
Central Valley Regional Water Quality Control Board

8 May 2017

Marcus Netz
Altamont Landfill and Resource Recovery Facility
Compostable Materials Handling Facility
10840 Altamont Pass Road
Livermore, CA 94551

NOTICE OF APPLICABILITY

**WATER QUALITY ORDER 2015-0121-DWQ
GENERAL WASTE DISCHARGE REQUIREMENTS FOR COMPOSTING OPERATIONS
WASTE MANAGEMENT OF ALAMEDA COUNTY, INC.
ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY
COVERED AERATED STATIC PILE COMPOSTING FACILITY
ALAMEDA COUNTY**

On 23 September 2016, Waste Management of Alameda County, Inc. (the Discharger) submitted a Notice of Intent (NOI), Technical Report, and Filing Fees for the Altamont Landfill and Resource Recovery Facility (ALRRF)'s Covered Aerated Static Pile (CASP) Compost Facility (Facility). On 15 March 2017, the Discharger submitted a revised Technical Report for the Facility. The Technical Report, NOI, and Filing Fee (\$4,699) were submitted to obtain coverage under Water Quality Order 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations (hereafter General Order) 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

This Notice of Applicability (NOA) was developed after the review of your NOI and Technical Report, as described in the attached Staff Memorandum that 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-R5S008** as a **Tier II** composting operation. The Discharger must comply with all Tier II requirements of the General Order.

The filing fee for the ALRRF CASP Compost Facility is based on a Threat to Water Quality and Complexity rating of **3B**. The \$4,699 filing fee also covers the first year permitted by this NOA. Thereafter, 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 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 and NOA include, but are not limited to:

- Working surfaces must be capable of resisting damage from the movement of equipment and weight of piles, and have a hydraulic conductivity of 1.0×10^{-5} cm/s or less.
- The Water and Wastewater Management Plan, as submitted in the Technical Report and approved by Staff in this NOA, must be implemented.
- Only fresh water or non-contact storm water may be used to moisturize Curing Pad windrows, and all runoff from the Curing Pad must be directed to the wastewater pond.
- 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.
- The Annual Monitoring and Maintenance Report, technical reports, and all monitoring reports must be uploaded into the State Water Board's GeoTracker database.
- 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 Water Board no later than **1 April 2018**, and then annually by 1 April each following year.

All monitoring and technical reports and other correspondence must be converted to searchable Portable Document Format (PDF) and submitted electronically to the State Water Board's GeoTracker database (see General Order, Report Submittals). Once you receive an upload confirmation from GeoTracker that your report has been received, please send a courtesy email and confirmation number to centralvalleysacramento@waterboards.ca.gov and to the staff person indicated below.

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 Paul.Sanders@waterboards.ca.gov (916) 464-4817
Discharger Name:	Waste Management of Alameda County, Inc.
Facility Name:	Altamont Landfill and Resource Recovery Facility Covered Aerated Stockpile (CASP) Composting Facility
County:	Alameda County
CIWQS Place ID:	205295

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 the contact email and phone number provided above. If you find it necessary to make a change to your permitted operations, Paul Sanders will direct you to the appropriate Permitting staff.

*ORIGINAL SIGNED BY
ANDREW ALTEVOGT FOR*

PAMELA C. CREEDON
Executive Officer

Enclosures: Staff Memorandum

cc: Brianna St. Pierre, Division of Water Quality, SWRCB, Sacramento (e-mail only)
Howard Hold, Compliance and Enforcement Unit, Central Valley Water Board,
Rancho Cordova (e-mail only)
Wing Suen, Alameda County Environmental Health, Alameda
Jessica Jones, JK Jones Consulting & Engineering, Berkeley

Central Valley Regional Water Quality Control Board

STAFF MEMORANDUM

TO: Marty Hartzell
Senior Engineering Geologist
Title 27 Permitting and Mining Unit

FROM: John Moody
Water Resources Control Engineer
Title 27 Permitting and Mining Unit

DATE: 5 May 2017

SUBJECT: **APPLICABILITY OF COVERAGE UNDER STATE WATER RESOURCES CONTROL BOARD WATER QUALITY ORDER 2015-0121-DWQ – ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY COVERED AERATED STATIC PILE COMPOSTING FACILITY, ALAMEDA COUNTY**

REPORT OF WASTE DISCHARGE

On 23 September 2016, Waste Management of Alameda County, Inc. (Discharger) submitted a Notice of Intent (NOI), Technical Report, and Filing Fee for the Altamont Landfill and Resource Recovery Facility - Covered Aerated Static Pile (CASP) Compost Facility (facility). A revised Technical Report was submitted on 15 March 2017. The Technical Report, NOI, and Filing Fee were submitted to obtain coverage under Water Quality Order 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations (hereafter General Order) at the above-referenced site.

The Altamont Landfill and Resource Recovery Facility (ALRRF) is a 472-acre municipal solid waste landfill facility on a 2,064-acre site about nine miles northeast of Livermore, and north of the Interstate 580 freeway. The ALRRF is regulated under Waste Discharge Requirements (WDRs) Order R5-2016-0042 issued by the Central Valley Water Board, and by a Solid Waste Facilities Permit issued by the Alameda County Environmental Health Department, which is the Local Enforcement Agency. The 61-acre CASP Compost Facility (including operational surfaces, wastewater collection pond, and associated facilities) will be constructed within the ALRRF area, but will be regulated separately under the General Order Composting Permit, not under the landfill WDRs.

SITE DESCRIPTION

The site address is 10840 Altamont Pass Road, Livermore, California and the Assessor's Parcel Number is 99B-6275-1-1. The ALRRF site is owned by Waste Management of Alameda County, Inc. The site is in the Diablo Range of the Coast Range Mountains near the crest of the Altamont Hills. The area is very hilly with hill slopes ranging from about 7 to 30 percent separated by narrow valleys. Ground surface elevations in the area range from about 800 feet MSL up to 1,200 feet MSL. Surface soils typically consist of clay in valley areas and rocky clay along hill slopes. Minimum in-place

permeabilities of these soils typically range from about 4.2×10^{-5} cm/sec (clay) up to 1.4×10^{-4} cm/sec (rocky clay), respectively. Beneath the surface alluvium lies the Panoche Formation, an uplifted, Cretaceous-age marine deposit consisting of weathered/fractured claystone and mudstone interspersed with sandstone lenses. Bedrock weathering decreases and bedrock hardness increases with depth. The weathering/fracturing does not typically extend below 100 feet below ground surface (bgs). Land uses surrounding the facility include the landfill, non-irrigated agricultural for cattle grazing, power generation (windmills), and rural residential. The nearest residences are along Dyer Road about one mile west of the facility. The average annual precipitation at the site is about 13.8 inches and the 24-hour, 25-year peak storm event is about 3.4 inches. The facility is not located within a 100-year flood plain.

Groundwater recharge occurs via surface infiltration into the weathered bedrock. Recharge flows move radially from topographic highs to drainage valleys at a rate of about 1.4 feet per day. Groundwater levels range from approximately 184 feet bgs on hill tops to as little as 11 feet bgs in the valley bottoms with an average groundwater depth of about 50 feet bgs. The average groundwater elevation is approximately 751 feet MSL. The Discharger's consultant (Cornerstone Environmental) reports in submitted Technical Documents that, due to a very low permeability of hardened bedrock at depth, groundwater beneath the site is believed to be hydraulically isolated from (and therefore not a source of recharge to) the large San Joaquin and Livermore Valley aquifers east and west of the facility, respectively.

The maximum groundwater elevation in the facility area is estimated to be about 900 feet MSL based on groundwater elevation contour plots from landfill monitoring wells. The minimum depth to groundwater from the facility's operational surface is estimated to be about 80 feet at the toe of the Curing Pad, which is constructed on the west side of the CASP Compost Facility.

Surface waters in the ALRRF area include Brush Creek to the northwest, Altamont Creek (a tributary to the San Francisco Bay) to the southwest, and Mountain House Creek (a tributary to the Sacramento-San Joaquin Delta) to the south and east. Portions of the ALRRF site are drained by seasonal streams/ditches flowing southwest to Altamont Creek and east to Mountain House Creek. The site is also proximate to the South Bay Aqueduct, which carries potable water from the Bethany Reservoir northeast of the site to Livermore and other service locations in the east and south Bay Area. A total of 14 domestic, agricultural and/or industrial supply wells have been identified within one mile of the ALRRF site boundary. All surface waters and supply wells are located more than the 100 feet from the perimeter of composting operations, as required under the General Order.

COMPOSTING OPERATIONS

Composting operations at the site will consist of green waste composting by the covered aerated static pile (CASP) method. Feedstock materials will include green materials, wood waste (e.g., untreated lumber), residential and commercial food waste, mixed organics diverted from the landfill, agricultural materials (e.g., grape pomace, hulls, skins, juice, etc.), manure, anaerobic digestate from organics processing facilities, and other compostable materials. The facility will receive up to 500 tons per day of feedstock (156,000 tons per year), which corresponds to about 1,100 cubic yards per day (346,642 cubic yards per year). Incoming loads of feedstock will be first weighed in at the Scale House and then tipped at the Materials Receiving and Processing Area located on the Active Pad area shown on Figure 1.

Tipped feedstock will first be visually screened for non-compostable and non-grindable materials (e.g., scrap metal, large tree stumps, and rocks) and then pre-processed in a grinder. The material will then be blended with a combination of yard wastes and food wastes to a uniform mixture.

Additives to the process may include gypsum, dolomite, lime, recycled wall board and other suitable materials in accordance with a composting “recipe”. Water will also be added as necessary to maintain proper moisture conditions in (“quench”) incoming and blended feedstock.

Following pre-processing, blended feedstock will be moved to the active portion of the CASP Pad and placed over a section of perforated aeration pipes. Temperature probes will also be installed in the piles per Title 14 composting regulations (14 CCR Section 17868.3(c)(1)) to allow for temperature monitoring. Once built up, each processed feedstock pile will be about 85 feet in length, 30 feet in width, and 11.5 feet in height, excluding cover. The piles will then be covered with at least 6 inches of finished compost (screened or unscreened) to control emissions and odors. Each CASP pile will contain about 1,200 cubic yards of material, including cover. The aeration system will then be activated and operated per CASP protocols to aerate the piles. The piles and cover will be moisturized, as needed, using contact and/or non-contact water to optimize the composting process and prevent excessive temperatures.¹ Fresh water will also be used to moisturize the CASP pile biofilter layer. Temperature monitoring will be conducted to ensure adequate pathogen reduction. The active composting process should take about 3 to 5 weeks, depending on various factors such as feedstock composition, temperature, moisture, season, and compost stability.

After active composting, the aerated compost piles will be dismantled and the compost moved to the Curing Pad on the west side of the composting facility. Typical curing pile dimensions will be up to 18 feet high and 20 feet wide. Length of the piles will vary depending on the location of the pile within the curing area footprint. Curing windrows may be periodically turned to enhance and shorten the curing process. Moisture (fresh/non-contact water) may also be added to the windrows as needed to maintain suitable curing conditions. After composting and curing, the finished compost will be screened to remove oversize particles and contaminants and provide a final compost product specific for its end use.

Operational Surface

The composting operational surface will consist of a 10-acre CASP Pad and a 28-acre Curing Pad separated by an elevated access road extending north from the main landfill area south of the CASP facility, see Figure 1.

The CASP Pad will be constructed on fill soil between (and abutting) the eastern sideslope of the access road and a hill immediately west of the CASP Pad area. The CASP Pad (i.e., top of the fill) will be graded from southwest to northeast at about a four percent slope. Surface elevations of the completed CASP Pad will range from about 1020 feet MSL upslope to about 976 feet MSL downslope along the toe of the pad. The CASP Pad surface will consist of at least 6 inches of asphalt paving.

The Curing Pad will be constructed on top of Stockpile #5, located between the western side slope of the main access road and a hill immediately west of the Curing Pad area. Stockpile #5 will be re-graded to provide the subgrade for the Curing Pad and after re-grading will range from about 40 to 80 feet in thickness.² The 28-acre Curing Pad surface will then be constructed with 12” of gravel underlain by 12” of compacted soil ($k \leq 1 \times 10^{-5}$ cm/s) and subgrade. Stockpile #5 soil will be used for the 12” compacted soil layer and as subgrade for the Curing Pad. The Curing Pad will be graded for

1· The optimum moisture content of blended feedstock for the CASP process is typically about 50 percent.

2· Stockpile #5 consists of excavated Panoche formation soils (e.g., weathered siltstone) from onsite development projects. Laboratory testing of re-compacted soil samples from Stockpile #5 indicated permeabilities ranging from 1×10^{-4} cm/s to 1×10^{-7} cm/s at 85 to 98 percent relative compaction.

drainage to a central “V” drain plumbed to a wastewater collection pond to be constructed immediately north of the Curing Pad. The western half of the Curing Pad will be graded to drain to the north-northeast at an average slope of about six percent, while the eastern half of the Curing Pad will be graded to drain north toward the pond at an average slope of about three percent. Curing pad elevations will range from about 1060 feet MSL upslope to about 990 feet MSL downslope. The exterior sideslopes of the Curing Pad (i.e., north and northeast) and the adjacent access road will be graded at 3H:1V with the northern toe slope and adjoining access road side slope contoured to conform to the shape of the wastewater pond.

Construction specifications for both pads, including hydraulic conductivity of the compacted soil layers, will be confirmed by project construction quality assurance (CQA). All areas of the composting facility’s operational surface will be constructed in accordance with the General Composting Order.

Drainage Controls & Leachate Handling

All runoff from the CASP facility’s operating surface will be collected and directed to a wastewater collection pond to be constructed immediately north of the Curing Pad area. Run-off from the CASP Active pad will be captured by a drainage ditch/berm system along the northern and eastern perimeters of the pad and routed to an overside drain plumbed to the wastewater pond via a culvert under the access road. Runoff from the Curing Pad will also be discharged to the wastewater pond via a toe-slope ditch plumbed to the pad’s central “V” drain. All drainage ditches plumbed to the wastewater pond will be sized for anticipated leachate flows plus a 25-year, 24-hour storm event and lined with compacted soil ($k \leq 1 \times 10^{-5}$ cm/s) per the General Composting Order. Additional ditches will route non-contact, sheet flow runoff from other areas (e.g., Curing Pad and access road sideslopes) to an existing sedimentation basin (SB-2) west of the wastewater pond. See Figure 1.

The wastewater pond will be constructed immediately north of the Curing Pad toe with a rim elevation of 941 feet MSL and a bottom elevation of 923 feet MSL. The side slopes of the pond will be graded to 2.5H:1V. The pond will hold a maximum of 18.89 acre-feet (excluding two feet of freeboard), corresponding to the storage capacity needed to handle anticipated flows from an average annual wet season plus direct precipitation and pad runoff from a 25-year, 24-hour storm event. The pond will be designed with a 60-mil high density polyethylene (HDPE) geomembrane underlain with a geosynthetic clay liner (GCL) to achieve a hydraulic conductivity of 1.0×10^{-6} cm/s or less. The wastewater pond will be designed and constructed with a pan lysimeter monitoring device under the lowest point of the pond, and will be fabricated with a section of six-inch HDPE perforated pipe placed within a gravel trench encased by 60-mil HDPE geomembrane with an access port that will be installed to monitor the lysimeter below the wastewater pond’s geosynthetic liner system. Contact water collected in the wastewater pond will be pumped back to the CASP Pad for moisture conditioning active compost, quenching feedstock, and dust control. Such water may also be supplemented with non-contact storm water and/or irrigation water.

The Discharger must submit a technical report with design information (i.e., design report) at least 90 days prior to new construction of any operating, containment, or drainage structures (e.g., working surfaces, detention ponds, berms, ditches), monitoring wells, or any other water quality protection element for approval by the Central Valley Water Board. The design information must include flow and capacity calculations, engineered drawings, materials, specifications, rationale, and all other information relevant to the proposed 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 (i.e., as-built) report to the Central Valley

Water Board within 60 days of completing all construction or installation activities associated with all applicable containment structures and/or monitoring facilities, as required for compliance with this General Order and the MRP.

MONITORING AND REPORTING

Waste Management of Alameda County, Inc. will regularly inspect and maintain all containment, control, monitoring structures, and monitoring systems pursuant to the submitted Technical Report and Attachment B of the 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.

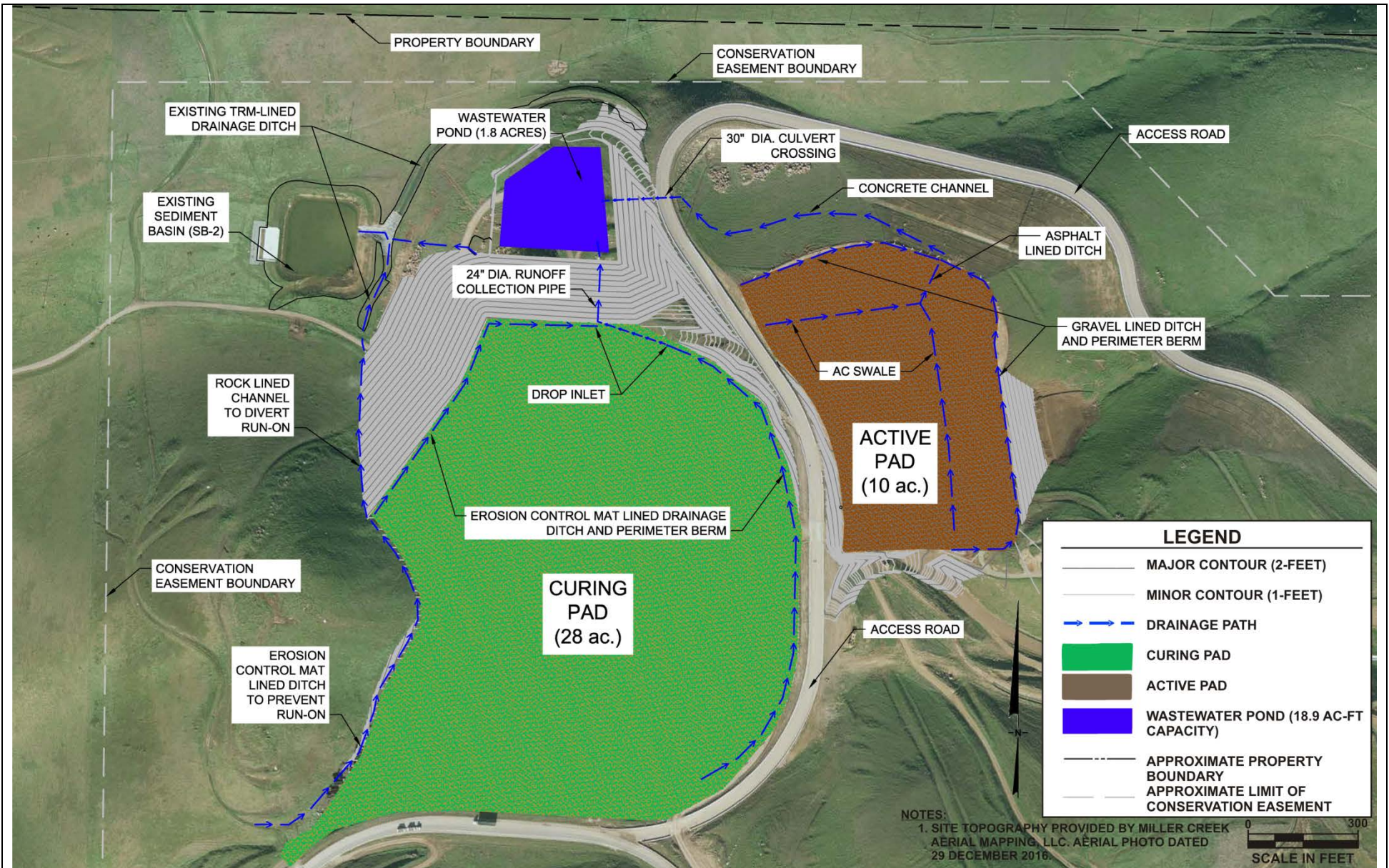
Waste Management of Alameda County, Inc. will conduct a monitoring program as prescribed in Attachment B of General Order Monitoring and Reporting requirements. Sections that apply are A.1 (Facility Inspections), A.2 (Detention Pond Monitoring), A.5 (General Sampling Requirements), B (Reporting Requirements), and C (Record-Keeping Requirements). 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, Waste Management of Alameda County, Inc. 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.

RECOMMENDATION

Based on staff review of the Technical Report and supporting documents, Waste Management of Alameda County, Inc. 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.



Drawing Reference:
 Waste Management of Alameda County, Inc.
 Altamont Landfill and Resource Recovery Facility CASP Facility
 Technical Report, March 2017
 Compost Facility Site Improvements, Figure 1

SITE PLAN MAP
 Waste Management of Alameda County, Inc.
 Altamont Landfill and Resource Recovery Facility CASP Facility
 Alameda County