposal  
Field notes from well development should be included in report

F. Well Survey (survey the top rim of the well casing with the cap removed):

Identify the coordinate system and datum for survey measurements  
Describe the measuring points (i.e. ground surface, top of casing, etc.)  
Present the well survey report data in a table  
Include the Registered Engineer or Licensed Surveyor's report and field notes in appendix.