

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. 5-00-093

WASTE DISCHARGE REQUIREMENTS
FOR
CITY OF ARVIN
AND
UNITED STATES FILTER CORPORATION
ARVIN WASTEWATER TREATMENT FACILITY
KERN COUNTY

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

1. The City of Arvin and United States Filter Corporation, a California corporation doing business as United States Filter Operating Services (hereafter US Filter), provide wastewater collection and treatment services to residential and commercial users within the City limits. The City of Arvin and US Filter entered into a 35-year agreement for expansion and operation of the City's Wastewater Treatment Facility (WWTF) and are hereafter jointly referred to as Discharger. The Discharger's WWTF is about two miles southwest of Arvin in Section 34, T31S, R29E, MDB&M. Specifically, the WWTF is on City-owned property (APN 189-34-24, -25, -26, and -27), as shown in Attachments A and B, which are part of this Order. The WWTF treats wastewater consisting mostly of domestic and commercial origin from Arvin, with some additional discharge from neighboring fruit and vegetable packing plants.
2. The Discharger supplies WWTF effluent to a contract farmer (Community Recycling and Resource Recovery, Inc.) to grow fodder crops on 240 acres owned by the City (APN 189-340-27-00 and 446-010-58, -59 and -60) in Sections 34 and 35, T31S, R29E, MDB&M, as shown in Attachment A. The City's 240-acre reclamation area is hereafter referred to as the designated reclamation area.
3. Waste Discharge Requirements (WDRs) Order No. 86-105, adopted by the Board on 30 May 1986, limits the dry weather discharge of treated domestic waste from the WWTF to 0.8 million gallons per day (mgd). The existing plant, constructed in 1984, features an oxidation ditch, final clarifier and two 43-acre-foot-capacity effluent storage reservoirs. Its sludge handling system includes an open-top holding tank, which operates as an aerobic digester, and 52,500 square feet of unlined sludge drying beds, most of which do not have an under drain system. The dried sludge is stockpiled onsite and is periodically disposed of by land application to the designated reclamation area. Order No. 86-105 is not adequate to reflect the current plans and policies of the Board and the Discharger's proposed expansion of WWTF treatment and disposal capacities.
4. The City's population was about 11,000 in 1997 and will reportedly increase to about 12,400 in 2000 and to 17,600 in 2010.

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5. The Discharger has exceeded the WWTF's permitted flow limit of 0.8 mgd since 1988. Prior to 1996, high flows frequently resulted in solids washing out of the final clarifier. In 1996, the Discharger began adding a polymer to the clarifier influent, which has and continues to result in improved solids retention. Current monthly average flows are about 1.1 mgd. Discharger monitoring reports for 1999 show that winter flows are not higher than summer flows, indicating there is no significant inflow and infiltration to the collection system during winter months.

Proposed WWTF Expansion Project

6. The Discharger submitted a Report of Waste Discharge (RWD), dated 21 September 1998, in support of a proposed WWTF expansion project that will increase its treatment capacity to 2 mgd. The RWD includes a State Form 200 and a California Environmental Quality Act (CEQA) document entitled, *Initial Study/Negative Declaration for the City of Arvin Wastewater Treatment Plant Expansion and Upgrade, Kern County, California*, dated February 1998.
7. The WWTF expansion project, which is partly financed by the State Revolving Fund, will reportedly include: upgrading and expanding the headworks; adding a splitter box, a 1.4-mgd-capacity oxidation ditch and associated clarifier; adding more sludge drying beds and effluent storage capacity; modifying and reducing the rated treatment capacity of the existing oxidation ditch to 0.6 mgd; upgrading the existing final clarifier; upgrading the sludge holding tank; and expanding the existing irrigation pump station. A treatment flow diagram indicating a complete WWTF expansion is shown in Attachment B, which is part of this Order. The WWTF expansion is currently ongoing and expected to be complete by December 2000.
8. The Discharger's consultant (Boyle Engineering) submitted a technical report, dated 8 January 1999, that includes a water balance of WWTF effluent storage and disposal capacity at current and expanded flows. The water balance considers annual storm water that would occur once every 100 years, distributed monthly in accordance with historic rainfall patterns. The report indicates that, to accommodate current WWTF flow, the Discharger must increase effluent storage capacity by 228 acre-feet and water reclamation area by 77 acres. To accommodate future flows (i.e., up to the requested 2 mgd), the report indicates that the Discharger must further increase effluent storage capacity by 288 acre-feet and water reclamation area by 248 acres.
9. In 1999, the Discharger constructed a 241-acre-foot-capacity effluent storage reservoir, thereby increasing the WWTF's effluent storage capacity to 327 acre-feet, which, in addition to the disposal capacity of the designated reclamation area, are adequate to accommodate current flows (i.e., up to 1.1 mgd).
10. Boyle Engineering also submitted a technical report, dated 29 September 1999, that discusses effluent disposal alternatives. These include expanding the designated reclamation area and/or reclaiming disinfected effluent on a nearby restricted-access golf course. The report also includes a

nitrogen balance for the Discharger's water reclamation operation that indicates the annual cropping pattern in the designated reclamation area is adequate to uptake all nitrogen applied in the WWTF effluent at current flows.

11. In the past, the Discharger had reclaimed WWTF effluent on 154-acres leased property (APN 446-010-04 and-05) owned by Mr. Bruno Cauzza. The lease agreement with Mr. Cauzza expired in 1999, and presently no lease agreement exists with Mr. Cauzza for WWTF effluent disposal.
12. The Discharger indicates that the WWTF expansion project is complete with the exception of the expanded sludge handling facility, which the Discharger expects to complete by December 2000. The Discharger is currently operating the new 1.4-mgd-capacity oxidation ditch (and associated final clarifier) to process all WWTF influent (i.e., the old 0.6-mgd-capacity oxidation ditch is in standby mode and will not become operational until WWTF influent flows exceed 1.4 mgd).
13. Boyle Engineering submitted a revised water balance and nitrogen balance report dated 17 February 2000, for the current WWTF monthly average flow of 1.0 mgd and projected monthly average flows of: 1.26 mgd, 1.37 mgd, 1.62 mgd, 1.65 mgd, and 2 mgd ultimate design flow. The water balance considers the aforementioned flows with some seasonal variations specifically increased flows during summer time (May through October), and annual storm water that would occur once every 100 years, distributed monthly in accordance with historic rainfall patterns. Based on the water balance report, Board staff concludes that the Discharger has adequate storage and disposal capacity for the current 1.1 mgd flow including summer time increase up to 1.26 mgd. Staff also concludes that the Discharger can accommodate monthly average flow of 1.26 mgd, with seasonal variation allowance of 1.45 mgd for the summer months only after complete construction of a proposed 20-acre emergency WWTF effluent storage area.

Hydrology, Soils and Beneficial Uses

14. The WWTF and designated reclamation area are within the South Valley Floor Hydrologic Unit and Kern Delta Hydrologic Area (No. 557.10), as depicted on interagency hydrologic maps prepared by the California Department of Water Resources (DWR) in August 1986. Surface water drainage is to the southwest, towards Kern Island Canal (Central Branch Levee).
15. Soils in the WWTF vicinity and designated reclamation area generally consist of alluvial material (Hesperida sandy loam at the surface) estimated to have a thickness of 200 to 300 feet. The soils in the WWTF vicinity exhibit a percolation rate of 0.026 ft/day, according to a technical report submitted by Boyle Engineering dated 29 September 1999.

16. Area groundwater flows northwest and is about 100 feet below surface grade, according to information in *Lines of Equal Elevation of Water in Wells in Unconfined Aquifer*, published by DWR in Spring 1998. Irrigation water within the City limits and surrounding area is supplied by the Arvin-Edison Water Storage District. This water originates from mountain streams and surface canals and is recharged or stored in underground aquifers prior to delivery to agricultural users.
17. Source water for the City of Arvin is provided by four groundwater wells owned and operated by the Arvin Community Water District (hereafter District). The quality of Arvin's source water is characterized below:

<u>Constituent</u>	<u>Units</u>	<u>City Municipal Supply¹</u>
Conductivity at 25°C (EC)	µmhos/cm	670
Chloride	mg/l	140
Nitrate-Nitrogen	mg/l	5.4

¹ From Arvin Community Water District annual water supply report dated 24 March 1999.

18. Average annual rainfall and pan evaporation rates in the area are about 6 inches and 52 inches, respectively.
19. According to the Federal Emergency Management Agency (FEMA), the WWTF vicinity is within Zone A, an area of flooding of indeterminate depth from potential 100-year storm event flood flows from Caliente Creek, which is northeast of Arvin. To provide flood protection, FEMA requires that all new construction be at least 24 inches above the highest adjacent grade.
20. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition*, (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies, for Basin waters. These requirements implement the Basin Plan.
21. The City of Arvin is on the valley floor, with surface water drainage to the west through unnamed channels towards Kern Lake. The beneficial uses of Valley Floor Waters, as identified in the Basin Plan, include industrial and agricultural supply, industrial process supply, water contact and noncontact water recreation, warm fresh water habitat, wildlife habitat, preservation of rare and endangered species, and groundwater recharge.
22. The beneficial uses of the groundwater are municipal, industrial, and agricultural supply.

General Findings

23. Domestic wastewater contains pathogens harmful to humans that are typically measured by means of total or fecal coliform, as indicator organisms. The California Department of Health Services

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(DHS), which has primary state-wide responsibility for protecting public health, has established statewide criteria in Title 22, California Code of Regulations (CCR), Section 60301, et seq., (hereafter Title 22) for the use of reclaimed (or recycled) water and has developed guidelines for specific uses. The 1988 Memorandum of Agreement (MOA) between DHS and the State Water Resources Control Board on the use of reclaimed water establishes basic principles relative to the agencies and the Regional Boards. In addition, the MOA allocates primary areas of responsibility and authority between these agencies, and provides for methods and mechanisms necessary to assure ongoing, continuous future coordination of activities relative to the use of reclaimed water in California.

The DHS has developed proposed revisions to the existing 1977 reclamation regulations. These revisions are intended to expand the range of allowable uses of reclaimed water, establish criteria for these uses, and clarify some of the ambiguity contained in the existing regulations. Under terms of the MOA, the Board implements the recommendations of DHS for the protection of public health. The DHS has recommended that the Board implement the regulations as proposed for revision. The proposed revisions are currently in circulation for public comment.

24. The California Department of Water Resources has established standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards). These standards are described in two DWR publications: *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981).
25. State regulations pertaining to water quality monitoring for waste management units are found in Title 27, California Code of Regulations (CCR), Section 20380 et seq., (hereafter Title 27). These regulations prescribe procedures for detecting and characterizing the impact of waste constituents on groundwater. While the facility has been found exempt from Title 27, the data analysis methods of Title 27 are appropriate for determining whether the discharge complies with the terms for protection of groundwater specified in this Order. As long as the discharge complies the exemption remains warranted.
26. Federal Regulations for storm water discharges were promulgated by the United States Environmental Protection Agency (USEPA) on 16 November 1990 (Title 40 CFR Parts 122, 123, and 124). The regulations require specific categories of facilities, which discharge storm water associated with industrial activity (storm water), to obtain NPDES permits and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or eliminate industrial storm water pollution. The State Water Resources Control Board adopted Order No. 91-13-DQ (General Permit No. CAS000001), amended 17 September 1992, specifying waste discharge requirements for discharges of storm water associated industrial activities, excluding construction activities, and requiring submittal of a Notice of Intent by industries to be covered under the permit.

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27. Federal sludge management and disposal regulations are prescribed by Title 40 Code of Federal Regulations (CFR), Part 503 (hereafter 40 CFR Part 503). Federal regulations require that the sludge be adequately sampled and analyzed prior to disposal, sludge disposal meet certain pollutant loading limits, and sludge disposal comply with certain operational standards to reduce pathogens and vectors.
28. On 17 February 1998, the City of Arvin certified a Negative Declaration in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines for the expanded WWTF. The document addressed only the increase in WWTF treatment capacity and not the need for expanding the designated reclamation area to accommodate additional flow. Board staff reviewed the document and concurs that the WWTF expansion project will not have a significant effect on water quality, provided the Discharger increases its effluent disposal capacity.
29. The conditional discharge as permitted herein is consistent with the antidegradation provisions of State Water Resources Control Board Resolution No. 68-16. Some degradation of groundwater immediately beneath the WWTF is appropriate provided no degradation of groundwater occurs beyond a specific area defined herein by predetermined points of compliance. Degradation of groundwater underlying the WWTF within these points of compliance is consistent with maximum benefit to the people of the State, as the land use at this location is not expected to ever change and best practical treatment or control can be achieved through a combination of the described treatment processes at the WWTF and water quality monitoring. Assimilative capacity is available in the underlying groundwater to allow for some degradation and will not unreasonably affect present and anticipated beneficial use of such water or result in water quality less than that described in the Water Quality Control Plan for the Tulare Lake Basin. Such degradation will be limited to only the groundwater underlying the WWTF within a predetermined area, and monitoring is required to assure protection of the groundwater inside and outside of this area.
30. The Board has notified the Discharger, interested agencies, and persons of its intent to prescribe waste discharge requirements of this discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

IT IS HEREBY ORDERED that Waste Discharge Requirements Order No. 86-105 is rescinded and that the City of Arvin and United States Filter Corporation, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following at the Arvin Wastewater Treatment Facility:

A. Discharge Prohibitions

1. Discharge of waste to surface waters or surface water drainage courses is prohibited. Bypass or overflow of untreated or partially treated waste is prohibited, except as allowed in Provision E.2 of Standard Provisions and Reporting Requirements.
2. Discharge of waste classified as 'hazardous' as defined in Section 2521(a) of Title 23, CCR, Section 2510 et seq., or 'designated,' as defined in Section 13173 of the California Water Code, is prohibited.

B. Discharge Specifications

1. **Until Provision F.6 is satisfied**, the monthly average discharge to effluent storage reservoirs shall not exceed 1.10 mgd from 1 November to 30 April, and 1.28 mgd from 1 May to 31 October.
2. **After Provision F.6 is satisfied**, the monthly average discharge to effluent storage reservoirs shall not exceed 1.26 mgd from 1 November to 30 April, and 1.45 mgd from 1 May to 31 October.
3. **After Provision F.7 is satisfied**, the monthly average discharge to effluent storage reservoirs shall not exceed 2.0 mgd from 1 November to 30 April, and 2.30 mgd from 1 May to 31 October.
4. The maximum EC of discharge from the WWTF shall not exceed the average EC of the source water plus 500 μ mhos/cm.
5. Discharge to the effluent storage reservoirs shall not exceed the following limits:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
BOD ₅ ¹	mg/l	40	80
Total Suspended Solids	mg/l	40	80
Settleable Solids	ml/l	0.2	1.0

¹ Five-day, 20°C biochemical oxygen demand.

6. Discharge to the designated reclamation area and storage reservoirs containing nutrients and/or commercial fertilizers shall be consistent with applicable agronomic loading rates acceptable to the Board.

7. Effluent in storage reservoirs should not have a pH less than 6.5 or greater than 8.5.
8. Effluent storage reservoirs shall be managed to prevent breeding of mosquitoes.
9. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment and disposal area.
10. As a means of discerning compliance with Discharge Specification B.9, the dissolved oxygen content in the upper zone (i.e., 1-foot) of effluent storage reservoirs shall not be less than 1.0 mg/l.
11. Freeboard in all effluent storage reservoirs shall never be less than two feet (measured vertically to the lowest point of potential overflow).
12. The WWTF, in conjunction with the designated reclamation area, shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration. Design seasonal precipitation shall be used on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
13. The WWTF shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
14. Public contact with wastewater shall be precluded through such means as fences and signs, or acceptable alternatives.

C. Designated Reclamation Area Specifications

1. Water reclamation shall be limited to furrow or flood irrigation of fodder, fiber, and seed crops for nonhuman consumption.
2. Reclaimed water used for irrigation shall be managed to minimize erosion.
3. The perimeter of the application area shall be graded to prevent ponding along public roads or other public areas.
4. Application of reclaimed water to the application area shall be at reasonable rates considering the crops, soil, climate, and irrigation management system.
5. The Discharger shall maintain the following setback distances from areas irrigated with reclaimed water:

<u>Setback Distance (feet)</u>	<u>To</u>
25	Property line
30	Public roads
100	Irrigation wells/drainage courses
150	Domestic wells

6. Areas irrigated with reclaimed water should be managed to prevent breeding of mosquitoes. More specifically:
 - a. All applied reclaimed water must infiltrate completely within a 48-hour period.
 - b. Ditches must be maintained free of emergent, marginal, and floating vegetation.
 - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store wastewater.
7. All areas where reclaimed water is to be used shall be posted with conspicuous signs displaying the following wording or its equivalent in a size that can be clearly read at a distance by the public:

“NO TRESPASSING SEWER WATER DANGER – PELIGRO
DO NOT DRINK NO SE BEBEN LA AGUA”

The signs will have the universal “Do not drink” cross-out underneath the wording (see Attachment C).

8. No physical connection shall exist between reclaimed water piping and any domestic water supply well, or between reclaimed water piping and any irrigation well that does not have an air gap or reduced pressure principle device.

D. Solids Disposal Specifications

1. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of in a manner that is consistent with Title 27, CCR, Division 2, Subdivision 1, Section 20005 et seq., and approved by the Executive Officer.
2. Any proposed change in sludge use or disposal practice shall be reported to the Executive Officer and USEPA Regional Administrator **at least 90 days in advance** of the change.
3. Use and disposal of sewage sludge shall comply with state laws and regulations. If the State Water Resources Control Board and the regional water quality control boards assume primacy to

implement regulations contained in 40 CFR 503, this Order may be reopened to incorporate appropriate time schedules and technical standards. In the interim, the Discharger should comply with the standards and time schedules contained in 40 CFR 503, which shall be enforced by the United States Environmental Protection Agency (USEPA).

E. Groundwater Limitations

A point of compliance (POC) as referenced herein means a vertical line that extends through the uppermost aquifer underlying the unit. Every POC must be hydraulically downgradient from the point of discharge. A POC may define either a point on a vertical surface representing the maximum horizontal extent of allowable degradation ("boundary, POC") or a point within this area ("internal POC"). Properly constructed groundwater monitoring wells capable of yielding representative samples from the uppermost layer of water shall be used to monitor water quality at POCs and to determine upgradient water quality according to a plan approved by the Executive Officer.

1. The discharge in combination with other sources, shall not cause groundwater underlying the WWTF inside the boundary POCs, to contain the following indicator parameters in concentrations that:
 - a. Are statistically greater than 2 mg/l nitrogen (as N) above background water quality, or a total of 10 mg/l, whichever is less.
 - b. Are equal to or greater than 2.2/100 ml total coliform organisms over any seven day period.
 - c. Are statistically greater than 5 mg/l total dissolved solids above background water quality, or a total of 400 mg/l, whichever is less
 - d. Impart tastes or odor that cause nuisance or adversely affect beneficial uses.
2. The discharge shall not cause groundwater passing or that are the boundary POCs and beyond to contain waste constituents in concentrations statistically greater than background water quality except for conductivity, which shall not exceed 25 μ mhos/cm over any five year period.

F. Provisions

1. The Discharger shall comply with Monitoring and Reporting Program No. 5-00-093, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.

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2. The Discharger shall comply with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991, which are attached hereto and by reference a part of this Order. This attachment and its individual paragraphs are commonly referenced as *Standard Provision(s)*.
3. By **September 2000**, the Discharger shall submit the following technical reports:
 - a. A technical report describing the Discharger's water reclamation operation and a contingency plan that will assure that untreated or inadequately treated wastewater will not be discharged to the designated reclamation area. The report shall clearly indicate the means for compliance with Designated Reclamation Area Specifications C.1 through C.8, and shall be prepared by a civil engineer registered in California and experienced in the design of wastewater treatment and disposal facilities.
 - b. A technical report describing a work plan for the installation of a groundwater-monitoring network. The network shall consist of one or more background monitoring wells and two or more downgradient wells capable of yielding representative samples from the uppermost layer of water representative of the uppermost aquifer located at the hydraulically downgradient limit(s) of the WWTF and/or designated reclamation area. All monitoring wells shall meet DWR Well Standards in addition to performance standards prescribed by Title 27, Section 20415(b)(4) et seq. All well locations and construction features are subject to the prior approval of the Executive Officer and must be sufficient to monitor potential impacts of wastewater discharge discharge to storage reservoirs and the designated reclamation area on the uppermost groundwater aquifer. Within **60 days** following workplan approval, the Discharger shall implement the program. Within **30 days** following the construction of the approved network, the Discharger shall submit copies of drillers' logs and "as built" construction drawings of each groundwater monitoring well, as well as properly surveyed reference point elevations for each well.
4. The Discharger shall commence monitoring of the background monitoring wells within **30 days** of completion of the approved groundwater monitoring network and shall monitor for all specified constituents of concern. The groundwater monitoring program shall include consistent sampling and analytical procedures that are designed to ensure that monitoring results provide a reliable indication of water quality at all monitoring points.
5. After **one full year** of monitoring of at least the frequency specified in the Monitoring and Reporting Program, the Discharger shall characterize background groundwater quality using data from approved background well(s) using methods as described by Title 27, Section 20415(e)(10). The Discharger shall use these background values and quarterly POC well

monitoring data and an appropriate data analysis method, as described by Title 27, Section 20415(e)(7-9), to determine whether there is statistically significant evidence of an increase in the concentrations of constituents of concern in groundwater passing the POCs.

6. To increase the WWTF's monthly average wet weather discharge to 1.26 mgd, and summertime discharge to 1.45 mgd for water reclamation, the Discharger shall submit a technical report indicating the storage capacity and construction details of the proposed 20-acre emergency effluent storage/reclamation area (as described by Boyle Engineering in its water balance report dated 17 February 2000). Upon written acceptance of the technical report by the Executive Officer, this Provision will be satisfied.
7. To increase the WWTF's disposal capacity to 2 mgd by water reclamation, the Discharger shall submit a technical report containing a complete description of additional property purchased or leased on which Discharger proposes to reclaim WWTF effluent. This report shall include, at a minimum, a description of the proposed reclamation property, its location and Assessor Parcel Number(s), crop types and growing seasons, groundwater well locations and construction details, and other information as necessary to demonstrate that the Discharger's use of the property for reclamation will comply with the terms and conditions of this Order.

All technical reports shall be prepared by a California registered civil engineer experienced in the design of wastewater treatment and disposal facilities. Upon DHS approval and written acceptance of the technical report by the Executive Officer, this Provision will be satisfied and the designated reclamation area (as defined in Finding No. 3) will be revised to include additional reclamation area(s) as approved by the Executive Officer.
8. The use of reclaimed water shall comply with provisions contained in Title 22.
9. The Discharger shall notify the Board, in writing, at least **120 days** prior to (a) any introduction of pollutants into the WWTF by an industrial user, and (b) any substantial change in the volume or character of wastewater being introduced into the WWTF.
10. The Discharger shall enforce the Pretreatment Standards promulgated under Sections 307(b), 307(c) and 307(d) of the Clean Water Act. The Discharger shall perform the pretreatment functions required by 40 CFR Part 403 including but not limited to:
 - a. Adopting the legal authority required by 40 CFR 403.8(f)(1);
 - b. Enforcing the Pretreatment Standards of 40 CFR 403.5 and 403.6;

- c. Implementing procedures to ensure compliance as required by 40 CFR 403.8(f)(2); and
 - d. Providing funding and personnel for implementation and enforcement of the pretreatment program as required by 40 CFR 403.8(f)(3).
11. The Discharger shall implement its approved pretreatment program and the program shall be an enforceable condition of this permit. If the Discharger fails to perform the pretreatment functions, the Regional Water Quality Control Board (RWQCB), the State Water Resources Control Board (SWRCB) or the U.S. Environmental Protection Agency (U.S. EPA) may take enforcement actions against the Discharger as authorized by the Clean Water Act.
12. The Discharger shall implement, as more completely set forth in 40 CFR 403.5, the necessary legal authorities, programs, and controls to ensure that the following incompatible wastes are not introduced to the treatment system, where incompatible wastes are:
- a. Wastes that create a fire or explosion hazard in the treatment works;
 - b. Wastes that will cause corrosive structural damage to treatment works, but in no case wastes with a pH lower than 5.0, unless the works is specially designed to accommodate such wastes;
 - c. Solid or viscous wastes in amounts that cause obstruction to flow in sewers, or which cause other interference with proper operation or treatment works;
 - d. Any waste, including oxygen demanding pollutants (BOD, etc.), released in such volume or strength as to cause inhibition or disruption in the treatment works, and subsequent treatment process upset and loss of treatment efficiency;
 - e. Heat in amounts that inhibit or disrupt biological activity in the treatment works, or that raise influent temperatures above 40°C (104°F), unless the Regional Board approves alternate temperature limits;
 - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
 - g. Pollutants that result in the presence of toxic gases, vapors, or fumes within the treatment works in a quantity that may cause acute worker health and safety problems; and
 - h. Any trucked or hauled pollutants, except at points predesignated by the Discharger.

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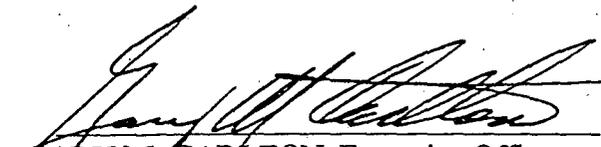
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13. In the event of any change in control or ownership of land or waste discharge facilities described herein, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

To assume operation 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 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 California Water Code. Transfer shall be approved or disapproved by the Executive Officer.

14. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including the Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
15. A copy of this Order shall be kept at the discharge facility for reference by WWTF operating personnel. Key operating personnel shall be familiar with its contents.
16. The Board will review this Order periodically and will revise requirements when necessary.

I, GARY M. CARLTON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 28 April 2000.


GARY M. CARLTON, Executive Officer

JSK:fmc:4/28/00

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. 5-00-093

FOR
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AND

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ARVIN WASTEWATER TREATMENT FACILITY
KERN COUNTY

INFLUENT MONITORING

Influent samples shall be collected at the inlet of the headworks and approximately the same time as effluent samples. Influent monitoring shall include the following:

<u>Constituent</u>	<u>Units</u>	<u>Type</u>	<u>Frequency</u>
Flow	mgd	Metered	Continuous ¹
Total Suspended Solids (TSS)	mg/l	8-hour composite	2/month ³
BOD ₅ ²	mg/l	8-hour composite	2/month ³

¹ Flow shall be measured continuously and recorded daily.

² Five day, 20°C biochemical oxygen demand.

³ In nonconsecutive weeks.

EFFLUENT MONITORING

Effluent samples shall be collected at the outlet of the WWTF prior to its discharge to the effluent storage reservoirs. In determining compliance with Discharge Specifications B.1, B.2, and B.3, the discharge flow to effluent storage reservoirs shall be equivalent to influent flow. Effluent samples shall be representative of the volume and nature of the discharge. Time of collection of a grab sample shall be recorded. Effluent monitoring shall include the following:

<u>Constituent</u>	<u>Units</u>	<u>Type</u>	<u>Frequency</u>
TSS	mg/l	8-hour composite	Weekly
BOD ₅	mg/l	8-hour composite	Weekly
EC ¹	µmhos/cm	Grab	Weekly
Settleable Solids	ml/l	Grab	Weekly
Nitrate-Nitrogen	mg/l	Grab	Monthly ²
Total Dissolved Solids	mg/l	Grab	Monthly ²

¹ Conductivity at 25°

² Concurrent with EC monitoring.

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<u>Constituent</u>	<u>Units</u>	<u>Type</u>	<u>Frequency</u>
Total Nitrogen	mg/kg	Grab ¹	Annually ²

¹ Samples shall be collected at 2-foot depth increments, and must extend at least 6-feet below surface grade.

² October

- e. The Discharger shall submit an annual soil monitoring report addressing compliance and summarizing/interpreting analytical results of the aforementioned constituents.

GROUNDWATER MONITORING

Samples shall be taken quarterly from the approved monitoring wells and analyzed for parameters specified below.

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Type</u>	<u>Frequency</u>
Depth	feet	Measured	Quarterly ¹
Elevation	feet AMSL ²	Measured	Quarterly ¹
Nitrate-Nitrogen	mg/l	Grab	Quarterly ¹
Chloride	mg/l	Grab	Quarterly ¹
EC	µmhos/cm	Grab	Quarterly ¹
pH	pH Units	Grab	Quarterly ¹
Total Dissolved Solids	mg/l	Grab	Quarterly ¹
Volatile Organic Compounds	µg/l	Grab	Quarterly ¹
Arsenic	mg/l	Grab	Quarterly ¹
Cadmium	mg/l	Grab	Quarterly ¹
Chromium	mg/l	Grab	Quarterly ¹
Copper	mg/l	Grab	Quarterly ¹
Lead	mg/l	Grab	Quarterly ¹
Mercury	mg/l	Grab	Quarterly ¹
Nickel	mg/l	Grab	Quarterly ¹
Selenium	mg/l	Grab	Quarterly ¹
Zinc	mg/l	Grab	Quarterly ¹

¹ January, April, July and October.

² above mean sea level

EFFLUENT STORAGE RESERVOIR MONITORING

The freeboard shall be monitored on all effluent storage reservoirs to the nearest tenth of a foot. A permanent marker shall be placed in each storage reservoir with calibration including the water level at design capacity and available operational freeboard. Monitoring of storage reservoirs shall include at least the following:

<u>Constituent</u>	<u>Units</u>	<u>Type</u>	<u>Frequency¹</u>
Freeboard	feet ²	Measurement	Weekly
pH	pH Units	Grab	Weekly
Dissolved Oxygen ³	mg/l	Grab	Weekly

¹ Effluent sampling indicate a violation or threatened violation of the terms of this Order or should the WWTF effluent storage reservoir produce objectionable odors, the monitoring frequency for the subject pond shall be increased to daily until violations, threatened violations, and/or odor-producing conditions are resolved.

² To the nearest tenth foot.

³ Samples shall be collected from opposite of the inlet to each storage reservoir and analyzed for dissolved oxygen. Samples shall be collected between 0800 and 0900 hours.

In addition, the Discharger shall inspect the condition of the effluent storage reservoir once per week and record visual observations (e.g., in data sheets or a bound logbook). Notations shall include observations of whether weeds are developing in the water or along the bank, and their location; whether dead algae, vegetation, scum, or debris are accumulating on the water surface; whether burrowing animals or insects are present; and the color of the ponds. A copy of the entries made during each month shall be submitted along with the monthly monitoring report. Where the O&M manual indicates remedial action is necessary, the Discharger shall briefly explain in the transmittal remedial action been taken or planned.

DESIGNATED RECLAMATION AREA MONITORING

- a. The area of land utilized for water reclamation shall be reported monthly.
- b. Discharge of WWTF effluent to the designated reclamation area shall be reported daily in units of million gallons per day.
- c. Representative sampling locations shall be established for soil profile sampling of the designated reclamation area. Two of these shall be within each parcel comprising the designated reclamation area, and at least two shall be outside to represent background conditions.
- d. Designated reclamation area soil samples shall be analyzed, at a minimum, for the following constituents:

<u>Constituent</u>	<u>Units</u>	<u>Type</u>	<u>Frequency</u>
Nitrate-Nitrogen	mg/kg	Grab ¹	Annually ²
Kjeldahl-Nitrogen	mg/kg	Grab ¹	Annually ²

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Prior to collecting samples, the monitoring well shall be adequately purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water. Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging is typically from 3 to 5 volumes of the standing water within the well casing and screen, or additionally the filter pack pore volume.

At least quarterly and concurrently with groundwater quality sampling, the Discharger shall in each well: (1) sample groundwater for Total Coliform Organism (TCO) concentration and (2) measure the water level. The Discharger shall report groundwater TCO concentrations in units of Most Probable Number per 100 mL and water level data as groundwater depth (in feet and hundredths) and as groundwater surface elevation (in feet and hundredths above mean sea level).

In reporting the results of first quarterly sampling event, the Discharger shall include a detailed description of the procedures and techniques for: (a) sample collection, including purging techniques, sampling equipment, and decontamination of sampling equipment; (b) sample preservation and shipment; (c) analytical procedures; and (d) chain of custody control.

After one full year of groundwater monitoring, the Discharger shall analyze monitoring data from background well(s) to compute background water quality values for each Constituent of Concern and to perform an initial assessment of whether there is evidence of an impact from the discharge. To complete this task, the Discharger shall use monitoring data from background and POC wells in an appropriate data analysis method as described in Title 27, Section 20415(e)(7-9). Reports thereafter shall be submitted quarterly by the 1st day of the second month after the prescribed sample collection and shall include the same analysis.

If the Discharger during any quarterly data evaluation finds statistically significant evidence of an increase in a Constituent of Concern in groundwater at a POC(s) compared to background levels, the Discharger shall resample the wells in which the increase or violation was determined within **30 days of its determination**. As soon as the new data is available, the Discharger shall rerun the statistical method (or nonstatistical comparison) separately upon each suite of retest data. For any indicated Constituent of Concern at an affected POC, if the test results of either (or both) of the retest data suites confirms the original indication, the Discharger shall conclude that it is in violation of waste discharge requirements unless it can demonstrate an offsite source. The Discharger shall describe the data analysis method used as well as the criteria it used for determining "statistically significant evidence," and submit within two weeks, at confirmation, a written report pursuant to Standard Provision B.1.

By **1 February** of each year, the Discharger shall submit an annual report covering the previous monitoring year. The reporting period ends December 31. This report shall contain:

- a. Hydrographs showing the groundwater elevation in each approved well for at least the previous five years. The hydrographs should show groundwater elevation with respect to the elevations of the top and bottom of the screened interval and be presented at a scale of values appropriate to show trends or variations in groundwater elevation. The scale for the background plots shall be the same as that used to plot downgradient elevation data;
- b. Graphs of the laboratory analytical data for all samples taken from each approved well within at least the previous five calendar years. Each such graph shall plot the concentration of one or more constituents of concern over time for a given monitoring well, at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. For any given constituent or parameter, the scale for the background plots shall be the same as that used to plot downgradient data;
- c. All monitoring analytical data obtained during the previous four quarterly reporting periods, presented in tabular form, as well as 3.5" computer diskettes (or submitted separately via e-mail), either in MS-DOS / ASCII format or in another file format acceptable to the Executive Officer (e.g., Microsoft Excel); and
- d. A comprehensive discussion of the compliance record, and the result of any corrective actions taken or planned that may be needed to bring the Discharger into full compliance with the waste discharge requirements.

WATER SUPPLY MONITORING

Sampling stations shall be established where a representative sample of the water supply can be obtained. The Discharger shall also submit Arvin's annual water quality report within 30 days of its publication date as an attachment to its regular monthly monitoring report. Water supply monitoring shall include at least the following:

<u>Constituent</u> ¹	<u>Units</u>	<u>Type</u>	<u>Frequency</u> ¹
EC	µmhos/cm	Grab	Quarterly ²
Nitrate-Nitrogen	mg/l	Grab	Quarterly ²
Total Dissolved Solids	mg/l	Grab	Annually ³

¹ If the source water is from more than one source, the constituent shall be reported for each source and as a weighted average and include copies of supporting calculations.

² January, April, July and October.

³ October, concurrent with quarterly EC monitoring.

SLUDGE MONITORING

A composite sample of sludge shall be collected annually in accordance with *United States Environmental Protection Agency's (USEPA) POTW SLUDGE SAMPLING AND ANALYSIS GUIDANCE DOCUMENT, AUGUST 1989*, and tested for the following metals:

Arsenic	Copper	Nickel	Cadmium	Lead
Selenium	Chromium	Mercury	Zinc	

Sampling records shall be maintained for a minimum of five years. A log shall be kept of sludge quantities generated and handling and disposal activities.

The Discharger shall submit an annual report by **1 February of each year** containing the following:

- a. Annual sludge production in dry tons and percent solids.
- b. A schematic diagram showing sludge handling and solids flow diagram.
- c. Depth of application and drying time for sludge drying beds.
- d. A map showing the location where sludge was applied in the year.
- e. The rate of application of sludge in lbs/acre/year.
- f. The rate of nitrogen loading from sludge application in lbs of nitrogen/acre/year.
- g. Types of crops grown on the land where sludge was applied.

Prior to any disposal or land application of sewage sludge, or removal of sewage sludge from the wastewater treatment plant site, the monitoring and record keeping requirements of 40 CFR 503 shall be met.

REPORTING

Daily, weekly, and monthly monitoring data shall be reported in monthly monitoring reports. Monthly and Quarterly monitoring reports shall be submitted to the Board by the **1st day of the second month following sample collection**. Annual monitoring reports shall be submitted by **1 February of each year**.

In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents and the constituent values are readily discernible. The data shall be summarized in such a manner that illustrates clearly whether the Discharger complies with waste discharge requirements.

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If the Discharger monitors any pollutant at the locations designated herein more frequently than required by this Order, the results of such monitoring shall be included in the discharge monitoring report

The Discharger may also be requested to submit an annual report to the Board with tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

By 1 February of each year, the Discharger shall submit a written report to the Executive Officer containing the following:

- a. The names, certificate grades, and general responsibilities of all persons in charge of wastewater treatment and disposal.
- b. The names and telephone numbers of persons to contact regarding wastewater disposal for emergency and routine situations.
- c. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration (Standard Provision C.4).
- d. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the wastewater treatment plant as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.
- e. The results of an annual evaluation conducted pursuant to Standard Provision E.4.

All reports submitted in response to this Order shall comply with the signatory requirements in Standard Provision B.3. The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

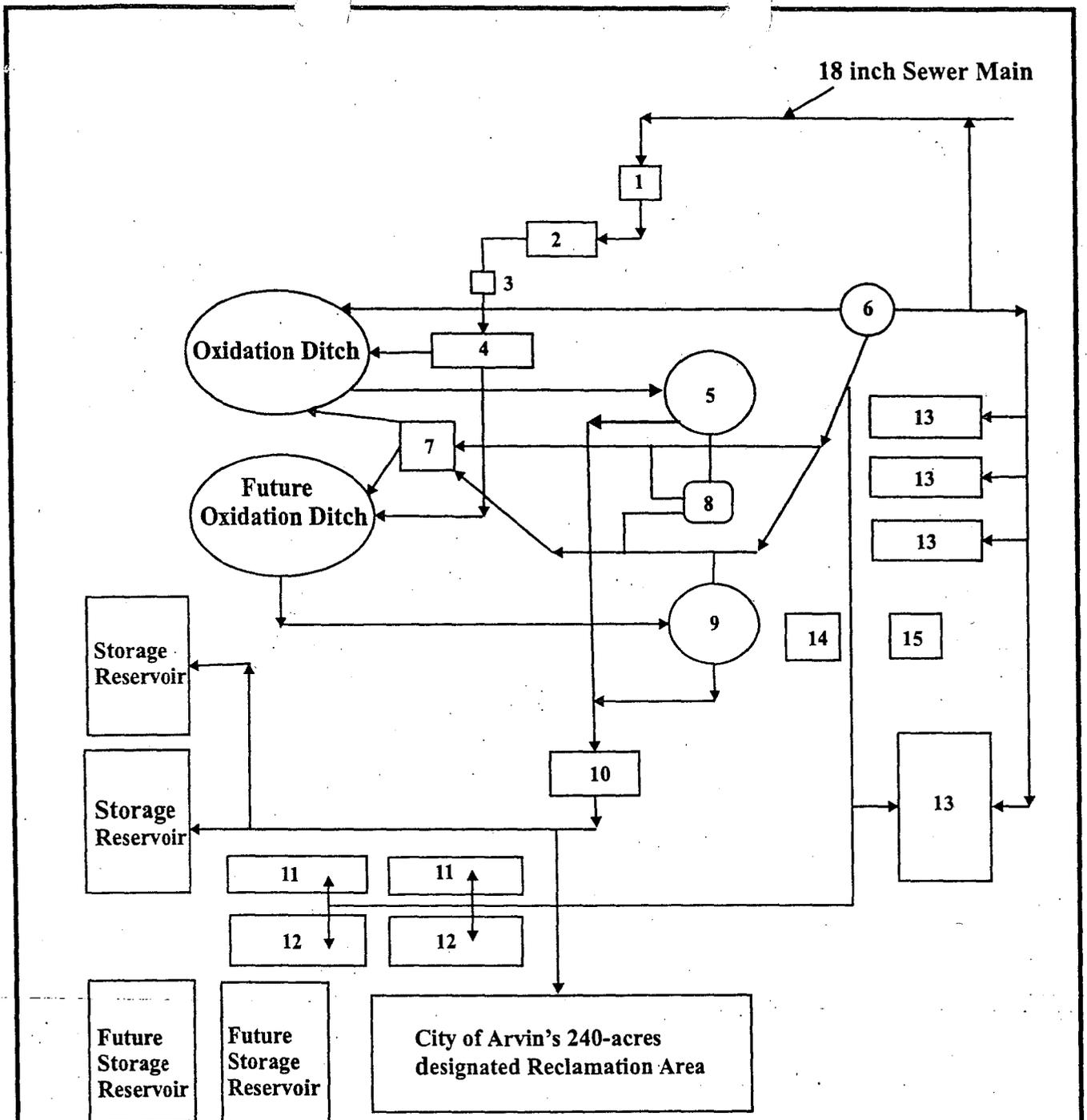
Ordered by:


GARY M. CARLTON, Executive Officer

28 April 2000

(Date)

JSK:fmc:4/28/00



1. Parshall Flume/Mechanical Bar Screen
2. Headworks
3. Flowmeter
4. Influent Splitter Box
5. Final Clarifier
6. Sludge Holding Tank
7. RAS Splitter Box
8. RAS/WAS Pump Station
9. Secondary Clarifier
10. Effluent Pump Station
11. Emergency Sludge Beds
12. Future Sludge Beds with Decant Boxes
13. Existing Sludge Beds
14. Scum Vault & Pump
15. Engine Generator

ATTACHMENT B
 Treatment Flow Diagram
 Order Number

CITY OF ARVIN AND UNITED STATES
 FILTER CORPORATION
 ARVIN WASTEWATER TREATMENT FACILITY
 KERN COUNTY



ATTACHMENT C

Order No.

CITY OF ARVIN AND UNITED STATES
FILTER CORPORATION
ARVIN WASTEWATER TREATMENT FACILITY
KERN COUNTY

INFORMATION SHEET

ORDER NO. 5-00-093
CITY OF ARVIN AND US FILTER CORPORATION
ARVIN WASTEWATER TREATMENT FACILITY
KERN COUNTY

The City of Arvin is approximately 15 miles southwest of Bakersfield along State Highway 223. The City provides wastewater services to residential and commercial users within the City limits. The City and United States Filter Corporation (hereafter jointly referred to as Discharger) operate a Wastewater Treatment Facility (WWTF) about two miles southwest of Arvin. The WWTF receives wastewater from the City along with some additional discharges from fruit and vegetable packing plants. The WWTF is regulated by Waste Discharge Requirements Order No. 86-105, which prescribes a maximum average daily flow of 0.8 million gallons per day (mgd).

The Discharger has exceeded the WWTF's permitted flow limit of 0.8 mgd since 1988, and continues to be in violation of Order No. 86-105. Discharger monitoring reports indicate that permitted flow limit continues to exceed and the current WWTF's monthly average flow is 1.1 mgd. The Discharger has been meeting its effluent limits at the increased flow of 1.1 mgd.

The City's population was about 11,000 in 1997 and is projected to increase to about 12,400 this year and to 17,600 in 2010, according to a 9 September 1997 draft report submitted by the Discharger's consultant (Carollo Engineers).

WWTF EXPANSION PROJECT

The City submitted a Report of Waste Discharge (RWD), dated 21 September 1998, in support of a proposed expansion in WWTF treatment and disposal capacity. The City entered into a 35-year agreement with the United States Filter Corporation for operating the City's WWTF and for expanding and upgrading the WWTF to provide 2.0 mgd treatment capacity. The Discharger expects to complete the WWTF expansion project by December 2000.

DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

This Order contains seasonal flow limits because of seasonal limitations in disposal capacity. The Discharger's consulting engineer indicates the WWTF currently has adequate storage and disposal capacity for permitted average monthly flows of 1.10 mgd from 1 November to 30 April, and 1.28 mgd from 1 May to 31 October. This Order contains provisions (F.6 and F.7) that will allow an increase in flow limit only after demonstrating to the written satisfaction of the Executive Officer that the Discharger has adequate storage and disposal capacity to accommodate the proposed increase in flow. The effluent limits for BOD₅, Total Suspended Solids (TSS), Settleable Solids (SS), pH and EC are based on the *Water Quality Control Plan for the Tulare Lake Basin, Second Edition*, (Basin Plan) and conform to the limits prescribed in similar permits in the Tulare Lake Basin. The groundwater limits implement the Basin Plan, including the Anti-degradation Policy. The proposed Order requires influent monitoring of flow, TSS, and BOD₅, and effluent monitoring of TSS, SS, pH, BOD₅, dissolved oxygen and EC. The effluent monitoring of these constituents is necessary to check compliance with various

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ARVIN WASTEWATER TREATMENT FACILITY
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discharge specifications. The monitoring frequency for the aforementioned constituents are set weekly because these constituents have daily maximum effluent limits and it is necessary to have at least these data points for adequate compliance check. The Order also requires quarterly groundwater and water supply monitoring and annual soil monitoring of the designated reclamation area. The monitoring is necessary to evaluate groundwater quality for early detection of potential degradation from the proposed effluent discharge to land.

CEQA CONSIDERATIONS

On 17 February 1998, the City of Arvin certified a final Negative Declaration, in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines. The Negative Declaration addresses the WWTF expansion project. Staff has reviewed the Negative Declaration and finds that the project will not have a significant impact on water quality if operated in accordance with the proposed Order. Further, the proposed Order requires the Discharger to identify adequate long-term effluent disposal capacity for current and projected flows.

JSK:fmc:4/28/00

