CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2005-0103

WASTE DISCHARGE REQUIREMENTS
FOR
CHINCHIOLO STEMILT CALIFORNIA, LLC/JT INVESTMENTS
FRUIT PROCESSING FACILITY
SAN JOAQUIN COUNTY

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

1. Chinchiolo Stemilt California, LLC/JT Investments (hereafter Discharger) submitted a Report of Waste Discharge (RWD) dated 28 January 2004 for the treatment and disposal of wastewater generated in processing fruit. Additional information was submitted on 29 and 30 April 2004, and 7 June 2004.

2. Tentative WDRs were transmitted on 24 June 2004. Based on comments received on the tentative order, staff determined additional information was required. On 26 August 2004 a Notice of Continuance of Board Hearing and California Water Code Section 13267 Order was issued by the Executive Officer to allow the Discharger time to complete technical studies.

3. The Discharger submitted an updated RWD on 31 March 2005.

4. Two businesses are located at the facility, Chinchiolo Stemilt California, LLC and Sierra Hills Packing; they are separate businesses but are both owned by Chinchiolo Stemilt California, LLC/JT Investments. Chinchiolo Stemilt California, LLC (CSC) and Sierra Hills Packing Inc. (SHP) are at 4799 N. Jack Tone Road and 4505 N. Jack Tone Road, respectively. The facilities are on Assessors Parcel Nos. 089-170-51, -52, and -59 in Section 13, T2N R7E, MDB&M. The location of the facility is presented on Attachment A, which is attached hereto and made part of this Order by reference.

5. Order No. 95-039, adopted by the Regional Board on 24 February 1995, prescribes requirements for the discharge of food processing wastewater. This Order is neither adequate nor consistent with the current plans and policies of the Regional Board.

BACKGROUND

6. The facility processes cherries, pears, and apples for fresh fruit packing, on-site cold storage, and shipping. No brining or canning of the fruit is performed on-site. Processing consists of washing, chilling, waxing, and cold storage of the fruit.

7. The facility currently includes the processing area, drench station, warehouse space, paved parking areas, cold rooms, a stormwater pond, one wastewater treatment pond, and land application areas.

8. The Discharger processes approximately 13,537 tons of apples, 10,943 tons of cherries, and 1,788 tons of pears. (A total of approximately 52.5 million pounds of fruit annually). Chinchiolo Stemilt processes cherries from April to July and from December to January, while Sierra Hills Packing processes pears from July to August, and apples from July through November each year.

9. Domestic wastewater is discharged to four septic systems. The septic systems are permitted by the San Joaquin County Environmental Health Department.

WASTE STREAM

10. During production, various chemicals are used. Some chemicals are used for all processes; others are only used for processing individual fruits. The chemicals used annually for the cherry fruit processing are presented below:

Product/Location	Product Name	Chemical Name	Amount
Bin-hydrocooler dump tank	BX-Chlor	Sodium Hypochlorite	1,166 gal
Fumigation chamber	Metrabrom Q	Methyl Bromide gas	9,450 lbs
Wax	Elite 45 DF	Tebuconazole	44 lbs
Wax	Britex 522P Cherry Wax	Mineral Oil/Emulsifier	438 gal

11. The chemicals used annually for apple and/or pear processing are presented below:

Product/Location	Product Name	Chemical Name	Amount
Wash water	Safoam Cleaner	unknown	626 gal
Wax	594-F, 597-F, 598-F	Thiabendazole (TBZ)	55 lbs
Wax	Britex 776 Apple Wax	Carnauba/Resin	1,485 gal
Wax	559 Carnuba	Carnauba/Resin	55 gal
Drencher Station	BX-Chlor	Sodium hypochlorite	1,113 gal
Drencher Station	Opti-Cal	Calcium chloride	330 gal
Drencher Station	Shield DPA 15%	diphenylamine	550 gal

12. The chemicals used annually for general sanitation and cooling tower maintenance are presented below:

Product/Location	Product Name	Chemical Name	Amount
Cooling tower	PSS-15	Algaecide	36 gal
Dechlorination	Dechlor	Sodium thiosulfate	660 gal
Equip. Cleaner	Linesolve	Sulfamic acid	330 gal
Equip. Cleaner	Acid Cleaner AB-73	Hydrofluoric acid/Sulfuric acid	5 gal
Equip. Cleaner	Grime Fighter	2-butoxy etyhanol, sodium metasilicate, nonylphenol polyethylenen glycol ether	825 gal
Equip. Cleaner	Brodex Easy Clean Wax Stripper	Kerosene, ammonium hydroxide, morpholine, potassium hydroxide	50 gal
Equip. Cleaner	Cleansan 537-2	Alkl dimethyl benzyl, Ammonium chloride, alkyl	10 gal

Product/Location	Product Name	Chemical Name	Amount
Added to pond to control odor.	Disintegrate	dimethyl ethyl benzyl, ammonium chloride Bacterial mix	10 gal

13. The Discharger maintains a chlorine residual concentration of 7 mg/L in water that contacts fruit. Higher concentrations of chlorine are maintained in hydrocoolers and cooling towers. Trihalomethane (THM) compounds can be produced when chlorine comes into contact with organic material.

14. On 25 May 2004 and 3 June 2004, Aqua Treat Chemicals sampled water from the well supply, the four fruit processing lines, and the cooling tower. The data is summarized below. Note that substantial concentrations of chlorine are present in the hydrocoolers.

Analyte	Date	Units	Well Supply	Export Hydrocooler	Boyd Hydrocooler	Boyd Chiller	Van Doren Hydrocooler	Van Doren Chiller
TDS	5/25/04	mg/L	165	615	290	610	575	490
TDS	6/3/04	mg/L	175	NIO	560	NIO	608	NIO
pH	5/25/04	Std.	7.9	7.9	7.9	8.25	8.4	8.15
pH	6/3/04	Std.	7.85	NIO	7.6	NIO	8.1	NIO
NaCl	5/25/04	mg/L	22	190	24	60	120	48
NaCl	6/3/04	mg/L	24	NIO	NR	NIO	NR	NIO
Chlorine	5/25/04	mg/L	NR	40-50	NR	60-70	120	4
Chlorine	6/3/04	mg/L	NR	NIO	35-40	NIO	80-90	NIO

TDS denotes Total Dissolved Solids. NaCl denotes sodium chloride. NIO denotes unit Not In Operation at time of sampling event. NR denotes Not Reported.

15. The RWD states that beginning in August 2004, dechlorination has been performed prior to discharge of wastewater to the wastewater pond. However, some chlorine has been detected in the wastewater as indicated by samples collected at the pond inlet. This may be due to sampling conditions as described in the following finding. Since 25 October 2004, no detectable chlorine has been detected at the pond inlet. Based on the available data, THMs have persisted in the wastewater pond and in wastewater pumped from the pond for land application. The data contained in the RWD is presented below.

	POND INLET				**WASTEWATER POND**			**WASTEWATER POND DISCHARGE**				
Date	BOD (mg/L)	Chloride (mg/L)	TDS (mg/L)	Chlorine (mg/L)	TDS (mg/L)	TTHMs (µg/L)	Total N (mg/L)	BOD (mg/L)	TDS (mg/L)	Chlorine (mg/L)	TTHMs (µg/L)	Total N (mg/L)
9/7/2004	15	26.7	324	0.031	315	9.2	2.22	NR	NR	NR	NR	NR
9/13/2004	39	NR	396	0.04	319	NR	2.39	NR	NR	NR	NR	NR
9/20/2004	22	NR	352	0.026	331	NR	4.62	NR	NR	NR	NR	NR
9/27/2004	22	NR	356	0.025	336	NR	1.57	NR	NR	NR	NR	NR
10/4/2004	12	17.6	222	<0.02	325	16.4	2.92	NR	NR	NR	NR	NR

	POND INLET				WASTEWATER POND			WASTEWATER POND DISCHARGE				
Date	BOD (mg/L)	Chloride (mg/L)	TDS (mg/L)	Chlorine (mg/L)	TDS (mg/L)	TTHMs (µg/L)	Total N (mg/L)	BOD (mg/L)	TDS (mg/L)	Chlorine (mg/L)	TTHMs (µg/L)	Total N (mg/L)
10/11/2004	18	19.7	330	0.024	326	25.9	3.81	NR	316	NR	NR	NR
10/18/2004	7.0	24.2	350	0.032	341	NR	2.84	NR	358	NR	NR	NR
10/25/2004	12	22.4	332	<0.02	333	31.9	2.38	30	318	<0.02	27.4	2.84
11/1/2004	9.0	22.4	348	<0.02	350	13.4	1.52	5.0	334	<0.02	17.6	2.1
11/8/2004	8.0	21.8	550	<0.02	337	21.6	1.97	10	354	<0.02	17.6	1.39
11/15/2004	19	18.9	376	<0.02	324	12.7	1.19	19	340	<0.02	10.9	2.76
11/22/2004	12	18.8	318	<0.02	329	9.77	3.07	9.0	330	<0.02	10.5	2.99
11/29/2004	17	18.7	380	<0.02	338	NR	1.91	NR	NR	NR	NR	NR
12/6/2004	12	49.4	370	<0.02	300	3.94	2.61	NR	NR	NR	NR	NR
12/13/2004	33	22	348	<0.02	355	NR	3.13	NR	NR	NR	NR	NR
12/20/2004	17	19.5	330	<0.02	353	NR	2.17	NR	NR	NR	NR	NR
12/27/2004	19	19.2	358	<0.02	353	NR	3.71	NR	NR	NR	NR	NR

BOD denotes Biochemical Oxygen Demand. TDS denotes Total Dissolved Solids. TTHMs denotes Total Trihalomethanes. Total N denotes Total Nitrogen.

16. Wastewater samples collected from the pond inlet and wastewater pond discharge may not accurately characterize the quality of those wastestreams. Sample collection locations are presented on Attachment B, which is attached hereto and made part of this Order by reference. Samples collected at Location A can be mixed with wastewater from the pond. Samples collected from Location B can be a mixture of pond water and facility wastewater. This Order requires the Discharger to submit an Operation and Maintenance Plan describing, among other items, appropriate sampling points.

17. Staff has reviewed the recent self-monitoring reports and summarized the wastewater quality. The data presented below represents an average of the data reported in each month. In discussing the data with the Discharger's consultant, staff has discovered that samples were collected from the wastewater pond rather than from the pond influent. The values presented below characterize the wastewater pond quality for the time period from March 2004 to February 2005. Despite the use of dechlorination procedures in the facility, total THMs persist in the wastewater.

AVERAGE VALUES

Date	TN (mg/L)	EC (µmhos/cm)	TTHMs (µg/L)
Mar-04	5.0	384.4	0.57
Apr-04	5.6	490.3	9.1
May-04	4.7	582.6	66.0
Jun-04	3.3	502.5	22.2
Jul-04	4.7	470.5	<0.5
Aug-04	7.4	446.2	5.8
Sep-04	2.7	492.8	9.2
Oct-04	3.0	501.8	24.7
Nov-04	1.9	508.4	14.4
Dec-04	2.9	515.5	3.94

AVERAGE VALUES

Date	TN (mg/L)	EC (µmhos/cm)	TTHMs (µg/L)
Jan-05	2.8	492.2	<0.5
Feb-05	2.2	462	45
Min/Max	1.9/7.4	384/582	.57/66
Average	3.9	487.4	20.1

TN denotes Total Nitrogen (as nitrogen). EC denotes Electrical Conductivity. TTHMs denotes Total Trihalomethanes.

18. Wastewater quality is characterized by relatively low nitrogen concentrations, moderate TDS concentrations, and fluctuating THM concentrations.

WASTEWATER SYSTEM

19. Wastewater is generated in cooling, rinsing, washing, sorting, and flume transport of fruit; defrost water is generated during defrost cycles; and rinse water is generated from the apple and pear drencher station.

20. An apple/pear drencher station is used to wash the fruit and apply a dilute solution of chemical preservative. The drencher station generates approximately 1,100 gallons of wastewater per day, seven days a week when the fruit is being processed. The apple/pear drencher water is recycled until the end of the day. Historically, drencher station wastewater was discharged to the wastewater system; the Discharger has now elected to haul all drencher station water off-site for proper disposal.

21. A chlorine concentration is maintained in the wash water and drencher station water. The Discharger has begun dechlorinating the water prior to discharge to the wastewater system. According to the RWD, the dechlorination should reduce the chlorine concentration from 7 mg/L to approximately 0.1 mg/L but that process will increase the TDS of the wastewater.

22. The Discharger uses water-softening, ion exchange water treatment for the apple spray bars. The ion exchange vessel is regenerated off-site. Therefore, no brine is generated on-site and/or discharged to the wastewater system.

23. Wastewater generated at the site is screened, dechlorinated (since August 2004), and discharged to the collection system. The collection system is piped to a sump where the wastewater is screened again before being discharged into the wastewater pond. Currently, the facility contains only one pond; however, the Discharger plans to construct two 60-mil HDPE lined wastewater storage ponds where the existing pond is located (as shown in Attachment C, which is attached hereto and made part of this Order by reference). The ponds will allow storage of wastewater during the wet months or when climatic conditions do not allow wastewater application. The wastewater ponds will be constructed to cumulatively provide approximately 8.48 million gallons of storage with two feet of freeboard.

24. An aerator is present in the existing pond. Aerators will be placed in both of the new ponds when they are constructed.

25. The screens and aerated wastewater treatment pond are expected to reduce concentrations of volatile dissolved solids in the wastewater, resulting in a lower concentration of Total Dissolved Solids (TDS) discharged to the land application area. However, the RWD does not quantify the expected reduction.

26. The RWD contained a water balance for the wastewater treatment and disposal system. The water balance presents flow rates that vary depending on the crop being processed. A total of approximately 20.5 million gallons of wastewater will be discharged on an annual basis. The water balance utilizes 100-year annual return rainfall amounts, and shows the wastewater storage ponds and land application areas have adequate capacity to contain and apply all wastewater and rainfall.

27. Wastewater generation varies during the year based on crop being processed. Flow rates measured at the facility are questionable because the flow meter had not been calibrated until 15 April 2004 and the wastewater piping configuration may allow wastewater to spin the flow meter backwards. The table below presents the wastewater flow rate data reported to the Regional Board in self-monitoring reports and the estimated flow rates presented in the RWD water balance.

Month	Units	Self-Monitoring Reports Measured Flow Rate	RWD Water Balance Estimated Flow Rate
March, 2004	GPM	357,337	56,998
April, 2004	GPM	680,000	679,999
May, 2004	GPM	4,019,825	4,161,999
June, 2004	GPM	1,214,800	1,214,999
July, 2004	GPM	1,446,700	1,446,999
August, 2004	GPM	2,961,300	2,961,003
September, 2004	GPM	2,627,600	2,628,001
October, 2004	GPM	2,956,300	2,955,999
November, 2004	GPM	2,642,000	2,584,003
December, 2004	GPM	2,986,400	1,700,002
January, 2005	GPM	2,706,500	49,996
February,2005	GPM	1,542,700	49,996
Total	Gallons	26,141,462	20,489,994

Wastewater flow rate data from Appendix E, 31 March 2005 RWD prepared by NOA.
GPM denotes Gallons Per Month.

28. Stormwater that falls on paved areas and roofs within the facility is collected and discharged into the stormwater retention pond. Collected stormwater evaporates and percolates through the unlined bottom of the pond.

29. The majority of the processing is conducted within buildings to prevent commingling of stormwater runoff with process wastewater. Some activities, such as the drench station are located outdoors and are exposed to stormwater. When stormwater mixes with wastewater the mixture must be handled as industrial wastewater.

LAND APPLICATION SYSTEM

30. Wastewater is currently applied to 8.5-acres of cherry orchards; however, the Discharger is developing an additional 10.9-acres of cropped land for wastewater application. Of the total 19.4-acres, 13.8-acres will consist of a cherry orchard and 5.6-acres of presently fallow ground will be planted in alfalfa. The land application area locations are presented on Attachment C.

31. Wastewater is applied by sprinkler, but flood irrigation will be acceptable as long as the land application area is prepared to allow even distribution and prevent spills of wastewater/supplemental irrigation water outside the land application areas. Because the wastewater application will not be sufficient to meet the crop irrigation needs during summer months, supplemental irrigation water will be applied.

32. Crops in both land application areas will remove nitrogen from the wastewater. Cherries will be harvested from the orchard and the trees will be regularly pruned from the 13.8-acre land application area; crops will be cut and removed from the 5.6-acre land application area. Based on a 20.5 million gallon discharge and an average total nitrogen concentration of 3.85 mg/L, the total nitrogen discharge is estimated to be 658 pounds/year. If evenly distributed, the nitrogen loading rate will be approximately 33.9 lbs/ac•year.

33. The RWD states that there is less nitrogen in the wastewater than the land application areas will utilize. This is based on a nitrogen demand of 95-125 lbs/acre•year for the 13.8-acre orchard and 360 lbs/acre•year for the 5.6-acre land application area (growing alfalfa).

IMPROVEMENTS TO THE WASTEWATER SYSTEM

34. The Discharger is proposing improvements to the wastewater system that include construction of two lined wastewater storage ponds and development of an additional 10.9-acres for land application. Construction of the ponds requires relocation of the stormwater retention pond. The RWD presented the following schedule for the improvements:

Task	Anticipated Completion Date
Complete design of Wastewater System	July 2005
Construct Pond No. 2 and Stormwater Pond	April-May 2006
Construct Pond No. 1	July-August 2006
Pond Construction and Wastewater System Complete	September 2006

35. The wastewater pond design was submitted as Appendix G in the 31 March 2005 RWD. The design includes installation of a 60-mil HDPE liner.

SOLID WASTE

36. Culled apples/pears/cherries that are removed due to bruising or other defects are sold to various buyers as off-grade product. Approximately six million pounds of off-grade product is sold annually.

37. Solid/semi-solid wastes are generated by the processing operations. Such solid/semi-solid wastes are segregated from the process wastewater stream by screening for separate handling and disposal. Approximately 9,000 pounds of screenings are collected each year. The screenings are hauled to a landfill for disposal.

GROUNDWATER CONDITIONS

38. Water is provided to the facility by four on-site groundwater wells. The well locations are presented on Attachment C. The Discharger only provided construction details for one of the four wells (Well CFC-1 is 450 deep and screened from 230 to 450 feet bgs).

39. All four production wells were sampled on 19 November 2003. A summary of the results are presented below:

Analyte	Units	CFC-1	CFC-2	SHP	Fire Sup.
Total Alkalinity	mg/L	134	323	200	110
Calcium	mg/L	25	96	50	20
Chloride	mg/L	3.67	22.7	12.9	2.93
Spec. Cond.	µmhos/cm	284	903	525	232
Potassium	mg/L	3.9	3.6	4.6	4.4
Sodium	mg/L	14	24	21	12
Nitrate as N	mg/L	0.9	17.2	4.3	0.6
TKN	mg/L	0.68	0.60	0.68	0.70
pH	Std. Units	7.9	7.4	7.9	8.0
TDS	mg/L	206	584	344	163
Sulfate (SO_4)	mg/L	3.84	32.7	12.4	2.83
THMs	µg/L	ND (3.5)	ND (3.5)	ND (3.5)	ND (3.5)

Spec. Cond. denotes Specific Conductivity, Nitrate as N denotes Nitrate as Nitrogen, TKN denotes Total Kjeldahl Nitrogen, TDS denotes Total Dissolved Solids, THMs denotes Trihalomethanes.

40. Four groundwater monitoring wells were installed at the site in November 2004. The well installation was proposed in a 1 October 2004 *Groundwater Quality Investigation Workplan* and a 15 October 2004 *Groundwater Investigation Workplan Addendum.* Both reports were signed by a California registered professional. Based on the 10 February 2005 *Monitoring Well Installation Report*, the wells were not installed consistent with the workplan documents, prompting Regional Board staff to issue a 22 March 2005 *Notice of Violation* for an inadequate report. The NOV listed the following issues related to the well installations:

    a. Inadequate lithologic sampling resulting in poorly defined subsurface conditions and poor/questionable well construction;

    b. Lack of a description of the lithology for the intervals in which the wells were screened;

    c. Construction of two wells at much greater depth than the "uppermost portion of the first aquifer underlying the site," as required in the 26 August 2004 Section 13267 Order; and

    d. Improper sample collection technique.

The 22 March 2005 NOV required further submittal of a workplan for investigation of subsurface conditions to define the first saturated intervals, installation of proposed Well MW-5, destruction of Well MW-3, investigation of subsurface conditions at Wells MW-1, MW-2, and MW-3, and a project schedule. The workplan was due by 15 April 2005 and, after discussion with Regional Board staff, was submitted on 11 May 2005. Staff will provide comments on the document.

41. The construction of the groundwater monitoring wells is presented in the table below:

Well Name	Units	Screen Length	Total Depth
MW-1	feet	20	125
MW-2	feet	20	125
MW-3	feet	20	130
MW-4	feet	20	135

42. Groundwater characterization is incomplete due to the issues discussed above. In addition, Well MW-3 was improperly constructed and cement grout leaked into the well. That resulted in high pH and TDS values. The groundwater data that has been collected is presented below. The data is based on a single sample event from each well. The samples were collected on 6 January and 25 January 2005.

Analyte	Units	MW-1 (1/25/05)	MW-2 (1/6/05)	MW-3 (1/25/05)	MW-4 (1/6/05)
Chloroform	µg/L	ND (0.5)	ND (0.5)	1.3	7.0
Chloride	mg/L	40.8	23.9	22.2	45.7
Sodium	mg/L	74	34	70	52
Ammonia as N	mg/L	0.50	ND (0.2)	0.50	ND (0.2)
Nitrate as N	mg/L	10.7	29.4	ND (0.2)	20.2
TKN	mg/L	0.263	1.8	1.11	1.85
TDS	mg/L	708	816	1,490	920
pH	Std. Unit	7.1	6.9	12.0	7.2
Electrical Conductivity	µmhos/cm	1,150	1,090	6,150	1,200

ND denotes Not Detected, detection limit in parenthesis. TKN denotes Total Kjeldahl Nitrogen. TDS denotes Total Dissolved Solids.

43. Based on one sampling event, the THM chloroform was detected in Wells MW-3 and MW-4. In addition, the TDS concentration is generally higher than the facility wastewater. Considerable variation in nitrate as nitrogen concentrations exists. However, if the wells were improperly constructed, the data may not characterize background groundwater conditions.

44. Based on groundwater elevation data collected in Wells MW-1, -2, and -3 the tentative groundwater flow direction is to the west. However, the Discharger has not completed additional studies to determine if the first saturated intervals were screened in each of the wells. So it is not possible to determine at this time which well represents background conditions.

45. The depth to groundwater is reported to be approximately 105 feet below the ground surface except in Well MW-3 in which groundwater is present at a much shallower depth.

SITE SPECIFIC CONDITIONS

46. The site topography is relatively flat. Surficial soils consist of Finrod clay loam. The soil possesses slow permeability (0.6 to 0.2 inches per hour) based on the Soil Survey of San Joaquin County.

47. The facility is within the Lower Mokelumne Hydrologic Area (No. 531.30), as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.

48. Average annual rainfall for the facility area is 17.55 in/year; the 100-year return annual total rainfall is 34.97 in/year; and the evapotranspiration rate for the area is 38.30 in/year.

49. The site is located outside the 100-year flood zone.

50. Domestic wastewater is collected separately from the process wastewater in an on-site sewage disposal system. This system is regulated by the San Joaquin County Environmental Health Department.

BASIN PLAN, BENEFICIAL USES, AND REGULATORY CONSIDERATIONS

51. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition*, (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Resources Control Board. Pursuant to §13263(a) of the California Water Code (CWC), waste discharge requirements must implement the Basin Plan.

52. Surface water drainage in the area is to the Calaveras River between New Hogan Reservoir and the Sacramento/San Joaquin Delta.

53. The beneficial uses of the Calaveras River between New Hogan Reservoir and the Delta are municipal and domestic supply; agricultural supply; industrial process supply; industrial service supply; water contact recreation; noncontact water recreation; warm freshwater habitat, cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and wildlife habitat.

54. The beneficial uses of underlying groundwater are municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply.

55. State Water Resources Control Board (State Board) Resolution No. 68-16 (the Antidegradation Policy) requires that the Board, in regulating the discharge of waste, must maintain the high quality of waters of the state until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Board's policies (e.g.,

quality that exceeds water quality objectives). Resolution No. 68-16 also requires that waste discharged to high quality waters be required to meet waste discharge requirements that will result in the best practicable treatment or control of the discharge.

56. The Discharger has not submitted any information showing that it should be allowed to degrade the groundwater as described in State Board Resolution No. 68-16, and therefore no degradation is allowed.

57. This discharge of waste should not degrade surface water or groundwater quality. Prior to discharge to land, the waste is treated in screens and an aerated wastewater treatment pond. This Order establishes effluent limitations that are protective of the beneficial uses of the underlying groundwater, requires that the wastewater ponds be lined with 60 mil HDPE prior to September 2006, and requires the sampling of groundwater monitoring wells to assure that the discharge of waste is not impacting the underlying groundwater. Based on the result of the scheduled tasks, this Order may be reopened to reconsider effluent limitations and other requirements to comply with Resolution 68-16.

58. California Water Code §13267(b) provides that: "*In conducting an investigation specified in subdivision (a), the 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, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters 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*."

    The technical reports required by this Order and the attached "Monitoring and Reporting Program No. R5-2005-0103" are necessary to assure compliance with these waste discharge requirements. The Discharger owns and operates the facility that generates the waste subject to this Order.

59. California Department of Water Resources standards for the construction and destruction of groundwater wells is described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981). These standards, and any more stringent standards adopted by the state or county pursuant to CWC §13801, apply to all monitoring wells.

60. State regulations that prescribe procedures for detecting and characterizing the impact of waste constituents from waste management units on groundwater are found in Title 27. While the wastewater treatment facility is exempt from Title 27, the data analysis methods of Title 27 may be appropriate for determining whether the discharge complies with the terms for protection of groundwater specified in this Order.

61. Federal regulations for storm water discharges were promulgated by the U.S. Environmental Protection Agency on 16 November 1990 (40 CFR Parts 122, 123, and 124). The State Board adopted Order No. 97-03-DWQ (General Permit No. CAS000001) specifying waste discharge

requirements for discharges of storm water associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers. The Discharger has not yet obtained coverage under General Permit No. CAS000001 and is required to do so.

62. The action to adopt WDRs for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), in accordance with Title 14, California Code of Regulations (CCR), Section 15301.

63. The discharge of wastewater is exempt from the requirements of *Consolidated Regulation for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, CCR, Division 2, Subdivision 1, §2005, et seq., (hereafter Title 27). The exemption, pursuant to §20090(b), is based on the following:

    a. The Board is issuing waste discharge requirements,
    b. The discharge complies with the Basin Plan, and
    c. The wastewater does not need to be managed according to Title 22 CCR, Division 4.5, and Chapter 11, as a hazardous waste.

64. Pursuant to California Water Code §13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

PUBLIC NOTICE

65. All the above and the supplemental information and details in the attached Information Sheet, incorporated by reference herein, were considered in establishing the following conditions of discharge.

66. The Discharger and interested agencies and persons were notified of the intent to prescribe WDRs for this discharge and provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

67. In a public meeting, all comments pertaining to the discharge were heard and considered.

IT IS HEREBY ORDERED that pursuant to §13263 and 13267 of the California Water Code, Order No. 95-039 is rescinded and Chinchiolo Stemilt California, LLC/JT Investments, 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:

[Note: Other prohibitions, conditions, definitions, and some methods of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991].

A. Discharge Prohibitions:

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.

2. Bypass or overflow of untreated or partially treated waste is prohibited.

3. Discharge of waste classified as 'hazardous,' defined in §20164 of Title 27, CCR, or 'designated,' as defined in §13173 of the California Water Code, is prohibited.

4. The discharge of process wastewater to the domestic wastewater system is prohibited.

5. The discharge of domestic waste to the process wastewater treatment system is prohibited.

6. Discharge of wastewater to other than the wastewater ponds and land application area as described in the Findings and shown on Attachment C is prohibited.

7. The Discharger is prohibited from applying wastewater to the new 10.9-acre cropped land application area until it submits the *Land Application Area Improvement Report* described in the Provisions, and the Executive Officer approves the report.

B. Discharge Specifications:

1. The monthly average wastewater flow to the land application areas shall not exceed 160,000 gpd. The annual flow shall not exceed 20.5 million gallons.

2. By **31 July 2005**, the Discharger shall have completed improvements to the 10.9-acre land application area and shall begin application of wastewater at agronomic rates in accordance with Discharge Prohibition A.7 and the requirements of this Order.

3. No later than **15 November 2006**, the Discharger shall construct and begin using the two HDPE lined wastewater ponds as described in the Findings.

4. Neither the treatment nor the discharge shall cause a condition of nuisance or pollution as defined by the CWC, §13050.

5. The discharge shall not cause the degradation of any water supply.

6. The wastewater pond shall not have a pH of less than 6.5 or greater than 10.0.

7. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations.

8. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the property owned by the Discharger.

9. As a means of discerning compliance with Discharge Specification No. B.8, the dissolved oxygen content of the wastewater ponds shall not be less than 1.0 mg/l at any time.

10. The Discharger shall operate all systems and equipment to maximize treatment of wastewater and optimize the quality of the discharge.

11. The pond shall be managed to prevent the breeding of mosquitoes. In particular, dead algae, vegetation, and debris shall not accumulate on water surfaces.

12. No physical connection shall exist between wastewater piping and any domestic water supply or other domestic/industrial supply well without an air gap or approved reduced pressure device.

13. The wastewater treatment system and land application area(s) shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

14. The freeboard in any wastewater pond shall never be less than two feet, as measured vertically from the water surface to the lowest point of overflow.

15. The wastewater treatment, storage, and land application system shall have sufficient capacity to accommodate wastewater flow and seasonal precipitation. 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.

16. On or about **15 October** each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specifications No. 14 and No. 15.

17. Wastewater from the drencher station shall not be discharged into the wastewater system. All wastewater generated at the drencher station shall be properly disposed of off-site.

C. Effluent Limitations:

1. Wastewater discharged to the land application areas shall not exceed the following monthly average effluent limits, or such lower concentrations as the Discharger determines necessary to ensure compliance with the Groundwater Limitations:

Constituent	Units	Concentration
BOD	mg/L	50
Total Dissolved Solids	mg/L	600
Total Nitrogen	mg/L	10

2. The maximum BOD_5 loading to the land application areas shall not exceed any of the following:
   a. 300 lbs/acre on any single day;
   b. 100 lbs/acre•day as a 7-day average;
   c. The maximum loading rate that ensures that the discharge will not create a nuisance.

3. Wastewater discharged to the wastewater pond shall be dechlorinated so that the residual chlorine concentration is below the detection limit.

D. Land Application Area Requirements

1. The discharge shall be distributed uniformly on adequate acreage in compliance with this Order.

2. Crops shall be grown on the land application areas. Crops shall be selected based on nutrient uptake capacity, tolerance to high soil moisture conditions, and consumptive use of water and irrigation requirements. Cropping activities shall be sufficient to take up all the nitrogen applied, and crops shall be harvested and removed from the land on at least an annual basis.

3. Discharge of process wastewater, including runoff, spray, or droplets from the irrigation system, shall not occur outside the boundaries of the approved land application area(s). The RWD described wastewater application using sprinkler application; however, flood or drip irrigation is acceptable if the discharge complies with all requirements of this Order.

4. Irrigation with process wastewater shall not be performed within 24 hours of a forecasted storm, during a precipitation event, 24 hours after a precipitation event, or when the ground is saturated.

5. Hydraulic loading of process wastewater and irrigation water shall be at reasonable agronomic rates designed to minimize the percolation of process wastewater and irrigation water below the root zone (i.e., deep percolation).

6. Wastewater conveyance lines shall be clearly marked as such. Process wastewater controllers, valves, etc. shall be affixed with reclaimed water warning signs; quick couplers and sprinkler heads shall be of a type, or secured in such a manner, that permits operation by authorized personnel only.

7. Irrigation systems shall be labeled as containing reclaimed wastewater. If wastewater and irrigation water utilize the same pipeline, then backflow prevention devices shall be installed to protect the potable/irrigation water supply.

8. Application of wastewater to the land application areas using sprinkler irrigation is prohibited when wind velocities exceed 30 miles per hour.

9. Public contact with wastewater shall be precluded through such means as fences, signs, and/or irrigation management practices. Signs with proper wording of sufficient size shall be placed at areas of access and around the perimeter of the land application area(s) to alert the public of the use of wastewater.

10. The land application areas shall be managed to prevent breeding of mosquitoes. More specifically:
    a. All applied irrigation water must infiltrate completely within 24 hours.
    b. Ditches not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation.
    c. Low pressure pipelines, unpressurized pipelines, and ditches that are accessible to

mosquitoes shall not be used to store wastewater.

11. A 50-foot buffer zone shall be maintained between any watercourse and the wetted area produced during irrigation used for process wastewater effluent disposal.

12. Discharges to land application areas shall be managed to minimize both erosion and runoff from the irrigated area.

13. The resulting effect of the wastewater discharge on the soil pH shall not exceed the buffering capacity of the soil profile and shall not cause significant mobilization of soil constituents such as iron and manganese.

14. Application of wastewater to the land application areas via flood irrigation shall only occur on furrows graded so as to achieve uniform distribution, minimize ponding and provide for tailwater control. Furrow runs shall be no longer and slopes shall be no greater than what permits reasonably uniform infiltration and maximum practical irrigation efficiency. The minimum furrow slope shall not be less than 0.2 percent.

15. Wastewater application areas shall be allowed to dry for at least 72-hours from the end of wastewater application.

16. There shall be no standing water in the land application areas 24-hours after wastewater is applied, except during periods of heavy rains sustained over two or more consecutive days.

E. Solids/Sludge Disposal Requirements:

1. Collected screenings, sludge, and other solids removed from the facility wastewater shall be disposed of in a manner that is consistent with Title 27, Division 2, Subdivision 1 of the CCR and approved by the Executive Officer.

2. Process wastewater sludge and other solids shall be removed from sumps, screens, etc. as needed to ensure optimal operation and adequate hydraulic capacity. Solids drying operations, if any, shall be designed and operated to prevent leachate generation.

3. Storage and disposal of domestic wastewater sludge (septage) shall comply with existing Federal, State, and local laws and regulations, including permitting requirements and technical standards.

4. Sludge and other solids shall be removed from domestic wastewater septic tank(s) as needed to ensure optimal operation and adequate hydraulic capacity. A duly authorized carrier shall haul sludge, septage, and domestic wastewater.

5. Any proposed change in solids use or disposal practice from a previously approved practice shall be reported to the Executive Officer at least 90 days in advance of the change.

F. Groundwater Limitations:

The discharge, in combination with other sources, shall not cause underlying groundwater to contain waste constituents in concentrations statistically greater than background water quality.

G. Provisions:

1. All of the following reports shall be submitted pursuant to §13267 of the CWC, and prepared by a California registered professional as described in Provision G.2.

   a. By **1 August 2005**, the Discharger shall either apply for coverage or submit a Notice of Non Applicability for Order No. 97-03-DWQ, Discharges of Storm Water Associated With Industrial Activities.

   b. By **1 August 2005**, the Discharger shall submit a Sampling and Analysis Plan (SAP) that describes sample locations, evaluates if the samples are representative of the media being sampled, sample procedures, sample containers, sample hold times, and sample preservatives. The SAP shall address all the constituents and monitoring points listed in the attached MRP.

   c. By **31 August 2005**, the Discharger shall submit a *Land Application Area Improvement Report* that describes improvements to the land application areas that allows operation in compliance with the requirements of this Order.

   d. By 31 August 2005, the Discharger shall submit a *Groundwater Monitoring Well Installation Report* that describes installation of a replacement for Well MW-3. The well installation report shall be consistent with the report preparation requirements presented in Attachment D.

   e. By **22 September 2005**, the Discharger shall submit a *Wastewater Storage and Disposal Contingency Plan (Contingency Plan)*. The *Contingency Plan* shall describe measures that will be implemented to maintain compliance with Discharge Specification B.14 during the construction phase when wastewater storage capacity may not be available.

   f. By **22 September 2005**, the Discharger shall submit a *Wastewater Flow Meter Report* that will evaluate the configuration of the flow meter to determine if accurate data is being recorded and reported to the Regional Board. The Discharger shall have the capability to measure the flow rates of wastewater both entering the first wastewater pond and applied to the land application areas.

   g. **At least 30 days prior to liner installation**, the Discharger shall submit a *Pond Liner System Construction Quality Assurance (CQA) Plan*. The CQA Plan shall set forth a detailed program of inspection and testing to ensure that the liner system is constructed as designed (as described in the 31 March 2005 RWD or equivalent) and is free from defects whether the result of manufacture or damage during installation. At a minimum, the CQA Plan shall include the following:

      1. Procedures for review of the liner manufacturer's quality control data to determine acceptance of the material;

2. Procedures for verifying and documenting appropriate shipping, handling, and storage requirements to ensure protection of the liner material prior to installation;
3. Procedures for inspection and documentation of final subgrade preparation and acceptance prior to liner installation;
4. Procedures for installation of the electrical leak imaging and monitoring system;
5. Procedures for inspection and documentation of liner placement, anchorage, and seaming, including trial seams;
6. Procedures for testing and documentation of nondestructive testing of all liner seams and penetrations;
7. Procedures for identifying and repairing faulty seams and construction damage and documenting the repairs;
8. Procedures for testing and documentation of testing of all liner repairs;
9. Inspection forms to be used for documenting all of the above and the final inspection for acceptance of the liner system

h. By **22 September 2005**, the Discharger shall submit and implement an *Operation and Management Plan* (*O&M Plan*) that addresses operation of the wastewater treatment and disposal facility. At a minimum, the *O&M Plan* will describe (a) the daily operation and maintenance of the wastewater system, (b) the practices used to treat the wastewater within limits specified in this Order, (c) the locations of the land application area, and procedures to prevent excessive BOD, nitrogen, or dissolved solids loading of the land application area, (d) the locations of flow and effluent sampling points, (e) quality control sampling procedures necessary to obtain representative samples, (f) practices used to maintain the land application area, and (g) the locations of the solid waste disposal areas, methods of disposal, and the daily practices associated with the disposal of the solid waste. A copy of the *O&M Plan* shall be kept at the facility for reference by operating personnel and they shall be familiar with its contents.

i. By **2 October 2006**, the Discharger shall submit a *Wastewater Treatment System Construction Report* that shows that the wastewater pond system was constructed to comply with the requirements of this Order, including installation of a 60-mill thick HDPE liner and a total storage capacity of at least 8.48 million gallons with two feet of freeboard in the ponds. The Discharger shall submit as-built drawings of the pond and liner system.

j. By **30 November 2006**, the Discharger shall submit a *Background Groundwater Quality Study Report*. For each groundwater monitoring parameter/constituent identified in the MRP, the report shall present a summary of monitoring data, calculation of the concentration in background monitoring wells, and a comparison of background groundwater quality to that in wells used to monitor the wastewater storage ponds and land application area. Determination of background quality shall be made using the methods described in Title 27, §20415(e)(10), or equivalent, and shall be based on data from at least four consecutive quarterly (or more frequent) groundwater monitoring events. For each monitoring parameter/constituent, the report

shall compare measured concentrations for compliance monitoring wells with the calculated background concentration. The report shall also analyze the effluent limitations and actual constituent concentrations in the wastewater to determine if these are protective of water quality. The report shall be prepared by or under the direction of an engineer or geologist registered to practice in California pursuant to California Business and Professions Code §6735, 7835, and 7835.1.

If the *Background Groundwater Quality Study Report* shows that the wastewater discharge has degraded, or is likely to degrade groundwater quality, then upon request of the Executive Officer, the Discharger shall submit *Groundwater Mitigation Plan* which shall evaluate contaminant control alternatives, describe a preferred alternative, and proposed a timeline to meet the Groundwater Limitations of this Order. The selected contaminant control alternative must comply with State Water Resources Control Board Resolution No. 68-16 and be consistent with the most recent Basin Plan.

2. In accordance with California 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, 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 contain the professional's signature and/or stamp of the seal.

3. The Discharger shall comply with the Monitoring and Reporting Program No. R5-2005-0103, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.

4. 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)."

5. 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.

6. The Discharger shall submit to the Regional Board on or before each compliance report due date the specified document, or if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is reported, then the Discharger shall state the reasons for noncompliance and shall provide a schedule to come into compliance.

7. The Discharger shall report to the Regional Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to §313 of the "Emergency Planning and Community Right to Know Act of 1986."

8. If the Discharger can demonstrate to the satisfaction of the Executive Officer that higher BOD loadings than those specified in this Order will not cause or contribute to cause waste constituents to leach into and degrade underlying groundwater, or cause any other violation of the terms and conditions of this Order, then this Order may be reopened for consideration of revision of BOD loading limits. The demonstration shall include the submittal of a technical report that describes, at a minimum, the results of a field demonstration project conducted on similar soil types as those in the land application area(s) and using similar wastewater as that described in the Findings.

9. The Discharger shall report promptly to the Board any material change or proposed change in the character, location, or volume of the discharge.

10. 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 Regional Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or recession of this Order.

11. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.

12. The Regional Board will review this Order periodically and will revise requirements when necessary.

I, THOMAS R. PINKOS, 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 24 June 2005.

_____
THOMAS R. PINKOS, Executive Officer

TRO: 6/1/05

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2005-0103

FOR
CHINCHIOLO STEMILT CALIFORNIA, LLC/JT INVESTMENTS
FRUIT PROCESSING FACILITY
SAN JOAQUIN COUNTY

This monitoring and reporting program (MRP) incorporates requirements for monitoring of the process wastewater, wastewater storage ponds, the land application area, solid waste, and groundwater. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All wastewater samples should be representative of the volume and nature of the discharge. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form. Process wastewater flow monitoring shall be conducted continuously using a flow meter and shall be reported in cumulative gallons per day.

Field test instruments (such as pH and dissolved oxygen) may be used provided that:

1. The operator is trained in the proper use of the instrument;
2. The instruments are field calibrated prior to each use;
3. 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.

INFLUENT MONITORING

Process wastewater samples shall be collected prior to entering the wastewater storage pond. Influent monitoring for the process wastewater system shall include at least the following:

Constituents	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow	gallons	Metered	Daily[1]	Monthly
BOD_5[2]	mg/L	Grab	Monthly	Monthly
Chlorine	mg/L	Grab	Weekly[3]	Monthly

[1] Continuous monitoring requires daily meter reading or automated data collection.
[2] Five-day, 20° Celsius Biochemical Oxygen Demand.
[3] Weekly chlorine samples can be measured with a field measurement device as provided above. At least one of the samples shall be submitted to a California licensed laboratory for confirmatory analysis per month.

WASTEWATER POND MONITORING

Samples shall be collected from an established sampling station located in an area that will provide a sample representative of the water in each wastewater storage pond. 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. Monitoring of each pond shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Dissolved Oxygen[1]	mg/L	Grab	Weekly	Monthly
Freeboard	feet (±0.1)	Measurement	Weekly	Monthly
pH	pH Units	Grab	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly

[1] Samples shall be collected at a depth of one foot from each pond in use, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.

POND EFFLUENT MONITORING

Process wastewater samples shall be collected from the pond prior to discharge to the land application areas. If wastewater is being discharged to land application areas from both ponds, then both ponds shall be sampled. Monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow[1]	Metered	Continuous	Continuous	Monthly
pH	pH units	Grab	Weekly	Monthly
BOD_5[2]	mg/L	Grab	Monthly	Monthly
Nitrate as Nitrogen	mg/L	Grab	Monthly	Monthly
Total Kjeldahl Nitrogen	mg/L	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
Volatile Dissolved Solids	mg/L	Grab	Monthly	Monthly
Trihalomethanes[3]	µg/L	Grab	Monthly	Monthly

1 Continuous monitoring requires daily meter reading or automated data collection and shall define the volume of wastewater discharged to each land application area from the wastewater pond.
2 Five-day, 20° Celsius Biochemical Oxygen Demand.
3 Trihalomethanes by EPA Method 524.2 or equivalent.

LAND APPLICATION AREA MONITORING

The Discharger shall monitor process wastewater discharged for irrigation to the land application areas. Loading rates for the land application areas shall be calculated. Monitoring of the land application areas shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Wastewater Flow[1]	Gallons	Continuous[1]	Daily	Monthly
Supplemental Irrigation Flow	Gallons	Continuous[1]	Daily	Monthly
Local Rainfall	Inches	Measurement	Daily	Monthly
Acreage Applied[2]	Acres	Calculated	Daily	Monthly
Application Rate	gal/acre•day	Calculated	Daily	Monthly
BOD Loading Rate	lbs/acre•month	Calculated	Daily	Monthly
Total Nitrogen Loading Rate[3]	lbs/acre•month[4]	Calculated	Monthly	Monthly
TDS Loading Rate	lbs/acre•month[4]	Calculated	Monthly	Monthly

[1] Continuous monitoring requires daily meter reading or automated data collection and shall define the volume of wastewater discharged to each land application area from the wastewater pond.
[2] Land Application Area(s) in use shall be identified by name or number and the acreage provided. If a portion of an area is used, then the acreage shall be estimated. A map identifying land application areas shall be included in monitoring reports.
[3] Total nitrogen applied from all sources, including fertilizers and supplemental irrigation water if used.
[4] Report monthly total and cumulative annual to date.

Daily when wastewater is being applied to the land application areas, the entire application area shall be inspected to identify any equipment malfunction or other circumstance that might allow irrigation runoff to leave the area and/or create ponding conditions that violate the Waste Discharge Requirements. Evidence of erosion, field saturation, runoff, or the presence of nuisance conditions shall be noted in the report. A log of these inspections shall be kept at the facility and be submitted with the monthly monitoring reports. If wastewater was not applied to the land application area, then the monthly monitoring reports shall so state.

SOLIDS MONITORING

The Discharger shall record and report monthly the quantity, disposal location, and method of disposal of solids disposed of during each processing season, as well as during the off-season, if applicable. If solid waste is shipped offsite, then an estimated amount and location of disposal shall be reported in the monthly report and the hauler identified.

GROUNDWATER MONITORING

Prior to construction and/or sampling of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Board for approval. Once installed, all new wells shall be added to the monitoring network and shall be sampled and analyzed according to the schedule below. All samples shall be collected using approved EPA methods. Water table elevations shall be calculated to determine groundwater gradient and direction of flow.

Prior to sampling, the groundwater elevations shall be measured and the wells shall be purged at least three well volumes until temperature, pH, and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Groundwater monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Depth to Groundwater	±0.01 feet	Measurement	Quarterly	Quarterly
Groundwater Elevation[1]	±0.01 feet	Calculated	Quarterly	Quarterly
Gradient	feet/feet	Calculated	Quarterly	Quarterly
Gradient Direction	Degrees	Calculated	Quarterly	Quarterly
PH	pH units	Grab	Quarterly	Quarterly
Nitrate as Nitrogen	mg/L	Grab	Quarterly	Quarterly
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly	Quarterly

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Trihalomethanes[3,4,5]	µg/L	Grab	Quarterly[5]	Annual
Standard Minerals[2,3]	mg/L	Grab	Annual	Annual

[1] Groundwater elevation shall be determined based on depth-to-water measurements from a surveyed measuring point elevation on the well.
[2] Standard Minerals shall include at least the following compounds: boron, calcium, iron, magnesium, potassium, sodium, chloride, sulfate, total alkalinity (including alkalinity series), and hardness.
[3] Standard Minerals and trihalomethanes shall be analyzed in the first quarter of the year.
[4] Trihalomethanes by EPA Method 524.2 or equivalent.
[5] Initially, samples for trihalomethane analysis shall be collected quarterly for eight quarters, then the sample collection frequency shall be reduced to annual.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., influent monitoring, groundwater monitoring well, 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.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all groundwater monitoring reports shall be prepared under the supervision of a registered professional engineer or geologist and signed by the registered professional.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Board by the **1st day of the second month** following the end of the reporting period (i.e. the January monthly report is due by 1 March). Monthly reports for the months of March, June, September, and December may be submitted as part of the Quarterly Monitoring Report, if desired. The monthly reports shall include the following:

1. Results of influent, wastewater pond, pond effluent, land application area, and solids monitoring;
2. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format;
3. If requested by staff, copies of laboratory analytical report(s);
4. A calibration log verifying calibration of all hand held monitoring instruments and devices used to comply with the prescribed monitoring program;
5. The cumulative volume of wastewater generated during the year to date;
6. The total pounds of total dissolved solids (year to date) that have been applied to the land application area, as calculated from the sum of monthly loadings; and
7. The total pounds of nitrogen (year to date, from all sources including fertilizer) applied to the land application area as calculated from the sum of monthly loadings.

B. Quarterly Report

The Discharger shall establish a quarterly sampling schedule for groundwater monitoring such that samples are obtained approximately every three months. Quarterly monitoring reports shall be submitted to the Regional Board by the **1st day of the second month after the quarter** (i.e. the January-March quarter is due by May 1st) each year. The Quarterly Report shall include the following:

1. Results of groundwater monitoring;
2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged;
3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any;
4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);
5. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements;
6. Summary data tables of historical and current water table elevations and analytical results;
7. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum; and
8. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

Annual Report shall be prepared as the December monthly monitoring report. The Annual Report shall be submitted to the Regional Board by **1 February** each year. In addition to the data normally presented, the Annual Report shall include the following:

1. The contents of a regular December monthly monitoring report;
2. The contents of the regular quarterly monitoring report for the last quarter of the year;
3. Annual flow meter calibration documentation;
4. Documentation of the off-site ion exchange vessel regeneration. The documentation shall be sufficient to determine where the vessel was hauled for regeneration and what company is performing that service.
5. If requested by staff, tabular and graphical summaries of all data collected during the year;

6. Tabular and graphical summaries of historical monthly total loading rates for wastewater generation, process water used for irrigation (hydraulic loading in gallons and inches), total nitrogen, and total dissolved solids.
7. A comprehensive evaluation of the effectiveness of the past year's wastewater application operation in terms of odor control and groundwater protection, including consideration of application management practices (i.e.: waste constituent and hydraulic loadings, application cycles, drying times, and cropping practices), and groundwater monitoring data;
8. A summary of the quantity of solid waste generated and disposed of both on and off the site;
9. An evaluation of the groundwater quality beneath the land application area. The evaluation shall include presentation and discussion of the analytes collected once per year (standard minerals and trihalomethanes) as well as all other analytes required by the MRP;
10. Estimated flows for the next calendar year;
11. A discussion of compliance and corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements; and
12. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

A letter transmitting the self-monitoring reports shall accompany each report. Such a 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 a statement by the discharger, or the discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

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

Ordered by: _____
THOMAS R. PINKOS, Executive Officer

_____
(Date)

TRO: 6/1/05

INFORMATION SHEET

ORDER NO. R5-2005-0103
CHINCHIOLO STEMILT CALIFORNIA, LLC/JT INVESTMENTS
FRUIT PROCESSING FACILITY
SAN JOAQUIN COUNTY

Chinchiolo Stemilt California, LLC/JT Investments operates two fruit processing facilities at 4799 N. Jack Tone Road and 4505 N. Jack Tone Road. The facility processes cherries, pears, and apples for fresh fruit packing, on-site cold storage, and shipping. No brining or canning of the fruit is performed on-site. Processing consists of washing, chilling, waxing, and cold storage of the fruit.

The Discharger processes approximately 13,537 tons of apples, 10,943 tons of cherries, and 1,788 tons of pears. (A total of approximately 52.5 million pounds of fruit annually). Chinchiolo Stemilt California LLC processes cherries from April to July and from December to January; Sierra Hills Packing processes pears from July to August, and apples from July through November each year.

Wastewater is generated in cooling, rinsing, washing, sorting, and flume transport of fruit; defrost water is generated during defrost cycles; and rinse water is generated from the apple and pear drencher. Estimated flow rates vary from no flow to 205,000 gallons per day. However, because the Discharger failed to adequately monitor flow rates as required by the existing WDRs, the actual flow rates are unknown.

Wastewater is screened, dechlorinated, and discharged to the collection system that is piped to a wastewater sump where the wastewater is screened again before being discharged into a wastewater pond equipped with aerators. The Discharger plans to construct two lined wastewater storage ponds where the existing pond is located. The ponds will allow storage of wastewater during the wet months or when climatic conditions don't allow wastewater application. Both ponds will be constructed with 60-mil HDPE liners. The wastewater ponds will be constructed to cumulatively provide approximately 8.48 million gallons of storage with two feet of freeboard. Wastewater is currently applied to 8.5-acres of cherry orchards; however the Discharger is developing an additional 10.9-acres of cropped land. Of the total 19.4-acres, 13.8-acres will consist of a cherry orchard and 5.6-acres of presently fallow land will be planted in alfalfa.

The Discharger maintains a chlorine residual concentration of 7 mg/L in water that contacts fruit. Higher concentrations of chlorine (up to 120 mg/L) are maintained in hydrocoolers and cooling towers. Trihalomethane (THM) compounds can be produced when chlorine comes into contact with organic material. The Discharger has recently begun dechlorinating wastewater prior to discharge into the wastewater pond; however, the Discharger will be required to monitor for THMs in groundwater.

Stormwater that falls on paved areas and roofs within the facility is collected and discharged into the stormwater retention pond. Most of the site where processing occurs is covered with concrete and/or asphalt pavement. Collected stormwater evaporates and percolates through the unlined bottom of the pond.

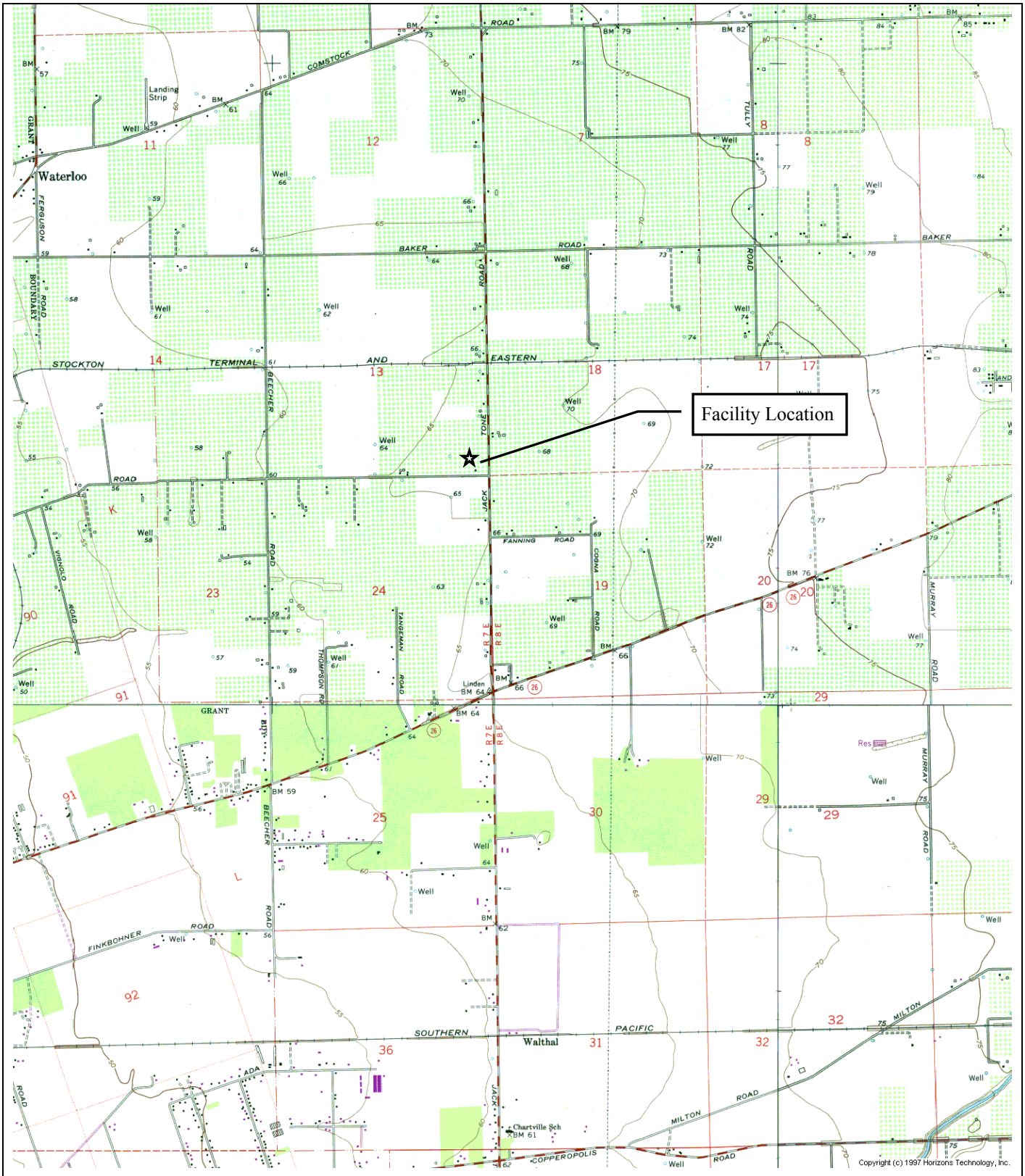
It is anticipated that the cropping activities in the land application area will utilize all the nitrogen applied in the wastewater. Dissolved solids in the wastewater are a concern based on the size of the land application area and cropping activities. Groundwater monitoring is appropriate to ensure that groundwater quality degradation does not take place, as dissolved solids also exist in the supplemental irrigation water and any fertilizer applied to the land application areas.

Solid/semi-solid wastes are generated by the processing operations. Such solid/semi-solid wastes are segregated from the process wastewater stream by screening for separate handling and disposal. Approximately 9,000 pounds of screenings are collected each year. The screenings are hauled to a landfill for disposal.

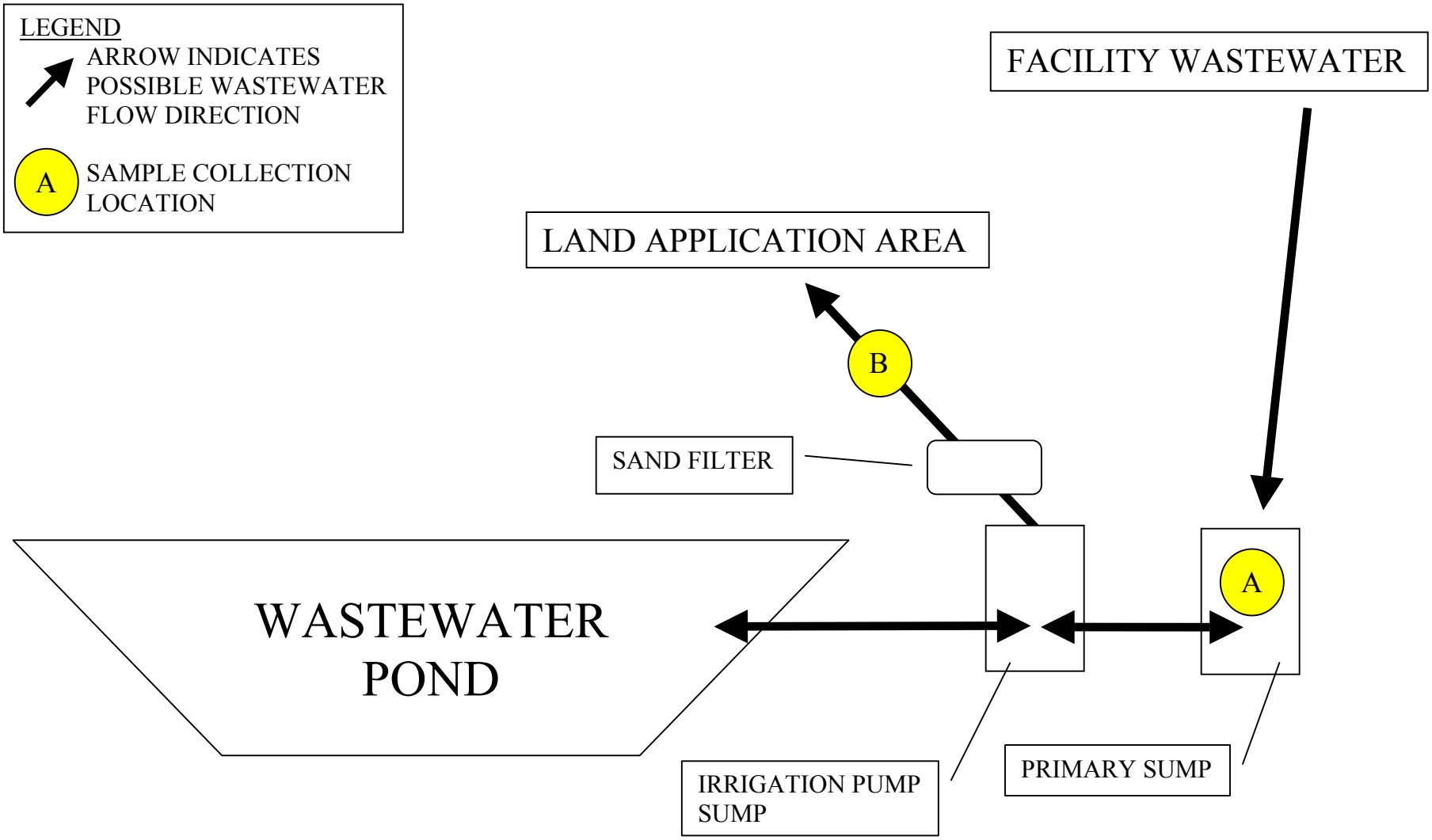
These WDRs establish wastewater effluent concentration limits, land application area loading limits, and require submittal of a *Stormwater Compliance Report, Sampling and Analysis Plan, Land Application Area Improvement Report, Groundwater Monitoring Well Installation Report, Wastewater Storage and Disposal Contingency Plan, Wastewater Flow Meter Report, Pond Liner System Construction Quality Assurance Plan, Operation and Maintenance Plan, Wastewater Treatment System Construction Report, and a Background Groundwater Quality Study Report.*

Surface water drainage in the area is to the Calaveras River between New Hogan Reservoir and the Sacramento/San Joaquin Delta.

TRO: 6/1/05

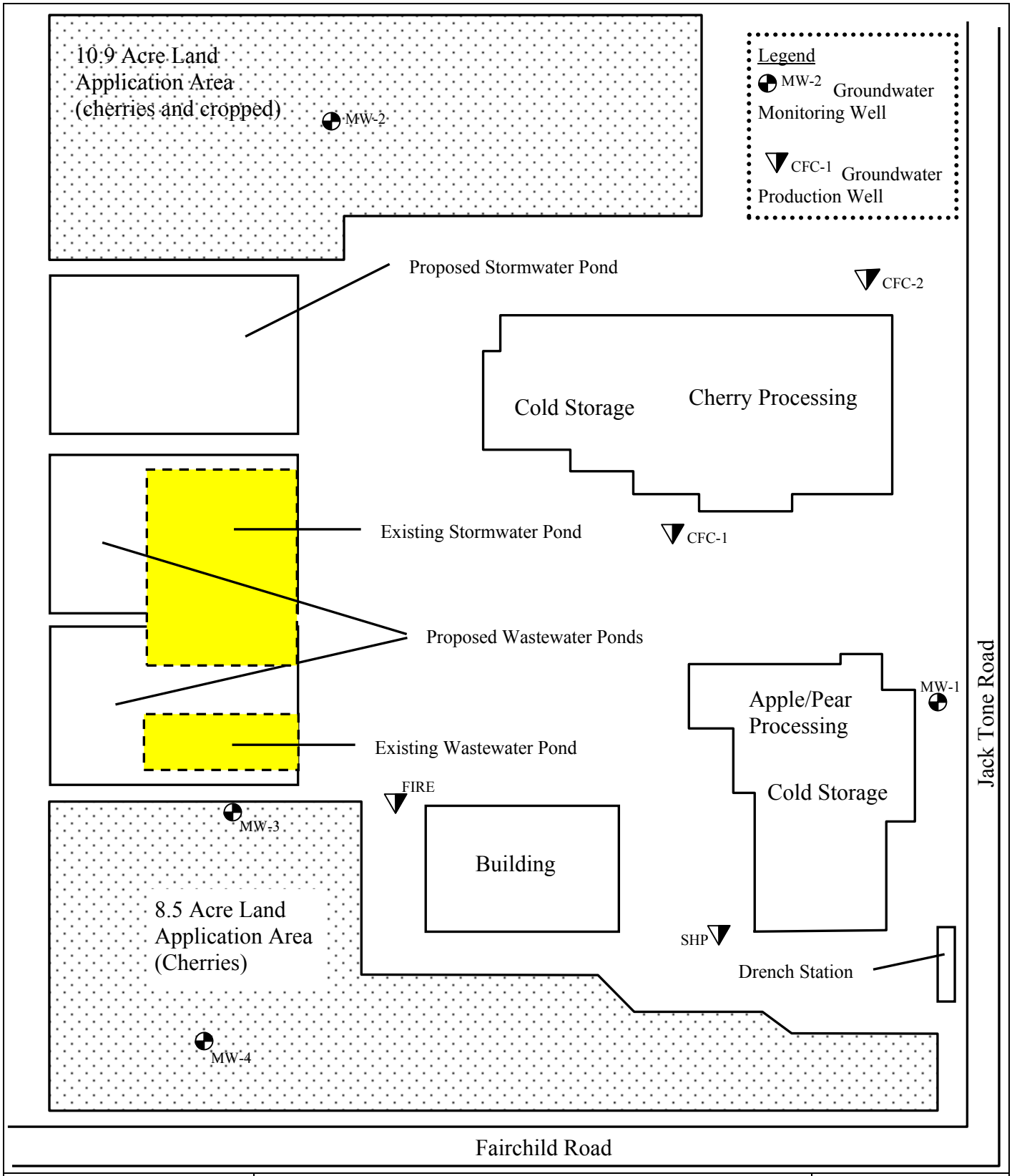


Drawing Reference: U.S.G.S, 7.5 Min Quad Stockton East Topographic Map	**SITE LOCATION MAP** CHINCHIOLO STEMILT/JT INVESTMENTS 4799 AND 4505 N. JACK TONE ROAD STOCKTON, CA SAN JOAQUIN COUNTY	N W E S approx. scale 1 in. = 3,200 ft.



Not to scale.

SAMPLE COLLECTION LOCATIONS
Chinchiolo Stemilt California/JT Investments
4799 and 4505 N. Jack Tone Road
Stockton, San Joaquin County



Drawing Reference: NOA Environmental Report of Waste Discharge, Site Plan 1/28/04	**SITE FACILITY MAP** Chinchiolo Stemilt California/JT Investments 4799 and 4505 N. Jack Tone Road Stockton, San Joaquin County	N W E S Not to scale.

California Regional Water Quality Control Board
Central Valley Region
Robert Schneider, Chair

Alan C. Lloyd Ph.D.
Secretary for Environmental Protection

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Arnold Schwarzenegger
Governor

ORDER NO. R5-2005-0103
ATTACHMENT D
REQUIREMENTS FOR
MONITORING WELL INSTALLATION REPORTS

Upon installation of the monitoring wells, the Discharger shall submit a well installation report that includes the information listed below. All reports must be prepared under the direction of, and signed by, a geologist or civil engineer licensed by the State of California.

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

Sacramento Non15 Unit: updated 3 March 2004