LATE REVISIONS – 24 June 2016

Item 22 ***Waste Management of Alameda County, Altamont Landfill and Resource Recovery Facility, Alameda County*** *–Consideration of Revised Waste Discharge Requirements*

Waste Discharge Requirements:

Page 2, New Finding 5	**Upon adoption of WDR Order R5-2016-XXXX, Monitoring and Reporting Program (MRP) R5-2009-0055 shall remain in effect until 23 September 2016.**
Page 3, Finding 10	The Discharger's JTD indicates that there are 11 municipal, domestic, industrial, or agricultural groundwater supply wells within one mile of the site. The wells include, 2S/3E 18C 2, 2S/3E 18J 1, 2S/3E 18J 2, 2S/3E 18J 5, 2S/3E 18J 6, 2S/3E 18J 7, 2S/3E 18 J 8, 2S/3E 19H 1, 2S/3E 21E 1, 2S/3E 21K 1, and 2S/3E 29C 1. ~~These WDRs require the Discharger to monitor all on-site supply wells as detection monitoring points.~~ **There are no on-site water supply wells.**
Page 7, Finding 25	On 13 October 2014 Board staff notified the Discharger of review of the Discharger's 2013 Annual Groundwater Monitoring Report and the First Semiannual 2014 Groundwater Monitoring Report. Board staff identified several issues related to these monitoring reports such as deficiencies in the Discharger's groundwater sampling, analysis, and reporting methods. ~~The review also requested that the Discharger periodically sample the deeper groundwater monitoring wells for a release of waste; these deeper wells are currently only being monitored for groundwater elevation. These WDRs include in Monitoring and Reporting Program (MRP) R5-2016-XXXX the requirements requested in the 13 October 2014 letter for monitoring deeper stratigraphic zones in monitoring wells where a release has occurred and deeper zones where the WMU intersects different stratigraphic zones.~~ **WMAC provided a re-evaluation of the site hydrogeologic conceptual model in multiple reports and letters in 2015 and 2016, where they stated that if constituents flowed along bedding planes, they would reach depths exceeding 1,000 feet below MSL, and at this depth, groundwater is characterized as mineralized/saline water. Staff concurred with this interpretation, and in a 6 May 2016 letter, staff stated that it is not currently requiring wells to be installed to intercept these bedding planes.**
Page 25, Finding 97	The Discharger must comply with Title 27 section 20415(e)(6) which requires the Discharger to establish background values of groundwater quality for a period of one year, including times of expected highest and lowest annual elevations of the groundwater surface prior discharging waste to the Units. As of the date of these WDRs, the Discharger has not completed their groundwater detection monitoring system for the 8-million gallon Class II surface impoundment. ~~, and construction on the two smaller surface impoundments has not started.~~
Page 36, Finding 124	The methods for calculating concentration limits were included in the Discharger's JTD. The method uses Practical Quantitation Limits (PQLs) as the concentration limits for VOCs, and the Shewart-CUSUM control chart for intra-well statistical analysis of inorganic monitoring parameters. ~~The Discharger's method for establishing concentration limits does not comply with Title 27 section 20400.~~
Page 41, Finding 138.b.2.	Minimum 1-foot of low-permeability layer of compacted fine grained soils or GCL equivalent, which will yield an equivalent low flow-through rate of ~~2-feet of low-permeability soil of~~ $1x10^{-7}$ cm/s or less;

<table>
<tr><td>Page 48,
Finding 168</td><td>This Order approves the proposed final cover(s) with provisions where required and also requires that a final closure and post-closure maintenance plan to be submitted at least two years prior to the anticipated closure date for review and approval, with the exception of Fill Area 1. This Order allows the Discharger additional time to conduct a demonstration of the ET cover; therefore, the final closure and post-closure maintenance plan may be submitted 6 months prior to closure.</td></tr>
<tr><td>Page 50-51,
Finding 177,
in part</td><td><s>Title 27 requires financial assurances for each Unit, and future cost estimates will need to include costs for all of Fill Area 2 Unit 1.</s> The closure costs assume the cost for installation of an ET final cover over Fill Area 1 Unit 1 and a geocomposite final cover over Fill Area 1 Unit 2 and Fill Area 2 Unit 1 Phase 1. This Order requires that the Discharger provide future financial assurance closure cost estimates in compliance with Title 27, and maintain financial assurance with the California Department of Resources Recycling and Recovery (CalRecycle) in at least the amount of the closure cost estimate.</td></tr>
<tr><td>Page 56,
Prohibition A.11</td><td><s>The discharge of liquids collected from the landfill underdrain into a solid waste disposal WMU for the purpose of waste disposal is prohibited.</s></td></tr>
<tr><td>Page 56,
Prohibition A.12</td><td><s>The discharge of landfill gas condensate which contains constituents of concern (e.g., VOCs) to a WMU which has a known release or is in corrective action due to a release of VOCs either by leachate or gas discharges is prohibited.</s></td></tr>
<tr><td>Page 58,
Discharge Specification B.1, in part, and Footnote 1.</td><td>1. The Discharger shall only discharge the wastes listed in Table 1 below.

Table 1. Waste Acceptance by Waste Management Unit

<table>
<tr><th>Title 27 Waste Type</th><th>Fill Area 1, Unit 1</th><th>Fill Area 1, Unit 2 & Fill Area 2</th><th>Class II Surface Impoundments</th><th>Solidification Basins</th></tr>
<tr><td>Inert</td><td>Yes</td><td>Yes</td><td>No</td><td>No</td></tr>
<tr><td>MSW</td><td>Yes</td><td>Yes</td><td>No</td><td>No</td></tr>
</table>

Footnote:
1. Designated wastes include <s>asbestos,</s> commercial and industrial waste, <s>MSW,</s> nonhazardous ash, nonhazardous petroleum and/or metal contaminated soils, salty waste, construction and demolition waste, <s>treated auto shredder waste, treated wood waste,</s> solidified wastes, and dewatered sewage and wastewater treatment plant waste sludge.</td></tr>
<tr><td>Page 60,
Discharge Specification B.11, in part</td><td>The Discharger at a minimum shall monitor the WMUs that receive treated wood waste for arsenic, copper, chromium, and pentachlorophenol, common COCs associated with treated wood, as required in the Discharger’s MRP R5-2016-XXXX <s>in order to determine if a leachate release has occurred</s>.</td></tr>
</table>

<table>
<tr><td>Page 66, Construction Specifications D.1.d, D.1.e, and Footnotes 11 and 12, in part</td><td>d. A ~~12 ounce/yard~~[2] geotextile cushion layer if needed[12]
e. A ~~double-sided~~ textured 60-mil thick HDPE geomembrane, or equivalent;

Footnotes:
[11]~~The LCRS granular size and physical characteristics (rounded, semi-rounded, etc.) shall be specified based on underlying cushion layer thickness in order to prevent damage to primary geomembrane liner from static and dynamic loads.~~

[12]The thickness of the geotextile cushion layer, if needed, shall be specified based on the LCRS granular size and physical characteristics (rounded, semi-rounded, etc.) in order to prevent damage to the primary geomembrane from static and dynamic loads.</td></tr>
<tr><td>Page 69, Construction Specifications D.16</td><td>If the Discharger proposes to use the ET cover design on lined Fill Area 1 Unit 2 and lined Fill Area 2 Unit 1, the Discharger shall demonstrate that the ~~hydraulic conductivity of the~~ ET cover meets the performance objectives described in the 2008 AFC Design Report and provides correspondingly low through-flow rate per Title 27 regulations.</td></tr>
<tr><td>Page 70, Construction Specifications D.20</td><td>The Discharger shall not proceed with construction until the construction plans, specifications, and all applicable construction quality assurance plans have been approved. The Discharger must allow Central Valley Water Board staff at least ~~180~~ 120 days for review and approval of these documents unless the Discharger chooses to proceed at its own risk.</td></tr>
<tr><td>Page 74, Monitoring Specifications G.10</td><td>The Discharger shall add any confirmed COCs detected during its 5-year monitoring schedule using Tables V and VI of MRP R5-2016-XXXX for detection monitoring purposes, as appropriate based upon consideration of laboratory false-positives, the repeatability of detections and the effectiveness of a particular COC in providing early indication of a potential release.</td></tr>
<tr><td>Page 76 Provisions H.8.b.1</td><td>Submit a technical report that considers the adequacy of the existing monitoring well network for Fill Area 1 and 2, and identifies if additional monitoring wells are necessary for detection monitoring in accordance with Title 27 section 21760(a)(3), and assess the adequacy ~~revised~~ of the current Sample Collection and Analysis Plan (SAP);</td></tr>
<tr><td>Page 77 Provisions H.8.c.1 and 2</td><td><table>
<tr><td>Provide Standard Operating Procedures for the solidification process at ALRRF.</td><td>30 September 2016</td></tr>
<tr><td>Submit a technical report to demonstrate that solidification operations do not result in the introduction of liquids into a solid waste WMU in excess of the moisture holding capacity of the WMU as a result of waste management operations, compaction, or settlement.~~; and provide Standard Operating Procedures for the solidification process at ALRRF~~.</td><td>1 April 2017</td></tr>
</table></td></tr>
<tr><td>Page 78 Provisions H.8.d.1</td><td>Submit a work plan and implementation schedule that complies with Title 27 section 20430 that investigates the source of COCs that have been periodically discovered in storm water detention basins. The work plan shall include an accelerated monitoring schedule for at least one year ~~for COCs~~ (e.g., quarterly monitoring or more frequently to determine the sources of VOCs);</td></tr>
</table>

<table>
<tr><td>Page 78
Provisions
H.8.e.1</td><td colspan="2">Revise compliance due date from 31 January 2017 to 28 February 2017</td></tr>
<tr><td>Page 78
Provisions
H.8.e.2 and 3</td><td colspan="2"><table>
<tr><td>Implement workplan for installation of soil-pore gas monitoring devices; and</td><td><s>1 April 2017</s> 30 April 2017 or 60 days after Water Board staff approval</td></tr>
<tr><td>Submit Final Documentation regarding installation completion of soil-pore gas monitoring devices.</td><td><s>1July 2017</s> 31 July 2017 or 60 days after completion of work</td></tr>
</table></td></tr>
<tr><td>Page 78
Provisions
H.8.f,
in part</td><td colspan="2"><table>
<tr><td>Monitoring of underdrains, leachate, and leak detection systems nearest the edge of waste for each phase of construction in Fill Area 2: The Discharger shall submit an <s>workplan,</s> updated sample collection and analysis plan, and schedule monitoring and reporting of liquid collected in the underdrain, LCRS, and leak detection system associated with each phase of construction in Fill Area 2 Unit 1.</td><td>1 August 2016 for Phase 1 and at least <s>180</s> 120 days prior to discharge for each future phase of construction</td></tr>
</table></td></tr>
<tr><td>Page 79
Provisions
H.8.g</td><td colspan="2"><s>Establish the Groundwater Detection Monitoring Program for the 8-million gallon Class II Surface Impoundment: The Discharger shall:</s>

<s>1. Submit a workplan and schedule that complies with Title 27 section 21760(a)(3) for installation of a groundwater detection monitoring well network and SAP associated with each Class II surface impoundment;</s>

<s>2. Implement approved workplan for installation of additional groundwater monitoring wells; and</s>

<s>3. Submit Final Documentation for groundwater monitoring well installation completion.</s>

<s>Establish Background Groundwater Quality for the Class II Surface Impoundment prior to discharge of waste to the WMU.</s></td></tr>
<tr><td>Page 79
Provisions
H.8.h</td><td colspan="2">Submit <s>Establish</s> Water Quality Protection Standards for the Class II Surface Impoundment that complies with Title 27 section 20390. The Discharger shall receive Water Board staff approval prior to the discharge of waste.</td></tr>
<tr><td>Page 79
Provisions
H.8.i</td><td colspan="2">Revise compliance date from 1 September 2016 to 15 December 2016.</td></tr>
</table>

Page 81 Provisions H.8.k.1	Submit a WQPS and concentration limits Technical Report that complies with Title 27 section 20390 for each Unit that shall clearly indicate the concentration limits for each compliance point and for each monitored medium i.e. ground water, surface water, unsaturated zone. The WQPS shall contain a sample collection and analysis plan that complies with Title 27 sections 20415(e)(4)-(5).	Prior to placement of waste in a newly constructed WMU ~~and 31 December 2017 for existing WMUs~~
Page 81 Provisions H.8.k.2 and 3	~~For naturally occurring monitoring parameters the Discharger shall establish concentration limits based on background monitoring data that represents the quality of ground water that has not been affected by a release from the Unit.~~	
	~~For non-naturally occurring monitoring parameters the Discharger shall use non-detect as the concentration limit for determination if there is measurably significant evidence of a release, or the Discharger shall submit a technical report that complies with Title 27 section 20400 that contains the necessary information required to request that the Central Valley Water Board establish concentration limits greater than background (CLGB).~~	~~Upon adoption of these WDRs~~
Page 82 Provisions H.8.m.3	Revise compliance date from 1 February 2017 to 1 February 2019.	

Monitoring and Reporting Program:

Page 4, Section A.1	Revise MW-15B from Background to a Detection Monitoring Program well.
Page 9, Section 3.e.	Revise the Flow Rate to Each Impoundment monitoring frequency from Daily to Weekly.
Page 9-10, Section A.4	Point ~~Description~~ **Identification** **SB-A** (Sedimentation Basin A) **SB-A Discharge** (Sedimentation Basin A Discharge) **SB-1** (Sedimentation Basin 1) **SB-1 Discharge** (Sedimentation Basin 1 Discharge) **SB-2** (Sedimentation Basin 2) **SB-2 Discharge** (Sedimentation Basin 2 Discharge)
Page 10, Section A.4	Following the field survey of springs within one mile of the Facility and a technical report in September 2017, and as approved by Water Board staff, downgradient springs within one mile of the **drainage basins downgradient of Fill Area 1 and Fill Area 2 where groundwater potentially originated and/or flowed beneath a WMU many need to** ~~WMU boundaries shall~~ be monitored for the Field and Monitoring Parameters listed in Table III and sampled and analyzed following the methods and frequency specified in Table IV.

<table>
<tr><td>Page 16,
Section A.6</td><td>The Discharger shall monitor the following corrective action monitoring wells as required in part A.1 and Table I of this MRP~~, with the following alternant sampling frequency for the following additional constituents and for all Field and Monitoring Parameters listed in Table I~~:

<table>
<tr><th>Well</th><th>~~Sampling Frequency~~</th></tr>
<tr><td>E-03A</td><td></td></tr>
<tr><td>E-05</td><td></td></tr>
<tr><td>E-07</td><td></td></tr>
<tr><td>E-17</td><td></td></tr>
<tr><td>E-20B</td><td></td></tr>
<tr><td>E-23</td><td></td></tr>
<tr><td>MW-12</td><td></td></tr>
<tr><td>PC-1B</td><td></td></tr>
<tr><td>PC-1C</td><td></td></tr>
<tr><td>~~E-18~~</td><td>~~Quarterly[1]~~</td></tr>
<tr><td>~~E-21~~</td><td>~~Quarterly[1]~~</td></tr>
<tr><td>~~E-22~~</td><td>~~Quarterly[1]~~</td></tr>
<tr><td>~~MW-1A~~</td><td>~~Quarterly[1]~~</td></tr>
<tr><td>~~MW-1B~~</td><td>~~Quarterly[1]~~</td></tr>
<tr><td>~~MW-2B~~</td><td>~~Quarterly[1]~~</td></tr>
<tr><td>~~MW-2C~~</td><td>~~Quarterly[1]~~</td></tr>
<tr><td>~~MW-3B~~</td><td>~~Quarterly[1]~~</td></tr>
<tr><td>~~MW-3C~~</td><td>~~Quarterly[1]~~</td></tr>
<tr><td>~~MW-4B~~</td><td>~~Quarterly[1]~~</td></tr>
<tr><td>~~MW-5B~~</td><td>~~Quarterly[1]~~</td></tr>
</table>
~~[1]Quarterly monitoring required until water quality trends are established.~~</td></tr>
<tr><td>Page 16,
Section A.6</td><td>The Discharger shall monitor the following unsaturated zone monitoring points as required in part A.2, and Table II of this MRP ~~and the following alternant sampling frequency for all Field and Monitoring Parameters listed in Table II~~:

<table>
<tr><th>Well</th><th>Unit</th><th>~~Sampling Frequency~~</th></tr>
<tr><td>VD</td><td>Fill Area 1, Unit 1</td><td>~~Quarterly~~</td></tr>
<tr><td>VD2</td><td>Fill Area 1, Unit 2</td><td>~~Quarterly~~</td></tr>
</table></td></tr>
<tr><td>Page 17,
Section A.6</td><td>Currently, the two areas with elevated VOC impacts are near groundwater monitoring wells E-05/E-07 and E-20B. The Discharger shall monitor its active gas extraction system near these two VOC impacted areas in accordance with Table VII.</td></tr>
<tr><td>Page 24,
Section B.13.2</td><td>~~An evaluation of the distribution and concentration of landfill gases in the landfill waste mass and the underlying vadose zone;~~</td></tr>
</table>

<table>
<tr><td>Page 24,
Section B.13</td><td>This report may be included as part of the Annual Monitoring Report specified in B.2.</td></tr>
<tr><td>Page 25,
Section C.1.</td><td>As described in the findings in WDRs R5-2016-XXXX and Provisions H.8 the Discharger is required to submit a WQPS ~~that meets the requirements of Title 27. Until a WQPS with concentration limits that meet the requirements of Title 27 is established, the Discharger shall use interim concentration limits shown in Section C.4 of this MRP~~. The approved Water Quality Protection Standard including appropriate concentration limits shall be updated every 1 to 2 years for each monitoring well using new and historical monitoring data.</td></tr>
<tr><td>Page 28,
Table I</td><td>Add Chemical Oxygen Demand (COD);

Delete Nitrogen, Nitrite (as N), and Manganese

Added footnotes:
• Field parameters are collected for informational purposes to document groundwater conditions at the time of sampling, and are not included in statistical analysis.
• The Discharger shall apply the statistical analyses described in Section C.4 of this MRP to the inorganic monitoring parameters included on this list.
• Supplemental parameters provide important information regarding groundwater geochemistry, but these parameters are not included in routine statistical analysis.</td></tr>
<tr><td>Page 32,
Table IV</td><td>Delete Biological Oxygen Demand, Ammonia (un-ionized), Total Suspended Solids, and Inorganics (dissolved) from Monitoring Parameters;

Move Total Organic Carbon (TOC) from Monitoring Parameters to 5-Year Constituents of Concern; and

Delete Chemical Oxygen Demand from 5-Year Constituents of Concern</td></tr>
<tr><td>Page 35-36,
Table V</td><td>Delete Additional COC’s Requiring Monitoring Due to 5-Year Detection Monitoring:

<table>
<tr><th>Analyte Description</th><th>Geotracker Code</th></tr>
<tr><td>~~2,4-D~~</td><td>~~24D~~</td></tr>
<tr><td>~~2,4-Dimethylphenol~~</td><td>~~DMP24~~</td></tr>
<tr><td>~~2-Methylnaphthalene~~</td><td>~~MTNPH2~~</td></tr>
<tr><td>~~2-Methylphenol (o-Cresol)~~</td><td>~~MEPH2~~</td></tr>
<tr><td>~~3-methylphenol~~</td><td>~~MEPH3~~</td></tr>
<tr><td>~~4-Methylphenol (p-Cresol)~~</td><td>~~MEPH4~~</td></tr>
<tr><td>~~5-Nitro-o-toluidine~~</td><td>~~TLDNONT5~~</td></tr>
<tr><td>~~Acenaphthene~~</td><td>~~ACNP~~</td></tr>
<tr><td>~~Acetophenone~~</td><td>~~ACPHN~~</td></tr>
<tr><td>~~Aldrin~~</td><td>~~ALDRIN~~</td></tr>
<tr><td>~~Atrazine~~</td><td>~~ATRAZINE~~</td></tr>
<tr><td>~~Benzyl alcohol~~</td><td>~~BZLAL~~</td></tr>
<tr><td>~~Bis-(2-ethylhexyl)phthalate~~</td><td>~~BIS2EHP~~</td></tr>
<tr><td>~~Dimethyl phthalate~~</td><td>~~DMPH~~</td></tr>
<tr><td>~~Di-n-octyl phthalate~~</td><td>~~DNOP~~</td></tr>
</table>
</td></tr>
</table>

	~~Dinoseb~~	~~DINOSEB~~
	~~Disulfoton~~	~~DISUL~~
	~~Endosulfan I~~	~~ENDOSULFANA~~
	~~Fluoranthene~~	~~FLA~~
	~~gamma-BHC (Lindane)~~	~~BHCGAMMA~~
	~~Heptachlor~~	~~HEPTACHLOR~~
	~~n-Nitrosodi-n-propylamine~~	~~NNSPR~~
	~~o-Toluidine~~	~~TLDNO~~
	~~Phenanthrene~~	~~PHAN~~
	~~Phenol~~	~~PHENOL~~
	~~Pyrene~~	~~PYR~~
Page 42, Table VII	LFG Extraction Well Field (Only extraction well fields for WMUs in corrective action due to LFG related exceedances at WMU compliance points are required to be monitored). **See Section A.6. Corrective Action Monitoring**	