

March 10, 2020

Anthony Demler
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25818 Highway 78
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Subject: Proposed Demler Brothers Poultry Manure Processing Project (PDS 2019-MUP-19-004) Trip Generation Memo

Introduction

Michael Baker International has completed a trip generation review for the proposed poultry manure processing facility (proposed project) at the Demler Brothers Egg Ranch located at 25818 State Route 78 (SR-78) between Rancho Santa Teresa Drive and Casner Road in the Ramona Community Planning Area within unincorporated San Diego County.

The proposed project would construct a poultry manure facility capable of processing on-site poultry manure and converting it into organic fertilizer pellets. Demler Brothers, LLC (applicant) proposes to construct and operate a 16,200 square foot (sq. ft.) poultry manure processing facility to allow the existing on-site egg ranch (Demler Brothers Egg Ranch) to become more efficient and sustainable. The proposed facility would allow manure generated by operation of the existing egg ranch to be processed on-site rather than shipping unprocessed manure off-site. The proposed manure drying system would remove ~30% of the water content in the poultry manure to reduce its weight and volume. This would reduce the truckloads generated by the site which would in turn reduce traffic and emissions associated with the transport of manure. To produce a marketable and easily transportable product, the dried poultry manure would be pelleted on-site as part of the proposed project.

Existing Conditions Trip Generation Comparison

Based on information provided by the applicant, each chicken produces approximately 0.75 pounds of wet manure each week. Therefore, the current operations are estimated to produce 750 tons of wet manure each week (2 million chickens * 0.75 lbs. per chicken / 2000 lbs. per ton = 750 tons). This requires an estimated 5 trucks per day to remove the existing wet manure from the site. This assumes each truck has a 25-ton capacity and operates Monday-Saturday (750 tons / 25 tons per truck / 6 days per week = 5 trucks per day).

With the implementation of the pellet processing mill, the wet manure will be processed into pellets. Each chicken is estimated to produce approximately 0.5 pounds of dry pellets each week due to the loss of water content in the drying process. Therefore, the current operations with the implementation of the mill is estimated to produce 500 tons of dry pellets each week (2 million chickens * 0.5 lbs. per chicken / 2000 lbs. per ton = 500 tons). This would require an estimated 4 trucks per day assuming each truck has a 25-ton capacity and operates Monday-Saturday (500 tons / 25 tons per truck / 6 days per week = 4 trucks per day).

In order to account for the additional effect of large trucks on traffic conditions, the estimated truck trip generation is converted to passenger car equivalents (PCE's) using a conservative factor of 3.0. As shown in **Table 1**, the existing operation is estimated to generate 10 truck trips per day or 30 daily PCE trips. With the implementation of the processing mill, the project site is estimated to generate 8 truck trips or 24 daily PCE trips. Therefore, the processing mill will result in a net decrease of 2 truck trips or 6 PCE trips per day.

Table 1 – Existing Operations Trip Generation Comparison

Daily Trips	Existing Operations			Existing Operations With Pellet Processing Mill			Net Change		
	In	Out	Total	In	Out	Total	In	Out	Total
Truck Trips (vehicles)	5	5	10	4	4	8	-1	-1	-2
Total Trips (PCE)	15	15	30	12	12	24	-3	-3	-6

PCE = passenger car equivalent

Primary access to the site is currently provided by a 24-foot decomposed granite (DG) Egg Ranch private driveway located approximately 1,000 feet east of Rancho Santa Teresa Drive via SR-78. Trucks currently transport wet manure to off-site locations using this driveway and will continue to use this driveway to transport the processed dry pellets to offsite locations. The majority of trucks transporting dry pellets to customers are anticipated to travel east along SR-78 towards Imperial Valley where most agricultural farm fertilizer customers are located.

Ultimate Conditions Trip Generation Comparison (3 million chickens)

The Demler Brothers Egg Ranch has the capacity to accommodate 3 million chickens¹. Three million chickens would produce an estimated 1,125 tons of wet manure each week (3 million chickens * 0.75 lbs. per chicken / 2000 lbs. per ton = 1,125 tons). This would require an estimated 8 trucks per day assuming each truck has a 25-ton capacity (1,125 tons / 25 tons per truck / 6 days per week = 8 trucks per day).

With the implementation of the pellet processing mill, ultimate operations would produce an estimated 750 tons of dry pellets each week (3 million chickens * 0.5 lbs. per chicken / 2000 lbs. per ton = 750 tons). This would require an estimated 5 trucks per day assuming each truck has a 25-ton capacity (750 tons / 25 tons per truck / 6 days per week = 5 trucks per day). In addition, future processing mill operations is forecast to require an additional two employees that would be assigned to a second work shift. As shown in **Table 2**, the future operations are estimated to generate 48 daily PCE trips. With the implementation of the processing mill, the proposed project is estimated to generate 34 daily PCE trips (includes new employee trips) which results in a net decrease of 14 PCE trips.

¹ Three million is allowed by right under Existing conditions/not part of MUP.

Table 2 – Future Operations Trip Generation Comparison

Daily Trips	Future Operations			Future Operations With Pellet Processing Mill			Net Change		
	In	Out	Total	In	Out	Total	In	Out	Total
Truck Trips (vehicles)	8	8	16	5	5	10	-3	-3	-6
Truck Trips (PCE)	24	24	48	15	15	30	-9	-9	-18
New Employee Trips (PCE)	-	-	-	2	2	4	2	2	4
Total Trips (PCE)	24	24	48	17	17	34	-7	-7	-14

PCE = passenger car equivalent

Conclusion

The results of this trip generation review show the addition of the poultry manure processing facility to the existing site is anticipated to result in a net decrease of 2 daily truck trips or 6 daily PCE trips when compared to the existing operations without the processing facility see **Table 1** (Net Change). When the number of chickens are increased to 3 million, the number of truck trips to and from the site are anticipated to increase above existing conditions. However, the proposed processing facility would result in 14 fewer daily PCE trips when compared to operations without the processing facility see **Table 2** (Net Change). Therefore, the proposed poultry manure processing facility is not expected to increase traffic along SR-78.

Table 1 of the *County of San Diego Report Format & Content Requirements Transportation and Traffic* (County of San Diego, Second Modification August 24, 2011) document states that the criteria for the need to prepare an issue specific Traffic Impact Study (TIS) is 200-500 average daily trips (ADT) or 20-50 peak trips. The proposed project is forecast to result in a net decrease of project trips with the implementation of the processing facility, therefore a traffic study is not required.

If you have any questions pertaining to the information summarized in this letter, please call me at (760) 603-6266.

Sincerely,



Dawn Wilson, PE, TE
 Transportation Planning Manager
 Transportation Services

