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## Central Valley Regional Water Quality Control Board

25 May 2017

Luke Kampmann  
K&S Spreading and Hauling, Inc.  
24790 Clark Avenue  
Orland, California 95963

### NOTICE OF APPLICABILITY

**WATER QUALITY ORDER 2015-0121-DWQ  
GENERAL WASTE DISCHARGE REQUIREMENTS FOR COMPOSTING OPERATIONS  
K&S SPREADING AND HAULING, INC.  
GLENN COUNTY**

On 17 February 2017, K&S Spreading and Hauling, Inc. (Discharger) submitted a Report of Waste Discharge (ROWD) for the K&S Spreading and Hauling, Inc. facility (Facility). The ROWD includes a Technical Report and Report of Composting Site Information (Technical Report), Notice of Intent (NOI), and a filing fee, to obtain coverage under Water Quality Order 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations (hereafter General Order) for composting operations at the above-referenced site. The complete General Order can be accessed at

[http://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/water\\_quality/2015/wqo2015\\_0121\\_dwq.pdf](http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2015/wqo2015_0121_dwq.pdf)

This Notice of Applicability (NOA) was developed after the review of your NOI and Technical Report as described in the attached Staff Memorandum which is a part of this NOA. Based on staff's review, the Facility meets the conditions of the General Order, and is hereby covered under General Order **2015-0121-DWQ-R5R008** as a **Tier I** composting operation. The Discharger must comply with all Tier I requirements of the General Order.

The filing fee for K&S Spreading and Hauling, Inc. is based on a Threat to Water Quality and Complexity rating of 3C. The submitted \$2,088 filing fee covers the first year permitted by this NOA. The Discharger shall submit the required annual fee (as specified in the annual billing issued by the State Water Resources Control Board) until the NOA is officially terminated.

To fully comply with this NOA, please familiarize yourself with the contents of this NOA, the enclosed Staff Memorandum and all of the requirements of the General Order. The Discharger is responsible for implementing all operations in a manner that complies with the General Order. Any noncompliance with the General Order constitutes a violation of the Water Code, and is grounds for enforcement action, and/or termination of enrollment under the General Order.

Conditions of the Composting General Order include but are not limited to:

- By **30 September 2017**, the Discharger must provide supplemental information (i.e., percolation test results, site-specific hydraulic conductivity data, and depth to groundwater at the Facility) that demonstrates that the working surface is in compliance with the General Order. If the Facility does not meet the criteria for working surface, the Discharger must provide recommendations for site improvements or the Facility will be considered a Tier II composting operation.
- The Facility must be brought into full compliance with the General Order no later than **3 October 2022**, which is six years from submittal of the NOI.
- Technical reports must be submitted at least 90 days prior to each construction activity, while post-construction reports must be submitted within 60 days after the completion of each construction activity.
- A revised NOI is required at least 90 days prior to: adding a new feedstock; adding an additive or amendment; changing material or construction specifications; changing a monitoring program; or changing an operation or activity not described in the approved NOI and Technical Report.


Attachment B of the General Order includes specific monitoring and reporting requirements that you must comply with, including routine monitoring with reporting to the Central Valley Water Board. The first year Annual Monitoring and Maintenance Report as identified in the General Order must be submitted to the Central Valley Water Board no later than **1 April 2018**.

All monitoring and technical reports submitted to this office must be in a searchable, electronic format [i.e., Portable Document Format (PDF)] and Electronic Deliverable Format (EDF) via the State Water Resources Control Board's Internet GeoTracker system at <http://geotracker.waterboards.ca.gov/> as require by the General Order.

To ensure that your submittal is routed to the appropriate staff person, the following information should be included on any documentation submitted to the mailing address for this office:

Central Valley Water Board  
Attention: Melissa Buciak  
364 Knollcrest Drive, Suite 205  
Redding, CA 96002

If you have any questions regarding this letter or the attached Staff Memorandum, please contact Melissa Buciak at (530) 224-4854 or by email at [Melissa.Buciak@waterboards.ca.gov](mailto:Melissa.Buciak@waterboards.ca.gov) or Kate Burger at (530) 223-2081 or by email at [Kate.Burger@waterboards.ca.gov](mailto:Kate.Burger@waterboards.ca.gov).

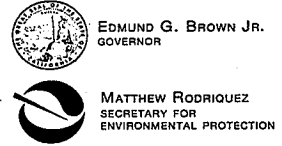
  
(for) Pamela C. Creedon  
Executive Officer

MAB:hc

Enclosure: Staff Memorandum

cc by email  
w/encl:

John Wells, Glenn County Department of Environmental Health, Willows  
John Loane, CalRecycle, Permits and Assistance Branch, Sacramento  
Robin Kampmann, NorthStar, Chico



EDMUND G. BROWN JR.  
GOVERNOR

MATTHEW RODRIGUEZ  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

**Central Valley Regional Water Quality Control Board**

**TO:** Kate Burger, P.G., Ph.D.  
Senior Engineering Geologist  
Chief, Groundwater Unit

**FROM:** Melissa Buciak, P.G.  
Engineering Geologist  
Groundwater Unit

Katie Gilman  
Student Engineering Aide

**DATE:** 25 May 2017

**SIGNATURE:** 

**SUBJECT: APPLICABILITY OF COVERAGE UNDER STATE WATER RESOURCES CONTROL BOARD WATER QUALITY ORDER 2015-0121-DWQ, K&S SPREADING AND HAULING, INC., 7165 COUNTY ROAD 24, ORLAND, GLENN COUNTY**

**REPORT OF WASTE DISCHARGE**

On 17 February 2017, K&S Spreading & Hauling, Inc. (Discharger) submitted a Report of Waste Discharge (ROWD) for K&S Spreading & Hauling, Inc. (Facility). The ROWD includes a Technical Report, Notice of Intent (NOI), and a filing fee to obtain coverage under Water Quality Order 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations (hereafter General Order), for composting operations at the above-referenced site. Public documents for the case can also be viewed on GeoTracker using the following public website:

[http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T10000010323](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000010323)

**SITE DESCRIPTION**

The Facility is located at 7165 County Road 24 in Orland, Glenn County on portions of Assessor's Parcel Numbers 023-200-033 and 023-200-034. The Facility began operations around 2004 and was recently permitted by the Local Enforcement Agency [Glenn County Department of Environmental Health (GCDEH)] under Enforcement Agency Notification 11-AA-0038 and has maximum throughput of 100,000 cubic yards and permitted capacity of 200,000 cubic yards per year.

According to the Technical Report, the soils underlying the Facility are comprised of approximately 80 percent Cortina loam and 20 percent Tehama loam. Cortina is generally a very gravelly loam to very gravelly loamy sand, and lies up to about 2.5 feet below ground surface (bgs). The Tehama loam is a loam to a silty clay loam and moderately deep over gravel, to about 2.5 feet bgs. The typical profile of the Cortina is 0 to 8 inches of very gravelly sandy loam on 8 to 32 inches of stratified very gravelly loamy sand to very gravelly loam. At approximately 32 inches in depth there is a restrictive layer that is a strongly contrasting textural stratification. The typical profile of the Tehama Loam is 0 to 9 inches of loam on 9 to 30 inches of silty clay loam. Like the Cortina at approximately 30 inches in depth there is a restrictive layer that is a strongly contrasting textural stratification.

The Technical Report states that the hydraulic conductivity of the most limiting soil layer to transmit water in the areas comprised of Tehama loam ranges from 0.2 inches per hour (in/hr) to 0.57 in/hr [ $1.4 \times 10^{-4}$  to  $4.0 \times 10^{-4}$  centimeters per second (cm/s)] and in areas that are comprised of Cortina loam ranges from 1.98 in/hr to 5.95 in/hr ( $1.4 \times 10^{-3}$  to  $4.2 \times 10^{-3}$  cm/s). Per the General Order working surfaces must have a hydraulic conductivity of  $1.0 \times 10^{-5}$  cm/s.

The annual precipitation was calculated using the Western Regional Climate Center for Orland, CA, Station 0465606, from years 1903-2012. The maximum, minimum and average annual precipitations for this location are 48.3, 7.7, and 20 inches, respectively. The mean evaporation was calculated using data from the Western Regional Climate Center for Chico, CA from years 1906 through 2005 and was calculated as 67.6 inches per year. Based on "Point Precipitation Frequency Data" presented in the NOAA Atlas 14, a 25-year, 24-hour event would generate 3.84 inches of rainfall.

The Facility is located in the Sacramento River Hydrologic Region, in the northern most portion of the Colusa Sub-Basin in the Stony Creek Fan. The geologic units within the fan area include Holocene alluvial deposits, Pleistocene deposits of the Riverbank and Modesto Formations, and Pliocene deposits of the Tehama and Tuscan Formations. The principal water bearing unit is comprised of late tertiary age deposits for the Tehama Formation. Thick clays of the upper part of this formation underlie the intermediate water bearing zone of the Stony Creek plain at a depth of 300 feet, rising to a minimum of 40 feet bgs. Permeability varies throughout the formation, depending on the fine grained sediment and presence of hardpan layers. Natural groundwater recharge to this basin is in the form of surface water recharge from Stony Creek. Some recharge in the area is from deep percolation of applied irrigation water. Using existing well logs for groundwater wells located adjacent to the Facility, depth to groundwater ranges in depth from 30 feet to 107 feet bgs with an average depth of approximately 52 feet bgs.

The nearest water supply well is a domestic well that serves an existing residence located 650 feet to the southeast of the Facility, which is greater than the General Order setback requirement of 100 feet. In addition to the domestic well there is an existing agriculture irrigation well located approximately 1,325 feet northeast of the Facility. Attachment A shows the location of the existing water supply wells in the area.

The nearest surface water (Tehama Colusa Canal) is located approximately 2.25 miles northwest of the Facility. Additionally, Stony Creek is located approximately 2.95 miles northwest of the Facility. Per the General Order, composting operations shall be setback at least 100 feet from the nearest surface water body.

According to the Federal Emergency Management Agency (FEMA), the Facility is not located within a 100-year floodplain, but is located within a minimum flood hazard Zone X (as per FEMA Flood Hazard Map 06021C400D dated 8/5/2010). Per the General Order, composting operations located within a 100-year floodplain may be subject to state and/or local land use restrictions and permits.

### **COMPOSTING OPERATIONS**

According to the NOI, the Facility only allows manure and has a maximum capacity of 20,000 cubic yards. No additives or amendments are used. Compostable materials will be on-site year round (January through December). The current site is composed of two compost processing/storage pads, the north pad and the south pad, a storm water retention pond and an access road. There are no waste handling areas, buildings or equipment cleaning facilities at this location. Attachment A provides a site plan.

### Design Information

The north pad is approximately 10 acres in size and is used for the active compost mixing, curing and final product. This pad is constructed of compacted native material that is graded to drain in the southerly direction. Along the southern boundary of the pad is a 3 foot deep by 5 foot wide drainage swale that slopes towards the retention pond located at the southeast corner of the pad. Surrounding the pad on the north, east and west side is a 2 foot tall constructed berm that prevents runoff water from entering the site and runoff water from leaving the pad area. At the southeast corner of the pad is a retention pond that is 0.3+/- acres in size. There is no outfall from this pond and evaporation is the primary method of discharge from the pond.

The south pad is approximately 3.7 acres in size and is used for the compost active mixing, curing and final product. This pad is constructed of compacted native material that is graded to drain in the southwesterly direction. The southwestern corner of this pad is graded to create a low spot where storm water runoff from the site is collected and allowed to evaporate. The elevation difference between the pad and the surrounding roadway is approximate 3 feet. The access roads and areas surrounding this pad are graded to drain away from the pad so that runoff water from the surrounding area is not directed towards the pad.

According to the NOI, the average ground surface material percolation rate is 0.03 minutes per inch (MPI). Table 3 in the General Order provides Tier I percolation rates and depth to groundwater standards. For composting operations with percolation rates less than 1 MPI, the required minimum depth to groundwater is 50 feet.

### Water and Wastewater Management Plan

The storm water/wastewater handling system is currently comprised of a pad underlying the compost operation area (13.7 acres), drainage channels at the perimeter of the pad, detention pond, and down-chutes to convey wastewater from the pad to the detention pond. The composting operations at this Facility do not use any processing water. The only wastewater at the Facility is generated by rainfall.

The storm water runoff from the north pad is directed to the south where it is captured in a drainage swale which discharges into the retention pond located at the southeast corner of the pad. The retention pond capacity is approximately 120,300 cubic feet with no outlets; all water is contained and is only extracted by evaporation. According to the Discharger, the storage capacity required in the pond to contain the runoff from a 25-year 24 hour storm event from the north pad is 25,280 cubic feet, which is well below the provided capacity.

The storm water runoff from the south pad is directed to the southwest corner of the pad where it is contained in a low area and allowed to evaporate. The low area of the pad is approximately 60 feet wide, 200 feet long and averages 1.5 feet in depth (0 feet deep where the low area starts and progresses to 3 feet deep at the southeast corner of the pad). During the rainy season compost material is not stored within this area and the area is only used for storm water retention. There are no outlets from the low area and all storm water from the south pad is contained and allowed to evaporate. The available capacity of the low area is approximately 18,590 cubic feet. According to the Discharger, the storage capacity required in the low area to contain the runoff from a 25-year 24 hour storm event from the south pad is 9,391 cubic feet, which is well below the provided capacity.

### **TIMELINE FOR COMPLIANCE**

Full compliance with Order 2015-0121-DWQ must be achieved by **17 February 2023**, which is six years from submittal of the NOI. To achieve compliance, the Discharger proposes conducting the required quarterly inspections and maintenance immediately. It is unclear if the working surface meets the hydraulic conductivity requirements or if the depth to groundwater at the Facility is at least 50 feet bgs. The Discharger should make this demonstration as part of an amendment to the Technical Report submitted to the Central Valley Water Board by **30 September 2017**. An Annual Monitoring and Maintenance Report will be prepared and submitted to the Central Valley Water Board starting **1 April 2018**.

### **MONITORING AND REPORTING**

The Discharger will regularly inspect and maintain all containment, control, monitoring structures, and monitoring systems pursuant to the submitted Technical Report and the Attachment B of General Order Monitoring and Reporting requirements. The frequency of inspections will be sufficient to prevent discharges of feedstocks, additives, amendments, compost (active, curing, or final product), or wastewater from creating, threatening to create, or contributing to conditions of contamination, pollution, or nuisance.

The Discharger will conduct a monitoring program as prescribed in the Attachment B of General Order Monitoring and Reporting requirements. Sections that apply are A.1., A.2., B and C. Results of monitoring will be reported annually in the Annual Monitoring and Maintenance Report which will be submitted by **1 April** of each year as long as the Notice of Applicability is in effect.

### **SITE CLOSURE**

At least 90 days prior to ceasing composting operations, the Facility shall submit a Site Closure Plan to the Central Valley Water Board staff for approval. The site restoration shall include work necessary to protect public health, safety, and the environment.

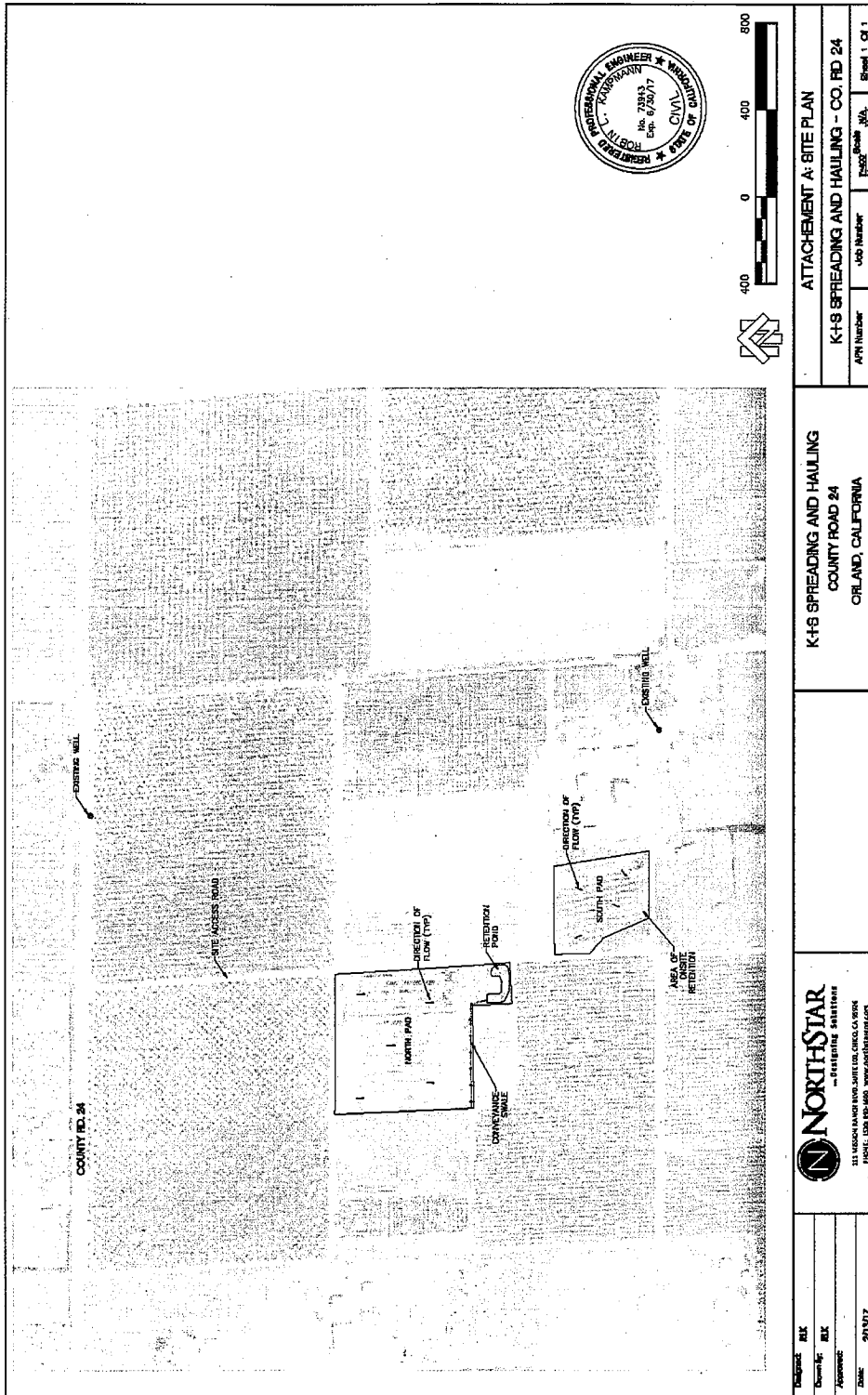
### **DISCUSSION**

The Technical Report reveals that composting operations on native surfaces (Cortina and Tehama loams) may not be compliance with the requirements of the General Order. Per the General Order working surfaces must have a hydraulic conductivity of  $1.0 \times 10^{-5}$  cm/s. The hydraulic conductivity in cm/s for the Tehama loam ranges from  $1.4 \times 10^{-4}$  to  $4.0 \times 10^{-4}$  cm/s and the Cortina loam ranges from  $1.4 \times 10^{-3}$  to  $4.2 \times 10^{-3}$  cm/s. Although the working surface has been compacted, the average ground surface material percolation rate is 0.03 MPI. For composting operations with percolation rates less than 1 MPI, the required minimum depth to groundwater is 50 feet. It is unclear if the working surface meets the hydraulic conductivity requirements or if the depth to groundwater at the Facility is at least 50 feet bgs. The nearest water supply well is a domestic well that serves an existing residence located 650 feet southeast of the Facility, which is greater than the General Order setback requirement of 100 feet. The nearest surface water (Tehama Colusa Canal) is located approximately 2.25 miles northwest of the Facility which is greater than the setback requirements of the General Order.

### **RECOMMENDATION**

Based on staff review of the Technical Report and supporting documents, the Facility meets the minimum requirements of the General Order. The Notice of Applicability can be issued and stay in effect as long as the Discharger implements all operations in a manner that complies with the requirements of the General Order, and the Discharger demonstrates that site conditions adequately protect water quality.

# Attachment A



Designer: <b>RJK</b> Checker: <b>RJK</b> Approver: Date: <b>2/13/17</b>	<b>NORTHSTAR</b> - Striping Solutions 111 Mission Road Bldg. 300, Suite 100, Orland, CA 94656 Phone: (925) 940-1400 www.northstarstriping.com	<b>KHS SPREADING AND HAULING</b> COUNTY ROAD 24 ORLAND, CALIFORNIA	<b>ATTACHMENT A: SITE PLAN</b> <b>KHS SPREADING AND HAULING - CO. RD 24</b> APR Number: Job Number: Date: Sheet 1 of 1
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