

APPENDIX C

SITE LIFE AND CAPACITY

A-MEHR, INC.
Memorandum

June 18, 2019

TO: Sage Kiyonaga, County of Maui

FROM: Ali Mehrazarin



RE: Molokai Landfill Airspace Use and Capacity as of April 17, 2019

Airspace Use

As requested, we have calculated the landfill airspace used between the topographic (topo) surveys of May 31, 2018 and April 17, 2019. Based on comparing digital terrain models of the topographic surfaces defined by the aerial survey data we calculated the net airspace use in the active landfill area to be 12,323 cubic yards (cy) in two specific areas of the landfill where refuse was disposed of during the May 31, 2018 and April 17, 2019. Attached drawings Figure 1 and Figure 2 show the topographic surfaces and limits used in the calculations.

We estimated approximately 2,616 cy of settlement in Phase 3 area between May 31, 2018 and April 17, 2019.

Based on data provided by the County, a total of 5,009 tons of solid waste disposed at the landfill between May 31, 2018 and April 17, 2019. Using this disposed tonnage and the airspace use of 12,323 cy we calculate the airspace utilization factor for the period between surveys to be 813 pounds per cubic yard (lb/cy). Using the 2,616 cy of calculated settlement in the Phase 3 area the airspace utilization factor is estimated to be 1032 lb/cy.

Remaining Capacity in Phases 1, 2, 3 and 4

We calculated the remaining gross airspace in the Phases 1, 2, 3 and 4 to be approximately 112,745 cubic yards, based on the difference between the 2019 topography (Figure 1) and interim final grades that can be achieved within the existing disposal area footprint (Figure 3) within the existing landfill footprint. After subtracting for required final cover, we estimate the net remaining capacity of the existing constructed airspace to be approximately 53,987 cubic yards. Using the monthly average airspace use of 1,168 cy/month, we estimate the remaining useful life of Phases 1-4 to be 46 months from April 17, 2019, or until approximately February 21, 2023. Considering the calculated settlement of top deck in Phase 3 area between May 31, 2018 and April 17, 2019 the life of Phases 1-4 is estimated to be 59 months or until March 6, 2024. Based on this, it appears that construction of Phase 5 should be completed no later than February 2022 in order to maintain efficient operations in the existing permitted waste footprint.

If there are any questions regarding our estimates of airspace use and capacity, please call us at (949) 206-0157. Thank you.



GRAPHIC SCALE 1" = 200'



LOT 28
T.M.K.(2)5-2-11:30
(MAP 10)

PERIMETER ROAD

ACCESS ROAD

PHASE 1
Area 1
Fill = 11,985 cy
CELL

PHASE 3
CELL

PHASE 2

Area 2
Fill = 340 cy

PHASE 1

PROPERTY LINE

T.M.K.(2)5-2-11:Por.27
GROSS AREA=37.846 ACRES
LESS EASEMENT "C"=0.939 ACRE
NET AREA=36.909 ACRES

PROPOSED LOT 27-C
T.M.K.(2)5-2-11:Por.27

STORM WATER POND

Legend

Existing Grades As of 4/17/19

A-Mehr, Inc

Molokai Landfill

2019 Annual Volume Calculations

Topography As of 4/17/19 (Phase 1- 4)

18-19 volume	6/5/19	RM	Figure 1
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GRAPHIC SCALE

1"=200'



LOT 28
T.M.K.(2)5-2-11.30
(MAP 10)

PERIMETER ROAD

ACCESS ROAD

PHASE 4
Area 1
CELL
Fill = 11,985 cy

PHASE 3
CELL

PHASE 2

T.M.K.(2)5-2-11:Por.27
GROSS AREA=37.848 ACRES
LESS EASEMENT=0.939 ACRES
NET AREA=36.909 ACRES

Area 2
Fill =
340 cy

PHASE 1

PROPERTY LINE

PROPOSED LOT 27-C
T.M.K.(2)5-2-11:Por.27

STORM WATER POND

Legend

Existing Grades As of 5/31/18

A-Mehr, Inc			
Molokai Landfill			
2019 Annual Volume Calculations			
Topography As of 5/31/18 (Phase 1- 4)			
18-19 volume	6/5/19	RM	Figure 2



GRAPHIC SCALE 1" = 200'



ACCESS ROAD

PERIMETER ROAD

PROPERTY LINE

STORM WATER POND

PHASE 2

PHASE 1

PHASE CELL 4

PHASE CELL 3

Legend

- Existing Grades As of 4/17/19
- Interim Final Grades (Phase 1, 2, 3 and 4)

A-Mehr, Inc			
Molokai Landfill			
2019 Annual Volume Calculations			
Interim Final Grades (Phase 1 - 4)			
18-19 volume	6/5/19	RM	Figure 3



GRAPHIC SCALE

1" = 200'



0 200 400 600

LOT 28
T.M.K.(2)5-2-11:30
(MAP 10)

PERIMETER ROAD

ACCESS ROAD

T.M.K.(2)5-2-11:Por:27
GROSS AREA=37.048 ACRES
LESS EASEMENT "C"=0.939 ACRE
NET AREA=36.909 ACRES

PROPOSED LOT 27-C
T.M.K.(2)5-2-11:Por:27

STORM WATER POND

PHASE 2

PHASE CELL 4

PHASE CELL 3

PHASE 1

PROPERTY LINE

Legend

- Existing Grades As of 4/17/19
- Isopach between 4/17/19 Topography and Interim Final Grades (Phase 1,2,3 and 4)

A-Mehr, Inc			
Molokai Landfill			
2019 Annual Volume Calculations			
Isopach between 4/17/19 Topography and Interim Final Grades			
18-19 volume	6/5/19	RM	Figure 4