

## LATE REVISIONS – 1 February 2013

### Item 23. NICHOLS PISTACHIO, PISTACHIO PROCESSING PLANT, KINGS AND TULARE COUNTIES – *Consideration of Revised Waste Discharge Requirements Order 93-006*

#### Findings

Page 7, edit Finding 40 as follows:

40. As discussed in Findings 19 and 20, sampling of the wastewater shows a 30% to 40% difference between the TDS and FDS of the discharge due to the presence of organic dissolved solids. In addition, the Discharger implements best management practices **for constituents that are expected to degrade groundwater** including use of cleaning chemicals at labeled rates, storage of wastewater in lined ponds, and application to the Reuse Area at agronomic rates for reuse on crops. This Order also requires the submittal of a Salinity Control Plan. These treatment and control measures represent a level of water quality protection consistent with those employed by comparable food processing facilities in the Central Valley and the Board finds that the Discharger employs practices that control inorganic dissolved solids to the extent feasible. Therefore, an EC limit of source water plus 500 umhos/cm need not be applied to this discharge.

Page 7, edit Finding 41 as follows:

41. The Municipal and Domestic Wastewater section in the Basin Plan also includes an effluent limit cap for EC of 1,000 umhos/cm for discharges overlying good quality groundwater. Under the Industrial Wastewater section of the Basin Plan it says that “Generally, the effluent limits established for municipal and domestic discharges will apply to industrial wastes.” However, the general application of an EC limit cap would be inappropriate in this case since: (a) The discharge meets the exemption for the EC limit of 500 umhos/cm over source water due to unavoidable increases of organic dissolved solids, (b) The Discharger implements best management practices **for constituents that are expected to degrade groundwater that will** to minimize the potential for the discharge to degrade groundwater including, storage in lined ponds, use of chemicals at labeled rates, and application of wastewater to crops at agronomic rates; and (c) The short processing season means that the overall salt load from the discharge will be relatively low (about 1,000 lbs/acre/year).

Page 10, edit Finding 49 as follows:

49. This Order includes specific conditions intended to mitigate or avoid environmental effects on water quality. Specifically, this Order:
  - a. Sets maximum and average daily flow limits;
  - b. Requires the application of wastewater be at agronomic rates **that reflect crop demand (except for potassium)** and prohibits discharge in the event soils become saturated;
  - c. Establishes groundwater limitations;
  - d. Establishes a monitoring and reporting program; and
  - e. Requires the Discharger to prepare and implement a Nutrient and Wastewater Management Plan to ensure application at agronomic rates

**Reuse Specification C.6:**

Page 14, edit Reuse Specification C.6 as follows:

6. Application of waste constituents shall be at reasonable agronomic rates to preclude creation of a nuisance or degradation of groundwater, considering the crop, soil, climate, and irrigation management. The annual nutritive loading to the Reuse Area, including the nutritive value of organic and chemical fertilizers and of the wastewater, shall not exceed the annual crop demand, **except for potassium, which may be applied at rates exceeding crop demand, due to the fact that the crops grown in the Reuse Area can take up more potassium than that which is required with no decrease in yield. ...**

**Provisions**

Page 15, renumber all Provisions starting with number 1 instead of number 3.

Page 17, edit Provision 15 as follows:

15. By <6 months following adoption of the Order>, The Discharger shall submit a Nutrient and Wastewater Management Plan. At a minimum the Plan must include procedures for monitoring the Reuse Area including daily records of wastewater applications and acreages, an action plan to deal with objectionable odors and/or nuisance conditions, a discussion on blending of wastewater and supplemental irrigation water, supporting data and calculations for monthly and annual water and nutrient balances, and management practices that will ensure wastewater, irrigation water, and commercial fertilizers are applied at agronomic rates, **except for potassium. For potassium, the Plan must describe how potassium loading to the Reuse Areas will not impact groundwater quality over the long term.**

**Information Sheet**

Page 4, Antidegradation, edit discussion for salinity as follows:

\* \* \*

- c. For salinity, with an average EC of 1,700 umhos/cm the discharge exceeds the Basin Plan limits of 500 umhos/cm over source water or 1,000 umhos/cm for discharges overlying good quality groundwater. However, a portion of the EC is from organic sources which will generally decompose into its component elements and can be used by plant and microorganisms in the soil. A significant portion of the remaining inorganic dissolved solids in the discharge is from constituents beneficial for soil conditions and plant growth, particularly potassium as well as calcium, magnesium, and phosphorus which will be further removed by crops or bound up in the soil.

**With an average effluent potassium concentration of 416 mg/L, the annual potassium load from the discharge would be about 500 lbs/acre/year. This is above the general annual potassium requirements for crops being grown within the Reuse**

**Area of 100 lbs/acre to 300 lbs/acre. Crops can and will take up more potassium than what is required with no significant yield reduction. Potassium not taken up by crops will readily bind to soil. Given the short processing season, excess uptake of potassium by crops, low mobility in soil, and greater than 130 feet to groundwater, the discharge is not expected to degrade groundwater quality for potassium.**

\* \* \*

Page 5, edit third paragraph under heading *Proposed Order Terms and Conditions* as follows:

The proposed Order requires that wastewater **and constituents therein** be applied at agronomic rates- **except for potassium, which may be applied at rates exceeding crop demand, because the crops grown in the Reuse Area can take up excess potassium with no decrease in crop yield and because the potassium not taken up by crops will readily bind to soil.** In addition, the proposed Order requires the Discharger to prepare a Salinity Control Plan and Nutrient and Wastewater Management Plan to control the salinity of the discharge and ensure application at agronomic rates.