CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER NO. 5-00-717

FOR
MUSCO OLIVE PRODUCTS AND THE STUDLEY CORPRATION
MUSCO OLIVE PRODUCTS, TRACY FACILITY
SAN JOAQUIN COUNTY

This Order is issued to Musco Olive Products and the Studley Corporation (hereafter known jointly as "Discharger") based on provisions of California Water Code Section 13304 which authorize the Regional Water Quality Control Board, Central Valley Region (hereafter known as Board) to issue a Cleanup and Abatement (C&A) Order.

The Board finds, that with respect to the Dischargers' acts, or failure to act, the following:

1. Musco Olive Products is an olive brining and packaging plant south of the town of Tracy, near Patterson Pass Road. The facility (Assessor's Parcel Number 251-3200-08) is in Section 4, T3S, R4E, MDB&M. Musco operates the facility on land leased from the Studley Corporation.
2. Wastewater generated at the facility is regulated by two separate waste discharge requirements. Order No. 96-075 regulates the Class II surface impoundments that are used to store concentrated brines, while Order No. 97-037 regulates the less concentrated wastes which are applied to land. This C&A Order only addresses violations of Order No. 97-037 in regard to the wastewater reclamation activities.
3. The facility processes olives on a year-round basis. Wastewater generation occurs from September to June, with the highest flows occurring in January and February. Recent self-monitoring reports show that the average daily flow ranges from 400,000 gallons per day (gpd) to 600,000 gpd, but has ranged up to 969,000 gpd. The wastewater quality is relatively constant all year, with total dissolved solids (TDS) concentrations ranging from approximately 2,500 to 4,568 mg/l. Dissolved inorganic solids (DIS) concentrations generally range from approximately 1,300 to 2,750 mg/l, with an average concentration of 2,030 mg/l. Sodium and chloride are also present at elevated concentrations in the wastewater. Sodium has been reported at concentrations of approximately 550 to 650 mg/l; chloride has been reported at concentrations of approximately 240 to 680 mg/l.
4. The Musco facility is on approximately 320 acres, of which approximately 200 acres are available for land application of process wastewater. Wastewater is currently spray irrigated to 100 acres of forage grass, consisting of volunteer weeds and grass, at a rate of approximately 48 inches per year. Prior to land disposal, the wastewater is first discharged to a one-million gallon storage pond.
5. Due to the closure of other olive packing plants, Musco submitted a January, 2000 Report of Waste Discharge seeking to increase both the allowable flow rate and the TDS limits for wastewater applied to land. The application seeks to increase the flow by 350,000 gpd and to increase the DIS effluent limit by 1,116 mg/l. Staff have determined that the RWD is incomplete because the Discharger has failed to demonstrate that these increases will not adversely impact surface water or groundwater quality.

6. Because the volume of the storage pond is inadequate to hold more than two days of wastewater, the Discharger applies wastewater to the fields even during rainfall events. The Discharger assumes that the soil will retain the wastewater and rainfall, and therefore prevent the discharge of waste. However, staff received complaints of wastewater running onto the neighboring properties in 1997. In addition, a May 2000 inspection, following a rainfall event, found that wastewater was flowing off the land application area into a seasonal drainage and then off the property.

7. On 15 May 2000, the Discharger was issued a Notice of Violation for inadequate wastewater handling, storage, and application procedures observed on 8 May and 10 May 2000. During the site inspection, evidence of the one million gallon pond overtopping and wastewater escaping the site in surface water drainage courses was observed. A review of self-monitoring reports also showed that the Discharger was discharging wastewater in violation of the effluent limits contained in Order No. 97-037. The items listed in the Notice of Violation were:

   a. Wastewater was observed discharging below Pond No. 3. The Discharger had no control of surface water flow below this pond. The WDRs require all production wastewater to be confined at all times to property owned or controlled by the Discharger.
   b. The Discharger applied process wastewater to land during rain events, in violation of the WDRs.
   c. The Discharger allowed wastewater and stormwater to flow directly into a natural drainage course in violation of the WDRs.
   d. The Discharger discharged process wastewater to ponded surface water and discharged wastewater to an area within 100 feet of surface waters.
   e. The Discharger applied process wastewater to land that had concentrations of DIS which exceeded the limits presented in the WDRs. The limits for DIS are 1,264 mg/l annual average and 1,340 mg/l daily maximum. The average DIS concentrations reported by the Discharger in the first quarter of 2000 all exceeded 2,000 mg/l. The daily maximum criterion has also been exceeded in all the reported sample events for the first quarter of 2000.

8. The 15 May 2000 Notice of Violation required the Discharger to come into compliance with the existing WDRs forthwith and submit a report showing how it had come into compliance. The Discharger submitted a report on 9 June 2000 stating all irrigation tailwater was contained on it's property and that a consultant had been retained to develop a wastewater management plan..

9. On 15 May 2000, the Discharger was issued a request to submit reports pursuant to Section 13267 of the California Water Code. The technical reports were required to supplement the Report of Waste Discharge and address wastewater storage issues, application procedures, contaminant concentration limits, the impact of applying wastewater to cropland, and alternatives for source control procedures at the facility that were described in the 15 May 2000 Notice of Violation.

10. On 14 July 2000, the Discharger submitted a groundwater monitoring report which was deemed inadequate; the workplan was resubmitted on 7 September 2000. The Discharger submitted two additional reports: *Storage Facility Improvements* on 8 August 2000, and *Evaluation of Effects of Land Applying Process Water* dated 28 August 2000. The reports were determined to be incomplete. While the Discharger has made some steps at addressing the situation (proposes construction of a 72-million gallon pond, collection trenches to control wastewater and surface water mixing, and a tailwater pump station), the reports do not contain all the information required

by the 15 May 2000 letter. The Discharger needs to complete one comprehensive plan for bringing its facility into compliance with its current WDRs and preventing water quality impacts from its proposed increase in flow and salt concentrations.

11. On 25 September 2000, the Discharger was informed the technical reports that were submitted were deemed incomplete and a C&A Order was in preparation. The Discharger had an opportunity to review and comment on this Order before it was signed by the Executive Officer.

12. In a 3 October 2000 meeting, held to discuss Musco's proposed interim plan for controlling wastewater onsite, the Discharger informed staff that CEQA issues would not delay construction of the proposed 72 million gallon storage pond, and that the pond would be constructed by mid-December 2000. Subsequently, the Discharger contacted the San Joaquin County Building Department and learned that CEQA documents are required prior to issuance of building permits. The Discharger is again entering the wet season without a holding pond of sufficient capacity, and if significant changes are not implemented, will again discharge wastewater to surface waters.

13. As a result of the events and activities described in this Order, the Board finds that the Discharger has caused or permitted waste to be discharged in such a manner that it has created, and continues to threaten to create, a condition of pollution or nuisance.

14. The Board's Water Quality Control Plan (Fourth Edition) for the Sacramento River and San Joaquin River Basins (Basin Plan) establishes the beneficial uses of the waters of the state and water quality objectives to protect those uses. The beneficial uses of the groundwater beneath the site are municipal and domestic supply; agricultural supply; industrial service and process supply; contact and noncontact recreation; warm and cold freshwater habitat; warm and cold spawning habitat; warm water spawning; wildlife habitat; and navigation.

15. Section 13304(a) of the California Water Code provides that: "Any person who has discharged or discharges waste into waters of this state in violation of any waste discharge requirements or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the water of the state, and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the Regional Board clean up the waste or abate the effects of the waste, or, in case of threatened pollution or nuisance, take other necessary remedial action, including but not limited to, overseeing cleanup and abatement efforts. Upon failure of any person to comply with the cleanup or abatement order, the Attorney General, at the request of the board, shall petition the superior court for that county for the issuance of an injunction requiring the person to comply with the order. In any such suit, the court shall have jurisdiction to grant a prohibitory or mandatory injunction, either preliminary or permanent, as the facts may warrant."

16. Section 13267(b) of the California Water Code states: "In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharged, or is suspected of discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state person who has discharged, discharged, or is suspected of discharging, or who proposes to discharge waste outside of its region that could affect the quality of waters of the state 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."

17. The issuance of this Order is an enforcement action by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act, pursuant to Section 15321(a)(2), Title 14, California Code of Regulations.

18. Any person affected by this action of the Board may petition the State Water Resources Control Board (State Board) to review the action in accordance with Section 2050 through 2068, Title 23, California Code of Regulations. The petition must be received by the State Board within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request. In addition to filing a petition with the State Board, any person affected adversely by this Order may request the Regional Board to reconsider this Order. Such request should be made within 30 days of the date of this Order. Note that, even if reconsideration by the Regional Board is sought, filing a petition with the State Board within the statutory period is necessary to preserve the petitioner's legal rights.

IT IS HEREBY ORDERED that, pursuant to Sections 13304 and 13267 of the California Water Code, Musco Olive Products and the Studley Corporation shall cleanup and abate, forthwith, all offsite discharges of wastewater and construct improvements to the wastewater handling and storage system to ensure compliance with Waste Discharge Requirements No. 97-037. "Forthwith" means as soon as is reasonably possible.

Compliance with this requirement shall include, but not be limited to, the following measures:

A. Immediate Measures

1. Consistent with Waste Discharge Requirements No. 97-037, the Discharger shall immediately come into compliance with all requirements contained in the Order, including:
    a. Prohibition A.1 which states, "The discharge of process water to surface water, or any surface water drainage courses, or ground water is prohibited."
    b. Prohibition A.5 which states, "The discharge of waste within 100 feet of surface waters is prohibited."
    c. Discharge Specification B.7 which describes application procedures the Discharger will follow as described in the WDR findings. Application of wastewater during rain events is prohibited.
    d. Discharge Specification B.3 which states, "The use of production wastewater shall be confined at all times to property owned or controlled by the Discharger, as shown in Attachment B."
    e. Discharge Specification B.6 which states, "The production wastewater used for irrigation shall have an annual average and daily maximum loading rates as shown below:"

Constituent	Annual Average Loading Rate	Daily Maximum Loading Rate
BOD	100 lbs/acre/day	3176 mg/l
TDS (DIS)	1264 mg/l	1340 mg/l

B. Short Term Measures – Immediate Equipment and Operational Modifications

1. By **19 December 2000**, the Discharger shall submit a Winter Contingency Report that describes procedures the Discharger has implemented to prevent wastewater from running off the disposal area and/or from entering surface watercourses. The report shall include a wastewater application plan, and procedures to modify or stop production at the facility to prevent wastewater runoff. The Contingency Report shall include:

   a. A written wastewater application plan to be implemented by personnel responsible for operation of the wastewater system. The plan shall describe procedures that have been implemented which will prevent surface runoff from the disposal fields, prevent wastewater from entering surface watercourses, and contain all wastewater on site.

   b. A facility procedure contingency plan that describes alternatives that can be implemented to prevent wastewater application during rain events or when the ground is saturated. The contingency plan shall specifically discuss the alternative of ceasing production and shall discuss the economics of each alternative.

C. Evaluation of Present Conditions – Surface Water, Groundwater, Soil Quality, and Crop Health

1. By **19 December 2000** the Discharger shall submit a stormwater/surface water sampling workplan designed to characterize stormwater quality in order to complete the final design of treatment and disposal facilities, and monitor surface water runoff during the wet season 2000/2001. Samples shall be collected to characterize the first flush of the rainfall basin and the stabilized surface water flow. The workplan shall identify sampling locations, sample collection procedures, sample containers, holding times, and analytical methods. Sample locations shall be located upgradient, within, and downgradient of the wastewater application areas. (The plan shall be implemented prior to Board staff approval and will be modified if required based on staff's review). Sample collection shall begin no later than **19 December 2000** and shall continue until this Order is rescinded.

2. By **3 January 2001**, the Discharger shall submit a hydrogeologic investigation workplan prepared by a California Registered Geologist or Registered Engineer. The workplan shall describe an evaluation of subsurface conditions at the one million gallon storage pond, proposed storage pond(s), and the disposal fields. The goal of the investigation is to determine the subsurface conditions and the depth of shallow groundwater. At a minimum, the work shall include:

   a. Drilling and logging one soil boring at the one-million gallon storage pond, one at the proposed storage pond(s), and additional borings in the land application areas. The borings at the ponds shall be drilled to a depth sufficient to collect groundwater samples and shall be sampled for lithologic description at an interval of at least every five feet. The borings located in the application area shall be drilled to a depth of approximately 30 feet and shall be sampled for lithologic description at an interval of at least every five feet.

   b. Sampling of any encountered groundwater.

c. Collection of soil samples for geotechnical analysis from plastic (fat) clay which are interpreted to comprise aquitard material in the pond borings. The hydraulic conductivity of each sample shall be determined in an "undisturbed" condition (not remolded) using a flexible wall permeameter using ASTM 5084-90. The samples shall also be tested for grain size distribution using ASTM D-422. A minimum of two samples per boring shall be analyzed.

3. Within **90 days** after approval of the hydrogeologic investigation workplan, the Discharger shall submit a hydrogeologic report of results, containing the data described in C.2 (above), scaled figures, and an interpretation of the data collected.

4. By **3 January 2001**, the Discharger shall submit a workplan to further investigate the effect of wastewater application on soil quality and the fate of the dissolved solids that are applied to land. At a minimum, the work shall include:

   a. A summary of the dissolved solids that are applied to the land application areas and an evaluation of the fate of the dissolved solids (i.e. adsorbed to site soil, leached to greater depth, or redissolved and transported off site in surface water).
   b. A summary presentation of all the soil quality data collected to date. The presentation shall include description of the depth, location, and analytical results.
   c. A statistical evaluation of the soil quality data to evaluate trends in the data generated.
   d. Additional sampling of soil, and composting of samples, to better evaluate the soil quality. Soil parameters that shall be included are:
      i. pH
      ii. Cation Exchange Capacity
      iii. Percent Base Saturation
      iv. Exchangeable Sodium Percentage
      v. Soil Salinity

5. Within **90 days** after approval of the wastewater application workplan, the Discharger shall submit a report on the wastewater application on soil quality. The report shall contain the data described in C.4 (above), scaled figures, and an interpretation of the data.

6. By **31 January 2001**, the Discharger shall submit a technical report on the effect of the application of the wastewater on crops. The report shall evaluate the present health of the crops grown in the application area, the effect of continued application of wastewater at present and increased flows, and the potential for increased soil salinity and the resulting impacts to future agricultural use. The report shall be prepared by a Certified Agronomist or other person specializing in soil/plant/water relationships.

D. Design and Construction of Long Term Storage and Disposal Facilities

1. By **30 May 2001**, the Discharger shall submit a technical report on the long term storage and disposal facility improvements. The report shall include the following:

a. A water balance; design seasonal precipitation shall be based on total annual precipitation using a return of 100 years, distributed monthly in accordance with historical rainfall patterns.

b. An evaluation of stormwater quality impact on the wastewater storage volume calculations. The evaluation shall be based on monitoring data collected in the fall, winter, and spring of years 2000/2001.

c. Improvements to the land application area that will prevent tailwater, and stormwater containing site-derived waste constituents, from flowing off of the disposal area or into surface waters.

d. A project schedule that shows all improvements will be completed before **1 November 2001**.

e. All necessary CEQA documents describing the environmental impacts of the construction of both the intermediate and final storage ponds, the proposed increase in flow and salt concentration, and any other changes to be made to the wastewater disposal facilities.

2. By **15 November 2001**, the Discharger shall submit a report describing the construction of the additional wastewater facilities and improvements to the processes that generate the wastewater.

In addition to the above, the Discharger shall comply with existing WDRs Order 97-037 and all applicable provisions of the California Water Code that are not specifically referred to in this Order. As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all reports shall be prepared by, or under the supervision of, a California Registered Engineer or Registered Geologist and signed by the registered professional.

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 or may issue a compliant for administrative civil liability.

This Order is effective upon the date of signature

original signed by

GARY M. CARLTON, Executive Officer

17 November 2000
(Date)

TRO: 10/17/2000