

California Regional Water Quality Control Board
North Coast Region

ORDER NO. R1-2011-0009
ID NO. 1B79174OHUM

WASTE DISCHARGE REQUIREMENTS

FOR

CLEAN CLOSURE OF THE
HUMBOLDT REDWOOD COMPANY, LLC
(FORMERLY PACIFIC LUMBER COMPANY)
HELY CREEK CLASS III SOLID WASTE DISPOSAL SITE

Humboldt County

The California Regional Water Quality Control Board, North Coast Region, (hereinafter the Regional Water Board) finds that:

1. Humboldt Redwood Company, LLC, (hereinafter Discharger) owns the Hely Creek SWDS (Site), a Class III Solid Waste Disposal Site (SWDS) five miles east of Carlotta along Highway 36. The Site is located in the north half of Section 5, Township 1 North, Range 2 East, of the Humboldt Base Meridian, as shown on Attachments "A" and "B" incorporated herein and made part of this Order.
2. The Louisiana Pacific Corporation, the original owners and operators of the site, submitted a complete Report of Waste Discharge on August 10, 1979. The Regional Water Board issued Waste Discharge Requirements Order No. 79-174 on September 27, 1979 designating the site as a Class 11-2 solid waste disposal site suitable to accept wood waste under the Subchapter 15 regulations prevailing at that time. Louisiana Pacific owned and operated the site until October 17, 1984 when Pacific Lumber Company (PL) purchased the property. Waste Discharge Requirements Order No. 91-52 reflecting the change of ownership and re-opening of the landfill, was adopted on April 25, 1991. On October 21, 1996, Pacific Lumber Company submitted a complete Report of Waste Discharge proposing off-site clean closure of the site. Wastes were to be taken to Pacific Lumber Company's wood waste recovery facility and processed into useable products. Waste Discharge Requirements Order No. 97-5 was issued on February 27, 1997 for that off-site clean closure.
3. In 2002, PL found that material at the Site did not contain sufficient amounts of woody debris to process and transport the material for use as compost feedstock or fuel for their co-generation plant, so on March 13, 2003, PL submitted a new ROWD suggesting an alternative method of clean closure and reuse. Regional Water Board staff rejected the ROWD as insufficient, and in follow-up meetings, PL agreed to implement a pilot study to determine if the processed wood waste would be suitable for silvicultural application without

creating a leachate discharge. Data from this pilot study was presented in *The Tree Growth Pilot Study Summary Report* by Winzler and Kelly in August 2007. Before PL could submit a new ROWD, its timber holdings (including this Site) were acquired by Humboldt Redwood Company, LLC (HRC). The Regional Water Board updated WDR Order 97-5 on September 11, 2008, in accordance with Order No. R1-2008-0100, to name HRC as the Discharger. In February 2010, HRC submitted a ROWD which was subsequently revised in April 2010 and amended by submittals on December 2010 and **XX 2011**. Additional documents, the *Soils Report and Grading Plans for Humboldt County Grading Permit Application* and the *Storm Water Pollution Prevention Plan* by AMEC Geomatrix, Inc. were submitted on November 1, 2010.

4. The ROWD provides cost data showing that the clean closure method described in the 1997 WDR would be nearly six times more expensive than the new clean closure proposal. The Discharger expects the new method of clean closure to be as protective of the environment as the 1997 method and will accelerate the Site's return to timber production. The Discharger will continue monitoring the Site after the clean closure until it can demonstrate that the soil amendment created from the waste does not cause a discharge.
5. The total Site area is 26 acres, with approximately 3 acres used for waste disposal.
6. The current Waste Management Unit (WMU) area, as delineated in Attachment B, meets the criteria contained in Title 27, California Code of Regulations (CCR), for a Class III landfill for non-hazardous solid wastes.
7. The current WMU area is not lined and does not have a leachate collection and recovery system (LCRS). Currently, leachate seeps have not been detected downgradient of the landfill.
8. The new ROWD indicates that the Discharger proposes to sort the waste material to remove any uncharacteristic wastes which are not appropriate for a soil amendment. The remaining wood waste, soil, and rock will be taken and used as a soil amendment on the current Site and a nearby former rock quarry. The current waste footprint will be tested to certify clean closure prior to placing soil amendment on the former landfill waste footprint. The land will be returned to timber production by planting a succession of suitable trees to prevent leachate formation and sediment discharges. A stockpile of Caltrans slide material currently located at the Site will be removed by either using it as road material or incorporating it into the soil amendment.
9. The material in the WMU consists of a mixture of woody debris, bark, sawdust, gravel, sand, silt, and soil generated from log deck and sawmill cleanup. It may also include minor amounts of uncharacteristic wastes such as concrete, metal, painted lumber, conveyor belts, construction debris, etc.
10. The spreading area for the soil amendment produced by clean closure encompasses the Site and a secondary spreading area of approximately 14 acres at a nearby former rock quarry (Attachment B).

11. Postclosure land use for the Site is timber production. Other public or private use of the Site is not planned.
12. Effective July 18, 1997, the Water Quality Regulations for Class II and Class III disposal facilities formerly contained in Chapter 15, Title 23, CCR, and the Solid Waste Regulations formerly in Title 14, CCR, were re-codified into Chapters 1 through 7, Subdivision 1, Division 2, Title 27, CCR.

SITE DESCRIPTION

13. The Site is accessed by a gated private gravel road off of Highway 36 approximately 5 miles east of Carlotta. The southern boundary is located approximately 200 feet north of Highway 36 and the eastern boundary is approximately 400 feet west of Redwood House Road. The Site is on a slightly sloping area northwest of the confluence of Hely Creek and the Van Duzen River. Surface elevations at the Site range from 230 to 285 feet above mean sea level.
14. The 26 acre parcel includes a steep forested hillside and a gently sloping grassy meadow. The landfill's WMU is situated on the grassy meadow, a flat to gently-sloping alluvial terrace along Hely Creek, within the Discharger's commercial timber production area. Approximately 80,000 cubic yards of wood waste, covering 3 acres, have been deposited at the Site. Site investigations have shown wood waste up to 8 feet thick outside of the 1994 waste footprint, most likely from pre-regulation disposal. This additional waste was taken into account when determining the spreading depth for the soil amendment derived from the permitted wood waste.

SURFACE WATER

16. Surface water sheet flows off the hillside and most likely percolates into Hely Creek. There are not any naturally established surface drainage patterns that cross the Site, and Hely Creek forms the eastern Site boundary. A run-on control ditch, which also serves as a groundwater diversion trench, has been placed above the landfill. The ditch, which has a maximum depth of approximately 10 feet, serves to break the contact between the groundwater seeps and the colluvial material. Storm water and the daylighted groundwater seeps are collected and flow in two directions, to the southeast and to the north-northwest. The flow to the southeast is discharged directly to the meadow. The flow to the north-northwest discharges to a sedimentation basin and then to the meadow. The sedimentation basin was constructed because that portion of the ditch also collects run-off from a natural landslide, located just west of the landfill.

17. Ditch flow mainly occurs during rainstorms, with the exception of small flows from the seeps. These groundwater seeps generally stop flowing during the dry weather months from July to October.
18. Hely Creek is a perennial stream and a second order tributary to the main fork of the Van Duzen River.
19. The Site is located within the Hely Creek watershed of the Bridgeville Hydrologic Subarea of the Van Duzen River Hydrologic Area, within the Eel River Hydrologic Unit. The Eel River discharges directly into the Pacific Ocean.
20. The beneficial uses of the Van Duzen River watershed include:
 - a. municipal and domestic supply
 - b. agricultural supply
 - c. industrial service supply
 - d. industrial process supply
 - e. groundwater recharge
 - f. freshwater replenishment
 - g. navigation
 - h. hydropower generation
 - i. water contact recreation
 - j. non-contact water recreation
 - k. commercial and sport fishing
 - l. warm freshwater habitat
 - m. cold freshwater habitat
 - n. wildlife habitat
 - o. rare, threatened or endangered species
 - p. migration of aquatic organisms
 - q. spawning, reproduction, and/or early development
 - r. aquaculture
19. The Van Duzen River Hydrologic Area is listed as an impaired water body for sedimentation and siltation, pursuant to Section 303(d) of the Clean Water Act. Given that the WDRs prohibit any waste discharge from the Site, they will not allow the Discharger to discharge at levels which will cause, have the reasonable potential to cause, or contribute to increases in sedimentation and siltation levels in the Van Duzen River watershed.
20. Based on Federal Insurance Rates Maps, published by the Federal Emergency Management Agency, the WMU is not located within a 100-year floodplain. The previously designated 100-year floodplain limits for Hely Creek could not be verified by gauging station data or hydrologic studies. In absence of this data, a 100-foot offset from Hely Creek's bank full level was used to establish the limits of soil amendment spreading.

STORM WATER

21. This Order does not replace a future need for a National Pollutant Discharge Elimination System (NPDES) storm water permit, as required by provisions of the Clean Water Act.
22. There are not any naturally established surface drainage patterns that cross the Site, and Hely Creek forms the eastern Site boundary. A run-on control ditch, which also serves as a groundwater diversion trench, has been placed above the landfill. The ditch has a maximum depth of approximately 10 feet, and serves to break the contact between the groundwater seeps and the colluvial material. Storm water and the daylighted groundwater seeps are collected and flow in two directions, to the southeast and to the north-northwest. The flow to the southeast is discharged directly to the meadow. The flow to the north-northwest discharges to a sedimentation basin and then to the meadow. The sedimentation basin was constructed because that portion of the ditch also collects run-off from a natural landslide, located just west of the landfill. Storm water is percolated into the meadow and likely recharges Hely Creek.
23. The mean annual precipitation for the area is approximately 39.10 inches per year. The 100-year, 24-hour precipitation event, based on intensity-duration frequency curves, is 6.02 inches. The maximum annual precipitation was 52.98 inches in 1958. This information is based on regional weather station information from the National Weather Service's Climatological Stations Numbers 8045, 3194, and 2910 in Scotia, Fortuna, and Eureka, respectively.
24. The average evaporation (from Department of Water Resources Bulletin 73-79, November 1979) for the Ferndale State Station Number 303000 is estimated to be 31.77 inches. The average high is 4.57 inches in July and the average low is 0.71 inches in January. Actual evaporation at the Site is expected to be higher since it is farther inland than the Ferndale Station.

SITE GEOLOGY

25. Soils in the vicinity are alluvial deposits consisting of interfingering layers of sand, silt, and gravel with an average permeability of 4×10^{-3} cm/sec. Alluvial deposits are roughly 15-25 feet deep and overlie the Carlotta Formation. The Carlotta Formation dips downward at approximately 20-25 degrees north-northeast.
26. There are no known Holocene faults on the Site. The Site is not within an Alquist-Priolo Special Studies Zone. The nearest potentially active fault is the Salmon Fault Zone, located approximately 3 miles north of the Site. This zone is characterized by several major northwest trending, northeast dipping thrust

and reverse faults with minor splays. Other nearby major faults include the Mendocino/False Cape Fault Zone and the San Andreas Fault Zone, 25 mile southwest and 30 miles west of the Site, respectively.

GROUNDWATER

27. On July 1, 1991 the Discharger submitted a Solid Waste Assessment Test (SWAT) report describing a groundwater monitoring network installed at the landfill in 1987. Three wells, MW-1, MW-2, and MW-3, were installed to depths of 25 to 35 feet below ground surface in the first encountered groundwater. Well MW-1 was installed upgradient of the disposal area, while MW-2 and MW-3 were installed downgradient of the disposal area. In September of 1994, two additional groundwater wells, MW-4 and MW-5, and two piezometers, P-1 and P-2, were installed. Well MW-4 was installed to monitor the upgradient alluvial groundwater, while MW-5 was installed to monitor the upgradient alluvial terrace groundwater. P-1 was installed to monitor the presence or absence of groundwater in the upper 5-feet of native soils below the WMU and P-2 was installed to determine whether free water is in contact with the wood waste in the WMU.
28. Well MW-4 and the piezometers P-1 and P-2 will be destroyed to allow for the WMU deconstruction. These will be replaced during the closure project by nine new piezometers and two new monitoring wells. Three piezometers and one well will be placed at the secondary spreading area at the old quarry and the remainder will be placed at the existing Site.
29. Based on the results from P-1 and P-2, there is not 5 feet of separation from groundwater to the wood waste in the WMU.
30. Groundwater levels range from 5 to 20 feet below ground surface under both confined and unconfined conditions. Groundwater flow direction is toward Hely Creek and the Van Duzen River. The locations of the current and proposed wells and piezometers are shown on Attachment B.
31. In addition to the Site's monitoring wells, there were reportedly three water wells within one mile of the Site during the period that the SWAT was conducted, two wells northwest of the site near Church Lane and one southeast of the site. The wells to the northwest are upgradient of the site and the other well is located near the Van Duzen River, but on the opposite side of Hely Creek. The Discharger has not had any of these wells tested.

32. There are daylighted springs in the hillslope north-northwest of the WMU. There are no other known mapped springs, but other springs may be present at the base of the hillslope.
33. Beneficial uses of areal groundwater include:
 - a. domestic water supply
 - b. agricultural water supply

CLOSURE AND FINANCIAL ASSURANCES

32. Sections 20950(f) and 20380(b), Title 27, CCR require that the Discharger establish a formal financial mechanism to fund Site closure and remediation of the known or reasonably foreseeable release from the facility. Given that a closure fund was not established at an earlier time and the site will be clean closed, HRC has established a self-insurance fund for post-closure issues for ten years following closure. The current estimate establishes a fund of \$255,461.
33. The Discharger is required to update approved cost estimates annually to account for inflation.
34. Plans for final closure activities are described in the report entitled *Work Plan for the Clean Closure and Soil Amendment Project at the Hely Creek Woodwaste Disposal Site (Clean Closure Plan)*, dated January 2010, with corrections submitted December 2010 and **XX 2011** - prepared by Winzler and Kelly. Closure will be conducted in accordance with the Excavation and Materials Management Procedures, which serve as the construction quality assurance plan, contained in the Clean Closure Plan.
35. The final clean closure will consist of site preparation; breakdown and sorting of waste from the WMU; transporting and spreading; planting; surface water drainage and erosion control; environmental monitoring; postclosure maintenance; and site security. A stockpile of Caltrans slide material will also be sorted for removal of waste and the remainder used as construction materials or added to the soil amendment. The grading at both spreading sites will be sloped to promote drainage and avoid ponding. The Discharger will retain the run-on control/interception ditch and sedimentation pond. Erosion control efforts will consist of planting trees in the areas where the soil amendment is spread, at the end of construction, as well as track walking the material to create a surface that will slow surface water runoff.
36. A clean closure verification report will be prepared and certified by the Construction Quality Assurance (CQA) Officer performing the third party

verification of the clean closure. The CQA officer must be a registered civil engineer or a certified engineering geologist licensed in the State of California. The report must be submitted under penalty of perjury to the Regional Water Board and other appropriate agencies. The report, at a minimum, will include the certificate of closure; daily construction logs; waste manifests; documentation of volume and placement of soil amendment; material acceptance reports; photologs of closure activities; final CQA documentation; laboratory testing results; field testing results; discussion of verification sampling results; and an as-built topographic map of the spreading areas, prepared at a scale of one-inch to 100 feet, with a contour interval of five feet.

PROCEDURAL REQUIREMENTS AND OTHER CONSIDERATIONS

37. On September 29, 2010, the Humboldt County Community Development Services Planning Division prepared and approved a mitigated Negative Declaration for the work proposed in the November 2009, with April/May 2010 revisions, *Clean Closure and Soil Amendment Project at the Hely Creek Wood Waste Disposal Site*, to satisfy the requirements of the California Environmental Quality Act (CEQA). The Regional Water Board, acting as a responsible agency under CEQA, has considered this Negative Declaration pursuant to Title 14, California Code of Regulations, Section 15096.
38. This order implements:
The Water Quality Control Plan for the North Coast Region (Basin Plan); and
 - a. The prescriptive standards and performance goals of Chapters 1 through 7, Subdivision 1, Division 2, Title 27, of the CCR, effective July 18, 1997, and subsequent revisions.
 - b. State Water Resources Control Board Resolution No. 93-62, *Policy for Regulation of Discharges of Municipal Solid Waste*, adopted June 17, 1993.
39. The Basin Plan includes water quality objectives and receiving water limitations.
40. The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge, and has provided them with an opportunity to submit their written comments and recommendations.
41. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.
42. The permitted discharge is consistent with the provisions of State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High*

Quality of Waters in California. The impact on existing water quality will be insignificant.

THEREFORE, IT IS HEREBY ORDERED that WDRs Order No. 97-5 and R1-2008-0100 are rescinded. It is further ordered that the Discharger, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. The discharge of any waste not specifically regulated by this Order is prohibited.
2. The discharge of solid and liquid wastes at this Site is prohibited. Water may be discharged in amounts reasonably necessary for dust control, compaction, fire control, and the establishment and maintenance of vegetation.
3. The Discharger shall not cause the concentration of any Constituent of Concern (COC) to exceed its respective concentration limit in any monitored medium. The concentration limit for each monitoring parameter shall be set at the background concentration. Data analysis shall be performed in accordance with the approved Monitoring and Reporting Program.
4. The discharge of "hazardous wastes" and "designated wastes" at this Site, as defined in Title 27, CCR, is prohibited. The discharge of leachate at this facility is prohibited.
5. The discharge of wastes, including leachate, solids, or waste-derived gas to surface waters, surface water drainage systems, or groundwater is prohibited.
6. The discharge of waste to surface waters or within 50 feet of surface waters is prohibited.
7. The discharge of wastes into ponded water from any source is prohibited.
8. Ponding of liquids, including rainfall runoff and leachate, over solid waste disposal cells is prohibited.
9. The discharge of wastes to any portion of the storm water control system is prohibited.
10. The discharge of any waste in any manner not specifically described or quantified in the findings and regulated by this Order is prohibited.

11. Creation of a pollution, contamination, or nuisance, as defined by Section 13050 of the CWC, is prohibited.

B. GENERAL SPECIFICATIONS

1. The discharge of wastes shall not cause water quality degradation by allowing a statistically or non-statistically significant increase over background or baseline concentrations, as determined in accordance with Monitoring and Reporting Program No. R1-2011-0009.
2. Any leachate generated and collected at the Site shall be handled and disposed of in a manner approved by the Executive Officer of the Regional Water Board (Executive Officer).
3. Precipitation and drainage control systems for storm water run-on and runoff shall be designed and constructed to limit, to the greatest extent possible, ponding, inundation, erosion, slope failure, washout and overtopping from precipitation conditions of a 100-year, 24-hour storm event, and for the peak flows from a 25-year, 24-hour storm event.
4. Prior to the anticipated rainy season, but no later than October 1st annually, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the facility and to prevent surface drainage from contacting or percolating through wastes. By October 15, annually, the Discharger shall submit a report to the Executive Officer describing measures taken to comply with this specification.

C. CLEAN CLOSURE SPECIFICATIONS

1. The Discharger shall provide the Regional Water Board an information package on the contractors providing services to dismantle, sort, and spread the waste and for the company providing the third party inspections. This package shall include the name, contact information, statement of qualifications for both companies. The name, contact information, and statement of credentials for the Construction Quality Assurance (CQA) officer and other third party inspectors. This package shall be provided a minimum of 30 days before the start of clean closure.
2. The Discharger shall notify the Regional Water Board staff in writing of the clean closure construction's scheduled start date a minimum of 14 days in

advance. The Discharger shall confirm the date via telephone within 48 business hours of the clean closure construction start date.

3. Processing of waste from the WMU and soil amendment placement shall occur during dry weather periods between June 1st and October 1st. Construction shall be stopped during periods of significant rainfall.
4. Soil amendment shall be placed to prevent inundation or washout due to floods with a 100-year return period.
5. Drainage control structures shall be constructed and maintained to prevent, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping under 100-year, 24-hour precipitation conditions.
6. All clean closure activities, engineered structures, and erosion and drainage control systems shall be designed and constructed under the direct supervision of a California registered professional civil engineer, or a certified engineering geologist, and shall be certified by that individual as meeting the prescriptive standards and performance goals of Sections 20310, 20324, 20365, 21090(f), and 21810 Title 27, CCR.
7. All wastes within the 1994 WMU shall be processed to remove any uncharacteristic wastes such as trash, conveyor belts, painted or treated lumber, plywood, metals, concrete, or other items that would not be considered a soil amendment. Any items not being used as soil amendment shall be documented using waste manifests and disposed of at an appropriate off-site facility. These waste manifests will include a description of the waste; weight or volume of the given waste; date of removal from the site; final disposition of a given waste (such as the cogeneration plant for large wood waste or transfer station for common waste); and the signature of person overseeing waste removal. Hazardous waste manifests will only be required if wastes that cannot be taken at a Class III landfill are found during clean closure.
8. No untreated lumber greater than 12 inches in any one dimension or branches/logs more than 2-inches thick shall be included in the soil amendment without size reduction. Such oversized material may be removed from the Site or mechanically processed to the appropriate size to include with the soil amendment.
9. Sorting and processing the waste material shall include the use of sorting lanes. Material shall be sorted in lifts of 12-inches thick or less. Sorting and processing shall be inspected by an independent, third party observer.

10. The Caltrans slide material stockpile shall also be deconstructed and uncharacteristic wastes shall be removed and disposed of at a legal point of disposal. Soil and rock from this stockpile shall be incorporated into the soil amendment or used as construction materials as needed.
11. Waste from the WMU and material from the Caltrans stockpile shall be screened for potential chemical contamination. All materials being sorted shall be inspected visually, by scent, and for volatile organic compounds by a photo ionization detector (PID). Screening with the PID shall occur at a minimum of once every 50 cubic yards of material sorted. If suspected contaminated material or containers are found, Regional Water Board staff shall be notified immediately via telephone. All further work in the suspected area shall be stopped until proper procedures for removal have been determined and submitted by the Discharger and approved by the Regional Water Board.
12. Post-closure final contours shall slope 2% minimum (H:V) toward Hely Creek. Depressions that may pond water shall be avoided.
13. Well and piezometer destruction and construction shall require a permit issued by the Humboldt County Division of Environmental Health and approval of the methods by the Regional Water Board. All deconstruction shall include the removal of well materials at a minimum to the depth of the site excavation and either complete removal of the remainder of the casing and backfilling with grout or an appropriate grouting in place of the remaining casing.
14. Monitoring well MW-4 and piezometers P-1 and P-2 shall be destroyed during clean closure. Two new monitoring wells and nine new piezometers shall be placed at the two spreading areas after the soil amendment is placed.
15. Verification sampling of the 1994 WMU footprint shall include verification of removal of waste to the natural soil/bedrock and chemical sampling of the soil/bedrock per Monitoring and Reporting Program No. R1-2011-0009. The native soil shall be visually examined for evidence of staining and a minimum of eight soil samples shall be taken for chemical analyses. Soil amendment shall not be spread on the 1994 WMU footprint until after clean-closure of the footprint has been verified.
16. Soil amendment verification sampling shall include a four-point composite sample per every 5,000 cubic yards of placed soil amendment analyzed for total metals, petroleum hydrocarbons, volatile organic compounds (VOCs), and tannins & lignins per Monitoring and Reporting Program No. R1-2011-0009.

17. Spreading of the soil amendment shall occur on the original site and a nearby rock quarry. Depths of soil amendment may be placed up to but not exceeding depths of three to six feet as shown on Attachment B.
18. Forest vegetation shall be re-established immediately following the first rains upon completion of the clean closure. Vegetation shall be selected to require a minimum of irrigation and maintenance and shall include a mixture of coast redwood, Douglas fir, and/or red alder.
19. The current run-on ditch/diversion trench and sedimentation basin shall be reestablished at the Site by each October 1st during clean closure construction.
20. Clean closure of the WMU shall be performed under the direct supervision of a California registered professional civil engineer or certified engineering geologist. Appropriate documents will be maintained by the Discharger, and provided at the request of the Executive Officer, to document that supervision. This documentation shall be included in the clean closure verification report.
21. Construction quality assurance information from the clean closure and as-built drawings shall be submitted to the Regional Water Board within 60 days of final cover construction or repair. This documentation shall be included in the clean closure verification report.
22. Post-closure maintenance shall include regular irrigation of the new trees on a weekly basis as necessary to maintain tree health for the first June through November period after tree planting. Dead seedling trees shall be replaced as necessary to achieve a minimum stocking of 300 to 400 trees per acre.

D. PROVISIONS

1. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its contents.
2. The Discharger shall comply with these WDRs and the attached Monitoring and Reporting Program No. R1-2011-0009, incorporated herein by reference. A violation of the Monitoring and Reporting Program is a violation of these WDRs.
3. The Discharger shall comply with the attached General Monitoring and Reporting Provisions, which are hereby incorporated into this Order. A violation of any of the standard provisions and reporting requirements is a violation of these WDRs.

4. The Discharger may file a written request, including appropriate supporting documents, with the Executive Officer proposing modifications to Monitoring and Reporting Program No. R1-2011-0009. The Discharger shall implement any changes in the revised Monitoring and Reporting Program upon receipt from the Executive Officer of a signed copy of the revised Monitoring and Reporting Program.
5. The Discharger shall further comply with all applicable provisions of Title 27 not specifically referred to in this Order.
6. By October 1 annually, any necessary erosion control measures shall be implemented and any necessary construction, maintenance, or repairs of drainage control facilities shall be completed to minimize erosion and prevent flooding at the Site. All disturbed areas shall be seeded with an appropriate vegetation mixture to minimize sedimentation if needed. Rainfall runoff from disturbed areas shall be channeled through sedimentation basins or other appropriate structures to minimize sedimentation in surface drainage courses downgradient of the Site. Sedimentation basins and other appropriate structures shall be cleaned out during the rainy season as necessary to maintain adequate sedimentation capacity. The Executive Officer may delete the requirement of submitting annual erosion control reports upon finding that no erosion control work is necessary prior to the return of winter rains. By October 15, annually, the Discharger shall submit a report to the Executive Officer describing measures taken to comply with this provision.
7. Prior to any construction, the Discharger shall obtain any and all permits required under federal, state, or local laws.
8. During times of active closure construction or any periods of repair to the waste containment, drainage, or monitoring facilities, legible copies of the daily CQA field notes and waste manifests shall be submitted to the Regional Water Board via facsimile at (707) 523-0135 or email by noon the following weekday. Monthly summary reports are due by the tenth of the following month. The facsimile shall be addressed to the Regional Water Board, Land Disposal Unit, and include the name of the staff person assigned to the Site. An email should be sent directly to the staff person assigned to the Site.
9. A clean closure verification report shall be submitted within 60 days of the completion of the waste management unit by sorting and spreading the soil amendment at the designated locations (Attachment B). A clean closure verification report will be prepared and certified by the CQA Officer performing the third party verification of the clean closure. The CQA officer must be a registered civil engineer or a certified engineering geologist licensed in the State of California. The report must be submitted to the Regional Water Board and other appropriate agencies, under penalty of perjury, in accordance with Sections 21090(f) and 21810(e) Title 27, CCR. The report, at a minimum, will include the certificate of closure; a description of any

required postclosure maintenance activities; daily construction logs; waste manifests; documentation of volume and placement of soil amendment; material acceptance reports; photologs of closure activities; final CQA documentation; laboratory testing results; field testing results; discussion of verification sampling results; and an as-built topographic map of the spreading areas, prepared at a scale of one-inch to 100 feet, with a contour interval of five feet.

10. The Discharger may file a written request, including appropriate supporting documents, to the Regional Water Board requesting termination of the WDRs and MRP after a minimum of three years of post-closure monitoring (as measured from sampling date to sampling date) showing no impact in any medium from the wood waste disposal site or its use as a soil amendment. The WDR and MRP shall be enforce until such time that the WDRs are rescinded.
11. Throughout the post closure maintenance period, the Discharger shall [Section 21090 (c), Title 27, CCR]:
 - a. maintain the structural integrity and effectiveness of all containment structures, and maintain the final cover as necessary to correct the effects of settlement or other adverse factors;
 - b. maintain monitoring systems and monitor the ground water, surface water, and the unsaturated zone in accordance with applicable requirements of Article 1, Chapter 3, Subchapter 3, Subdivision 1 (Section 20380 et seq.); and
 - c. prevent erosion and related damage of the final cover due to drainage.
12. The Discharger shall obtain and maintain adequate assurances of financial responsibility for closure and corrective action for all known and reasonably foreseeable releases from a WMU at the facility in accordance with Sections 20380(b), 20950, 22210, 22211, 22212, 22220, 22221, and 22222 of Title 27, CCR.
13. By January 15, 2016, January 15, 2021, and every five years thereafter, for the term of this permit, the Discharger shall provide as part of the Annual Monitoring Report an updated estimate of post-closure and corrective action costs to the Regional Water Board for review. The Discharger shall demonstrate and report to the Regional Water Board that it has established an acceptable financial assurance mechanism described in Section 22228, Title 27 CCR in at least the amount of the cost estimate approved by the Executive Officer. The Executive Officer may delete the requirement of submitting updated cost estimates, with the exception of inflation adjustments, upon finding that the need for further corrective action is unlikely and that post-closure costs are likely to remain constant.

14. The Discharger is required to update approved cost estimates annually to account for inflation, in accordance with Section 22236, Title 27, CCR.
15. In the event that the Regional Water Board determines that HRC has failed to pay or is failing to perform corrective action as required by law, Regional Water Boards may direct HRC to pay such amounts as are necessary to ensure sufficient corrective action.
16. The Discharger shall maintain proper erosion control, monitoring systems, site security, and precipitation and drainage control systems throughout the post-closure maintenance period. The Discharger shall immediately notify the Regional Water Board of any flooding, equipment failure, slope failure, or other change in Site conditions that could impair the integrity of the Site, monitoring systems, or precipitation and drainage control structures.
17. The Discharger shall continue to monitor the spreading areas, surface drainage, and underlying medium throughout the post-closure maintenance period, per Monitoring and Reporting Program No. R1-2011-0009. Monitoring shall continue until the Regional Water Board determines that the Site no longer threatens water quality.
18. The Discharger or persons employed by the Discharger shall comply with all notice and reporting requirements of the State Department of Water Resources with regard to the construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this Order or with Monitoring and Reporting Program No. R1-2011-0009, as required by Sections 13750 through 13755 and 13267 of the CWC.
19. Monitoring points and Points of Compliance for surface water and groundwater shall be as listed in the Monitoring and Reporting Program No. R1-2011-0009 for the Site. Leachate, if encountered, shall be sampled in accordance with Monitoring and Reporting Program No. R1-2011-0009.
20. If the Discharger determines that there is measurably significant evidence of a release from the Site, as defined in Section 20164, Title 27, CCR, the Discharger:
 - a. shall immediately notify the Regional Water Board verbally and take all necessary corrective actions. Written notification by certified mail or other traceable delivery service shall be provided within 7 days of occurrence. [Section 20420(j)(1), Title 27, CCR]
 - b. can immediately initiate the verification procedure pre-approved by the Regional Water Board to verify the release. [Section 20420(j)(2), Title 27, CCR]

21. Immediately following detection of a release, or after completion of the retest, the Discharger:
 - a. shall immediately sample all Monitoring Points in the affected medium at the WMUs and determine the concentration of all COCs. [Section 20420(k)(1), Title 27, CCR]
 - b. within 90 days of determining measurably significant evidence of release, submit an amended ROWD to establish an evaluation monitoring program, in accordance with Section 20420(k)(5), Title 27, CCR
 - c. within 180 days of verifying measurably significant evidence of a release from a WMU, submit an engineering feasibility study for a corrective action program. The corrective action program shall, at a minimum, meet the requirements of Section 20430, Title 27, CCR. [Section 20420(k)(6), Title 27, CCR]
22. The Regional Water Board may make an independent finding that there is a measurably significant evidence of release. The Regional Water Board shall send written notification of such a determination to the Discharger by certified mail, return receipt requested or other traceable delivery service. The Discharger shall comply with all provisions of Section 20420, Title 27, CCR and Provisions in this Order that are required in response to a measurably significant evidence of release.
23. The Discharger shall report to the Regional Water Board by certified mail or other traceable delivery service the results of both the initial statistical test and the results of the verification procedure, as well as all concentration data from samples collected for use in these tests within seven days of the last laboratory analysis of the samples collected for the verification procedure. [Section 20415(e)(8)(E)(6), Title 27, CCR]
24. If the Discharger verifies that there has been a measurably significant release from the Site, the Discharger may demonstrate that a source other than the Site caused the evidence of a release or that the evidence is an artifact caused by an error in sampling, analysis or the data analysis protocol. [Section 20420(k)(7), Title 27, CCR] The Discharger may make this demonstration in addition to or in lieu of submitting an amended ROWD and an engineering feasibility study pursuant to Section 20420(k)(5), Title 27, CCR and Section 20420(k)(6), Title 27, CCR. The Discharger is not relieved of the requirements specified in Sections 20420(k)(5) and (k)(6), Title 27, CCR unless the demonstration report is accepted by the Executive Officer. In making a demonstration, the Discharger shall:
 - a. within 7 days of determining measurably significant evidence of a release, submit a report to the Regional Water Board by certified mail or other traceable delivery service stating that the Discharger intends to make a demonstration pursuant to Section 20420(k)(7)(A), Title 27, CCR

- b. within 90 days of determining measurably significant evidence of a release, submit a report to the Regional Water Board that demonstrates that a source other than the WMU caused the apparent release [Section 20420(k)(7)(B), Title 27, CCR]
 - c. within 90 days of determining measurably significant evidence of a release, submit an amended ROWD to make any appropriate changes to the detection monitoring program. [Section 20420(k)(7)(C), Title 27, CCR]
25. If the Discharger determines that there is significant physical evidence of a release, as described in Section 20385(a)(3), Title 27, CCR, or that the detection monitoring program does not meet the requirements of Section 20420, Title 27, CCR, the Discharger shall:
 - a. notify the Regional Water Board by certified mail or other traceable delivery service within 7 days of such a determination [Section 20420(l)(1), Title 27, CCR]; and
 - b. within 90 days of such a determination, submit an amended ROWD to the Regional Water Board to make any appropriate changes to the program. [Section 20420(1)(2), Title 27, CCR]
26. Any time that the Regional Water Board determines that the detection monitoring program does not satisfy the requirements of Section 20420, Title 27, CCR, the Regional Water Board shall send written notification of such a determination to the Discharger by certified mail, return receipt requested or other traceable delivery service. The Discharger shall, within 90 days after receipt of notification by the Regional Water Board, submit an amended ROWD to make any appropriate changes to the program. [Section 20420(m), Title 27, CCR]

Compliance Time Schedule

27. Pursuant to Section 13267(b) of the CWC, the Discharger shall complete the tasks outlined in these WDRs and the attached Monitoring and Reporting Program No. R1-2011-0009, in accordance with the following time schedule:

Action	Compliance Date
The Discharger shall submit a completion report for the monitoring system changes.	December 15, 2011
The Discharger shall submit a Clean Closure Verification Report.	60 days after completion, no later than December 15, 2011

28. The Discharger shall notify the Regional Water Board in writing of any proposed change of ownership or responsibility for construction, operation, closure or post-closure maintenance of the Site. This notification shall be given prior to the effective date of the change, and shall include a statement by the new Discharger that construction, operation, closure, and post-closure maintenance will be performed in compliance with any existing WDRs and any revisions thereof. The Regional Water Board shall amend the existing WDRs to name the new Discharger.
29. The Discharger or any person who violates WDRs and/or who intentionally or negligently discharges waste or causes or permits wastes to be discharged into surface waters or groundwaters of the State may be liable for civil and/or criminal remedies, as appropriate, pursuant to Sections 13350, 13385, and 13387 of the CWC.
30. The Regional Water Board requires all technical and monitoring reports pursuant to this Order in accordance with Section 13267 of the CWC. Failure to submit reports in accordance with schedules established by this Order, 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 CWC.
31. The Discharger must comply with all conditions of these WDRs. Violations may result in enforcement actions, including Water Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these WDRs by the Regional Water Board. (CWC Sections 13261, 13267, 13263, 13265, 13268, 13300, 13301, 13304, 13340, and 13350.)
32. After notice and opportunity for hearing, this Order may be terminated or modified for cause, including but not limited to:
 - a. violation of any term or condition in this Order;

- b. obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts; or
- c. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

33. The Discharger shall remove and relocate any wastes discharged at this Site in violation of this Order.

34. Severability

Provisions of these WDRs are severable. If any provision of these requirements is found to be invalid, the remainder of these requirements shall not be affected.

35. Operation and Maintenance

The Discharger shall maintain in good working order and operate as efficiently as possible any facility or control system installed by the Discharger to achieve compliance with the WDRs.

36. Change in Discharge

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

37. Signatory Requirements

- a. All applications, reports, or information submitted to the Regional Water Board Executive Officer shall be signed by either a principal executive officer, ranking elected official, or a responsible corporate officer. For purposes of this provision, a responsible corporate officer means:
 - i. a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or
 - ii. the manager of one or more manufacturing, production, or operating facilities, if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- b. Reports required by this Order, other information requested by the Regional Water Board may be signed by a duly authorized representative provided:

- i. The authorization is made in writing by a person described in paragraph (a) of this provision;
 - ii. the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; and
 - iii. the written authorization is submitted to the Regional Water Board prior to or together with any reports, information, or applications signed by the authorized representative.
- c. Any person signing a document under paragraph (a) or (b) of this provision shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

38. Change in Ownership

In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the following items by letter, a copy of which shall be forwarded to the Regional Water Board:

- a. existence of this Order, and
- b. the status of the Discharger's annual fee account.

39. Vested Rights

This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the Discharger from his liability under federal, state, or local laws, nor create a vested right for the Discharger to continue the waste discharge.

40. Inspections

The Discharger shall permit authorized staff of the Regional Water Board:

- a. entry upon premises in which a waste source is located or in which any required records are kept;
- b. access to copy any records required to be kept under terms and conditions of this Order;
- c. to inspect monitoring equipment or records; and
- d. to sample any discharge.

41. Noncompliance

In the event the Discharger is unable to comply with any of the conditions of this Order due to:

- a. breakdown of waste treatment equipment;
- b. accidents caused by human error or negligence; or
- c. other causes such as acts of nature;

the Discharger shall notify the Executive Officer by telephone as soon as it or its agents have knowledge of the incident and shall confirm this notification in writing within 14 days of the telephone notification. The written notification shall include pertinent information explaining reasons for the noncompliance, and shall indicate the steps taken to correct the problem and the dates thereof, and the steps being taken to prevent the problem from recurring.

42. Accidental Spills, Incident Reporting and Monitoring

The Discharger shall comply with the Contingency Planning and Notification Requirements Order No. 74-151 and the Monitoring and Reporting Program No. R1-2011-0009 and any modifications to these documents as specified by the Executive Officer. Such documents are attached to this Order and incorporated herein. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services.

- a. Order No. 74-151 requires immediate incident reporting of unintentional or accidental spills (including Emergency Response actions) and diligent action to abate the effects of the discharge. Written confirmation of the incident is required within two weeks of notification.

- b. General Monitoring and Reporting Provisions require sampling and analysis performance criteria in addition to compliance reporting criteria and timeframes.

43. Revision of Requirements

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

44. This Regional Water Board requires the Discharger to file a ROWD at least 120 days before making any material change or proposed change in the character, location, or volume of the discharge.

Certification

I, Catherine Kuhlman, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on June 23, 2011.

Catherine Kuhlman
Executive Officer