
Central Valley Regional Water Quality Control Board

27 January 2016

Kirk Steed
Recology Environmental Solutions, Inc.
235 N. First Street
Dixon, CA 95620

NOTICE OF APPLICABILITY

**WATER QUALITY ORDER 2015-0121-DWQ
GENERAL WASTE DISCHARGE REQUIREMENTS FOR COMPOSTING OPERATIONS
RECOLOGY INC.
RECOLOGY BLOSSOM VALLEY ORGANICS NORTH
STANISLAUS COUNTY**

On 30 November 2015, Recology Inc. (the Discharger) submitted a Report of Waste Discharge (ROWD) for the Recology Blossom Valley Organics North composting facility (Facility) which 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. The complete General Order can be accessed at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2015/wgo2015_0121_dwq.pdf

This Notice of Applicability (NOA) was developed after the review of your ROWD 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 State Water Resources Control Board General Order **2015-0121-DWQ-R5S001** as a **Tier II** composting operation. The Discharger must comply with all Tier II requirements of the General Order.

The filing fee for the Recology Blossom Valley Organics North is based on Threat to Water Quality and Complexity rating of **2C**. The submitted \$11,195 filing fee covers the first year permitted by this Notice of Applicability (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 Notice of Applicability is officially terminated.

To fully comply with this NOA, please familiarize yourself with the contents of 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 this General Order constitutes a violation of the Water Code, and is grounds for enforcement action, and/or termination of enrollment under this General Order.

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

- The Water and Wastewater Management Plan as submitted in the Technical Report and approved by Staff must be implemented. Construction of new storage and treatment ponds with associated facilities, low flow diversion structure, and conveyance pipes must be completed by **30 November 2016**.
- The Facility must be brought to full compliance with the General Order no later than **30 November 2021**, which is six years from submittal of NOI. The timeline for compliance is proposed in the submitted Technical Report and specified in the attached Staff Memorandum.
- Technical reports must be submitted 90 days prior to each construction activity, while post-construction reports must be submitted 60 days after the completion of each construction activity.
- A revised NOI is required at least 90 days prior to: adding a new feedstock, 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 and reporting to the Central Valley Regional Water Control Board. The first year Annual Monitoring and Maintenance Report as identified in the General Order must be submitted to the Central Valley Regional Water Board no later than **1 April 2017**.

Now that the NOA has been issued, the Board’s Compliance and Enforcement Section will provide management of this composting site. Paul Sanders is your new point of contact for any questions about the General Order and NOA, and you may contact him at (916) 464-4817 or at Paul.Sanders@waterboards.ca.gov. If you find it necessary to make a change to your permitted operations, Paul Sanders will direct you to the appropriate Permitting staff.

All monitoring and technical reports are to be submitted to the Compliance and Enforcement Section. All monitoring reports and other correspondence must be converted to searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50 MB are to be emailed to: centralvalleysacramento@waterboards.ca.gov. Documents that are 50 MB or larger are to be transferred to a portable data storage device and mailed to this office at the address provided on the cover page, Attention: ECM Mailroom.

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

| | |
|------------------|---|
| Attention: | Paul Sanders, Compliance and Enforcement Unit |
| Discharger Name: | Recology Blossom Valley Organics North |
| Facility Name: | Recology Blossom Valley Organics North |
| County: | Stanislaus County |
| CIWQS Place ID: | 817431 |

If you have any questions regarding this letter or the attached Staff Memorandum, please contact Natasha Vidic at (916) 464-4614 or Natasha.Vidic@waterboards.ca.gov or Marty Hartzell at (916) 464-4630 or Marty.Hartzell@waterboards.ca.gov.

Original Signed By Andrew Altevogt for

PAMELA C. CREEDON
Executive Officer

Enclosures: Staff Memorandum

cc: Leslie Graves, State Water Resources Control Board, Sacramento
Miguel Galvez, Stanislaus County Planning and Community Development, Modesto

Central Valley Regional Water Quality Control Board

STAFF MEMORANDUM

TO: Marty Hartzell, PG, CHG
Senior Engineering Geologist

FROM: Natasha Vidic
Engineering Geologist

DATE: 26 January 2016

SUBJECT: APPLICABILITY OF COVERAGE UNDER STATE WATER RESOURCES CONTROL BOARD WATER QUALITY ORDER 2015-0121-DWQ, RECOLOGY BLOSSOM VALLEY ORGANICS NORTH COMPOSTING FACILITY, STANISLAUS COUNTY

REPORT OF WASTE DISCHARGE

On 30 November 2015, Recology Inc. (the Discharger) submitted a Report of Waste Discharge (ROWD) for the Recology Blossom Valley Organics North (RBVON) facility. The ROWD includes a Technical Report, Notice of Intent (NOI), and 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. On 22 January 2016, Recology submitted an update to the Technical Report to address reducing the Facility footprint and improving working surfaces.

SITE DESCRIPTION

The existing facility, formerly the Grover Environmental Products Composting Facility, is located on a 123.5-acre property at 3909 Gaffery Road in Vernalis, Stanislaus County.

The site is on the footprint of a former WWII military airport. Some of the operations take place on a former runway which extends northwest to southeast –see Attachment A. The former runway was previously paved with asphalt, and covers an area of approximately 13.8 acres. The topography of the site is relatively flat with a gentle slope to the southeast. Subsurface lithology observed during groundwater well construction consists primarily of silty/clayey gravel with intermittent lenses of clay or silt 5-15 feet thick. Land uses within one mile of the facility include agricultural fields to the north and to the south, an industrial facility supplying gypsum and aggregate products to the east, and the Delta-Mendota Canal to the west –see Attachment A.

The closest surface water is the Delta-Mendota Canal which is approximately 200 feet away from the perimeter of composting operations at its closest point, which is greater than the General Order requirement of 100 feet. There are 17 water supply wells within one mile of the facility and includes municipal, domestic, industrial, and agricultural water supply wells. Of these 17 wells, three are RBVON water supply wells, two are on-site, and one is 50 feet from the site. The closest off-site well is located 400 feet from the perimeter of the facility, which is greater

than the General Order setback requirement of 100 feet. Depth to groundwater ranges between 110-118 feet, and the groundwater flow direction determined from water levels measured in the three new groundwater monitoring wells is to the west-northwest.

Data from the Tracy Carbona Station (Station 048999) were used to estimate the average annual precipitation at 9.86 inches, and to calculate the magnitude of the design storm (24-hour 25-year wet season event) at 2.22 inches (based on National Oceanic and Atmospheric Research Administration value). Based on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map, Community-Panel Number 0500E, the facility is not located within 100-year flood plain.

COMPOSTING OPERATIONS

According to the Technical Report, RBVON complies with allowable feedstock and setback requirements. The facility currently utilizes open windrow composting with daily receiving limit of 2,000 tons per day of green waste and food waste feedstock from residential and commercial sources. Feedstock is offloaded onto a concrete receiving pad, processed, and arranged into windrows in the active composting areas where it resides for four weeks. No additives or biosolids are used at this point of the process. After the active composting phase is completed, the material goes through a three week pathogen reducing process, and a four week curing process. Cured compost is screened, blended with amendments, and stored until it transported from the facility. Amendments that are used at the facility include zinc sulfate, potash sulfate, sulfur, boron, phosphorus, oyster shells, sand, gypsum, lime, and dolomite.

On 22 September 2015, staff visited the facility to observe monitoring well drilling at MW-01 and to perform an inspection. Staff observed processing of incoming waste on the concrete receiving pad, and observed the curing and finished compost that was stored on native soil surfaces or on areas of the old asphalt runway. Wastewater conveyance systems including drainage swales and storage ponds were unlined and dry at the time of inspection. The full inspection report with photos is available in CIWQS, inspection # 21939491.

According to the submitted Technical Report, RBVON will improve the wastewater conveyance system within the first year from submittal of the NOI (by 30 November 2016). The improved wastewater management system will consist of wastewater conveyance pipes, a low flow diversion structure, lined ponds, and lined treatment pond with associated facilities –see Attachment A. In addition to the liner systems, each pond will have a pan lysimeter for leakage monitoring. Groundwater monitoring wells have been installed adjacent to the storage ponds.

Test pits, which were excavated on 2 April 2014, show that hydraulic conductivities (ASTM D5084 using 2-psi confining pressure) of working surfaces range between 1.7×10^{-4} and 2.8×10^{-8} centimeters per second (cm/s). The minimum General Order permeability requirement for compost pads is 1×10^{-5} cm/s. To prevent infiltration of any wastewater, and depending on the existing properties of surfaces in different areas of the facility, RBVON will reduce the permeability of working surfaces to hydraulic conductivity equal or less than 1×10^{-5} cm/s through a combination of scarification, moisture conditioning, compaction, and/or adding bentonite admixture.

According to the Technical Report update submitted on 22 January 2016, the Discharger plans a significant reduction in the Facility footprint, and they will transition their operations to a smaller footprint as shown on Attachment A. Alternative working surface improvements are proposed to achieve the required hydraulic conductivity and include cement treated base with a minimum thickness of one foot, asphaltic concrete or Portland cement, or a combination,

depending on operational use. The Discharger is required to submit a revised NOI if their plans for the working surface size changes.

The Discharger must submit a technical report with design information at least 90 days prior to new construction of working surfaces, detention ponds, berms, ditches, or any other water quality protection containment structure for approval by the Central Valley Water Board. The design information must include water balance calculations for detention ponds, design of wastewater conveyance features, liner materials and thicknesses, and rationale for liner system design. The technical report must ensure testing and quality assurance of liner materials and compacted soils in accordance with commonly accepted engineering practices, American Society for Testing and Materials test methods, and/or other appropriate material standards. The Discharger must submit a post-construction report to the Central Valley Water Board within 60 days of completing all construction activities associated with all applicable containment and monitoring structures, as required for compliance with this General Order and the MRP.

TIMELINE FOR COMPLIANCE

Full compliance with Order 2015-0121-DWQ must be completed by **30 November 2021**, which is six years from submittal of the NOI.

The table below shows the proposed improvement plan schedule which incorporates on-going operations of the facility, seasonal weather, fluctuations in the market demand of finished product, and company resources. As shown on Attachment A, the proposed improvement plan includes a significant reduction in the footprint of working surfaces. RBVON must comply with the proposed timeline.

| Improvement | Completion Dates |
|--|--------------------------------------|
| Construct New East and West Lined Storage Ponds, Lined Treatment Pond and Associated Facilities, Low Flow Diversion Structure, and conveyance pipes ^a | 30 September 2016 |
| Construct improvements to ±6.5 acres of working surfaces ^b | 30 September 2017^c |
| Construct improvements to ±6 acres of working surfaces ^b | 30 September 2018^c |
| Construct improvements to ca. ±7.3 acres of working surfaces ^b | 30 September 2019^c |
| Construct improvements to ±7.3 acres of working surfaces ^b | 30 September 2020^c |
| Construct improvements to ±3 acres of working surfaces ^b | 30 September 2021^c |

^a Source for drainage design: Brown and Caldwell. 2015

^b Source for working surface design: EBA. "Evaluation of Working Pads for Recology Grover Environmental Products Compost Facility." May 9, 2014. Revised June 5, 2014.

^c As shown on Attachment A

MONITORING AND REPORTING

RBVON will regularly inspect and maintain all containment, control, monitoring structures, and monitoring systems pursuant to the submitted ROWD 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.

RBVON 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., A.5., and B. Site specific sampling points for storm/surface water (SW-1 and SW-2) and groundwater (MW-01, MW-02, and MW-03) are shown on the site map in Attachment A. 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, RBVON shall submit a Site Closure Plan to the RWQCB for approval. The site restoration shall include work necessary to protect public health, safety, and the environment.

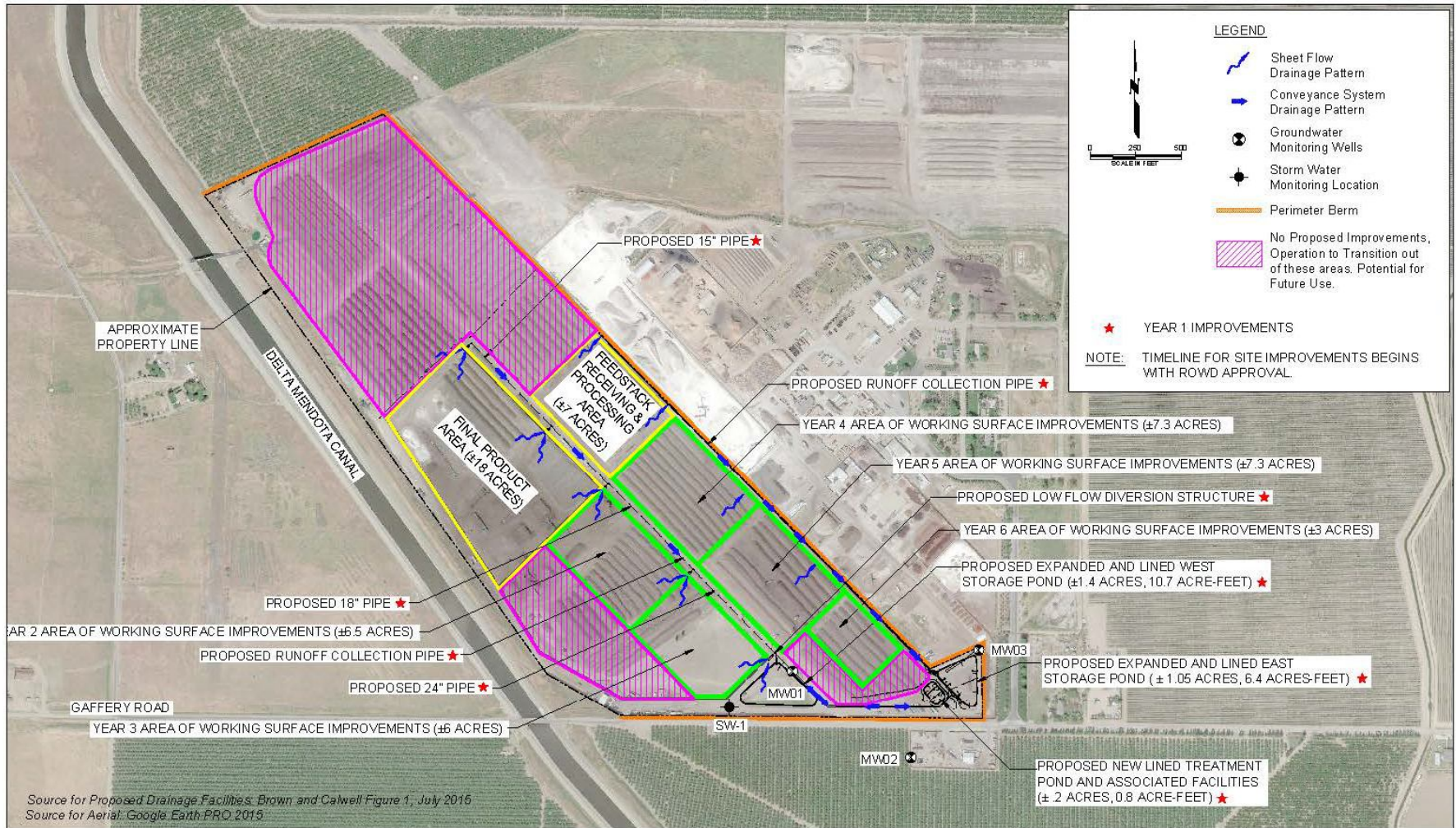
DISCUSSION

Staff's site visit and Recology's Technical Report reveal that composting operations on native surfaces are currently not in compliance with the requirements of the General Order and need significant improvements. Composting operations on unimproved surfaces without an appropriate waste water management system may have impacted and can continue to impact water quality at or near the site. Analyses of groundwater samples, which were collected after the groundwater wells were installed in November 2015, show nitrate concentrations as nitrogen ($\text{NO}_3\text{-N}$) that are already above the primary drinking water standard maximum contaminant level (MCL) of 10 mg/L (MW01: 14.0 mg/L, MW02: 15.3 mg/L, and MW03: 10.2 mg/L). Also, total coliform bacteria were detected in samples from wells MW01 and MW02.

RECOMMENDATION

Based on staff review of the ROWD and supporting documents, RBVON 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.

ATTACHMENT A



RECOLOGY BLOSSOM VALLEY NORTH
 SITE IMPROVEMENTS

DATE
 1/13/2016
 FIGURE
 C-1