

Appendix 'A'

Draft Mitigated Negative Declaration and Initial Study



# City of Kerman

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*"Community Comes First"*

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## INITIAL STUDY AND DRAFT MITIGATED NEGATIVE DECLARATION

### MID VALLEY DISPOSAL, INC. RECYCLING FACILITY AND TRANSFER STATION EXPANSION PROJECT

Prepared by:  
City of Kerman  
Planning and Development Department

Revised January 22, 2013

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- A. Mid Valley Disposal Recycling and Transfer Station Transfer/Processing Report
- B. Yorke Engineering, LLC. *Air Quality Technical Report: Mid Valley Disposal Recycling and Transfer Station*. September 2012.
- C. Yorke Engineering, LLC. *Response to Comments from San Joaquin Valley Air Pollution Control District*. January 19, 2013.

## Section I

### PROJECT BACKGROUND AND INTRODUCTION

#### 1. PROJECT INFORMATION

Project Title:	Mid Valley Disposal, Inc. Recycling and Transfer Station Expansion Project
Lead Agency Name & Address:	City of Kerman Planning and Development 850 S. Madera Avenue Kerman, CA 93630
Contact Person:	Luis Patlan Director of Planning & Development City of Kerman 850 S. Madera Avenue Kerman, CA 93630 Phone: (559) 846-9389 Fax: (559) 846-6199 Email: <a href="mailto:lpatlan@cityofkerman.org">lpatlan@cityofkerman.org</a>
Project Location:	Approximately ¼ mile west of Madera Avenue and just east of City of Kerman's Wastewater Treatment Plant consisting of 28± acres of a 37.81± acre site owned by Mid Valley Disposal, Inc. located at 15300 W. Jensen Avenue, Kerman, CA. Assessor Parcel Number E.½ of 023-080-15s & 023-080-16.
Applicant/Owner:	Mid Valley Disposal, Inc. 15300 Jensen Avenue Kerman, CA 93630
Zoning:	Agricultural Exclusive (AE-20)
General Plan:	Heavy Industrial
Project Description:	Expansion of existing recycling and transfer station operations to increase permitted tons per day (TPD) from 500 to 1,500 TPD in three phases to include addition buildings and parking areas, additional composting for greenwaste/ food waste, expanding construction and demolition debris processing area, anaerobic digestion, and natural gas (CNG) production facility. For a detailed project description and operational statement please refer to Transfer/Processing Report for the project enclosed herein as Attachment A.



- Land Use Entitlements: Entitlements include rezoning of the site from agricultural exclusive (AE-20) to Heavy Industrial (M-2), annexation of 28± acres from the County of Fresno to the City of Kerman, and a Conditional Use Permit.
- Responsible Agencies:
- Central Valley Regional Water Quality Control Board
  - City of Kerman Planning & Development Services
  - San Joaquin Valley Unified Air Pollution Control District
  - Fresno County Department of Public Health
  - North Central Fire Protection District
  - California Department of Toxic Substance Control
  - California Recycle
  - Fresno County Local Agency Formation Commission
- Additional Documents: All of the documents cited and relied upon in the preparation of this Initial Study are available at the City of Kerman Planning and Development Services Department and are hereby incorporated into the record.

## 2. INTRODUCTION AND REGULATORY GUIDANCE

Mid Valley Disposal (MVD) operates an existing Recycling and Transfer Station on a 9.81± acre site located on Jensen Avenue about ¼ mile west of Madera Avenue and just east of the City of Kerman's Wastewater Treatment Plant. Figure 1-1 shows the location of the project site.

Mid Valley Disposal currently receives, processes, recycles, and converts a wide variety of materials, many of which are diverted from landfills consistent with AB 939 and AB 341. MVD is proposing to expand the capacity of the Recycling and Transfer Station from 500 permitted tons per day (TPD) to 1,500 TPD. The expansion will be located on 28± acres just east and north of the existing facility. Figure 2-1 shows the location of the proposed expansion area. The 28± project site is situated within the City's sphere of influence boundary, and will need to be annexed into the City of Kerman.

This Initial Study has been prepared in accordance with CEQA, Public Resources Code 21000 et. seq., and the State CEQA Guidelines, Title 14 California Code of Regulations (CCR) 15000 et. seq. An Initial Study is prepared by a lead agency to determine if a project may have a significant effect on the environment. This Initial Study relies on expert opinion based on facts, technical studies, or other substantial evidence to document its findings.

In accordance with State CEQA Guidelines 15064(a), an Environmental Impact Report (EIR) must be prepared if there is substantial evidence that a project may have a significant effect on the environment. A Negative Declaration is prepared if the agency finds that a proposed project would not have a significant effect on the environment, and if the lead agency prepares a written statement supporting that finding. A Mitigated Negative Declaration shall be prepared when the Initial Study identifies potentially significant effects, but revisions made to the project and agreed to by the project applicant would avoid or mitigate the effects of the project.

### Lead Agency

The lead agency is the public agency with primary responsibility over the proposed project. In accordance with State CEQA Guidelines 15051(b)(1), "the lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." The lead agency for the proposed project is the City of Kerman, Department of Planning and Development Services.

### Project Objectives

The objective of the Mid Valley Disposal Recycling and Transfer Station Expansion Project is to assist the City of Kerman and other jurisdictions in Fresno County to achieve waste diversion rates from landfills in compliance with AB 939 and AB 341 through extensive composting and recycling activities.

### Summary of Findings

Section II of this Initial Study contains the Environment Checklist that identifies potential environmental impacts (presented by environmental subject area) and a discussion of each impact that would result from implementation of the proposed Expansion Project. Based on the Environmental Checklist and the supporting environmental analysis provided in this document, development of the proposed project would result in the following impacts:

- **No Impact:** Biological Resources, Cultural Resources, Hazards/Hazardous Materials, Land Use & Planning, Mineral Resources, Public Services, Recreation and Transportation and Traffic.
- **Less-than-Significant Impacts:** Aesthetics, Geology and Soils, Utilities and Service Systems and Noise.
- **Less-than-Significant Impacts with Mitigation Incorporated:** Agricultural Resources, Air Quality, Hydrology/Water Quality and Population & Housing.

In accordance with State CEQA Guidelines 15070, a Mitigated Negative Declaration may be prepared if the proposed project will not have a significant effect on the environment after the inclusion of mitigation measures into the project. There is no substantial evidence that the proposed project, as revised by mitigation measures, would have a significant effect on the environment based on the availability project information and the environmental analysis presented in this document. Therefore, a Mitigated Negative Declaration is proposed to be adopted in accordance with CEQA Guidelines.

### 3. BACKGROUND INFORMATION AND PROJECT DESCRIPTION

#### Background

Mid Valley Disposal operates an existing Recycling and Transfer Station on 9.81± acres. Current operations include receiving daily quantity of inbound material not exceeding 500 permitted tons per day (TPD) from curbside collection programs, gardeners, landscapers, agricultural operations, building and demolition contractors, solid waste haulers, and the public. Non-salvageable residue is trucked to permitted disposal facilities. Mid Valley Disposal recently purchased 28± acres for expansion of current operations.

#### Project Description

Mid Valley Disposal is proposing to expand its existing Recycling and Transfer Station operations in three phases. Currently, Mid Valley Disposal conducts its operations on 9.81± acre site, which includes 127 visitor and employee parking stalls, 10,120 square foot office/maintenance building, 34,000 square foot material recovery facility and transfer station building, fuel islands, truck wash, truck scale, compactors and hazmat locker area.

Mid Valley Disposal acquired 28± acres to expand its operations. At full build-out the facility will consist of a material recovery facility (MRF), transfer station, construction and demolition (C&D) debris recycling operation, maintenance shops, truck wash stations, fueling islands, greenwaste chipping and grinding operation, greenwaste/food waste covered composting operation, and anaerobic digestion on a total of 37.81± acres.

The proposed expansion of the existing Recycling and Transfer Station will be done in three phases, as reflected in Figure 2-1 and described below:

#### Phase I

- Increase the permitted tons per day (TPD) from 500 TPD to 1,500 TPD;
- Increasing the site acreage from 9.81± acres up to 37.81± acres;
- Add 44,000 SF to existing building for recycling and transfer station;
- New 10,000 SF office/maintenance building;
- 290,000 SF of open construction and demolition and greenwaste material processing area;
- 68,000 SF of open compost post-processing and load-out area;
- 100,000 SF of concrete and asphalt crushing area
- 70,500 SF of open storage of recovered materials in bales;
- Finished project storage bunkers
- 31,000 SF of self-haul tipping area

## Phase II

- Installation of 8-bay design anaerobic digesters;
- Add 34,000 SF to existing building for recycling and transfer station;
- Add 44,000 SF to existing building for dirty material recovery facility;
- Installation of compressed natural gas (CNG) fuel dispenser;

## Phase III

- Expand anaerobic digester

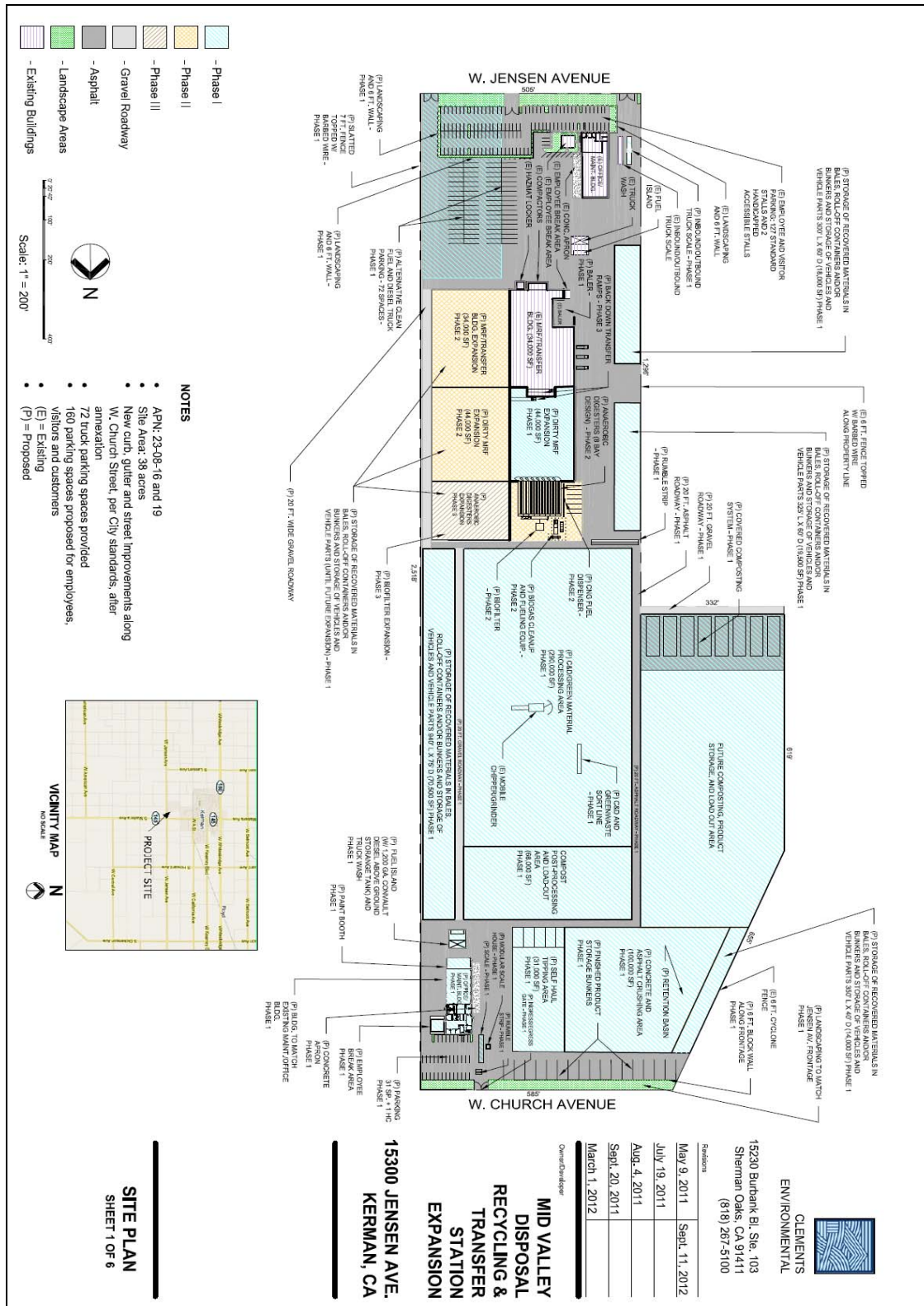
## Project Location

Mid Valley Disposal is located approximately ¼ mile west of Madera Avenue along Jensen Avenue. Mid Valley Disposal currently occupies approximately 9.81± with proposed expansion on 28± acres immediately to the east and north. Figure 2-1 shows the location of Mid Valley Disposal.

Figure 1-1  
Project Site



Figure 2-1  
Proposed Site Plan



## Construction Schedule

Mid Valley Disposal shall proceed with the Recycling and Transfer Station Expansion Project as specified in the following schedule:

Schedule	Due Date
a. Submit land use entitlements to the City of Kerman	October 2012
b. Submit construction plans for Phase I	May 2013
c. Begin construction of Phase I improvements	July 2013
d. Complete construction of Phase I improvements	April 2014
e. Commence construction of Phase II improvements	January 2016
f. Commence construction of Phase III improvements	January 2017

#### 4. ENVIRONMENTAL SETTING

Kerman is located in the central Fresno County in the middle of the San Joaquin Valley floor. The Kerman area is characterized by flat terrain of approximately 200 to 225 feet above mean sea level. Agricultural uses surround the City on all sides. Kerman is approximately 30 miles from both the Coast Range foothills to the west and the Sierra Nevada foothills to the east. The nearest significant topographical feature is the San Joaquin River bluffs, located approximately 6 miles north of Kerman.

The City of Kerman, population, 13,598, is a small but growing community. The City of Kerman is organized around Madera Avenue, which consists of the central business district. Residential uses are located to the west and east of the City. Commercial and agricultural uses are located on the north and south side of the City.

##### Site-Specific Conditions

The project site is located in the City of Kerman, Fresno County, California. The project site consists of one parcel totaling 38.81 acres, bounded by cultivated land to the north, Jensen Avenue to the south, cultivated land to the east, and the City of Kerman Wastewater Treatment Plant to the west.

A portion of the project site, 9.81 acres, is developed as a recycling and transfer station operation consisting of parking spaces, landscaping, office/maintenance building, material recovery and transfer station building, internal roads, and perimeter fencing. The proposed project will expand the recycling and transfer station operations on a 28 acre site immediately to the east and north of the site. The proposed 28 acre site is currently under cultivated agricultural uses (alfalfa). There are no structures existing on the site. The California Department of Conservation Farmland Mapping and Monitoring Program designate the project site as primarily "Primary Farmland".

The project site is not located within a 100-year floodplain according to the Federal Emergency Management Agency maps (FEMA Maps). Mid Valley Disposal has an onsite retention basin that collects all storm water runoff and does not discharge to water of the United States.

##### Land Use

The city supports a variety of land uses including residential, commercial, industrial and agricultural activities. Mid Valley Disposal's existing operations is situated on 9.81± acres located within the city limits of the City of Kerman. The expansion areas consisting of 28± acres is located outside the city limits but within the sphere of influence of the City of Kerman. The city's General Plan has designated the land owned by Mid Valley Disposal as industrial (City of Kerman, 2007-2007 General Plan). Adjacent Fresno County land generally consists of land in agricultural production.

Figure 3-1 shows the Mid Valley Disposal site, including the land immediately adjacent to its boundaries. The County of Fresno General Plan has designated these surrounding lands for agricultural land uses with a minimum parcel size of 20 acres (County of Fresno, General Plan). Land use in the vicinity of Mid Valley Disposal is primarily agricultural to the south, north, and east with the City of Kerman's wastewater treatment plant located to the west.



## Surface Waters

There are no natural surface water features such as streams or lakes in the Kerman Area, and there are no year-round water courses that traverse the project site.

## Water Quality

Regional groundwater is approximately 90-100 feet below ground surface and flows south-southwest (City of Kerman, General Plan EIR 2007). The city obtains its source water from five deep groundwater wells. The source water is of good quality, with the exception of uranium, as indicated by the City's 2006 Annual Water Quality Report (City of Kerman, 2006). Elevated concentrations of uranium in groundwater have resulted in the city drilling additional wells to meet drinking water standards (depths of 600 to 800 feet).

Figure 3-1  
Surrounding Land Uses



## 5. PURPOSE AND LEGAL BASIS FOR THE INITIAL STUDY

This Initial Study serves as the initial environmental compliance for the Mid Valley Disposal Recycling and Transfer Station Expansion Project. As described in Section 15063 of the California Environmental Quality Act guidelines (14 CCR 15000 *et. Seq.*), the purpose of an Initial Study is to determine if a project may have significant effect on the environment.

Section III of this Initial Study presents the analyses of whether the proposed project would cause any significant impacts.

## 6. FINDINGS AND CONCLUSIONS

### Potential Environmental Effect of the Project

Based on the initial findings and conclusions of the environmental checklist, provided in Section III, it is concluded that implementation of the proposed project will have a less-than-significant impact on the environment with mitigation measures incorporated. The city will be preparing a Mitigated Negative Declaration for the proposed project.

### Potential Cumulative Effects

The proposed project could have effects on agricultural resources, aesthetics, hazards, biological resources, and air quality that are potentially significant and, when considered in combination with the effects of the other projects, could contribute to cumulative effects on the environment. However, a majority of these effects would be mitigated by the design of the proposed project and the standardized mitigation measures that the city would adopt as part of the environmental review process.

### References

City of Kerman. 2007-2007, *General Plan*. February 2007.

City of Kerman. 2007-2007, *General Plan: Final Program Environmental Impact Report (SCH#20060091148)*. February 2007.

Yorke Engineering, LLC. *Air Quality Technical Report: Mid Valley Disposal Recycling and Transfer Station*. September 2012.

Michael Brandman Associates. *Kerman Walmart Project Environmental Impact Report. SCH No. 2009101035*. December 2010.

York Engineering, LLC. *Response Letter to comments from the San Joaquin Valley Air Pollution Control District*. January 19, 2013.

## Section II ENVIRONMENTAL IMPACT ANALYSIS

### Evaluation of Environmental Impacts

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the report on the following pages. Although the project as originally proposed could have had significant effect on the environment, there will be not be a significant effect in this case, because revisions in the project design and provide provisions have been made by or agreed to by the project proponent to alter the project to avoid potentially significant impacts. Therefore, a Negative Declaration has been prepared for the proposed project. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures or altered provisions of the project design reduce the effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The provisions of altered project design are briefly explained in each section of this report to state how they reduce the effect to a less than significant level.

<input checked="" type="checkbox"/>	Aesthetics	<input checked="" type="checkbox"/>	Agricultural Resources	<input checked="" type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input checked="" type="checkbox"/>	Cultural Resources	<input checked="" type="checkbox"/>	Geology/Soils
<input checked="" type="checkbox"/>	Hazards/Hazardous Materials	<input checked="" type="checkbox"/>	Hydrology/Water Quality	<input type="checkbox"/>	Land Use/Planning
<input type="checkbox"/>	Mineral Resources	<input checked="" type="checkbox"/>	Noise	<input type="checkbox"/>	Population/Housing
<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation	<input checked="" type="checkbox"/>	Transportation/Traffic
<input type="checkbox"/>	Utilities/Service Systems	<input checked="" type="checkbox"/>	Mandatory Findings of Significance	<input checked="" type="checkbox"/>	None after mitigation measures are incorporated

**DETERMINATION:** On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a <b>NEGATIVE DECLARATION</b> will be prepared.
<input checked="" type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A <b>MITIGATED NEGATIVE DECLARATION</b> will be prepared.
<input type="checkbox"/>	I find that the Expansion Project MAY have a significant effect on the environment, and an <b>ENVIRONMENTAL IMPACT REPORT</b> is required.
<input type="checkbox"/>	I find that the Expansion Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An <b>ENVIRONMENTAL IMPACT REPORT</b> is required, but is must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	I find that although the Expansion Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier <b>EIR or NEGATIVE DECLARATION</b> pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier <b>EIR or NEGATIVE DECLARATION</b> , including revisions or mitigation measures that are imposed upon the Expansion Project, nothing further is required.

Date: October 18, 2012

  
Luis Patlan, Director of Planning and Development

## Evaluation of Environmental Impacts

Appendix G, the Environmental Checklist Form, of the State CEQA (California Environmental Quality Act) Guidelines asks questions about various potential environmental impacts. Those questions and the appropriate answers are included in the following sections of this Initial Study for a Mitigated Negative Declaration.

1. A brief explanation for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the reference information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project specific-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant.
4. Less than Significant with Mitigation Incorporation applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact". The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
5. Earlier analysis may be used where, pursuant to the tiering, program EIR, or other California Environmental Quality Act (CEQA) process, an effect has been adequately analyzed in an earlier EIR or negative declaration, Section 15063<sup>(3)</sup>(D). In this case, a brief discussion should identify the following:
  - a. Earlier Analysis Used. Identify and state where they are available for review.
  - b. Impact Adequately Addressed. Identify which effects from the above checklist were within the scope of adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporation", describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference page or pages where the statement is substantiated.
7. Supporting Information Sources: A source listed should be attached, and other sources used, or individuals contacted, should be cited in the discussion.
8. The explanation of each issue should identify the following:
  - a. The significant criteria, or threshold, used to evaluate each question
  - b. The mitigation measures identified, if any, to reduce the impacts to less than significant

# INITIAL STUDY CHECKLIST

## Aesthetics

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
1.	<b>AESTHETICS</b> Would the project:				
a)	Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Threshold and Conclusion:

Discussion:	
Items 1a:	There are no designated scenic vistas or highways within or adjacent to the project site. The project site will be screened by walls, fences, and landscaping. The proposed project would have <b>no impact</b> .
Item 1b:	The proposed project site is not visible from a state-designated scenic highway. The proposed project would have <b>no impact</b> .
Item 1c:	<p>Vegetation removal and grading associated with future site development will alter the visual character of the site converting it from agricultural use to industrial related uses as a recycling and transfer station operation. However, the proposed project consists of uses that are consistent with existing recycling and transfer station operations and general plan land use designations for the surrounding area. The proposed project will install a seven foot slated fence along the perimeter of the site to screen internal operations. Landscaping along the northern frontage of the site along Church Avenue to include decorative block wall and landscaping at the base. Landscape plans must be submitted to comply with the City of Kerman Model Water Efficiency Landscape Ordinance and general landscape standards, including, but not limited, to:</p> <ul style="list-style-type: none"> <li>• Shrub areas should be located to screen unwanted views (e.g., utility boxes, trash enclosures, etc.)</li> <li>• One tree (minimum 15 gallon) to be provided for every 5 parking spaces to achieve 50% shade within 15 years.</li> <li>• One street tree (15 gallon) to be planted every 40' of street frontage</li> </ul> <p>The proposed project would have a <b>less than significant impact</b>.</p>
Item 1d:	<p>The existing operation plus existing surrounding development to the northeast already has light and glare affecting nighttime views in the area. The addition of new industrial uses and associated lighting for businesses, parking areas, roadways and related amenities will increase light in the area. Combined with existing lighting in the area, the proposed project could contribute, incrementally, to the overall light and glare in the area resulting in potentially cumulative adverse impacts to nighttime views.</p> <p>To ensure that lighting does not create glare or adversely impact nighttime views, any future development on the project site will be required to downward or otherwise shielded to direct light sources downward and not into the sky onto adjoining. Proper implementation of this mitigation measure should reduce the potential impact to a <b>level less-than-significant impact</b>.</p>
Documentation:	None referenced.
Mitigation:	AES-1: All outdoor lighting shall be designed to aim downward onto the project site and not glare skyward or onto adjacent parcels (e.g., by incorporating cut-off shields, or the equivalent).

## Agricultural Resources

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
2.	<b>AGRICULTURAL RESOURCES</b> In determining whether impacts to agricultural resources are significant environmental effects, lead agency may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agricultural and farmland. Would the project:				
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resource Agency, to non-agricultural use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Threshold and Conclusion:

Discussion:	
Items 2a:	<p>The project site consists of 28± acres of Prime Farmland and Farmland of Statewide Importance. The development of the proposed project would permanently convert all of the Prime Farmland and Farmland of Statewide Importance to urban uses. The City of Kerman General Plan designates the project site for Industrial use. This designation indicates that the City has contemplated the conversion of this agricultural and to urban use over the planning horizon of the General Plan and, therefore, does not view the project site as a preferred location for permanent agriculture. The Program EIR prepared for the 2027 General Plan update and adopted on February 7, 2007, identified that the projected growth of the city over the 20-year planning period as having a potentially significant impact on agricultural resources by conversion of farmland to non-agricultural uses. According to the City of Kerman's 2007-2027 General Plan, most of the land within the city's planning area is considered "Prime" or "Farmland of Statewide Importance" by the California Department of Conservation. The Program EIR stated that such impacts to farmland are unavoidable as the city grows, and included mitigation measures in the Land Use Element of the General Plan to lessen the impacts on agricultural land, but not to an insignificant level. As such the Program EIR for the General Plan included adoption of a statement of overriding consideration that the economic, social, health and welfare and other benefits to be effected by implementation of the General Plan outweigh the unavoidable adverse impacts to the conversion of agricultural lands in accordance with Section 15093 of the CEQA Guidelines. The proposed project would have a <b>significant an unavoidable impact</b>.</p>
Item 2b:	<p>The project site is not subject to a Williamson Act land conservation contract and is designated industrial on the City of Kerman's General Plan Land Use Map. The proposed project would have <b>no impact</b>.</p>
Item 2c:	<p>See paragraph 2a. The proposed project would have <b>no impact</b>.</p>
Documentation:	<ul style="list-style-type: none"> <li>City of Kerman. 2007-2027. General Plan Resources Element. <a href="http://www.codepublishing.com/CA/Kerman/generalplan/2-3%20%20Resources.pdf">http://www.codepublishing.com/CA/Kerman/generalplan/2-3%20%20Resources.pdf</a>. Accessed February 1, 2008.</li> <li>City of Kerman. 2007-2027. General Plan Resources Element. <a href="http://www.codepublishing.com/CA/Kerman/generalplan/Map%204_Farmland.pdf">http://www.codepublishing.com/CA/Kerman/generalplan/Map%204_Farmland.pdf</a>. Accessed February 1, 2008.</li> <li>City of Kerman. 2007-2027. General Plan Final Environmental Impact Report. SCH#2006091148: Chapter 4, Pages 4-9 and pages 4-12.</li> <li>Kerman Municipal Code, Title 18, Zoning. <a href="http://www.codepublishing.com/CA/Kerman/generalplan/Map%2020_Zoning.pdf">http://www.codepublishing.com/CA/Kerman/generalplan/Map%2020_Zoning.pdf</a></li> </ul>
Mitigation:	None.

## Air Quality

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
3.	<b>AIR QUALITY</b> Where available, the significant criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors?)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e)	Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f)	Greenhouse gas emissions – does the project have the potential either directly or cumulatively, to global climate change?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g)	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Threshold and Conclusion:

Discussion:	
Items 3a:	<p>The City of Kerman lies within the San Joaquin Valley Air Basin (SJVAB). The SJVAB is comprised of eight counties: San Joaquin Stanislaus, Merced, Madera, Fresno, Kings, Tulare and Kern. The SJVAB has been designated as a non-attainment area for failing to meet National Ambient Air Quality Standards for two pollutants: 1) ozone, and 2) particulates (particulate matter with particles no larger than 2.5 microns (thousandths of a meter) in diameter (PM2.5)). Consequently, these pollutants are the focus of local air quality policy.</p> <p>The proposed project will include an expanded greenwaste composting operation on site. This portion of the operation will be regulated under SJVAPCD Rule 4566 – Organic Material Composting Operations. Other SJVAPCD rules that will apply to the proposed project for stationary sources include:</p> <ul style="list-style-type: none"> <li>• Rule 4565 implements Control Measure S-GOV-1, Composting Boilsolids;</li> <li>• Rule 4307 implements Control Measure S-COM-3, Small Boilers;</li> <li>• Rule 4311 implements Control Measure S-IND-21, Flares; and</li> <li>• Rule 4601 implements Control Measure S-SOL-1, Architectural Coatings.</li> </ul> <p>The San Joaquin Valley Air Pollution Control Board PM2.5 Plan contains a comprehensive list of strict regulatory and incentive-based measures to reduce directly emitted PM 2.5 and precursor emissions through the Valley. The proposed project has several stationary equipment that will be subject to SJVPCD regulatory control measures, including:</p> <ul style="list-style-type: none"> <li>• Rule 4307 implements Control Measure S-COM-3, Small Boilers;</li> <li>• Rule 4311 implements Control Measure S-IND-21, Flares; and</li> </ul> <p>The primary pollutant of concern during construction of the proposed project is PM10 (i.e., dust). The proposed project will comply with the SJVAPCD Regulation VIII, Fugitive PM 10 Prohibitions, Dust Control Plan (Rule 8021), by submitting a Dust Control Plan to the District for the Expansion Project. The Dust Control Plan will describe all the dust control measures to be implemented before, during, and after any dust generating activity for the duration of the project</p>



	<p>The proposed project will be required to install best available control technologies (BACT) and permitted to comply with all applicable rules consistent with the San Joaquin Valley Air Pollution Control Board Air Attainment Plan for ozone and PM2.5 standards. The proposed project would have <b>no impacts</b>.</p>																																																																																																																																																
Item 3b:	<p>The propose project will be required to install best available control technologies (BACT) to minimize emissions from permitted sources. Emissions due to construction activities will be minimized through implementation of comprehensive fugitive dust control measures. With emission controls, the proposed project is expected to have a <b>less than significant impacts</b>.</p> <p>The <i>Air Quality Technical Report: Mid Valley Disposal Recycling and Transfer Station</i> dated September 2012 (enclosed as Attachment B) that was prepared for the proposed project by Yorke Engineering, LLC evaluated significant thresholds to address impacts of proposed project emissions on local and regional air quality as well as for other potential impacts related to project operations, such as odors and toxic air contaminants. The Yorke air quality report evaluated Ozone Precursor, Local Carbon Monoxide Concentrations, and Greenhouse Gas Emissions for project construction impacts and project operations impacts.</p> <p>Project Construction Impacts</p> <p>The proposed project has the potential, temporarily, to generate dust, smoke and other air emissions during construction. Specifically, PM10 emissions can result from a variety of construction activities, including excavation, grading, demolition, vehicle travel on paved and unpaved surfaces, and vehicle exhaust. Construction-related emissions can cause substantial increases in localized concentrations of PM10, as well as affecting PM10 compliance with ambient air quality standards on a regional base.</p> <p>To determine the emissions associated with this project, the URBEMIS2007 version 9.2.4 computer model was utilized. The expected construction emissions from the proposed project are summarized in Table 3-2 of the Yorke air quality report, and is reprinted below:</p> <table><tr><th colspan="8">Summary of Construction Emissions: Mid Valley Recycling and Transfer Station Expansion Project</th></tr><tr><th>Year</th><th>VOC (ton/yr)</th><th>NOx (ton/yr)</th><th>CO (ton/yr)</th><th>SO<sub>2</sub> (ton/yr)</th><th>PM10 (ton/yr)</th><th>PM2.5 (ton/yr)</th><th>CO<sub>2</sub> (ton/yr)</th></tr><tr><td>1</td><td>1.62</td><td>2.28</td><td>2.25</td><td>0.00</td><td>1.38</td><td>0.39</td><td>397.96</td></tr><tr><td>2</td><td>1.44</td><td>1.23</td><td>1.44</td><td>0.00</td><td>0.08</td><td>0.07</td><td>269.88</td></tr></table> <p>The SJVAPCD has determined that compliance with Regulation VIII and implementation of all other control measures indicated in Tables 602 and 6-3 of Regulation (as appropriate, depending on the size and location of the project site) will constitute sufficient mitigation to reduce PM10 impacts to a level considered less-than-significant.</p> <p>Project Operation Impacts</p> <p>The term "project operations" refers to the full range of activities that can or may generate pollutant emissions when the development is functioning in its intended use. For industrial projects and some commercial projects, equipment operation and manufacturing processes can be of greatest concern from an emissions standpoint. Air emission from proposed project operations are estimated based on the proposed process, process throughput, and equipment-specific emission factors and other criteria. The Yorke air quality report calculated the emissions for each source type using the URBEMIS model. The operational emissions for the proposed project are summarized in Table 3-5 of the report and reprinted below:</p> <table><tr><th colspan="8">Summary of Operational Emissions</th></tr><tr><th>Process</th><th>VOC (ton/yr)</th><th>NOx (ton/yr)</th><th>CO (ton/yr)</th><th>SO<sub>x</sub> (ton/yr)</th><th>PM10 (ton/yr)</th><th>CO<sub>2</sub> (ton/yr)</th><th></th></tr><tr><td colspan="8"><i>Onsite Emission Sources</i></td></tr><tr><td>CD&amp;D/Inserts/Self-Haul</td><td>0.24</td><td>4.47</td><td>2.58</td><td>0.01</td><td>0.90</td><td>128</td><td></td></tr><tr><td>Processed Organics</td><td>3.13</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.14</td><td>16,369</td><td></td></tr><tr><td>MSW Unload Operations</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.02</td><td>0</td><td></td></tr><tr><td>Flare</td><td>2.77</td><td>3.93</td><td>1.18</td><td>0.24</td><td>0.33</td><td>229</td><td></td></tr><tr><td>Off-Road Vehicles</td><td>0.27</td><td>7.54</td><td>2.37</td><td>0.03</td><td>0.11</td><td>318</td><td></td></tr><tr><td>On-Road Vehicles</td><td>0.10</td><td>9.24</td><td>0.55</td><td>0.00</td><td>3.56</td><td>9</td><td></td></tr><tr><td colspan="8"><i>Offsite Emission Sources</i></td></tr><tr><td>Vehicle Traffic</td><td>0.67</td><td>6.68</td><td>1.09</td><td>0.01</td><td>0.56</td><td>657</td><td></td></tr><tr><td>Total</td><td>7.18</td><td>31.85</td><td>7.76</td><td>0.29</td><td>5.62</td><td>17,710</td><td></td></tr><tr><td>Significant Threshold</td><td>10</td><td>---</td><td>10</td><td>---</td><td>---</td><td>---</td><td></td></tr><tr><td>Significant (Yes/No)</td><td>No</td><td>NA</td><td>No</td><td>NA</td><td>NA</td><td>---</td><td></td></tr></table> <p>Yorke conducted construction- and operational-phase emission calculations using CalEEMod, as requested by the SJVAPCD. In summary, the CalEEMod model predicts slightly higher emissions during both the construction and operational phases of the project than the URBEMIS model used for the AQTR; however, the criteria pollutant emissions during both phases of the project remain below the SJVAPCD CEQA significance thresholds. A copy of the model output report is provided at Attachment 1 of the Response Letter from Yorke Engineering, LLC to comments from the SJVAPCD.</p> <p>Impacts to Ozone are assessed based on VOC and NOx emissions, which are regulated as ozone precursors. The largest contributor to the predicted VOC emissions is the composting operations. The compost operations would be subject to the New Source Review requirements of the SJVAPCD (Rule 2201), including the requirement to provide best available control technologies. The proposed project intends to install the Gore membrane composting system with demonstrated VOC control efficiency of 98 percent or better. With the BACT, the VOC emissions from the proposed project are less than significant. The largest contributor to NOx emissions are the operation of off-road vehicles necessary to manage wastes at the site such as front-end loaders, excavator and water trucks, and the operation of the diesel-fueled tub grinder. As mobile sources, the off-road vehicles are subject to the CARB off-road equipment regulations which require the use of EPA-certified Tiered engines. The tub grinders may be permitted through the SJVAPCD as stationary sources or permitted through the CARB Portable Equipment Registration Program (PERP). The application of BACT and/or the use of the CARB-required EPA-certified Tiered engines, the proposed project impact from NOx emissions are expected to be less than significant.</p>	Summary of Construction Emissions: Mid Valley Recycling and Transfer Station Expansion Project								Year	VOC (ton/yr)	NOx (ton/yr)	CO (ton/yr)	SO <sub>2</sub> (ton/yr)	PM10 (ton/yr)	PM2.5 (ton/yr)	CO <sub>2</sub> (ton/yr)	1	1.62	2.28	2.25	0.00	1.38	0.39	397.96	2	1.44	1.23	1.44	0.00	0.08	0.07	269.88	Summary of Operational Emissions								Process	VOC (ton/yr)	NOx (ton/yr)	CO (ton/yr)	SO <sub>x</sub> (ton/yr)	PM10 (ton/yr)	CO <sub>2</sub> (ton/yr)		<i>Onsite Emission Sources</i>								CD&D/Inserts/Self-Haul	0.24	4.47	2.58	0.01	0.90	128		Processed Organics	3.13	0.00	0.00	0.00	0.14	16,369		MSW Unload Operations	0.00	0.00	0.00	0.00	0.02	0		Flare	2.77	3.93	1.18	0.24	0.33	229		Off-Road Vehicles	0.27	7.54	2.37	0.03	0.11	318		On-Road Vehicles	0.10	9.24	0.55	0.00	3.56	9		<i>Offsite Emission Sources</i>								Vehicle Traffic	0.67	6.68	1.09	0.01	0.56	657		Total	7.18	31.85	7.76	0.29	5.62	17,710		Significant Threshold	10	---	10	---	---	---		Significant (Yes/No)	No	NA	No	NA	NA	---	
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Item 3c:	<p>As discussed in paragraph 3b, the VOC and NOx emissions from proposed project individually do not exceed the CEQA thresholds from stationary source operations, and the proposed project is expected to have a less than significant impact. The only large proposed project in the City of Kerman is the proposed Walmart store, which is scheduled to begin construction in November 2012. The project is located approximately 3 miles northeast of the proposed project. Construction of the Walmart store is expected to be completed prior to the start of construction of the proposed project. Therefore, there will be no cumulative construction-related air quality impacts from the proposed project and the Walmart project. The proposed project would have <b>no impacts</b>.</p>																																																																																																																																																

Item 3d:

The proposed project may emit hazardous air pollutants (HAP) and toxic air contaminants (TAC) from several stationary sources, including boiler(s), flare, anaerobic digester, and possibly the compost operations. Many, if not all, of these stationary sources will require air permits from the SJVAPCD. All projects requiring air quality permits from the SJVAPCD are evaluated for HAP/TAC emissions.

Yorke prepared a Health Risk Assessment (HRA) to assess the potential health risk from diesel particulate matter (DPM) emissions from truck traffic at the facility. DPM is considered a carcinogenic compound by the State California; DPM is currently not evaluated for acute or chronic non-cancer impacts. The cancer risk HRA is explained below.

**Air Dispersion Model**

Air dispersion modeling was performed using USEPA's AERMOD computer model, version 12060. The source of emissions is from diesel vehicles entering and exiting the facility. It was previously estimated that 343 vehicles would enter and exit the site. It was assumed that all 343 vehicles were diesel fueled. Modeling was performed following the SJVAPCD's Guidance for Air Dispersion Modeling. The emissions were modeled as a series of volume sources adjacent to each other along the travel path of the vehicle inside the facility. Each source was modeled to be 6 feet in height and 12 feet in width. The emissions were taken from EMFAC2007 using the default fleet mix for San Joaquin Valley for the year 2013 based on a travel speed of 15 miles per hour. It was assumed that the vehicles would stop at the unloading area and idle for a short amount of time. Diesel trucks must follow the state ATCM and SJVAPCD's guidance which limits idling to 5 minutes.

Modeling was performed for 5 years of meteorological data. The meteorological data is for the city of Sacramento for the years 2004 through 2008. This station was selected as it is the station that is the closest to the Project site with a complete meteorological data that has been compiled for use with the AERMOD model.

**Receptors**

Based on discussions with the facility and examination of publicly available maps, three offsite worker locations and one residential location were identified and included in the analysis. Because the area is generally rural, developed farmland, with widely scattered businesses and residences, a specific set of receptors was selected for determining health impacts from Project operation, as follows:

- The first offsite worker location is the offices of the water treatment plant located west of the facility. The offices are located at the north end of the water treatment plant facility. Workers typically are not out in the field except for maintenance duties. Since there would be little chance of long term exposure away from the offices, only the office area was analyzed. A 4x4 grid of receptors spaced 25 meters apart was used to represent the office area.
- The second offsite worker location is the business area located immediately north of the facility. Fourteen receptors spaced 25 meters apart were placed along the nearest points of that facility to the Project location.
- The third offsite worker location was found to be the nearest to the project. This location was a business located immediately south of the project. A 3x3 grid of receptors spaced 25 meters apart was used for this location.
- The nearest residential receptor identified is a small home located west of the project along W. Jensen Avenue. A 5x2 grid of receptors spaced 25 meters apart represents this location.

**Health Risk Calculations**

The air dispersion model estimated the highest ground level concentrations for the receptors used. The point of maximum impact (PMI) was found to be at the fence line of the project. However, as there are no off-site workers or residential receptors located along the fence line, the results for the PMI are not reported. The maximum ground level concentration for each of the off-site worker and residential receptors were then used to calculate the incremental increase in cancer risk at these locations from the proposed project.

**Results**

Table 1 summarizes the maximum calculated increased cancer risk at the various receptor locations identified. A spreadsheet showing the HRA results and analysis is provided as Attachment 2. The AERMOD modeling files are provided as Attachment 3 (electronically).

Receptor	Description	Cancer Risk (excess cases per million exposed)
Worker #1	Treatment plant office area	0.32
Worker #2	Business north of the project	0.20
Worker #3	Business south of the project	4.91
Residence	Resident to the west of the project	8.43

According to the SJVAPCD's Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI), the CEQA significance threshold for projects emitting hazardous air pollutants is the probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million. As shown in Table 2, the health risk to exposed receptor locations is in all cases less than 10 per million, thus the proposed Project is expected to have less than significant impact with respect to Public Health.

The SJVAPCD will ensure that the health risk to the public from project operations does not exceed the significance threshold for TAC by the application of the Risk Management Policy for Permitting New and Modified Sources during the permit application review process and by placing operating conditions on any permits issued for the project. Compliance with the permit conditions will ensure that HAP/TAC emissions from the proposed project would be **less than significant**.

Item 3e:	<p>The proposed project is a full service organic waste processing operation where green material, wood waste and food waste is received, ground, and either composted on site or sent to biomass power plants and other users. In the future, MVD will be adding anaerobic digesters to convert food waste and organics to CNG. The facility also includes a construction and demolition debris (C&amp;D) recycling operation, a Material Recovery Facility (MRF), and a municipal solid waste (MSW) transfer station with a full Solid Waste Facility Permit (SWFP). C&amp;D is sorted, and shipped off-site to recycling markets. Source separated recyclables and select commercial loads are sorted and recyclables shipped to markets. MSW and non-salvageable residue is trucked to the County landfill.</p> <p>The closest sensitive receptors to the proposed project are two farms to the east about 0.34 miles away and to the north about one mile. The proposed project would potentially generate odorous emissions from the composting operations and anaerobic digester. Odor impacts from these activities are discussed below.</p> <p>Decomposition of organic matter inherently generates a large number and variety of volatile chemical compounds that humans can sense as odors. A compound's volatility (i.e., its conversion to a gaseous phase and subsequent migration into the air), is what allows it to be sensed by humans. Important factors in the formation and outcome of odor-causing compounds include the feedstock, nutrient balances, oxygen, aeration time, moisture, bulk density and porosity, temperature and PH.</p> <p>The proposed project plans to install the Gore membrane composting system which is expected to retain the malodorous VOC in the compost pile for sufficient time to decompose the compounds and eliminate the majority of the emissions and associated odors. All commercial composting facilities in California are required to prepare, implement, and maintain a site-specific Odor Impact Minimization Plan (OIMP) pursuant to Title 14 California Code of Regulations, Chapter 3.1 § 17863.4. In addition, the composting operation will be subject to SJVAPCD Rule 4565 Biosolids, Animal Manure, and Poultry Litter Operations, and Rule 4566, Organic Material Composting Operations. Lastly, the mitigation measures developed by the California Department of Resources Recycling and Recovery (CalRecycle) in its final program environmental impact report (EIR) for statewide anaerobic digester facilities are included as AIR-3 and AIR-4 to further mitigate any odorous emissions from the anaerobic digester.</p> <p>Anaerobic digestion is the biological decomposition of organic matter in the absence of oxygen. As a result, odorous compounds such as ammonia and H<sub>2</sub>S are generated and could be released into the environment. The anaerobic digestion process at the proposed project occurs in a closed system. Volatile organic compounds (VOCs) are broken down through the anaerobic digestion process, and exhaust is processed in a controlled environment. The proposed project will digest organic matter in a closed pressure vessel. The resulting biogas will be stored in a closed tank, processed to remove impurities in a scrubber, and the resulting purified methane would be compressed for use in vehicles.</p> <p>With the development and implementation of the OIMP, compliance with SJVAPCD Rules 4565 and 4566, and implementation of Mitigation Measures AIR-3 and AIR-4, the odor impacts from the composting operations and anaerobic digester are expected to be <b>less than significant</b>.</p>
Item 3f:	<p>Gases that trap heat in the atmosphere are greenhouse gases. Common greenhouse gases include water vapor, carbon dioxide, methane, nitrous oxides, chlorofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Natural processes and human activities emit greenhouse gases. The presence of greenhouse gases in the atmosphere affects the earth's temperature. However, it is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentrations, leading to a trend of unnatural changes to the earth's natural climate, known as global climate warming or climate change.</p> <p>An individual project cannot generate enough greenhouse gas emissions to effect a discernible change in global climate. However, the proposed project may participate in this potential impact by its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases, which when taken together constitute potential influences on global climate change.</p> <p>Specifically, the SJVAPCD has adopted a standard requiring that project must implement performance based standards (BEST Performance Standards, BPS) to reduce GHG emissions, or otherwise demonstrate that project specific GHG emissions have been reduced or mitigated by at least 29% (compared to business as usual).</p> <p>Therefore, until the City of Kerman, or State of California adopts an alternative threshold for determining the significance of GHG emissions or a plan to minimize impacts to a level of less-than-significant, the proposed project will be required to implement Best Performance Standards (BPS) or other GHG emissions reduction measures to reduce GHG emissions, or otherwise demonstrate that the project specific GHG emissions have been reduced or mitigated by at least 29%.</p> <p>The proposed project has the potential to contribute to greenhouse gas emissions from composting and anaerobic operations. The composting and anaerobic operations would result in diverting waste from the landfill, which would otherwise decompose under anaerobic conditions to form landfill gas (LFG) consisting of methane and carbon dioxide. The proposed project would process waste via anaerobic digestion into compressed natural gas (CNG) which will be collected at 100 percent capture and used as vehicle fuel. The compost will be used locally as fertilizer, wood chips that will be used locally as either ground cover or fuel for biomass power plants.</p> <p>The diversion of waste to the landfill is expected to exceed the 29 percent reduction threshold established by the SJVAPCD as significant; thus, the proposed project is expected to divert waste to the landfill resulting in reduced greenhouse gas emissions and the project would have a <b>less than significant impact</b>.</p>
Item 3g:	<p>Neither the city, county, nor state has an adopted plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Therefore, the proposed project does not conflict with any applicable requirement. The proposed project would have <b>no impact</b>.</p>
Documentation:	<ul style="list-style-type: none"> <li>• <i>Air Quality Technical Report: Mid Valley Disposal Recycling and Transfer Station</i>. September 2012. Yorke Engineering, LLC.</li> <li>• <i>Transfer/Processing Report: Mid Valley Disposal Recycling and Transfer Station</i>. November 2012. Clemens Environmental Corporation.</li> <li>• SJVAPCD. <i>Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI)</i>. August 1998. <a href="http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI%20Jan%202002%20Rev.pdf">http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI%20Jan%202002%20Rev.pdf</a>.</li> <li>• SJVAPCD. <i>Rule 8021, Construction, Demolition, Excavation, Extraction and other Earthmoving Activities</i>. Adopted November 15, 2001. Amended August 19, 2004. <a href="http://www.valleyair.org/rules/curnrules/r8021.pdf">http://www.valleyair.org/rules/curnrules/r8021.pdf</a>.</li> <li>• City of Kerman. 2007-2027. General Plan Final Environmental Impact Report. SCH#20060091148: Chapter 4, Page 4-23</li> </ul>

	<p>through 4-31.</p> <ul style="list-style-type: none"> <li>Response Letter from York Engineering, LLC to comments from the San Joaquin Valley Air Pollution Control District. January 19, 2013.</li> </ul>
Mitigation:	<ul style="list-style-type: none"> <li>AIR-1: Implement the control measures identified in the SJVAPCD Regulation VIII to control PM10 emissions from construction activities.</li> <li>AIR-2: Prepare, implement, and maintain a site-specific Odor Impact Minimization Plan (OIMP).</li> <li>AIR-3: Applicants for the development of anaerobic digester (AD) facilities shall comply with appropriate local land use plans, policies, and regulations, including applicable setbacks and buffer areas from sensitive land uses for potentially odoriferous processes.</li> <li>AIR-4: If an AD facility handles compostable material and is classified as a compostable material handling facility, the facility must develop an Odor Impact Minimization Plan (OIMP) pursuant to 14 CCR 17863.4. Otherwise, applicants shall develop and implement an Odor Management Plan (OMP) that incorporates equivalent odor reduction controls for digester operations and is consistent with local air district odor management requirements. These plans shall identify and describe potential odor sources, as well as identify the potential, intensity, and frequency of odor from these likely sources. In addition, the plans will specify odor control technologies and management practices that if implemented, would mitigate odors associated with the majority of facilities to less than significant. However, less or more control measures may be required for individual projects. Odor control strategies and management practices that can be incorporated into these plans include, but are not limited to, the following: <ul style="list-style-type: none"> <li>Require substrate to the AD facility within covered, liquid leak-proof containers.</li> <li>Establish time limit for on-site retention of undigested substrates (i.e., feedstocks should be processed and placed into the portion of the system where liquid discharge and air emissions can be controlled within 24 or 48 hours of receipt).</li> <li>Provide enclosed, negative pressure building for indoor receiving and pre-processing. Treat collected foul air in a biofilter or air scrubbing system.</li> <li>Establish contingency plans for operating downtime (e.g., equipment malfunction, power outage).</li> <li>Manage delivery schedule to facilitate prompt handling of odorous substrates.</li> <li>Handle fresh unstable digestate within enclosed building, or mix with green waste and incorporate into a composting operation within the same business day, and/or directly pump to covered, liquid leak-proof containers for transportation.</li> <li>Protocol for monitoring and recording odor events.</li> <li>Protocol for reporting and responding to odor events.</li> </ul> </li> </ul>

## Biological Resources

Issues (and Supporting Information Sources):		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
4.	<b>BIOLOGICAL RESOURCES</b> Would the project:				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the CDFG or USFWS?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Thresholds and Conclusion

Discussion:	
Items 4a:	<p>The project site is located on the southern end of the City of Kerman. The project site is currently cultivated for alfalfa, and has been used for cultivated agriculture for some time. The project site is located immediately west of Madera Avenue, south of Church Avenue and north of Jensen Avenue. Immediately west of the project site is the City of Kerman Wastewater Treatment Plant consisting of storm water retention basin, settling ponds, laboratory offices, maintenance building, sludge press, and sludge drying beds. Further west of the site is land that is under cultivated agriculture (almonds and alfalfa). East of the project site is cultivated agricultural land (alfalfa). South of the project site is cultivated agricultural land (alfalfa).</p> <p>The Environmental Impact Report for the Kerman Walmart project (August 30, 2010) and the Environmental Impact Report for the City of Kerman 2007-2027 General Plan update consulted the California Natural Diversity Database (CNDD) as well as the USFWS for a list of special-status plant species and special-status wildlife species. The nearest occurrence record of special-plant species is for a strand of Lesser Saltscale (<i>Atriplex minuscule</i>) located nearly two miles south of the project site. Several regional occurring special-status wildlife species were determined not to have potential to occur within the project site (<i>Cooper's Hawk</i>, <i>Sharp-shinned hawk</i>, <i>Swainson's hawk</i>, <i>White-tailed kite</i>, <i>Hoary bat</i>, <i>San Joaquin kit fox</i>). The occurrence of these regional species on the project site is low because there is no recorded occurrence of these species within 5 miles of the site and the site is, and has been, under cultivated agriculture for some time with no structure, mature trees, dense shrubs, fallow land, suitable for these species.</p> <p>Although the project site does not contain suitable habitat for the long-term support of the San Joaquin kit fox and there are no recorded occurrences of this species within 5 miles of the site, this species does occur regionally and may traverse the site and may take temporary shelter even though the project site is under cultivated agriculture. Therefore, implementation of the project could have a potentially significant impact on this species, which is federally listed as endangered and state-listed as threatened. In accordance with the Dissemination of Standard Recommendations for the Protection of the San Joaquin Kit Fox Prior to our During Ground Disturbance, implementation of Mitigation Measures BIO-1a is required to reduce potential impact to a <b>less than significant level</b>.</p>
Item 4b:	See paragraph 4b. The proposed project would have <b>no impact</b> .
Item 4c:	There is no federally protected wetland affected by the proposed project nor are there naturally occurring bodies of water discovered on or adjacent to the project site. The proposed project would have <b>no impact</b> .
Item 4d:	There will be no interference with any native resident or migratory fish or wildlife species, corridors, or wildlife nursery sites affected by the proposed project. The proposed project would have <b>no impact</b> .
Item 4e:	There are no local policies or ordinances protecting biological resources affected by the proposed project. The proposed project would have <b>no impact</b> .

Item 4f:	No habitat conservation or natural community conservation plans have been adopted. The proposed project would have <b>no impact</b> .
Documentation:	<ul style="list-style-type: none"> <li>Kerman Walmart Project Environmental Impact Report. SCH#2009101035. Chapter 4.</li> <li>City of Kerman. 2007-2027. General Plan Final Environmental Impact Report. SCH#20060091148; Chapter 4, Page 4-19.</li> </ul>
Mitigation:	<ul style="list-style-type: none"> <li>BIO-1: prior to and during construction activities, the following measures shall be implemented to reduce impacts to the San Joaquin kit fox: <ul style="list-style-type: none"> <li>Project-related vehicles should observe a 20 mile-per-hour speed limit within the project site boundaries; this is particularly important at night when kit foxes are most active. Construction shall not occur during nighttime hours (8:00 p.m. to 6:00 a.m.). Off-road traffic outside of designated project construction areas is prohibited.</li> <li>To prevent inadvertent entrapment of kit foxes or other animals during construction, all excavated, steep-walled holes or trenches more than 2 feet deep shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they would be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the procedures outlined below must be followed.</li> <li>Kit foxes are attracted to den-like structures such as pipes and may enter stored pipe, becoming trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4 inches or greater that are stored at the construction site for once or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the USFWS has been consulted. If necessary, and under the direction of a qualified biologist, the pipe may be moved once to remove it from the path of construction activity, until the fox has escaped.</li> <li>All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from the project site.</li> <li>To prevent harassment, mortality of kit foxes or destruction of dens by dogs or cats, no pets shall be permitted on the project site.</li> <li>Use of rodenticides and herbicides in project construction areas is restricted to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture and other state or federal legislation, as well as additional project-related restrictions deemed necessary by USFWS. If rodent control is conducted, zinc phosphide should be used because of proven lower risk to kit fox.</li> <li>A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured, or entrapped individual. The representative shall be identified during the employee education program. The representative's name and telephone number shall be provided to USFWS.</li> <li>An employee education program for the project's construction workers shall be conducted. The program shall consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors. A fact sheet shall be prepared for distribution to the above-mentioned people and anyone else who may enter the project site.</li> <li>In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape and USFWS should be consulted.</li> <li>Any contractor, employee, or agency personnel who inadvertently kills or injures a San Joaquin kit fox shall immediately report the incident to his or her representative. This representative shall contact the CDFG immediately in the case of a dead, injured, or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916) 445-0045.</li> <li>The Sacramento USFWS office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS contact is the Chief of the Division of Endangered Species. The CDFG contact is Mr. Ron Schlorff at 1416 9<sup>th</sup> street, Sacramento, California 95814, (916) 654-4262.</li> </ul> </li> <li>BIO-2: prior to commencing project-related activities, the following measures shall be implemented to reduce impacts to the Swainson's Hawk: <ul style="list-style-type: none"> <li>If ground-disturbing activities are to occur at the site during the nesting season (February 1 through September 15), the project applicant will be required to retain a qualified biologist to conduct surveys for nesting Swainson's hawk, including the White-tailed kite, following the survey method developed by the Swainson's Hawk Technical Advisory Committee (SWHA TAC, 2000) prior to commencing project-related activities. Surveys shall be conducted no more than 10 days prior to the start of construction and during the appropriate timing to maximize detectability. If an active nest is located, a minimum buffer of ½ mile shall be delineated and maintained around the nest until a qualified biologist has determined that fledging has occurred.</li> <li>If the Department of Fish and Game cannot determine that "take" can be avoided, acquisition of an ITP may be warranted prior to project-related implementation.</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• BIO-3: prior to commencing project-related activities, the following measures shall be implemented to reduce impacts to raptors:             <ul style="list-style-type: none"> <li>○ The City of Kerman will add Mitigation Measure BIO-3 to the Final MND. Mitigation Measure BIO-3 stipulates that if ground-disturbing activities are to occur at the site during the nesting season (February 1 through September 15), the project applicant will be required to retain a qualified biologist to conduct surveys for nesting shall be conducted by a qualified biologist no more than 30 days prior to the start of construction. If an active nest is located, a minimum buffer of 250 feet should be delineated around active nests of migratory birds and 500 feet around active nests of non-listed raptors, until breeding season has ended or until a qualified biologist has determined that fledging has occurred.</li> </ul> </li> </ul>
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## Cultural Resources

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
5.	<b>CULTURAL RESOURCES</b> Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 1504.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Threshold and Conclusion

Discussion:	
Items 5a,b:	<p>The records search conducted at the Southern San Joaquin Valley Information Center as part of the Environmental Impact Report prepared for the City of Kerman 2007-2017 General Plan indicated that no recorded historic resources are documented on the project site or within 0.25 miles radius beyond the project site.</p> <p>Although considered unlikely since there is no indication of any historic resources on the project site, subsurface construction activities such as trenching and grading associated with the proposed project could potentially damage or destroy previously undiscovered historic resources. This is considered a potentially significant impact. Mitigation is proposed requiring implementation of standard inadvertent discovery procedures to reduce potential impacts to previously undiscovered subsurface historic resources. With the implementation of this mitigation measure, potential impacts would be reduced to a level of <b>less than significant</b>.</p>
Item 5c:	There is no evidence of an abandoned cemetery or related indications of human remains were identified on the site. Therefore, no adverse impacts are anticipated to any human remains. However, grading and excavation in conjunction with site development has the low potential to uncover unanticipated subsurface resources – a potentially significant adverse impact. Mitigation is proposed to reduce this potentially significant impact to a level of <b>less than significant</b> .
Item 5d:	There is no record of human remains interred at the site. The proposed project would have <b>no impact</b> .
Documentation:	<ul style="list-style-type: none"> <li>City of Kerman. 2007-2027, General Plan Natural Resources Element.</li> <li>City of Kerman. 2007-2027. General Plan Final Environmental Impact Report. SCH#20060091148; Chapter 4.6.</li> </ul>
Mitigation:	<ul style="list-style-type: none"> <li>CUL-1: If ground-disturbing activities uncover previously unknown human remains, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed: <ul style="list-style-type: none"> <li>There shall be no further excavation or disturbance of the area where the human remains were found or within 50 feet of the find until the Fresno County Coroner and the City of Kerman are contacted. Duly authorized representatives of the Coroner and the City's Planning Director shall be permitted onto the project site and shall take all actions consistent with Health and Safety Code Section 7505.5 and Government Code Section 27460, et seq. Excavation or disturbance of the area where the human remains were found or within 50 feet of the find shall not be permitted to re-commence until the Coroner determines that the remains are not subject to the provisions of law concerning investigation of the circumstances, manner, and cause of any death. If the Coroner determines the remains are Native American, the Coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 50976.98.</li> </ul> </li> <li>CUL-2: If in the event that unanticipated cultural or paleontological resources (including structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains) are encountered during construction, all earthmoving activities within 100-foot radius of the identified resources shall cease until a qualified archaeologist evaluates the item for its significance and records the item on the appropriate State Department of Parks and Recreation (DPR) forms. The archaeologist shall determine whether the item requires further study. If, after the qualified archaeologist conducts appropriate technical analyses, the item is determined to be significant under California Environmental Quality Act, the archaeologist shall recommend feasible mitigation measures, which may include avoidance, preservation in place or other appropriate measure, as outlined in Public resources Code section 21083.2. Upon the City's approval of the recommended mitigation measure, the project developer shall implement such measures. The developer shall fund the costs of the qualified archaeologist and required analysis, and shall</li> </ul>



	<p>include his mitigation measure in every construction contract to inform contractors of this requirement.</p> <ul style="list-style-type: none"> <li>• CUL-3: The project developer shall consult with the Duma-Wo-Wah Tribal Government regarding the placement of a Native American monitor onsite during construction related activities. Should a Native American monitor be required the cost of the monitor shall be covered by the project developer.</li> </ul>
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## Geology and Soils

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
6.	<b>GEOLOGY AND SOILS</b> Would the project:				
a)	Expose people or structure to potential substantial adverse effects, including the risk of loss, injury, or death involving:  I. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.  II. Strong seismic ground shaking?  III. Seismic-related ground shaking, including liquefaction?  IV. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Result in substantial soil-erosion or loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Be located on a geologic unit or soil that is unstable as a result of the project, and potentially result in on-or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risk to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Threshold and Conclusion

Discussion:	
Items 6a,c:	<p>The project site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone. Since no known surface expression of active faults is believed to cross the site, fault rupture through the site is not anticipated. No impact would occur.</p> <p>The Fresno County General Plan Background Report identified the City of Kerman as being within the Uniform Building Code Seismic Zone 3. According to the United States Geological Survey's Probabilistic Hazard Map, ground shaking in Fresno County is predicted to have a 10-percent probability that a seismic event would produce horizontal ground shaking of 10 to 25 percent within a 50-year period.</p> <p>Although Kerman is located in an area of low seismic activity, the faults and fault systems that lie along the eastern and western boundaries of Fresno County, as well as other regional faults, have the potential to produce high-magnitude earthquakes throughout Fresno County. The City of Kerman is located on alluvial deposits, which tend to experience greater ground shaking intensities than areas located on hard rock. However, the distance to the faults that are the expected sources of the shaking would be sufficiently great that the effect should be minimal.</p> <p>Mitigation Measure HYD-1 requires the applicant to prepare and submit a geotechnical study that complies with all applicable seismic design standards of the California Building Standards Code.</p> <p>The subsurface soil in Kerman consisted of dense and stiff silt soils. These subsurface characteristics indicate that the project site has a low susceptibility to liquefaction and liquefaction-related phenomena. However, Mitigation Measure GEJ-1 requires the applicant to submit geotechnical study that complies with all seismic standards of the California Building Standards Code. This measure would reduce the potential ground failure impact to a <b>level of less than significant</b>.</p> <p>There are no substantial slopes on or near the project site. Therefore, the opportunity for slope failure in response to the long-term geologic cycle of uplift, mass wasting, and difference in slopes is unlikely. Project site conditions preclude the possibility of earthquake-induced land sliding onsite. The proposed project would have no impact.</p>
Item 6b:	Construction activities associated with the proposed project would involve vegetation removal, grading, and excavation activities that could expose barren soil to sources of wind or water, resulting in the potential for erosion and sedimentation on and off the project site. National Pollutant Discharge Elimination System (NPDES) stormwater permitting programs regulate stormwater quality from construction sites, which includes erosion and sedimentation. Under the NPDES permitting program, the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) are required for construction activities that would disturb an area of 1 acre or ore. The SWPPP must identify

	<p>potential sources of erosion or sedimentation that may be reasonably expected to affect the quality of stormwater discharges as well as identify and implement Best Management Practices (BMPs) that ensure the reduction of these pollutants during stormwater discharges. Typical BMPs intended to control erosion include sand bags, detention basins, silt fencing, storm drain inlet protection, street sweeping, and monitoring of water bodies.</p> <p>These requirements have been incorporated into the proposed project as mitigation. The implementation of an SWPPP and its associated BMPs would reduce potential erosion impacts to a level <b>less than significant</b>.</p>
Item 6d:	<p>According to the United States Geological Survey of Agricultural Soil Conservation Service survey, the project site is underlain by Hanford coarse sandy loam and Hesperia sandy loam. These soils have low clay content and possess low shrink-swell properties. The proposed project would have <b>less than significant impact</b>.</p>
Item 6e:	<p>No impact from septic systems or waste water are expected on the project site which will be serve by public sewer and a public storm drain system. Because no septic tanks or alternative waste water disposal systems for the disposal of waste water are anticipated for the project site, the proposed project would have <b>no impact</b>.</p>
Documentation:	<ul style="list-style-type: none"> <li>City of Kerman. 2007-2027, General Plan Safety Element. February 2007.</li> <li><i>Transfer/Processing Report: Mid Valley Disposal Recycling and Transfer Station</i>. November 2012. Clemens Environmental Corporation.</li> </ul>
Mitigation:	<ul style="list-style-type: none"> <li>GEO-1: Prior to issuance of building permits for the proposed project, the project applicant shall submit geotechnical report to the City of Kerman for review and approval. The report shall demonstrate that the proposed project's plans for that structure incorporate all applicable seismic design standards of the latest adopted edition of the California Building Standards Code. The recommendations from the approved geotechnical report shall be incorporated into the project plans, and the project applicant shall adhere to these approved plans in developing the project site.</li> </ul>

## Hazards and Hazardous Materials

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
7.	<b>HAZARDS AND HAZARDOUS MATERIALS</b> Would the project:				
a)	Create a significant hazard to the public or through the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Emit hazardous emission or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 6592.5 and, as a result, would create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	If located within an airport land use plan or, where such a plan not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the Proposed Project Site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	If located within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the Proposed Project Site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h)	Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residence are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Threshold and Conclusion

Discussion:	
Items 7a,b:	The proposed project is a recycling and transfer station operation which receives, processes, recycles, and converts a wide variety of household and commercial waste, greenwaste, and construction and demolition debris. The proposed project will not transport, use, or dispose of hazardous materials on the project site. Hazardous waste will be prohibited from entering the facility. However, there may be a need to dispose of a limited quantity of hazardous waste discovered through the facility's load checking program. If hazardous waste is discovered, the facility has procedures for handling, manifesting, and reporting the discovered waste. A temporary hazardous waste storage area will be located on the site, and all hazardous waste incidentally recovered from the waste stream will be temporarily stored onsite, manifested, and transported off site according to Federal and State regulatory requirements. A spill response locker will be supplied with emergency response equipment. The facility will report to the County each month, the quantity of hazardous waste transported for disposal off site. The proposed project would have a <b>less than significant impact</b> .
Item 7c:	There is no proposed or existing school within one-quarter mile of the project site. The nearest existing school (Kerman Floyd Elementary) is located about one mile north of the project site. The proposed project would have <b>no impact</b> .
Item 7d:	The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The proposed project would have <b>no impact</b> .
Item 7e:	The project is not located within an established airport land use plan, and will not result in a safety hazard for people residing or working in the project site. The proposed project would have <b>no impact</b> .
Item 7f:	No private airstrips are located within the vicinity of the project site. The proposed project would have <b>no impact</b> .
Item 7g:	The Kerman General Plan 2027 provides an overview of the City's Safety Element. Based on a review of the element, development of the proposed project site is not anticipated to physically interfere with either emergency response or evacuation plans. The proposed project would have <b>no impact</b> .

Item 7h:	There are no wildland within or in proximity to the proposed project. The project site and surrounding uses are primarily cultivated agriculture (alfalfa, cotton, tree fruit, etc.). The proposed project will be served by the North Central Fire Protection District. The proposed project will be required to install a series of fire hydrants on site for fire suppression purposes. The proposed project would have <b>no impact</b> .
Documentation:	<ul style="list-style-type: none"> <li>• City of Kerman. 2007-2027, General Plan Safety Element. February 2007.</li> <li>• <i>Transfer/Processing Report: Mid Valley Disposal Recycling and Transfer Station</i>. November 2012. Clemens Environmental Corporation.</li> </ul>
Mitigation:	None.

## Hydrology and Water Quality

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
8.	<b>HYDROLOGY AND WATER QUALITY</b> Would the project:				
a)	Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge causing a net deficit in aquifer volume or lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on-or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e)	Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f)	Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
g)	Place housing within a 100-year flood hazard area as mapped on a Federal Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h)	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i)	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j)	Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Threshold and Conclusion

Discussion:	
Items 8a:	<p>The development of the proposed project would grading and construction on approximately 28 acres of land. During these activities, there would be the potential for surface water to carry sediment from onsite erosion and small quantities of pollutants into the stormwater system and local waterways. Soil erosion may occur along project boundaries during construction in areas where temporary soil storage is required. Small quantities of pollutants have the potential to enter the storm drainage system, thereby potentially degrading water quality. The Clean Water Act (CWA) requires local jurisdictions to address the problems of pollutants in stormwater runoff from development. To regulate point source pollution, the CWA provides that the EPA may issue National Pollutant Discharge Elimination System (NPDES) permits. California's NPDES permit program is implemented through the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs). In September 2009, the SWRCB adopted a new NPDES General Permit for stormwater discharges associated with construction and land disturbance activities of more than 1 acre. This General Permit requires development of a site-specific Storm Water Pollution Prevention Plan (SWPPP) that specifies Best Management Practices (BMP) that will prevent construction pollutants from contacting stormwater with the interest of keeping all products of erosion from moving offsite to receiving waters. Mitigation Measure HYD-1 is proposed that would require the project applicant to prepare and implement a SWPPP prior to the issuance of grading or building permits. The SWPPP would identify potential sources of pollutants that are reasonably expected to affect the quality of the stormwater discharges as well as identify and implement BMPs that ensure the reduction of these pollutants during stormwater discharges to the maximum extent possible. The implementation of this measure would ensure that potential, short-term, construction water quality impacts are reduced to a level of <b>less than significant</b>.</p> <p>The floor of the MRF, "dirty" MRF, and transfer station will be concrete, as will the pad under the GORE compost heaps. Inlaid in the concrete under the composting heaps will be leachate collection trenches. The leachate generated is very minor in quantity, roughly 5 gallons per 250 tons of material composted. This leachate is collected and stored in a tank and is used to moisten the feedstock as it is prepared for the composting process. This is a zero discharge leachate system.</p>

Item 8b:	<p>The proposed project would be served with potable water supplied by the City of Kerman, which relies on groundwater from the Kings Groundwater Subbasin. The groundwater basis is classified as being in a state of overdraft by California Department of Water Resources because groundwater pumping has historically exceeded recharge.</p> <p>The proposed project would result in a net increase in groundwater consumption, but mitigates this impact to the maximum extent feasible through various measures associated with water conservation and groundwater recharge. However, because of uncertainties associated with quantifying reductions in groundwater consumption and the net increase in recharge attributable to the proposed project, the residual significance of the project's impact on the subbasin groundwater supplies may be significant and unavoidable.</p> <p>The Environmental Impact Report prepared for the City of Kerman 2007-2027 General Plan adopted a state of overriding consideration indicating that the loss of groundwater was a significant and unavoidable impact. The proposed project would have a <b>significant and unavoidable impact</b>.</p>
Item 8c:	<p>Construction activities would have minimal impacts on the storm water drainage patterns of the site or area resulting in substantial erosion or siltation on-or offsite. The WWTF currently has an existing storm water retention basin on-site. The contractor, during construction, will attempt to maintain surface water drainage in a manner that will not create onsite flooding events. Additionally, the storm water drainage pattern that currently exists on the project site will not be impacted by the proposed Expansion Project; therefore, the impact is considered <b>less than significant</b>.</p>
Item 8d:	<p>The project site contains primarily cultivated agricultural lands with no existing drainage infrastructure. The project would increase impervious surface coverage on the project site. The increase in impervious surface coverage would create the potential for greater runoff to leave the project site, which could cause flooding or substantial erosion or siltation unless adequate facilities are in place. The proposed project would install onsite storm drainage system consisting of inlets and piping to a retention basin onsite, located on the northern end of the project site. The proposed project would provide adequate storm drainage facilities to ensure that runoff is captured and conveyed to the onsite storm drain basin. The proposed project would have <b>no impact</b>.</p>
Item 8e:	<p>See paragraph 8d. The proposed project would have <b>less than significant impact</b>.</p>
Item 8f:	<p>The proposed project would consist of a recycling and transfer station facility on a 28 acre site. The facility will collect, process, recycle and dispose of a variety of non-hazardous material (e.g., C&amp;D materials, bulk metal, organics, wood waste, food waste, municipal solid waste, etc.). The proposed waste tipping, recycling, and processing will occur within the MRF, "dirty" MRF, and transfer station enclosures, and that the composting piles will be covered.</p> <p>The floor of the MRF, "dirty" MRF, and transfer station will be concrete, as will the pad under the GORE compost heaps. Inlaid in the concrete under the composting heaps will be leachate collection trenches. The leachate generated is very minor in quantity, roughly 5 gallons per 250 tons of material composted. This leachate is collected and stored in a tank and is used to moisten the feedstock as it is prepared for the composting process. This is a zero discharge leachate system.</p> <p>As discussed in paragraph 8a and d, implementation of a SWPPP and a stormwater management control plan as set forth in Mitigation Measure HYD-1 would mitigate these impacts to less than significant.</p>
Item 8g:	<p>The project is a recycling and transfer station operation with no housing planned for future development. The project site is located in an area determined to be outside the 0.2% chance floodplain (Zone X) pursuant to the Federal Emergency management Agency Flood Insurance Rate Map Number 06019C2075F. The proposed project would have <b>no impact</b>.</p>
Item 8h:	<p>See paragraph 8g. The proposed project would have <b>no impact</b>.</p>
Item 8i:	<p>See paragraph 8g. The proposed project would have <b>no impact</b>.</p>
Item 8j:	<p>There are no nearby reservoirs or other bodies of water that could result in inundation from either seiche or tsunami. The proposed project would have <b>no impact</b>.</p>
Documentation:	<ul style="list-style-type: none"> <li>California Regional Water Quality Control Board, Central Valley Region. <i>Waste Discharge Requirement for City of Kerman Wastewater Treatment Facility, Order No. R5-2007-0115</i>. September 15, 2007.</li> <li>California Regional Water Quality Control Board, Central Valley Region. <i>Cease and Desist Order Requiring the City of Kerman Wastewater Treatment Facility to Cease and Desist from Discharging Waste Contrary to Requirement, Order No. R5-2007-0116</i>. September 15, 2007.</li> <li>Federal Emergency Management Agency Floodplain Regulations, FEMA Map 06019C2075 F, effective July 19, 2001.</li> <li><i>Transfer/Processing Report: Mid Valley Disposal Recycling and Transfer Station</i>. November 2012. Clemens Environmental Corporation.</li> </ul>
Mitigation:	<ul style="list-style-type: none"> <li>HYD-1: Prior to the issuance of a grading permit or building permit for the project, the project applicant shall obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit No. CA2000002 for Storm Water Discharge Associated with Construction and Land Disturbing Activities, Water Quality Order No. 2009-0009-DWQ through State Water Board's Storm Water Multi-Application and Report Tracking System (SMARTS) website at <a href="https://smarts.aterboards.ca.gov">https://smarts.aterboards.ca.gov</a>. The Construction General Permit requires the preparation and submittal of a Stormwater Pollution Prevention Plan (SWPPP) to the Central Valley RWQCB that identifies specific actions and Best management Practices (BMPs) to prevent stormwater pollution during construction activities to the maximum extent practicable. The City of Kerman shall confirm that the RWQCB has approved the SWPPP prior to issuance of the grading permit or building permit. The SWPPP shall identify a practical sequence for BMP implementation and maintenance, site restoration, contingency measures, responsible parties, and agency contact. The</li> </ul>

	<p>SWPPP shall include but not limited to the following elements:</p> <ul style="list-style-type: none"> <li>○ Temporary erosion control measures shall be employed for disturbed areas.</li> <li>○ No disturbed surfaces shall be left without erosion control measures in place during the winter and spring months.</li> <li>○ Sediment shall be retained onsite by a system of sediment basins, traps, or other appropriate measures.</li> <li>○ Silt fence – installation of silt fence in order to detain sediment-laden water, promoting sedimentation behind the fence.</li> <li>○ The construction contractor shall prepare Standard Operating Procedures for the handling of hazardous materials on the construction site to eliminate or reduce discharge of materials to storm drains.</li> <li>○ BMP performance and effectiveness shall be determined either by visual means where applicable (e.g., observation of above-normal sediment release), or by actual water sampling in cases where verification of containment reduction or elimination (such as inadvertent petroleum release) is required by the Central Valley Regional Water Quality Control Board to determine adequacy of the measure.</li> <li>○ In the event of significant construction delays or delays in the final landscape installation, native grasses or other appropriate vegetative cover shall be established on the construction site as soon as possible after disturbance, as an interim erosion control measure throughout the wet season.</li> </ul>
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## Land Use and Planning

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
9.	<b>LAND USE AND PLANNING</b> Would the project:				
a)	Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Conflict with any applicable Habitat Conservation Plan or natural Community Conservation Plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Threshold and Conclusion

Discussion:	
Items 9a:	The proposed project is located at the southern portion of the community in the designated industrial park. The proposed project is surrounded primarily by cultivated agricultural lands to the north, east, south and west. The City of Kerman Wastewater Treatment Plant is located immediately to the east of the project site with cultivated agricultural lands farther east. To the north and northeast are some existing light and heavy industrial uses. The project site is designated for industrial uses in the Kerman General Plan. The proposed project would not physically divide an established community. The project site does not have the potential to physically divide the community. The proposed project would have <b>no impact</b> .
Item 9b:	The project site is designated Industrial by the City of Kerman General Plan. The proposed project consists of the expansion of the recycling and transfer station operations on a 38 acre site. The proposed project would be consistent with all applicable objectives, goals, and policies of the Kerman General Plan, including development standards contained in the City of Kerman Zoning Ordinance. The proposed project would have <b>no impact</b> .
Item 9c:	There is no habitat conservation or natural community conservation plans that apply to the site. The proposed project would have <b>no impact</b> .
Documentation:	<ul style="list-style-type: none"> <li>City of Kerman. Zoning Ordinance, Chapter 17.34. <a href="http://www.codepublishing.com/CA/Kerman/">http://www.codepublishing.com/CA/Kerman/</a></li> <li>City of Kerman. 2007-2027, General Plan, Land Use Element. February 2007.</li> <li>City of Kerman. 2007-2027, General Plan, Resources Element. February 2007.</li> <li><i>Transfer/Processing Report: Mid Valley Disposal Recycling and Transfer Station</i>. November 2012. Clemens Environmental Corporation.</li> </ul>
Mitigation:	None.

## Mineral Resources

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
10	<b>MINERAL RESOURCES</b> Would the project:				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Threshold and Conclusion

Discussion:	
Items 10a,b:	The Proposed Project site is not identified in the General Plan as having any known mineral resource value or as being located within any "Critical Mineral Resource Overlay" area. The proposed project would have <b>no impact</b> .
Documentation:	<ul style="list-style-type: none"> <li>City of Kerman. 2007-2027, General Plan, Resources Element. February 2007.</li> </ul>
Mitigation:	None.

## Noise

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
11	<b>NOISE</b> Would the project:				
a)	Expose persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Expose persons to or generation of excessive ground-borne vibration or ground-borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Result in a substantial permanent increase in ambient noise levels in the project vicinity above the levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e)	If within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the Proposed Project site to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	If within the vicinity of a private airstrip, expose people residing or working in the Proposed Project site to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Threshold and Conclusion

Discussion:	
Items 11a:	<p>Exterior noise is anticipated in conjunction with ground disturbances during construction of the project and activities from operation of the facility. The short-term increase in ambient noise and vibration levels could occur during construction activities either from the noise impacts created by the transport of workers and movement of construction materials to and from the project site, or from the noise generated onsite during ground clearing/excavation, grading, and building construction activities. The project site is primarily in a rural setting, surrounded primarily by cultivated agricultural land to the north, east, south and west. The City of Kerman Waste Water Treatment Plant is immediately to the west. The closest noise-sensitive receptor is one single-family home located approximately 1,084 feet west of the project site. However, implementation of Mitigation Measure NOI-1 will limit the hours of construction and the noise impact to <b>less than significant</b>.</p> <p>Based on the noise levels currently generated by the project and the surrounding land uses, the expansion of the proposed project is expected to produce noise levels with existing noise levels in the vicinity of the project site. Therefore, long-term noise impacts from the proposed project are not anticipated.</p>
Items 11b:	See paragraph 11a. The proposed project would have a <b>less than significant impact</b> .
Item 11c:	See paragraph 11a. The proposed project would have a <b>less than significant impact</b> .
Item 11d:	See paragraph 11a. The proposed project would have a <b>less than significant impact</b> .
Item 11e:	The proposed project is not located within an airport land use plan area or within 2 miles of any public airport. The proposed project would have <b>no impact</b> .
Item 11f:	There are no private airstrips in the vicinity of the Proposed Project site. The proposed project would have <b>no impact</b> .
Documentation:	<ul style="list-style-type: none"> <li>City of Kerman Municipal Code, Chapter 9.26.020, Subsection A.</li> <li>City of Kerman. 2007-2027, General Plan Noise Element. February 2007.</li> <li><i>Transfer/Processing Report: Mid Valley Disposal Recycling and Transfer Station</i>. November 2012. Clemens Environmental Corporation.</li> </ul>
Mitigation:	<ul style="list-style-type: none"> <li>NOI-1: Construction activities will be limited to the hours between 7 a.m. to 8 p.m. daily. The City of Kerman shall have the discretion to permit construction activities to occur outside of the allowable hours if compelling circumstances warrant such an exception (e.g., weather conditions to pour concrete).</li> <li>NOI-2: All construction equipment shall use noise-reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.</li> </ul>

## Population and Housing

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
12	<b>POPULATION AND HOUSING</b> Would the project:				
a)	Induce substantial population growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Threshold and Conclusion

Discussion:	
Items 12a:	The project site currently carries a general plan land use designation of Industrial (I). This designation would allow for future development consistent with industrial uses (e.g., manufacturing, transportation, recycling, etc.). The project site is located within the City of Kerman's designated industrial park area. There are no existing residential or housing development within or adjacent to the project site. Water, sewer, and roads already about the property to the south and north. No extensions of these facilities, except through the project site itself and connecting to existing developed sites will occur. The proposed project would have <b>no impact</b> .
Item 12b:	The proposed project would expand existing recycling and transfer station operations on a 28 acre site that is currently cultivated for agricultural uses. There are no existing homes or housing units on the project site that would be displaced as a result of the proposed project. The proposed project would have <b>no impact</b> .
Item 12c:	See paragraph 12b. The proposed project would have <b>no impact</b> .
Documentation:	<ul style="list-style-type: none"> <li>City of Kerman. 2007-2027. General Plan Final Environmental Impact Report. SCH#20060091148. February 2007.</li> </ul>
Mitigation:	None.

## Public Service

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
13	<b>PUBLIC SERVICE</b> Would the project:				
a)	Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times or other performance objectives for any of the following public services:				
	i. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ii. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	iii. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	iv. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	v. Other facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Threshold and Conclusion

Discussion:	
Items 13a(i):	<p>The proposed project includes the development of an expansion to an existing recycling and transfer station facilities and operations on a 28 acre site. There have been no reportable incidents or major issues with the operation of the existing recycling and transfer station. The proposed project will be required to install appropriate fire hydrants for use in fire suppression and provide all appropriate markings and designation for fire lanes and other emergency access points. The proposed project will be served by North Central Fire District (under contract with the City of Fresno Fire Department). The proposed project will be required to comply with all building and fire code requirements and will be verified at various points in the projects' progress, including a plan check and prior to issuance of the certificate of occupancy.</p> <p>For these reasons, the proposed project would not generate the need for additional staff such that new or physically altered facilities would be required. The proposed project would have a <b>less than significant impact</b>.</p>
Items 13a(ii):	<p>The proposed project includes the development of an expansion to an existing recycling and transfer station facilities and operations on a 28 acre site. There have been no reportable incidents or major issues with the operation of the existing recycling and transfer station. The project site will include a perimeter fence around the site with lockable gates at all entrances. The proposed project would have a <b>less than significant impact</b>.</p>
Item 13a(iii):	<p>The proposed project includes the development of an expansion to an existing recycling and transfer station facilities and operations on a 28 acre site. The project applicant currently employs over 150 people. Many of which reside in the Kerman and, presumably those with school aged children already attend Kerman schools. Although new employees from the proposed project may enroll children in local schools, the proposed project would have a less than significant impact.</p>
Item 13a(iv):	<p>The proposed project includes the development of an expansion to an existing recycling and transfer station facilities and operations on a 28 acre site. There are no parks or other recreational space on the project site or within the vicinity of the project site. The proposed project would have a <b>less than significant impact</b>.</p>
Documentation:	None referenced.
Mitigation:	None.

## Recreation

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
14	<b>RECREATION</b> Would the project:				
a)	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Threshold and Conclusion

Discussion:	
Items 14a:	The proposed project is an industrial use which includes the development of an expansion to an existing recycling and transfer station facilities and operations on a 28 acre site. The project applicant currently employs over 150 people. Many of which reside in the Kerman and, presumably utilize existing park and recreational facilities. Although new employees from the proposed project may choose to reside in Kerman and use existing parks and recreational facilities, the proposed project would have a <b>less than significant impact</b> .
Item 14b:	See paragraph 14b. The proposed project would have a <b>less than significant impact</b> .
Documentation:	<ul style="list-style-type: none"> <li>City of Kerman. 20027-2027, General Plan. Conservation, Open Space, Parks &amp; Recreation Element. February 2007.</li> </ul>
Mitigation:	None.

## Transportation and Traffic

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
15	<b>TRANSPORTATION AND TRAFFIC</b> Would the project:				
a)	Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Exceed, either individually or cumulatively, a level-of-service standard established by the County congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Threshold and Conclusion

Discussion:																																					
Items 15a,b:	<p>The proposed project will expand existing recycling and transfer station buildings and operations from 500 tons per day (TPD) to 1,500 TPD. The facility will receive, process, and recycle inbound material from curbside collection programs, gardeners, landscapers, agricultural operations, building and demolition contractors, roofers, solid waste haulers, and the public. Non-salvageable material will be trucked to permitted disposal site.</p> <p>The facility will be open to receive material 6:00 a.m. to 7:00 p.m. Monday through Saturday. Material will be processed and transferred up to seven days a week, 24 hours a day. The public will be able to drop off recyclable material, municipal solid waste (MSW), construction and demolition debris, e-Waste and other self-hauled loads.</p> <p>The anticipated peak daily vehicles will be approximately 443, as reflected in the table below:</p> <table><tr><th>Vehicle Type</th><th>Number Per Day</th><th>Payload (tons/load)</th></tr><tr><td colspan="3">Inbound Vehicles</td></tr><tr><td>Roll-offs (C&amp;D, Inerts)</td><td>90</td><td>5.1</td></tr><tr><td>Collection trucks (MSW)</td><td>18</td><td>6.0</td></tr><tr><td>Self-haul vehicles (C&amp;D,Inerts)</td><td>110</td><td>1.6</td></tr><tr><td>Self-haul vehicles (White goods)</td><td>31</td><td>1.0</td></tr><tr><td>End dumps</td><td>33</td><td>22</td></tr><tr><td colspan="3">Outbound Vehicles</td></tr><tr><td>Transfer trucks (residue to landfill)</td><td>19</td><td>22</td></tr><tr><td>Transfer trucks (recyclable materials)</td><td>42</td><td>22</td></tr><tr><td>Employee vehicles</td><td>100</td><td>- - -</td></tr><tr><td>Total Vehicles Per Day</td><td>443</td><td>- - -</td></tr></table> <p>The proposed project will incrementally contribute to the existing traffic load on Jensen, Church and Madera Avenues. Jensen and Church Avenues are designated collectors. Madera Avenue is designated arterial and is under the jurisdiction of the California Department of Transportation (Caltrans). The existing level of service at the Madera/Jensen Avenue intersection is B at AM Peak Hour and C at PM Peak Hour. The minimum level of service at this intersection is C (per Caltrans). The proposed project would have a less than significant impact.</p>	Vehicle Type	Number Per Day	Payload (tons/load)	Inbound Vehicles			Roll-offs (C&D, Inerts)	90	5.1	Collection trucks (MSW)	18	6.0	Self-haul vehicles (C&D,Inerts)	110	1.6	Self-haul vehicles (White goods)	31	1.0	End dumps	33	22	Outbound Vehicles			Transfer trucks (residue to landfill)	19	22	Transfer trucks (recyclable materials)	42	22	Employee vehicles	100	- - -	Total Vehicles Per Day	443	- - -
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Item 15c:	The proposed project will not affect air traffic patterns. The proposed project would have <b>no impact</b> .																																				
Item 15d:	The proposed project will use existing roadways for egress and ingress and will be compatible with the General Plan land use designation for industrial uses. The proposed project would have <b>no impact</b> .																																				

Item 15e:	The proposed project will be developed contingent upon the provision of emergency access as required by the North Central Fire Department (under contract with the City of Fresno Fire Department). The proposed project would have <b>no impact</b> .
Item 15f:	The proposed project will be required to provide adequate on-site parking in compliance with Chapter 17.74 of the Kerman Municipal Code. The proposed project would have <b>no impact</b> .
Item 15g:	The proposed project would be required to provide bicycle racks for employees use as a condition of the development. The proposed project would have <b>no impact</b> .
Documentation:	<ul style="list-style-type: none"> <li>• City of Kerman. 2007-2027, General Plan Circulation Element. February 2007.</li> <li>• <i>Transfer/Processing Report: Mid Valley Disposal Recycling and Transfer Station</i>. November 2012. Clemens Environmental Corporation.</li> </ul>
Mitigation:	None.



## Utilities and Service Systems

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
16	<b>UTILITIES AND SERVICE SYSTEMS</b> Would the project:				
a)	Exceed wastewater treatment requirements of the applicable RWQCB?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e)	Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to providers existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f)	Be served by a landfill with sufficient permitted capacity to accommodate the projects solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g)	Be served by a landfill with sufficient permitted capacity to accommodate the projects solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Threshold and Conclusion

Discussion:	The proposed project consists of expanding an existing recycling and transfer station operation. The site is currently served by existing municipal utilities. The development of the proposed project would extend existing utilities to serve the expansion. Minor roadway improvement on the south side of Church along the property frontage will be required including the extension of sewer, water, and storm drain to serve the site.
Items 16a:	The proposed project would be served by wastewater collection service provide by the City of Kerman via an extension to the existing sewer line onsite which is connected to the existing sewer line in Jensen Avenue. The proposed project would generate negligible amounts of wastewater from the proposed 10,000 square foot office/maintenance building. The City of Kerman recently completed a major upgrade and expansion to its wastewater treatment plant from 1.2 mgd to 2.0 mgd. Based on growth projections contained in the General Plan, the expansion will provide capacity fort he city (including the proposed project) to the year 2022. The proposed project would have a <b>less than significant impact</b> .
Item 16b:	See paragraph 16a. The proposed project would have a <b>less than significant impact</b> .
Item 16c:	The proposed project will develop a storm water retention basin onsite to capture any new storm water runoff from the project. The proposed project would have a <b>less than significant</b> .
Item 16d:	The City of Kerman currently provides potable water to the proposed project through existing water lines serving the site. The project proponent will install new water lines onsite to serve the proposed project. The City of Kerman has sufficient distribution and capacity to serve the proposed project. The proposed project would have a <b>less than significant impact</b> .
Item 16e:	See paragraph 16a. The proposed project would have <b>less than significant impact</b> .
Item 16f:	The proposed project is expected to generate solid waste from construction and operational activities. Construction and operational waste would be extremely small amount relative to the existing capacity at the American Avenue Disposal Site. The City of Kerman is currently meeting the State's waste diversion goal. Because the project applicant is a recycling and transfer station operation, the impact on the existing landfill site would be negligible. The proposed project would have a <b>less than significant impact</b> .
Item 16g:	The project applicant is a recycling and transfer station operation permitted by the several local and state agencies. The project applicant is required to comply with all applicable federal, state statutes and regulations in order to operate as a municipal solid waste recycling and

	transfer station. The proposed project would have <b>no impact</b> .
Documentation:	<ul style="list-style-type: none"> <li>City of Kerman. 2007-2027, General Plan Human Environment. February 2007.</li> </ul>
Mitigation:	None.

## Section III

### MANDATORY FINDINGS OF SIGNIFICANCE

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
17	<b>MANDATORY FINDINGS OF SIGNIFICANCE</b>				
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Does the project have impacts that are individually limited, but cumulative considerable? ("Cumulative considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future project)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Does the project have environmental effect which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Threshold and Conclusion

Discussion:	
Items a:	The proposed project does not have the potential to degrade the quality of the environment by reducing habitat, threatening to eliminate any plant or animal community, or eliminating important examples of California history or prehistory. With regard to this issue, the proposed project would have a <b>less than significant impact</b> .
Item b:	The propose project could potentially contribute to incremental effects that would cumulatively considerable when considered in combination with other past, present, or foreseeable future projects. With regards to this issue, the proposed project would have a <b>less than significant impact with mitigation incorporation</b> .
Item c:	The proposed project would not result in environmental impact that would have a direct or indirect adverse effect on human beings. With regard to this issue, the proposed would have a <b>less than significant impact</b> .
Documentation:	<ul style="list-style-type: none"> <li>City of Kerman. 2007-2027, General Plan Human Environment. February 2007.</li> <li><i>Transfer/Processing Report: Mid Valley Disposal Recycling and Transfer Station</i>. November 2012. Clemens Environmental Corporation.</li> </ul>
Mitigation:	Project will require implementation of mitigation measures. A Mitigation Monitoring and Reporting Program was prepared to ensure compliance.

Appendix 'B'

Air Quality Technical Report

# **Mid Valley Disposal Recycling and Transfer Station**

**September 2012**

**Prepared by:**

**Yorke**  
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## **Air Quality Technical Report: Mid Valley Disposal Recycling and Transfer Station**

# Air Quality Technical Report: Mid Valley Disposal Recycling and Transfer Station

Prepared for:

**Mid Valley Disposal Recycling and  
Transfer Station**

September 2012

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# Air Quality Technical Report: Mid Valley Disposal Recycling and Transfer Station

## 1.0 INTRODUCTION

This Air Quality Technical Report has been prepared in support of a Condition Use Permit (CUP) modification to assess the potential air quality impacts from the proposed facility expansion and upgrades (the "Project") to the Mid Valley Disposal Recycling and Transfer Station (MVD). The format and content of the Report generally follow the Air Quality Section of Appendix G of the CEQA Guidelines (Environmental Checklist Form), which contains a list of effects that may be deemed potentially significant. Based on the environmental impacts analysis presented herein, the proposed Project is expected to have a less-than-significant impact with mitigation.

<b>AIR QUALITY:</b> Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 1.1 Project Overview

The Mid Valley Disposal Recycling and Transfer Station has a primary mission to receive, process, recycle, and convert a wide variety of materials, many of which would otherwise end up in landfills.

Air Quality Technical Report  
Mid Valley Disposal Recycling and Transfer Station

The proposed Project consists of increasing the permitted daily tonnage as well as expanding the site acreage and operations. The proposed Project will include the construction of additional buildings and parking areas, additional composting for greenwaste and foodwaste, expanding C&D debris and greenwaste processing areas, additional storage, and installing an Anaerobic Digester (AD) with an associated biofilter, and compressed natural gas (CNG) production facilities. The planned site expansion will take place in three phases as described in this report.

The Mid Valley Disposal Recycling and Transfer Station will be critical to the City of Kerman and other jurisdictions of Fresno County as it will provide a significant capacity for regional composting and recycling activities. Landfill diversion at MVD will be credited back to the jurisdictions to help these entities comply with the 50 percent diversion rate mandated by Assembly Bill (AB) 939 and the increased 75 percent diversion mandated by AB 341 with the incorporation of mandatory commercial recycling.

## 1.2 Applicant Information

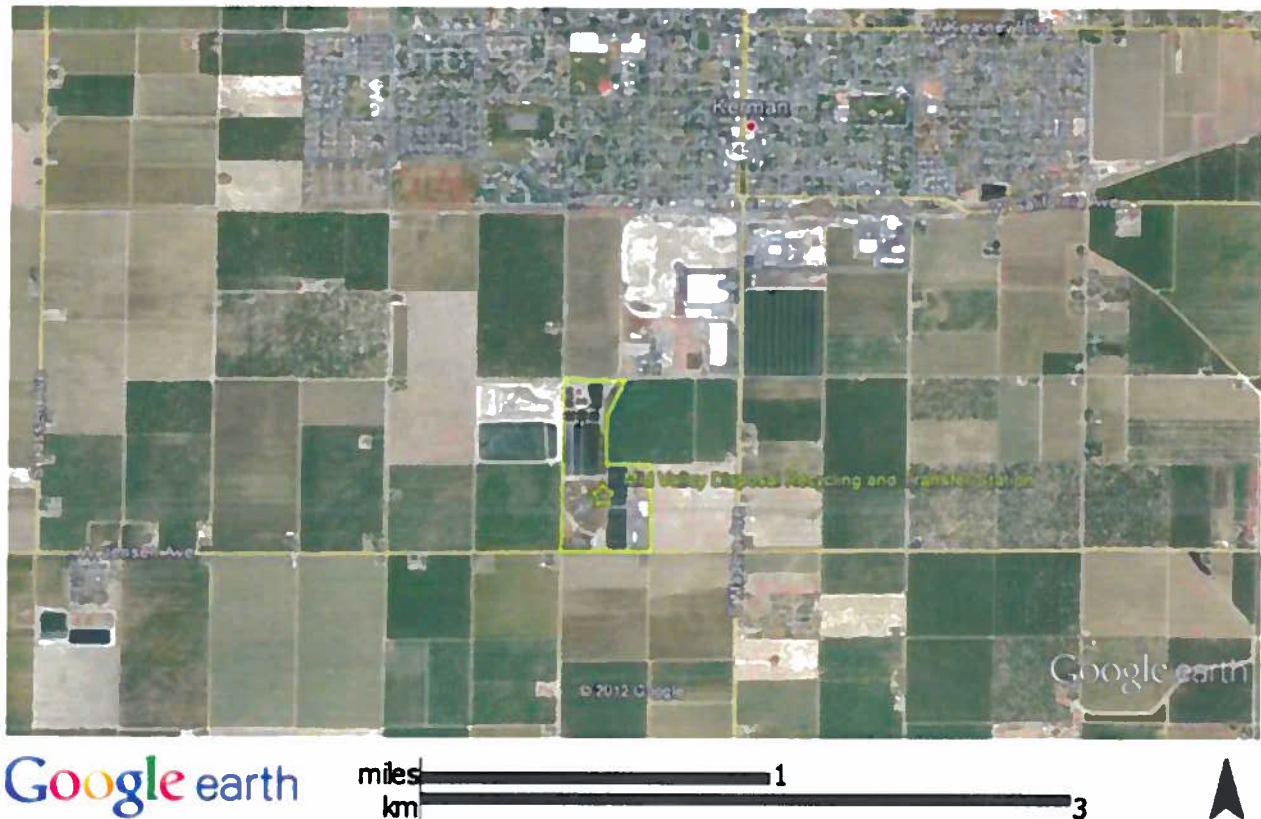
The applicant and project information are shown in Table 1-1.

**Table 1-1: Applicant and Project Information**

Applicant		Applicant #2	
Name:	Mid Valley Disposal, Inc.	Name:	none
Address:	15300 W. Jenson Avenue Kerman, CA 93630	Address:	---
Email:	<del>jayk</del> @midvalleydisposal.com	Email:	---
Phone:	(559) 843-2467	Phone:	---
Fax:	(559) 842-9437	Fax:	---
Property Owner (if different than applicant)		Agent (i.e., architect or engineer)	
Name:	Kalpakoff Properties, LLC	Name:	Ernest Clements
Address:	15300 W. Jenson Avenue Kerman, CA 93630	Address:	15230 Burbank Blvd Suite 103 Sherman Oaks, CA 91411
Email:	<del>jayk</del> @midvalleydisposal.com	Email:	cclements@clementsenvironmental.com
Phone:	(559) 843-2467	Phone:	(818) 267-5100
Fax:	(559) 842-9437	Fax:	(818) 782-6712
Project Information			
Project Address:	15300 W. Jenson Ave	Zoning Designation:	Industrial
APN(s):	E. ½ of 023-080-15 & 023-080-16	Existing Use:	Recycling and Transfer Station
General Location:	West of Madera Ave and just east of the City of Kerman's Waste Water Treatment Plant		
Proposed Project:	Expanding current operations, increasing daily tonnage from 500 tons to 1,500 tons, adding composting and anaerobic digestion operations, etc. See attached Project Description.		

### 1.3 Project Location

The facility is located approximately one mile south of Kerman, California. The properties surrounding the facility are agricultural to the north, east, south and west. The nearest school to the facility is the Kerman City Pre-school, located approximately one mile northeast of the facility. An aerial photograph depicting the facility and the surrounding properties is shown as Figure 1.



**Figure 1: Aerial Photo of Mid Valley Disposal and Surrounding Area**



## 2.0 PROJECT DESCRIPTION

Located on approximately 38 acres within the City of Kerman, the Mid Valley Disposal Recycling and Transfer Station has a primary mission to receive, process, recycle, and convert a wide variety of materials, many of which would otherwise end up in landfills. At full build-out the facility will consist of a material recovery facility (MRF), transfer station, construction and demolition (C&D) debris recycling operation, maintenance shops, truck wash stations, fueling islands, greenwaste chipping and grinding operation, greenwaste/foodwaste covered composting operation, and future anaerobic digestion.

The proposed Project consists of increasing the permitted daily tonnage as well as expanding the site acreage and operations. The site expansion will take place in three phases. The main permit revisions for **Phase I** include:

- Increasing the permitted tons per day (TPD) from 500 TPD to 1,500 TPD;
- Increasing the site acreage from 28 to 38 acres;
- Adding a receiving building as an expansion to the existing MRF and Transfer Station;
- Installing a membrane-type covered composting operation at the site for greenwaste and foodwaste;
- Expanding C&D debris and greenwaste processing areas;
- Expanding onsite storage areas;
- Adding a second office/maintenance building, fuel island, and truck wash station;
- Adding a separate self-haul tipping area; and
- Adding additional vehicle and truck parking onsite.

**Phase II** revisions will include:

- Installing Anaerobic Digesters (including biofilter and compressed natural gas [CNG] production);
- Expanding the MRF and Transfer Station building;
- Expanding the receiving building; and
- Adding back-down transfer ramps in the MRF and Transfer Station/receiving buildings.

**Phase III** revisions will include:

- Expanding the Anaerobic Digesters and biofilters.

Processing of the proposed increase in tonnage at the MVD facility may proceed with or without anaerobic digesters (described in Phases II and III above). In the case that an AD is not installed, all organic material would be composted. A process flow diagram is provided as Figure 2 (with AD) and Figure 3 (without AD), and a site layout diagram is provided as Figure 4.

The daily quantity of material received will not exceed 1,500 tons. Inbound material will come from curbside collection programs, gardeners, landscapers, agricultural operations, building and demolition contractors, roofers, solid waste haulers, and the public. Non-salvageable residue will be trucked to permitted disposal sites.

**Air Quality Technical Report**  
**Mid Valley Disposal Recycling and Transfer Station**

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The facility will be open to receive material 6:00 a.m. to 7:00 p.m. Monday through Saturday. Material will be processed and transferred up to seven days a week, 24 hours a day. The actual time of shifts will vary depending on type and amount of materials received.

The public will be able to drop off recyclable material, municipal solid waste (MSW), C&D debris, e-Waste and other self-haul loads between 6:00 a.m. and 7:00 p.m. Monday through Saturday.

The anticipated peak daily vehicles will be approximately 443; a breakdown of vehicles by type, quantity per day and capacity is provided in Table 2-1.

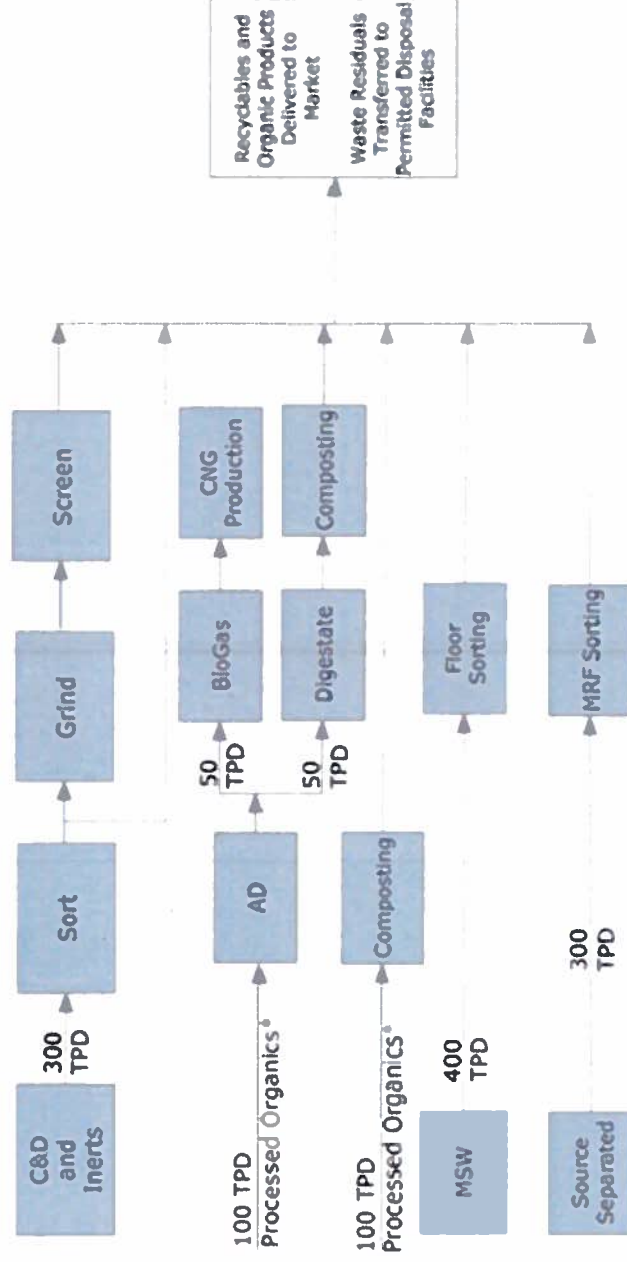
**Table 2-1: Anticipated Peak Daily Vehicles**

<b>Vehicle Type</b>	<b>Number Per Day</b>	<b>Payload (tons/load)</b>
<b>Inbound Vehicles</b>		
Roll-offs (C&D, Inerts)	90	5.1
Collection trucks (MSW)	18	6.0
Self-haul vehicles (C&D, Inerts)	110	1.6
Self-haul vehicles (White goods)	31	1.0
End dumps	33	22
<b>Outbound Vehicles</b>		
Transfer trucks (residue to landfill)	19	22
Transfer trucks (recyclable materials)	42	22
Employee Vehicles	100	---
<b>Total Vehicles per Day</b>	<b>443</b>	<b>—</b>

The project location is optimal for this type of operation because:

- The site is zoned for industrial uses (M-2 industrial). Within this radius, the surrounding uses are agricultural land, vacant land, and water district treatment ponds on the west;
- Much of the processing operations will occur within partially-enclosed buildings; and
- The site is easily accessed via the major roads which include Jensen Avenue, Church Ave, and State Route 145.

**Mid Valley Disposal Recycling and Transfer Station  
Waste Flow Diagram  
(With Anaerobic Digestion)  
(1,000 TPD Expansion)**

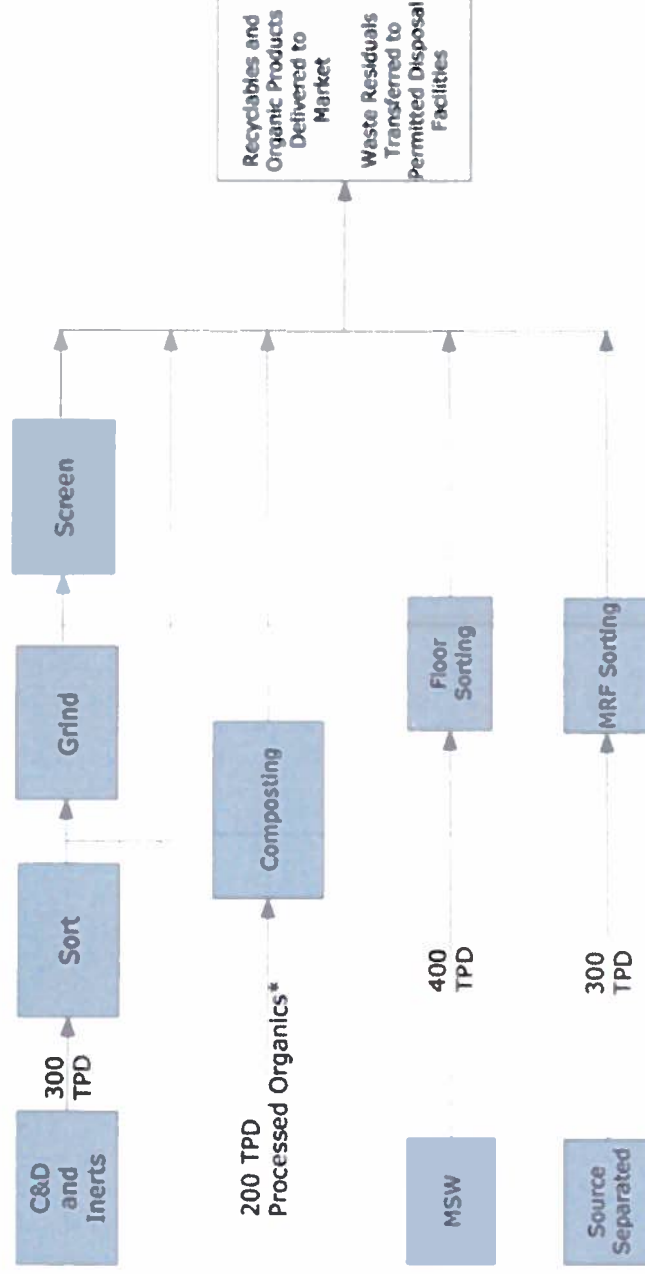


\* Up to 200 TPD of organics received as part of the existing operation will be processed through proposed anaerobic digester and composting.

Mid Valley Waste Flow Diagram 1000 TPD Expansion w AD

**Figure 2: Process Flow Diagram with Anaerobic Digestion**

**Mid Valley Disposal Recycling and Transfer Station  
Waste Flow Diagram  
(Without Anaerobic Digestion)  
(1,000 TPD Expansion)**



- Up to 200 TPD of organics received as part of the existing operation will be processed through composting.

Mid Valley Waste Flow Diagram 1000 TPD Expansion w/o AD

**Figure 3: Process Flow Diagram without Anaerobic Digestion**

# Air Quality Technical Report Mid Valley Disposal Recycling and Transfer Station

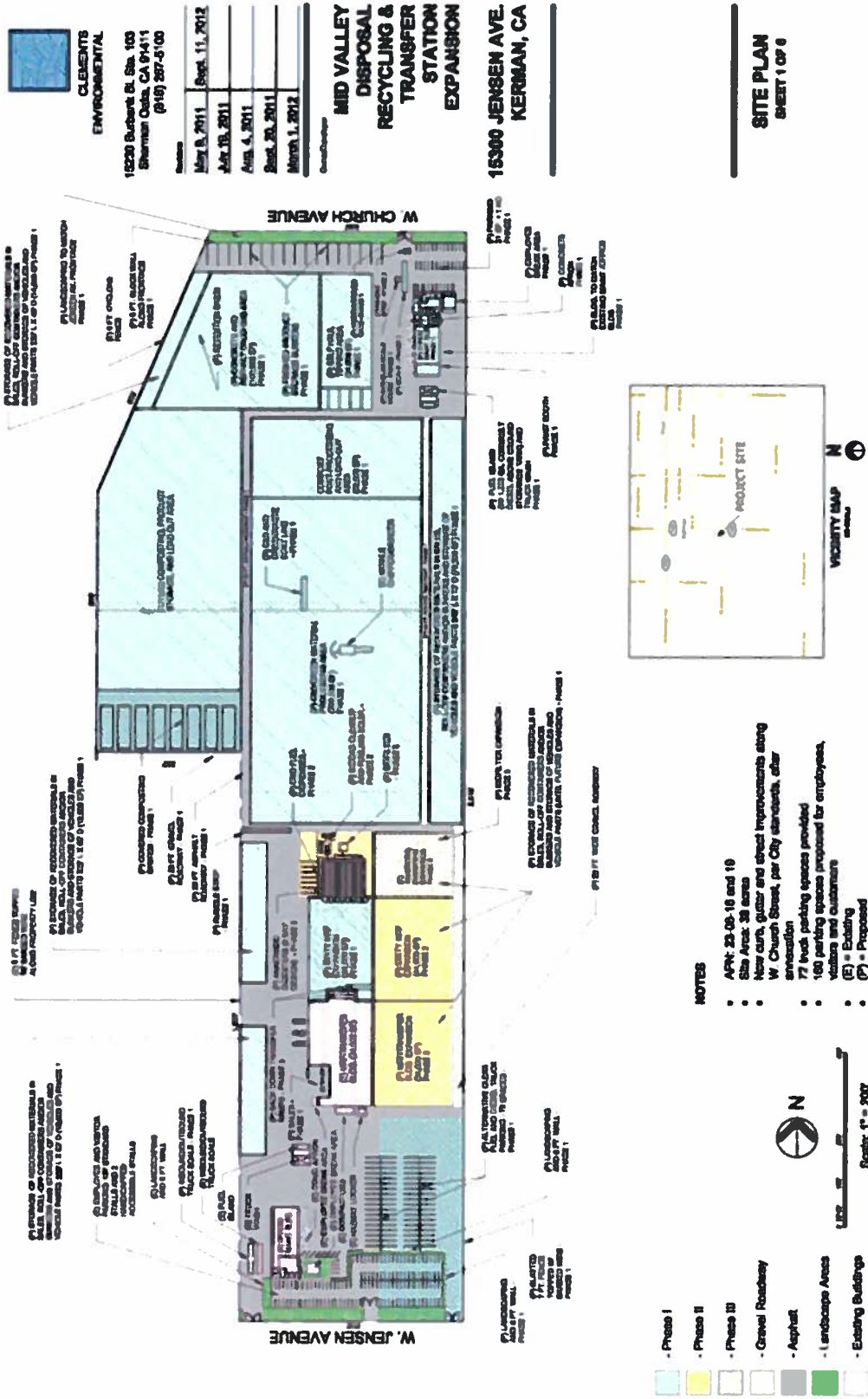


Figure 4: Site Plan



### 3.0 AIR QUALITY IMPACTS ANALYSIS

The Air Quality Section of Appendix G of the CEQA Guidelines (Environmental Checklist Form) contains a list of air quality impacts that may be deemed potentially significant. They are:

- a) Conflict with or obstruct implementation of the applicable air quality plan;
- b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project is non-attainment under applicable federal or state ambient air quality standards (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- d) Expose sensitive receptors to substantial pollutant concentrations; or
- e) Create objectionable odors affecting a substantial number of people.

Because the Project is located within jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD or District), the significance criteria used to evaluate Project impacts are those developed by the District. The significance criteria are explained in the District's Guideline for Assessing and Mitigating Air Quality Impacts (GAAQI), January 10, 2002 revision. Each potential air quality impact listed above is discussed in this section.

#### 3.1 Conflict with or obstruct implementation of the applicable air quality plan

***SUMMARY OF IMPACT ANALYSIS:** The Project will be required to install best available control technologies (BACT) and permitted to comply with all applicable rules; therefore, the Project will have No Impact on this air quality criterion.*

The San Joaquin Valley is in nonattainment with the federal ozone and PM<sub>2.5</sub> standards, and as such, has developed and adopted air quality plans that potentially affect the proposed Project. The air quality plans and the potential impact to the proposed Project are discussed herein.

##### 3.1.1 Ozone

Ozone, the primary ingredient of summertime smog, is a colorless and odorless gas that can be harmful to human health at certain concentrations. To protect public health, the U.S. Environmental Protection Agency (EPA) has established standards for ozone concentrations in ambient – or outdoor – air, as averaged over the course of eight-hour periods.

The San Joaquin Valley's ozone "design values" indicate nonattainment at 17 of the Valley's 21 monitoring stations. In 2005, the Valley's highest design value was approximately 35 percent above the federal ozone standard. During the years 2003 through 2005, the San Joaquin Valley recorded an average of 105 exceedance days per year.

As required by federal rules to address the non-attainment status, the District Governing Board adopted the 2007 Ozone Plan on April 30, 2007.

On December 18, 2008, the District Governing Board adopted the "Amendment to the 2007 Ozone Plan to Extend the Rule Adoption Schedule for Organic Waste Operations." This amendment revised the 2007 Ozone Plan to extend the control measure completion date for Composting Green Waste to the fourth quarter of 2010. This extension allowed time for further

study before rule adoption, and this rule extension does not impact Reasonable Further Progress (RFP) or the attainment demonstration. On August 18, 2011, the SJVAPCD Governing Board adopted Rule 4566 – Organic Material Composting Operations.

Based on a comparison of the proposed Project elements to the control measures and District Regulatory Control Measures for Stationary Sources, there are several control measures that potentially impact the proposed Project. The SJVAPCD developed rules to implement all of the control measures potentially applicable to the project, including specifically:

- Rule 4565 implements Control Measure S-GOV-1, Composting Biosolids;
- Rule 4566 implements Control Measure S-GOV-5, Composting Organic Material Waste;
- Rule 4307 implements Control Measure S-COM-3, Small Boilers;
- Rule 4311 implements Control Measure S-IND-21, Flares; and
- Rule 4601 implements Control Measure S-SOL-1, Architectural Coatings.

The Project will require air permits for many of the individual pieces of process equipment. The SJVAPCD will ensure that the Project meets rule requirements through the application review process and by placing operating conditions on any permits issued for the Project. Compliance with the rules and permit conditions will ensure that the Project is consistent with the adopted air quality plans and, therefore, would have no adverse air quality impact.

#### **3.1.2 Fine Particulate Matter (PM<sub>2.5</sub>)**

In 1997, EPA set two PM<sub>2.5</sub> standards: a 24-hour standard to protect against short-term health impacts, and a 12-month (annual) standard to protect against longer-term impacts. The San Joaquin Valley complied with the 24-hour standard, based on data from 2004 through 2006. In 2006, EPA revised the 24-hour standard to a lower level. Based on informal discussions with EPA, SJVAPCD predicted that attainment plans for this new standard may be required by 2012 or 2013. Consequently, the 2008 PM<sub>2.5</sub> Plan focuses primarily on the strategy to attain the 1997 annual standard. Nonetheless, the measures proposed in the plan will also provide for progress towards the more stringent 2006 PM<sub>2.5</sub> standards and the California PM<sub>2.5</sub> standard.

The PM<sub>2.5</sub> Plan contains a comprehensive list of strict regulatory and incentive-based measures to reduce directly emitted PM<sub>2.5</sub> and precursor emissions throughout the Valley. As the District continues to tighten regulations for sources under its jurisdiction, state and federal agencies need to also reduce emissions from mobile sources, which are beyond the District's direct jurisdiction.

Based on a comparison of the proposed Project elements to the control measures and further study measures, there are several control measures that potentially impact the proposed Project. The SJVAPCD rules that were developed to implement District Regulatory Control Measures for Stationary Sources that are potentially applicable to the project, including specifically:

- Rule 4307 implements Control Measure S-COM-3, Small Boilers;
- Rule 4311 implements Control Measure S-IND-21, Flares; and
- Regulation VIII implements Control Measure S-IND-4 Fugitive PM<sub>10</sub> Prohibitions.

The Project will require air permits for many of the stationary sources including the boiler(s) and flare. The SJVAPCD will ensure that the Project meets rule requirements through the permit application review process and by placing operating conditions on any permits issued for the

Project. Compliance with the rules and permit conditions will ensure that the Project is consistent with the adopted air quality plans and, therefore, would have no adverse air quality impact.

### 3.1.3 Particulate Matter (PM10)

On September 25, 2008, EPA re-designated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan. The PM10 Maintenance Plan does not contain any emission control strategies that would impact the proposed Project. There are no PM10 Plans under development.

## 3.2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation

***SUMMARY OF IMPACT ANALYSIS:** The Project will be required to install BACT to minimize emissions from permitted sources. Emissions due to construction activities will be minimized through implementation of comprehensive fugitive dust control measures. With emission controls, the Project is expected to have a Less than Significant air quality impact for this criterion without mitigation.*

### 3.2.1 Significance Criteria

#### 3.2.1.1 Threshold of Significance for Project Construction Impacts

##### Pollutants of Concern

A project's construction phase produces many types of emissions, but PM10 is the pollutant of greatest concern. PM10 emissions can result from a variety of construction activities, including excavation, grading, demolition, vehicle travel on paved and unpaved surfaces, and vehicle exhaust. Construction-related emissions can cause substantial increases in localized concentrations of PM10, as well as affecting PM10 compliance with ambient air quality standards on a regional basis. Particulate emissions from construction activities can lead to adverse health effects as well as nuisance concerns such as reduced visibility and soiling of exposed surfaces. Asbestos can also be of concern during demolition activity associated with construction. The use of diesel powered construction equipment produces ozone precursor emissions and combustion-related particulate emissions. Large construction projects lasting many months may exceed the District's annual threshold for NOx emissions and could expose area residents to diesel particulate matter (a toxic air contaminant).

##### Qualitative Approach

The SJVAPCD's approach to CEQA analyses of construction PM10 impacts is to require implementation of effective and comprehensive control measures rather than to require detailed quantification of emissions. PM10 emitted during construction can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors, making quantification difficult. Despite this variability in emissions, experience has shown that there are a number of feasible control measures that can be reasonably implemented to significantly reduce PM10 emissions from construction. The SJVAPCD has determined that compliance with Regulation VIII for all sites and implementation of all other control measures indicated in Tables 6-2 and 6-3 of the



regulation (as appropriate, depending on the size and location of the project site) will constitute sufficient mitigation to reduce PM<sub>10</sub> impacts to a level considered less-than-significant.

#### Demolition Asbestos Impacts

Project construction sometimes requires the demolition of existing buildings at the project site. Buildings often include materials containing asbestos. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not carried out when the material is disturbed. The demolition, renovation, or removal of asbestos-containing materials is subject to the limitations of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations as listed in the Code of Federal Regulations (CFR) requiring notification and inspection. Most demolitions and many renovations are subject to an asbestos inspection prior to start of activity. Strict compliance with existing asbestos regulations will normally prevent asbestos from being considered a significant adverse impact.

#### 3.2.1.2 Thresholds of Significance for Impacts from Project Operations

The term “project operations” refers to the full range of activities that can or may generate pollutant emissions when the development is functioning in its intended use. For projects such as office parks, shopping centers, residential subdivisions, and other indirect sources, motor vehicles traveling to and from the projects represent the primary source of air pollutant emissions. For industrial projects and some commercial projects, equipment operation and manufacturing processes can be of greatest concern from an emissions standpoint. Significance thresholds discussed below address the impacts of these emission sources on local and regional air quality. Thresholds are also provided for other potential impacts related to project operations, such as odors and toxic air contaminants.

#### Ozone Precursor Emissions Threshold

Ozone precursor emissions from project operations should be compared to the thresholds provided in Table 3-1. Projects that emit ozone precursor air pollutants in excess of the levels in Table 3-1 will be considered to have a significant air quality impact. Both direct and indirect emissions should be included when determining whether the project exceeds these thresholds. The following total emissions thresholds for air quality have been established by the SJVAPCD for project operations. Projects in the San Joaquin Valley Air Basin (SJVAB) with operation-related emissions that exceed these emission thresholds will be considered to have significant air quality impacts.

**Table 3-1: Ozone Precursor Emissions Thresholds For Project Operations**

Pollutant	Tons/yr
ROG (VOC)	10
NO <sub>x</sub>	10

#### Local Carbon Monoxide Concentrations Threshold

Estimated CO concentrations, as determined by an appropriate model, exceeding the California Ambient Air Quality Standard (CAAQS) of 9 parts per million (ppm) averaged over 8 hours and 20 ppm for 1 hour will be considered a significant impact.

### Thresholds of Significance for Greenhouse Gas Emissions

The effects of project-specific GHG emissions are cumulative and, unless reduced or mitigated, their incremental contribution to global climatic change could be considered cumulatively considerable. When serving as lead agency, the District would require all stationary source projects with increased GHG emissions to implement performance based standards, or otherwise demonstrate that project specific GHG emissions have been reduced or mitigated by at least 29 percent, as compared to Business-as-Usual (as defined in the guidance), consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan.

#### *3.2.2 Air Quality Standards Impacts Assessment*

##### **3.2.2.1 Project Construction Impacts**

To determine the emissions associated with this project, the URBEMIS2007 version 9.2.4 computer model was utilized. The URBEMIS program provides default parameters such as the number and type of construction vehicles needed to perform construction type activities and to calculate the emissions associated with those activities. Project-specific parameters were input to the model to the extent that the data was available; model defaults were used in the absence of project-specific data. The following assumptions and project-specific information were used for this analysis:

- **Construction Schedule** - The construction schedule for Phase I of the Project is assumed to require one year to complete. Phases II and III are assumed to require one year to complete.
- **Building and Structures:**
  - Phase 1 – Three structures with a total of 114,000 sq. ft.
  - Phase 2 – Three structures with a total of 93,000 sq. ft.
  - Phase 3 – Expanding one structure with an additional 20,000 sq. ft.
- **Grading and Paving** - The majority of the expansion will occur on land currently not used by MVD. This land will need to be cleared and graded as part of the project. To be conservative, it was assumed all 38 acres of the facility will be graded. It was assumed that 50 percent (approximately 19 acres) of the Project area would be paved.
- **Construction equipment** - The default equipment types and equipment counts as allowed by URBEMIS2007 were used for this analysis.
- **Engine Emission Factors** - URBEMIS2007 requires an air district-specific EMFAC2007 database be installed. The EMFAC2007 dataset for the SJVAPCD region was downloaded and used for this project.
- **Land Use** - The land use chosen for this project was industrial, with the subtype being manufacturing.
- **Dust Control** – Dust mitigation was assumed during the grading phase to include watering the exposed surfaces twice daily during the grading process.

URBEMIS2007 has the ability to calculate emissions from five other categories that are not directly related to construction vehicles. Only three were chosen for this analysis: natural gas

fuel combustion, landscape fuel combustion, and architectural coatings. The other two categories are hearth fuel combustion and consumer products. Since these categories are related to residential activities, they were not appropriate for inclusion in this analysis.

The expected construction emissions from the proposed Project are summarized in Table 3-2. A detailed evaluation of construction emissions is provided in Appendix A.

**Table 3-2: Summary of Construction Emissions**

Year	VOC (ton/yr)	NO <sub>x</sub> (ton/yr)	CO (ton/yr)	SO <sub>2</sub> (ton/yr)	PM <sub>10</sub> (ton/yr)	PM <sub>2.5</sub> (ton/yr)	CO <sub>2</sub> (ton/yr)
1	1.62	2.28	2.25	0.00	1.38	0.39	397.96
2	1.44	1.23	1.44	0.00	0.08	0.07	269.88

URBEMIS does not allow the application of all of the mitigation measures required by the SJVAPCD; however, MVD is proposing to implement the required mitigation, i.e., compliance with Regulation VIII, for all construction activities. The SJVAPCD has determined that compliance with Regulation VIII and implementation of all other control measures indicated in Tables 6-2 and 6-3 of Regulation VIII (as appropriate, depending on the size and location of the project site) will constitute sufficient mitigation to reduce PM<sub>10</sub> impacts to a level considered less-than-significant.

#### Demolition Asbestos Impacts

Construction of the proposed Project is not expected require the demolition of asbestos-containing materials. Therefore, no significant adverse impacts are expected from asbestos demolition.

#### 3.2.2.2 Project Operations Impacts

Air emissions from Project operations are estimated based on the proposed process, process throughput, and equipment-specific emission factors and other criteria. The methodology used for each type of source is explained in Table 3-3. Detailed emission calculations are provided in Appendix B. Note that because the Project may be operated for some period before the AD is installed, the operational impacts are evaluated both with and without AD.

**Table 3-3: Methodology for Estimating Operating Emissions**

Source Type	Methodology	Key Assumptions
C&D Screen-Sort	AP-42 Chapter 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing, Table 11.19.2-2	PM emissions controlled by water application (50% PM abatement) Throughput: 300 ton/day
C&D Load-In	AP-42, Section 13.2.4	PM emissions controlled by water application (50% PM abatement) Throughput: 300 ton/day



**Table 3-3: Methodology for Estimating Operating Emissions**

Source Type	Methodology	Key Assumptions
Grinding	BAAQMD Permit Handbook Chapter 11.13 (based on Log debarking from Table 10.3-1 of AP-42)	Water spray abatement on greenwaste grinding achieves 50% control of PM emissions Throughput: 300 ton/day
Stationary ICE	Interim Tier 4 emission factors	Tub grinders (2) operate 1,560 hr/yr each
Screening	AP-42 Chapter 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing, Table 11.19.2-2	Control efficiency for water suppression on unpaved roads ranging from 10 to 74% Throughput: 300 ton/day
Composting	Emission factors based on SJVAPCD Paper: Compost VOC Emission Factors, September 15, 2010 Composting GHG emission factors calculated from October 2011 Report: GHG Emission from Covered Windrow Composting	98% reduction in VOC emissions based on use of Gore membrane composting system Throughput: 200 ton/day w/o AD Throughput: 100 ton/day w/AD
New Offroad Vehicles	Combustion emission factors from EMFAC2007	Offroad vehicle operation: <ul style="list-style-type: none"> <li>Excavator: 30 hr/week</li> <li>Loader (2): 30 hr/week each</li> <li>Forklift (2): 30 hr/week each</li> <li>Water truck (2): 20 hr/week each</li> </ul>
MSW Unloading	AP-42 Section 13.2.4-4	Throughput: 400 ton/day
Truck / Vehicle Traffic	Emissions estimated using URBEMIS2007	See Table 2-1 for breakdown of offsite vehicle activity
Flare	Emission Factors: <ul style="list-style-type: none"> <li>NOx: BACT</li> <li>SOx: Based on fuel sulfur</li> <li>CO: Manufacturer's Specifications</li> <li>VOC: AP-42, Sect 13.5, Industrial Flares</li> <li>PM10: AP-42, Sect 2.4, Municipal Solid Waste Landfills</li> <li>GHG factors: 40 CFR Part 98, Tables C-1 and C-2</li> </ul>	Used with AD only 2,000 hrs/year operation (includes operation for start-up, shutdown and emergency)
Anaerobic Digester	CO <sub>2</sub> emissions from vendor information for commercially available AD	Biogas production: 4,150 scf/ton of MSW processed; CO <sub>2</sub> is 45% by volume in biogas Throughput: 100 tons/day (w/AD only)

### Summary of Emissions

The operational emissions for the proposed Project without AD are summarized in Table 3-4. The operational emissions for the proposed Project with AD are summarized in Table 3-5. As shown in the tables, the proposed Project would be less than significant for both ozone precursors, NOx and VOC, during operations, whether the Project is operated with or without AD. Emissions of PM10, CO, SOx and CO<sub>2</sub> are reported for information only; the SJVAPCD does not have mass-based significance thresholds for these pollutants.

**Table 3-4: Summary of Operational Emissions – Without AD**

Process	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	SOx (tons/yr)	PM10 (tons/yr)	CO2e (tons/yr)
<b>Onsite Emission Sources</b>						
CD&D/Inerts/Self-Haul	0.24	4.47	2.58	0.01	0.90	128
Processed Organics	4.17	0.00	0.00	0.00	0.27	16,550
MSW Unload Operations	0.00	0.00	0.00	0.00	0.02	0
Off-Road Vehicles	0.27	7.54	2.37	0.03	0.11	318
On-Road Vehicles	0.10	9.24	0.55	0.00	3.56	9
<b>Offsite Emission Sources</b>						
Vehicle Traffic	0.67	6.68	1.09	0.01	0.56	657
<b>Total</b>	<b>5.45</b>	<b>27.92</b>	<b>6.58</b>	<b>0.05</b>	<b>5.42</b>	<b>17,662</b>
Significance Threshold	10	---	10	---	---	---
<b>Significant (Yes/No)</b>	<b>No</b>	<b>NA</b>	<b>No</b>	<b>NA</b>	<b>NA</b>	<b>---</b>

**Table 3-5: Summary of Operational Emissions – With AD**

Process	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	SOx (tons/yr)	PM10 (tons/yr)	CO2e (tons/yr)
<b>Onsite Emission Sources</b>						
CD&D/Inerts/Self-Haul	0.24	4.47	2.58	0.01	0.90	128
Processed Organics	3.13	0.00	0.00	0.00	0.14	16,369
MSW Unload Operations	0.00	0.00	0.00	0.00	0.02	0
Flare	2.77	3.93	1.18	0.24	0.33	229
Off-Road Vehicles	0.27	7.54	2.37	0.03	0.11	318
On-Road Vehicles	0.10	9.24	0.55	0.00	3.56	9
<b>Offsite Emission Sources</b>						



**Table 3-5: Summary of Operational Emissions – With AD**

Process	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	SOx (tons/yr)	PM10 (tons/yr)	CO2e (tons/yr)
Vehicle Traffic	0.67	6.68	1.09	0.01	0.56	657
<b>Total</b>	<b>7.18</b>	<b>31.85</b>	<b>7.76</b>	<b>0.29</b>	<b>5.62</b>	<b>17,710</b>
Significance Threshold	10	---	10	---	---	---
<i>Significant (Yes/No)</i>	No	NA	No	NA	NA	---

#### Discussion of Ozone Impacts

Impacts to ozone are assessed based on VOC and NOx emissions, which are regulated as ozone pre-cursors. The largest contributor to the predicted VOC emissions is the composting operations with approximately 43 percent of the total emissions. The compost operations would be subject to the New Source Review requirements of the SJVAPCD (Rule 2201), including the requirement to provide BACT. MVD is proposing to install the Gore membrane composting system with demonstrated VOC control efficiency of 98 percent or better, which has been accepted as BACT by several air agencies. It is expected that SJVAPCD will recognize the Gore system as BACT for the process, as well. With BACT, the VOC emissions from the proposed Project are less than significant. The largest contributors to the NOx emissions are the operation of offroad vehicles necessary to manage wastes at the site such as front-end loaders, excavator and water trucks, and the operation of the diesel-fueled tub grinders. As mobile sources, the offroad vehicles are subject to the CARB offroad equipment regulations which require the use of EPA-certified Tiered engines. The tub grinders may be permitted through the SJVAPCD as stationary sources or permitted through the CARB Portable Equipment Registration Program (PERP). If permitted through SJVAPCD, the engine would have to meet BACT. Through PERP, the engine would have to meet the Tier 2 engine standards (at a minimum). With the application of BACT and/or the use of the CARB-required EPA-certified Tiered engines, Project impacts from NOx emissions are expected to be less than significant.

#### 3.2.2.3 Greenhouse Gas Emissions Impacts

GHG emissions are reported for construction in Table 3-2 and for operations in Table 3-4 (the Project without AD) and Table 3-5 (the Project with AD). The GHG emissions during the construction phase are due to fuel combustion in construction equipment. The major contributors to GHG emissions during Project operations are the due to composting and anaerobic digestion operations.

The SJVAPCD CEQA significance threshold for GHG emissions would require all stationary source projects with increased GHG emissions to implement performance based standards, or otherwise demonstrate that project specific GHG emissions have been reduced or mitigated by at least 29 percent, as compared to Business-as-Usual (as defined in the guidance), consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan.

As this Project is proposed as a landfill diversion project, it is reasonable to assume that if not processed at the proposed Project, the wastes would be landfilled. Organic matter will

decompose in a landfill under anaerobic conditions to form landfill gas (LFG) consisting of methane and carbon dioxide. In a typical landfill, the LFG is collected at 75 percent capture efficiency. The LFG is either flared or burned in an engine to produce power, depending on the landfill. Inert materials have no direct impact to GHG emissions; however, by not recycling materials, there would be indirect GHG emissions associated with the production of new materials.

With the proposed Project, the wastes will be processed via anaerobic digestion into CNG which will be collected at 100 percent capture and compressed for use as vehicle fuel, compost which will be used locally as fertilizer, wood chips that will be used locally as either ground cover or fuel for biomass power plants, and a variety of source-separated inert materials that are recycled back into industry. While difficult to quantify, the net reduction to the GHG emissions from waste management due to the landfill diversion process is expected to greatly exceed the 29 percent reduction threshold established by the SJVAPCD as significant; thus, the proposed Project is expected to be less than significant with respect to GHG emissions.

**3.3 Result in a cumulatively considerable net increase of any criteria pollutant for which the project is non-attainment under applicable federal or state ambient air quality standards (including releasing emissions which exceed quantitative thresholds for ozone precursors)**

***SUMMARY OF IMPACT ANALYSIS:** Because Project VOC and NO<sub>x</sub> emissions do not exceed the CEQA thresholds for stationary source operations, the Project is expected to have a **Less than Significant** air quality impact for this criterion without mitigation. All other Project-related activities were determined to be less than significant.*

**3.3.1 Significance Criteria**

Any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact. Impacts of local pollutants (CO, HAPs) are cumulatively significant when modeling shows that the combined emissions from the project and other existing and planned projects will exceed air quality standards.

**3.3.2 Impact Assessment**

There are two large proposed projects in the City of Kerman:

- A Walmart Store to be located at the intersection of Whitesbridge Road (SR180) and Goldenrod. This project is set to begin construction in March 2012. It is located approximately 3 miles northeast of the proposed Mid Valley project.
- The Kearney Palms III Senior Apartments located at the intersection of Kearney Blvd. and 9<sup>th</sup> Street. It began construction in May 2011. It is approximately 1.5 miles northeast of the Mid Valley project site.

Construction of the Walmart Store and Kearney Palms III Senior Apartments projects are expected to be complete prior to the start of construction of the proposed Project. Therefore, there will be no cumulative construction-related air quality impacts from the proposed Project and these other projects. The Walmart Store and Kearney Palms III Senior Apartments projects may have small stationary emission sources (boilers, water heaters, etc.) and will both have

indirect emissions from vehicles: customer and employee trips for Walmart and resident and employee trips for the Senior Apartments. However, given the distance of these activities from the Project site, no cumulative air quality impacts are expected due to Project operations.

### 3.4 Expose sensitive receptors to substantial pollutant concentrations

***SUMMARY OF IMPACT ANALYSIS:*** *Because equipment will be permitted in compliance with air toxic control requirements, the Project will have a **Less Than Significant** air quality impact (and accidental releases, typically associated with hazardous materials storage and handling) for this criterion without mitigation.*

#### 3.4.1 Significance Criteria

##### 3.4.1.1 Toxic Air Contaminants/Hazardous Air Pollutants

Any project with the potential to expose sensitive receptors (including residential areas) or the general public to substantial levels of hazardous air pollutants (HAP, also includes toxic air contaminants [TAC]) would be deemed to have a potentially significant impact. This applies to receptors locating near existing sources of TAC, as well as sources of HAP/TAC locating near existing receptors.

Particular attention should be placed on either the location of a facility that has the potential to emit HAP/TAC near an existing school or the location of a new school site near facilities that have the potential to emit HAP/TAC. Both scenarios have specific regulations that govern agency actions.

Proposed development projects that have the potential to expose the public to TAC/HAP in excess of the following thresholds in Table 3-6 would be considered to have a significant air quality impact. These thresholds are based on the SJVAPCD's Risk Management Policy.

**Table 3-6: Thresholds of Significance for Toxic Air Contaminants**

Parameter	Threshold of Significance
Probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds	10 in one million
Ground-level concentrations of non-carcinogenic toxic air contaminants would result in a Hazard Index for the Maximally Exposed Individual (MEI)	1.0 (unitless)

##### 3.4.1.2 Accidental Releases/Acutely Hazardous Air Emissions

The determination of significance for potential impacts from accidental releases of acutely hazardous air pollutants should be made in consultation with the local administering agency of the Risk Management Prevention Program. The county health department, Office of Emergency Services, or local fire department is usually the administering agency.



### 3.4.2 Impact Assessment

#### 3.4.2.1 Toxic Air Contaminants/Hazardous Air Pollutants

The Project may emit HAP/TAC from several of the stationary sources, including the boiler(s), flare, anaerobic digester, and possibly the compost operations. Many (possibly all) of these stationary sources will require air permits from the SJVAPCD. All projects requiring air quality permits from the SJVAPCD are evaluated for HAP/TAC emissions. The SJVAPCD will ensure that the health risk to the public from Project operations does not exceed the significance thresholds for TAC by the application of the *Risk Management Policy for Permitting New and Modified Sources* (APR 1905) during the permit application review process and by placing operating conditions on any permits issued for the Project. Compliance with the permit conditions will ensure that the Project does not exceed the significance thresholds and, therefore, the Project will have a less-than-significant air quality impact.

#### 3.4.2.2 Accidental Releases/Acutely Hazardous Air Emissions

The Project is not expected to store or use acutely hazardous materials; however, the anaerobic digester (AD) will produce biogas (a mixture consisting primarily of methane and carbon dioxide) that may contain hydrogen sulfide ( $H_2S$ ), an acutely hazardous material, as an impurity. The AD, and subsequent process operations, such as biogas storage, biogas upgrading (a process to remove  $H_2S$  and  $CO_2$  from the biogas) and compression will have overpressure relief to the flare. The overpressure relief prevents accidental releases of biogas to atmosphere by directing excess biogas to the flare for destruction. The flare will convert  $H_2S$  to sulfur oxides ( $SO_x$ ), thus preventing an accidental release of  $H_2S$  to atmosphere.

Strict adherence to design codes and standards for overpressure protection for the AD and subsequent process steps will ensure that the Project does not cause an accidental release of an acutely hazardous material and, therefore, the Project will have a less-than-significant air quality impact.

### 3.5 Create objectionable odors affecting a substantial number of people

***SUMMARY OF IMPACT ANALYSIS:*** *Because the Project will be permitted in compliance with air emission control requirements that effectively reduce odors, and the distance to the nearest receptor, the Project will have a **Less Than Significant with Mitigation** air quality impact for this criterion without mitigation.*

#### 3.5.1 Significance Criteria

While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the SJVAPCD. Any project with the potential to frequently expose members of the public to objectionable odors will be deemed to have a significant impact. Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc., warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas. Analysis of potential odor impacts should be conducted for the following two situations:

- Generators – projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and
- Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

The SJVAPCD has determined some common types of facilities that have been known to produce odors in the region. These are presented in Table 3-7 along with a reasonable distance from the source where the degree of odors could possibly be significant. A Lead Agency should use Table 3-7 to determine whether the proposed project, either as a generator or a receiver, would result in sensitive receptors being within the distances indicated in Table 3-7. If the proposed project would result in sensitive receptors being located closer than the screening level distances indicated in Table 3-6, a more detailed analysis, as described in Section 5 of the GAAQI, should be conducted.

**Table 3-7: Project Screening Trigger Levels  
For Potential Odor Sources**

Type of Facility	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Food Processing Facility	1 mile
Rendering Plant	1 mile

Because offensive odors rarely cause any physical harm and no requirements for their control are included in state or federal air quality regulations, the SJVAPCD has no rules or standards related to odor emissions, other than its nuisance rule. Any actions related to odors are based on citizen complaints to local governments and the SJVAPCD. Lead Agencies can make a determination of significance based on a review of District complaint records as described in Section 5 of the GAAQI. For a project locating near an existing source of odors, the impact is potentially significant when the project site is at least as close as any other site that has already experienced significant odor problems related to the odor source. Significant odor problems are defined as:

- More than one confirmed complaint per year averaged over a three year period, or
- Three unconfirmed complaints per year averaged over a three-year period.

For projects locating near a source of odors where there is currently no nearby development and for odor sources locating near existing receptors, the determination of significance should be based on the distance and frequency at which odor complaints from the public have occurred in the vicinity of a similar facility.

If a proposed project is determined to be a potentially significant odor source, mitigation measures should be required. For some projects, operational changes, add-on controls, or process

changes, such as carbon absorption, incineration, or relocation of stacks/vents can reduce odorous emissions. In many cases, however, the most effective mitigation strategy is to provide a sufficient distance, or buffer zone, between the source and the receptor(s).

Recent experience has shown that locating upwind from an odor source does not necessarily eliminate potential problems. Even places with reliable prevailing winds experience days with light and variable winds and days with winds opposite prevailing winds related to the passage of storms. Residents in these upwind areas, while exposed less frequently, may be more sensitive to the odors.

### *3.5.2 Impact Assessment*

The Project will be located within 1 mile of the nearest public receptor. The Project proposes to install and operate two processes that have the potential for offsite impacts associated with odor: 1) composting, and 2) anaerobic digestion. Odorous compounds inherently form as raw organic materials decompose. This applies to both aerobic (i.e. with oxygen) and anaerobic (i.e. without oxygen) decomposition, and applies to both naturally occurring organic substances (e.g. leaves) and those resulting from human activities (e.g. biosolids, food residues). Odor impacts from these activities are discussed in the following sections.

#### *3.5.2.1 Composting*

Decomposition of organic materials inherently generates a large number and variety of volatile chemical compounds that humans can sense as odors. A compound's volatility, its conversion to a gaseous phase and subsequent migration into the air, is what allows it to be sensed by human noses. The compounds primarily responsible for malodors are thought include organic sulfides (particularly dimethyl disulfide [DMDS] and dimethyl sulfide [DMS]), mercaptans, amines, volatile fatty acids (VFAs), and terpenes. With certain feedstocks, ammonia and, to a lesser extent,  $H_2S$ , can be emitted. Important factors in the formation and fate of odor-causing compounds include the feedstocks, nutrient balances, oxygen, aeration, time, moisture, bulk density and porosity, temperature and pH.

MVD plans to install the Gore membrane composting system. The Gore membrane is expected to retain the malodorous VOC in the compost pile for sufficient time to decompose the compounds and eliminate the majority of the emissions and associated odors.

In addition, all commercial composting facilities in California are required to prepare, implement, and maintain a site-specific Odor Impact Minimization Plan (OIMP) pursuant to Title 14 California Code of Regulations, Chapter 3.1 §17863.4. In addition, the SJVAPCD has two rules applicable to composting at the proposed Project: Rule 4565 Biosolids, Animal Manure, and Poultry Litter Operations, and Rule 4566, Organic Material Composting Operations. With the development and implementation of the OIMP and compliance with SJVAPCD Rules 4565 and 4566, the odor impact from composting operations is expected to be less than significant.

#### *3.5.2.2 Anaerobic Digestion*

Factors that affect odor impacts include the proposed AD facility design, sensitive receptor proximity, and exposure duration. Anaerobic digestion is the biological decomposition of organic matter in the absence of oxygen. As a result, odorous compounds such as ammonia and  $H_2S$  are generated and could be released into the environment. The anaerobic digestion process

occurs naturally in marshes, wetlands and is the principal decomposition process in landfills. However, in the operation of AD facilities, the digestion process occurs in a closed system. Volatile organic compounds are broken down through the anaerobic digestion process, and exhaust is processed in a controlled environment.

The proposed Project will digest organic matter in a closed pressure vessel. The resulting biogas will be stored in a closed tank, processed to remove impurities in a scrubber, and the resulting purified methane would be compressed for use in vehicles. Any unplanned released from any of the pressure vessels would vent to flare for destruction of volatile compounds and H<sub>2</sub>S. Thus odors are not expected during normal processing. However, the collection transport, storage, and pre-processing activities of the potentially odiferous organic substrates for digestion and the resultant digestate could produce nuisance odors at the facility. With the development and implementation of the OIMP, the odor impact from anaerobic digestion operations is expected to be less than significant.

### **3.6 Mitigation Measures**

Consistent with accepted CEQA policy, compliance with mandatory rules and regulations, including the application of BACT emissions controls, is not considered mitigation. However, as discussed in this Air Quality Technical Study, the Project will implement the following control measures to ensure that Project impacts are minimized to the extent practical and feasible:

- Implement the control measures identified in SJVAPCD Regulation VIII to control PM<sub>10</sub> emissions from construction activities; and
- Prepare, implement, and maintain a site-specific Odor Impact Minimization Plan (OIMP).



#### **4.0 REFERENCES**

- California Department of Resources Recycling and Recovery (CalRecycle), Final Program Environmental Impact Report for the Statewide Anaerobic Digester Facilities for the Treatment of Municipal Organic Solid Waste, SCH No. 2010042100, June 2011.
- San Joaquin Valley Unified Air Pollution Control District, 2007 Ozone Plan, Chapter 6: District Regulatory Control Measures for Stationary Sources, April 30, 2007
- San Joaquin Valley Unified Air Pollution Control District, 2007 Ozone Plan, Chapter 6: District Regulatory Control Measures for Stationary Sources, Table 6-1, revised December 18, 2008.
- San Joaquin Valley Unified Air Pollution Control District, District Strategy 2008 PM2.5 Plan, June 17, 2010.
- San Joaquin Valley Unified Air Pollution Control District, 2007 PM10 Maintenance Plan and Request for Redesignation, September 20, 2007
- San Joaquin Valley Unified Air Pollution Control District, Guideline for Assessing and Mitigating Air Quality Impacts (GAAQI), January 10, 2002 revision.
- San Joaquin Valley Unified Air Pollution Control District, District Policy Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency, December 17, 2009.
- San Joaquin Valley Unified Air Pollution Control District, Risk Management Policy for Permitting New and Modified Sources, APR 1905, March 2, 2001.
- City of Kerman Planning & Development Services Department website:  
[http://www.cityofkerman.net/current\\_planning\\_projects.html](http://www.cityofkerman.net/current_planning_projects.html), accessed March 27, 2012.
- Integrated Waste Management Board, Comprehensive Compost Odor Response Project, Contractor's Report to the Board, San Diego State University, IWM 03039, March 2007.



## 5.0 AIR QUALITY TECHNICAL REPORT AUTHORS

This air quality technical report was prepared by Yorke Engineering, LLC. The company contact information and the individuals responsible for the preparation of this report are identified below:

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## **APPENDIX A – CONSTRUCTION EMISSION ESTIMATES**

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Users\kl\AppData\Roaming\Urbemis\Version9a\Projects\MVD Expansion.urb924

Project Name: Mid Valley Disposal Recycling & Transfer Station Expansion - Phase I

Project Location: San Joaquin Valley APCD

In-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

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Summary Report:

# CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
13 TOTALS (tons/year unmitigated)	1.62	2.28	2.25	0.00	2.19	0.14	2.33	0.46	0.13	0.59	397.96
13 TOTALS (tons/year mitigated)	1.62	2.28	2.25	0.00	1.24	0.14	1.38	0.26	0.13	0.39	397.96
Percent Reduction	0.00	0.00	0.00	0.00	43.28	0.00	40.72	43.16	0.00	33.85	0.00
14 TOTALS (tons/year unmitigated)	1.44	1.23	1.44	0.00	0.01	0.07	0.08	0.00	0.06	0.07	269.88
14 TOTALS (tons/year mitigated)	1.44	1.23	1.44	0.00	0.01	0.07	0.08	0.00	0.06	0.07	269.88
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.13	0.15	0.12	0.00	0.00	0.00	176.38

## OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.67	1.09	6.68	0.01	0.56	0.13	657.05

## SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.80	1.24	6.80	0.01	0.56	0.13	833.43

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

[illegible]

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014	1.44	1.23	1.44	0.00	0.01	0.07	0.08	0.00	0.06	0.07	269.88
Building 01/01/2014-06/30/2014	0.22	1.23	1.43	0.00	0.01	0.07	0.08	0.00	0.06	0.07	268.42
Building Off Road Diesel	0.17	0.84	0.64	0.00	0.00	0.05	0.05	0.00	0.05	0.05	104.57
Building Vendor Trips	0.03	0.37	0.31	0.00	0.00	0.01	0.02	0.00	0.01	0.01	100.57
Building Worker Trips	0.01	0.02	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.28
Coating 07/01/2014-08/31/2014	1.22	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46
Architectural Coating	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46

Phase Assumptions

Phase: Fine Grading 1/1/2013 - 1/31/2013 - Default Fine Site Grading Description

Total Acres Disturbed: 38

Maximum Daily Acreage Disturbed: 9.5

Negative Dust Level of Detail: Default

0 lbs per acre-day

In Road Truck Travel (VMT): 0

Off-Road Equipment:

Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 2/1/2013 - 3/31/2013 - Default Paving Description

Cres to be Paved: 19

Off-Road Equipment:

Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

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Phase: Building Construction 4/1/2013 - 10/31/2013 - Default Building Construction Description  
Off-Road Equipment:

- Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day
- Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
- Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day
- Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
- Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Building Construction 1/1/2014 - 6/30/2014 - Type Your Description Here

Off-Road Equipment:

- Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day
- Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
- Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day
- Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
- Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 1/1/2013 - 12/31/2013 - Default Architectural Coating Description

- File: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130
- File: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130
- File: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
- File: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Phase: Architectural Coating 7/1/2014 - 8/31/2014 - Type Your Description Here

- File: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130
- File: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130
- File: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
- File: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

**CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated**[illegible]



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014	1.44	1.23	1.44	0.00	0.01	0.07	0.08	0.00	0.06	0.07	269.88
Building 01/01/2014-06/30/2014	0.22	1.23	1.43	0.00	0.01	0.07	0.08	0.00	0.06	0.07	268.42
Building Off Road Diesel	0.17	0.84	0.64	0.00	0.00	0.05	0.05	0.00	0.05	0.05	104.57
Building Vendor Trips	0.03	0.37	0.31	0.00	0.00	0.01	0.02	0.00	0.01	0.01	100.57
Building Worker Trips	0.01	0.02	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.28
Coating 07/01/2014-08/31/2014	1.22	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46
Architectural Coating	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 1/1/2013 - 1/31/2013 - Default Fine Site Grading Description  
 x Soil Stabilizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:  
 M10: 55% PM25: 55%

Area Source Unmitigated Detail Report:AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.01	0.15	0.12	0.00	0.00	0.00	176.38
Earth							
Landscape							
Consumer Products							
Architectural Coatings	0.12						
TOTALS (tons/year, unmitigated)	0.13	0.15	0.12	0.00	0.00	0.00	176.38

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

**OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated**

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
General light industry	0.67	1.09	6.68	0.01	0.56	0.13	657.05
<b>TOTALS (tons/year, unmitigated)</b>	<b>0.67</b>	<b>1.09</b>	<b>6.68</b>	<b>0.01</b>	<b>0.56</b>	<b>0.13</b>	<b>657.05</b>

**Operational Settings:**

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2013 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
General light industry		3.89	1000 sq ft	114.00	443.46	3,478.72
					443.46	3,478.72

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.5	0.7	99.1	0.2
Light Truck < 3750 lbs	12.1	1.7	92.5	5.8
Light Truck 3751-5750 lbs	21.1	0.9	98.6	0.5
Medium and Heavy Truck 5751-8500 lbs	11.9	0.8	99.2	0.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light-Heavy Truck 8501-10,000 lbs	2.4	0.0	75.0	25.0
Light-Heavy Truck 10,001-14,000 lbs	0.9	0.0	44.4	55.6
Medium-Heavy Truck 14,001-33,000 lbs	1.3	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	2.7	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.9	56.4	43.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential				Commercial	
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Suburban Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Top speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
Number of Trips - Residential	32.9	18.0	49.1			

Number of Trips - Commercial (by land use)

General light industry

23.0

11.5

65.5

Operational Changes to Defaults

## **APPENDIX B – OPERATING EMISSION ESTIMATES**

## Emissions without Anaerobic Digestion

Equipment	Qty	Hp	Operating Hours	
			hrs/wk	hrs/day
Excavator	1	164	30	5
Loader	2	150	30	5
Forklift	2	48	30	5
Grinder	2	500	30	5
Water Truck	2	280	20	3.33

Operating Parameters			
Operating Hours - Compost	24	hrs/day	
Operating Hours - AD	24	hrs/day	
Flare Operation	0	hrs/yr	
Operating Days - Compost	365	day/yr	
Operating Days - AD	365	day/yr	
Operating Days - Receiving	312	day/yr	
Operating Days - screening	312	day/yr	
Operating Days - grinding	312	day/yr	
Operating Days - MSW Unloading	312	day/yr	
Screening Schedule	12	hrs/day	
Screening and sorting	300	tons/day	
AD Throughput	0	tons/day	
Composting Throughput	200	tons/day	
Composting of AD	0	tons/day	
MSW Unloading	400	tons/day	

Process	ROG (tons/yr)	CO (tons/yr)	NOx (tons/yr)	SOx (tons/yr)	PM10 (tons/yr)	CO2e (tons/yr)
<b>Onsite Emission Sources</b>						
CD&D/Inerts/Self-Haul	0.24	4.47	2.58	0.01	0.90	128
Processed Organics	4.17	0.00	0.00	0.00	0.27	16,550
MSW Unloading Operations	0.00	0.00	0.00	0.00	0.02	0
Off-Road Vehicles	0.27	7.54	2.37	0.03	0.11	318
On-Road Vehicles	0.10	9.24	0.55	0.00	3.56	9
<b>Offsite Emission Sources</b>						
Vehicle Traffic	0.67	6.68	1.09	0.01	0.56	657
Total	5.45	27.92	6.58	0.05	5.42	17,662
SJVAPCD Significance Threshold	10.00	---	10.00	---	---	---
Significant (Yes/No)	No	NA	No	NA	NA	---

INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

All Emissions in Tons per Year

EMISSION SOURCE

C&D/Inerts/Self-Haul

- Sorting/Load-In
- Conveyor Drop Points
- Screening Operations
- Tub Grinder

Processed Organics

- Covered Composting

MSW Unloading Operations

Off-Road Vehicles

- Excavator
- Loaders
- Forklift

On-Road Vehicles

Water Truck

Vehicle Traffic on Paved Roads

Vehicle Traffic on Unpaved Roads

NOTES

ROG	CO	NOx	SOx	PM10	CO2	CH4	N2O	CO2e
				0.17				
				0.10				
				0.61				
0.24	4.47	2.58	0.01	0.02	127.14	0.01	0.00	127.56
4.17				0.27	15,505.30	40.06	0.66	16,549.75
				0.02				
0.09	0.52	0.70	0.00	0.04	87.53	0.01	0.00	87.82
0.15	0.91	1.20	0.00	0.07	158.16	0.01	0.00	158.65
0.02	6.10	0.47	0.03	0.00	71.53	0.00	0.00	71.64
0.10	9.24	0.55	0.00	0.00	9.36	0.00	0.00	9.38
				0.30				
				3.26				

PM WORKSHEET # NOTE #

0.36	2
0.28	1
1.76	1
	4

1

IDATAI	6
	8

11

11

12

13

2

13

2

- 1 Screen diesel engine emissions assumed identical to tub grinder engines.
- 2 PM emissions calculated from PM10 emissions, assuming PM10 is 60 % of total PM emissions.
- 3 Fields marked IDATAI await emission factors and calculations completion.



# INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

C&D + Inerts + Self Hauling: Emissions from Screening and sorting

## EMISSIONS BASIS

Number of Emission Points:		3 Screen 4 Conveyor Transfer Points	BASES Estimate Estimate
Maximum Daily Operating Hours		300 ton/day	
Weekly Hours of operation <sup>1</sup>		25.00 ton/hr 12 hr/day	
Annual Hours of Operation		84 hours/week 52	
Days/yr		3744 hours/year	
Annual Amount of Waste Processed <sup>1</sup>		312 days/yr 93,600 tons/year	Hourly average, based on 12 hr/day @ 300 tpd
Estimated PM Control Efficiency (water application)		50% Screen Operation	
Estimated PM Control Efficiency (water application)		50% Conveyor Transfer Points	Based on 300 tpd @ 312 day/yr
			Assumed Water Spray Abatement
			Assumed Water Spray Abatement

<sup>1</sup> Hours of operation and maximum amount of material processed in Source -15 provided by Waste Management on 5/12/2011

## SCREENING CALCULATIONS

MRF Screen Emissions	Pollutant	Material Throughput tons/yr	Emission Factor <sup>(1)</sup> lb/ton-screen	Number of Screens Sorters	Potential Uncontrolled Emissions - Screen Sources <sup>(2)</sup>		Abatement Efficiency	Controlled Potential Emissions - Screen Sources <sup>(3,4)</sup>	
					highest lb/day	tons/yr		(lbs/yr)	(tons/yr)
Screen	Total PM	93,600	0.0250	3	22.5	7,020.00	Percent	3,510	1.795
	PM10	93,600	0.0087		7.8	2,442.96		1,221	0.611
									lbs/day
									11.25
									3.915

## CONVEYOR TRANSFER CALCULATIONS

Krause Emission Source	Pollutant	Amount of Material in One Conveyor Transfer Point tons/yr	Emission Factor <sup>(1)</sup> lb/ton-transfer point	Number of Conveyor Transfer Points	Potential Uncontrolled Emissions, Conveyor Transfer Points <sup>(2)</sup>		Abatement Efficiency	Controlled Potential Emissions - Conveyor Transfer Points <sup>(3)</sup>	
					highest lb/day	(tons/yr)		(lbs/yr)	(tons/yr)
Conveyor Transfer Points	Total PM	93,600	0.0030	4	3.6	1,123	Percent	562	0.281
	PM10	93,600	0.0011		1.3	0.562		206	0.103
									lbs/day
									1.8
									0.66

## NOTES

- Emission factors taken from Table 11.19.2-2 of AP-42 Chapter 11.19.2 Crushed Stone Processing and Pulverized Mineral Processing.
- Uncontrolled Potential Emissions = Amount of Material x Emission Factor.
- Controlled emissions assume 50 percent PM abatement by water application. Emissions Factors & AP 42, Compilation of Air Pollutant Emission Factors, Section 13, November 2006 provides control efficiencies for water suppression on unpaved roads ranging from 10 to 74%.
- Controlled Potential Emissions = Amount of Material x Emission Factor x (1-control efficiency).
- PM emissions controlled by water application (50% PM abatement)

## INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

C&amp;D + Inerts + Self Hauling: Emissions from Load-In

## EMISSIONS BASIS

Maximum Input Rate 300 tpd 93,600 ton/yr  
 Estimated PM Control Efficiency (water application) 50% Screen Operation

PM<sub>x</sub> Emissions

$$E_x = k * (0.0032)^* (((U/5)^{1.3}) / ((M/2)^{1.4}))$$

(particle size multiplier)\*(constant)\*((mean wind speed)/(material moisture content)) = lb/ton  
 (lb/ton\*amt of material handled per year (tons)) = lb/yr

## Data Inputs:

Variables Required by Material Handling Equation #1 in AP-42 Chapter 13.2.4.  
 and Calculated Emission Factors

Category, Variable	Value	Units	Range <sup>a</sup>	BASIS assumed
Wind speed	10.1	mph		
Surface Material Moisture Content, M	1.0	%	0.46 - 5.0	
No. of Days of Waste Acceptance	312	day		
Particle Size Multiplier - PM <sub>2.5</sub> , k	0.053			AP-42
Particle Size Multiplier - PM <sub>10</sub> , k	0.35			AP-42
Particle Size Multiplier <sup>b</sup> - PM <sub>30</sub> , k	0.74			AP-42
Calculated Emission Factor - PM <sub>2.5</sub> , E	0.001116412	lb/ton		
Calculated Emission Factor - PM <sub>10</sub> , E	0.00737	lb/ton		
Calculated Emission Factor - PM <sub>30</sub> , E	0.01559	lb/ton		

<sup>a</sup>The range is specific for various limestone products, and is conservatively dry for recovered fines.

<sup>b</sup>PM<sub>30</sub> is sometimes termed "suspensible particulate" (SP) and is often used as a surrogate for "total suspended particulate" (TSP) per AP-42.

Note: The emission factor equation is valid for the following ranges: silt content (0.44 - 19%), moisture content (0.25 - 4.8%), and wind speed (1.3 - 15 mph). The confidence factor decreases if any value (used) is beyond these ranges.

Source: U.S.E.P.A., Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources ("AP-42") 5th Ed., November 2006, Section 13.2.4

## EMISSIONS CALCULATIONS

Amount of Material Handled Per Day 300 ton/day  
 No. of Days Year 312 days  
 Total Material Loaded Out Per Year 93,600 tons per year

Abatement Efficiency 50%

Category	Uncontrolled Emissions, Load-In		Controlled Emissions, Load-In		Controlled Emissions, Load-In
	Value	Units	Value	Units	
Calculated Emissions - PM <sub>2.5</sub>	104	lb/yr			
Calculated Emissions - PM <sub>10</sub>	690	lb/yr	0.026	ton/yr	0.167
Calculated Emissions - PM <sub>30</sub>	1459	lb/yr	0.173	ton/yr	1.106
			0.365	ton/yr	2.338

## NOTES

- 1 Emission factors taken from AP-42
- 2 PM emissions controlled by water application (50% PM abatement).

INCREMENTAL EMISSIONS ESTIMATE  
(1,000 tpd Incremental Waste Input)

Tub Grinder

Stationary CI Engine - C&D + Inerts + Self Hauling

EMISSIONS BASIS

Hours of Operation per Day	5
Days of Operation per Year	312
Hours of Operation per Year	1560
Engine hp Rating	500
# of Engines	2
Fuel Density	7.5 lb/gal
Fuel Heat Content	18536 Btu/lb
Fuel Consumption Rate	378 lb/hr
total, both engines	

EMISSIONS CALCULATIONS

	ROG	CO	NOx	SOx	PM10	CO2	CH4	N2O	CO2e
Emission Factor	0.14 g/bhp-hr	2.6 g/bhp-hr	1.5 g/bhp-hr	0.0051 g/bhp-hr	0.01 g/bhp-hr	74 kg/mm8tu	0.003 kg/mm8tu	0.0006 kg/mm8tu	
Emissions, lb/day	1.54	28.63	16.52	0.06	0.11	814.98	0.03	0.01	
Emissions, lb/yr	481.1	8,933.9	5,154.2	17.5	34.4	254,273	10	2	817.72
									255,129

NOTES

- 1 Assumed Tier 4 Emission Factors
  - 2 SOx calculations based on 15 ppmw as sulfur
  - 3 Fuel use from EPA: 7000 Btu/Hp-hr
  - 4 GHG Emission Factors from 40 CFR Part 98, Table C-1
- $$SO_x = \frac{7,000 \text{ Btu}}{\text{Hp} - \text{hr}} \times \frac{0.000015 \text{ g S}}{\text{g fuel}} \times \frac{454 \text{ g}}{\text{lb}} \times \frac{\text{lb}}{10,536 \text{ Btu}} \times \frac{64 \text{ g SO}_2}{32 \text{ g S}} = 0.0051 \frac{\text{g}}{\text{Hp} - \text{hr}}$$

INCREMENTAL EMISSIONS ESTIMATE  
(1,000 tpd Incremental Waste Input)

Covered Composting - Processed Organics

EMISSIONS BASIS

Hours of Operation per Day	24
Days of Operation per Year	365
Composting Rate	200 ton/day

<b>PM10 Emission Factor-Override</b>	
$E \text{ (lb/ton)} = k (0.0032) [(U/5)^{1.5} / (M/2)^{1.4}]$	
$k = 0.35 \text{ (for } <10 \text{ } \mu \text{ particles)}$	
$U = 10 \text{ mph wind speed (ave)}$	
$M = \text{moisture content (assume 1\%)}$	
$E = 0.35 (0.0032) [(10/5)^{1.5} / (1/2)^{1.4}] =$	0.0073 lb/ton
<b>VOC Factor =</b>	
<b>Control Efficiency</b>	
<b>VOC Factor, Controlled =</b>	
<b>CO2 Factor =</b>	
<b>CH4 Factor =</b>	
<b>N2O Factor =</b>	

SIVAPCD Report, Compost VOC Emission Factors, September 15, 2010  
Based on use of Gore membrane

See Worksheet 10  
See Worksheet 10  
See Worksheet 10

EMISSIONS CALCULATIONS

	PM10	VOC	CO2	CH4	N2O
Emissions, lb/day	1.46	22.84	84960.57	219.52	3.59
Emissions, ton/yr	0.27	4.17	15505.30	40.06	0.66

NOTES

- 1 98% abatement efficiency of Gore membrane for covered composting operations
- 2 Composting emission factors calculated from October 2011 Report: GHG Emission from Covered Windrow Composting, Calculation detailed in Worksheet 10.

INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

MSW Unloading Operations

EMISSIONS BASIS/CALCULATIONS

Days of Operation per Year                      312  
Throughput    400 ton/day

$E = 0.35 (0.0032) [ (5/5)^{1.3} / (5/2)^{1.4} ] =$

k = 0.35 (for <10 μ particles)

U = 5 mph wind speed (ave)

M = moisture content ( assume 5%)

3.10E-04 lb/ton                      AP-42 Section 13.2.4-4

PM10 Emissions

1.24E-01 lb/day

1.93E-02 ton/yr

INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

Emission Factor Derivation - Greenhouse Gases - Composting

Reference: Greenhouse Gas Emissions from covered windrow composting with controlled ventilation; Ermolaev, Pell, et al, Waste Management & Research, 12 October 2011.

	Metric	English	NOTES
Windrow Volume:	72 cu m	2543 cu ft	
Duration:	20 day	20 day	
Exhaust Rate:	450 cu m/hr	15,891 cu ft/hr	
Compost Density:	1 kg/cu dm	35 lb/cu ft	
Mass Compost:		44.41 ton	
R (Ideal Gas) @ 60 F		379 scf/lb-mole	

GHG Compound	CH4	CO2	N2O	
Molecule Weight	16.04 lb/lb-mole	44.01 lb/lb-mole	44.02 lb/lb-mole	1
Maximum Average Concentration	151 ppm	21,300 ppm	1 ppm	

Mass Emissions, 20 day basis:

	49 lb	18,867 lb	0.8 lb
EF, lb GHG/ton	1.10	424.80	0.02

Assumptions/Basis

- 1. Langes Handbook

INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

Offroad Vehicle Emissions Calculations

EMISSIONS BASIS

All emission factors taken from SCAB Fleet Average Emission Factors for diesel-fueled equipment

N2O calculated from assumed ratio of N2O to CO2:

kg/MIMBtu 74  
3.00E-04  
(N2O/CO2 Factor) 4.05E-06

EMISSIONS CALCULATIONS - EXCAVATOR

Surrogate Excavators

Hip 164  
Hours of Operation per Day 5  
Number 1  
Vehicle Speed 0.5 mph  
Total Daily Miles 2.5  
Days/year 312 day/yr

ROG	CO	NOx	SOx	PM10	CO2	CH4	N2O	CO2e
Emission Factor, lb/hr	0.1208	0.8932	0.0013	0.0512	112.2216	0.0109	0.0005	113
Emissions, lb/day	0.604	4.466	0.006	0.256	561.108	0.055	0.002	563
Emissions, lb/yr	188.46	1393.33	1.97	79.91	175065.67	17.00	0.71	175643

EMISSIONS CALCULATIONS - LOADERS

Surrogate Tractors/Loaders/Backhoes

Hip 150  
Hours of Operation per Day 5  
Number 2  
Vehicle Speed 0.5 mph  
Total Daily Miles 5  
Days/year 312 day/yr

ROG	CO	NOx	SOx	PM10	CO2	CH4	N2O	CO2e
Emission Factor, lb/hr	0.0988	0.5861	0.0011	0.0428	101.3869	0.0089	0.0004	102
Emissions, lb/day	0.988	5.861	0.011	0.428	1013.869	0.089	0.004	1017
Emissions, lb/yr	308.21	1828.65	3.56	133.48	316327	28	1	317309

EMISSIONS CALCULATIONS - FORKLIFTS

Hip 48  
Hours of Operation per Day 5  
Day/yr 312  
Number 2  
Vehicle Speed 5 mph  
Total Daily Miles 50  
Fuel Use 3.67 gal/hr

Pollutant  
NOx + HC  
CO  
SOx  
PM10  
CO2  
CH4  
Emission Factor  
3 gm/hp-hr  
37 gm/hp-hr  
4.6 lbs/1000 gal  
0.28 lbs/1000 gal  
12500 lbs/1000 gal  
0.2 lbs/1000 gal  
Reference  
LSI Regulation for 2007 and later  
LSI Regulation for 2007 and later  
SCAQMD AER  
SCAQMD AER  
AP-42  
AP-42

ROG	CO	NOx	SOx	PM10	CO2	CH4	N2O	CO2e
Emission Factor, lb/hr	0.0159	3.9119	0.3013	0.0169	45.85	0.0007	0.0002	45.92
Emissions, lb/day	0.159	39.119	3.013	0.169	458.515	0.007	0.002	459
Emissions, lb/yr	49.5	12205.1	940.1	52.6	143056.8	2.3	0.6	143285

INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

Onroad Vehicle Emissions Calculations

EMISSIONS BASIS (GLOBAL ASSUMPTIONS)

Average Vehicle Speed	5	mph				
Average Diesel Vehicle Mileage	7.5	mpg				
Distance per Vehicle	2	mile/day				
ROG EF	0.15	g/bhp-hr	0%	Controlled EF	Reference	Except for Water Trucks
CO EF	14.40	g/bhp-hr	0%			
NOx EF	2.85	g/bhp-hr	70%			
SOx EF	0.00163	lb/mmBtu	0%			
PM10 EF	0.10	g/bhp-hr	90%			
CO2 EF	73.96	kg/mmBtu	0%			73.96 40 CFR 98, Table C-1
CH4 EF	0.0003	kg/mmBtu	0%			0.0003 40 CFR 98, Table C-2
N2O EF	0.0006	kg/mmBtu	0%			0.0006 40 CFR 98, Table C-2
Diesel HHV	0.138	mmBtu/gal				

\*2007 MY Engine as defined in heavy duty on-road diesel truck and bus regulation.

EMISSIONS CALCULATIONS - WATER TRUCKS - DIESEL

Hp	280
Vehicles per Day	2
Miles per Day	10
Days/year	312
Total Annual Mileage	6240
Total Daily Fuel Usage	2.67
	0.368
Total Daily Hours	3.33
	hours per day (20 hrs/wk, 6 day/wk)

ROG	CO	NOx	SOx	PM10	CO2	CH4	N2O	CO2e
Emissions, lb/day	59.2070	3.5154	0.0006	0.0206	59.9869	0.0002	0.0005	60
Emissions, lb/yr	18472.60	1096.81	0.19	6.41	18716	0.08	0.15	18765





INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

Vehicle Traffic Emissions

EMISSIONS BASIS

Paved Road EF 7.90E-02 lb/vmt  
Unpaved Road EF 9.30E-01 lb/vmt

EMISSIONS CALCULATIONS - ONROAD VEHICLES

	MPD Tot	Paved MPD	Unpaved MPD	PM Emissions, lb/day	
				Paved	Unpaved
Water Truck	20	10	10	0.8	9.30
Excavator	2.5	0	2.5	0.0	2.33
Loaders	5	5	0	0.4	0.00
Forklift	50	25	25	2.0	23.25
TOTALS				3.2	34.9

NOTES

- 1 Water truck spends 50/50 watering paved/unpaved roads
- 2 Based on average vehicle weight of 5.05 ton
- 3 Emission factors used from BAAQMD permit application 13247, West County Landfill Transfer Station.
- 4 Factors calculated in Application 13247 from AP-42 Chater 13.2.1 (paved) and 13.2.2 (unpaved).
- 5 MVW climate (rainfall, etc) is similar to Richmond, CA area.

## Emissions with Anaerobic Digestion

Equipment	Qty	Hp	Operating Hours	
			hrs/wk	hrs/day
Excavator	1	164	30	5
Loader	2	150	30	5
Forklift	2	48	30	5
Grinder	2	500	30	5
Water Truck	2	280	20	3.33

Operating Parameters			
Operating Hours - Compost	24	hrs/day	
Operating Hours - AD	24	hrs/day	
Flare Operation	2000	hrs/yr	
Operating Days - Compost	365	day/yr	
Operating Days - AD	365	day/yr	
Operating Days - Receiving	312	day/yr	
Operating Days - screening	312	day/yr	
Operating Days - grinding	312	day/yr	
Operating Days - MSW Unloading	312	day/yr	
Screening Schedule	12	hrs/day	
Screening and sorting	300	tons/day	
AD Throughput	100	tons/day	
Composting Throughput	100	tons/day	
Composting of AD	50	tons/day	
MSW Unloading	400	tons/day	

Process	ROG (tons/yr)	CO (tons/yr)	NOx (tons/yr)	SOx (tons/yr)	PM10 (tons/yr)	CO2e (tons/yr)
<b>Onsite Emission Sources</b>						
CD&D/Inerts/Self-Haul	0.24	4.47	2.58	0.01	0.90	128
Processed Organics	3.13	0.00	0.00	0.00	0.14	16,369
MSW Unloading Operations	0.00	0.00	0.00	0.00	0.02	0
Flare	2.77	3.93	1.18	0.24	0.33	229
Off-Road Vehicles	0.27	7.54	2.37	0.03	0.11	318
On-Road Vehicles	0.10	9.24	0.55	0.00	3.56	9
<b>Offsite Emission Sources</b>						
Vehicle Traffic	0.67	6.68	1.09	0.01	0.56	657
Total	7.18	31.85	7.76	0.29	5.62	17,710
SJVAPCD Significance Threshold	10.00	---	10.00	---	---	---
Significant (Yes/No)	No	NA	No	NA	NA	---

INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

All Emissions in Tons per Year

EMISSION SOURCE	ROG	CO	NOx	SOx	PM10	CO2	CH4	N2O	CO2e	PM	WORKSHEET #	NOTE #
<b>CD&amp;D/Inerts/Self-Haul</b> <ul style="list-style-type: none"><li>- Sorting/Load-in</li><li>- Conveyor Drop Points</li><li>- Screening Operations</li><li>- Screening Diesel Engine</li></ul>					0.17					0.36	2	
					0.10					0.28	1	
					0.61					1.76	1	
	0.24	4.47	2.58	0.01	0.02	127.14	0.01	0.00	127.56		4	1
<b>Processed Organics (= GW + FW + AD)</b> <ul style="list-style-type: none"><li>- Covered Composting Processed Organics</li><li>- Anaerobic Digestion</li><li>- Covered Composting - Digestate</li></ul>	2.08				0.13	7,752.65	20.03	0.33	8,274.87			
						3,956.73			3,956.73			
	1.04				0.00	3,876.33	10.02	0.16	4,137.44			
					0.02						2	
<b>MSW Unloading Operations</b>	2.77	3.93	1.18	0.24	0.33	226.34	0.04	0.00	228.60		2	
<b>Off-Road Vehicles</b> <ul style="list-style-type: none"><li>Excavator</li><li>Loader</li><li>Forklift</li></ul>	0.09	0.52	0.70	0.00	0.04	87.53	0.01	0.00	87.82		11	
	0.15	0.91	1.20	0.00	0.07	158.16	0.01	0.00	158.65		11	
	0.02	6.10	0.47	0.03	0.00	71.53	0.00	0.00	71.64		11	
<b>On-Road Vehicles</b> <ul style="list-style-type: none"><li>Water Truck</li><li>Vehicle Traffic on Paved Roads</li><li>Vehicle Traffic on Unpaved Roads</li></ul>	0.10	9.24	0.55	0.00	0.00	9.36	0.00	0.00	9.38		12	
					0.30					0.49	13	2
					3.26					5.44	13	2

NOTES

- 1 Screen diesel engine emissions assumed identical to tub grinder engines.  
2 PM emissions calculated from PM10 emissions, assuming PM10 is 60 % of total PM emissions.

## INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

## C&D + Inerts + Self Hauling: Emissions from Screening and sorting

## SKYRIS EMISSIONS BASIS

<b>Number of Emission Points:</b>	3 Screen 4 Conveyor Transfer Points	Estimate Estimate
<b>Maximum Daily Operating Hours</b>	300 ton/day	
<b>Weekly Hours of operation <sup>1</sup></b>	25 00 ton/hr 12 hr/day	
<b>Weeks of Operation/Year</b>	84 hours/week	
<b>Annual Hours of Operation</b>	52 3744 hours/year	
<b>Days/Yr</b>	312 days/yr	
<b>Annual Amount of Waste Processed <sup>4</sup></b>	93,600 tons/year	Based on 300 tpd @ 312 day/yr
<b>Estimated PM Control Efficiency (water application)</b>	50% Screen Operation	Assumed Water Spray Abatement
<b>Estimated PM Control Efficiency (water application)</b>	50% Conveyor Transfer Points	Assumed Water Spray Abatement

1) hours of operation and maximum amount of material processed in Source -15 provided by Waste Management on 5/12/2011

## SCREENING CALCULATIONS

[illegible]

## CONVEYOR TRANSFER CALCULATIONS

[illegible]

## NOTES

1. Emission factors taken from Table 11.19.2.2 of AP-42 Chapter 11.19.2 Crushed Stone Processing and Pulverized Mineral Processing.
2. Uncontrolled Potential Emissions = Amount of Material  $\times$  Emission Factor
3. Controlled Emissions assume 50 percent PM abatement by water application Emissions Factors & AP 42, Compilation of Air Pollutant Emission Factors, \* Section 13, November 2006
4. provides control efficiencies for water suppression on unpaved roads ranging from 10 to 74%.
5. Controlled Potential Emissions = Amount of Material  $\times$  Emission Factor  $\times$  (1-control efficiency)
6. PM emissions controlled by water application (50% PM abatement)

INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

C&D + Inerts + Self Hauling: Emissions from Load-In

EMISSIONS BASIS

Maximum Input Rate 300 tpd 93,600 ton/yr  
Estimated PM Control Efficiency (water application) 50% Screen Operation

PM<sub>10</sub> Emissions

$$Ex = k^* (0.0032)^* \left( \frac{(U/5)^{1.3}}{[(M/2)^{1.4}]} \right)$$

(particle size multiplier)\*((constant)\*((mean wind speed)/(material moisture content)) = lb/ton  
(lb/ton\*amt of material handled per year (tons) = lb/yr

Data Inputs:  
Variables Required by Material Handling Equation #1 in AP-42 Chapter 13.2.4.  
and Calculated Emission Factors

Category, Variable	Value	Units	Range <sup>a</sup>	BASIS
Wind speed	10.1	mph		assumed
Surface Material Moisture Content, M	1.0	%	0.46 - 5.0	
No. of Days of Waste Acceptance	312	day		AP-42
Particle Size Multiplier - PM <sub>2.5</sub> , k	0.053			AP-42
Particle Size Multiplier - PM <sub>10</sub> , k	0.35			AP-42
Particle Size Multiplier <sup>b</sup> - PM <sub>2.5</sub> , k	0.74			
Calculated Emission Factor - PM <sub>2.5</sub> , E	0.001116412	lb/ton		
Calculated Emission Factor - PM <sub>10</sub> , E	0.00737	lb/ton		
Calculated Emission Factor - PM <sub>2.5</sub> , E	0.01559	lb/ton		

<sup>a</sup>The range is specific for various limestone products, and is conservatively dry for recovered fines.

<sup>b</sup>PM<sub>2.5</sub> is sometimes termed "suspensible particulate" (SP) and is often used as a surrogate for "total suspended particulate" (TSP) per AP-42).

Note: The emission factor equation is valid for the following ranges: silt content (0.44 - 19%), moisture content (0.25-4.8%), and wind speed (1.3-15 mph). The confidence factor decreases if any value (used) is beyond these ranges.

Source: U.S. E.P.A., *Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources* ("AP-42")

5th Ed., November 2006, Section 13.2.4

EMISSIONS CALCULATIONS

Amount of Material Handled Per Day 300 ton/day 50%  
No. of Days Year 312 days  
Total Material Loaded Out Per Year 93,600 tons per year

Category	Uncontrolled Emissions, Load-In		Controlled Emissions, Load-In		Controlled Emissions, Load-In
	Value	Units	Value	Units	
Calculated Emissions - PM <sub>2.5</sub>	104	lb/yr	0.026	ton/yr	0.167
Calculated Emissions - PM <sub>10</sub>	690	lb/yr	0.173	ton/yr	1.106
Calculated Emissions - PM <sub>2.5</sub>	1459	lb/yr	0.365	ton/yr	2.338

NOTES

- 1 Emission factors taken from AP-42.
- 2 PM emissions controlled by water application (50% PM abatement).

INCREMENTAL EMISSIONS ESTIMATE  
(1,000 tpd Incremental Waste Input)

Tub Grinder

Stationary CI Engine - C&D + Inerts + Self Hauling

EMISSIONS BASIS

Hours of Operation per Day	5
Days of Operation per Year	312
Hours of Operation per Year	1560
Engine hp Rating	500
# of Engines	2
Fuel Density	7.5 lb/gal
Fuel Heat Content	18536 Btu/lb
Fuel Consumption Rate	378 lb/hr

total, both engines

EMISSIONS CALCULATIONS

ROG	CO	NOx	SOx	PM10	CO2	CH4	N2O	CO2e
0.14 g/bhp-hr	2.6 g/bhp-hr	1.5 g/bhp-hr	0.0051 g/bhp-hr	0.01 g/bhp-hr	74 kg/mmBtu	0.003 kg/mmBtu	0.0006 kg/mmBtu	
1.54	28.63	16.52	0.06	0.11	814.98	0.03	0.01	817.72
Emissions, lb/yr	481.1	8,933.9	17.5	34.4	254,273	10	2	255,129

NOTES

- 1 Assumed Tier 4 Emission Factors
- 2 SOx calculations based on 15 ppmw as sulfur
- 3 Fuel use from EPA: 7000 Btu/Hp-hr
- 4 GHG Emission Factors from 40 CFR Part 98, Table C-1

$$SO_x = \frac{7,000 \text{ Btu}}{\text{Hp} - \text{hr}} \times \frac{0.000015 \text{ g}}{\text{g fuel}} \times \frac{454 \text{ g}}{\text{lb}} \times \frac{\text{lb}}{18,536 \text{ Btu}} \times \frac{64 \text{ g SO}_2}{32 \text{ g S}} = 0.0051 \frac{\text{g}}{\text{Hp} - \text{hr}}$$



## INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

Covered Composting - Greenwaste + Foodwaste

## EMISSIONS BASIS

Hours of Operation per Day 24  
Days of Operation per Year 365  
Composting Rate 100 ton/day

PM10 Emission Factor-Outdoor

$$E \text{ (lb/ton)} = k (0.0032) [(U/5)^{1.3} / (M/2)^{1.4}]$$

$$k = 0.35 \text{ (for } < 10 \mu \text{ particles)}$$

$$U = 10 \text{ mph wind speed (ave)}$$

$$M = \text{moisture content (assume 1\%)}$$

$$E = 0.35 (0.0032) [(10/5)^{1.3} / (1/2)^{1.4}] =$$

0.0073 lb/ton

VOC Factor =

5.71 lb/wet ton

Control Efficiency

98%

VOC Factor, Controlled =

0.11 lb/wet ton

CO2 Factor =

425 lb/wet ton

CH4 Factor =

1.10 lb/wet ton

N2O Factor =

1.80E-02 lb/wet ton

SIVAPCD Report, Compost VOC Emission Factors, September 15, 2010  
Based on use of Gore membraneSee Worksheet 10  
See Worksheet 10  
See Worksheet 10

## EMISSIONS CALCULATIONS

	PM10	VOC	CO2	CH4	N2O	CO2e
Emissions, lb/day	0.73	11.42	42480.28	109.76	1.80	45341.77
Emissions, ton/yr	0.13	2.08	7752.65	20.03	0.33	8274.873

Covered Composting - AD Digestate

## EMISSIONS BASIS

Hours of Operation per Day 24  
Days of Operation per Year 365  
Composting Rate 50 ton/day

PM10 Emission Factor-Indoor

$$E = 0.35 (0.0032) [(5/5)^{1.3} / (5/2)^{1.4}] =$$

3.10E-04 lb/ton

$$k = 0.35 \text{ (for } < 10 \mu \text{ particles)}$$

$$U = 5 \text{ mph wind speed (ave)}$$

$$M = \text{moisture content (assume 5\%)}$$

VOC Factor =

5.71 lb/wet ton

Control Efficiency

98%

VOC Factor, Controlled =

0.11 lb/wet ton

CO2 Factor =

425 lb/wet ton

CH4 Factor =

1.10 lb/wet ton

N2O Factor =

1.80E-02 lb/wet ton

SIVAPCD Report, Compost VOC Emission Factors, September 15, 2010  
Based on use of Gore membraneSee Worksheet 10  
See Worksheet 10  
See Worksheet 10

## EMISSIONS CALCULATIONS

	PM10	VOC	CO2	CH4	N2O	CO2e
Emissions, lb/day	0.02	5.71	21240.14	54.88	0.90	22670.88
Emissions, ton/yr	0.00	1.04	3876.33	10.02	0.16	4137.436

## NOTES

- 98% abatement efficiency of Gore membrane for covered composting operations
- Composting emission factors calculated from October 2011 Report: GHG Emission from Covered Windrow Composting, Calculation detailed in Worksheet 10.

INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

Anaerobic Digestion

EMISSIONS BASIS/CALCULATIONS

Days of Operation per Year	365
Biogas Production Rate	4150 scf/ton OFMSW
Anaerobic Digester Throughput	100 ton/day
Biogas Production	415000 scf/day
CO2 Vol%	45%
CO2 Production Rate	186750 scf/day
	21680.74 lb/day
	3956.735 ton/yr

Assumes 379 scf/lbmol

INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

MSW Unloading Operations

EMISSIONS BASIS/CALCULATIONS

Days of Operation per Year	312	
Throughput	400 ton/day	
$E = 0.35 (0.0032) [ (5/5)^{1.3} / (5/2)^{1.4} ] =$		

- k = 0.35 (for <10 μ particles)
- U = 5 mph wind speed (ave)
- M = moisture content ( assume 5%)

PM10 Emissions	1.24E-01 lb/day
	1.93E-02 ton/yr

3.10E-04 lb/ton      AP-42 Section 13.2.4-4

INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

Flare Emissions

EMISSIONS BASIS

Hours of Operation per Year 2000  
Maximum Gas Flow Rate 588 cfm  
Nominal Methane Content 55%  
Methane Flow Rate 0.019404 mmcf CH4/hour

EMISSIONS CALCULATIONS

	Emission Factor, lb/mmcf CH4	Emissions, lb/hr	Emissions, ton/yr	Reference
NOx	60.72	1.1782	1.1782	BACT
SOx	12.28	0.2383	0.2383	Calculated
CO	202.4	3.9274	3.9274	Manufacturer's Specifications
VOC	142.8	2.7709	2.7709	AP-42, Sect 13.5, Industrial Flares
PM10	17	0.3299	0.3299	AP-42, Sect 2.4, Municipal Solid Waste Landfills
CO2	11664.4	226.3360	226.3360	Yorke GHG Calculator
CH4	2.24	0.0435	0.0435	Yorke GHG Calculator
N2O	0.224	0.0043	0.0043	Yorke GHG Calculator

INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

Emission Factor Derivation - Greenhouse Gases - Composting

Reference: Greenhouse Gas Emissions from covered windrow composting with controlled ventilation; Ermolaev, Pell, et al, Waste Management & Research, 12 October 2011.

	Metric	English	NOTES
Windrow Volume:	72 cu m	2543 cu ft	
Duration:	20 day	20 day	
Exhaust Rate:	450 cu m/hr	15,891 cu ft/hr	
Compost Density:	1 kg/cu dm	35 lb/cu ft	
Mass Compost:		44.41 ton	
R (Ideal Gas) @ 60 F		379 scf/lb-mole	
GHG Compound	CH4	CO2	N2O
Molecule Weight	16.04 lb/lb-mole	44.01 lb/lb-mole	44.02 lb/lb-mole
Maximum Average Concentration	151 ppm	21,300 ppm	1 ppm
Mass Emissions, 20 day basis:	49 lb	18,867 lb	0.8 lb
EF, lb GHG/ton	1.10	424.80	0.02

Assumptions/Basis

1. Langes Handbook

## INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

## Offroad Vehicle Emissions Calculations

## EMISSIONS BASIS

All emission factors taken from SCA8 Fleet Average Emission Factors for diesel-fueled equipment

N2O calculated from assumed ratio of N2O to CO2:

$$\frac{\text{kg/MMBtu}}{\text{lb/MMBtu}} \quad 74$$
$$3.00\text{E-04}$$
$$(\text{N2O/CO2 Factor}) \quad 4.05\text{E-06}$$

## EMISSIONS CALCULATIONS - EXCAVATOR

## Surrogate Excavators

Hp 164

Hours of Operation per Day 5

Number 1

Vehicle Speed 0.5 mph

Total Daily Miles 2.5

Days/year 312 day/yr

ROG	CO	NOx	SOx	PM10	CO2	CH4	N2O	CO2e
Emission Factor, lb/hr	0.1208	0.8932	0.0013	0.0512	112.2216	0.0109	0.0005	113
Emissions, lb/day	0.604	4.466	0.006	0.256	561.108	0.055	0.002	563
Emissions, lb/yr	188.46	1040.27	1.97	79.91	175065.67	17.00	0.71	175643

## EMISSIONS CALCULATIONS - LOADERS

## Surrogate Tractors/Loaders/Bulldozers

Hp 150

Hours of Operation per Day 5

Number 2

Vehicle Speed 0.5 mph

Total Daily Miles 5

Days/year 312 day/yr

ROG	CO	NOx	SOx	PM10	CO2	CH4	N2O	CO2e
Emission Factor, lb/hr	0.0988	0.7696	0.0011	0.0428	101.3869	0.0089	0.0004	102
Emissions, lb/day	0.988	7.696	0.011	0.428	1013.869	0.089	0.004	1017
Emissions, lb/yr	308.21	1828.65	2401.25	133.48	316327	28	1	317309

## EMISSIONS CALCULATIONS - FORKLIFTS

Hp 48

Hours of Operation per Day 5

Day/yr 312

Number 2

Vehicle Speed 5 mph

Total Daily Miles 50

Fuel Use 3.67 gal/hr

Pollutant

NOx + HC

CO

SOx

PM10

CO2

CH4

Emission Factor

3 gm/hp-hr

37 gm/hp-hr

4.6 lbs/1000 gal

0.28 lbs/1000 gal

12500 lbs/1000 gal

0.2 lbs/1000 gal

Reference

LSI Regulation for 2007 and later

LSI Regulation for 2007 and later

SCAQMD AER

SCAQMD AER

AP-42

AP-42

ROG	CO	NOx	SOx	PM10	CO2	CH4	N2O	CO2e
Emission Factor, lb/hr	0.0159	0.3013	0.0169	0.0010	45.85	0.0007	0.0002	45.92
Emissions, lb/day	0.159	3.013	0.169	0.010	458.515	0.007	0.002	459
Emissions, lb/yr	49.5	12205.1	940.1	3.2	143056.8	2.3	0.6	143285

# INCREMENTAL EMISSIONS ESTIMATE

(1,000 tpd Incremental Waste Input)

## Onroad Vehicle Emissions Calculations

### EMISSIONS BASIS (GLOBAL ASSUMPTIONS)

Average Vehicle Speed	5	mph			
Average Diesel Vehicle Mileage	7.5	mpg			
Distance per Vehicle	2	mile/day			
ROG EF	0.15	g/bhp-hr	0%	Controlled EF	Reference
CO EF	14.40	g/bhp-hr	0%		Except for Water Trucks
NOx EF	2.85	g/bhp-hr	70%		0.15 *
SOx EF	0.00163	lb/mmBtu	0%		14.4 *
PM10 EF	0.10	g/bhp-hr	90%		0.855 *
CO2 EF	73.96	kg/mmBtu	0%		0.00163 *
CH4 EF	0.0003	kg/mmBtu	0%		0.01 *
N2O EF	0.0006	kg/mmBtu	0%		73.96 40 CFR 98, Table C-1
Diesel HHV	0.138	mmBtu/gal	0%		0.0003 40 CFR 98, Table C-2
					0.0006 40 CFR 98, Table C-2

\*2007 MY Engine as defined in heavy duty on-road diesel truck and bus regulation.

### EMISSIONS CALCULATIONS - WATER TRUCKS - DIESEL

Hp	280
Vehicles per Day	2
Miles per Day	10
Days/year	312
Total Annual Mileage	6240
Total Daily Fuel Usage	2.67
	0.368
Total Daily Hours	3.33
	hours per day (20 hrs/wk, 6 day/wk)

ROG	CO	NOx	SOx	PM10	CO2	CH4	N2O	CO2e
Emissions, lb/day	59.2070	3.5154	0.0006	0.0206	59.9869	0.0002	0.0005	60
Emissions, lb/yr	18472.60	1096.81	0.19	6.41	18716	0.08	0.15	18765

INCREMENTAL EMISSIONS ESTIMATE  
(1,000 tpd Incremental Waste Input)

Vehicle Traffic Emissions

EMISSIONS BASIS

Paved Road EF 7.90E-02 lb/vmt  
Unpaved Road EF 9.30E-01 lb/vmt

EMISSIONS CALCULATIONS - ONROAD VEHICLES

	MPD Tot	Paved MPD	Unpaved MPD	PM Emissions, lb/day	
				Paved	Unpaved
Water Truck	20	10	10	0.8	9.30
Excavator	2.5	0	2.5	0.0	2.33
Loaders	5	5	0	0.4	0.00
Forklift	50	25	25	2.0	23.25
TOTALS				3.2	34.9

NOTES

- 1 Water truck spends 50/50 watering paved/unpaved roads
- 2 Based on average vehicle weight of 5.05 ton
- 3 Emission factors used from BAAQMD permit application 13247, West County Landfill Transfer Station.
- 4 Factors calculated in Application 13247 from AP-42 Chater 13.2.1 (paved) and 13.2.2 (unpaved).
- 5 MVW climate (rainfall, etc) is similar to Richmond, CA area.



Appendix 'C'  
Mid Valley Disposal, Inc.  
Transfer/Processing Report

# **MID VALLEY DISPOSAL RECYCLING AND TRANSFER STATION**

## **TRANSFER/PROCESSING REPORT**

*Prepared for:*

Mid Valley Disposal, Inc.  
15300 W Jensen Ave  
Kerman, CA 93630  
(559) 843-2467

*Prepared by:*

Clements Environmental Corporation  
15230 Burbank Blvd., Suite 103  
Sherman Oaks, CA 91411  
(818) 267-5100

*November 2012*

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## 1.0 FACILITY OVERVIEW

### INTRODUCTION

This document has been prepared in accordance with Title 14, Section 18221.6 of the California Code of Regulations (CCR), which lists the specific requirements for inclusion in a Transfer/Processing Report (TPR). This TPR describes the design and operation of the Mid Valley Disposal Recycling and Transfer Station (FACILITY) located in the City of Kerman.

The FACILITY is proposing to increase the permitted daily tonnage as well as expand the site acreage and operations. The full build out of the site expansion will take place in three phases.

The following are the main permit revisions for **Phase I**:

- Increasing the permitted tons per day (TPD) from 500 TPD to 1,500 TPD
- Increasing the site acreage from 10 to 38 acres
- Adding a receiving building as an expansion to the existing MRF and Transfer Station
- Installing a covered composting system at the site including organics and food waste as feedstock
- Expanding construction and demolition (C&D) debris and organics processing areas
- Expanding onsite storage areas
- Adding a second office/maintenance building, fuel island, and truck wash station
- Adding a separate self haul tipping area
- Adding additional vehicle and truck parking onsite

**Phase II** revisions will include:

- Installing Anaerobic Digesters (including biofilter and CNG production)
- Expanding the MRF and Transfer Station building
- Expanding the receiving building
- Adding back-down transfer ramps in the MRF and Transfer Station/receiving buildings
- Adding digestate from the digesters as feedstock to the composting operations

**Phase III** revisions will include:

- Expanding the Anaerobic Digesters and biofilter

### Summary of Facility Information

Name of Facility: Mid Valley Disposal Recycling and Transfer Station

Facility Address: 15300 W. Jensen Ave  
Kerman, CA 93660

APN: 023-08-16 and 023-08-19

Solid Waste Facility Permit No.: 10-AA-0201

Permitted Capacity: 1,500 Tons Per Day (TPD)

Land Owner/Operator/Address Legal Where Notice May Be Served: Kalpakoff Properties, LLC (owner)  
Mid Valley Disposal, Inc.(operator)  
15300 W Jensen Ave  
Kerman, CA 93630

### SITE LOCATION

At full build-out the facility will consist of a material recovery facility (MRF), transfer station, construction and demolition (C&D) debris recycling operation, maintenance shops, truck wash stations, fueling islands, organics chipping and grinding operation, organics composting operation using a GORE Cover (or equivalent), organics/food waste covered composting operation, and future anaerobic digestion.

Major roads providing access to the facility include Jensen Avenue, and State Route 145. **Figure 1**, Vicinity Map, shows the location of the FACILITY, which covers 38 acres and is zoned M-2 (industrial).

**Figure 2**, Radius Map, shows a 1,000 ft radius around the site. Within this radius, the surrounding uses are agriculture, vacant land, and water district treatment ponds on the west.

### ADJACENT LAND USES

This site is surrounded on east by vacant land; on the north by light industrial uses, on the south by agricultural land; and on the west by the City's wastewater treatment and recharge facility.

### SERVICE AREA

The facility will service the City of Kerman, other local cities, and unincorporated Fresno County within Mid-Valley Disposal's franchise area.

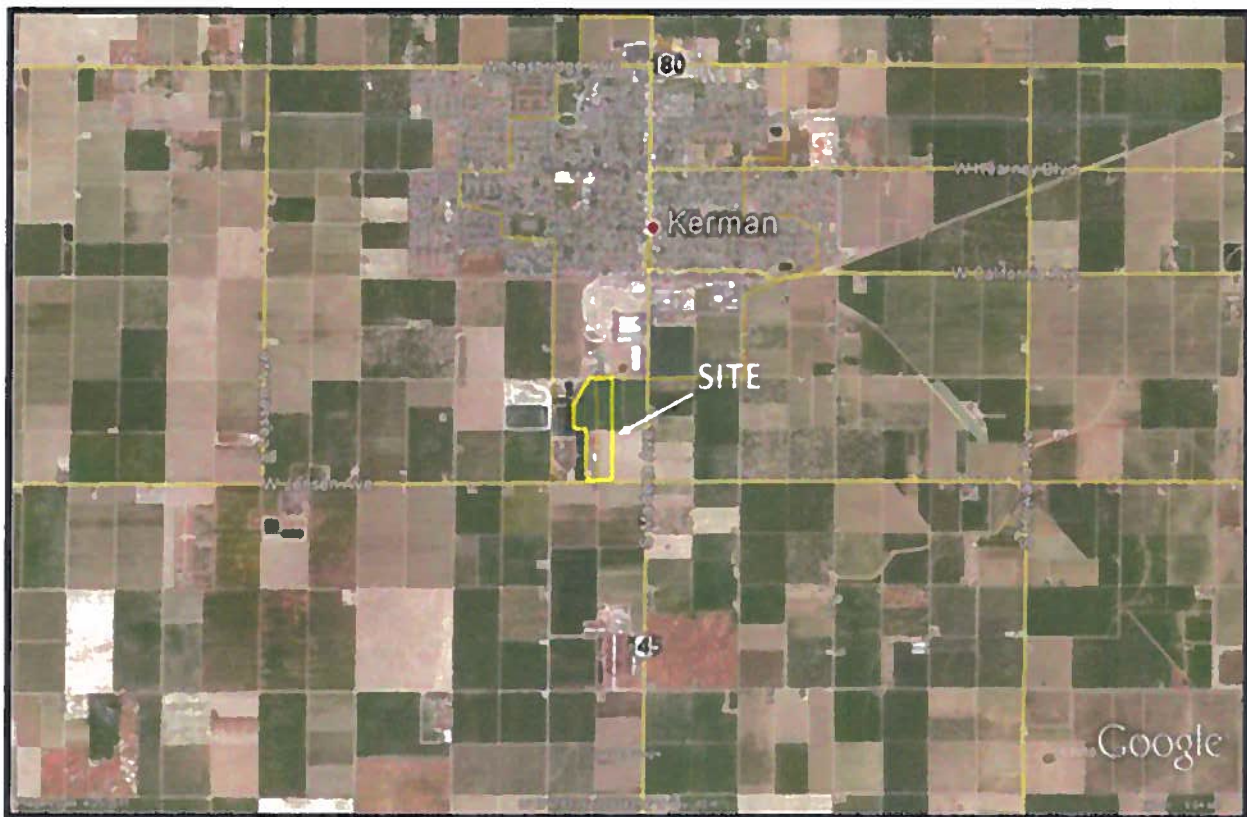
## NATURE AND QUANTITY OF WASTES

### Waste Types

Only non-hazardous material is accepted at the facility. This includes materials from curbside-collection programs, organics, food waste, commercial accounts, or other recycling programs. The facility is also permitted to receive and process mixed loads of residential, commercial and industrial municipal solid waste (MSW), as well as construction and demolition debris and self-hauled material. e-Waste, white goods, and incidental tires may also be received.

No designated, special, medical, liquid or hazardous wastes are accepted at the facility. A Hazardous Waste Load Checking Program has been implemented to enforce this policy. A copy of this policy is included as **Appendix A**.

**FIGURE 1  
VICINITY MAP**





**FIGURE 2  
RADIUS MAP**



## Waste Quantities

The anticipated average annual throughput over the first five years will be 309,400 tons, as shown in **Table 1**. This annual projection is an estimate only, and may differ as a result of new or revised waste hauling contracts, legislative mandates, or changes in available landfill disposal capacity and tipping fees. Diversion will depend on the types and quantities of materials, but given the focus on organic and C&D debris, a recycling rate of up to 50% or more is expected.

The average weekly tonnages are expected to vary by 5 to 10 percent, and seasonal variations are expected to affect the averages by as much as 10 percent. The maximum daily tonnage of 1,500 TPD will not be exceeded. Unusual peak loading or emergencies will be handled at the station by adding manpower and equipment, and/or extending the length of shifts. The station buildings will also be designed to accept and provide temporary storage for unusual peak loadings.

**TABLE 1**  
**ANTICIPATED AVERAGE ANNUAL TONNAGE**

YEAR	TONS/DAY	TONS/YEAR*
2012	550	200,200
2013	700	254,800
2014	850	309,400
2015	1,000	364,000
2016	1,150	418,600
<b>5-YEAR AVERAGE</b>	<b>850</b>	<b>309,400</b>

\* Based on 7 days per week x 52 weeks per year operation

## TYPES AND NUMBERS OF VEHICLES

The following types of vehicles will use the facility:

- **Inbound Vehicles:** collection trucks, as well as public self-haul vehicles
- **Outbound Vehicles:** transfer trucks for waste; recyclable materials semi-trucks, roll-off trucks, flatbed trucks, or stake bed trucks.
- **Employee and Visitor Vehicles:** cars, trucks and vans.

**Table 2** summarizes facility traffic projected at the peak permitted capacity of 1,500 TPD.

**TABLE 2**  
**ANTICIPATED PEAK DAILY VEHICLES**

VEHICLE TYPE	Number Per Day
	Proposed 1,500 TPD Operation
<u>Inbound Vehicles</u>	
Roll-offs (C&D, Organics, Inerts)	90
Collection trucks (MSW, Food Waste)	46
Self-haul vehicles (C&D, Organics, Inerts)	97
Self-haul vehicles (White goods)	16
End dumps	27
<u>Outbound Vehicles</u>	
Transfer trucks (residue to landfill)	19
Transfer trucks (recyclable materials)	42
<u>Employee Vehicles</u>	100
<b>TOTAL VEHICLES PER DAY</b>	<b>437</b>

Assumptions for payloads: roll-offs = 5.1 tons; MSW collection trucks = 6.0 tons; self-haul (C&D) = 1.6 tons; self-haul (white goods) = 1.0 tons; all end dumps = 22 tons; outbound residue trucks = 22 tons; and outbound recyclable material trucks = 22 tons

To ensure that no off-site parking will occur, the facility design will set aside parking spaces for employees, visitors, and the Mid Valley Disposal (MVD) collection truck fleet. Collection and transfer trucks belonging to other companies will park off-site at other locations.

## 2.0 REGULATORY REQUIREMENTS

The following permits have been obtained by the FACILITY:

- **Land Use Permits** - Conditional Use Permit (CUP) 05-07 was approved on November \_\_\_\_, 2012 by the City of Kerman Planning Commission with passage of Resolution \_\_\_\_.
- **Environmental Documentation** - As part of the above CUP approval, the City of Kerman performed an environmental review and prepared a Mitigated Negative Declaration to satisfy the requirements of CEQA. This MND was approved simultaneously with the CUP via Resolution \_\_\_\_ on \_\_\_\_.
- **Revision of County Non-Disposal Facility Element (NDFE)** – At its meeting of December 21, 2005, the Kerman City Council approved an amendment to its NDFE to include the FACILITY.
- **Storm Water Permit** - The FACILITY has filed a Notice of Intent (NOI) for a General Industrial Storm Water Permit (NPDES) with the State Water Resources Control Board (SWRCB). A Storm Water Pollution Prevention Plan (SWPPP) and Monitoring Program Plan (MPP) have been developed. The General Industrial Stormwater Permit is WDID # 5F10I021076.
- **Hazardous Waste Generator ID Number** - The FACILITY has obtained a State Site Specific Identification number from the Department of Toxic Substances Control (DTSC). This number is CAL000319616 and is used for all manifesting, record keeping, and reporting required for materials discovered through the load-checking program.
- **Solid Waste Facilities Permit** – A revised Solid Waste Facilities Permit will be obtained from the Fresno County Department of Community Health; and CalRecycle.

### 3.0 FACILITY DESIGN

#### DESIGN PLANS

##### Site Plan

##### Site Description

The Site Plan (**Figure 3**) shows major structures and functions at the site. The Site Plan also shows the location of the tipping areas, processing area, baler, and material storage and load out areas.

The proposed FACILITY will be completed in three Phases. The facility's design includes the following major components:

##### Existing

- Administration Building including scale office (6,097 sf)
- Maintenance Building (6,840 sf)
- Material Recovery Facility (MRF) and Transfer Station (34,250 sf)
- Truck wash and fuel island (bermed to capture any accidental spills)
- C&D and Organics processing area
- Concrete and asphalt crushing area
- Roll-off and bin storage areas
- Bale storage area
- Inbound/Outbound Truck Scale

##### Proposed Phase I

- Additional Administration Building including scale office (6,097 sf)
- Additional Maintenance Building (6,840 sf)
- Receiving building for MRF and Transfer Station (44,000 sf)
- Self-Haul Tipping area (31,000 sf)
- Additional Truck wash and fuel island (bermed to capture any accidental spills)
- Expanded C&D and Organics processing area (290,000 sf)
- Expanded Concrete and Asphalt Crushing area (100,000 sf)
- Expanded Roll-off and Bin Storage areas
- Expanded Bale Storage areas
- Expanded Vehicle and Parts Storage areas
- Covered Composting System
- Compost Post-Processing and Load-Out area (68,000 sf)
- Finished Product Storage Bunkers
- Two (2) additional Inbound/Outbound Truck Scales (one being a "future" scale)

##### Proposed Phase II

- MRF and Transfer Station building expansion (34,000 sf)
- "Dirty" MRF building expansion (44,000 sf)
- Anaerobic Digesters (including biofilter and CNG production)

**Proposed Phase III**

- Anaerobic Digesters expansion

**Tipping Areas**

The facility will consist of a 78,000 sf enclosed tipping area for recyclables, food waste, and mixed MSW, and several acres of open yard for receiving organics and C&D debris.

**Storage Areas**

Waste storage is minimized by implementing a “first-in, first-out” policy. In accordance with State law, no MSW is stored onsite longer than 48 hours. The facility does not anticipate waste storage for this extended amount of time. Generally, waste will be transferred from the facility within 24 hours. Green material, processed or unprocessed, will be stored no longer than 48 hours, or up to seven days if approved by the Local Enforcement Agency. Food waste will be mixed as quickly as possible with other organics, ground and placed in the covered composting system. Processed C&D debris will be stored no longer than 30 days. Unprocessed inerts will be stored no longer than 30 days, processed inerts no longer than 120 days.

Recyclables, e-Waste, and white goods will be stored in bunkers, bins (max. 100), or roll-off containers (max. 75) both inside and outside the building. Bale storage locations are shown on the Site Plan. The maximum storage capacity is approximately 3,400 bales. The maximum storage time for salvaged recyclables from the MRF is 120 days. Any putrescible waste stored in bins or roll-offs will be covered and removed within 48 hours.

**Maintenance Shop**

The existing FACILITY has a maintenance and bin repair shop, truck wash station, and fuel island. The existing 10,000-12,000 gallon above ground, double contained diesel tank is located at the fuel island. The proposed expansion of the facility will include an additional maintenance and bin repair shop, truck wash station and fuel island. See **Figure 3**, Site Plan for the locations.

**Parking Areas**

Transfer trucks are owned by others and park off-site. On-site parking is provided for all MVD employees, visitors, and collection trucks. The parking areas are shown on the Site Plan (**Figure 3**).

**Offsite Traffic Patterns**

Trucks and self haul vehicles access the facility off Jensen Avenue and Church Avenue. Primary access to the site area is via State Hwy 45 and Jensen Avenue.

**Onsite Traffic Patterns**

Collection trucks enter the facility through the designated driveways and weigh in on a scale. Loads of source-separated recyclables, mixed MSW, and food waste dump in the appropriate enclosed tipping area. Loads of organics and C&D debris are tipped where indicated by onsite personnel in the middle area of the site. Depending on the type of payloads, self-haul vehicles follow a similar pattern; however most enter the site through the Church Street entrance. Most commercial collection vehicles have their tare weights recorded in the scalehouse computer and are not required to weigh out. All others are required to weigh out.

Transfer trucks and trucks picking up processed recyclable material enter through the designated driveway and proceed to the respective load out areas. After loading, these trucks weigh out and exit through the indicated driveway.

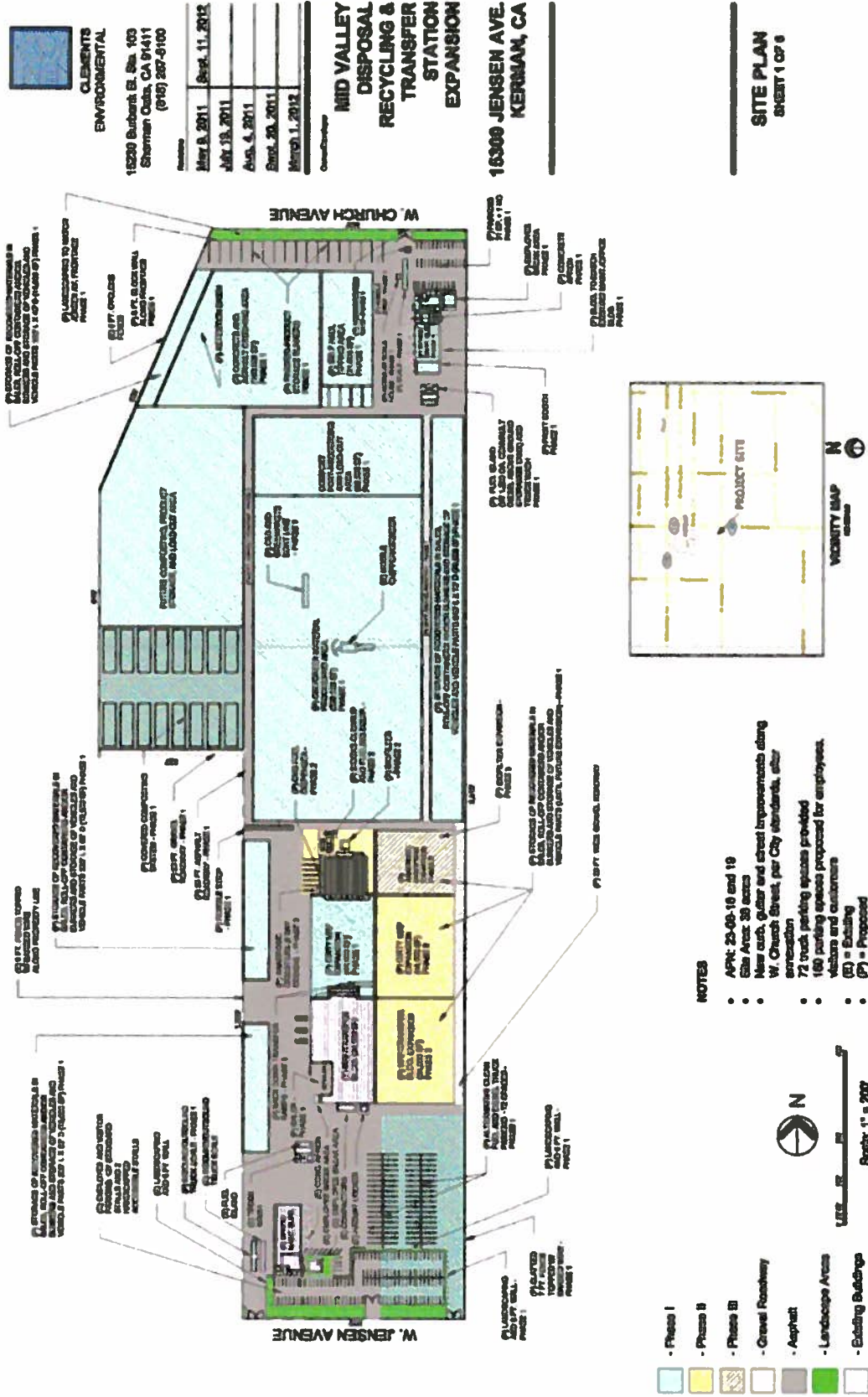
Visitors and employees enter through one of the two main driveways and park where indicated.

During waste receiving hours, facility personnel in the scale office monitor all incoming traffic. During non-waste receiving hours, fences, walls, and gates secure the site at all entry and exit points.

See **Figure 4** for the Site Plan, Traffic Flow.

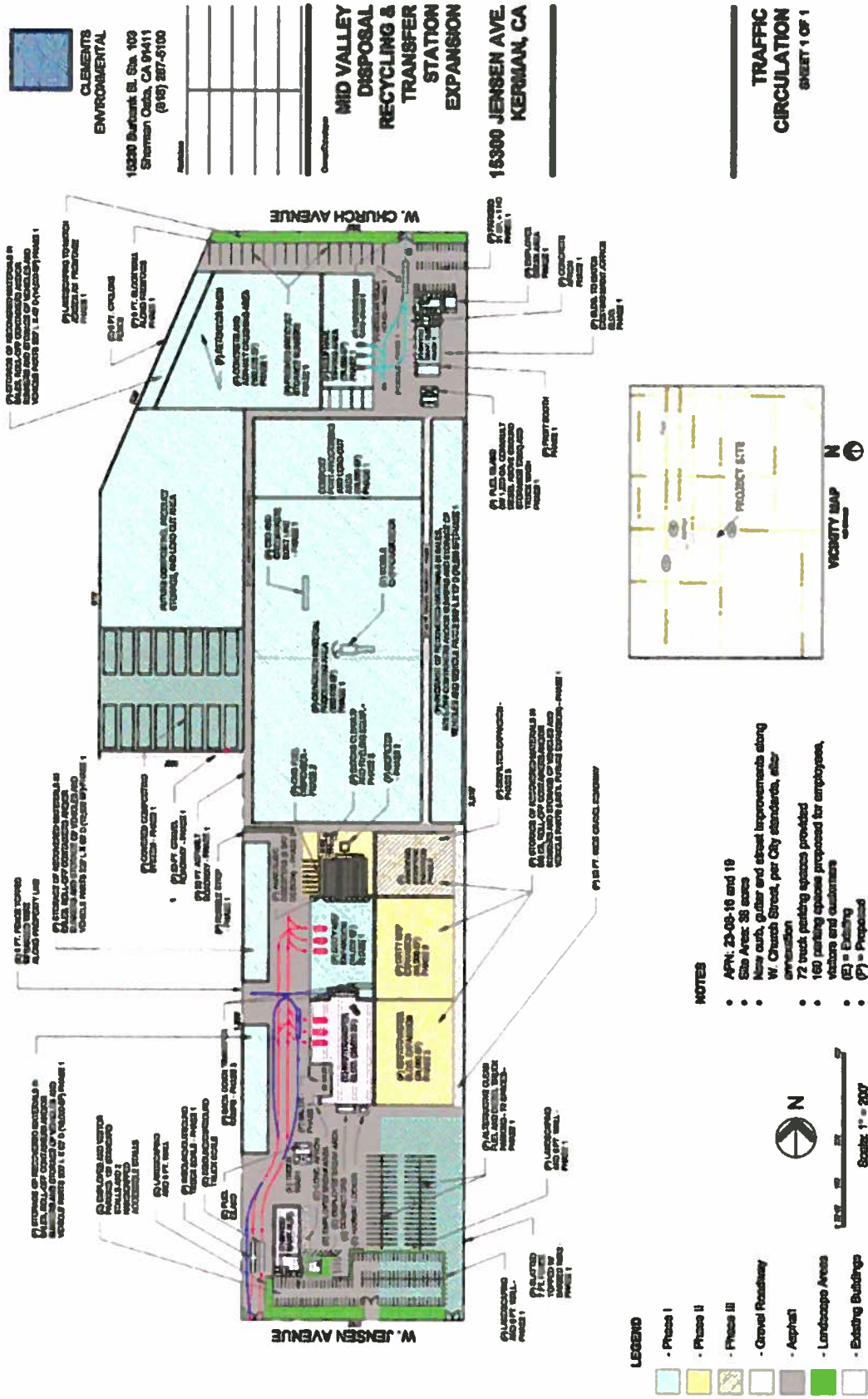


FIGURE 3: SITE PLAN





**FIGURE 4: SITE PLAN - TRAFFIC FLOW**



**Waste Flow**

**Figure 5** and **6** present schematic plans showing the flow of waste materials through the facility from unloading through sorting, processing, and removal. **Figure 5** represents facility operations without anaerobic digestion. **Figure 6** shows the flow of materials once anaerobic digesters have been installed. Material handling activities involved in this waste flow are discussed in **Section 5, Operations**.

**Surface Drainage and Runoff Control Plan**

The drainage and runoff control plan will be submitted as part of the revised Stormwater NPDES Permit. The purpose is to ensure that runoff does not contain solids or other contaminants; that flooding does not occur; and that erosion is avoided. The plan indicates the direction of surface runoff into the drainage structures. A Storm Water Pollution Prevention Plan and Monitoring Program Plan have been implemented to manage stormwater at the facility.

**Industrial Wastewater Discharge**

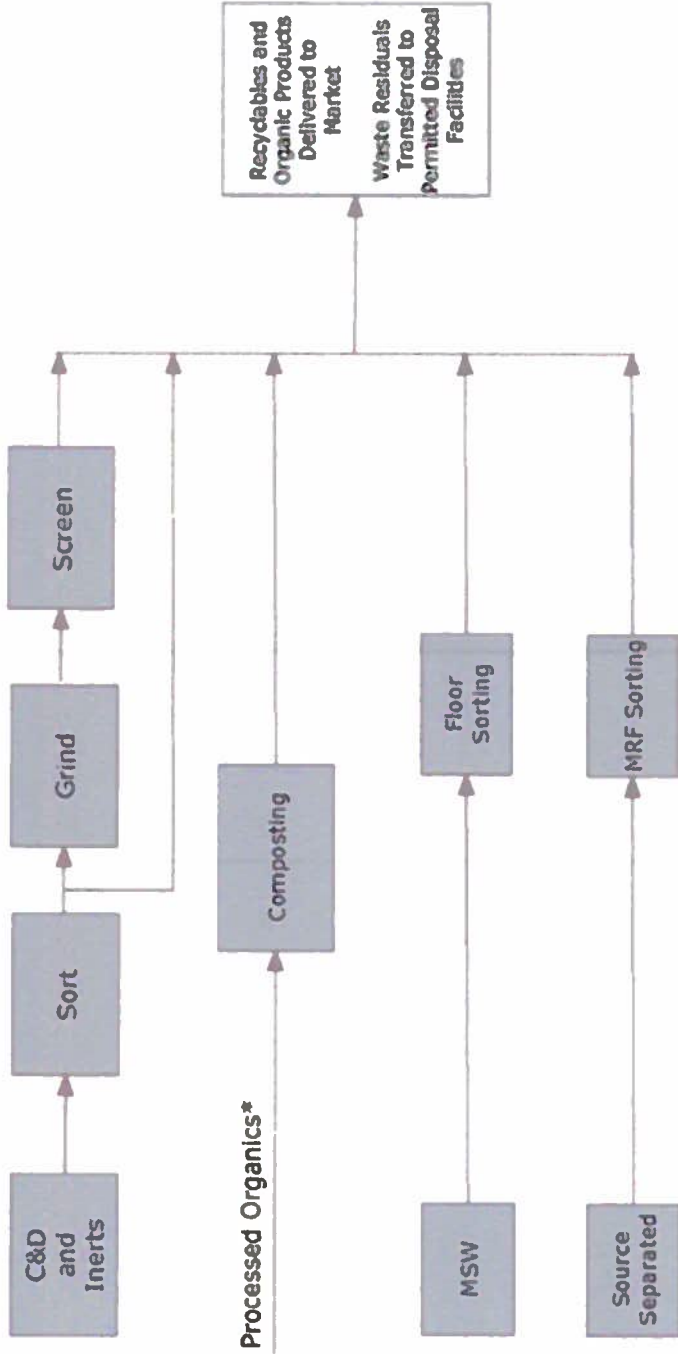
Dry clean-up methods are used exclusively at the site; therefore no industrial wastewater will be generated. The only exception will be the discharge from the truck wash racks. This industrial wastewater is processed through a clarifier and discharged to a new sewer line running to the headworks of the City of Kerman wastewater treatment plant. Sanitary wastewater from the employee restrooms will be pumped to the same sewer line for treatment at the City's wastewater treatment plant.

No other process or quench water is used.

**Utilities**

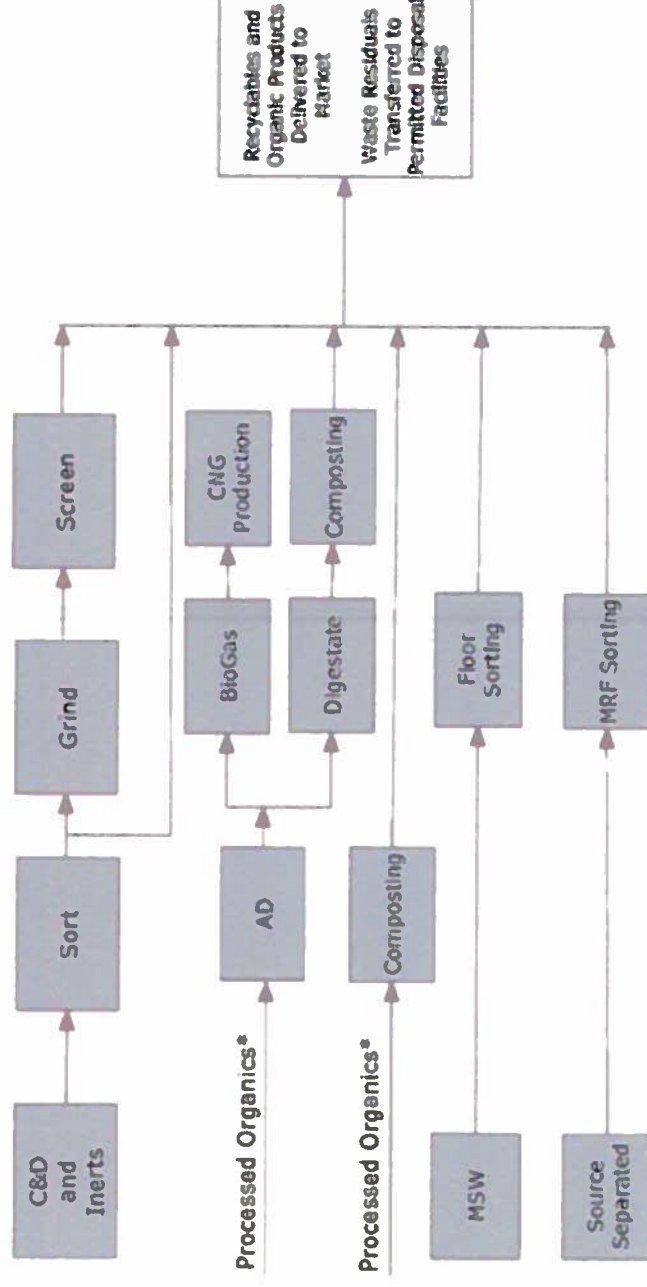
Pacific Gas and electric (PG&E) provides power to the facility. The City of Kerman Public Works Department supplies water and sewer service.

**FIGURE 5**  
**WASTE FLOW DIAGRAM**  
**(WITHOUT ANAEROBIC DIGESTION)**



\*Up to 200 TPD of organics received as part of the existing operation will be processed through proposed anaerobic digester and/or composting

**FIGURE 6**  
**WASTE FLOW DIAGRAM**  
**(WITHANAEROBIC DIGESTION)**



\*Up to 200 TPD of organics received as part of the existing operation will be processed through proposed anaerobic digester and/or composting

## DESIGN CALCULATIONS

### Station Capacity

This section substantiates the facility's ability to handle the proposed design capacity of 2,000 TPD without causing environmental harm or safety problems.

### Vehicle Loading and Unloading

The following assumptions and calculations support the facility design with respect to vehicle loading and unloading:

- **Queuing**

The Mid Valley Disposal facility has three inbound/outbound scales.

Four collection vehicles can queue onsite before each incoming scale. A substantial queue can also be established on the 38 acre site between the scales and the tipping areas to accommodate additional collection trucks. Given the quick 60-second weigh-in time, this is sufficient to ensure that all queuing occur onsite.

Assuming 60 seconds to weigh-in and report the origin of material, approximately 60 vehicles can weigh-in per hour over each incoming scale, totaling 180 vehicles. This capacity will initially meet the demand for the ultimate peak hourly number of incoming vehicles expected (50) at the maximum permitted capacity of 1,500 TPD. Vehicles with recorded tare weights will not need to weigh out.

- **Collection Vehicle Weigh-in/Off-loading**

Assuming 60 seconds to weigh-in, approximately 180 vehicles could weigh-in per hour. This capacity exceeds the peak hourly number of collection vehicles (15), and self-haul vehicles (35) expected at the maximum capacity of 1,500 TPD.

Assuming a collection truck can unload in 10 minutes and that eight (8) vehicles can unload simultaneously in both MRF tipping areas, a maximum of 96 vehicles could unload per hour.

### Solid Waste and Material Storage

The storage area for incoming material is approximately 78,000 square feet. Assuming a loader can work a pile 10 ft high, the total tonnage that could be stored on the floor would be 6,500 tons based on the calculation below. This assumes a density on the floor of 450 pounds per cubic yards, which was calculated from standard "in truck" compacted densities of 750 lbs/cy and assumes an average "decompression" of 40% during tipping.

The in-building tipping areas (78,000 sf) will have the capacity to store a maximum of 6,500 tons, with a maximum depth of approximately four to five feet (assuming a density on the floor of 450 pounds per cubic yards). The loaders can easily manage this depth.

$$(1 \text{ ton} / 2,000 \text{ lbs}) \times (450 \text{ lbs} / 1 \text{ cy} \times 1 \text{ cy} / 27 \text{ ft}^3) \times 10 \text{ ft depth} \times 78,000 \text{ sf} = 6,500 \text{ Tons}$$

In addition, 3.5 acres will be reserved for outdoor storage of C&D debris and organics.

#### Waste Transfer

A transfer truck can be loaded in roughly 15 minutes, or four per hour. With two loadout ports eight transfer trucks can be loaded per hour. Assuming a 22-ton payload for each truck, this equates to 176 tons per hour (TPH), well beyond the needed capacity. At this rate, all 1,500 tons could be loaded out in less than 9 hours.

$$22 \text{ tons per payload} \times 8 \text{ payloads per hour} = 176 \text{ TPH}$$

$$1,500 \text{ tons} / 176 \text{ TPH} = 8.5 \text{ hours}$$

In addition, non-recyclable residue from the MRF line will be loaded directly into a compactor. Once full, this compactor will be hauled to the landfill for disposal of the residue.

Under any foreseeable circumstance, all residual waste can be transferred within the State's 48-hour requirement.

**TABLE 3**  
**DIVERSION TABLE**  
**(1,500 TPD Design Capacity)**

Material	TPD Received	% Diversion	TPD	
			Diverted	Disposed
C&D/Inerts	300	98	294	6
Single Stream Recyclables	375	85	319	56
MSW	450	25	113	337
Organics	300	95	285	15
Food Waste	75	95	71	4
<b>TOTAL</b>	<b>1,500</b>	<b>-</b>	<b>1,082</b>	<b>418</b>

#### Processing Operations

The facility is designed to be flexible to handle a wide variety of materials and programs, including MSW transfer. Recovery is achieved by sorting and processing C&D materials, organics, food waste, wood, inerts, single stream recyclables, and select commercial loads.

The following assumptions and calculations support the facility design with respect to the sorting and processing operations. These assumptions could change during the course of the project. The LEA will be notified before any change to operating procedures.

- *C&D Materials*

C&D material is handled in a designated area covering about 6.7 acres. The incoming material tipping area is roughly two acres of this total. It will then be sorted manually to remove large items. The following materials are expected to be recovered for recycling: concrete, asphalt, dirt, wood, dry wall, scrap metal, organics, and other recyclable commodities. A majority of this material will then be stockpiled and subsequently loaded into trucks for delivery to markets.

Wood recovered from the C&D may be ground, and screened. The fines will be composted along with organics and food waste onsite. The chips will be shipped to biomass power plants or sold as mulch. Stockpiles may be watered as needed to reduce dust.

Residue that is non-recyclable, estimated at 2% of incoming C&D tonnage, will be loaded in outbound vehicles, and hauled to a permitted landfill for disposal.

- *Inerts*

Inert material will be cleaned of contaminants by hand labor and/or screens and staged for load out.

- *Bulk Metal*

Bulk metal is separated from the mixed C&D materials or received already source-separated, then staged and loaded out.

- *Organics*

Within accepted policies and regulations, organics will be cleaned of contamination, screened, and ground by a tub grinder. Ground organics will be screened again and visually inspected for contaminants which may include: plastic, trash or inerts.

Ground material will be marketed directly as mulch or deposited in onsite covered composting operations. Covered compost piles will be aerated by injected air into them through a ventilation system as needed to maintain optimal temperature, moisture, oxygen, and pathogen reduction for a composting period of approximately 8 weeks. Finished, composted material will be screened, with reject material being delivered back to the system, and acceptable material stockpiled for load out. Some of the larger fraction organics may also be sold as boiler fuel.

- *Wood Waste*

Wood will be ground and screened. Depending on market conditions, processed material may be marketed as mulches, soil amendments, or boiler fuel.

- *Food Waste*

All receiving of food waste occurs inside the “dirty” MRF building. Food waste is mixed with other organics and composted in a covered composting system located in the western portion of the approximately 5.4 acres composting area (See **Figure 3**, Site Plan).

The food waste/organics ratio can vary from 20/80 to 50/50 depending on operating conditions, nutrient loading, etc. Mid Valley will experiment with various blends to optimize the process and final product quality.

In **Phase II**, Mid Valley will install anaerobic digesters to convert the food and possibly some of the organics to renewable electricity and/or transportation fuel. This will require submittal of additional documents to regulators and revisions to the SWFP.

- *Single Stream Curbside Recyclables*

Single stream curbside recyclables will be processed through a traditional sorting system including mechanical and manual separation, located in the MRF building.

- *Select Commercial Loads*

Select commercial loads will be processed through a traditional sorting system including mechanical and manual separation primarily for fiber recovery (OCC and other paper), located in the MRF building.

- *Municipal Solid Waste*

Loads of MSW are tipping in the “dirty” MRF, floor sorting of any recoverable recyclable materials is conducted, and then the MSW is transferred to a permitted landfill.

- *Source-Separated Recyclables Processing*

Assuming a throughput capacity of 10 tons per hour for the elevated sorting platform, a total of 80 tons per shift could be conveyed across the sorting belt. This is well above the capacity needed for sorting.

Some source-separated cardboard and high-grade paper may also be received at the facility from commercial and industrial businesses. Much of this material will not require sorting and will be baled directly.

- *Baling*

At maximum diversion, a total of approximately 100 tons of recyclable material will be baled for transport to market per day. Assuming a capacity of 20 tons per hour for the baler, 160 tons of material could be baled each 8-hour period.

### Storage of Salvaged Materials

Mid Valley has four designated storage areas, totaling approximately 122,000 square feet, for bales, roll-off containers and/or bunkers and storage of vehicles. This area can accommodate



approximately 3,400 bales based on 25% of the storage area used for aisles and 25% of the area used for bale storage with the bales stacked 3 high (8 ft high) as follows:

- **122,000 sf of storage area x 0.75 (to allow for access aisles) = 91,500 sf**
- **91,500 sf x 0.25 bale storage area = 22,875 sf**
- **22,875/20 square feet per bale = 1143 bales x 3 bales high = 3,429 bales.**

e-Waste, bulky items, white goods, and tires will be stored outside to the south of the C&D and greenwaste chipping and grinding area. This area encompasses about 70,500 sf. Material will be stored in bunkers, on pallets, or in bins or roll-off containers. Care will be taken to keep this areas looking organized and neat.

Recyclable material will be shipped out on a continuous basis as truckloads accumulate.

#### GORE™ Cover Composting System

The GORE Cover composting system (GORE™) is a covered composting system that provides a high level of moisture, temperature, and oxygen control, as well as excellent air emission reductions and stormwater protection. It has already been designated as BACT by the SJVAPCD. The system is made up of three components: aeration, control, and the membrane cover. Medium pressure aerators are connected to in-floor aeration ducts to provide the required oxygen for aerobic micro-organisms. Probes sunk into the material monitor temperature and oxygen data.

Organics and food waste from the existing and permitted grinding operation will be placed on the aeration channels using wheeled loaders. The GORE™ Cover is immediately pulled over the pile and monitoring and aeration started. Active composting will last for approximately 28 days followed by 14 days of curing.

The system at Mid Valley will consist of 16 composting bunkers designed to process approximately 100 TPD on a continuous basis. The covered system will be used to control emissions and prevent stormwater penetration during both the “active” and “curing” phases of the composting process. MVD is working closely with GORE™ to ensure that the system will be designed to handle up to 100 TPD of organics (including digestate from the dry fermentation digesters when these are constructed in Phase II).

#### Anaerobic Digestion

The MVD anaerobic digestion system, to be constructed in Phase II, consists of four primary steps: (1) pre-processing to obtain a prepared organic feedstock; (2) digestion of the prepared organic feedstock in a fully enclosed concrete tunnel; (3) composting of the digestate to produce a clean, mature compost, and (4) conversion of the biogas generated during the anaerobic digestion process to CNG fuel for the MVD truck fleet.

Mid Valley will likely use either BIOFerm Energy Systems or SMARTFERM Dry Fermentation technology for the anaerobic digestion. The technologies are very similar. The installed systems will have eight (8) enclosed chambers for digesting material designed to process approximately

100 TPD of organic material. The digestion process takes approximately 28 days. Once the process is complete, the digester is aerated to minimize the potential for odor, and the solid residual (digestate) is moved by loader to the composting site.

#### CNG Conversion Overview

To create CNG fuel from the digester biogas (BioCNG fuel), the gas is piped into a conditioning unit where moisture (H<sub>2</sub>O), hydrogen sulfide (H<sub>2</sub>S), volatile organic compounds (VOCs), and carbon dioxide (CO<sub>2</sub>) are removed. After cleaning and conditioning, BioCNG fuel meets Society of Automotive Engineers (SAE) standard minimum methane content of 95% (SAE J1616) and engine manufacturer's fuel specifications.

The fuel is then routed to a CNG fueling station, where it is compressed for use in CNG vehicles. It can be used directly or mixed with natural gas to produce a blended vehicle fuel similar to biodiesel or ethanol/gasoline blends.

Mid Valley will install a BioCNG 200 Gas Cleanup Skid. The unit is matched to the gas production of the digesters and can convert 200 scfm of biogas to 775-1100 gallons of CNG fuel for use in the facility's vehicles.

## **4.0 STATION IMPROVEMENTS**

### **SIGNAGE**

A signage plan, conforming to City of Kerman planning standards, ensures safe operations. Signs are maintained and replaced as needed to ensure easy readability and maintain aesthetics. At a minimum, the following signs are posted with the following information:

#### Sign Located at all Entrances of the Facility

- Hours of Operation, Days of Week
- Name of Facility and Operator
- Materials Accepted/Not Accepted
- Speed Limit
- Facility Telephone Number
- Schedule of Charges

#### Sign Located at the Scale Houses

- Schedule of Charges
- Transfer Station Rules (stay in truck, etc.)
- Tarping Requirements

### **SECURITY**

During waste receiving hours, facility personnel are stationed in the scale office to monitor all incoming traffic. During non-waste receiving hours, a combination of walls and gates secure the site at all entry and exit points.

### **ROADS**

The office, maintenance, and parking areas are paved with asphalt. The interior MRF and Dirty MRF tipping and load out areas are surfaced with concrete; truck maneuvering areas in the truck yard, MRF areas, and roadways throughout the site are paved with asphalt; and finished product storage bunkers are paved with asphalt. Daily sweeping to remove litter and provide dust control will not impact the structural integrity of the site surfaces. The site will be accessible during wet and dry conditions.

### **VISUAL SCREENING**

The facility is designed so that the buildings, slatted chain-link fencing, and landscaping screen the operation from view. A wall and landscaping along the site frontage on Jensen Ave and Church Ave provide further screening and enhancement of the aesthetics of the site.

## 5.0 OPERATIONS

### HOURS OF OPERATION

The following are the proposed hours of operation by activity:

Activity	Hours of Operation
Waste Receiving	6:00 am to 7:00 pm M-Sat
Waste Processing	24 hours a day, 7 days per week
Waste Transfer	24 hours a day, 7 days per week
Visitors	By appointment, M-F

The facility will be closed on the following holidays: Thanksgiving Day and Christmas Day.

### STATION PERSONNEL

**Table 4** lists the facility positions and number of personnel anticipated at the facility at the maximum 1,500 TPD capacity. The number and assignments may change to some extent depending on operational requirements.

**Figure 7** shows an organizational chart for the operation of the facility. Facility management will be selected based on their proven experience in the waste management and recycling industry. **Appendix C** contains capsule resumes of key people. **Table 5** and **Table 6** contain emergency contact information.

All employees will receive training including, but not limited to: safety, health, environmental controls, and emergency procedures. The training programs will offer standardized training for all employees in company operations, policies and procedures, as well as additional training based on the specific job description and responsibilities of the employee. For example, sorters will be trained to recognize the types of hazardous or special waste that may be inadvertently included in the loads brought to the facility. Employees will receive regular safety briefings.

Joe Kalpakoff will be the facility manager and the primary contact for the LEA and other regulatory agencies. His contact information is:

Office: (559) 237-9425  
15300 W. Jensen Avenue  
Kerman, CA

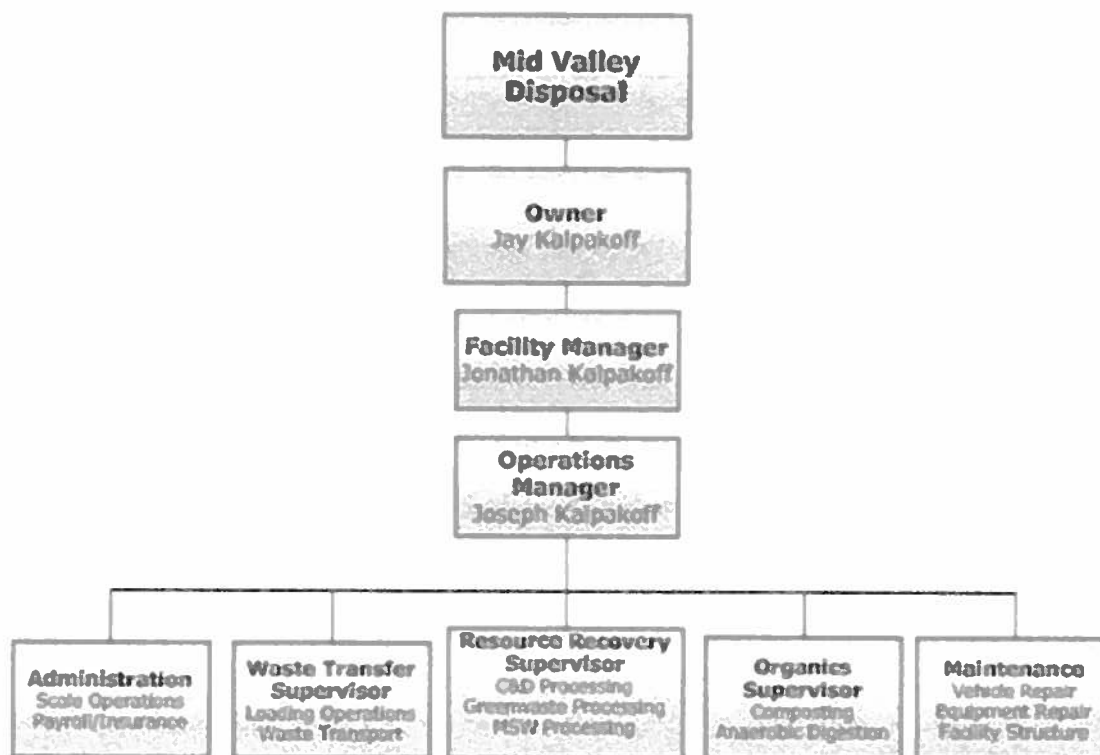
**After Hours Emergency Contact Telephone: (559) 351-1320**

**TABLE 4**  
**ESTIMATED FACILITY STAFFING**

Position	1,500 TPD Operation
Ops/Safety Manager	1
Supervisor/Foreman	2
Scalehouse Attendants	2
Traffic Spotters	4
Sorters	
Floor Sort	6
Sort Line	15
Equipment Operators	5
Loader Operators	4
Grinder Operator	2
Maintenance	4
Anaerobic Digester	2
Gas Treatment (CNG)	1
Composting Operations	4
<b>Total</b>	<b>52</b>

Note: additional transfer truck drivers for wood and organics will be contract haulers.  
Manual labor for inerts sorting has been replaced by mechanical sorting via screens.

**FIGURE 7**  
**ORGANIZATIONAL CHART**



**TABLE 5**  
**CORPORATE EMERGENCY CONTACT LIST**

Name	Phone
Jay Kalpakoff	Office: (559) 237-9425 After Hours Emergency: (559) 351-1320
Joe Kalpakoff	Office: (559) 237-9425

**TABLE 6**  
**OUTSIDE AGENCY EMERGENCY CONTACT LIST**

TYPE OF EMERGENCY	AGENCY	PHONE NUMBER
General Emergency	Emergency Dispatch	911
Fire or Haz. Waste Spill	County Fire Department	911 or (559) 621-4000
Explosives	County Sheriff and Fire Department	911 (559) 488-3939 (Sheriff) (559) 621-4000 (Fire)
Security	County Sheriff	911 or (559) 488-3939
Hazardous/Suspected Hazardous Waste, Unknown Sludges, Slurries and Liquids	County Fire Department, Hazardous Materials	(559) 621-4000
Medical Waste	County Fire Department or Fresno County Community Health Department	(559) 621-4000 (559) 445-3271
Injuries/Non-Emergency Medical Assistance	Madera Community Hospital	(559) 675-5555

## STATION EQUIPMENT

**Table 7** lists the type of equipment and estimated number of units anticipated at the peak volume of 1,500 TPD.

- **Transfer Trucks:** Some of these trucks and drivers will be provided by outside contractors; six will be based at the FACILITY.
- **Material Marketing Trucks:** These trucks and drivers will be provided by outside contractors and will not be based at the FACILITY.

**TABLE 7**  
**ESTIMATED STATION EQUIPMENT**

<b>Equipment Type</b>	<b>Existing (500 TPD)</b>	<b>Proposed Additional (1,500 TPD)</b>
Excavators	1	1
Loaders	2	2
Baler	1	1
Forklifts	1	2
Grinder	1	2
Sort Lines	1	2
Electronic Truck Scales	1	2
Water Truck	-	2
Dry Fermentation Digester System	-	1
Covered Compost System with Biofilter	-	1

#### Preventative Maintenance Program

An equipment preventative maintenance program will be implemented at the facility to ensure the reliability of all equipment and vehicles. The schedule will approximately be as follows:

- Loaders and Forklifts: every 250 hours
- Conveyors: bi-weekly lube and alignment
- Trailers: weekly brake examination and adjustment; welding as needed
- Balers: monthly inspection and service

Maintenance of collection and of transfer trucks will be conducted at the facility.

#### Standby Equipment

To assure ongoing operations, the following back-up equipment will be maintained at the facility's maintenance shop:

- One (1) loader
- One (1) forklift

To assure fast repair, adequate parts and supplies will be kept on-site. While there are few critical spare parts necessary to maintain facility operations, it is anticipated that the following equipment will be stored in the maintenance the facility for emergency purposes: shipping containers, spare baler parts, electric conveyor motor, and conveyor parts. For the quick replacement of mobile equipment, local equipment rental companies in Fresno can provide same day delivery of loaders and forklifts.

### Hazardous Waste Handling Equipment

Hazardous waste discovered on the tipping floor or on the sorting platforms will be handled in accordance with the facility's hazardous waste handling plan. The equipment used to handle hazardous waste may consist of the following Personal Protective Equipment (PPE):

- Eye protection: safety glasses or goggles
- Body protection: hard hats, disposal coveralls or Tyvec sleeve, Nitril gloves, neoprene aprons and steel-toed boots
- Respiratory Protection: Dust masks or respirators (if needed)

For the storage of hazardous wastes, at a minimum, EPA-approved 55-gallon drums will be used, along with overpak drums, and a portable hazardous waste storage locker with secondary containment and lockable doors.

### **MATERIALS HANDLING ACTIVITIES**

The following section describes waste handling activities.

#### Material Recovery Facility (MRF)

Collection vehicles (curbside trucks, select commercial front-loaders, some self-haul) enter the facility and weigh in on an incoming scale. The scalehouse operator directs them to the appropriate tipping area within the MRF building.

After tipping, trucks exit the facility via the main gate on Jensen Avenue. Most truck tare weights are coded into the scalehouse computer so repeat customers do not have to weigh-out when they exit. Roll-off trucks weigh-out, because of the differences in the tare weights of the containers.

The MRF is where most source-separated recyclable materials are tipped and the location of the primary sorting operation. Loaders push source-separated recyclables onto the infeed conveyor for the elevated sorting platform. Material conveyed down the sorting platform are recovered by material type by sorters and dropped through the platform into bunkers or bins below. Conveyors or loaders move the material from beneath the sorting platforms to the baler line. Selected loads of clean cardboard, newspaper and other recyclable materials may be sent directly to the baler. Recovered materials are baled and stored in the bale storage area.

#### Proposed "Dirty" MRF

Mostly mixed MSW and food waste will be tipped in the "dirty" MRF. Like the existing MRF, collection vehicles enter the facility and weigh in on an incoming scale. The scalehouse operator directs them to the appropriate tipping area within the "dirty" MRF building, depending on their load. After tipping, trucks exit the facility via the main gate on Jensen Avenue.

The mixed MSW will be floor sorted and then loaded for transfer to the landfill for disposal. Food waste tipped in this building will be mixed with other organics, ground and then placed in



the covered composting system. See **Appendix E** for details on the Covered Composting System.

In Phase II of the “project” some of the food waste/organics mix will be placed in the Anaerobic Digestion System and converted into CNG fuel. See **Appendix F** for details on Anaerobic Digestion.

#### Waste Transfer

Waste residue from material recovery operations will be top-loaded into transfer trailers in the tipping building and hauled to permitted disposal sites. Residue from the MRFs will be loaded directly into a 30 cy compactor and hauled to the landfill.

#### Self-Haul

Self-haul loads of recyclables or MSW will be delivered by professional salvagers (repeat customers), and residents (non-repeat customers). All customers will scale-in and be charged on a \$/ton basis similar to other collection vehicles.

#### Collection of Fees

MVD employees will staff the administration building, and the Company will manage all fee collections and accounting.

#### Storage of Recyclables

Recovered recyclable materials will be stored in bins or bales in several locations both inside and outside the buildings. Approximately 3,400 bales of recyclables can be stored. Typically, all grades of paper, plastics, and scrap metals are baled. This material will be shipped out on a continuous basis as truckloads accumulate. The maximum storage time is 120 days.

#### Hazardous Waste Load Checking Program

In accordance with CCR Title 22, a hazardous waste load-checking program has been implemented at the facility to detect and properly handle liquid, hazardous and/or special wastes (infectious wastes, dead animals, and sludge) that have been inadvertently received. **Appendix A** contains a copy of the program. Hazardous wastes will be manifested and transported off-site to a permitted disposal facility in accordance with local, state, and federal laws.

#### Hazardous Waste Storage

Hazardous wastes discovered as part of the hazardous waste load-checking program will be properly containerized, inventoried, and temporarily stored in a Hazardous Waste Locker located outside the tipping building and away from on-site traffic patterns. All Federal, state and local hazardous waste laws and regulations will be followed.

## **STATION MAINTENANCE**

A station maintenance program will be implemented, and the facility will be monitored on a daily, weekly, or monthly basis. Items found to be in need of maintenance will be brought to the attention of the General Manager.

The site will be cleaned daily to collect loose litter and dust, including driveways, parking areas, and truck maneuvering areas. At the end of each day, the tipping floor will be cleaned using dry clean-up methods.

MVD will provide adequate housekeeping for the maintenance of facility equipment and will minimize the accumulation of fuel drums, inoperable equipment, parts, tires, scrap and other similar items. The site Manager, Joe Kalpakoff, will personally take responsibility for the site appearance and minimizing the accumulation of unsightly scrap material.

## **HEALTH AND SAFETY PROGRAM**

A health and safety program will be implemented at the facility to ensure the health and safety of employees and the public visiting the facility. It will include the following programs:

- Employee Safety Training Program
- Injury and Illness Prevention Program (IIPP)
- Emergency Procedures and Contingency Plan
- Hazard Communication Program
- Energy Control (Lockout/Tagout) Program
- Respiratory Protection and Hearing Conservation Programs

### Water Supply and Sanitary Facilities

The City of Kerman Public Works Department provides the potable water supply. Water fountains or other potable water dispensers and sanitary facilities will be located in both the office building for administrative personnel, and the shop break room for operations employees.

### Communications

The facility will have a communications network between the scale office, loaders and buildings to ensure smooth operation. The scale office will be equipped with an intercom phone system, outside phone line, and paging system. Supervisors and loader operators will be equipped with two-way radios.

### Lighting

The facility will have indoor and outdoor lighting sufficient to conduct operations during non-daylight hours. Outdoor lighting will consist of building-mounted fixtures directed to the interior of the site to reduce glare. In addition, the loaders may be equipped with lights to facilitate operations during non-daylight hours.

**Fire**

A fire prevention system will be installed in the buildings in accordance with all local fire codes. This includes automated sprinkler systems throughout the buildings. In addition, fire extinguishers will be located per the requirements of the Fire Marshall.

**Safety Equipment**

The facility will require that employees directly involved in waste handling operations be properly outfitted with Personal Protective Equipment (PPE). At a minimum, these employees will be required to wear hard hats, safety glasses or goggles, safety vests, gloves, and safety boots. In addition, ear protection will be provided as necessary for all employees. Employees involved in hazardous waste handling will be required to wear specialized safety equipment.

The facility has operational controls and safety devices for equipment to protect employees. Railings, curbs, grates, fences and other controls will be designed to meet OSHA standards in order to ensure the safety of each employee.

Supervisors will be responsible for the following:

- monitoring and evaluating safety equipment at the facility to ensure that it is in good condition and adequate stock
- inspecting the (PPE) on a daily basis while touring the facility
- issuing new PPE as needed, or at the request of employees
- inspecting hazardous waste response equipment on a monthly basis, any items will be replaced as needed
- checking fire extinguishers, first aid kits, and eye wash kits monthly.

**Emergency Provisions for Power Failure**

If electrical power to the site is temporarily lost, top-loading of waste can still continue. If power is lost for an extended period of time, collection trucks and self-haul vehicles may be instructed to bypass the facility and deliver their loads directly to permitted landfills.

## 6.0 STATION CONTROLS

This section discusses how the facility will be designed and operated to meet State Minimum Standards relating to transfer stations, Title 14, Section 17406.1 et. seq.

### GENERAL DESIGN REQUIREMENTS (17406.2)

- (a) The design of the facility was conducted by Clements Environmental Corp. and J.R. Miller & Associates, two firms that have performed similar services on over 30 MRF/transfer station projects throughout California.
- (b) The design was based on appropriate data regarding the expect service area (the franchise area for MVD most specifically), the nature and quantity of waste to be received, rainfall and other climatological factors, physical setting, adjacent land use, types and number of vehicles anticipated, adequate off-street parking for transfer vehicles, collection trucks, and employees and visitors, drainage control, the hours of operation and other pertinent information. Since the facility will be open to the public, additional safety features have been incorporated, including a traffic controller and the use of K-rails or cones to set apart the public tipping area in the transfer building.
- (c) The unloading area for MSW is restricted by requiring that all tipping occur within the transfer building. This also minimizes windblown material. Vectors are minimized by moving the MSW out on a first-in first-out basis and always as quickly as possible. If the MRF/Transfer Station doors are left open during non-operating hours, the LEA may require all waste left on the tipping floor to be covered with tarps. See following sections for dust control, noise control, public health, etc.
- (d) See following sections.
- (e) Containers to be used on site are the same ones used on the collection routes and will meet all the requirements of the regulations such as leak-resistance and ease of cleaning.

### BURNING WASTES AND OPEN BURNING (17407.1)

Open burning of solid waste will be prohibited at the facility.

Should the facility accidentally receive burning wastes or experience accidental ignition of wastes on the tipping floor, the following will occur:

- If possible, the burning wastes will be separated from the unloading, transfer, processing areas, and other structures.
- If the fire is small and manageable, the floor workers and loader operators will put it out with water hoses and portable extinguishers.
- If the fire appears to be a greater threat, 911 will be called immediately for assistance from the Fire Department. Loader operators may be able to isolate the burning material, to minimize spread of the fire until help arrives.
- Two inch water line has been installed in the MRF and can be used to fight small fires

In either case, the facility will back-track the waste to alert the generator and eliminate future occurrences.

**CLEANING (17407.2)**

Litter crews will police the site daily, including driveways and the frontage sections of Jensen Avenue each day.

The facility will be cleaned daily or once every 24 hours. Equipment, bins, pits, and all other containers will be inspected routinely for litter and debris and cleaned on a regular schedule approved by the LEA.

**DRAINAGE CONTROL (17407.3)**

Wastewater generated by the facility will be minimized as a result of dry sweeping methods employed at the facility.

The facility has a General Industrial Storm Water Permit (WDID # 5F10I021076) and developed a Storm Water Pollution Prevention Plan (SWPPP), which describes best management practices to be employed at the facility. The site will be graded so that the front half drains to the south and the back half drains to the northwest corner. Runoff will be controlled by grading and swales, and will be sampled in accordance with the NPDES permit to ensure that it is not contaminated. Drainage will be controlled so as to prevent safety hazards, protect roads and structures, and protect public health. Mid Valley will install an onsite storm drainage system that will convey stormwater to a retention basin, located on the northern end of the site.

Truck travel areas will either be paved or surfaced with crushed rock to provide a good all-weather surface. MSW will all be handled inside a building, thus eliminating the potential for contact water.

**DUST CONTROL (17407.4)**

Speed limits for trucks are set at 5 MPH to minimize dust. Areas around both entrances, off Jensen and Church Avenues, will be paved. The truck travel areas of the site where the C&D and green material will be processed will be surfaced with crushed rock to control dust during the dry season and mud during the winter. A tire shaker will be installed to knock the mud and dirt off the truck tires as the exiting trucks pull on to the paved area of the site.

In addition, water hoses will be used in the C&D tipping areas to wet down particularly dusty material. Misting systems will be installed in the transfer building, if required by the LEA.

Sweeping of the tipping floor and ventilation will be used in the transfer building to control the build up of dust. Employees working in the tipping, processing and load out areas will be required to wear dust masks.

**HAZARDOUS, LIQUID, AND SPECIAL WASTES (17407.5)**

This facility will not intentionally accept hazardous materials including batteries, oil, paint, and special wastes. The facility has implemented a load-checking program, and procedures to handle

hazardous material discovered on the tipping floor (See **Appendix A** for Load Checking Program). The facility will not accept liquid waste or sludges.

#### **LITTER CONTROL (17408.1)**

Litter will be controlled at the site in several ways:

- A litter crew polices the site once per day, picking up litter from the site perimeter, driveways, and along the frontage
- A mandatory tarping policy is enforced requiring all incoming loads to be covered. Measures for enforcement include warnings, refusal of loads, and possible banning from the facility. See **Appendix B** for a copy of the Litter Control Program.

#### **MEDICAL WASTES (17408.2)**

The facility will knowingly accept no medical waste that has not been properly autoclaved. If “red bag” medical waste is discovered, the LEA will be called immediately, the material isolated, and all contact with employees or users of the facility eliminated.

#### **NOISE CONTROL (14708.3)**

The facility will be located in an industrial zone, in a rural area. On-site vehicles (forklifts, loaders) and equipment (conveyors, balers) will be sound-proofed and muffled. Warning signs will be posted that recommend or require hearing protection and the facility will comply with all C.U.P. and CEQA mitigation measures.

#### **NON-SALVAGEABLE ITEMS (17408.4)**

Drugs, cosmetics, foods, beverages, hazardous wastes, poisons, medical supplies or syringes, needles, pesticides and other materials capable of causing health or safety problems will not be salvaged. All employees will be trained in this regard.

#### **NUISANCE CONTROL (17408.5)**

Strict operating practices, such as daily cleaning and prompt removal of waste material will be continued to ensure that the facility poses no nuisance to the community. The location of the facility in a rural area will also mitigate potential nuisances. The facility will comply with all C.U.P. and CEQA mitigation measures.

#### **MAINTENANCE PROGRAM (17408.6)**

See **Section 5**.

#### **PERSONNEL HEALTH AND SAFETY (17408.7)**

See **Section 5**.

**PROTECTION OF USERS (17408.8)**

Loads delivered by the public in their own vehicles will be guided by a spotter to a designated area of the tipping floor, separated from the commercial trucks. Traffic cones will be used to isolate this area.

**ROADS (17409.1)**

Heavy traffic areas on the site will be paved with asphalt or surfaced with crushed rock to provide an all-weather surface. A tire rattler to knock dirt and mud from the tires of outbound truck will be installed where trucks come off the dirt surface onto the paved portion of the site.

**SANITARY FACILITIES (17409.2)**

See Section 5.

**SCAVENGING AND SALVAGING (17409.3)**

Scavenging will be prohibited. Salvaging of recoverable material such as cardboard, wood, glass, paper, and metal is an integral part of the operation. This salvaging will be confined to specific areas of the site as noted on the Site Plan. Storage areas for salvaged materials are designated on the site plan. Processed CDI materials must be stored in bins or bunkers unless an alternate storage method is approved by the LEA. Maximum material storage times are:

	<u>Unprocessed Material</u>	<u>Processed Material</u>
• CDI (without concrete/asphalt):	15 days	30 days
• Concrete and asphalt:	30 days	120 days
• Organics:	48 hours <sup>(*)</sup>	48 hours <sup>(*)</sup>
• Recyclables:	---	120 days

<sup>(\*)</sup> Organics may be stored up to 7 days with the approval of the LEA

**SIGNS (17409.4)**

See Section 4.

**LOAD CHECKING (17409.5)**

See Section 6 and Appendix A. Training of personnel regarding the load check program will be quarterly at a minimum, or more frequently if needed. All hazardous materials stored in the hazardous materials storage locker must be labeled with the date they were found at the facility. Copies of the load check records will be maintained in the operating record for a year and be available for review by the LEA.

**PARKING (17409.6)**

Off-street parking will be provided for all employees, company vehicles and all users of the site. All collection and transfer trucks are provided by others and will park off-site at other facilities.

The operator will comply with specific provisions regarding adequacy of off street parking per the C.U.P or CEQA mitigation measures.

**SOLID WASTE REMOVAL (17410.1)**

Solid waste will be removed continually from the site on a first-in first-out policy and in all cases within 48 hours of receipt.

**SUPERVISION AND PERSONNEL (17410.2)**

See Section 5.

**TRAINING (17410.3)**

Personnel will be adequately trained on subjects pertinent to site solid waste operations and maintenance, hazardous materials recognition and screening, use of mechanized equipment, environmental controls, emergency procedures and other requirements of the Minimum Standards for Solid Waste handling and Disposal. Training records will be available for inspection.

**VECTOR, BIRD, AND ANIMAL CONTROL (17410.4)**

To eliminate any attraction for rodents, birds, and insects, non-salvageable wastes will be loaded into trailers on a first-in, first-out basis. At no time will waste be stored onsite longer than 48 hours. Baled and recyclable materials will be shipped out on a regular basis. A pest control company will visit the site as needed to set rodent traps and inspect the facility. Periodic spraying for flies and insect control will be conducted, if needed.

**RECORD KEEPING (17414)**

See Section 7.

**DOCUMENTATION OF LEA ACTIONS (17414.1)**

The operator will maintain a record of LEA approvals, determinations, and other requirements.

**COMMUNICATIONS EQUIPMENT (17415.1)**

See Section 5.

**FIRE FIGHTING EQUIPMENT (17415.2)**

See Section 5.

**HOUSEKEEPING (17416.1)**

See Section 5.



**LIGHTING (17416.2)**

See **Section 5**.

**EQUIPMENT (17416.3)**

The station will maintain the proper type, capacity, and number of equipment units to efficiently run the station according to the controls stipulated in this document. See **Section 5**.

**SITE SECURITY (17418.1)**

See **Section 4**.

**SITE ATTENDANT (17418.2)**

An attendant will be on duty during the hours the facility is open to the public.

**TRAFFIC CONTROL (17418.3)**

Traffic at the facility will be comprised of collection trucks, transfer trucks, recyclable material trucks, employee vehicles, and the public. Collection vehicles include, but are not limited to: roll-offs; side-loading; rear-loading; and front-loading trucks. Access to the site is from Jensen Avenue and Church Avenue.

On-site traffic will be controlled by the following means:

- enforced speed limit of 5 mph
- tipping directions from scale house operator
- sufficient queuing space
- the controlled metering of trucks into the tipping areas as necessary by the site supervisor, traffic controller, or lead floor man
- pavement striping, physical barriers, and directional signs, as needed

**VISUAL SCREENING (17419.1)**

The facility operation will be screened by buildings, walls, fences, and landscaping around the site perimeter. New landscaping along the Jensen Avenue and Church Avenue frontages will also screen the site. MVD will comply with any land use or CEQA mitigation measures that apply to visual screening.

**WATER SUPPLY (17419.2)**

The City of Kerman Public Works provides the potable water supply.

**UNUSUAL PEAK LOADS**

In the event of unusual peak loading, such as after a natural disaster, operations will be extended to a second or third shift, and stand-by equipment will be brought on-line, including loaders, forklifts, and transfer trailers. However, the maximum daily capacity of 1500 tons will not be exceeded, unless given specific emergency approvals by the City and the LEA.

**FINAL DISPOSAL**

All solid waste residues will be disposed at permitted sanitary landfills, principally the American Avenue landfill.

## **7.0 RECORDS AND REPORTING**

### **WEIGHT/VOLUME RECORDS**

The facility will maintain records of incoming weights, and outgoing salvage or residual weights. Records will also be maintained as required by 18809 et seq.

### **SPECIAL OCCURRENCES**

A Special Occurrences Log will be kept on a daily basis to document the following: any loads refused entry to the facility, fires, vectors, accidents and injuries, explosions, flooding, earthquake damage, lack of sufficient number of personnel pursuant to 17410.2, property damage, inspections, notices of violations, and other occurrences as needed. The log will be completed by the facility operator and kept in the office. Reports of all special occurrences and the operator's actions in response will be reported to the LEA within 24 hours.

### **COMPLAINTS**

A record of all complaints regarding this facility will be maintained and will include:

- the nature of the complaint
- the date the complaint was received
- the name and address of the complainer
- the telephone number of the complainer
- and the operator's actions taken to resolve these complaints. The LEA will be notified by telephone within 24 hours of any complaint received.

### **RESPONSIBLE PERSON**

The operator will maintain a copy of the written notification to the LEA and Local Health Agency of the name, address, and telephone number of the operator and other persons responsible for the site as required by 17410.2.

### **EMPLOYEE TRAINING**

All employee training records will be maintained as required by 17410.3.

### **INSPECTION OF RECORDS**

All records will be accessible for three years. Copies will be submitted to the LEA upon request or at a frequency approved by the LEA. Facility records will be maintained in the site office, and are available for inspection by contacting the facility operator between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday.

**APPENDIX A**

**LOAD CHECK PROGRAM**

## **MID VALLEY DISPOSAL RECYCLING AND TRANSFER STATION**

### **LOAD CHECKING PROGRAM**

A hazardous waste screening program will be implemented at the facility to make sure that no hazardous waste is brought to the facility, and to ensure that no hazardous waste is transferred to the landfill. The program will consist of the following elements:

#### **I. Signage**

Bi-lingual signs will be posted at the entrance of the facility stating that delivery of hazardous material is prohibited at the facility.

#### **II. General Visual Inspection**

As each load of waste is unloaded on the tipping floor, trained spotters will visually inspect each load for the presence of hazardous or suspicious materials to prevent and discourage disposal at the facility. A minimum of one trained spotter will be on duty at all times. Supervisors, equipment operators and sorters will also be trained and will perform continuous visual inspection to remove any suspicious materials. Discovered materials will be managed as described in Section VI.

#### **III. Random/Focused Load Inspection**

- A. Select a least one (1) load per day.
- B. Select them at different times during the day (Randomize selections for each inspection, for example Monday at 1:00 pm and Thursday at 9:00 am)
- C. Select an equal share of roll-off and packer trucks.
- D. Record date, time, truck and route number of selected load on the Load Check Inspection Record, Attachment A.

#### **IV. Dumping Procedure**

- A. Dump selected trucks apart from the other haulers in a clean area of the station.
- B. Dumping area must be separated from the other site operations.

#### **V. Sorting Procedure**

- A. Each load will be visually inspected by a trained spotter.

- B. Loads will be spread out with loaders and hand rakes. Particular items such as drums, 5 gallon containers, wastes with DOT or other descriptive labels, sludges and liquids, soils and rags, and unidentifiable wastes suspected of being hazardous will not be accepted.
- C. All containers large enough to contain other objects must be opened.

**VI. Handling Suspected Hazardous Waste**

- A. If hazardous waste is found:
  - 1. If the transporter is still on the premises:
    - a. Obtain driver's license number, vehicle license number, vehicle identification number, and bin number if roll-off.
  - 2. If transporter is identified, but has already left the facility:
    - a. Transporter's company should be contacted and notified of findings.
    - b. Transport trucks from that company may be subject to regular inspections.
  - 3. If transporter is not identified:
    - a. Mid Valley Disposal Recycling and Transfer Station is responsible for proper disposal of the hazardous material. Transportation and disposal of the materials will be accomplished using their EPA identification number.
- B. Procedure for Handling Hazardous Waste
  - 1. The person discovering the incident will immediately report the situation to their supervisor or the Facility Manager.
  - 2. If work area or building evacuation is necessary to ensure worker health and safety, the person discovering the incident, his/her supervisor, or the Facility Manager will initiate evacuation procedures:
    - a. Notify area personnel via intercom or loudspeaker to proceed to the nearest exit. Evacuation plans will be reviewed periodically.
    - b. Personnel will proceed to the following regrouping area:
      - Regrouping Area A – Mid Valley Disposal Recycling and Transfer Station scale area.
  - 3. The Site Manager will designate an individual to interface with the emergency response agencies and an individual to assess personnel injuries, if any, and conduct a head-count.

4. As soon as possible, the Site Manager, or his designee, will contact the Local Fire Department, County HazMat Team, and/or the Police Department by **dialing 911**.
5. Only personnel who have received proper emergency response training will be allowed into the incident area, and only after donning appropriate personal protective equipment (PPE).
6. Personnel who are trained in spill control and fire response and who have the appropriate PPE will try to contain the incident under the direction of the Site Manager.
  - a. If a large quantity of a hazardous chemical (>5 gallons) has been spilled, or a dangerous fire situation erupts, site personnel will not try to contain or control the situation. Site personnel will wait for local emergency response agencies to arrive.
    1. If a reportable quantity of material has been spilled, the Site Manager will also notify the:
      - DOT/EPA National Response Center at (1-800) 424-8802, and
      - California Office of Emergency services at (1-800) 852-7550.
  - b. If quantity of a hazardous chemical is less than 5 gallons and waste can be easily moved to storage area, the material will be temporarily set aside identifiable materials according to the following categories:
    - flammable and combustible
    - oxidizers
    - poisons
    - poisons containing heavy metals
    - corrosives (acids)
    - corrosives (bases)
7. Following containment and control of the incident, the Site Manager will complete the Special/Unusual Occurrence Report Form, **Attachment B** of this document.
8. Any hazardous material remaining on site overnight must be stored in the hazardous waste storage area.

**C. Notification**

Every hazardous waste occurrence will be documented. The following local agencies will be notified when any reportable quantity of hazardous or unidentifiable material is discovered at the facility.

- Fire Department, Fresno County  
(559) 621-4000
- Fresno County Environmental Health  
(559) 445-3391

If an investigation of the hazardous material generator seems warranted, call the Hazardous Material Investigative Unit of the California Highway Patrol at (916) 327 - 3310, and the County.

- D. Repeat offenders of hazardous waste from the same source will result in the termination of collection service for that business.

**V. Packaging Procedures**

- A. Small containers of the same hazardous class can be packed in the same drum (lab packs).
- B. All lab packs must contain enough absorbent material to contain liquids if there is a spill and prevent breakage. Vermiculite is approved packing material.

**C. Steps:**

1. Pack a few inches of absorbent material at bottom of the drum.
2. Pack more absorbent around each small container placed in the drum.
3. Drums for corrosive acid storage should be protected with plastic liner prior to adding absorbent and waste.
4. Each drum is to be assigned a number which is clearly marked on the drum body and lid.
5. Log sheets should be taped to the lid and should be marked as to: Facility location, drum number and hazard category.
6. Hazardous waste labels should be filled out and affixed to drum.
7. Affix proper hazard category label.



D. Packing compatibility:

1. Only chemically compatible materials can be packaged together. **DON'T MIX: ACID AND BASES, CYANIDE COMPOUNDS AND ACIDS, OXIDIZERS AND FLAMMABLE** (bleach is an oxidizer, though often marked poison).
2. If there is any doubt as to hazard class, call Fresno County Health Care Agency.

**VI. Labeling and Record Keeping**

- A. Log Sheet: Enter the following information on a log sheet - to be used later to prepare manifest:
1. waste category,
  2. list as much information about the chemical as possible (including the brand name),
  3. number of containers, and
  4. volume or weight of each container.
- B. Manifest: Must be prepared if wastes are to be transported (manifest forms available from the Department of Health Services).
- C. Training Records: Including Health and Safety Certifications.
- D. Inspection Reports.
- E. Spill or emergency incident reports.

**VII. Storage Procedures**

- A. Lab packed drums are to be stored inside secure, ventilated storage containers, so as to remain out of the way of any operations.
- B. Drums containing flammable, poisons, corrosives (bases) must be separated from drums with corrosives and oxidizers.
- C. Containers must be closed except when being packed.
- D. The temporary storage area of hazardous waste is to be fenced and secured.
- E. Signs in English and Spanish posted around storage area(s) reading:

**DANGER: HAZARDOUS WASTE STORAGE AREA.  
ALL UNAUTHORIZED PERSONS KEEP OUT.  
KEEP LOCKED WHEN NOT IN USE.**

**VIII. Disposal Procedures**

- A. Each lab pack must be inspected by a site supervisor experienced in waste identification and categorization before it is sealed.
- B. Each sealed drum must be labeled as to hazard class (according to CFR 40 and 49).
- C. Hazardous waste cannot accumulate for more than 90 days; otherwise we must secure a permit.
- D. Obtain an EPA ID# from the Fresno County Environmental Health Department.
- E. Manifest must be prepared if wastes are to be transported.
  1. Manifest forms are available from the Fresno County Environmental Health Department
  2. Prepare five copies:
    - The Facility keeps two.
    - One copy to transporter.
    - Legible copy to Fresno County Environmental Health Department within 30 days of each shipment.
  3. Within 35 days of shipment, Mid Valley Disposal Recycling and Transfer Station must receive copies of manifest signed by the operator of the disposal facility. If not, then the Facility must contact the facility (if not received within 45 days, an exception report of the pertinent manifest and cover letter describing efforts made to locate shipment, must be submitted to the Fresno County Environmental Health Department)
  4. The Facility is to keep copies of manifests for three years.
  5. Transporter - Only EPA-permitted facilities can transport hazardous wastes.

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**MID VALLEY DISPOSAL RECYCLING AND TRANSFER STATION**  
**HAZARDOUS WASTE LOAD CHECKING**  
**TRAINING PROGRAMS**

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**I. Training Personnel**

- A. Sorters: Only those trained in the use of personal protective equipment, emergency response, identification of hazardous materials and proper handling and procedures are allowed to sort refuse.
- B. Training is required at the time of the employee's INITIAL ASSIGNMENT AND WHENEVER A NEW HAZARD IS INTRODUCED into the work place.
- C. Supervisors will train regarding specific aspects of the load-checking program.
- D. Training is to be reinforced once a year.

**II. Personal Protective Equipment**

- A. Respiratory Protection:
  - training is required before a worker is allowed to wear respirators.
  - the safety officers is responsible for insuring all site workers are respirator certified, and
  - certificates must be kept up to date/renewed annually, and copies must be kept available for inspection.
- B. Eye Protection:
  - safety glasses or goggles must be worn when handling hazardous wastes, and
  - packers must wear full-face shield.
- C. Body/Hand Protection:
  - coveralls and steel-toed boots will be worn to protect the body and feet.
  - chemical, abrasion, puncture and tear resistant butyl or neoprene gloves will be worn by all employees coming in direct contact with waste (i.e. sorting).
- D. Dust Masks:
  - must be provided and additional protection must be available upon request.

***Load Checking Program  
Attachment A***

**MID VALLEY DISPOSAL RECYCLING AND TRANSFER STATION**

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**LOAD INSPECTION RECORD**

**Date and time:**

**Load checker name:**

**Collection Company:**

**Truck number:**

**Driver name:**

**Results of load check:**

**Description of hazardous material found (quantity, type, container, etc.):**

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**Disposition of material: (i.e. stored in HHW area):**

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**Load Checking Program  
Attachment B**

**MID VALLEY DISPOSAL RECYCLING AND TRANSFER STATION**

**SPECIAL/UNUSUAL OCCURRENCES REPORT FORM**

Date\_\_\_\_\_

Name of employee completing report form

\_\_\_\_\_

Name of employee who discovered incident

\_\_\_\_\_

Type of Incident

\_\_\_ Chemical spill

\_\_\_ Earthquake

\_\_\_ Personal injury

\_\_\_ Unknown hazardous waste

\_\_\_ Fire

\_\_\_ Other\_\_\_\_\_

Description of incident\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

• Time\_\_\_\_\_

• Location\_\_\_\_\_

• Date\_\_\_\_\_

• Source\_\_\_\_\_

Chemicals involved\_\_\_\_\_

\_\_\_\_\_

Action taken\_\_\_\_\_

\_\_\_\_\_

Extent of injury (if any)\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Emergency equipment used\_\_\_\_\_

\_\_\_\_\_

Response Agencies notified\_\_\_\_\_

\_\_\_\_\_

Facility Manager's signature\_\_\_\_\_

Date\_\_\_\_\_

**APPENDIX B**

**LITTER CONTROL PROGRAM**

## **LITTER CONTROL PROGRAM**

### **PURPOSE**

Promoting a clean environment through a Litter Control Program encourages all vehicles to properly cover (or tarp) their loads while traveling to and from the Facility in order to minimize the potential of litter on and around the property.

### **PROGRAM COMPONENTS**

The four components of the Litter Control Program are:

1. TARPING REQUIREMENT
2. CONTAINMENT OF LITTER
3. SITE AND FACILITY CLEAN-UP
4. MONITORING AND RECORDING

### **Tarping Requirement**

All loads entering the facility must be tarped or otherwise covered to control litter or other materials from escaping along any of the identified collection truck routes leading to the site. The following measures are implemented:

- A sign is posted at the entrance at each scalehouse which states that all refuse loads (inbound and outbound) must be covered.
- All haulers/customers are initially given a copy of a printed notice stating the requirements of the Litter Control Program.
- Each incident of an uncovered load is logged by date, the customer's name and vehicle license numbers are documented.
- Repeat violators may be refused entry.

### **Containment Of Litter**

Litter can be generated by activities at the facility (receipt and processing of wastes and recyclables) or from vehicles using the facility.

### **Facility Containment**

Litter is controlled primarily by restricting waste unloading and processing operations to inside the building. If litter blows out, a fence and wall surrounds the facility, providing a secondary barrier and preventing any litter from blowing off site. Recyclables are baled or stored in bunkers, bins or roll-offs and hauled to market on a regular basis.

**Vehicle Containment**

*Transfer Vehicles*

Each transfer truck has screen coverings to prevent refuse from escaping the trailer while traveling to or from the landfill. After the transfer vehicles are loaded, they move forward from the loading area. The vehicle driver will then properly place the covers over the load and remove any extraneous refuse from the vehicle, which might blow off while traveling. The driver will again inspect the truck for loose refuse before leaving the landfill.

*Collection Vehicles*

All vehicles arriving with uncovered loads are logged by date, their company name and vehicle license numbers in the Litter Control Reporting Log. Repeat offenders may be restricted from the facility.

*Transport Vehicles*

Vehicles removing recyclable materials will be visually inspected as they leave the station. Drivers of the vehicles having uncovered loads will be informed that they must cover their load before leaving the station. Violator's will be documented in the Litter Control Reporting Log. Repeat offenders may be restricted from entering the facility.

**Site and Facility Clean-Up**

The facility and surrounding areas are cleaned daily. Tipping areas, driveways, internal roads, yard area, and the immediate perimeter of the facility are swept as needed.

**Monitoring and Recording**

Scalehouse employees are trained in monitoring vehicles to ensure the loads are properly covered. Any loaded transfer, commercial or self-haul vehicle entering or exiting the facility without proper covering will be asked to cover their load and the company name and vehicle numbers will be documented in the Litter Control Reporting Log. Repeat offenders may be restricted from entering the facility.

All records are stored in the administrative office and available for inspection by an authorized inspector upon request.



**LITTER CONTROL REPORTING LOG**

DATE & TIME	COMPANY NAME	VEHICLE LICENSE NO.	COMMENTS

# **APPENDIX C**

## **CAPSULE RESUMES**

# **MID VALLEY DISPOSAL RECYCLING AND TRANSFER STATION**

## **RESUMES**

### **Jay Kalpakoff, President**

Jay started in the solid waste industry in 1972 in the Los Angeles area. He successfully owned and operated a stable solid waste and recycling company lasting over 22 years. He moved to the Central Valley thirteen years ago and started Mid Valley Disposal from a one-truck operation to operating over thirty refuse and recycling vehicles. That is why today he is the President and CFO of Mid Valley Disposal. He oversees business development and ensures the company's financial status is always strong.

### **Joseph Kalpakoff, General Manager**

Joseph oversees and manages municipal contracts for the City of Avenal, City of Huron, City of San Joaquin, City of Mendota, and the City of Coalinga. He plays key role in business growth, from employee retention to public relations; his enthusiasm and work ethic are valued day to day. He is also responsible for implementing recycling programs in each of the company's communities and assuring they meet all state and local requirements. He is dedicated in keeping current with all environmental law changes both locally and on the State level. He also gathers data and submits all reports to CalRecycle for each jurisdiction.

**APPENDIX D**

**ODOR IMPACT MINIMIZATION PLAN**

# **MID VALLEY DISPOSAL RECYCLING AND TRANSFER STATION**

## **ODOR IMPACT MINIMIZATION PLAN**

**September 2012**

### **INTRODUCTION**

This Odor Impact Minimization Plan (OIMP) has been developed to provide guidance to on-site personnel in the handling, storage, and removal of compostable materials, in accordance with 14 CCR 17863.4. This OIMP will be revised as necessary to reflect any changes in the design or operation. A copy of the revisions will be provided to the enforcement agency within 30 days of the changes. In addition, this OIMP will be reviewed annually to determine if any revisions are necessary.

**Site Name:** Mid Valley Disposal Recycling and Transfer Station  
**SWIS#:** 10-AA-0201  
**Location:** 15300 West Jensen Avenue, Kerman, CA  
**Permit:** Full Solid Waste Facility Permit  
**Operation:** Organics chipping and grinding; C&D debris processing and recycling; commingled recyclables processing, MSW processing and transfer; organics and food waste processing and composting; Anaerobic Digestion and CNG fueling operations  
Maximum 1,500 TPD  
Total Permitted acreage of 38 acres

The MVD Facility is a full service organic waste processing operation where green material, woodwaste and food waste is received, ground, and either composted on site or sent to biomass power plants and other users. In the future, MVD will be adding anaerobic digesters to convert food waste and organics to CNG. The facility also includes a construction and demolition debris (C&D) recycling operation, a Material Recovery Facility (MRF), and a municipal solid waste (MSW) transfer station with a full Solid Waste Facility Permit (SWFP). C&D is sorted, and shipped off-site to recycling markets. Source separated recyclables and select commercial loads are sorted and recyclables shipped to markets. MSW and non-salvageable residue is trucked to the County landfill.

### **ODOR MONITORING PROTOCOL**

#### **Proximity of Odor Receptors**

The site is located in a rural area and is bounded by light industrial uses to the north, vacant land to the east; on the south by agricultural land; and on the west by the City's wastewater treatment and

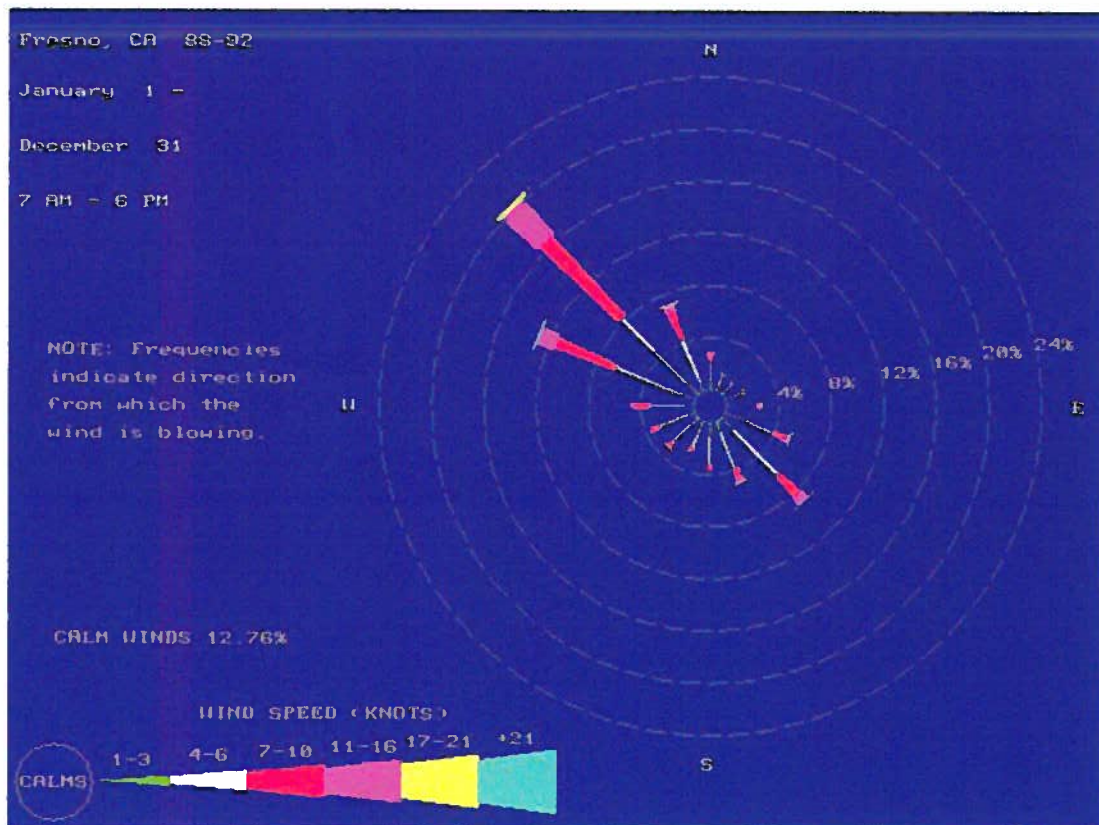
groundwater recharge facility. The closest sensitive receptors are two farms to the east about 0.34 miles away and to the north about one mile.

In order to assess potential odor impacts at the locations of possible odor receptors, a facility employee will drive past these locations at the beginning and close of working day. The level of offensiveness will be measured and action will be taken, if needed, as discussed below.

## **METEOROLOGICAL CONDITIONS**

The facility is located in the middle of the San Joaquin Valley. The location experiences little rain and moderate wind. Temperatures can be extremely high in the summers. Winds are typically from the west and northwest.

The prevailing winds and the heaviest winds are from the northwest. See the following Wind Rose. During high wind episodes, the winds can blow at high velocities (above 25 mph). High winds could potentially transport odor-causing material off-site. During winds of 25 mph or greater, facility personnel will monitor the situation closely and if winds are blowing material offsite, grinding operations will be curtailed.



Migration of odors may occur during light wind or calm conditions when dispersion is minimized. See the "Design Considerations" that follow for the means of controlling odors during all operating conditions.

### **COMPLAINT RESPONSE PROTOCOL**

If an odor complaint is received, staff will go to the location of the complaint to verify the presence and intensity of the odors. If the odor can be detected at the complainant's home or business, staff will trace the odor by conducting odor checks around the general vicinity. If the odor was determined to be generated offsite, staff will contact the complainant notifying them of the source of the odors. If however, staff determines that the odor is generated by the facility, staff will immediately identify the source of the odor and mitigate it as outlined in **Table 1**. All odor complaints will be entered in the Log of Special Occurrences, and the LEA will be notified within 24 hours. All complaints will be logged as to the time, date, location, ambient air temperature, cloud cover, wind direction and speed, and nature of complaint.

If the facility receives more than three different complaints within a one month period or two complaints from the same individual within a one month period, staff will meet with the LEA and the complainant (if possible) within a reasonable time to discuss the source of the odor and discuss operational changes that would minimize odors in the future.

The presence of odor is also monitored at the site boundary prior to commencing and closing daily operations. The level of offensiveness from on-site odors at the property boundary is based on a scale of 1 to 5 as follows:

1. No noticeable odor.
2. Slight odor
3. Moderate odor (noticeable)
4. Strong odor (objectionable)
5. Stench (noxious)

Should an odor problem occur at a level 3 or above, the following steps will be taken:

- Identify the source of the odor
- Determine possible cause(s) and select remedial action as outline in **Table 1**
- In the event the odors cannot be controlled by any of the selective remedies in **Table 1**, truck the odorous material to a landfill

Should odors increase or a complaint be verified, the plan will be re-evaluated and more provisions will be considered to monitor or minimize odors.

### **DESIGN CONSIDERATIONS FOR MINIMIZING ODORS**

In order to minimize the development of conditions that could lead to odor problems, the compostable material handling areas of the site were designed based on the nature and quantity of materials to be received and stored, climatological factors, adjacent land use, grading, and drainage controls.

Loads of organics materials received and approved for this facility will be stockpiled, ground and either composted on site or sent to bio-mass power plants, or other end users. Green material, processed or unprocessed, will be stored no longer than 48 hours unless approved by the LEA for storage up to several days before being placed in the windrows, under the compost cover, in the anaerobic digestion system (future) or removed from the site.

All receiving of food waste occurs inside the building. Food waste is mixed with other organics and composted under the covered compost system in a designated area (See **Figure 3**, Site Plan in the main body of the TPR). In Phase II the food waste may also be placed in the anaerobic digestion system.

Loads of C&D debris are moistened by hoses to control dust. This also acts to control odor that may be associated with airborne particles. If ponding water occurs, the water is removed immediately by absorbing it in the material as it is pushed by loaders. Effort is made to avoid adding moisture to organics, food waste or residual MSW, which tends to accelerate its decomposition, possibly resulting in the generation of odor.

#### **Method and Degree of Aeration**

Odor is potentially generated by anaerobic conditions in the piles of staged unprocessed and processed material. To avoid this, the operators move incoming material into covered composting operations or offsite within 48 hours, or up to seven days if approved by the LEA. Material is aerated by injected air from a system located beneath the covered composting piles. Additionally, the engineered covers are designed to keep potential odors contained. If incoming material is identified as odiferous, it is processed immediately, mixed with other material and aerated by the loader.

#### **Moisture Content of Materials**

Most of the organic material received consists of woody materials with a small percentage of materials that have high moisture content, such as grass clippings. To reduce the potential for odor, incoming materials of higher moisture content are mixed with drier, woody material.

#### **Feedstock Characteristics**

The feedstock consists of green material, yard trimmings, wood waste, food waste, and C&D as they are defined in 14 CCR 17852.

#### **Airborne Emission Production**

In order to reduce airborne emissions, water may be used to moisten the material during the chipping and grinding and screening processes. In addition, the stockpiles of C&D and ground material are also moistened as needed to minimize particulate emissions. Processing will be curtailed in high wind conditions if blowing material becomes a problem.

#### **Process Water Distribution**

All water applied is absorbed into the material.



### **Pad and Site Drainage and Permeability**

The operation is graded and bermed where needed to control run-on and run-off. It is expected the excess storm water will eventually percolate or evaporate.

Runoff from the facility is covered under the General Industrial Storm Water Permit for the State of California. The facility samples stormwater runoff in accordance with this permit. High wind episodes have already been discussed. Under conditions of torrential rain, trucks may be diverted to other facilities or the landfill.

### **Equipment Reliability**

The organics will be handled, processed, stockpiled and composted utilizing the following diesel powered equipment, all of which is dedicated to this site:

- Front end loaders (1)
- Screens (2)
- Hoses
- Grinder
- Scarab windrow-turning machine

The MVD facility has the capacity for in-house equipment maintenance and repair, and is not dependent upon any firm for normal maintenance or daily operations. Back-up equipment capability permits the facility to function with virtually no equipment down time.

### **Personnel Training**

Personnel have been trained in subjects pertinent to site operation and maintenance, such as this OIMP, load checking procedures and heavy equipment operations (loader, grinder, screens). The owner/operator maintains personnel training records.

### **Utility Service interruptions**

If the grinder breaks down, the unprocessed green material will be loaded and shipped out as is, until the grinder is repaired.

## **OPERATING PROCEDURES FOR MINIMIZING ODOR**

The primary potential sources of odors from this facility are organics processing and MSW transfer. The two key operating procedures to minimize odor are to handle all MSW inside the building; and to process and move all organic material into the covered composting system or off site as quickly as possible. This will occur within 48 hours unless longer storage is approved by the LEA.

### **Aeration**

(See above.)

### **Moisture Management**

Adequate water is added before and after grinding on an as needed basis to maintain optimal moisture content, to reduce dust and yet not saturate the material which could lead to anaerobic conditions.

### **Feedstock Quality**

The feedstock consists of green material, yard trimmings, wood waste, food waste, and CDI debris as defined in 14 CCR 17852. All incoming feedstock is checked for materials which could lead to the generation of odors such as food waste, grass clippings, and decayed organics. This material is mixed with organics as soon as possible to control odor. A spotter is onsite during operating hours to inspect each load.

### **Drainage Controls**

(See Above.)

### **Pad Maintenance**

Site personnel routinely inspect the pad for any evidence of ponding or drainage problems. Vegetation is removed. Any static water that is discovered is absorbed with the chipped material. Any depressions on site that could lead to ponding are filled with soil.

### **Storage Practices**

Per the new regulations, the maximum storage times for compostable materials are as follows:

- Organics: 48 hours (or up to 7 days with LEA approval)
- Residual Waste: 48 hours

The number and dimensions of storage piles is constantly changing as operations shift around the site. The operation is dynamic in nature, and therefore does not lend itself to static pile locations and dimensions.

### **Contingency Plans**

- |            |   |
|------------|---|
| Equipment: | Backup equipment is located on site   |
| Water:     | Water is supplied by the City of Kerman.  |
| Power:     | All equipment is powered by diesel engines, and diesel fuel storage is maintained onsite. |
| Personnel: | Additional personnel are available from the operator's operations as needed.              |

### **Biofiltration**

Biofiltration equipment is not utilized at this site.

### **Tarping**

All incoming and outgoing loads are tarped to prevent organics and chipped material from blowing out.

**TABLE 1**  
**Sources of Odor and Possible Management Techniques**

Source of Odor	Possible Cause	Management Approach
Feedstock Receiving	Material sitting too long prior to processing	Expedite material processing
Aisles	Stormwater allowed to pond or aisles not clear	Correct drainage grading or control; Clear aisles of material; Absorb ponded water with ground material; Fill depressions with soil
Stockpiles	Long retention time	Remove processed material more frequently; Aerate piles appropriately; Mix odorous material with non-odorous material

## **APPENDIX E**

# **COVERED COMPOSTING SYSTEM INFORMATION**



## COMPOSTING FOOD AND YARD WASTE WITH GORE™ COVER

Composting with GORE™ Cover means using the most up-to-date technology available, because it brings together various technologies that have hitherto appeared incompatible. Composting with GORE™ Cover is almost as economical as composting with open windrows and yet it is as safe to manage as in-vessel systems using highly technological structures and complies equally with the requirements of most licensing authorities. This is precisely what makes it ideal for treating Source Separated Organics and yard waste where a first-class final product is required. Even the authorising bodies generally recognised as the strictest in Europe and North America, such as Germany (TA Luft), UK (ABP-Regulation) and California have accepted GORE™ Cover as best available technology.



As a result there are more than 150 plants worldwide with throughputs of 6,500 t/a up to 160,000 t/a operating with our technology, and licensed to operate in accordance with Odour and Emission Control Laws. The combination of a membrane cover and controlled aeration allows a reliable composting process. Pressurised aeration ensures a sufficient supply of oxygen and proper tempe-

ture management, while at the same time minimising odour and microbial emissions. Ultimately that leads to trouble-free operation of the plant even where the composition of the input varies – and in all climatic conditions. Ideal composting conditions with minimum energy consumption lead to reduced composting times, saving the operator space, effort and considerable cost. In this way

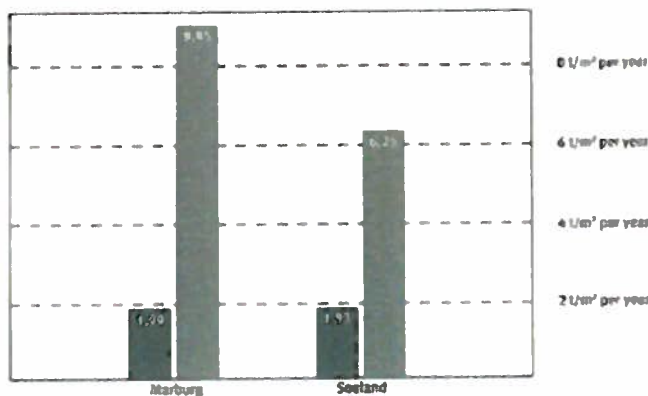
our technology offers significant increases in throughput for many plants, while using the same space.

Using GORE™ Cover to compost Source Separated Organics offers compliance with licensing requirements, operating safety, and an impossible-to-beat cost/performance ratio, all in one!

### INCREASES IN THROUGHPUT BY GORE™ COVER

Whether it is Source Separated Organics or yard waste – composting with the GORE™ Cover produces ideal composting conditions. It all leads to increased throughput per composting footprint, yet requires a relatively small investment.

■ before conversion: open windrow composting  
■ afterwards: GORE™ Cover



W. L. Gore & Associates

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## THE PRINCIPLE OF ORGANIC WASTE TREATMENT WITH GORE™ COVER



Take just as much favourably priced nature as possible and as much intelligent technology as necessary. Or more precisely: GORE™ Cover.

It consists essentially of three components: aeration, control, and the membrane cover. Brought together in a perfect balance, the three components interact to produce a unique, economical and reliable composting system. In order to provide the essential basic requirements for the aerobic micro-

organisms, medium pressure aerators are connected to in-floor aeration ducts. The bigger the throughput of the plant, the more worthwhile the investment in aeration channels, allowing vehicular access and saving on staffing costs.

The aerators are controlled by means of oxygen, for which the necessary data, as well as temperature, is obtained directly from the main body of the heap using stainless steel probes. The data is

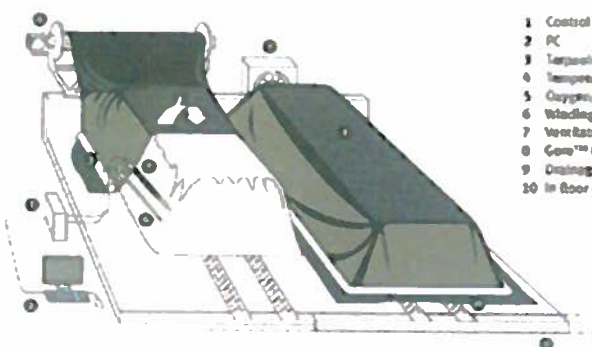
fed into the computer and stored there, documenting the course of the operation. Radio-remote monitoring of the controlled composting process is possible.

The material is first mechanically prepared and homogenised before being laid on the aeration channels using wheel loaders. The probes are then sunk into the material to be composted and the GORE™ Cover is immediately pulled over the body of the heap. Various handling aids are available to make this action easy. All that is required is to fill the fire hose at the edge of the cover with water to fix it in position and within a few minutes an in-vessel system is functioning.

Without the cost of any further technical installations like bio-

filters and without producing any conspicuous odours or microorganisms, nature now sets to work. It is inexpensive and it is in perfect tune ecologically. Four weeks later the heap can be opened up to find that its contents have thoroughly decomposed. All that has to be done is to remove the measuring probes, roll back the cover onto the winding gear by remote radio control, and place the material – e.g. by a front-end loader – on the maturation field, cover it, position the probes and continue biodegradation. After one further turning of the heap high quality compost can be produced in a total of just 8 weeks. With the right equipment and our expertise you can save yourself the bother of watering, turning – and trouble with the neighbours.

### COMPOSTING WITH GORE™ COVER



- 1 Control unit
- 2 PC
- 3 Tarpside rotator
- 4 Temperature profile probe
- 5 Oxygen/temperature probe
- 6 Winding gear
- 7 Ventilator station
- 8 GORE™ Cover
- 9 Drainage system
- 10 In floor aeration channels

Intelligent technology allows rapid organic decomposition with integrated protection against weather, emissions and odour. A plant of this kind can be installed anywhere in the world within a short time.

W. L. GORE & ASSOCIATES

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## THE GORE™ COVER PRINCIPLE



GORE™ Cover performs better than steel container walls and better than a concrete shed or pit wall.

The waste covers consist of a specially developed ePTFE membrane (using the same technology as the famous GORE-TEX® garments), laminated between two highly robust polyester layers. Because

the membrane has just the right pore structure, GORE™ Cover offers more than just storage cover – It is possible to selectively influence the treatment process. The membranes used in waste treatment protect the composting material from the penetration of rainwater and yet allow CO<sub>2</sub> and water vapour produced during the composting process to escape.

Even so, odours are extensively retained. GORE™ Covers act as a physical barrier against gaseous substances escaping from the rotting material. In addition, a fine film of condensation develops on the inside of the covers during the composting procedure, suppressing odours and other gaseous substances like VOC. The vast majority of these gases are dissolved in the film of water and drop back into the composting material where they continue to be broken down by bacteria.

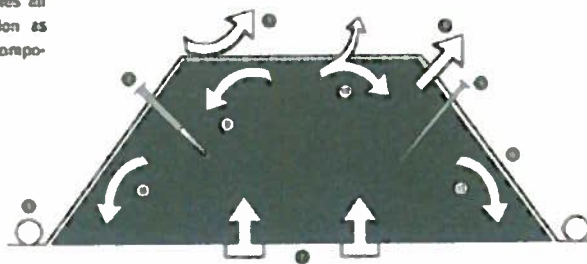
The right choice of membrane influences the extraction of moisture during composting. It prevents the final product being too wet, yet at the same time ensures that there is sufficient moisture retained to allow the material to be decomposed – particularly

important in arid zones. The microporous structure of the GORE™ Cover membrane means that it is practically impossible for bio-aerosols to penetrate.

Microbiological tests have proved that microbes can be reduced by >99%, thus ensuring that workers and nearby residents are protected and safe. The insulating effect of GORE™ Cover and the pressurisation by which the system ensures even temperature distribution mean that achieving the necessary temperature for pathogen reduction across the entire cross-section of the heap can be ensured – even during the winter months. Pathogenic micro-organisms are safely destroyed throughout the entire composting material as required by many national regulations.

### PRINCIPLE OF AN IN-VESSEL GORE™ COVER HEAP WITH CONTROLLED PRESSURISED AERATION

GORE™ Cover improves the composting process and satisfies all requirements for certification as an efficient and controlled composting technology.



- 1 Turbidity collector
- 2 O<sub>2</sub>-measuring probe
- 3 Weather impact
- 4 CO<sub>2</sub>
- 5 Temperature profile monitoring probe
- 6 GORE™ Cover
- 7 Air
- 8 Heat
- 9 Odour
- 10 Moisture
- 11 Micro-organisms

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## **APPENDIX F**

### **ANAEROBIC DIGESTION INFORMATION**



## Anaerobic Digestion Overview

In anaerobic digestion, the biodegradable, organic components of the waste stream are metabolized by microorganisms in the absence of oxygen, producing a biogas (primarily methane and carbon dioxide), and a solid byproduct (called "digestate", which is generally considered to be a feedstock compost). The anaerobic digesters achieve significant diversion of 60 percent to 80 percent, assuming the composted residue can be marketed.

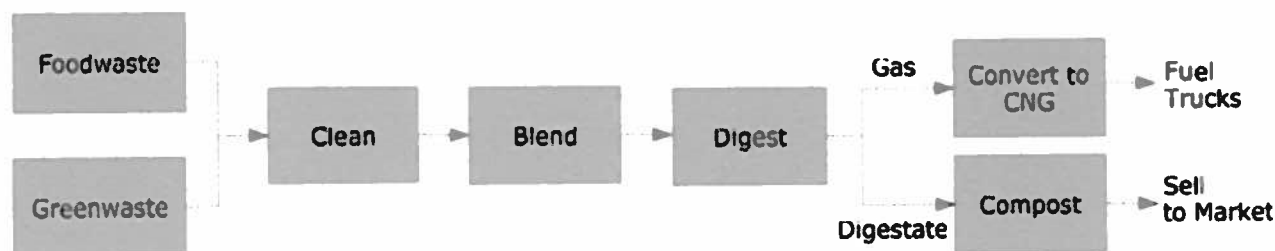
In an overview fashion, anaerobic digestion can be described by four primary steps: (1) pre-processing, or separation/preparation, of the municipal solid waste (MSW) to obtain a prepared organic feedstock; (2) digestion of the prepared organic feedstock; (3) for some anaerobic digestion technologies, post-treatment of the digestate to produce a clean, mature compost, and (4) management and use of the biogas generated during the anaerobic digestion process.

Even though a specific anaerobic digestion system has not yet been chosen for Mid Valley Disposal's MRF and Transfer Station the process will involve the following basic functions:

- Source-separated food waste and segregated organics will be received and tipped in the proposed building.
- Within a matter of hours, the material will be mixed with a loader, screened to remove reject material (glass, dirt, and other inert material that will not digest), and fed into a grinder.
- The ground feedstock will then be metered into the digesters, which are enclosed vessels where bacteria ingest the organic matter and produce biogas (a blend of methane and CO<sub>2</sub>).
- The biogas is collected from the digestion tanks and converted to liquid fuels such as CNG via chemical processes.
- The solid residue remaining from the digestion process will be blended with segregated ground organics and composted in the covered compost system at the site.

See BIOFerm Energy Systems and SMARTFERM Semi-Mobile Dry Fermentation for some examples of anaerobic digestion systems at the end of this section.

### Anaerobic Digestion Process Flow Diagram



## **CNG Conversion Overview**

To create CNG fuel from the biogas (BioCNG fuel), biogas is piped into a conditioning unit where moisture (H<sub>2</sub>O), hydrogen sulfide (H<sub>2</sub>S), volatile organic compounds (VOCs), and carbon dioxide (CO<sub>2</sub>) are removed. After cleaning and conditioning, BioCNG fuel meets Society of Automotive Engineers (SAE) standard minimum methane content of 95% (SAE J1616) and engine manufacturer's fuel specifications.

The fuel is then routed to a CNG fueling station, where it is compressed for use in CNG vehicles. It can be used directly or mixed with natural gas to produce a blended vehicle fuel similar to biodiesel or ethanol/gasoline blends.

See photographs and layout drawings at the end of this section.

## **Environmental Issues**

Overall air emissions from the anaerobic digestion process at Mid Valley Disposal MRF and Transfer Station are expected to be very low because the biogas is not combusted to make electricity (which does have criteria pollutant emissions such as NO<sub>x</sub> and CO), but instead is converted to CNG fuel in a fully enclosed process.

The only potentially significant impact from the facility is odor. To mitigate possible odor issues, Mid Valley Disposal proposes the following control measures:

### **Waste Receiving**

- All incoming food and organics will be received inside a building.
- Within minutes, the material is pushed into a fully-enclosed receiving chamber, with a door that seals it.

### **Digestate Handling**

- When digestion is complete, the digestion chamber is aerated and the exhaust air is treated by a biofilter before release.
- The aerated digestate is then sent to the composting operation onsite, and is added to the covered compost piles as a feedstock.

This digestate operation occurs only once every few days.

# **BIOFerm and SmartFerm**

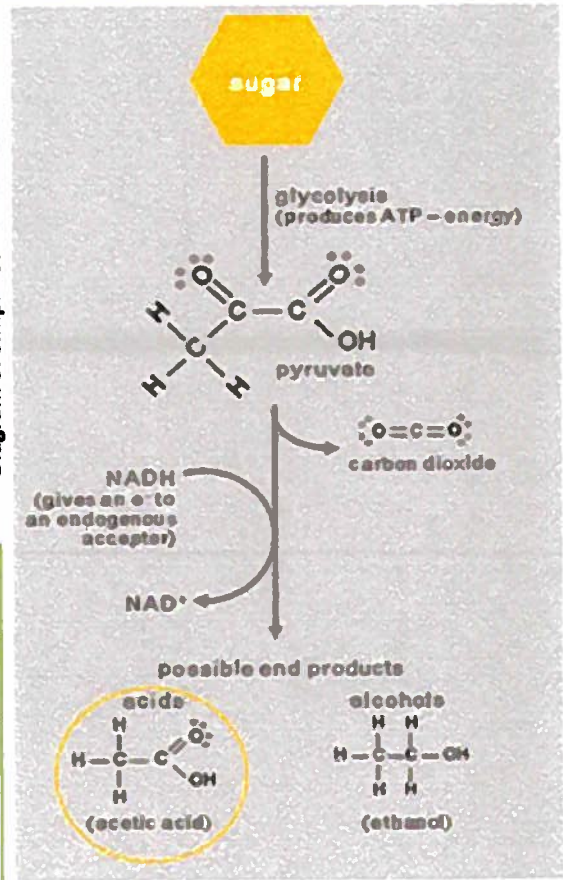
## **Anaerobic Digestion Systems**

## Dry Fermentation vs. Wet Fermentation

Anaerobic digesters induce the processes of fermentation and anaerobic digestion and provide a mechanism for capturing the released by-product, biogas. Traditional digesters are classified as “wet” fermentation systems. They typically use high moisture waste streams, like manure, as input and add large amounts of liquid to facilitate movement required by this system. BIOFerm™ Energy Systems offers industrial scale “dry” fermentation technology that uses numerous waste streams, such as municipal solid waste and industrial food processing waste. Our specialized system eliminates the need for movement of input and the addition of liquid. BIOFerm™ dry fermentation technology has specific advantages over “wet” fermentation systems in many situations and provides customers with increased flexibility and profitability.

<b>Anaerobic Digestion:</b>	A biological process in which organic material is broken down by microorganisms resulting in the release of biogas. Biogas can be used to generate heat, electricity and as a natural gas substitute.
<b>Dry Fermentation:</b>	Anaerobic digestion using input material that has moisture content less than 75%. BIOFerm™ dry fermentation systems require no movement of organic matter or addition of liquid. No pre-treatment of biomass or organic waste is required.
<b>Wet Fermentation:</b>	Anaerobic digestion using input material that has moisture content greater than 75% and a system that requires the addition of liquid for the movement of organic material. Wet fermentation systems require that biomass and organic waste input undergo multiple treatment steps prior to entering digester system. Steps often include: separation of non-organic material, liquefaction, sand separation and sanitization.

Diagram of Simplified Fermentation Process



### Fermentation Process:

The term fermentation is often used interchangeably with anaerobic digestion when describing the physical decomposition of organic material (typically when discussing foods and beverages). In reality, fermentation is a distinct biological reaction that makes up one step in the greater process of anaerobic digestion. It is responsible for acidogenesis, the forming of acids.

Fermentation is a metabolic pathway for certain microbial organisms in anoxic environments. During fermentation, larger organic molecules, like sugars, are converted into a mixture of reduced end products (products that have gained electrons). The process occurs in two steps (see diagram). First, energy (in the form of ATP molecules) is produced by the reactions of glycolysis, a process that breaks down sugars and converts them into pyruvate molecules.  $\text{NAD}^+$  molecules are used up in this step and are transformed into  $\text{NADH}$ . In the second step,  $\text{NAD}^+$  is recreated from  $\text{NADH}$  via oxidation and reduction reactions (which involve repositioning electrons).  $\text{NADH}$  molecules donate an electron to an acceptor. Because a typical substance that normally receives the electron, like oxygen, is not available, endogenous electron acceptors are utilized in this cycle. Pyruvate molecules, (created during glycolysis) accept the electron and are subsequently converted into substances such as acids and alcohols through further molecular rearrangement. Specific fermentation reactions differ according to the microorganism performing the process as well as the original substrates (sugars) being used. The result is the creation of varying end products. In the case of fermentation within anaerobic digestion, the production of a mixture of organic acids drive the decomposition process to create biogas.





### BIOFerm™ Dry Fermentation

- Organic input remains stationary throughout process, eliminating moving parts and resulting in low system maintenance and repair costs
- Batch process and stationary system allow precise control over input removal ensuring maximum energy yield
- Closed loop liquid cycle — no additional liquid required following start-up, eliminating post-process waste water treatment needs
- No pre-treatment or sorting of inputs required prior to system loading, saving time and money for system operators
- Almost no limitations to inputs—over 3,000 inputs have been identified and researched
- BIOFerm™ system has low energy consumption, using only 5% of the energy generated for plant operation
- Organic input volume reduced by minimum of 40%, a significant additional cost benefit, and waste water is eliminated, removing risk of groundwater contamination



### Wet Fermentation

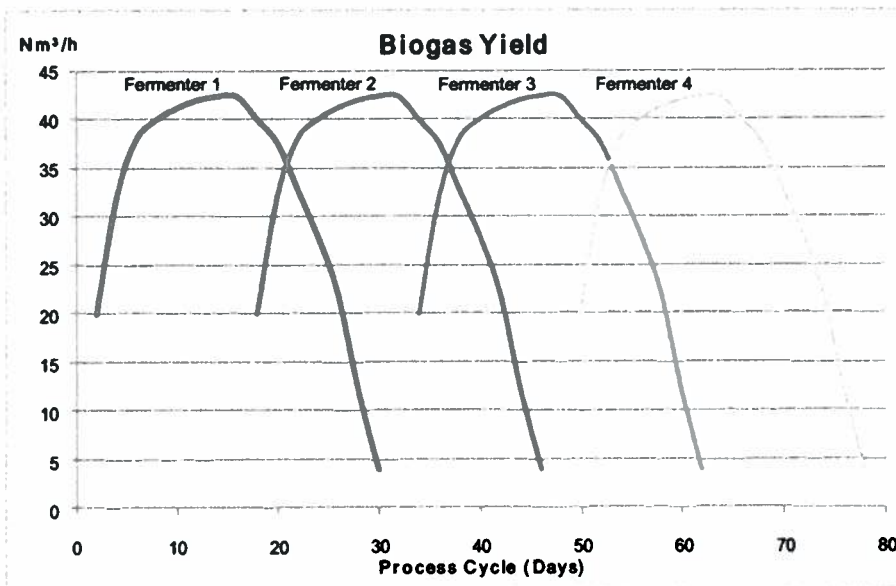
- System requires mechanical parts to circulate biomass in liquid holding tank, leading to increased maintenance and repair costs
- Liquid mixture causes premature removal of input before all organic matter has been digested, resulting in a loss of energy
- System requires additional liquid to allow fermentation, greatly increasing the amount of system waste water and costly post-process treatments
- Inputs require pre-treatment to prevent breakdown of mechanical parts as input is agitated and moved through system
- Input limited to “wet” waste streams
- Typical systems consume 10-30% of the energy generated for plant operation, and treatment of waste water requires additional energy
- Waste water volume increased up to 70%, requiring high energy input for treatment and increasing risk of groundwater contamination







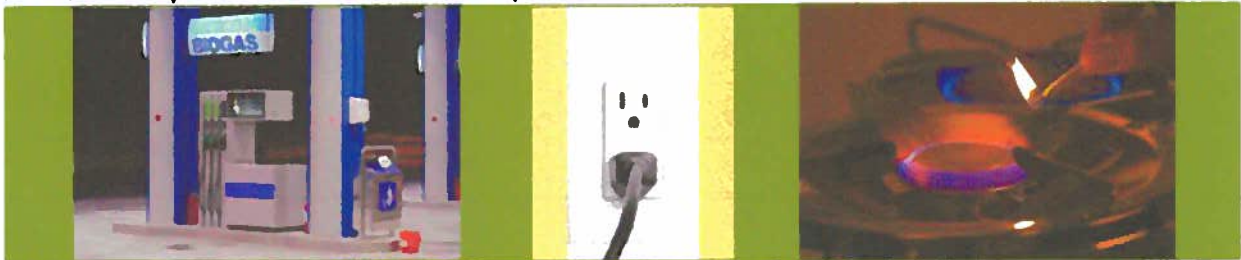
## Biogas Production



Peak biogas production occurs between days 7 and 14 of the fermentation cycle. Gas yields from individual chambers are stored and mixed together, increasing consistency in gas content as well as increasing production during organic material exchanges.



BIOFerm™ biogas can be used in many energy generation applications, including: natural gas substitution, electric and thermal power production through a combined heat and power unit (CHP), heat generation through boiler technology and fossil fuel replacement for vehicle and fleet operation.



## Energy Generation

Plant Size	Biogas ( $\text{m}^3$ )	Methane ( $\text{m}^3$ )	KW <sub>el</sub> (from CHP)	MMBTU (from Boiler)	Gas Gallon Equivalent <sup>1</sup>
4 Chambers	1,250,947	725,549	341	26,047	210,643
8 Chambers	2,501,894	1,451,098	682	52,810	421,286
16 Chambers	5,003,788	2,902,196	1,364	105,620	842,573
24 Chambers	7,505,682	4,353,294	2,046	158,442	1,263,859

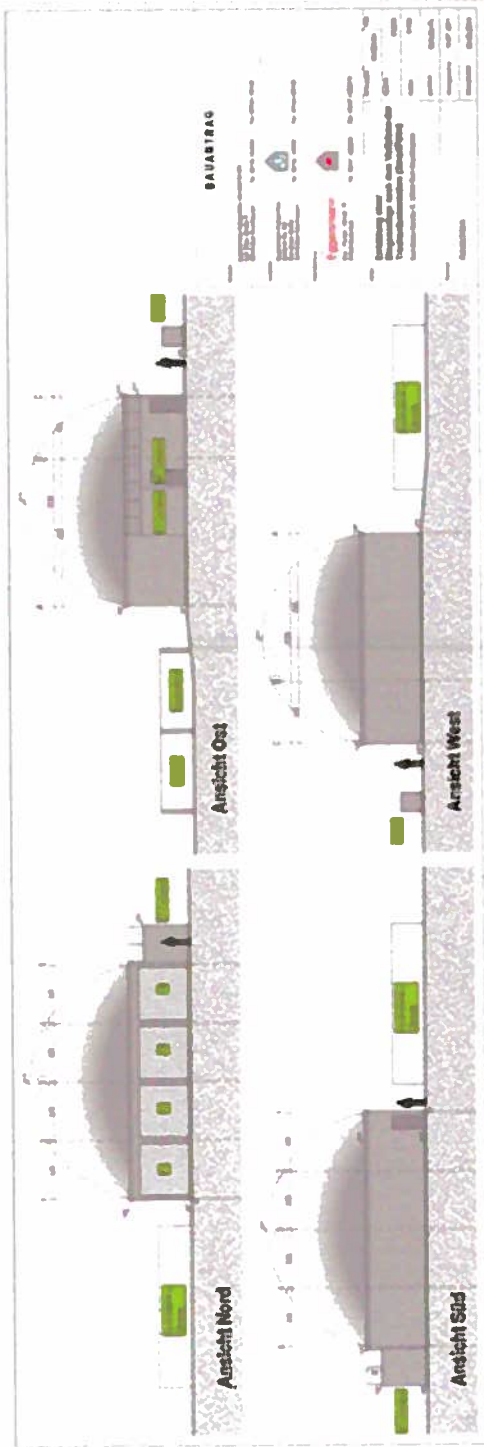
1. Gas Gallon Equivalent represents the amount of gasoline it would take to equal the energy produced by plant. Calculated using heat content values of 124,000 BTU/gallon for gasoline and 36,000 BTU/ $\text{m}^3$  for methane (from US Dept. of Energy).





# SMARTFERM

SEMI-MOBILE DRY FERMENTATION



- 1 Substratlager / Input storage
- 2 4 Trockenfermenter / 4 dry fermenters
- 3 BHKW / CHP
- 4 Maschinentechnik / Machine technology
- 5 Elektrotechnik / Electrical technology
- 6 Gasspeicher / Gas storage
- 7 Biofilter / Biofilter

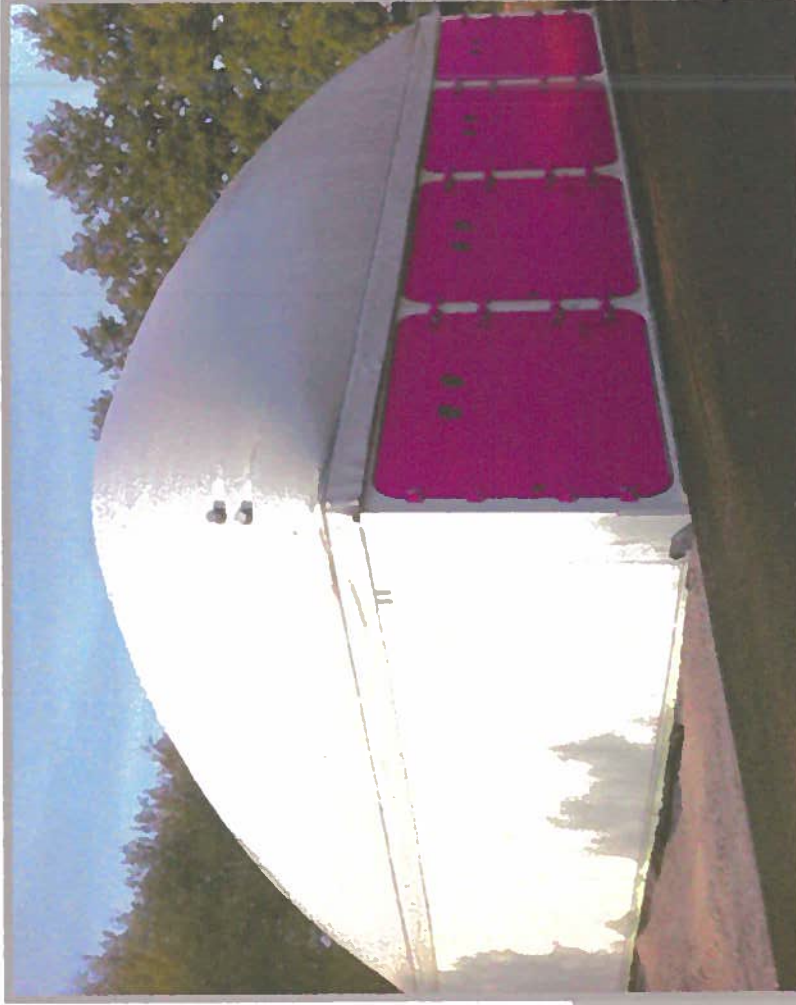
SMARTFERM ist die kompakte Lösung mit wenig Platzbedarf, die sich in kurzer Bauzeit realisieren lässt.

*SMARTFERM is the compact solution, with minimal space requirements, installed in only a short time.*









04. Oktober 2011

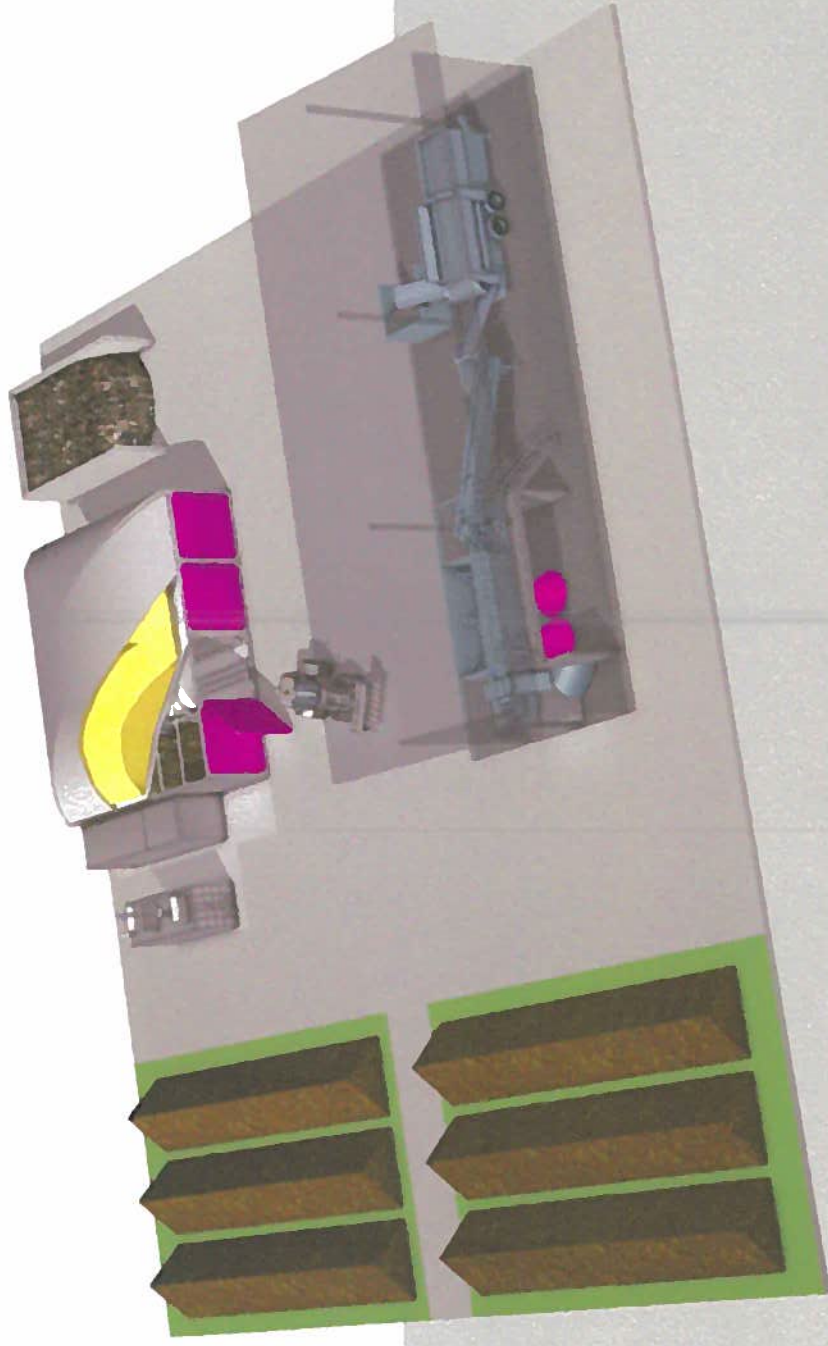
Die Anlage mit Gasspeicher ist aufgestellt.

*The plant, with gas storage, is installed.*

BAUVERLAUF

Installation process





BASIC - Die solide Lösung für die Produktion von Energie und Kompost sowie Erzeugung einer Deponietraktion.

*BASIC - The sound solution for the production of energy and compost and the production of a landfill-traction.*



# **CNG Conversion**

## **Photographs and Layout**



Sauk County  
Landfill



Dane County Cooperative Manure  
Digester



Sheboygan Waste Water Treatment  
Plant







System Startup December 28, 2010

**FORESTER UNIVERSITY**



**CNG Storage vessels**





## CNG Moisture Removal System

**FORESTERUNIVERSITY**

Greening the Fleet with Biogas    Mark Torresani, P.E., Conestoga Environmental Group, LLC.



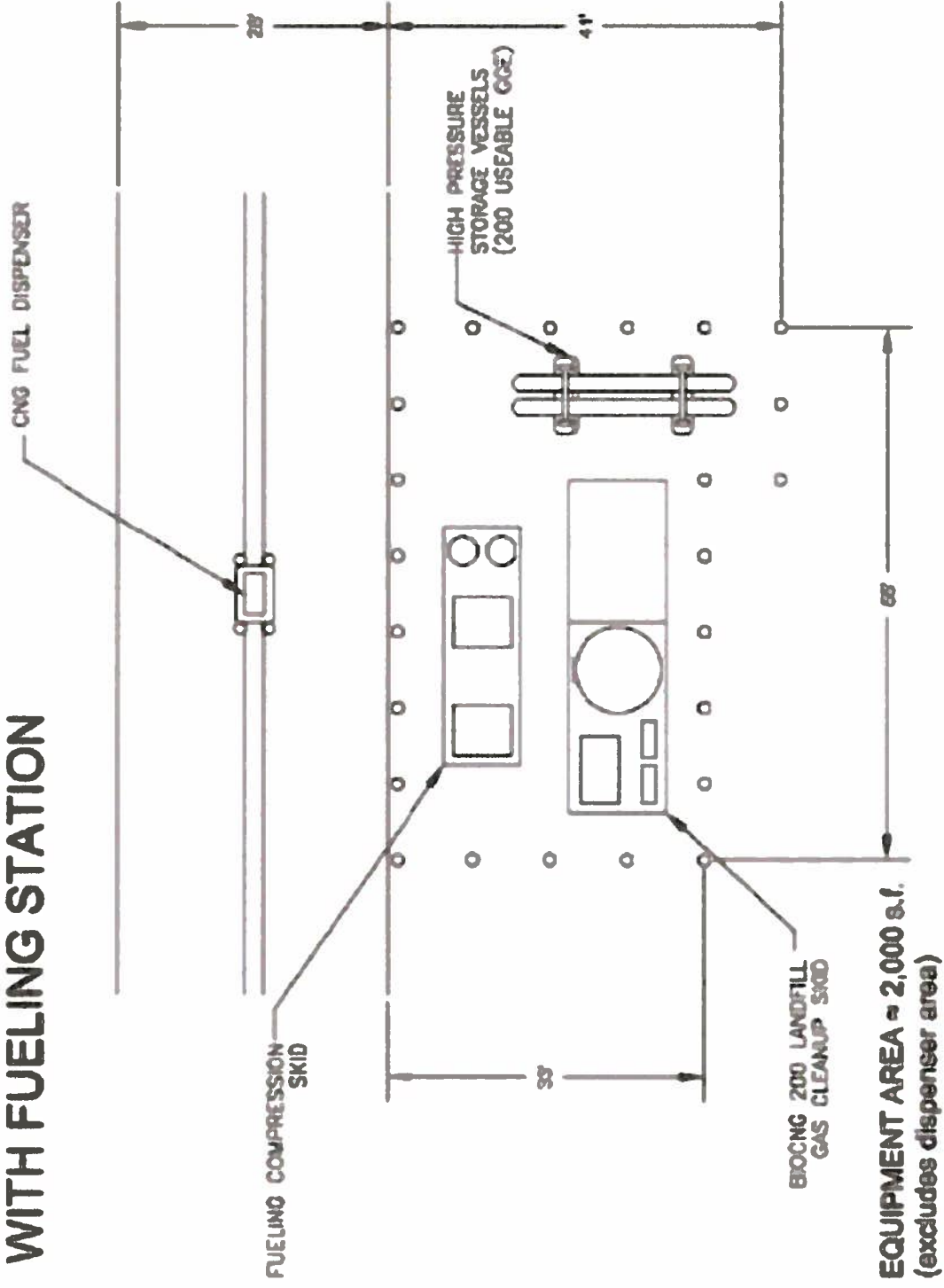


First Vehicle Fueled March 18, 2011

**FORESTER UNIVERSITY**

Greening the Fleet with Biogas Mark Torresani, P.E., Conestoga Environmental Group, LLC.

# TYPICAL BIO-CNG SYSTEM WITH FUELING STATION



Appendix 'D'

Mitigation Monitoring and Reporting Program

**Mitigation Monitoring and Reporting Program  
for the  
Final Mitigated Negative Declaration**

**Mid Valley Disposal, Inc.  
Recycling and Transfer Station Expansion**

**State Clearinghouse No. 201212100**



Prepared by:

**City of Kerman  
Planning and Development Department**  
850 S. Madera Avenue  
Kerman, CA 93630

559.846.9387

Contact: Luis Patlan, City Manager/Director of Planning

February 13, 2013

Table 1: Mid Valley Disposal, Inc. Recycling &amp; Transfer Station Expansion Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
1. Aesthetics, Light, and Glare					
MM AES-1: All outdoor lighting shall be designed to aim downward onto the project site and not glare skyward or onto adjacent parcels (e.g., by incorporating cut-off shields, or the equivalent).	Approval of lighting plan	Prior to the issuance of building permits	City of Kerman Planning & Development Services Department		
2. Air Quality					
MM AIR-1: Implement the control measures identified in the SJVAPCD Regulation VIII to control PM10 emissions from construction activities.	Submittal of documentation	Prior to the issuance of building permits	City of Kerman Planning & Development Services Department		
MM AIR-2: Prepare, implement, and maintain a site-specific Odor Impact Minimization Plan (OIMP).	Site inspection	Prior to issuance of Certificates of Occupancy	City of Kerman Planning & Development Services Department		
MM AIR-3: Applicants for the development of anaerobic digester (AD) facilities shall comply with appropriate local land use plans, policies, and regulations, including applicable setbacks and buffer areas from sensitive land uses for potentially odoriferous processes.	Site inspection	Prior to issuance of building permits for anaerobic digester	City of Kerman Planning & Development Services Department		
MM AIR-4: If an AD facility handles compostable material and is classified as compostable material handling facility, the facility must develop an Odor Impact Minimization Plan (OIMP) pursuant to 14 CCR 17863.4. Otherwise, applicants shall develop and implement an Odor Management Plan (OMP) that incorporates equivalent odor reduction controls for digester operations and is consistent with local air district odor management requirements. These plans shall identify and describe potential odor sources, as well as identify the potential, intensity, and frequency of odor from these likely sources. In addition, the plans will specify odor control technologies and management practices that if implemented would mitigate odors associated with the majority of facilities to less than significant. However, less or more control measures may be required for individual projects. Odor control	Submittal of documentation	Prior to issuance of building permit	City of Kerman Planning & Development Services Department		

<p>strategies and management practices that can be incorporated into these plans include, but are not limited, to:</p> <ul style="list-style-type: none"> <li>• Require substrate to the AD facility within covered, liquid leak proof containers.</li> <li>• Establish time limit for on-site retention of undigested substrates (i.e., feestocks should be processed and placed into the portion of the system where liquid discharge and air emissions can be controlled within 24 or 48 hours of receipt).</li> <li>• Provide enclosed, negative pressure building for indoor receiving and pre-processing. Treat collected foul air in a biofilter or air scrubbing system.</li> <li>• Establish contingency plans for operating downtime (e.g., equipment malfunction, power outage).</li> <li>• Manage delivery schedule to facilitate prompt handling of odorous substrates.</li> <li>• Handle fresh unstable digestate within enclosed building, or mix with green waste and incorporate into a composting operation within the same business day, and/or directly pump to covered, liquid leak-proof containers for transportation.</li> <li>• Protocol for monitoring and recording odor events.</li> <li>• Protocol for reporting and responding to odor events.</li> </ul>					
<b>3. Biological Resources</b>					
<p><b>MM BIO-1:</b> prior to and during construction activities, the following measures shall be implemented to reduce impacts to the San Joaquin kit fox:</p> <ul style="list-style-type: none"> <li>• Project-related vehicles should observe a 20 mile-per-hour speed limit within the project site boundaries; this is particularly important at night when kit foxes are most active. Construction shall not occur during nighttime hours (8:00 p.m. to 6:00 a.m.). Off-road traffic outside of designated project construction areas is prohibited.</li> <li>• To prevent inadvertent entrapment of kit foxes or other animals during construction, all excavated, steep-walled holes or trenches more than 2 feet deep shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes</li> </ul>	<p>Submittal of documentation; Site inspection</p>	<p>Prior to and during construction activities</p>	<p>City of Kerman Planning &amp; Development Services Department</p>		



<p>or trenches are filled, they would be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the procedures outlined below must be followed.</p> <ul style="list-style-type: none"><li>• Kit foxes are attracted to den-like structures such as pipes and may enter stored pipe, becoming trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4 inches or greater that are stored at the construction site for once or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the USFWS has been consulted. If necessary, and under the direction of a qualified biologist, the pipe may be moved once to remove it from the path of construction activity, until the fox has escaped.</li><li>• All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from the project site.</li><li>• To prevent harassment, mortality of kit foxes or destruction of dens by dogs or cats, no pets shall be permitted on the project site.</li><li>• Use of rodenticides and herbicides in project construction areas is restricted to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture and other state or federal legislation, as well as additional project-related restrictions deemed necessary by USFWS. If rodent control is conducted, zinc phosphide should be used because of proven lower risk to kit fox.</li><li>• A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured, or entrapped individual. The representative shall be identified during the employee education program. The representative's name and telephone number shall be provided to USFWS.</li></ul>					
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<ul style="list-style-type: none"> <li>• An employee education program for the project's construction workers shall be conducted. The program shall consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors. A fact sheet shall be prepared for distribution to the above-mentioned people and anyone else who may enter the project site.</li> <li>• In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape and USFWS should be consulted.</li> <li>• Any contractor, employee, or agency personnel who inadvertently kills or injures a San Joaquin kit fox shall immediately report the incident to his or her representative. This representative shall contact the CDFG immediately in the case of a dead, injured, or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916) 445-0045.</li> <li>• The Sacramento USFWS office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS contact is the Chief of the Division of Endangered Species. The CDFG contact is Mr. Ron Schlorff at 1416 9th street, Sacramento, California 95814, (916) 654-4262.</li> </ul>					
<p><b>MM BIO-2:</b> prior to commencing project-related activities, the following measures shall be implemented to reduce impacts to the Swainson's Hawk:</p> <ul style="list-style-type: none"> <li>• If ground-disturbing activities are to occur at the site during the nesting season (February 1 through September 15), the project applicant will be required to retain a qualified biologist to conduct surveys for nesting Swainson's hawk, including the White-tailed kite, following the survey method developed by the Swainson's Hawk Technical Advisory Committee (SWHA TAC, 2000) prior to commencing project-related activities. Surveys shall be conducted no more than 10 days</li> </ul>	Submittal of documentation; Site inspection	If ground clearing or vegetation removal activities occur during the nesting season (March 1 through September 1)	City of Kerman Planning & Development Services Department		



<p>prior to the start of construction and during the appropriate timing to maximize detectability. If an active nest is located, a minimum buffer of ½ mile shall be delineated and maintained around the nest until a qualified biologist has determined that fledging has occurred.</p> <ul style="list-style-type: none"> <li>If the Department of Fish and Game cannot determine that "take" can be avoided, acquisition of an ITP may be warranted prior to project-related implementation.</li> </ul>					
<p><b>MM BIO-3:</b> prior to commencing project-related activities, the following measures shall be implemented to reduce impacts to raptors:</p> <ul style="list-style-type: none"> <li>The City of Kerman will add Mitigation Measure BIO-3 to the Final MND. Mitigation Measure BIO-3 stipulates that if ground-disturbing activities are to occur at the site during the nesting season (February 1 through September 15), the project applicant will be required to retain a qualified biologist to conduct surveys for nesting shall be conducted by a qualified biologist no more than 30 days prior to the start of construction. If an active nest is located, a minimum buffer of 250 feet should be delineated around active nests of migratory birds and 500 feet around active nests of non-listed raptors, until breeding season has ended or until a qualified biologist has determined that fledging has occurred.</li> </ul>	<p>Submittal of documentation; Site inspection</p>	<p>If ground clearing or vegetation removal activities occur during the nesting season (February 1 through September 15)</p>	<p>City of Kerman Planning &amp; Development Services Department</p>		
<p><b>4. Cultural Resources</b></p>					
<p><b>MM CUL-1:</b> If ground-disturbing activities uncover previously unknown human remains, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed:</p> <p>There shall be no further excavation or disturbance of the area where the human remains were found or within 50 feet of the find until the Fresno County Coroner and the City of Kerman are contacted. Duly authorized representatives of the Coroner and the City's Planning Director shall be permitted onto the project site and shall take all actions consistent with Health and Safety Code Section 7050.5 and Government Code Section 27460, et seq. Excavation or disturbance of the area where the human remains were found or within 50 feet of the find shall not be permitted to re-commence until the Coroner determines that the remains are not subject to the provisions of law</p>	<p>Notification of Fresno County Coroner; Submittal of documentation; Site inspection</p>	<p>During ground-disturbing activities</p>	<p>City of Kerman Planning &amp; Development Services Department</p>		

concerning investigation of the circumstances, manner, and cause of any death. If the Coroner determines the remains are Native American, the Coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the “most likely descendant” (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.					
<b>MM CUL-2:</b> If a potentially significant historical or archaeological resource is encountered during subsurface construction activities (i.e., trenching, grading), all construction activities within a 100-foot radius of the identified potential resource shall cease until a qualified archaeologist evaluates the item for its significance and records the item on the appropriate State Department of Parks and Recreation (DPR) forms. The archaeologist shall determine whether the item requires further study. If, after the qualified archaeologist conducts appropriate technical analyses, the item is determined to be significant under California Environmental Quality Act, the archaeologist shall recommend feasible mitigation measures, which may include avoidance, preservation in place or other appropriate measure, as outlined in Public Resources Code section 21083.2. Upon the City's approval of the recommended mitigation measures, the project developer shall implement said measures. The developer shall fund the costs of the qualified archaeologist and required analysis, and shall include this mitigation measure in every construction contract to inform contractors of this requirement.	Submittal of documentation; Site inspection	If a potentially significant historical or archaeological resource is encountered during subsurface construction activities (i.e., trenching, grading)	City of Kerman Planning & Development Services Department		
<b>MM CUL-3:</b> The project developer shall consult with the Duma-Wo-Wah Tribal Government regarding the placement of a Native American monitor onsite during construction related activities. Should a Native American monitor be required the cost of the monitor shall be covered by the project developer.	Submittal of documentation	Prior to issuance of grading permit	City of Kerman Planning & Development Services Department		

5. Geology, Soils, and Seismicity					
MM GEO-1: Prior to issuance of building permits for the proposed project, the project applicant shall submit geotechnical report to the City of Kerman for review and approval. The report shall demonstrate that the proposed project's plans for that structure incorporate all applicable seismic design standards of the latest adopted edition of the California Building Standards Code. The recommendations from the approved geotechnical report shall be incorporated into the project plans, and the project applicant shall adhere to these approved plans in developing the project site.	Approval of plans	Prior to issuance of building permits for the Walmart store and for the structure on each outlot	City of Kerman Planning & Development Services Department		
6. Hydrology and Water Quality					
MM HYD-1: Prior to the issuance of a grading permit or building permit for the project, the project applicant shall obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit No. CA2000002 for Storm Water Discharge Associated with Construction and Land Disturbing Activities, Water Quality Order No. 2009-0009-DWQ through State Water Board's Storm Water Multi-Application and Report Tracking System (SMARTS) website at <a href="https://smarts.aterboards.ca.gov">https://smarts.aterboards.ca.gov</a> . The Construction General Permit requires the preparation and submittal of a Stormwater Pollution Prevention Plan (SWPPP) to the Central Valley RWQCB that identifies specific actions and Best management Practices (BMPs) to prevent stormwater pollution during construction activities to the maximum extent practicable. The City of Kerman shall confirm that the RWQCB has approved the SWPPP prior to issuance of the grading permit or building permit. The SWPPP shall identify a practical sequence for BMP implementation and maintenance, site restoration, contingency measures, responsible parties, and agency contact. The SWPPP shall include but not limited to the following elements: <ul style="list-style-type: none"> <li>• Temporary erosion control measures shall be employed for disturbed areas.</li> <li>• No disturbed surfaces shall be left without erosion control measures in place during the winter and spring months.</li> <li>• Sediment shall be retained onsite by a system of sediment basins, traps, or other appropriate measures.</li> </ul>	Submittal of documentation	Prior to issuance of the grading permit for the project	City of Kerman Planning & Development Services Department		

<ul style="list-style-type: none"> <li>• Silt fence – installation of silt fence in order to detain sediment-laden water, promoting sedimentation behind the fence.</li> <li>• The construction contractor shall prepare Standard Operating Procedures for the handling of hazardous materials on the construction site to eliminate or reduce discharge of materials to storm drains.</li> <li>• BMP performance and effectiveness shall be determined either by visual means where applicable (e.g., observation of above-normal sediment release), or by actual water sampling in cases where verification of containment reduction or elimination (such as inadvertent petroleum release) is required by the Central Valley Regional Water Quality Control Board to determine adequacy of the measure.</li> <li>• In the event of significant construction delays or delays in the final landscape installation, native grasses or other appropriate vegetative cover shall be established on the construction site as soon as possible after disturbance, as an interim erosion control measure throughout the wet season.</li> </ul>					
<b>7. Noise</b>					
<b>MM NOI-1:</b> The project applicant shall require construction contractors to adhere to the following noise attenuation requirements: <ul style="list-style-type: none"> <li>• Construction activities shall be limited to the hours between 7 a.m. to 8 p.m. daily. The City of Kerman shall have the discretion to permit construction activities to occur outside of allowable hours if compelling circumstances warrant such an exception (e.g., weather conditions necessary to pour concrete).</li> </ul>	Notes on plans; Site inspection	During construction	City of Kerman Planning & Development Services Department		
<b>MM NOI-2:</b> All construction equipment shall use noise-reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.	Site inspection	During project operations	City of Kerman Planning & Development Services Department		

Appendix 'E'

Response Letter from York Engineering, Inc.

January 19, 2013

Jacqueline McMillen  
Staff Engineer  
Clements Environmental  
15230 Burbank Blvd., Suite 103  
Sherman Oaks, CA 91411

**Subject: Mid Valley Recycling & Transfer Station Facility Expansion  
Response to Comments from SJVAPCD**

Dear McMillan,

As requested, Yorke Engineering, LLC is providing this response to comments received from the San Joaquin Valley Air Pollution Control District (SJVAPCD) regarding the Air Quality Technical Report (AQTR) Yorke prepared for the Mid Valley Recycling & Transfer Station Facility Expansion project.

**RESPONSE TO COMMENTS**

We understand that Mr. Luis Patlan, City Manager, Director of Planning & Development, City of Kernan, received comments from Mr. David Warner, Director of Permit Services for the SJVAPCD on December 18, 2012. Yorke has reviewed the comment letter and prepared additional analyses and responses to comments to supplement the AQTR. Each comment is reproduced herein for your convenience, and is followed by our response.

**Comment 1:**

*The District transitioned to the use of the California Emissions Estimator Model (CalEEMod) when reviewing or preparing air impact assessments in compliance with provisions of District Rule 9510 (Indirect Source Review), California Environmental Quality Act (CEQA), and National Environmental Policy Act (NEPA), within the San Joaquin Valley air basin. CalEEMod is the newest computer emissions estimating model developed by the California Air Pollution Control Officers Association (CAPCOA). The model calculates criteria pollutant and greenhouse gas (GHG) emissions from a variety of land uses, including residential, commercial, retail, and industrial projects. CalEEMod also calculates the benefits of implementing mitigation measures, including GHG mitigation measures.*

*As of July 1, 2012 the District requires the use of CalEEMod when reviewing or preparing air impact assessments in compliance with CEQA. Therefore, the District cannot make a determination on the impact the project will have on air quality at this time. The District recommends the Air Quality Technical Report (AQTR) be revised using CalEEMod. The District recognizes that CEQA can involve long lead times, and if lead Agencies are acting on projects with significant modeling already completed before the July 1st, 2012 deadline, please contact the District at (559) 230-6000 for project-specific discussions.*

***Response:***

Construction- and operational-phase emission calculations were revised using CalEEMod, as requested. A copy of the model output report is provided at **Attachment 1**. In summary, the CalEEMod model predicts slightly higher emissions during both the construction and operational phases of the project than the URBEMIS model used for the AQTR; however, the criteria pollutant emissions during both phases of the project remain below the SJVAPCD CEQA significance thresholds.

**Comment 2:**

*On page 5 of the AQTR Table 2-1 breaks down the anticipated peak daily vehicles by vehicle type. The URBEMIS analysis used default values instead of project specific information that is available at the time. The District recommends the model be updated to include the anticipated vehicle type as shown in Table 2-1 for an accurate project assessment.*

***Response:***

In the AQTR, Yorke used default vehicle types for the construction vehicle mix; the actual vehicle types and counts from Table 2-1 of the AQTR were used in the URBEMIS emission calculations for operational emission estimates. Yorke revised the operational emission estimates using the CalEEMod model using the default fleet mix. CalEEMod does not allow modifying the fleet mix for vehicles used to calculate operational emissions. The results are provided in **Attachment 1**.

**Comment 3:**

*On page 2 of the AQTR it states "Mid Valley Disposal Recycling and Transfer Station will be critical to the City of Kerman and other jurisdictions of Fresno County as it will provide significant capacity for the regional composting and recycling activities". This indicates material will come from anywhere within Fresno County however, the URBEMIS model used a default trip length of 7.4 miles. The District recommends the AQTR be updated to include an average trip length for the anticipated vehicles indicated in Table 2-1 for an accurate project assessment, or further clarification be provided for the trip length.*

***Response:***

Operational emissions were revised from the default distance of 7.3 miles to 25 miles when the operational emissions were prepared with CalEEMod; 25 miles is one-half the distance from the facility to the county line. The revised operational emissions are shown in Table 1. The emissions reported in the AQTR are presented for comparison purposes. The emissions are also shown in the CalEEMod output report in **Attachment 1**.

As shown, the revised operational emissions are less than the SJVAPCD significance threshold for NO<sub>x</sub> (10 tons per year) and ROG (10 tons per year), thus the conclusion presented in the AQTR that the proposed Project is less than significant for criteria pollutant emissions during operations is unchanged. SJVAPCD has not established numerical significance thresholds for CO, PM<sub>10</sub>, SO<sub>2</sub> or CO<sub>2</sub>.

**Table 1: Operational Mobile Source Emissions**

Pollutant	2014 Emissions (Ton/Year)	
	URBEMIS (7.4 mile collection radius)	CalEEMod 25 mile collection radius
ROG	0.67	1.27
NO <sub>x</sub>	1.09	6.28
CO	6.68	11.21
SO <sub>2</sub>	0.01	0.02
PM <sub>10</sub>	0.56	1.65
CO <sub>2</sub>	657.05	1,713.46

**Comment 4:**

*On page 20 section 3.4.2.1 Toxic Air Contaminants/Hazardous Air Pollutants of the AQTR discusses the health risk of Hazardous Air Pollutants/Toxic Air Contaminants (HAP/TACs) from the stationary sources from the project. The AQTR didn't discuss the health risk of HAP/TACs from mobile sources, mainly the larger trucks needed to haul material inward and outward bound from the facility. The most common source of HAP/TACs can be attributed to diesel exhaust fumes that are emitted from both stationary and mobile sources. If the project is located near residential/sensitive receptors, the proposed project should be evaluated to determine the health impact of HAP/TACs to the near-by receptors. If the analysis indicates that HAP/TACs are a concern, the District recommends that a Health Risk Assessment (HRA) be performed. If an HRA is to be performed, it is recommended that the project proponent contact the District to review the proposed modeling approach.*

**Response:**

Yorke prepared a Health Risk Assessment (HRA) to assess the potential health risk from diesel particulate matter (DPM) emissions from truck traffic at the facility. DPM is considered a carcinogenic compound by the State California; DPM is currently not evaluated for acute or chronic non-cancer impacts. The cancer risk HRA is explained below.

***Air Dispersion Model***

Air dispersion modeling was performed using USEPA's AERMOD computer model, version 12060. The source of emissions is from diesel vehicles entering and exiting the facility. It was previously estimated that 343 vehicles would enter and exit the site. It was assumed that all 343 vehicles were diesel fueled.

Modeling was performed following the SJVAPCD's Guidance for Air Dispersion Modeling. The emissions were modeled as a series of volume sources adjacent to each other along the travel path of the vehicle inside the facility. Each source was modeled to be 6 feet in height and 12 feet in width. The emissions were taken from EMFAC2007 using the default fleet mix for San Joaquin Valley for the year 2013 based on a travel speed of 15 miles per hour. It was assumed that the vehicles would stop at the unloading area and idle for a short amount of time. Diesel trucks must follow the state ATCM and SJVAPCD's guidance which limits idling to 5 minutes.



Modeling was performed for 5 years of meteorological data. The meteorological data is for the city of Sacramento for the years 2004 through 2008. This station was selected as it is the station that is the closest to the Project site with a complete meteorological data that has been compiled for use with the AERMOD model.

### ***Receptors***

Based on discussions with the facility and examination of publicly available maps, three offsite worker locations and one residential location were identified and included in the analysis. Because the area is generally rural, developed farmland, with widely scattered businesses and residences, a specific set of receptors was selected for determining health impacts from Project operation, as follows:

- The first offsite worker location is the offices of the water treatment plant located west of the facility. The offices are located at the north end of the water treatment plant facility. Workers typically are not out in the field except for maintenance duties. Since there would be little chance of long term exposure away from the offices, only the office area was analyzed. A 4x4 grid of receptors spaced 25 meters apart was used to represent the office area.
- The second offsite worker location is the business area located immediately north of the facility. Fourteen receptors spaced 25 meters apart were placed along the nearest points of that facility to the Project location.
- The third offsite worker location was found to be the nearest to the project. This location was a business located immediately south of the project. A 3x3 grid of receptors spaced 25 meters apart was used for this location.
- The nearest residential receptor identified is a small home located west of the project along W. Jensen Avenue. A 5x2 grid of receptors spaced 25 meters apart represents this location.

### ***Health Risk Calculations***

The air dispersion model estimated the highest ground level concentrations for the receptors used. The point of maximum impact (PMI) was found to be at the fenceline of the project. However, as there are no off-site workers or residential receptors located along the fenceline, the results for the PMI are not reported.

The maximum ground level concentration for each of the off-site worker and residential receptors were then used to calculate the incremental increase in cancer risk at these locations from the proposed project.

### ***Results***

Table 1 summarizes the maximum calculated increased cancer risk at the various receptor locations identified. A spreadsheet showing the HRA results and analysis is provided as **Attachment 2**. The AERMOD modeling files are provided as Attachment 3 (electronically).

**Table 2: Summary of Health Risk Impacts**

Receptor	Description	Cancer Risk (excess cases per million exposed)
Worker #1	Treatment plant office area	0.32
Worker #2	Business north of the project	0.20
Worker #3	Business south of the project	4.91
Residence	Residence to the west of the project	8.43

According to the SJVAPCD's *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI), the CEQA significance threshold for projects emitting hazardous air pollutants is the probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million. As shown in Table 2, the health risk to exposed receptor locations is in all cases less than 10 per million, thus the proposed Project is expected to have less than significant impact with respect to Public Health.

**Comment 5:**

*The District concurs that the project will need to comply with the rules and regulation stated on page 19 of the Mitigated Negative Declaration under the Air Quality section discussion item 3a. To identify any other District rules or regulations that may apply to this project or to obtain information about District permit requirements, the applicant is strongly encouraged to contact the District's Small Business Assistance Office at (559) 230-5888. Current District rules can be found online at: [www.valleyair.org/rules/1ruleslist.htm](http://www.valleyair.org/rules/1ruleslist.htm).*

**Response:**

None required.

**Comment 6:**

*The District recommends that a copy of the District's comments be provided to the project proponent.*

**Response:**

None required.

**CONCLUSION**

Should you have any questions or concerns, please contact me at (805) 376-0088.

Sincerely,



Russell Kingsley  
Principle Engineer  
Yorke Engineering, LLC

Ms. Jacque McMillan, Clements Environmental  
January 19, 2013  
Page 6 of 6

RKingsley@YorkeEngr.com

cc: Greg Wolffe, Yorke Engineering, LLC

Attachments:

1. CalEEMod Output Report
2. Mobile Source Health Risk Assessment
3. AERMOD Modeling Files

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## ATTACHMENT 1 – CALEEMOD OUTPUT REPORT

**Mid Valley Disposal Recycling and Transfer Station**  
**San Joaquin Valley Unified APCD Air District, Annual**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric
General Light Industry	114	1000sqft

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Utility Company</b>	Pacific Gas & Electric Company
<b>Climate Zone</b>	7	<b>Precipitation Freq (Days)</b>	45		

### 1.3 User Entered Comments

Project Characteristics -

Land Use - Project size is 38 acres. Building will include 114,000 sq. ft. area.

Construction Phase - Based on expected project construction schedule

On-road Fugitive Dust - Construction vehicles will not be using onsite paved roads.

Grading - Assumed all 38 acres is disturbed.

Vehicle Trips - Assumes customers can come from anywhere in the County. The distance from the facility to the furthest edge of the county is 50 miles. The average of 25 miles was used.

Water And Wastewater - Based on expected usage of 5,000 GPD.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

## 2.0 Emissions Summary

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### 2.1 Overall Construction

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2013	1.55	5.11	3.74	0.01	271.73	0.31	272.04	27.15	0.31	27.46	0.00	597.43	597.43	0.06	0.00	598.69
2014	1.14	2.34	1.86	0.00	57.76	0.14	57.90	5.76	0.14	5.91	0.00	300.08	300.08	0.03	0.00	300.67
<b>Total</b>	<b>2.69</b>	<b>7.45</b>	<b>5.60</b>	<b>0.01</b>	<b>329.49</b>	<b>0.45</b>	<b>329.94</b>	<b>32.91</b>	<b>0.45</b>	<b>33.37</b>	<b>0.00</b>	<b>897.51</b>	<b>897.51</b>	<b>0.09</b>	<b>0.00</b>	<b>899.36</b>

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2013	1.55	5.11	3.74	0.01	0.05	0.31	0.36	0.02	0.31	0.33	0.00	597.43	597.43	0.06	0.00	598.69
2014	1.14	2.34	1.86	0.00	0.00	0.14	0.15	0.00	0.14	0.14	0.00	300.08	300.08	0.03	0.00	300.67
<b>Total</b>	<b>2.69</b>	<b>7.45</b>	<b>5.60</b>	<b>0.01</b>	<b>0.05</b>	<b>0.45</b>	<b>0.51</b>	<b>0.02</b>	<b>0.45</b>	<b>0.47</b>	<b>0.00</b>	<b>897.51</b>	<b>897.51</b>	<b>0.09</b>	<b>0.00</b>	<b>899.36</b>

## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.52	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.01	0.10	0.08	0.00		0.00	0.01		0.00	0.01	0.00	195.05	195.05	0.01	0.00	196.25
Mobile	1.27	6.28	11.21	0.02	1.43	0.22	1.65	0.03	0.20	0.23	0.00	1,713.46	1,713.46	0.08	0.00	1,715.13
Waste						0.00	0.00		0.00	0.00	1,346.31	0.00	1,346.31	79.56	0.00	3,017.17
Water						0.00	0.00		0.00	0.00	0.00	2.89	2.89	0.06	0.00	4.51
<b>Total</b>	<b>1.80</b>	<b>6.38</b>	<b>11.29</b>	<b>0.02</b>	<b>1.43</b>	<b>0.22</b>	<b>1.66</b>	<b>0.03</b>	<b>0.20</b>	<b>0.24</b>	<b>1,346.31</b>	<b>1,911.40</b>	<b>3,257.71</b>	<b>79.71</b>	<b>0.00</b>	<b>4,933.06</b>

## 2.2 Overall Operational

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.52	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.01	0.10	0.08	0.00		0.00	0.01		0.00	0.01	0.00	195.05	195.05	0.01	0.00	196.25
Mobile	1.27	6.28	11.21	0.02	1.43	0.22	1.65	0.03	0.20	0.23	0.00	1,713.46	1,713.46	0.08	0.00	1,715.13
Waste						0.00	0.00		0.00	0.00	1,346.31	0.00	1,346.31	79.56	0.00	3,017.17
Water						0.00	0.00		0.00	0.00	0.00	2.89	2.89	0.06	0.00	4.51
<b>Total</b>	<b>1.80</b>	<b>6.38</b>	<b>11.29</b>	<b>0.02</b>	<b>1.43</b>	<b>0.22</b>	<b>1.66</b>	<b>0.03</b>	<b>0.20</b>	<b>0.24</b>	<b>1,346.31</b>	<b>1,911.40</b>	<b>3,257.71</b>	<b>79.71</b>	<b>0.00</b>	<b>4,933.06</b>

## 3.0 Construction Detail

### 3.1 Mitigation Measures Construction

Water Exposed Area



### 3.2 Grading - 2013

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.09	0.00	0.09	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.14	1.12	0.61	0.00		0.05	0.05		0.05	0.05	0.00	113.23	113.23	0.01	0.00	113.46
<b>Total</b>	<b>0.14</b>	<b>1.12</b>	<b>0.61</b>	<b>0.00</b>	<b>0.09</b>	<b>0.05</b>	<b>0.14</b>	<b>0.04</b>	<b>0.05</b>	<b>0.09</b>	<b>0.00</b>	<b>113.23</b>	<b>113.23</b>	<b>0.01</b>	<b>0.00</b>	<b>113.46</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	3.21	0.00	3.21	0.32	0.00	0.32	0.00	1.93	1.93	0.00	0.00	1.94
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.21</b>	<b>0.00</b>	<b>3.21</b>	<b>0.32</b>	<b>0.00</b>	<b>0.32</b>	<b>0.00</b>	<b>1.93</b>	<b>1.93</b>	<b>0.00</b>	<b>0.00</b>	<b>1.94</b>

### 3.2 Grading - 2013

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.04	0.00	0.04	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.14	1.12	0.61	0.00		0.05	0.05		0.05	0.05	0.00	113.23	113.23	0.01	0.00	113.46
<b>Total</b>	<b>0.14</b>	<b>1.12</b>	<b>0.61</b>	<b>0.00</b>	<b>0.04</b>	<b>0.05</b>	<b>0.09</b>	<b>0.02</b>	<b>0.05</b>	<b>0.07</b>	<b>0.00</b>	<b>113.23</b>	<b>113.23</b>	<b>0.01</b>	<b>0.00</b>	<b>113.46</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93	1.93	0.00	0.00	1.94
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.93</b>	<b>1.93</b>	<b>0.00</b>	<b>0.00</b>	<b>1.94</b>

### 3.3 Asphalt - 2013

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.11	0.69	0.43	0.00		0.06	0.06		0.06	0.06	0.00	54.25	54.25	0.01	0.00	54.44
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>0.11</b>	<b>0.69</b>	<b>0.43</b>	<b>0.00</b>		<b>0.06</b>	<b>0.06</b>		<b>0.06</b>	<b>0.06</b>	<b>0.00</b>	<b>54.25</b>	<b>54.25</b>	<b>0.01</b>	<b>0.00</b>	<b>54.44</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	4.29	0.00	4.29	0.43	0.00	0.43	0.00	2.59	2.59	0.00	0.00	2.59
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>4.29</b>	<b>0.00</b>	<b>4.29</b>	<b>0.43</b>	<b>0.00</b>	<b>0.43</b>	<b>0.00</b>	<b>2.59</b>	<b>2.59</b>	<b>0.00</b>	<b>0.00</b>	<b>2.59</b>

### 3.3 Asphalt - 2013

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.11	0.69	0.43	0.00		0.06	0.06		0.06	0.06	0.00	54.25	54.25	0.01	0.00	54.44
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>0.11</b>	<b>0.69</b>	<b>0.43</b>	<b>0.00</b>		<b>0.06</b>	<b>0.06</b>		<b>0.06</b>	<b>0.06</b>	<b>0.00</b>	<b>54.25</b>	<b>54.25</b>	<b>0.01</b>	<b>0.00</b>	<b>54.44</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.59	2.59	0.00	0.00	2.59
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.59</b>	<b>2.59</b>	<b>0.00</b>	<b>0.00</b>	<b>2.59</b>

### 3.4 Building Construction - Phase I - 2013

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.40	2.67	1.81	0.00		0.18	0.18		0.18	0.18	0.00	282.17	282.17	0.03	0.00	282.85
<b>Total</b>	<b>0.40</b>	<b>2.67</b>	<b>1.81</b>	<b>0.00</b>		<b>0.18</b>	<b>0.18</b>		<b>0.18</b>	<b>0.18</b>	<b>0.00</b>	<b>282.17</b>	<b>282.17</b>	<b>0.03</b>	<b>0.00</b>	<b>282.85</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.05	0.51	0.29	0.00	55.12	0.02	55.14	5.50	0.02	5.52	0.00	73.83	73.83	0.00	0.00	73.87
Worker	0.05	0.05	0.52	0.00	206.03	0.00	206.03	20.56	0.00	20.56	0.00	62.14	62.14	0.00	0.00	62.23
<b>Total</b>	<b>0.10</b>	<b>0.56</b>	<b>0.81</b>	<b>0.00</b>	<b>261.15</b>	<b>0.02</b>	<b>261.17</b>	<b>26.06</b>	<b>0.02</b>	<b>26.08</b>	<b>0.00</b>	<b>135.97</b>	<b>135.97</b>	<b>0.00</b>	<b>0.00</b>	<b>136.10</b>

### 3.4 Building Construction - Phase I - 2013

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.40	2.67	1.81	0.00		0.18	0.18		0.18	0.18	0.00	282.17	282.17	0.03	0.00	282.85
<b>Total</b>	<b>0.40</b>	<b>2.67</b>	<b>1.81</b>	<b>0.00</b>		<b>0.18</b>	<b>0.18</b>		<b>0.18</b>	<b>0.18</b>	<b>0.00</b>	<b>282.17</b>	<b>282.17</b>	<b>0.03</b>	<b>0.00</b>	<b>282.85</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.05	0.51	0.29	0.00	0.00	0.02	0.02	0.00	0.02	0.02	0.00	73.83	73.83	0.00	0.00	73.87
Worker	0.05	0.05	0.52	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	62.14	62.14	0.00	0.00	62.23
<b>Total</b>	<b>0.10</b>	<b>0.56</b>	<b>0.81</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>0.00</b>	<b>135.97</b>	<b>135.97</b>	<b>0.00</b>	<b>0.00</b>	<b>136.10</b>

### 3.5 Architectural Coating - Phase I - 2013

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.79					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.06	0.04	0.00		0.01	0.01		0.01	0.01	0.00	5.48	5.48	0.00	0.00	5.50
<b>Total</b>	<b>0.80</b>	<b>0.06</b>	<b>0.04</b>	<b>0.00</b>		<b>0.01</b>	<b>0.01</b>		<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>5.48</b>	<b>5.48</b>	<b>0.00</b>	<b>0.00</b>	<b>5.50</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	3.00	0.00	3.00	0.30	0.00	0.30	0.00	1.81	1.81	0.00	0.00	1.81
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>3.00</b>	<b>0.00</b>	<b>3.00</b>	<b>0.30</b>	<b>0.00</b>	<b>0.30</b>	<b>0.00</b>	<b>1.81</b>	<b>1.81</b>	<b>0.00</b>	<b>0.00</b>	<b>1.81</b>

### 3.5 Architectural Coating - Phase I - 2013

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.79					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.06	0.04	0.00		0.01	0.01		0.01	0.01	0.00	5.48	5.48	0.00	0.00	5.50
<b>Total</b>	<b>0.80</b>	<b>0.06</b>	<b>0.04</b>	<b>0.00</b>		<b>0.01</b>	<b>0.01</b>		<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>5.48</b>	<b>5.48</b>	<b>0.00</b>	<b>0.00</b>	<b>5.50</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81	1.81	0.00	0.00	1.81
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.81</b>	<b>1.81</b>	<b>0.00</b>	<b>0.00</b>	<b>1.81</b>



### 3.6 Building Construction - Phase II & III - 2014

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.31	2.07	1.50	0.00		0.13	0.13		0.13	0.13	0.00	236.37	236.37	0.02	0.00	236.89
<b>Total</b>	<b>0.31</b>	<b>2.07</b>	<b>1.50</b>	<b>0.00</b>		<b>0.13</b>	<b>0.13</b>		<b>0.13</b>	<b>0.13</b>	<b>0.00</b>	<b>236.37</b>	<b>236.37</b>	<b>0.02</b>	<b>0.00</b>	<b>236.89</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.02	0.19	0.11	0.00	11.54	0.01	11.55	1.15	0.01	1.16	0.00	30.89	30.89	0.00	0.00	30.91
Worker	0.02	0.02	0.19	0.00	43.15	0.00	43.15	4.31	0.00	4.31	0.00	25.41	25.41	0.00	0.00	25.44
<b>Total</b>	<b>0.04</b>	<b>0.21</b>	<b>0.30</b>	<b>0.00</b>	<b>54.69</b>	<b>0.01</b>	<b>54.70</b>	<b>5.46</b>	<b>0.01</b>	<b>5.47</b>	<b>0.00</b>	<b>56.30</b>	<b>56.30</b>	<b>0.00</b>	<b>0.00</b>	<b>56.35</b>

### 3.6 Building Construction - Phase II & III - 2014

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.31	2.07	1.50	0.00		0.13	0.13		0.13	0.13	0.00	236.37	236.37	0.02	0.00	236.89
<b>Total</b>	<b>0.31</b>	<b>2.07</b>	<b>1.50</b>	<b>0.00</b>		<b>0.13</b>	<b>0.13</b>		<b>0.13</b>	<b>0.13</b>	<b>0.00</b>	<b>236.37</b>	<b>236.37</b>	<b>0.02</b>	<b>0.00</b>	<b>236.89</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.02	0.19	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	30.89	30.89	0.00	0.00	30.91
Worker	0.02	0.02	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.41	25.41	0.00	0.00	25.44
<b>Total</b>	<b>0.04</b>	<b>0.21</b>	<b>0.30</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>56.30</b>	<b>56.30</b>	<b>0.00</b>	<b>0.00</b>	<b>56.35</b>

### 3.7 Architectural Coating - Phase II & III - 2014

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.79					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.06	0.04	0.00		0.01	0.01		0.01	0.01	0.00	5.61	5.61	0.00	0.00	5.63
<b>Total</b>	<b>0.80</b>	<b>0.06</b>	<b>0.04</b>	<b>0.00</b>		<b>0.01</b>	<b>0.01</b>		<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>5.61</b>	<b>5.61</b>	<b>0.00</b>	<b>0.00</b>	<b>5.63</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	3.07	0.00	3.07	0.31	0.00	0.31	0.00	1.81	1.81	0.00	0.00	1.81
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>3.07</b>	<b>0.00</b>	<b>3.07</b>	<b>0.31</b>	<b>0.00</b>	<b>0.31</b>	<b>0.00</b>	<b>1.81</b>	<b>1.81</b>	<b>0.00</b>	<b>0.00</b>	<b>1.81</b>

### 3.7 Architectural Coating - Phase II & III - 2014

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.79					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.06	0.04	0.00		0.01	0.01		0.01	0.01	0.00	5.61	5.61	0.00	0.00	5.63
<b>Total</b>	<b>0.80</b>	<b>0.06</b>	<b>0.04</b>	<b>0.00</b>		<b>0.01</b>	<b>0.01</b>		<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>5.61</b>	<b>5.61</b>	<b>0.00</b>	<b>0.00</b>	<b>5.63</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81	1.81	0.00	0.00	1.81
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.81</b>	<b>1.81</b>	<b>0.00</b>	<b>0.00</b>	<b>1.81</b>

## 4.0 Mobile Detail

### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.27	6.28	11.21	0.02	1.43	0.22	1.65	0.03	0.20	0.23	0.00	1,713.46	1,713.46	0.08	0.00	1,715.13
Unmitigated	1.27	6.28	11.21	0.02	1.43	0.22	1.65	0.03	0.20	0.23	0.00	1,713.46	1,713.46	0.08	0.00	1,715.13
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	794.58	150.48	77.52	2,761,627	2,761,627
Total	794.58	150.48	77.52	2,761,627	2,761,627

## 4.3 Trip Type Information

Land Use	Miles			Trip %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
General Light Industry	9.50	25.00	7.30	59.00	28.00	13.00

## 5.0 Energy Detail

## 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	87.55	87.55	0.00	0.00	88.10
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	87.55	87.55	0.00	0.00	88.10
NaturalGas Mitigated	0.01	0.10	0.08	0.00		0.00	0.01		0.00	0.01	0.00	107.49	107.49	0.00	0.00	108.15
NaturalGas Unmitigated	0.01	0.10	0.08	0.00		0.00	0.01		0.00	0.01	0.00	107.49	107.49	0.00	0.00	108.15
<b>Total</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
General Light Industry	2.01438e+006	0.01	0.10	0.08	0.00		0.00	0.01		0.00	0.01	0.00	107.49	107.49	0.00	0.00	108.15
<b>Total</b>		<b>0.01</b>	<b>0.10</b>	<b>0.08</b>	<b>0.00</b>		<b>0.00</b>	<b>0.01</b>		<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>107.49</b>	<b>107.49</b>	<b>0.00</b>	<b>0.00</b>	<b>108.15</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
General Light Industry	2.01438e+006	0.01	0.10	0.08	0.00		0.00	0.01		0.00	0.01	0.00	107.49	107.49	0.00	0.00	108.15
<b>Total</b>		<b>0.01</b>	<b>0.10</b>	<b>0.08</b>	<b>0.00</b>		<b>0.00</b>	<b>0.01</b>		<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>107.49</b>	<b>107.49</b>	<b>0.00</b>	<b>0.00</b>	<b>108.15</b>

## 5.3 Energy by Land Use - Electricity

### Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Light Industry	300960					87.55	0.00	0.00	88.10
<b>Total</b>						<b>87.55</b>	<b>0.00</b>	<b>0.00</b>	<b>88.10</b>

### 5.3 Energy by Land Use - Electricity

#### Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Light Industry	300960					87.55	0.00	0.00	88.10
<b>Total</b>						<b>87.55</b>	<b>0.00</b>	<b>0.00</b>	<b>88.10</b>

## 6.0 Area Detail

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### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.52	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated	0.52	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>



## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.08					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.45					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>0.53</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>0.00</b>	<b>0.00</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.08					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.45					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>0.53</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>0.00</b>	<b>0.00</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## 7.0 Water Detail

## 7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					2.89	0.06	0.00	4.51
Unmitigated					2.89	0.06	0.00	4.51
<b>Total</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Light Industry	1.825 / 0					2.89	0.06	0.00	4.51
<b>Total</b>						<b>2.89</b>	<b>0.06</b>	<b>0.00</b>	<b>4.51</b>

## 7.2 Water by Land Use

### Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Light Industry	1.825 / 0					2.89	0.06	0.00	4.51
<b>Total</b>						<b>2.89</b>	<b>0.06</b>	<b>0.00</b>	<b>4.51</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

### Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					1,346.31	79.56	0.00	3,017.17
Unmitigated					1,346.31	79.56	0.00	3,017.17
<b>Total</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

## 8.2 Waste by Land Use

### Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Light Industry	6632.37					1,346.31	79.56	0.00	3,017.17
<b>Total</b>						<b>1,346.31</b>	<b>79.56</b>	<b>0.00</b>	<b>3,017.17</b>

### Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Light Industry	6632.37					1,346.31	79.56	0.00	3,017.17
<b>Total</b>						<b>1,346.31</b>	<b>79.56</b>	<b>0.00</b>	<b>3,017.17</b>

## 9.0 Vegetation

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## ATTACHMENT 2 – MOBILE SOURCE HEALTH RISK ASSESSMENT

$$\text{Dose-inh} = \frac{C_{\text{air}} \{DBR\} A \quad EF \quad ED}{AT} 10^{-6}$$

		PMI	MEIW 1	MEIW 2	MEIW 3	MEIR
Dose-inh	=	9.85E-05	2.94E-07	1.84E-07	4.46E-06	7.66E-06
$10^{-6}$	=	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
$C_{\text{air}}$	=	<b>0.2614</b>	<b>0.00514</b>	<b>0.00322</b>	<b>0.07805</b>	<b>0.02033</b>
{DBR}	=	393	149	149	149	393
A	=	1	1	1	1	1
EF	=	350	245	245	245	350
ED	=	70	40	40	40	70
AT	=	25550	25550	25550	25550	25550

- = Dose through inhalation (mg/kg/day)
- = Micrograms to milligram conversion
- = Concentration in air (ug/m3)
- = Daily Breathing Rate (Lkg body weight - day)
- = Inhalation absorption factor
- = Exposure frequency (days/year)
- = Exposure duration (years)
- = Averaging time period over which exposure is averaged

$$\text{Cancer Risk} = \text{Dose-inh} \times \text{Incer Poten} \times \text{Incer Potency}$$

		PMI	MEIW 1	MEIW 2	MEIW 3	MEIR
Cancer Risk	=	<b>108.4</b>	<b>0.3</b>	<b>0.2</b>	<b>4.9</b>	<b>8.4</b>
Cancer Risk	=	0.000108	3.23E-07	2.02E-07	4.91E-06	8.43E-06
Dose-inh	=	9.85E-05	2.94E-07	1.84E-07	4.46E-06	7.66E-06
Cancer Potency	=	1.1	1.1	1.1	1.1	1.1

	Fenceline	Worker 1	Worker 2	Worker 3	Resident
2004	0.25787	0.00508	<b>0.00322</b>	<b>0.07805</b>	0.01844
2005	<b>0.2614</b>	<b>0.00514</b>	0.00255	0.06863	0.0199
2006	0.26028	0.00453	0.00313	0.07034	<b>0.02033</b>
2007	0.20365	0.00375	0.00187	0.07042	0.01636
2008	0.192	0.00397	0.00269	0.07429	0.01477

Scen Year: 2013 -- All model years in the range 1969 to 2013 selected

Season : Annual

Area : San Joaquin Valley

\*\*\*\*\*

Year: 2013 -- Model Years 1969 to 2013 Inclusive -- Annual

Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 1: Running Exhaust Emissions (grams/mile; grams/idle-hour)

Pollutant Name: PM10 Temperature: 70F Relative Humidity: 50%

Speed								
MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL	
0	0	0	0	0	1.388	0	0	1.388
5		0	0	0	1.704	0	0	1.704
10		0	0	0	1.163	0	0	1.163
15	0	0	0	0	0.767	0	0	0.767
20		0	0	0	0.54	0	0	0.54

Pollutant Name: PM10 - Tire Wear Temperature: 70F Relative Humidity: 50%

Speed								
MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL	
5		0	0	0	0.036	0	0	0.036
10		0	0	0	0.036	0	0	0.036
15	0	0	0	0	0.036	0	0	0.036
20		0	0	0	0.036	0	0	0.036

Pollutant Name: PM10 - Brake Wear Temperature: 70F Relative Humidity: 50%

Speed								
MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL	
5		0	0	0	0.028	0	0	0.028
10		0	0	0	0.028	0	0	0.028
15	0	0	0	0	0.028	0	0	0.028
20		0	0	0	0.028	0	0	0.028

Total PM10 - PM10 + Tire Wear + Brake Wear

Speed								
MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL	
5		0	0	0	1.768	0	0	1.768
10		0	0	0	1.227	0	0	1.227
15	0	0	0	0	0.831	0	0	0.831
20		0	0	0	0.604	0	0	0.604

Assume truck entrance is located at 0, 0

Emis 7093.435 grams/year  
7.50E-06 g/s-src

1773.359 grams/year

Emis 11822.39 grams/year

Emis 14480.89 grams/year  
2.30E-05 g/s-src

Paths	Distance	Direction
1	360 feet	North
2	90 feet	East
3	600 feet	North

Path 1	x (ft)	y (ft)
1	0	6
2	0	18
3	0	30
4	0	42
5	0	54
6	0	66
7	0	78
8	0	90
9	0	102
10	0	114
11	0	126
12	0	138
13	0	150
14	0	162
15	0	174
16	0	186
17	0	198
18	0	210
19	0	222
20	0	234
21	0	246
22	0	258
23	0	270
24	0	282
25	0	294
26	0	306
27	0	318
28	0	330
29	0	342
30	0	354

x (ft)	y (ft)
6	360
18	360
30	360
42	360
54	360
66	360
78	360
90	360

Path 3	x (ft)	y (ft)
39	90	366
40	90	378
41	90	390
42	90	402
43	90	414
44	90	426
45	90	438
46	90	450
47	90	462
48	90	474
49	90	486
50	90	498
51	90	510
52	90	522
53	90	534
54	90	546
55	90	558
56	90	570
57	90	582
58	90	594
59	90	606
60	90	618
61	90	630
62	90	642
63	90	654
64	90	666
65	90	678
66	90	690
67	90	702
68	90	714
69	90	726
70	90	738
71	90	750
72	90	762
73	90	774
74	90	786
75	90	798
76	90	810
77	90	822
78	90	834
79	90	846
80	90	858
81	90	870
82	90	882
83	90	894
84	90	906
85	90	918
86	90	930
87	90	942
88	90	954

Idling	x (ft)	y (ft)
89	120	954
90	120	924
91	120	894
92	120	864
93	120	834
94	120	804
95	120	774
96	120	744
97	120	714
98	120	684
99	120	654
100	120	624
101	120	594
102	120	564
103	120	534
104	120	504
105	120	474
106	120	444
107	120	414
108	120	384

Boundary	x (m)	y (m)
1	0	0
2	-9.14	0
3	-9.14	50
4	-9.14	100
5	-9.14	150
6	-9.14	200
7	-9.14	250
8	-9.14	300
9	-9.14	350
10	-9.14	395.02
11	-50	395.02
12	-100	395.02
13	-110.34	395.02
14	-110.34	400
15	-110.34	450
16	-110.34	500
17	-110.34	550
18	-110.34	583.69
19	-91.06	629.83
20	-71.78	675.96
21	-52.5	722.09
22	-33.53	767.49
23	0	767.49
24	50	767.49
25	100	767.49
26	144.78	767.49
27	144.78	750
28	144.78	700
29	144.78	650
30	144.78	600
31	144.78	550
32	144.78	500
33	144.78	450
34	144.78	400
35	144.78	350
36	144.78	300
37	144.78	250
38	144.78	200
39	144.78	150
40	144.78	100
41	144.78	50
42	144.78	0
43	100	0
44	50	0



## Worker Receptors

### Treatment Facility Office

	x (ft)	y (ft)
1	-710	2258

	x (m)	y (m)
1	-216.408	688.2384
2	-241.408	688.2384
3	-266.408	688.2384
4	-291.408	688.2384
5	-216.408	713.2384
6	-241.408	713.2384
7	-266.408	713.2384
8	-291.408	713.2384
9	-216.408	738.2384
10	-241.408	738.2384
11	-266.408	738.2384
12	-291.408	738.2384
13	-216.408	763.2384
14	-241.408	763.2384
15	-266.408	763.2384
16	-291.408	763.2384

### Northern Business

	x (ft)	y (ft)
1	90	2578

	x (m)	y (m)
1	27.432	785.7744
2	52.432	785.7744
3	77.432	785.7744
4	102.432	785.7744
5	127.432	785.7744
6	152.432	785.7744
7	177.432	785.7744
8	27.432	810.7744
9	52.432	810.7744
10	77.432	810.7744
11	102.432	810.7744
12	127.432	810.7744
13	152.432	810.7744
14	177.432	810.7744

### Southern Business

	y (ft)
1	-60

	y (m)
1	-18.288
2	-18.288
3	-18.288
4	-43.288
5	-43.288
6	-43.288
7	-68.288
8	-68.288
9	-68.288

## Residential Receptor

### W Jensen Avenue

	x (ft)	y (ft)
1	-590	0

	x (m)	y (m)
1	-179.832	0
2	-204.832	0
3	-229.832	0
4	-254.832	0
5	-279.832	0
6	-179.832	25
7	-204.832	25
8	-229.832	25
9	-254.832	25
10	-279.832	25

CO STARTING  
TITLEONE MID-VALLEY DISPOSAL RECYCLING AND TRANSFER STATION  
TITLETWO DELIVERY TRUCK EMISSIONS HRA  
MODELOPT CONC  
AVERTIME PERIOD  
POLLUTID OTHER  
RUNORNOT RUN  
CO FINISHED

SO STARTING

\*\*\* PATH 1 \*\*\*

LOCATION TR001 VOLUME 0.183 0  
LOCATION TR002 VOLUME 0.549 0  
LOCATION TR003 VOLUME 0.914 0  
LOCATION TR004 VOLUME 0.128 0  
LOCATION TR005 VOLUME 0.1646 0  
LOCATION TR006 VOLUME 0.2012 0  
LOCATION TR007 VOLUME 0.2377 0  
LOCATION TR008 VOLUME 0.2743 0  
LOCATION TR009 VOLUME 0.3109 0  
LOCATION TR010 VOLUME 0.3475 0  
LOCATION TR011 VOLUME 0.384 0  
LOCATION TR012 VOLUME 0.4206 0  
LOCATION TR013 VOLUME 0.4572 0  
LOCATION TR014 VOLUME 0.4938 0  
LOCATION TR015 VOLUME 0.5304 0  
LOCATION TR016 VOLUME 0.5669 0  
LOCATION TR017 VOLUME 0.6035 0  
LOCATION TR018 VOLUME 0.6401 0  
LOCATION TR019 VOLUME 0.6767 0  
LOCATION TR020 VOLUME 0.7132 0  
LOCATION TR021 VOLUME 0.7498 0  
LOCATION TR022 VOLUME 0.7864 0  
LOCATION TR023 VOLUME 0.823 0  
LOCATION TR024 VOLUME 0.8595 0  
LOCATION TR025 VOLUME 0.8961 0  
LOCATION TR026 VOLUME 0.9327 0  
LOCATION TR027 VOLUME 0.9693 0  
LOCATION TR028 VOLUME 0.10058 0  
LOCATION TR029 VOLUME 0.10424 0  
LOCATION TR030 VOLUME 0.1079 0  
SRCPARAM TR001 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR002 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR003 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR004 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR005 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR006 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR007 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR008 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR009 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR010 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR011 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR012 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR013 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR014 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR015 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR016 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR017 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR018 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR019 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR020 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR021 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR022 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR023 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR024 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR025 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR026 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR027 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR028 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR029 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR030 7.498E-06 0.9144 1.7012 1.7012

\*\*\* PATH 2 \*\*\*

[illegible]

\*\*\* PATH 3 \*\*\*

LOCATION TR039 VOLUME 27.43 111.56 0  
LOCATION TR040 VOLUME 27.43 115.21 0  
LOCATION TR041 VOLUME 27.43 118.87 0  
LOCATION TR042 VOLUME 27.43 122.53 0  
LOCATION TR043 VOLUME 27.43 126.19 0  
LOCATION TR044 VOLUME 27.43 129.84 0  
LOCATION TR045 VOLUME 27.43 133.5 0  
LOCATION TR046 VOLUME 27.43 137.16 0  
LOCATION TR047 VOLUME 27.43 140.82 0  
LOCATION TR048 VOLUME 27.43 144.48 0  
LOCATION TR049 VOLUME 27.43 148.13 0  
LOCATION TR050 VOLUME 27.43 151.79 0  
LOCATION TR051 VOLUME 27.43 155.45 0  
LOCATION TR052 VOLUME 27.43 159.11 0  
LOCATION TR053 VOLUME 27.43 162.76 0  
LOCATION TR054 VOLUME 27.43 166.42 0  
LOCATION TR055 VOLUME 27.43 170.08 0  
LOCATION TR056 VOLUME 27.43 173.74 0  
LOCATION TR057 VOLUME 27.43 177.39 0  
LOCATION TR058 VOLUME 27.43 181.05 0  
LOCATION TR059 VOLUME 27.43 184.71 0  
LOCATION TR060 VOLUME 27.43 188.37 0  
LOCATION TR061 VOLUME 27.43 192.02 0  
LOCATION TR062 VOLUME 27.43 195.68 0  
LOCATION TR063 VOLUME 27.43 199.34 0  
LOCATION TR064 VOLUME 27.43 203 0  
LOCATION TR065 VOLUME 27.43 206.65 0  
LOCATION TR066 VOLUME 27.43 210.31 0  
LOCATION TR067 VOLUME 27.43 213.97 0  
LOCATION TR068 VOLUME 27.43 217.63 0  
LOCATION TR069 VOLUME 27.43 221.28 0  
LOCATION TR070 VOLUME 27.43 224.94 0  
LOCATION TR071 VOLUME 27.43 228.6 0  
LOCATION TR072 VOLUME 27.43 232.26 0  
LOCATION TR073 VOLUME 27.43 235.92 0  
LOCATION TR074 VOLUME 27.43 239.57 0  
LOCATION TR075 VOLUME 27.43 243.23 0  
LOCATION TR076 VOLUME 27.43 246.89 0  
LOCATION TR077 VOLUME 27.43 250.55 0  
LOCATION TR078 VOLUME 27.43 254.2 0  
LOCATION TR079 VOLUME 27.43 257.86 0  
LOCATION TR080 VOLUME 27.43 261.52 0  
LOCATION TR081 VOLUME 27.43 265.18 0  
LOCATION TR082 VOLUME 27.43 268.83 0  
LOCATION TR083 VOLUME 27.43 272.49 0  
LOCATION TR084 VOLUME 27.43 276.15 0  
LOCATION TR085 VOLUME 27.43 279.81 0  
LOCATION TR086 VOLUME 27.43 283.46 0  
LOCATION TR087 VOLUME 27.43 287.12 0  
LOCATION TR088 VOLUME 27.43 290.78 0  
SRCPARAM TR039 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR040 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR041 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR042 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR043 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR044 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR045 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR046 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR047 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR048 7.498E-06 0.9144 1.7012 1.7012  
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SRCPARAM TR050 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR051 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR052 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR053 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR054 7.498E-06 0.9144 1.7012 1.7012  
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SRCPARAM TR056 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR057 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR058 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR059 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR060 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR061 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR062 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR063 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR064 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR065 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR066 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR067 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR068 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR069 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR070 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR071 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR072 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR073 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR074 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR075 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR076 7.498E-06 0.9144 1.7012 1.7012

SRCPARAM TR077 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR078 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR079 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR080 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR081 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR082 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR083 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR084 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR085 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR086 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR087 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR088 7.498E-06 0.9144 1.7012 1.7012

\*\*\* IDLING \*\*\*

LOCATION TR089 VOLUME 36.58 290.78 0  
LOCATION TR090 VOLUME 36.58 281.64 0  
LOCATION TR091 VOLUME 36.58 272.49 0  
LOCATION TR092 VOLUME 36.58 263.35 0  
LOCATION TR093 VOLUME 36.58 254.2 0  
LOCATION TR094 VOLUME 36.58 245.06 0  
LOCATION TR095 VOLUME 36.58 235.92 0  
LOCATION TR096 VOLUME 36.58 226.77 0  
LOCATION TR097 VOLUME 36.58 217.63 0  
LOCATION TR098 VOLUME 36.58 208.48 0  
LOCATION TR099 VOLUME 36.58 199.34 0  
LOCATION TR100 VOLUME 36.58 190.2 0  
LOCATION TR101 VOLUME 36.58 181.05 0  
LOCATION TR102 VOLUME 36.58 171.91 0  
LOCATION TR103 VOLUME 36.58 162.76 0  
LOCATION TR104 VOLUME 36.58 153.62 0  
LOCATION TR105 VOLUME 36.58 144.48 0  
LOCATION TR106 VOLUME 36.58 135.33 0  
LOCATION TR107 VOLUME 36.58 126.19 0  
LOCATION TR108 VOLUME 36.58 117.04 0

SRCPARAM TR089 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR090 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR091 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR092 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR093 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR094 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR095 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR096 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR097 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR098 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR099 7.498E-06 0.9144 1.7012 1.7012  
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SRCPARAM TR101 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR102 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR103 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR104 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR105 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR106 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR107 7.498E-06 0.9144 1.7012 1.7012  
SRCPARAM TR108 7.498E-06 0.9144 1.7012 1.7012

\*\*\* SOURCE GROUPS \*\*\*

SRCGROUP PATH01 TR001-TR030  
SRCGROUP PATH02 TR031-TR038  
SRCGROUP PATH03 TR039-TR088  
SRCGROUP IDLING TR089-TR108  
SRCGROUP ALL  
SO FINISHED

RE STARTING

\*\*\* BOUNDARY RECEPTORS \*\*\*

DISCCART 0 0 0 0  
DISCCART -9.14 0 0 0  
DISCCART -9.14 50 0 0  
DISCCART -9.14 100 0 0  
DISCCART -9.14 150 0 0  
DISCCART -9.14 200 0 0  
DISCCART -9.14 250 0 0  
DISCCART -9.14 300 0 0  
DISCCART -9.14 350 0 0  
DISCCART -9.14 395.02 0 0  
DISCCART -50 395.02 0 0  
DISCCART -100 395.02 0 0  
DISCCART -110.34 395.02 0 0  
DISCCART -110.34 400 0 0  
DISCCART -110.34 450 0 0  
DISCCART -110.34 500 0 0  
DISCCART -110.34 550 0 0  
DISCCART -110.34 583.69 0 0  
DISCCART -91.06 629.83 0 0  
DISCCART -71.78 675.96 0 0  
DISCCART -52.5 722.09 0 0  
DISCCART -33.53 767.49 0 0  
DISCCART 0 767.49 0 0  
DISCCART 50 767.49 0 0  
DISCCART 100 767.49 0 0  
DISCCART 144.78 767.49 0 0

DISCCART 144.78 750 0 0  
DISCCART 144.78 700 0 0  
DISCCART 144.78 650 0 0  
DISCCART 144.78 600 0 0  
DISCCART 144.78 550 0 0  
DISCCART 144.78 500 0 0  
DISCCART 144.78 450 0 0  
DISCCART 144.78 400 0 0  
DISCCART 144.78 350 0 0  
DISCCART 144.78 300 0 0  
DISCCART 144.78 250 0 0  
DISCCART 144.78 200 0 0  
DISCCART 144.78 150 0 0  
DISCCART 144.78 100 0 0  
DISCCART 144.78 50 0 0  
DISCCART 144.78 0 0 0  
DISCCART 100 0 0 0  
DISCCART 50 0 0 0  
\*\*\* WORKER RECEPTORS #1 \*\*\*  
DISCCART -216.408 688.2384 0 0  
DISCCART -241.408 688.2384 0 0  
DISCCART -266.408 688.2384 0 0  
DISCCART -291.408 688.2384 0 0  
DISCCART -216.408 713.2384 0 0  
DISCCART -241.408 713.2384 0 0  
DISCCART -266.408 713.2384 0 0  
DISCCART -291.408 713.2384 0 0  
DISCCART -216.408 738.2384 0 0  
DISCCART -241.408 738.2384 0 0  
DISCCART -266.408 738.2384 0 0  
DISCCART -291.408 738.2384 0 0  
DISCCART -216.408 763.2384 0 0  
DISCCART -241.408 763.2384 0 0  
DISCCART -266.408 763.2384 0 0  
DISCCART -291.408 763.2384 0 0  
\*\*\* WORKER RECEPTORS #2 \*\*\*  
DISCCART 27.432 785.7744 0 0  
DISCCART 52.432 785.7744 0 0  
DISCCART 77.432 785.7744 0 0  
DISCCART 102.432 785.7744 0 0  
DISCCART 127.432 785.7744 0 0  
DISCCART 152.432 785.7744 0 0  
DISCCART 177.432 785.7744 0 0  
DISCCART 27.432 810.7744 0 0  
DISCCART 52.432 810.7744 0 0  
DISCCART 77.432 810.7744 0 0  
DISCCART 102.432 810.7744 0 0  
DISCCART 127.432 810.7744 0 0  
DISCCART 152.432 810.7744 0 0  
DISCCART 177.432 810.7744 0 0  
\*\*\* WORKER RECEPTORS #3 \*\*\*  
#REF!  
#REF!  
#REF!  
#REF!  
#REF!  
#REF!  
#REF!  
#REF!  
#REF!  
\*\*\* RESIDENTIAL RECEPTORS \*\*\*  
DISCCART -179.832 0 0 0  
DISCCART -204.832 0 0 0  
DISCCART -229.832 0 0 0  
DISCCART -254.832 0 0 0  
DISCCART -279.832 0 0 0  
DISCCART -179.832 25 0 0  
DISCCART -204.832 25 0 0  
DISCCART -229.832 25 0 0  
DISCCART -254.832 25 0 0  
DISCCART -279.832 25 0 0  
RE FINISHED  
  
ME STARTING  
SURFFILE 2004.SFC  
PROFFILE 2004.PFL  
SURFDATA 23237 2004 Sacramento  
UAIRDATA 23230 2004 Sacramento  
PROFBASE 120 FEET  
STARTEND 2004 1 1 1 2004 12 31 24  
ME FINISHED  
  
OU STARTING  
RECTABLE ALLAVE FIRST  
MAXTABLE ALLAVE 50  
OU FINISHED

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## ATTACHMENT 3 – AERMOD MODELING FILES