Hernandez, Kroone & Associates
Engineers & Land Surveyors

March 21, 2025

Freepoint Eco-Systems Yermo Supply, LLC
3050 Post Oak Boulevard
Houston, TX 77056

Plastic Sorting and Processing
Yermo, CA
Project Trip Generation Letter
24-1010

RE: Plastics Sorting and Processing Facility Project
37265 Yermo Road
Project Trip Generation

Hernandez, Kroone & Associates (HKA) would like to thank Tetra Tech, Inc. (Client) and Freepoint Eco-Systems (Developer) for the opportunity to submit a Project Trip Generation for the Plastics Sorting and Processing Facility Project proposed at 37265 Yermo Road, Yermo, California (Project).

The location of the subject project is in the northeast quadrant of the intersection of Dusty Trail and Marine Road. Developments in this location are permitted by the County of San Bernardino (County). The County's traffic guidelines are included in "*Transportation Impact Studies Guidelines,"* County of San Bernardino, July 9, 2019 (Guidelines).

According to these guidelines, the requirement to prepare a traffic impact study should be based upon, but not limited to, one or more of the following criteria:

- If a project generates 100 or more trips without consideration of pass-by trips during any peak hour. [1]
- If a project is located within 300 feet of
  - The intersection of two streets designated as Collector or higher in the County's General Plan or the Department's Master Plan or
  - An impacted intersection as determined by the Traffic Division.
- If this project creates safety or operational concerns.
- The project has the potential to generate VMT[2] that could result in a transportation impact as noted in the significance criteria presented later in this memorandum.

[1] Guidelines defines peak hours as occurring during 7:00 – 9:00 am (AM Peak Period) and 4:00 – 6:00 pm (PM Peak Period), non-holiday weekdays.
[2] VMT is the acronym for Vehicle Miles Traveled. VMT analysis may be required for compliance with California Senate Bill 743. This methodology was developed as a means to identify projects and mitigate projects in an effort to meet California's emission goals.

- If a project generates less than 100 trips without consideration of pass-by trips during any peak hour, a study may be required if there are special concerns.

The project is not near an intersection of collector streets. No other concerns of safety, operation or VMT generation have been noted as of this date. This letter will develop a project trip generation to compare to the 100 or more trips criteria.

The property and much of the surrounding area is vacant land. A plastics sorting and processing facility is being proposed. The size of the facility is sufficient to process up to 855 U.S. short tons ("tons") of post-industrial and post-consumer waste.

The information about the Project has been provided by Freepoint Eco-Systems based on their experience on other sites. Changes to the Project in terms of size and operation may impact the project trip generation developed here. However, HKA and the Client have both tried to estimate the maximum trips anticipated for the operation of the site. No construction trips were included in this analysis as the construction period is temporary.

Project Description

A large building will be built, consisting of:

- A receiving area for inbound material
- Sorting and processing equipment
- Storage areas for outbound material awaiting pickup
- Offices, break room, locker room, restrooms, and support spaces

All materials will be stored in this building.

Post-industrial waste from manufacturers and post-consumer material (Raw Material) from material recovery facilities will be trucked to the Project site. The recyclable plastic in this material will be sorted, baled, and sent to a pyrolysis facility in Eloy, Arizona. This material will be delivered by rail, but the plastic bales may be trucked while the rail is being constructed.

Other recyclables diverted from the waste stream, such as old corrugated containers (OCC), ferrous, and non-ferrous metals, would be sorted, baled, and then collected by traditional mechanical third party recycling companies. Any residual, unusable material would be trucked off-site for disposal at an area landfill.

Currently the site is envisioned to operate 24 hours per day, Sunday through Saturday. Deliveries of Raw Material to be sorted will be accepted from 8:00 am to 6:00 pm, Monday – Saturday. It is anticipated that up to 61 trucks (an average of 14 tons each) for a typical scenario, or 86 trucks (an average of 10 tons each) for a worst case scenario will be delivering materials for sorting. The Project will have a designed processing capacity of 855 tons per day.

Residual material destined for the landfill will be trucked from the site between 8:00 am to 6:00 pm, Monday – Saturday. It is anticipated that up to 31 trucks will move baled plastics to Eloy for additional processing and up to 31 trucks will be moving the remaining materials to other recyclers or to a landfill.

Employees will be on site:

- Sunday – Saturday 1st Shift 6:00 a.m. – 6:00 p.m., 22 – 27 employees.
- Sunday – Saturday 2nd Shift 6:00 p.m. – 6:00 a.m., 22 – 27 employees.

The employee parking lot will have 14 carpool parking spaces, but the analysis was completed as if all employees will drive individually to and from the Project site.

Other people that might occasionally travel to or from the Project site include:

- Schoolchildren and their chaperons, by bus or van.
- Other occasional visitors.
- Outside maintenance vendors.

They are expected to visit seldomly, and their visits would be outside of the peak periods. Their trips are not included in the calculation of project trips

Project Trips

Typically, the project trips generated by a new project are forecast from the *"Trip Generation Manual," Volumes 1-5, 11th Edition,* Institute of Transportation Engineers, United States of America, September 2021 (ITE). This type of project is not included in the ITE, nor is it included in the "*Truck Trip Generation Study,"* City of Fontana, August 2003. HKA will be estimating the trips for the Project based on information provided in the project description.

Trucks – *(See Table 1)* Each inbound vehicle loaded with Raw Material or outbound vehicle loaded with non-plastic materials is anticipated to enter and leave the site daily, between 8:00 am – 6:00 pm except Sundays. It was assumed that delivery trucks would leave empty and that trucks removing sorted materials would arrive empty. The worst case daily truck Project Trips would be 296 (86 Raw Material Trucks entering and leaving, and 62 sorted material trucks comprised of 31 trucks for residual material and 31 trucks for baled plastic for Eloy entering and leaving).

The Raw Material trucks were assumed to start arriving at 8:00 am with a peak arrival at midday as the operations ramp up for the day. Table 1 shows all the Raw Material trucks entering and leaving between 8:00 am – 6:00 pm. The outbound trucks of sorted materials are expected to start at 9:00 am and continue to 6:00 pm, which is conservative as the trucks could arrive or leave outside of these hours. Table 1 shows a conservative distribution of trucks across the day. This distribution shows the peak hours to have a volume of:

- Peak during AM Peak Period – 10 Trucks Arriving, 0 Trucks Exiting – 10 Project Trips
- Peak during PM Peak Period – 11 Trucks Arriving, 25 Trucks Exiting – 36 Project Trips

The trucks used are tractor-trailer trucks (semis). Since they are larger and take more time to maneuver, a Passenger Car Equivalent (PCE) of 3 is assigned to them. This is done to represent the impact of the Project Trips more clearly on the operation of the roads and intersections. Table 1 shows the Project's trips in PCEs to be:

- Daily – 888 Project Trips
- Peak during AM Peak Period – 30 Project Trips
- Peak during PM Peak Period – 108 Project Trips

Employees - (See Table 2) Assuming all employees individually drive to the site and do not use bicycles, ride share or public transit, and using the maximum number of employees per shift, the daily employee trips are anticipated to be 108.

Table 2 shows the employee trips distributed across the day by their shifts. It is assumed that 10% of the employees will arrive late at the beginning of their shifts and 10% will leave early at the end of their shift. With that assumption, Table 2 shows the Project Trips due to employees' trips to be outside of the AM Peak Period, and half outside of the PM Peak Period. As employees are assumed to use motorcycles, cars, pickups or similar smaller vehicles, conversion to PCEs is not required.

Total Project Trips - Table 3 below shows the combined Project Trips for trucks and employees, by vehicles and PCEs, daily and during the peak periods.

TABLE 3 – TOTAL PROJECT TRIPS, VEHICLES AND PCES

		AM Peak Hour (8:00 AM – 9:00 AM)			PM Peak Hour (4:00 PM – 5:00 PM)		
TYPE	**DAILY**	**IN**	**OUT**	**TOTAL**	**IN**	**OUT**	**TOTAL**
VEHICLES	404	10	0	10	8	17	25
PCEs	996	30	0	30	24	51	75

The highest volume of Project Trips, in PCEs, is 75 during a peak hour. This volume is less than the 100 project trips in a peak hour listed in the Guidelines as the criteria for needing additional analysis.

Conclusion

A conservative number of trucks has been projected for the trucks bringing Raw Material to the site and for the trucks leaving the site with sorted materials. HKA used the maximum number of employees when estimating the Project Trips generated by the employees. The distribution throughout the day of the trucks limited the hours the trucks arrived and left the site to less than what may be used in practice. HKA has prepared and presented a conservative estimate of the Project Trips generated and distributed those trips in a conservative manner.

Since the Project Trips are anticipated to be less than 100 during the peak hour, no significant traffic impacts are expected, and additional analysis is not warranted.

Please call if you have any questions or concerns.

Sincerely,

Anne M. Hernandez, PE
Hernandez, Kroone & Associates, Inc.
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Attachments: Table 1 - Truck Trips Distributed by Hour, in Trucks and PCEs
Table 2 – Weekday Employee Trips Distributed by Hour

Table 1 - Truck Trips Distributed by Hours, in Trucks and PCEs

		Trucks					PCEs				
		Inbound Loads 86		Outbound Loads 62		Total	Inbound Loads 258		Outbound Loads 186		Total
Time Period		In	Out	In	Out		In	Out	In	Out	
0:00	1:00	0	0	0	0	0	0	0	0	0	0
1:00	2:00	0	0	0	0	0	0	0	0	0	0
2:00	3:00	0	0	0	0	0	0	0	0	0	0
3:00	4:00	0	0	0	0	0	0	0	0	0	0
4:00	5:00	0	0	0	0	0	0	0	0	0	0
5:00	6:00	0	0	0	0	0	0	0	0	0	0
6:00	7:00	0	0	0	0	0	0	0	0	0	0
7:00	8:00	0	0	0	0	0	0	0	0	0	0
8:00	9:00	10	0	0	0	10	30	0	0	0	30
9:00	10:00	10	10	6	6	32	30	30	18	18	96
10:00	11:00	11	10	9	6	36	33	30	27	18	108
11:00	12:00	12	10	9	7	38	36	30	27	21	114
12:00	13:00	12	10	8	7	37	36	30	24	21	111
13:00	14:00	12	12	7	7	38	36	36	21	21	114
14:00	15:00	12	12	7	7	38	36	36	21	21	114
15:00	16:00	5	12	7	7	31	15	36	21	21	93
16:00	17:00	2	10	6	7	25	6	30	18	21	75
17:00	18:00	0	0	3	8	11	0	0	9	24	33
18:00	19:00	0	0	0	0	0	0	0	0	0	0
19:00	20:00	0	0	0	0	0	0	0	0	0	0
20:00	21:00	0	0	0	0	0	0	0	0	0	0
21:00	22:00	0	0	0	0	0	0	0	0	0	0
22:00	23:00	0	0	0	0	0	0	0	0	0	0
23:00	0:00	0	0	0	0	0	0	0	0	0	0
		86	86	62	62	296	258	258	186	186	888

Table 2 - Weekday Employee Trips Distributed by Hour

Time Period		1st Shift - 27		2nd Shift - 27		Total
		6:00 AM - 6:00 PM		6:00 PM - 6:00 AM		
		In	Out	In	Out	
0:00	1:00					0
1:00	2:00					0
2:00	3:00					0
3:00	4:00					0
4:00	5:00					0
5:00	6:00	24			3	27
6:00	7:00	3			24	27
7:00	8:00					0
8:00	9:00					0
9:00	10:00					0
10:00	11:00					0
11:00	12:00					0
12:00	13:00					0
13:00	14:00					0
14:00	15:00					0
15:00	16:00					0
16:00	17:00					0
17:00	18:00		3	24		27
18:00	19:00		24	3		27
19:00	20:00					0
20:00	21:00					0
21:00	22:00					0
22:00	23:00					0
23:00	0:00					0
	Total	**27**	**27**	**27**	**27**	**108**