

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

**WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2006-0001
Waste Discharger Identification No. 3 440302001**

For

**CITY OF WATSONVILLE
CLASS III LANDFILL
SANTA CRUZ COUNTY**

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

SITE OWNER AND LOCATION

1. The City of Watsonville Public Works Department (hereafter "Discharger" or "City") owns and operates the City of Watsonville Class III Landfill (hereafter "Landfill").
2. The Landfill is located in Sections 2 and 3 of Township 12 South, Range 1 East, Mount Diablo Baseline & Meridian, in the coastal region of Santa Cruz County, approximately 1.5 east of Monterey Bay, 3.5 miles west of City of Watsonville, as shown in Attachments 1 and 2 of this Order. The Landfill's address is 730 San Andreas Road, Watsonville, California, 95076. The longitude and latitude of the site is latitude 36.91284 North, longitude 121.82345 West. The current Assessor's Parcel Numbers for the Landfill are 46-201-22 and 46-201-27.

PURPOSE OF ORDER

3. The purpose of Waste Discharge Requirements Order No. R3-2006-0001 (Hereafter "Order" or "Order No. R3-2006-0001") is to revise, update, and replace existing Waste Discharge Requirements Order No. 94-020, adopted by the Regional Board on February 11, 1994, and incorporate corrective action requirements and provisions as a result of CDO No. 96-08, adopted by the Regional Board on July 26, 1996.
4. The Discharger submitted a Joint Technical Document (JTD) on March 9, 2005, to facilitate the review and revision of Order No. 94-020. The Discharger did not propose modifications to the design and operation of the Landfill. The JTD discusses the following:
 - a. General Info
 - b. Waste Classification and Management
 - c. Waste Management Unit Classification and Siting
 - d. Waste Management Unit Characteristics
 - e. Design and Construction Standards
 - f. Design Report
 - g. Operating Criteria
 - h. Operations Plan
 - i. Landfill Cover
 - j. Waste Handling Procedures
 - k. Environmental Controls

The JTD also includes the following documents:

- a. Permits and Other Related Documents including Waste Discharge Requirements Order No. 94-020
 - b. A Landfill Development Plan
 - c. A Settlement Evaluation
 - d. Site Capacity and Service Life Calculations
 - e. A Slope Stability Evaluation,
 - f. Leachate Generation Potential Evaluation
 - g. Drainage Calculations
 - h. Landfill Gas Information
 - i. A Construction Quality Assurance Plan
 - j. An Emergency Response Plan
 - k. Soil Loss Calculations
 - l. A Load Checking Program
5. Order No. R3-2006-0001 includes the following key elements:
- a. A detailed review of the entire 103-acre Landfill site.
 - b. A revised Monitoring and Reporting Program, which includes groundwater and surface water monitoring.
 - c. Updated waste stream information.
 - d. Allowance for disposal of treated wood waste.
 - e. Language that brings the Landfill into compliance with California Code of Regulations Title 27, Solid Waste, effective July 18, 1997 (CCR Title 27); and 40 CFR Parts 257 and 258 Solid Waste Facility Disposal Criteria, Final Rule, as promulgated October 9, 1991 (40CFR 257 and 258).
 - f. Requirements and provisions that address corrective actions initiated with CDO No. 96-08.

LANDFILL SITE DESCRIPTION AND HISTORY

6. The Landfill currently meets all Title 27 criteria for classification as a Class III Landfill and is suitable to receive non-hazardous solid wastes.
7. The Landfill covers 103-acres and is located on a hillside sloping northeastward and eastward toward Gallighan Slough. Elevation at the site (referenced from mean sea level) is 260 feet near the southern boundary, 325 feet at Phase I/II (maximum elevation), and 100 feet on the northern boundary.
8. The Landfill is bordered by the Gallighan Slough to the north, agricultural land to the south and west, and the Southern Pacific rail lines to the east and north. The County of Santa Cruz operates the Buena Vista landfill, which is located east of the Watsonville landfill across the Southern Pacific railroad track.
9. The Discharger purchased the site property and began operation as a Class II facility for discharge of municipal solid waste in 1968. Based on revisions to the California Code of Regulations, the site was reclassified pursuant to Chapter 15 as a Class III landfill for municipal solid waste on March 13, 1987.
10. The Landfill consists of both unlined and lined areas and will be developed in five phases. Phases I & II (unlined) are closed and have received an approved final cover. For all practical purposes these two phases are treated as one fill area and will be referred to as Phase I/II. Phase III (lined) is currently active and phases IV and V (to be lined) are designated for future filling activities.
11. The Landfill is open for disposal Monday through Friday, from 6:00 am until 4:00 pm, and is closed on Saturdays and Sundays. Site operations, such as equipment maintenance or repair of environmental control systems, may occur outside the hours for receiving waste. The landfill may open, if needed, to service franchise haulers on a holiday, as long as the holiday operating hours are within the permitted hours of operation.

12. Wastes are disposed of utilizing the area fill method. Wastes are placed and compacted in approximately 2-foot thick layers on a working face sloped no steeper than 3:1 (horizontal:vertical). The working face is covered daily with tarps, an approved form of alternative daily cover (ADC), to conserve landfill capacity. The waste is placed into 10-15 foot high lifts, and is covered as the lift advances across the landfill active area. If a lift is left undisturbed for over 180 days the top and side slopes of the lift are covered with a 12-inch thick intermediate soil cover. Cover material is generally obtained from on-site sources, but the City also accepts clean soil from construction projects.

13. The Landfill's historic municipal solid waste (MSW) disposal quantities are shown in the table below:

Year	Waste Disposed (Tons)	Daily Average* (Tons)
1994	25,558	98
1995	28,368	109
1996	25,669	99
1997	25,867	99
1998	31,821	122
1999	31,334	121
2000	30,494	117
2001	29,552	114
2002	30,029	115
2003	35,133	135
2004	37,935	146

* Based on 260 operating days per year.

14. Liquid wastes previously accepted at the Landfill are now taken directly to the City Wastewater Treatment Plant.

15. During 2004, the Landfill received approximately 37,935 tons of waste, or approximately 146 tons per day based on 260 operating days per year. The current peak daily flow is 205 tons. The JTD contains projected waste disposal quantities for the next five years as shown below:

Year	Waste Disposed* (Tons)	Daily Average** (Tons)
2005	38,220	147
2006	38,507	148
2007	38,796	149
2008	39,087	150
2009	39,380	151

* Based on 2004 waste disposal tonnage and 0.75 annual growth

** Based on 260 operating days per year.

16. As of 2004, the Landfill had an estimated remaining capacity of 2.05 million cubic yards. The estimated closure year is 2039, based on projected waste disposal quantities with a capacity utilization factor of approximately 1,700 pounds per cubic yard, 260 operating days per year, and an anticipated increase in growth of waste disposal tonnage of 0.75 percent per year.

WASTE TYPE & CLASSIFICATION

17. Waste received at the Landfill consists of non-hazardous residential, commercial and industrial solid waste classified in CCR Title 27, Section 20220(a) as Class III wastes. Class III wastes are all putrescible and nonputrescible solid, semi-solid, and liquid wastes including: garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid or semi-solid wastes and other discarded wastes (whether solid or semi-solid consistency); provided that such wastes do not contain materials that must be

managed as hazardous wastes, or material that contain soluble pollutants in concentrations that exceed applicable water quality objectives or could cause degradation of waters of the state.

18. Typical residential non-hazardous waste includes household waste, tree and lawn clippings, leaves and brush, scrap lumber and metal, appliances, furniture, wood chips, plastic containers, newspapers, cardboard, and glass containers. Commercial and demolition (inert) waste typically includes food wastes, agricultural wastes, paper, corrugated cardboard, plastic, rubber, glass, mixtures of concrete, asphalt, wood, steel, brick and block wastes.
19. Tires, mattresses, carpet padding, antifreeze, motor oil, and automobile batteries are accepted and temporarily stored on-site for periodic pick-up and removal by commercial recycling firms.
20. Wastes containing greater than one percent (>1%) friable asbestos are classified as hazardous under CCR, Title 22. Since such wastes do not pose a threat to water quality, Section 25143.7 of the Health and Safety Code permits their disposal in any landfill, providing waste discharge requirements specifically permit the discharge and the wastes are handled and disposed of in accordance with other applicable State and Federal statutes and regulations.
21. Animal carcasses, fish wastes, and food processing industry wastes are no longer accepted by the Landfill.
22. Liquid wastes previously accepted at the Landfill are now taken directly to the City Wastewater Treatment Plant where they are deposited into a stainless steel receiving hopper. The liquid waste is then pumped from the hopper to a grinder and flows directly to an anaerobic digester.
23. Most of the dewatered sewage sludge (biosolids) accepted at the Landfill is greater than 50 percent solids.
24. Most of the special waste accepted at the Landfill has been biosolids with greater than 50 percent solids. Other types of special wastes include non-friable asbestos and bulky waste (e.g. furniture). Autodies which were once accepted, are no longer accepted
25. Non-friable asbestos is occasionally received at the Landfill from City construction projects. In 1988, non-friable asbestos wastes were also received from two commercial sites following the 1989 Loma Prieta earthquake. Non-friable asbestos is removed, packaged and transported to the landfill by a licensed asbestos contractor. Disposal is modeled after the May 1985 United States Environmental Protection Agency (EPA) publication "Asbestos Waste Management Guidance" with the following variation: City construction inspectors advise landfill staff that non-friable asbestos will be coming to the landfill. An area of the active face is set aside for the non-friable asbestos. The non-friable asbestos is placed in the active face and covered immediately with 12 inches of soil. No projections for non-friable asbestos are possible as there are no anticipated removal projects.
26. The Discharger may choose to accept treated wood waste at the facility. "Treated wood" means wood that has been treated with a chemical preservative for purposes of protecting the wood against attacks from insects, microorganisms, fungi, and other environmental conditions that can lead to decay of the wood and the chemical preservative is registered pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. Sec. 136 and following). Existing law regulates the control of hazardous waste, but exempts from the hazardous waste control laws, wood waste that is exempt from regulation under the federal Resource Conservation and Recovery Act of 1976, as amended (RCRA), if the wood waste is disposed of in a municipal landfill that meets certain requirements imposed pursuant to the Porter-Cologne Water Quality Control Act for the classification of disposal sites, and the landfill meets other specified requirements outlined in Sections 25143.1.5 and 25150.7 of the Health and Safety Code. Section 25150.8 of the Health and Safety Code also provides that if treated wood waste is accepted by a solid waste landfill that manages and disposes of the treated wood waste in the manner specified, the treated wood waste shall be deemed to be a solid waste, and not a hazardous or designated waste. The Discharger has indicated that all treated wood waste accepted at the facility will be handled and disposed of in accordance with the provisions outlined in Sections 25143.1.5, 25150.7, and 25150.8 of the Health and Safety Code.

27. Source sorted beverage containers (bottles and cans), newspaper and cardboard are not currently brought to the Landfill. Wood and metal wastes are separated and placed in 30 yard roll-off containers, and removed from the site to be recycled. Tires are stockpiled and shipped to a recycler prior to accumulating more than 500.
28. The City has a separate system for green waste and non-treated wood waste. The City collects an average of 3 tons per day of green waste, and 2 tons per day of wood waste. The material is stored in Phase III of the landfill site for up to 5 months, and then chipped by a contractor. Generally, all the chipped green waste is used for compost feedstock by various local composting facilities, and is removed from Phase III within 7 days of chipping. Chipped wood waste is used on-site as ADC or may be shipped off site for use as biofuel.

GEOLOGY/HYDROGEOLOGY

29. **Setting** – The Landfill site lies within a broad band of gently rolling hills of the Monterey Bay coastal plain. This terrain has been incised by small streams draining southward to the Pajaro River, including Harkins and Gallighan sloughs east of the Landfill
30. **Topography** – The Landfill site is on a hillside that slopes northeastward and eastward toward Gallighan Slough. Original elevations within the site range from approximately 260 feet above mean sea level (MSL) to 100 feet MSL along the Southern Pacific Railroad track. At this elevation the site is well above any inundation that might be caused by a 100-year flood event. The development of the Landfill will create final landfill grades ranging from 3:1 (horizontal to vertical) on the landfill sideslopes to 20:1 on the top deck. The maximum elevation achieved will be approximately 325 feet MSL in Phases I/II, and III, and 275 feet MSL in Phases IV and V.
31. **Geologic Structure** – The Pajaro Valley is underlain by three distinct structural blocks, separated by the two major fault systems, the San Andreas and the Zayante-Vergeles. The San Andreas Fault zone trends from the southeast to the northwest across northern and eastern sides of the Pajaro Valley. Northeast of the fault zone, sandstones and shale of Paleocene to mid-Miocene age underlie the Santa Cruz Mountains, which rest on a Franciscan Formation basement. A subsiding structural block lies between the San Andreas and Zayante-Vergeles fault zones. A sequence of folded Eocene to Pliocene sediments and some volcanics extend to a depth of about 10,000 feet and lies upon granitic basement. Southwest of the Zayante-Vergeles fault zone, where the landfill is located, the same granitic basement is found at depths of 2,000 to 3,000 feet is overlain by very gently sloping water-bearing deposits of the Pliocene age. A thick sequence of sedimentary deposits, including interbedded clays, silts, and gravel, underlie the site area to depths in excess of 2,500 feet. Distinct hydrogeologic units that have identified in the Pajaro Valley include the semi-consolidated Tertiary Purisima Formation (Pliocene), and the unconsolidated Aromas Red Sands, terrace deposits, alluvium, and dune sands of the Quaternary age.
32. **Stratigraphy** – The Landfill is underlain by Manresa dune sands, which overlie fluvial terrace deposits made up of interbedded clays, silts, and sands, followed by the Aromas Sands Formation made up of interbedded fluvial sands, gravels, silts, and clays. All three units of the Quaternary period. Tertiary Purisima Formations from the mid-Pliocene age underlie the Aromas Formation. The thickness of the Manresa dune sands on site is determined by topography, at the higher elevations the dune sands are over 150 feet thick compared to 30 to 50 feet thick at the lower elevations. The contact between the Manresa dune sands and the underlying terrace deposits is at approximately 110 to 120 feet MSL. The contact between the terrace deposits and underlying Aromas Sands Formation is approximately –30 to –10 feet MSL.

Geologic characterization of materials beneath the site indicates that these sediments do not provide adequate protection for water quality. An engineered liner system is necessary for all proposed disposal areas.

33. **Faulting/Seismicity** – The Landfill lies in the geologically active coastal belt of central California, characterized by periodic seismic activity along the San Andreas and associated faults. The San Andreas fault is approximately 7 miles northwest of the site and is the most probable seismic source in the region.

Other associated faults include the Zayante-Vergeles Fault, approximately 1 mile northeast of the site, and the Cypress Point Fault, approximately 20 miles from the site.

The maximum probable earthquake along the San Andreas fault, magnitude 8.25, would yield the highest peak horizontal bedrock acceleration of approximately 0.58g at the site. The maximum probable earthquake, magnitude 7.1, from the Zayante-Vergeles fault, corresponds to a mean peak horizontal bedrock acceleration of approximately 0.46g at the site.

34. **Hydrogeology** – Three water bearing zones are found below the Landfill. A perched zone contained within the terrace deposits, the Aromas formation aquifer, and the Purisima formation aquifer. The perched groundwater in the terrace deposits occurs at 65 to 115 feet MSL with a general flow to the north and west. The principal water bearing formation is the Aromas Formation Aquifer, which has a groundwater elevation near sea level with a general flow to the east and southeast. The deepest water bearing zone is the Purisma formation aquifer, but its use is limited since the Aromas formation produces ample water for the areas needs.

GROUNDWATER, STORM WATER, AND SURFACE WATER

35. **Groundwater** – Groundwater information onsite is limited to two distinct water bearing zones the perched groundwater of the terrace deposits and the Aromas formation aquifer. In September 2004, the hydraulic gradient of the groundwater contained in the terrace deposits beneath Phase I/II was approximately 0.0408 feet/feet with a calculated velocity of 2.77 feet per day, and beneath Phase III was approximately 0.0403 feet/feet with a calculated velocity of .274 feet per day, based on a 4.8×10^{-3} hydraulic conductivity and a 0.20 effective porosity. General flow of groundwater within the terrace deposits is to the east and southeast. In September 2004, the hydraulic gradient of the groundwater contained in the Aromas Sands formation was approximately 0.00318 feet/feet with a calculated velocity of 0.04 foot per day, based on a $1/0 \times 10^{-3}$ cm/sec hydraulic conductivity and a 0.25 effective porosity. General flow of groundwater within the Aromas formation aquifer, is to the east and southeast. As the perched groundwater of the Terrace Deposits moves offsite, with a steep gradient to the north and west, it quickly comes into contact with the Aromas Sands formation, which generally flows east and southeast back under the Landfill.
36. **Groundwater Quality** – Trace volatile organic compounds (VOC) have been consistently detected in several groundwater monitoring wells. All wells impacted monitor the perched zone of the terrace deposits except for Aromas formation monitoring well AW-3 and are in the vicinity of Phase I/II. VOC impacts to terrace deposit monitoring wells are stable or trending lower. Vinyl chloride impacts to AW-3 were decreasing prior to 1997 but have trended higher since. The VOC, 1,2-dichloropropane, consistently detected in wells TW-2, TW-5, TW-12, TW-13A, TW-20, and AW-23, with historically concentrations ranging from 0.4 ppb to 3.2 ppb and is typically used agriculturally as an ingredient of soil fumigant D-D, and is not commonly associated with municipal waste. The lack of landfill related VOCs in groundwater monitoring wells in the vicinity of phase III appear to show that the liner, leachate collection, and gas extraction for phase III are performing as designed.
37. Inorganic monitoring parameters regularly exceed the concentration limits in most of the terrace deposit monitoring wells and several of the Aromas formation monitoring wells. Several of the inorganic concentration limits for evaluation monitoring wells have been exceeded in both the Aromas Sand and terrace deposit aquifers, but are consistent with historical findings. In general inorganic monitoring demonstrate that leachate impacts may still be resulting from phase I/II. Monitoring for inorganic groundwater quality in the vicinity of phase III appears to show that the liner and leachate collection for phase III are performing as designed.

38. **Supply Wells** – There are no onsite water supply wells, all water is trucked to the Landfill by a certified potable water carrier and stored. A 1,500 gallon tank is located adjacent to the maintenance building. A 2,500 gallon tank is located adjacent to the landfill office building. Water for washing and toilet flushing is provided from the tanks. A drinking water cooler is located in the office building.

Groundwater from the Aromas formation is the primary source of drinking and irrigation water near the Landfill. The approximate locations of 24 domestic and irrigation supply wells, within a one-mile radius of the site, are shown in Attachment 3.

39. **Groundwater Separation** - California Code of Regulations Title 27, Section 20240(c), requires the Discharger to operate the Landfill to ensure that wastes will be a minimum of five feet above highest anticipated groundwater. This operational requirement reduces leachate generation and impairment of beneficial uses. The base of Phase III varies from approximately 204 to 220 feet MSL, resulting in a separation to groundwater exceeding 100 feet. The proposed base of Phase IV varies from approximately 135 to 180 feet MSL and the proposed base of Phase V varies from approximately 135 to 154 feet MSL, resulting in groundwater separation exceeding 40 feet for both of the future phases.
40. **Surface Water** – Gallighan Slough lies just north and east of the landfill and flows southeast, joining Harkins Slough 0.75 miles southeast of the site. Harkins Slough is tributary to Watsonville Slough, which discharges at the mouth of the Pajaro River. The Watsonville Slough system consists of flat alluvial valleys near sea level, which are intermittently flooded with fresh water during the winter months. The lower part of the Watsonville Slough is subject to tidal action. The low gradient of the slough bottom delays the discharge of storm water, and the slough bottoms are flooded up to several feet deep for several months during most winters.
41. **Storm Water** - The Landfill is located on a hillside that faces eastward within the Gallighan Slough watershed. Runoff from the hillside flows northeastward and eastward to the railroad, which abuts the site on the north and east. Runoff then passes through numerous culverts beneath the tracks, and flows down side-canyon areas to Gallighan Slough.

California Code of Regulations Title 27, Section 21750(e), requires that Class III landfills be designed to handle the runoff from a 100-year, 24-hour storm. Based on information from the National Oceanographic and Atmospheric Administration the 100-year, 24-hour storm for the area in the vicinity of the Landfill is estimated to be 6 inches. Surface-water runoff from the side slopes of the landfill is carried by bench-ditches and overside drains, which discharge to various onsite storm water detention basins. The detention basins and surface water sampling locations are shown in Attachment 4.

42. **Storm Water Permitting** - In addition to this Order, the Discharger is covered under a Statewide General Storm Water Permit. On April 2, 1992, the Discharger submitted a "Notice of Intent" to comply with the General Permit to Discharge Storm Water Associated with Industrial Activity (WQ Order No. 97-03-DWQ). The Discharger performs storm water monitoring in accordance with the General Permit's Monitoring and Reporting Program and required onsite storm water pollution prevention plan. Storm water samples are collected twice per year. Samples are collected during the first hour of runoff from a storm event that occurs during scheduled operating hours and that was preceded by at least three working days without storm water discharge.
43. **Precipitation** – Based on records from the Watsonville Water Works Station, about 90 percent of the annual precipitation occurs from October through April with an average annual rainfall at the site of approximately 22.3 inches. January is the wettest month with an average precipitation of 4.7 inches and July is the driest month with an average precipitation of 0.05 inches.
44. **Floodplain** - The Federal Emergency Management Agency Flood Insurance Rate Map (Panel 0600353 0390 B), shows the landfill located in Flood Hazard Zone C, which is outside the 100-year flood plain.
45. **Springs** – There are several springs along the railroad tracks and the northern boundary of the site.

CONTROL SYSTEMS/MONITORING PROGRAMS

46. **Leachate Management System** – Phase I/II leachate is collected by a gravity flow collection system along the fill benches and fill perimeter. The gravity flow collection system consists of 2,300 feet of 4-inch perforated PVC piping, which is set in a 2 feet by 3 feet gravel bed. A forty foot wide french drain along the northern toe of the fill was later added in 1993. Phase III leachate is collected by a perforated HDPE pipe that runs through the lined cell drain rock layer. The leachate is directed into a collection sump where it is pumped out automatically when the leachate reaches a specified depth. Leachate from both Phase I/II and III is pumped to a leachate storage area that contains four 10,000 gallon tanks. The tanks are contained in a concrete pad with equivalent secondary containment.

Water from the French drain system in Phase I/II is called seep water and is substantially cleaner than the actual leachate collected from Phase I/II. This seep water is believed to be generated by irrigation water from adjacent farm fields that travels through the sandy soils onto the landfill site due to underlying clay layers. Seep water is used onsite for dust control outside of the lined areas. Leachate collected from Phase I/II and Phase III is used only in lined areas for dust control or hauled to the City's wastewater treatment plant for disposal.

47. **Landfill Gas Control** – Phase I/II contains 18 gas extraction wells, 14 of which were installed as part of the Phase I/II Closure Construction. Several of the interior gas wells in the southwest part of Phase I/II contain leachate and as a result effectiveness of the gas collection is limited. The City is attempting to extract leachate and gas concurrently from the impacted wells. There are seven gas extraction wells installed in the native soil around the southwest perimeter of Phase I/II. This system contains an independent blower, which sends the gas from these wells through a carbon bed to remove VOCs. The system was installed in 1996 to eliminate off-site migration from Phase I/II. The perimeter gas system contains only low levels of landfill gas and are expected to be abandoned when the interior gas wells can contain the landfill gas completely. Since 2003, the perimeter system has only been needed intermittently, and is generally turned on one week per month. A series of horizontal gas wells have been installed in Phase III, more will be added as it is filled. Landfill gas collected from Phase I/II (interior) and Phase III is piped to the adjacent Buena Vista Landfill, where blowers provide vacuum for the City gas wells and a ground flare burns both the City and County landfill gas. Gas condensate resulting from landfill gas collection is stored in tanks and hauled as necessary to the City WWTP.

48. **Groundwater Monitoring** – The groundwater monitoring system consists of 12 wells in the Terrace Deposit perched zone (TW-2, TW-5, TW-8, TW-9, TW-10, TW-11, TW-12, TW-13A, TW-14, TW-20, TW-21, and TW-22), five wells in the Aromas Sand aquifer (AW-1, AW-3, AW-4, AW-18, AW-23), and agricultural well 240, as shown in Attachment 4.

Background Monitoring Points for the future fill areas of Phase IV and V include the following groundwater wells: AW-4, TW-9, TW-10, TW-11. Detection Monitoring Points for existing fill areas include the following groundwater wells: AW-1, AW-3, AW-4, AW-23, TW-9, TW-10, TW-11, TW-13A, TW-14, TW-21, TW-22, and agricultural well 240. Corrective Action Points (CAPs) for unlined Phase I/II area include the following groundwater wells: AW-3, TW-2, TW-5, TW-6, TW-12, TW-18, and TW-20. Since Phase I/II received its final cover all the CAP wells have trended lower with regard to total VOCs except for wells AW-3, and TW-2. Vinyl Chloride in AW-3 has trended higher indicating that landfill gas may still be impacting groundwater. Volatile Organic Compounds in TW-2 have remained relatively stable while inorganic constituents have trended higher towards levels consistent with leachate.

49. **Leachate Monitoring** – Leachate from Phase I/II and III, seep water, and condensate collected from the landfill gas collection system are periodically tested for VOCs and inorganics to ensure compliance with CCR Title 27, and 40 CFR, Part 258.40(a)(2). Leachate, seep water, and condensate are either disposed of onsite through dust control or hauled offsite for disposal at the City of Watsonville WWTP.
50. **Surface Water Monitoring** - Surface water is monitored at up to seven water-sampling locations, SW-1

through SW-7, as shown in Attachment 4. Stations SW-1, SW-3, and SW-5 have been dry since 1996 and as a result have not been sampled recently. Storm water monitoring must also comply with the State's NPDES storm water discharge general permit and periodically storm water leaving the site to the Galighan Slough is sampled and analyzed.

51. **Vadose Zone Monitoring** – Vadose zone monitoring is required by Section 20415 (Title 27) unless demonstrated by representative soil suction curves that soil pore liquid cannot be extracted. The Phase I/II area is unlined. As part of the construction of Phase III a lysimeter was installed at the leachate collection sump. The lysimeter is to be sounded periodically in accordance with MRP R3-2006-0001, if liquid is present, the Regional Board will be notified and the liquid will be sampled and analyzed for constituents of concern.
52. **Landfill Gas Monitoring** – To monitor lateral migration of gas at the Landfill, gas probes were installed adjacent to the onsite maintenance building and in several locations along the perimeter of the site as shown in Attachment 4. Gas probes are monitored monthly and reported quarterly in accordance with MRP Order No. R3-2006-0001.

BASIN PLAN

53. The Water Quality Control Plan, Central Coast Basin (Basin Plan), was adopted by the Regional Board on September 8, 1994, and approved by the State Water Resources Control Board (SWRCB) on November 17, 1994. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State Waters. This Order implements the water quality objectives stated in that Plan.
54. The Basin Plan identifies the following present and anticipated beneficial uses of the Galighan Slough:
 - a. Water contact recreation;
 - b. Non-contact water recreation;
 - c. Wildlife habitat;
 - d. Warm fresh-water aquatic habitat;
 - e. Rare, threatened, or endangered species;
 - f. Estuarine habitat;
 - g. Commercial and sport fishing; and
 - h. Shellfish Harvesting.

Galighan Slough discharges to Harkins Slough 0.75 miles southeast of the Landfill. Harkins Slough is a tributary to Watsonville Slough, and both include the present and anticipated beneficial uses listed above and also the following:

- a. Preservation of biological habitats of special significance.

55. Present and anticipated beneficial uses of groundwater in the Landfill vicinity include:

- a. Agricultural supply;
- b. Municipal and domestic supply; and
- c. Industrial use.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

56. This Order contains prohibitions, discharge specifications, water quality protection standards, and provisions intended to protect the environment by mitigating or avoiding impacts of the project on water quality. This Order is for an existing facility and therefore is exempt from provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) in accordance with Title 14, Chapter 3, and Section 15301.

GENERAL FINDINGS

57. The Landfill is included in the Santa Cruz County Waste Management Plan, dated April 1996 and operates under various permits other than these Waste Discharge Requirements including:
- a. Solid Waste Facilities Permit No. 44-AA-0002, issued by California Integrated Waste Management Board on August 10, 2000.
 - b. Minor Land Division/Coastal Zone/Riparian Exception Permit No. 90-0123, issued by the County of Santa Cruz on July 17, 1990, Permit No. 93-0055 issued by the County of Santa Cruz on April 16, 1993, and Permit No. 96-0216 issued by the County of Santa Cruz on July 17, 1996.
 - c. Coastal Development Permit No. A-3-SCO90-98 and A-3-SCO-90-101, issued by the California Coastal Commission on July 17, 1990 and February 5, 1991, respectively.
58. Discharge of waste is a privilege, not a right, and authorization to discharge waste is conditioned upon the discharge complying with provisions of Division 7 of the California Water Code and with any more stringent limitations necessary to implement the Basin Plan, to protect beneficial uses, and to prevent nuisance. Compliance with this Order should ensure conditions are met and mitigate any potential changes in water quality due to the project.
59. Title 27 of the California Code of Regulations (CCR 27) regulates waste discharges to land. The terms used in this permit are defined in CCR Title 27, Section 20164.
60. Pursuant to Title 27, Section 20080(g), landfill areas that were closed, abandoned, or became inactive on or before November 27, 1984, are not specifically required to be closed in accordance with current Title 27 requirements (Section 20950 et seq.). However, the requirements of CCR Title 27 are minimum requirements. The Regional Board may impose more stringent requirements if necessary to accommodate regional or site-specific conditions [Title 27, Section 20080(a)(1)].
61. This Order implements the prescriptive standards and performance goals of CCR Title 27, as promulgated on July 18, 1997, and in conformance with the goals of the Central Coast Regional Water Quality Control Basin Plan.
62. Final closure plans for Phases III, IV, and V will be submitted to the Board for approval at least 240 days prior to beginning any Landfill closure activities.
63. On November 17, 2005, the Regional Board notified the Discharger and interested agencies and persons of its intention to update the Landfill Waste Discharge Requirements and has provided them with a copy of the proposed Order and an opportunity to submit views and comments.
64. After considering all comments pertaining to this discharge during a public hearing on February 10, 2006, this Order was found consistent with the above findings.

IT IS HEREBY ORDERED pursuant to authority in Section 13263 of the California Water Code, the City of Watsonville, its agents, successors, and assigns may discharge wastes at the Watsonville Class III Landfill, providing compliance is maintained with the following:

A. COMPLIANCE WITH OTHER REGULATIONS, ORDERS AND STANDARD PROVISIONS

1. Discharge of waste shall comply with all applicable requirements contained in the California Code of Regulations Title 27, Division 2, Solid Waste (CCR Title 27) and Title 40 Code of Federal Regulations Parts 257 and 258 (40 CFR) Solid Waste Facility Disposal Criteria. If any applicable regulation requirements overlap or conflict in any manner, the most water quality protective requirement shall govern in all cases, unless specifically stated otherwise in this Order, or as directed by the Executive Officer.

2. This Landfill is no longer subject to this Regional Board's Order No. 93-84 "Waste Discharge Requirements (WDR) Amendment for All Municipal Solid Waste Landfills in the Central Coast Region" (Super Order). The Super Order updated all Region 3 landfill WDRs to comply with the updated federal landfill regulations, 40 CFR Parts 257 and 258. Through compliance with CCR Title 27 and 40 CFR Parts 257 and 258 as required above in A.1, the Discharger will satisfy requirements identical to those within Order No. 93-84.
3. The Discharger shall monitor potential releases from the Landfill related to storm water runoff by complying with all requirements contained in the "State Water Resources Control Board Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001 Waste Discharge Requirements for Discharge of Storm Water Associated with Industrial Activities Excluding Construction Activities."
4. This Landfill is subject to this Regional Board's Cleanup and Abatement Order No. R3-2002-0130 "Moratorium on the Disposal of Decommissioned Materials to Class III and Unclassified Waste Management Units" adopted on October 11, 2002.

B. PROHIBITIONS

1. Discharge of waste to areas outside the Permitted Landfill Boundary, as identified in Attachment 4, is prohibited.
2. Discharge of waste (solid or liquid) to areas within the Permitted Landfill Boundary that have not previously received waste is prohibited unless a composite liner system, as described in Specification C.32, is installed and accepted by the Executive Officer. Only inert wastes, as defined in Title 27 CCR 20230(a), may be disposed of outside the composite liner system and within the permitted waste footprint of the Landfill provided an Executive Officer approved Sampling Plan, as described in Specification C.19, is implemented to demonstrate that the waste is inert.
3. Discharge of the following types of wastes is **prohibited**:
 - a. Radioactive wastes.
 - b. Designated waste, except where the Discharger demonstrates to the Executive Officer's satisfaction that waste constituents present a lower risk of water quality degradation than indicated by this classification.
 - c. Hazardous waste, except wastes containing greater than one percent (>1%) friable asbestos.
 - d. Chemical and biological warfare agents.
 - e. Waste solvents, dry cleaning fluids, paint sludge, pesticides, phenols, brine, and acid and alkaline solutions.
 - f. Oils or other liquid petroleum products.
 - g. Wastes that have the potential to reduce or impair the integrity of containment structures or which, if commingled with other wastes in the unit, could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products.
 - h. Wastes that require a higher level of containment than provided by the Landfill.
 - i. Liquid or semi-solid waste containing less than 50 percent solids by weight. This includes dewatered sewage or water treatment sludge, landfill leachate and gas condensate, except as allowed by Specification C. 21 and Provision E.15.
4. Discharge of solid waste, liquid waste or leachate to surface waters, ponded water from any source, surface water drainage courses, or groundwater is prohibited.
5. Discharge of waste within 50 feet of the property line or within 100 feet of surface waters or domestic supply wells is prohibited. However, the Discharger may submit a request to discharge waste within 50 feet of the property line. The request shall include an irrevocable access and operations easement with the adjacent property owner and shall be approved by the Executive Officer, prior to waste disposal.
6. Disposal of wastes within five (5) feet of the highest anticipated elevation of underlying groundwater,

including the capillary fringe, is prohibited unless an Executive Officer approved engineered alternative in accordance with CCR Title 27, Section 20080 (b) is in place.

7. Ponding of liquids over solid waste fill areas is prohibited

C. SPECIFICATIONS

General Specifications

1. The Discharger shall implement the attached Monitoring and Reporting Program No. R3-2006-0001, including any addendum thereof, in order to detect, at the earliest opportunity, any unauthorized discharge of waste constituents, or any unreasonable beneficial use impairment associated with and or caused by the discharge of waste. The Executive Officer may amend the Monitoring Reporting Program at any time.
2. The discharge shall neither cause nor contribute to any surface water contamination, pollution, or nuisance, including, but not limited to:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam.
 - b. Increases in bottom deposits or aquatic growth.
 - c. An adverse change in temperature, turbidity, or apparent color beyond natural background levels.
 - d. The creation or contribution of visible, floating, suspended, or deposited oil or other products of petroleum origin.
 - e. The introduction or increase in concentration of toxic or other pollutants/contaminants resulting in unreasonable impairment of beneficial uses of waters of the State.
3. Disposal site operations shall not be a source of odor nuisance
4. "Treated wood" wastes may be discharged, but only to an area equipped with a composite liner and leachate collection and removal system, as described in Construction Specification C.30, and shall be handled in accordance with California Health and Safety Code Sections 25143.1.5 and 250150.7. "Treated wood" means wood that has been treated with a chemical preservative for purposes of protecting the wood against attacks from insects, microorganisms, fungi, and other environmental conditions that can lead to decay of the wood and the chemical preservative is registered pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. Sec. 136 and following). This may include but is not limited to waste wood that has been treated with chromated copper arsenate (CCA), pentachlorophenol, creosote, acid copper chromate (ACC), ammoniacal copper arsenate (ACA), ammoniacal copper zinc arsenate (ACZA), or chromated zinc chloride (CZC).
5. Treated wood must be managed to ensure consistency with Sections 25143.1.5 and 25150.7 of the Health and Safety Code. If a verified release is detected from the waste management unit where treated wood is disposed, the disposal of treated wood shall be terminated at the unit with the verified release until corrective action ceases the release.
6. Discharge Specifications C.4 and C.5, above, apply only to treated wood waste that is a hazardous waste solely due to the presence of a preservative in the wood, and is not subject to regulation as a hazardous waste under the federal act.
7. The discharge shall not cause an increase in concentration of waste constituents in soil-pore gas, soil-pore liquid, perched water, groundwater or geologic materials outside of the Point of Compliance (as defined by CCR Title 27).
8. The Discharger shall conduct intake load checking as specified by this Order including the attached monitoring and reporting program, to ensure that "hazardous waste," "designated waste," and "radioactive waste" are not discharged to the landfill.

9. Wastes discharged in violation of these requirements shall be removed and relocated.
10. All refuse material that is wind-blown outside the active Landfill area shall be collected regularly and disposed of in the Landfill. If wind-blown litter becomes a continuing problem, a containment barrier (additional screens and/or fences) shall be constructed to prevent spreading of refuse.
11. The Waste containment system shall be maintained to ensure effectiveness.
12. Refuse shall be covered daily by at least six inches of soil cover material at an Executive Officer-accepted alternative daily cover and cover frequency. Daily cover shall promote lateral runoff of rainfall away from the active disposal area and waste.
13. All Landfill waste disposal areas that have not reached final fill elevation, but will remain inactive more than one year, must be provided with an Executive Officer-approved long-term intermediate cover. The thickness and permeability of the long-term intermediate cover shall be based primarily on site-specific conditions including, but not limited to length of exposure time; volume of underlying material, permeability, thickness and composition of existing cover; amount of yearly rainfall; depth to groundwater; beneficial uses of underlying groundwater; site-specific geologic and hydrogeologic conditions; and effectiveness of existing monitoring system.
14. Water used over areas underlain by waste within unlined Landfill areas shall be limited to the minimum amount necessary for dust control and construction.
15. Water collected in any storm water catchment basin or a site water treatment facility may be used in minimum amounts necessary for dust control, compaction, or irrigation of cover vegetation provided:
 - a. The water does not infiltrate past the vegetation root zones or past a depth where effective evaporation can occur.
 - b. The water does not contain or carry waste constituents.
16. Surface drainage from tributary areas and internal site drainage from non-landfill surface or subsurface sources shall not contact or percolate through wastes.
17. To prevent erosion and percolation through the waste, permanent drainage ditches crossing over Landfill areas shall be lined with either a synthetic liner or at least a one-foot-thick layer of soil having an in-place hydraulic conductivity of 1×10^{-6} cm/sec or less, or an alternative material that restricts infiltration of surface waters into the underlying waste as approved by the Executive Officer.
18. Waste shall not be discharged to a wetland, as defined in 40 CFR Section 232.2(r), or to any portion thereof.
19. Only inert wastes, as defined in Title 27 CCR 20230(a), may be disposed of outside the composite liner system and within the permitted waste footprint of the Landfill. The discharger shall characterize inert waste in accordance with an Executive Officer-approved Liquid Waste Sampling Plan to demonstrate that the waste is inert.
20. The handling and disposal of asbestos containing waste shall be in accordance with all applicable federal, state, and local statutes and regulations.
21. Discharge of condensate or leachate shall comply with the following:
 - a. Liquids shall be returned to **only** a waste management unit equipped with a containment system that meets or exceeds the performance standards of CCR Title 27, 40 CFR, Part 258.40(a)(2), or in this Order, whichever is more protective of water quality.
 - b. Liquids shall be measured by volume and recorded on a monthly basis. These monthly volumes shall be included as a part of monitoring submittals as required in MRP R3- 2006-0001.

- c. No discharge of leachate shall occur within 48-hours of any forecasted rain event, during any rain event, or 48-hours after any rain event, unless a site specific Leachate Application Plan is submitted and approved by the Executive Officer,
- d. Have an approved alternate method of leachate disposal (e.g., wastewater treatment plant) that is acceptable to the Executive Officer.

Wet Weather

22. By **October 1st of each year**, all necessary runoff diversion and erosion prevention measures shall be implemented. All necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the Landfill and to prevent surface drainage from contacting or percolating through wastes.
23. **Throughout the rainy season of each year**, a minimum one foot thick compacted soil cover designed and constructed to minimize percolation of precipitation through wastes shall be maintained over all waste disposal areas containing buried waste. The soil cover shall be in place by **October 1st of each year**. The final thickness and permeability of the intermediate cover shall be based primarily on site-specific conditions including, but not limited to: length of exposure time; volume of underlying material; permeability, thickness and composition of existing cover; amount of yearly rainfall; depth to groundwater; beneficial uses of underlying groundwater; site-specific geologic and hydrogeologic conditions; existing groundwater impacts and effectiveness of existing monitoring system. The only exception to this specification is the working face. The working face shall be confined to the smallest area practicable based on the anticipated quantity of waste discharged and required Landfill facility operations. Landfill areas that have been provided with an Executive Officer-approved vegetative layer shall not be required to satisfy this requirement. Based on site-specific conditions, the Executive Officer may require a thicker soil cover for any portion of the Landfill prior to the rainy season.
24. By **October 1st of each year**, vegetation shall be planted and maintained as necessary to minimize erosion on intermediate cover slopes and on slopes at final elevation. Vegetation shall be selected to require a minimum of irrigation and maintenance. Upon written Executive Officer acceptance, non-hazardous sewage sludge may be utilized as a soil amendment to promote vegetation. Soil amendments and fertilizers (including wastewater sludge) used to establish vegetation shall not exceed the vegetation's agronomic rates (i.e., annual nutrient needs), unless approved by the Executive Officer.
25. If adequate soil cover material is not accessible during inclement weather, such material shall be stockpiled during favorable weather to ensure year-round compliance.
26. All Landfill surfaces and working faces shall be graded and operated to minimize rainfall infiltration into wastes, to prevent ponding of water, and to resist erosion.
27. Rills in the cover (final or interim) exceeding six inches in depth must be backfilled throughout the entire year.
28. Drainage facilities shall be designed, constructed, and maintained to accommodate anticipated precipitation and peak surface runoff flows from a 100-year, 24-hour rain event.
29. Storage facilities associated with precipitation and drainage control systems shall be emptied immediately following each storm or otherwise managed to maintain the design capacity of the system. A minimum of two feet of freeboard shall be maintained in all storm water/sediment containment or percolation ponds.

Design Criteria

30. All waste disposal areas, containment structures and drainage facilities shall be designed and constructed under the direct supervision of a California Registered Civil Engineer or a Certified Engineering Geologist, and shall be certified by that individual as meeting the prescriptive standards and performance goals of all state and federal landfill regulations including, but not limited to, CCR Title 27 and 40 CFR parts 257 and 258. For containment structures (liners), certification of standards consistent with CCR Title 27 Sections 20324 and 20310 (e), shall be obtained prior to waste discharge.
31. Waste management units, containment structures, and drainage facilities shall be designed, constructed and maintained to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, overtopping, and damage due to natural disasters (e.g., floods with a predicted frequency of once in 100 years, and severe wind storms).
32. Wastes shall not be discharged to new areas (i.e., permitted areas that have not previously received wastes) unless equipped with a containment system, which meets either a. or b. below:
 - a. A composite liner and a leachate collection and removal system consisting of the following components:
 - A well-prepared subgrade, engineered to support the Landfill and associated structures.
 - Lower Component: a minimum two-foot layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec.
 - Upper Component: a minimum 60-mil high-density polyethylene (HDPE). The upper component must be installed in direct and uniform contact with the lower component.
 - A Leachate Collection and Removal System (LCRS), designed so that leachate drains by gravity to a collection point/sump and is removed through gravity or pumping to a holding tank or sanitary sewer for volume measurement, testing and disposal.
 - A protective soil layer or operations layer shall be placed above the LCRS and liner system. This layer shall be a minimum of 12 inches thick
 - b. An engineered alternative liner design, approved by the Executive Officer. Engineered alternative designs must satisfy the performance criteria in 40 CFR Section 258.40(a)(1) and (c), and satisfy the criteria for an engineered alternative to the above prescriptive design, as provided by CCR Title 27, Section 20080(b). Performance of the alternative composite liners' components, in combination, shall equal or exceed the waste containment capability of the prescriptive design outlined above.
33. All Landfill facilities shall be designed and constructed to prevent damage during the maximum probable earthquake.
34. The integrity of final slopes shall be maintained to handle design static and dynamic conditions to protect public health and safety and prevent damage to post-closure land uses, roads, structures, utilities, gas monitoring and control systems, leachate collection and control systems to prevent public contact with leachate, and prevent exposure of waste. Slope stability analyses shall be conducted and reported pursuant to the requirements of Division 2, Subdivision 1, Chapter 4, Subchapter 3, Article 4 Section 21750(f)(5). A minimum factor of safety of 1.5 is required for permanent and interim slopes under static slope stability analyses. For permanent seismic deformation analyses, an acceptable limit for permanent slope displacement is 6 inches for landfill slopes and bottom liners and 12 inches for final cover system slopes.
35. The leachate collection and removal system shall:
 - a. Be designed and constructed to prevent more than 12 inches of static hydraulic head on the liner.
 - b. Be designed and operated to function without clogging through the scheduled closure of the waste management unit and during the post-closure maintenance period.
 - c. Convey to a sump, or other appropriate collection area, all leachate that reaches the liner. The depth of fluid in any collection sump shall be kept at the minimum needed to ensure efficient pump operation.

- d. Be designed so that short and long term system performance can be monitored and evaluated [CCR Title 27, Section 20340 (d)].
- e. Above ground storage facilities shall have a secondary containment system sized to hold 100 percent of the primary containment system capacity.
- f. Sumps shall be constructed with double liners with leak detection capability.

Closure

36. Final Landfill configuration shall conform to the contours delineated in Appendix B, Drawings No. 2 and 3, Final Grading Plan Phase I-III and IV-V, of the March 2005 JTD.
37. The Discharger shall implement final closure activities as the site operation progresses, in accordance with requirements consistent with the closure of the entire site as approved by the Executive Officer and the California Integrated Waste Management Board in accordance with the most recently approved closure plan.
38. Partial closure shall be accomplished by implementing closure activities, including but not limited to: placement of final cover, final grading, maintenance, revegetation, and installation of environmental monitoring control systems consistent with the closure the entire site. Units closed in accordance with a Closure Plan approved by the Executive Officer and the California Integrated Waste Management Board, are not subject to future regulatory changes unless monitoring data indicates impairment of beneficial uses of groundwater.
39. All Landfill waste disposal areas at final elevations shall receive final cover pursuant to CCR Title 27, Section 21090, which meets either a. or b. below:
 - a. A final cover system consisting of the following components:
 - Minimum two-foot foundation layer placed over waste, compacted to maximum density obtainable at optimum moisture conditions [CCR Title 27, Section 21090 (a)(1)].
 - For units that have not been equipped with a Subtitle D composite liner system, a low hydraulic conductivity layer, consisting of compacted clay with a hydraulic conductivity of 1×10^{-6} cm/sec or less. Compacted clay will not be considered for sites with VOC detections in point of compliance wells. In such cases a geosynthetic clay layer or geomembrane will be proposed.
 - For units that have been equipped with a Subtitle D composite liner system, a low hydraulic conductivity layer equal to or less than the hydraulic conductivity of the bottom liner system.
 - At least one foot of soil capable of supporting vegetation, resisting erosion, and protecting the underlying low hydraulic conductivity layer.
 - b. An engineered alternative design, approved by the Executive Officer, will be considered for final cover areas. Engineered alternative designs must satisfy the performance criteria in 40 CFR Parts 257 and 258, and satisfy the criteria for an engineered alternative to the above prescriptive design, as provided by CCR Title 27. Performance of the alternative composite cover's components, in combination, shall equal or exceed the waste containment capability of the prescriptive design outlined above.
40. All closed Landfill waste management units shall be provided with at least two permanent monuments, installed by a licensed land surveyor, from which the location and elevation of all wastes, containment structures, and monitoring facilities can be determined throughout the post-closure maintenance period. Cumulative waste subsidence and settlement of areas where final cover is installed shall be documented in the annual report.
41. Vectors shall be controlled to minimize and prevent, to the extent feasible, on and off-site impacts to water quality.
42. Leachate shall be removed from the Landfill to the maximum extent feasible. Leachate removal and disposal shall be in accordance with an Executive Officer-approved Leachate Reduction and Removal Plan.

43. Landfill gas shall be adequately vented, removed from the Landfill, or otherwise controlled to prevent the danger of explosion, adverse health effects, nuisance conditions, or the impairment of beneficial uses of water due to migration through the vadose zone.
44. The closure of Phase III shall be completed within 180 days of diverting waste to Phase IV or in accordance with an Integrated Waste Board and Regional Board approved final closure plan.

D. WATER QUALITY PROTECTION STANDARDS

1. Discharge of waste shall not cause the concentration of any Constituents of Concern (COC) or Monitoring Parameter to exceed its respective background value in any monitored media (i.e., soil or groundwater) at any Monitoring Point pursuant to MRP No. R3-2006-0001.
2. Constituents of Concern and Monitoring Parameters for groundwater and surface water are listed in MRP No. R3-2006-0001. Monitoring points and background monitoring points for detection monitoring and corrective action monitoring shall be those specified in MRP No. R3-2006-0001.
3. The discharge of waste shall not cause a statistically significant difference in water quality over background concentrations or Concentration Limit for each COC or Monitoring Parameter (per MRP No. R3-2006-0001) at the Point of Compliance. The Concentration Limits shall be maintained for as long as the waste poses a threat to water quality. Discharge of waste shall not adversely impact the quality of State waters.
4. Discharge of waste shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Board or the State Water Resources Control Board.
5. The Point of Compliance is the vertical surface located at the downgradient edge of the waste footprint as shown on Attachment 4, and extends vertically down through the uppermost aquifer.
6. Discharge of waste shall not cause radionuclides in groundwater down-gradient of the Point of Compliance to exceed the State Department of Health Services latest recommended Drinking Water Action Levels or Maximum Contaminant Levels of the CCR Title 22, Division 4, Chapter 15, Article 5.5.
7. The Regional Board considers the Discharger to have a continuing responsibility for waste containment, monitoring, and correcting any problems that may arise in the future as a result of this waste discharge. This responsibility continues as long as the waste poses a threat to water quality.
8. Monitoring results are subject to the most appropriate statistical or non-statistical test, as required by the attached MRP No. R3-2006-0001. Monitoring Parameters will be subjected to the most appropriate statistical or non-statistical test, as required by the attached MRP.
9. The Discharger shall, in a timely fashion, install any additional groundwater, soil pore liquid, soil pore gas, surface water, and leachate monitoring devices as required by the Executive Officer.

E. PROVISIONS

General Provisions

1. Order No. 94-020, "*Waste Discharge Requirements for City of Watsonville, Class III Landfill, Santa Cruz County*", adopted by the Board on February 11, 1994, is hereby rescinded.
2. Order No. 96-08, "Order Requiring the City of Watsonville, Santa Cruz County, To Cease and Desist from Discharging Waste at the City Class III Landfill Contrary to Requirements Prescribed by the California Regional Water Quality Control Board, Central Coast Region", adopted July 26, 1996, is hereby rescinded.
3. The Discharger shall comply with "Monitoring and Reporting Program No. R3-2006-0001," as specified by

the Executive Officer.

4. A Construction Quality Assurance Plan, acceptable to the Executive Officer, must be implemented by a third party (i.e., unrelated to the Discharger, Landfill operator, project designer, contractor) prior to initiating construction of the Landfill's final cover system or constructing a new lined waste management unit.
5. Two weeks prior to and during construction of each module (e.g., preparing foundation, installing liner, installing leachate collection and removal system, placing operations layer, etc.), the Discharger shall provide a schedule of construction activities. Schedules shall be updated and provided to Regional Board staff on a weekly basis.
6. Prior to beginning discharge of waste into any newly constructed waste management unit, the Discharger must receive a final site inspection, submit a final construction Quality Assurance report, and receive written permission to discharge waste, from the Executive Officer [CCR Title 27, Section 20324(d)(1)(C)].
7. The Discharger shall maintain a copy of this Order at the facility and make it available at all times to regulatory agency personnel and to facility operating personnel (who shall be familiar with its contents).
8. The Discharger shall maintain legible records of the volume and type of all waste discharged at the Landfill and the manner and location of discharge. Such records shall be maintained at the facility until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the Regional Board and of the State Water Resources Control Board at any time during normal business hours. At the beginning of the post-closure maintenance period, copies of these records shall be sent to the Regional Board.
9. The Discharger shall be responsible for accurate waste characterization, including determinations of whether or not wastes will be compatible with containment features or other wastes, whether or not wastes are required to be managed as hazardous wastes or lead based paint debris, whether waste is liquid, and whether waste is inert.
10. A list of the general types of the more widely used names of hazardous-type wastes prohibited at this site shall be posted on a legible roadway sign at the Landfill's entrance. The sign shall also state the locations of the nearest hazardous waste disposal sites and shall list penalties for illegal dumping. A specific list of hazardous wastes and other types of materials prohibited at this Landfill shall be provided to commercial waste haulers that use this Landfill and shall be available to all other site users upon request.
11. The Discharger shall comply with all other applicable provisions of CCR Title 27 and 40 CFR Parts 257 and 258 that are not specifically referred to in this Order. If any applicable requirements overlap or conflict in any manner, the requirement most protective of water quality shall govern in all cases, unless specifically stated otherwise in this Order, or as directed by the Executive Officer.
12. The Discharger shall have a continuing responsibility to ensure protection of usable waters from discharged wastes and from gases and leachate generated by discharged waste during the Landfill's active life, closure, and post-closure maintenance periods and during subsequent use of the property for other purposes.
13. The Discharger shall maintain waste containment facilities and precipitation and drainage controls, and shall continue to monitor, as appropriate, groundwater, vadose zone, liquid and gas, surface waters, and leachate from waste management units throughout the post-closure monitoring and maintenance period.
14. The Regional Board will review this Order periodically and will revise these requirements when necessary.
15. Sewage sludge or water treatment sludge with greater than 50 percent moisture content may be discharged to the waste management unit **only if all** the following criteria are met:
 - a. Sludge shall be discharged only to lined modules that have a LCRS, designed so that leachate drains by

- gravity to a collection point/sump and is removed through gravity or pumping to a holding tank or sanitary sewer for volume measurement, testing and disposal.
- b. A daily minimum solids-to-sludge ratio of 5 to 1, based on weight, shall be maintained when co-disposing sludge with solid waste.
 - c. Primary and mixtures of primary and secondary sewage sludge shall contain at least 20 percent solids by weight.
 - d. Secondary sewage sludge and water treatment sludge shall contain at least 15 percent solids by weight.
16. The Regional Board considers the Discharger to have a continuing responsibility for correcting any problems that may arise in the future as a result of this waste discharge. This responsibility continues as long as the waste poses a threat to water quality.
 17. For the protection of water quality, the Executive Officer may require partial or final closure of any Waste Management Unit or Landfill area regardless of whether the unit or area has reached final capacity. Such a requirement will be requested in writing and in accordance with CCR Title 27, Section 22190.
 18. Any person who violates Waste Discharge Requirements and/or who intentionally or negligently discharges waste or causes or permits waste to be deposited where it is discharged into waters of the State is liable for civil and/or criminal remedies, as appropriate, pursuant to Section 13350, 13385, and 13387 of the California Water Code.
 19. As provided by CWC Section 13350(a), any person may be civilly liable if that person in violation of a waiver condition or waste discharge requirements, discharges waste, or causes waste to be deposited where it is discharged, into the waters of the State.
 20. Provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.
 21. This Order does not authorize commission of any act causing injury to the property of another, does not convey any property rights of any sort, does not remove liability under federal, state, or local laws, and does not guarantee a capacity right.
 22. The Discharger must comply with all conditions of these Waste Discharge Requirements. Violations may result in enforcement actions, including Regional Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these Waste Discharge Requirements by the Regional Board. [CWC Section 13261, 13263, 13265, 13267, 13268, 13300, 13301, 13304, 13340, 13350].

Reporting Provisions

23. All technical and monitoring reports submitted pursuant to this Order are required pursuant to Section 13267 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order and attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer may subject the Discharger to enforcement action pursuant to Section 13268 of the California Water Code.
24. Discharger shall notify Regional Board staff, within 24 hours by telephone and within seven days in writing, of any noncompliance potentially or actually endangering health or the environment. Any noncompliance that threatens the Landfill's containment integrity shall be promptly corrected. Correction schedules are subject to the approval of the Executive Officer, except when delays will threaten the environment or the Landfill's integrity (i.e., emergency corrective measures). Corrections initiated prior to Executive Officer approval shall be so stated in the written report. The written report shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times or anticipated duration; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. This provision includes, but is not limited to:

- a. Violation of a discharge prohibition.
 - b. Violation of any Water Quality Protection Standard.
 - c. Slope failure.
 - d. Liner damage.
 - e. Leachate seep(s) occurring on, or in proximity to, the Landfill.
25. Reports of compliance or noncompliance, or any progress reports on interim and final requirements contained in any compliance schedule, shall be submitted within 14 days following each scheduled date unless otherwise specified within the Order. A report shall be submitted within 14 days of achieving full compliance.
26. Design reports shall be submitted 180 days in advance of any planned changes in the permitted facility or any activity that could potentially or actually result in noncompliance.
27. The Discharger shall report all changes in usage of daily cover and performance standards within 10 days following the change.
28. The Discharger shall implement all necessary wet weather preparedness measures to ensure discharges to surface waters or groundwater do not occur during the impending rainy season, and ensure all other relevant CCR Title 27 and 40 CFR criteria have been implemented. To ensure the appropriate wet weather measures have been implemented, the Discharger shall submit a report of Wet Weather Preparedness. The report shall detail all preparedness actions taken to comply with this requirement. The report shall also address noncompliance or deficiencies in wet weather preparedness during previous years and steps taken to ensure future compliance. **REPORT DUE DATE: October 15th of each year.**
29. The Discharger shall evaluate the performance of the corrective action program initiated as a result of Cease and Desist Order No. 96-08 and submit a technical report containing at least the following:
- a. Define the current vertical and horizontal extent of the VOC pollution in groundwater.
 - b. Summarize tabularly and graphically all historical monitoring information documenting both VOC and inorganic groundwater impacts.
 - c. Define and evaluate trends for VOCs and inorganic parameters; compare to previously made assumptions and conclusions.
 - d. Evaluate the performance of existing corrective actions; propose modification and/or improvements as necessary.
 - e. Evaluate the effectiveness of the monitoring well network to evaluate and document background conditions, groundwater impacts, effectiveness of corrective actions, and possible future releases; propose improvements as necessary.

REPORT DUE DATE: December 31, 2006, and every five years thereafter.

30. The Discharger shall obtain and maintain Financial Assurance Instruments (Instruments), which comply with CCR Title 27 (Sections 22207 [Closure Fund], 22212 [Post-Closure Fund], and 22220 et seq. [Corrective Action Fund]), and 40 CFR parts 257 and 258. The Discharger shall evaluate the cost of Financial Assurance to cover the estimated costs of the worst case reasonably foreseeable release. Upon request, the Discharger shall submit a report on financial assurance for corrective action for the Regional Water Board Executive Officer's review and approval. Every five years after submittal of the initial financial assurance report, or earlier if requested by the Executive Officer, the Discharger shall submit a report that either validates the Instruments' ongoing viability or proposes and substantiates any needed changes. The Discharger may combine the three components (Closure, Post Closure, Corrective Action) of the Instruments into one report to comply with this requirement. The Discharger shall also submit evidence (e.g., an acceptance letter from the California Integrated Waste Management Board - Financial Assurance Division) that a financial assurance instrument(s) is in place for closure, post-closure, and corrective action. This can be included in the Landfills Annual Report to the Executive Officer.

31. The Discharger shall submit a Joint Technical Document (JTD) pursuant to CCR Title 27, Section 21710, to the Executive Officer. The JTD shall contain, but is not limited to, the following:
- a. Information on waste characteristics, geologic and climatologic characteristics of the Landfill and the surrounding region, installed features, operation plans for waste containment, precipitation and drainage controls, and closure and post closure maintenance plans, in accordance with CCR Title 27 Sections 21740, 21750, 21760, and 21769.
 - b. A completed SWRCB JTD Index, in accordance with CCR Title 27, Section 21585(b), with your JTD addendum.
 - c. A Discussion of whether, in the Discharger's opinion, there is any portion of this Order that is incorrect, obsolete, or otherwise in need of revision.
 - d. Any technical documents needed to demonstrate continued compliance with this Order and all pertinent State and Federal requirements.
 - e. Detailed information regarding regulatory considerations; design, construction and operating provisions; environmental monitoring; and closure and post-closure.
 - f. A Fill Sequencing Plan that includes detailed maps. The Fill Sequencing Plan should describe in detail the overall development of the entire Landfill.
 - g. A detailed description of the lateral and vertical extent of refuse within all existing Landfill Units. It must include an accurate estimate of waste volumes within each existing Landfill fill area (i.e., phases) and an approximation of the remaining volume and years of capacity for each existing phase and all new proposed fill area within currently "Permitted Landfill Boundary." It must also describe all existing available space within currently permitted Landfill areas (i.e., areas where refuse has been placed in the past, but have not reached final permitted elevation and Landfill Units or portions of Landfill Units where refuse has never been placed).
 - h. A discussion of any plans or proposals to close or partially close any Landfill Units or portions of Landfill Units, any proposed liner systems and respective design components, any proposed plans for long-term intermediate cover for Landfill areas which may remain inactive for long periods of time (over one year).

REPORT DUE DATE: July 30, 2015, or as specified by the Executive Officer.

32. The Discharger shall submit to the Regional Board an updated closure and post-closure maintenance plan (Closure Plan). The Closure Plan shall describe the methods and controls to be used to ensure protection of the quality of surface and groundwater during partial and final closure operations and during any proposed subsequent use of the land. The Closure Plan shall include:
- a. A description of the final cover, designed in accordance with all applicable State and Federal regulations and the methods and procedures to be used to install the cover.
 - b. An estimate of the largest waste disposal area (Waste Management Unit) requiring a final cover at any time during the Landfill's active life.
 - c. An estimate of the maximum inventory of wastes at the site over the active life of the Landfill.
 - d. A schedule for completing all activities necessary to satisfy all closure criteria as required by CCR Title 27 and 40 CFR Parts 257 and 258 regulations.
 - e. An estimate of closure and post closure maintenance costs.
 - f. A proposal for a trust fund or equivalent financial arrangement to provide sufficient funding for closure and post-closure maintenance.
 - g. The amount to be deposited in the trust fund or equivalent financial arrangement each year.

The Closure Plan shall be prepared by or under the supervision of a California Registered Civil Engineer or Certified Engineering Geologist. Updates of the plan are required whenever substantial changes occur or five years has elapsed since the last major revision. The method identified for each WMU closure and protection of the quality of surface and groundwater shall comply with this Order. The Closure Plan report shall be consistent with all applicable state and federal regulations, including CCR Title 27 and 40 CFR Parts 257 and 258. **REPORT DUE DATE: May 31, 2010, and every five years thereafter.**

33. After suspending Corrective Action Program measures, the Discharger shall remain in corrective action monitoring until an approved Detection Monitoring Program is established in accordance with CCR Title 27 and has been incorporated into Waste Discharge Requirements. Any time the Executive Officer determines that the Corrective Action Program does not satisfy the requirements of CCR Title 27, the Discharger shall, within 90 days of receiving written notification of such determination, submit an amended Corrective Action Program with needed changes pursuant to Water Code section 13267.
34. The leachate collection and removal system shall be tested annually to demonstrate proper operation. The results of the test shall be compared with previous tests and included in the Annual Monitoring Report.
35. The Discharger shall notify the Regional Board in writing of any proposed change in ownership or responsibility for construction or operation of the Landfill in accordance with CCR Title 27, Section 21710 (c)(1). Failure to submit the notice in writing shall be considered a violation of Section 13264 of the Water Code. The written notice shall be given at least **90 days** prior to the effective date of change in ownership or responsibility and shall:
 - a. Be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate continued compliance with these Waste Discharge Requirements.
 - b. Contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Regional Board.
 - c. Contain a statement indicating that the new owner or operator assumes full responsibility for compliance with this Order.

Request for change in ownership or responsibility may be approved or disapproved in writing by the Executive Officer. In the event of any change in ownership of this Landfill, the Discharger shall notify the succeeding owner or operator, in writing, of the existence of this Order. A copy of that notification shall be sent to the Executive Officer.
36. At any time, the Discharger may file a written request (including appropriate supporting documents) with the Regional Board Executive Officer, proposing appropriate modifications to the monitoring and reporting program. The Executive Officer either shall reject the proposal for reasons listed, or shall incorporate it into a revised monitoring and reporting program. The Discharger shall implement any changes in the monitoring and reporting program proposed by the Executive Officer upon receipt of a revised monitoring and reporting program.
37. The Discharger shall notify the Executive Officer at least 180 days prior to beginning any partial or final Landfill closure activities. The notice shall include a statement that all closure activities will conform to the most recently approved Closure Plan and that the Plan provides for closure in compliance with all applicable State and Federal regulations. If there is no approved Closure Plan, the Discharger must submit a complete Closure Plan at least 240 days prior to beginning any Landfill closure activities.
38. The Regional Board shall be allowed, at any time, and without prior notification:
 - a. Entry upon the Landfill or where records must be kept under the conditions of this Order and MRP No. R3-2006-0001.
 - b. Access to copy any records that must be kept under the conditions of this Order and MRP No. R3-2006-0001.
 - c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order and MRP No. R3-2006-0001.
 - d. To photograph, sample, and monitor for the purpose of showing compliance with this Order.
39. Except for data determined to be confidential under Section 13267 (b) of the California Water Code, all reports prepared in accordance with this Order are considered public record and shall be sent to the appropriate contact at the California Integrated Waste Management Board and Monterey County Health

Department - Environmental Health Division. All reports shall be signed as follows:

- a. For a public agency - by either a principal executive officer or ranking elected official*.
- b. For a partnership or sole proprietorship - by a general partner or the proprietor, respectively*.
- c. For a corporation - by a principal executive officer of at least the level of vice president*.
- d. For engineering reports and monitoring reports- by a California Registered Civil Engineer or Certified Engineering Geologist.

*or their "duly authorized representative."

40. Any person signing a report makes the following certification, whether it is expressed or implied:

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

41. The Discharger shall comply with the following submittal and implementation schedule for all tasks and reports required by this Order:

REPORT AND TASK IMPLEMENTATION DATE SUMMARY

TASK	IMPLEMENTATION DATE
Runoff diversion and erosion prevention. [Specification C.22]	October 1, of each year
Minimum one foot cover over entire active WMU. [Specification C.23]	October 1, of each year
Vegetation placement on interim cover slopes and slopes at final elevation. [Specification C.24]	October 1, of each year
REPORT	DUE DATE
Wet Weather Preparedness Report [Provision E.28]	October 15, 2006, and yearly thereafter
Corrective Action Program Assessment Report [Provision E.29]	December 31, 2006, and every five years thereafter
Financial Assurance Report [Provision E.30]	Upon Request, and every five years thereafter
Closure Plan [Provision E.32]	May 31, 2010, and every five years thereafter.
Joint Technical Document [Provision E.31]	July 30, 2015

I, Roger W. Briggs, 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 Coast Region, on February 10, 2006.


Executive Officer

Attachments: Attachment 1 - Location Map
Attachment 2 - Vicinity Map
Attachment 3 - Area Well Location Map
Attachment 4 - Site Map
Monitoring and Reporting Program No. R3-2006-0001

S:\Land Disposal\Land Disposal Facilities\PERMITTED SITES\Watsonville\Order No R3-2006-0001\WDR, R3-2006-0001.doc