Draft Subsequent Environmental Impact Report

Executive Summary

B-18/B-20 Hazardous Waste Disposal Project

Kettleman Hills Facility

Chemical Waste Management, Inc.

State Clearinghouse No. 2005041064

Prepared for

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Contents

Executive Summary ES-1
ES.1 Introduction ES-1
ES.2 Project Location ES-1
ES.3 Project Purpose and Objectives ES-2
ES.4 Project Summary ES-2
ES.5 Environmental Analysis ES-3
ES.5.1 Summary of Proposed Project Impacts ES-4
ES.5.2 Cumulative Impacts ES-14
ES.6 Project Alternatives ES-18
ES.6.1 No Project Alternative ES-18
ES.6.2 B-18 Landfill Expansion/Reduced Size B-20 Landfill ES-18
ES.6.3 B-18 Landfill Expansion Only ES-18
ES.6.4 B-20 Landfill Only ES-19
ES.6.5 Offsite Alternative ES-19
ES.6.6 Environmentally Superior Alternative ES-19
ES.7 Environmental Issues Raised ES-20
ES.8 References ES-20

Table

Table ES-1 Summary of Impacts and Mitigation Measures ES-22

Figures

ES-1 Location Map

Executive Summary

ES.1 Introduction

Under the direction of the Kings County Planning Agency (the County), CH2M HILL prepared this Draft Subsequent Environmental Impact Report (SEIR) pursuant to the California Environmental Quality Act (CEQA) (California Public Resources Code [PRC], Section 21000 *et seq.*). The purpose of the Draft SEIR is to identify and evaluate potentially significant adverse environmental impacts associated with the proposed Kettleman Hills Facility (KHF) B-18/B-20 Hazardous Waste Disposal Project (proposed Project). The KHF is owned by Chemical Waste Management, Inc. (CWMI) and is located as shown in Figure ES-1.

The proposed Project will occur within the existing 1,600-acre KHF site of which 474 acres are currently permitted for waste operations, and to which the proposed Project will add 221.5 acres of new waste operations area (for a total of 695.5 acres of operations area). The proposed Project will involve the same waste transport and disposal activities as currently occur for waste disposal at the Class I/II B-18 Landfill. The proposed Project involves the expansion, continued operation and closure of the existing Class I/II B-18 Landfill and construction, operation, and closure of a new Class I/II B-20 Landfill. The B-20 Landfill will provide for continued disposal of hazardous waste at KHF as the existing Class I/II B-18 Landfill reaches capacity. The two Class I/II landfills may be operated concurrently for a limited period of time as the B-18 Landfill nears its final grades and disposal operations begin to be shifted to the B-20 Landfill (e.g., B-20 may be needed for the disposal of bulkier waste items, while B-18 may still have capacity for soil type wastes).

ES.2 Project Location

The KHF is located in rural western Kings County, approximately 3.5 miles southwest of Kettleman City, 6.5 miles southeast of the City of Avenal, and about 2.5 miles west of Interstate (I-) 5 (see Figure ES-1). The KHF is located on a 1,600-acre property, with approximately 474 acres currently available and permitted for ongoing treatment, storage, and disposal operations for hazardous waste and designated waste, and for disposal operations for municipal solid waste.

ES.3 Project Purpose and Objectives

The purpose of the proposed Project is to enable KHF to provide long-term disposal capacity for hazardous waste and designated waste.

The objectives of the proposed Project are as follows:

- Retain and maximize the use of an existing hazardous waste unit (B-18 Landfill) to provide additional short-term and long-term disposal capacity for hazardous waste and designated waste consistent with the Kings County General Plan (General Plan) and County Hazardous Waste Management Plan (CHWMP).
- Develop a new hazardous waste landfill (B-20 Landfill) on land suitable for development as a hazardous waste disposal unit consistent with the General Plan and CHWMP, including a landfill site removed from existing or proposed residential uses by at least one mile.
- Utilize an existing site that is in conformance with the General Plan and CHWMP.
- Utilize an existing County site that is included as a permitted hazardous waste site in the Siting Element of the Kings County Countywide Integrated Waste Management Plan (CIWMP) to continue providing the most economical and safe disposal of hazardous waste and designated waste possible.
- Ensure the County's long-term ability to continue providing hazardous waste and designated waste disposal capacity at an existing permitted hazardous waste Class I/II facility for at least 30 to 35 years, 24 hours per day, 7 days per week, 365 days per year.

ES.4 Project Summary

The proposed Project involves the following elements:

- Construction of a vertical and lateral expansion of the existing Class I/II B-18 Landfill.
- Operation and closure of the Class I/II B-18 Landfill as approved as part of the proposed Project.
- Construction, operation, and closure of a new Class I/II B-20 Landfill.
- Addition of approximately 221.5 total acres to the KHF's existing permitted operations area, bringing the total operations area to 695.5 acres.

Currently, there are no restrictions on the daily amount of hazardous waste that can be received at KHF for treatment, storage and/or disposal. The current number of hazardous waste truck trips to KHF is a maximum average of 400 truck round-trips per day, which

represents the baseline condition for the SEIR. Unrelated to the proposed Project, there could be an increase in both the amount of hazardous waste that is received at KHF on a daily basis and in the number of hazardous waste transport daily truck trips. The Notice of Preparation (NOP) misstated that the proposed Project would result in 100 additional daily truck trips for the transport of hazardous waste.

The proposed Project would extend the number of years that hazardous waste would be disposed of at the KHF. Currently, the existing B-18 Landfill has remaining permitted capacity for the disposal of hazardous waste and designated waste into 2010. As part of the proposed Project, the existing B-18 Landfill would be expanded vertically and laterally in two phases, and the additional capacity is projected to allow the B-18 Landfill to continue to receive hazardous waste and designated waste for disposal through 2017. Also as part of the proposed Project, the initial phase of the new B-20 Landfill would be constructed in 2017, with hazardous waste and designated waste disposal operations expected to shift to the new B-20 Landfill in 2018 as the B-18 Landfill reaches it capacity.

The new B-20 Landfill would be constructed in three phases (though each phase could be constructed in sub-phases) and is anticipated to provide capacity through 2042. Therefore, as part of the proposed Project, KHF is anticipated to provide an additional 32 years (2010 to 2042) of hazardous waste and designated waste disposal capacity at KHF. The actual duration of the proposed Project will depend on the volume of hazardous waste and designated waste disposed of in the expanded B-18 Landfill and the new B-20 Landfill on an annual basis, and could be more or less than 32 years. For a complete understanding of the proposed Project, including the design and operation of the expanded B-18 Landfill and the new B-20 Landfill, the reader is referred to Section 2.0 – Project Description of the Draft SEIR.

ES.5 Environmental Analysis

In compliance with requirements of the CEQA, an environmental analysis was conducted for the proposed Project. An Initial Study was prepared to determine if the proposed Project could result in significant environmental impacts. Based on results of the Initial Study and other information included in the Notice of Preparation (NOP) (see Appendix A of this Draft SEIR), it was determined that the proposed Project would be a continuation of the existing hazardous waste and designated waste disposal operations at KHF, with the expansion, continued operations and closure of the existing Class I/II B-18 Landfill and construction, operation and closure of the new Class I/II B-20 Landfill.

As a result, the Kings County Planning Agency, as lead agency, determined that a Subsequent EIR (SEIR) was required for the proposed Project, in accordance with CEQA

Guidelines, Section 15162(a), which states, in relevant part, that when an previous EIR has been prepared for a project, as here, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of the substantial evidence in light of the whole record, one or more of the following:

> *(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*
>
> *(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects…*

Based on the results of the Initial Study, it was determined that the proposed Project involves substantial changes and would have the potential to affect: Aesthetics, Air Quality, Biological Resources, Cultural and Paleontological Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, and Transportation/Traffic. Therefore, these environmental resource areas are addressed in the Draft SEIR. In addition, based on recent passage of legislation regarding greenhouse gas (GHG) emissions and its role in global climate change, this Draft SEIR addresses the proposed Project's emissions of GHG and its contribution to global climate change.

The Initial Study also determined, based on substantial evidence in the record, that the proposed Project would not have the potential to affect: Agricultural Resources, Mineral Resources, Population and Housing, Public Services, Recreation, or Utilities and Service Systems. Therefore, these environmental resource areas are not addressed in the SEIR.

ES.5.1 Summary of Proposed Project Impacts

The reasonably foreseeable environmental effects of the proposed Project are evaluated in Chapter 3.0 of this Draft SEIR. All feasible mitigation measures required to avoid or substantially reduce the identified significant impacts are provided and are incorporated as part of the conclusions of this Draft SEIR. The potential impacts and mitigation measures for each environmental topic are summarized in Table ES-1 (page ES-22). Table ES-1 summarizes the major findings and conclusion of the environmental analysis for the proposed Project. With the exception of air quality, greenhouse gas (GHG)/climate change, and traffic, the potentially direct and/cumulative significant effects of the proposed Project will be reduced to less than significant levels. The identified air quality, GHG/climate

change, and traffic impacts are considered significant and unavoidable, even after the adoption of all feasible mitigation measures.

ES.5.1.1 Aesthetics

The areas of KHF that would be affected by the proposed Project will not be visible from Kettleman City, the portions of I-5 close to Kettleman City, or from other inhabited areas to the northeast, north, and northwest of the KHF property because of the screening provided by the ridges of the Kettleman Hills. The closest views toward the portions of the site that will be affected by the Project are from brief segments of State Route (SR-) 41 located immediately east and southwest of the site. Because of the screening provided by intervening landscape features, the only views from I-5 toward the portions of the site affected by the proposed Project are from northbound lanes in the area south of Utica Avenue, a distance of 5 miles and more from the site.

The appearance of many of the features on the KHF site will remain unchanged. There will be no change to the appearance of the facility entrance, and there will be no changes to existing structures such as the administration building, maintenance building, or scale area. In general, physical changes associated with the proposed expansion of the B-18 Landfill and construction, operation, and closure of the new B-20 Landfill will have a low level of visibility in offsite areas used by the public. The design, operational procedures, closure of the B-18 and B-20 landfills, and regulatory requirements of the proposed Project will reduce aesthetic impacts to a level that is less than significant, and no mitigation is required.

ES.5.1.2 Air Quality

The proposed Project is located in Kings County, in the San Joaquin Valley Air Basin (SJVAB). Air quality issues are under the jurisdiction of the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD). The Kings County portion of the SJVAB has been classified by EPA and ARB for each criteria pollutant as attainment, nonattainment, unclassified, or designation to be determined (see Table 3.3-2). For the ozone 1-hour standard, there is no federal standard; however, the County is designated as state nonattainment/severe. For the ozone 8-hour federal standard, the County is designated nonattainment serious and designated state nonattainment. For $PM_{10,}$ the County is designated federal nonattainment/serious and state nonattainment, and for $PM_{2.5}$ the County is designated as federal nonattainment and by the state as "designation to be determined." Based on the air quality technical analysis for the proposed Project (see Appendix F), the Project will not exceed federal and state standards for nitrogen oxides (NO_x), reactive organic gases (ROG), sulfide dioxide ($SO_{2)}$, carbon dioxide (CO) or $PM_{2.5}$ at the KHF boundary. The proposed Project will exceed the federal and state standard for PM_{10} at the KHF boundary. Because the SJVAB is nonattainment for the federal and state ozone

1-hour standard and is nonattainment for the federal ozone 8-hour standard, nonattainment for the federal and state PM_{10} standard, and nonattainment for the federal $PM_{2.5}$ standard, the proposed Project is found to have both Project-specific and cumulative significant impacts on air quality.

Air quality mitigation measures for the proposed Project are included in Table ES-1 (page ES-22). However, for the purpose of this Draft SEIR, the proposed Project is considered to result in both Project-specific and cumulatively significant ozone, PM_{10}, and $PM_{2.5}$ air quality impacts. These impacts would remain significant and unavoidable even after implementation of feasible mitigation measures. The proposed Project and onsite cumulative projects result in a cumulatively significant and unavoidable health risk impact at the KHF property boundary even with the implementation of feasible mitigation measures, but this impact is less than significant 2,000 feet from the KHF property boundary.

If the proposed Project is approved, a statement of overriding considerations relative to air quality and health risk impacts would be required by the Kings County Planning Commission.

ES.5.1.3 Biological Resources

Under the proposed Project, most of the proposed B-18 Landfill expansion is located within the existing operations area at KHF. However, approximately 11 acres of the B-18 Landfill expansion and all of the B-20 Landfill (63 acres of landfill disposal area and a total of 92 acres of disturbance)) are located outside the existing operations area, resulting in approximately 103 acres of new disturbance at KHF. To accommodate the proposed Project, 221.5 acres of mostly undisturbed land (although there are existing roads, wells, and the B-18 stockpile), of which 103 acres will be disturbed, will be added to the approximately 474-acre KHF operations area bringing the total operational area to 695.5 acres.

One sensitive plant species, the gypsum-loving larkspur, occurs within the proposed Project area. However, this species is widespread within the region. As a result, the proposed Project will not result in significant impacts to this species.

Four protected/sensitive wildlife species (loggerhead shrike, blunt-nosed leopard lizard, San Joaquin kit fox, and American Badger) have the potential to occur within the proposed Project area. Although a portion of the B-18 Landfill expansion and all of the B-20 Landfill will be constructed within mostly undisturbed areas, impacts from construction and operation will be mitigated to less than significant (see Table ES-1, page ES-22). Therefore, the proposed Project will not result in significant impacts to protected and/or sensitive wildlife species known to occur at KHF.

ES.5.1.4 Cultural and Paleontological Resources

An archaeological study was conducted at KHF in 2002, and a supplemental survey was conducted in 2003 (TRC 2004). These studies included examination of archaeological site records, maps, and project files. The archival searches revealed three prior archaeological surveys in or near the proposed Project area, which identified two isolated occurrences (IOs) within the KHF. Neither of these isolates was considered a significant cultural resource. The investigations conducted in 2002 and 2003 concluded that the proposed Project area does not contain potentially significant archaeological resources (TRC 2004). Therefore, mitigation measures are not required. However, two archaeological resource mitigation measures have been included and will be implemented in the event that archaeological resources are encountered during construction of the proposed Project (see Table ES-1, page ES-22).

Paleontological studies conducted in 1984 and 2002 determined that the general sensitivity of the Project area for paleontological resources is potentially significant. Project-related excavation activities could result in the disturbance of fossil resources. The probability of fossil occurrence in the proposed Project area appears to be moderate to high based on previous studies. Therefore, because the proposed Project involves disturbance of new land for the B-18 Landfill expansion and new B-20 Landfill, there is a moderate to high probability of impact on paleontological resources. Mitigation measures will be implemented in the event paleontological resources are encountered during Project construction (see Table ES-1, page ES-22). These measures will reduce impacts to less than significant for paleontological resources.

ES.5.1.5 Geology and Soils

The proposed Project is located in an area of historic seismicity, primarily related to the San Andreas Fault, about 22 miles southwest of the site. However, there are no active faults near KHF. Further, the site is not located within an Alquist-Priolo Special Studies Zone.

Because KHF is within a seismically active area (as is most of California), there may be earthquake ground motion during the life of the Project. However, the Project will be designed to meet the requirements of the California Code of Regulations (CCR) Titles 22 and 23 to assure that damage will not occur to the liner system or other components of the B-18 Landfill expansion and the new B-20 Landfill.

Based on Project design, operational and closure procedures, and regulatory requirements (see Section 3.6.5), potential impacts related to nonseismic or seismic geologic conditions will be less than significant, and no mitigation is required.

ES.5.1.6 Hazards and Hazardous Materials

Based on the characteristics of the proposed Project, potential occurrences that involve hazards and hazardous materials are related to waste transport, handling and disposal, fire, and site security. The proposed Project will operate in accordance with federal and state regulations that establish performance standards for the transport, management, and disposal of hazardous wastes and designated wastes, and for personnel safety and emergency response. In addition, KHF operational procedures (see Section 3.7.5) will continue to be implemented to reduce or eliminate potential incidents related to hazards and hazardous materials.

The nearest school is Kettleman City Elementary School, located approximately 3.5 miles from KHF. Due to this distance, activities at the B-18 Landfill expansion and B-20 Landfill would not impact the school or persons at the school.

The KHF is not on the list of "Identified Hazardous Waste Sites" for Kings County, prepared in accordance with California Government Code Section 65962.5. Therefore, the Project will not affect or be affected by any existing hazardous waste site.

The proposed Project will occur within the existing 1,600-acre KHF site of which 474 acres are currently available and authorized for waste operations, and to which the proposed Project will add 221.5 acres of new waste operations area (for a total of 695.5 acres of operations area). The proposed Project will involve the same waste transport and disposal activities as currently occur for waste disposal at the Class I/II B-18 Landfill. As a result, the existing KHF Contingency Plan will be applicable for the proposed Project. Therefore, the proposed Project will neither impair implementation of nor interfere with the existing KHF Contingency Plan.

Based on the above, conditions associated with the proposed Project would not result in significant impacts related to hazards and hazardous materials, and no mitigation is required.

ES.5.1.7 Hydrology and Water Quality

The KHF site is located in the San Joaquin Valley Groundwater Basin, which is divided into seven subbasins. The Kettleman Hills form a groundwater divide between the Tulare Lake Groundwater Subbasin to the east and the Pleasant Valley Groundwater Subbasin to the west. Groundwater near KHF varies from about 413 to 480 feet above mean sea level (msl). This groundwater is considered stagnant due to its age, velocity, and elevated concentrations of total dissolved solids (TDS). Water beneath KHF lies approximately 350 to 540 feet below ground surface. This water ranges from 16,000 to more than 30,000 years old;

has poor quality due to its hardness, TDS, and mineralization; and is calculated to travel 1 to 10 feet per year.

Natural lakes or other surface waters do not occur at or near KHF. The nearest surface water is the California Aqueduct, located approximately 3 miles east of KHF. The aqueduct is isolated from the underlying groundwater basin by its concrete liner. Stormwater at KHF is controlled to prevent runoff from flowing off the site. In accordance with requirements of CCR Title 23, the stormwater control system is designed to accommodate peak flows from the probable maximum precipitation (PMP) event.

The Project will be designed to meet state and federal requirements to assure that impacts will not occur to groundwater or surface water as a result of Project activities. These regulatory requirements include, but are not limited to, protection from the PMP; installation of liner systems and leachate management systems; drainage control; groundwater monitoring; installation of final cover; and closure and post-closure monitoring and maintenance.

Based on the above, the proposed Project will not result in significant impacts to groundwater or surface water resources, and no mitigation is required.

ES.5.1.8 Land Use

The proposed Project is located within unincorporated western Kings County. The KHF is designated for hazardous, municipal, and designated waste disposal by the Land Use Element of the General Plan. The existing waste storage, treatment, and disposal uses at KHF are consistent with the General Plan.

Waste disposal sites are included in the County's Uniform Rules for Agricultural Preserves, Section B.10, as compatible and allowed uses within contracted land (Kings County 2004). The KHF and surrounding area are located within the General Agriculture Zone District (AG-40), which allows waste disposal, including hazardous waste disposal as a conditional use with a conditional use permit (CUP). The proposed Project will require the issuance of new CUP No. 05-10.

CWMI acquired KHF in 1979, after previous landowners had established it as a waste disposal site. The existing 1,600-acre KHF site and its permitted operational area are consistent with County land use designations and the surrounding land uses. The existing operations at KHF are authorized by a series of CUPs. As a continuation of the existing waste operations at KHF, the proposed Project will also be consistent with the County land use designation and surrounding land uses.

ES.5.1.9 Noise

Ambient noise levels near KHF are consistent with the agricultural land use designation of the surrounding area. The principal sources of noise associated with existing facility operations at KHF are: (1) Class I/II hazardous waste treatment, storage, and disposal operations; (2) Class II/III waste disposal operations at the B-19 Landfill; (3) excavation and development of the new Class II/Class III B-17 Landfill; and (4) truck traffic along SR-41 to the facility. Another noise contributor in the area is traffic on I-5, about 2.5 miles east of KHF.

The nearest receptor to the KHF site is a residence on the corner of Milham Road and I-5, approximately 2.5 miles from KHF. Kettleman City and the City of Avenal are about 3.5 and 6.5 miles from KHF, respectively. Noise from KHF operations is not detectable at the nearest residence, or in Kettleman City, or the City of Avenal.

Currently, the Class I/II B-18 Landfill and Class II/III B-19 Landfill are active, and soil is being excavated from the newly permitted B-17 Landfill. These current operations generate noise that is less than significant at the KHF property boundary. Landfill activities associated with the proposed Project will not result in a new type of noise. Nonetheless, operation of the proposed B-20 Landfill would place noise-generating equipment in an area of KHF that currently does not generate noise. The B-18 Landfill expansion will occur at and adjacent to the existing B-18 Landfill footprint, so this aspect of the Project will not result in noise in a new area.

At its closest point to the eastern KHF property boundary, construction at the proposed B-18 Landfill expansion is estimated to result in a maximum noise level of 69 dBA at the property boundary. Operations at the B-18 Landfill expansion are estimated to result in a maximum noise level of 61 dBA at the property boundary. At its closest point to the western KHF property boundary, construction at the proposed B-20 Landfill is estimated to result in a maximum noise level of 69 dBA at the property boundary. Operations at the B-20 Landfill are estimated to result in a maximum noise level of 55 dBA at the property boundary. Therefore, the maximum onsite noise levels for the proposed Project would remain below the Kings County noise standard of 70 dBA for agricultural lands. Therefore, the proposed Project will result in a less than significant noise impact on surrounding agricultural lands, and no mitigation is required.

The proposed Project would not result in an increase in the existing number of daily truck round-trips to and from KHF. Therefore, the proposed Project would not result in additional truck-related noise impacts along local and regional roadways, and no mitigation is required.

Based on the above, noise levels from the proposed Project and from Project-related traffic will be less than significant. Further, the proposed Project will not result in an exceedance of the General Plan noise standard. Therefore, mitigation is not required.

ES.5.1.10 Transportation/Traffic

The major roadways near the Project site that are used for existing KHF operations and that will continue to be used by Project-related traffic are I-5 and SR-41. Existing waste transport traffic associated with all operations at KHF is 568 waste transport truck round-trips per day, Monday through Friday/Saturday (a maximum average of 400 truck round-trips for hazardous waste and a maximum of 168 truck round-trips to the B-19/B-17 Class II/Class III landfills. The proposed Project would not result in an increase in existing traffic from KHF.

The traffic study for the proposed Project analyzed traffic conditions on SR-41 from the KHF entrance to I-5, and I-5 north and south of SR-41 over time, both with and without the proposed Project, and with cumulative projects (TPG 2008). Most truck round-trips for the proposed Project would travel to the Project site via I-5 to its interchange with SR-41, then westbound on SR-41 to the KHF entrance. With or without the proposed Project, the LOS on I-5 in this area of the San Joaquin Valley will continue to operate at an acceptable level until 2018 (i.e., LOS of C or better). However, beginning in 2026 and through the projected closure date for the B-20 Landfill in 2043, the LOS on SR-41 and I-5 in this area of the San Joaquin Valley would operate at LOSs ranging from D to F with or without the proposed Project if roadway improvements are not implemented. Therefore, impacts to traffic on SR-41 and I-5 after 2026 are considered cumulatively significant.

As discussed above, transportation and traffic impacts related to the proposed Project would not be significant through 2018, but the proposed Project would contribute to a significant impact on SR-41 from the KHF entrance to I-5 and on I-5 beginning in 2026 and through 2043. Based on the proposed Project's contribution to a significant impact, two traffic mitigation measures are included in this Draft SEIR and shown in Table ES-1 (TT-MM.1 and TT-MM.2, see page ES-36). Measure TT-MM.2, the preparation of a construction traffic control plan (TCP), is within the control of CWMI and will be implemented as part of the proposed Project. However, measure TT-MM.1 is not within the control of CWMI or the County. This measure indicates CWMI will pay its prorated fair-share to contribute to improvements of specific segments of SR-41 and I-5, which would reduce the proposed Project's contribution to traffic impacts to less than significant. However, the implementation of the roadway improvements is not within the control of CWMI. Therefore, for the purpose of this Draft SEIR, the reduction of the LOS to D or below on SR-41 from the KHF entrance to I-5, and the reduction of the LOS to D or below on I-5

north and south bound of its interchange with SR-41 will be considered a cumulatively significant and unavoidable impact, as roadway improvements are controlled by Caltrans, and neither CWMI or the County have the authority to guarantee that such improvements will occur. Therefore, if the proposed Project is approved, a statement of overriding considerations would be required by the Kings County Planning Commission.

ES.5.1.11 Greenhouse Gas Emissions and Global Climate Change

In California, observational trends from the last half-century show warmer winter and spring temperatures, decreased spring snow levels in lower- and mid-elevation mountains, (Cayan et al. 2006b). Research suggests that human activities, such as the burning of fossil fuels and clearing of forests, are resulting in more emissions of carbon dioxide (CO_2) and other heat trapping gases into the atmosphere. This could lead to future global climate change, with widespread consequences that would affect many of California's important resources.

This Draft SEIR considers the contribution of the proposed Project to greenhouse gas (GHG) emissions and global climate change. The primary environmental impact of the emissions of GHGs is not local, but global in nature. For this Draft SEIR, the incremental contribution of the proposed Project to global climate change would be considered significant if it would:

- Conflict with or obstruct implementation of the goals and/or strategies of Executive Order S-03-05 and/or Executive Order S-01-07, or the California Global Warming Solutions Act of 2006.
- Result in increased exposure to one or more of the potential adverse effects of global warming identified in the California Global Warming Solutions Act of 2006, Health and Safety Code Section 38501(a).
- Result in a substantial Project-specific increase in GHG emissions relative to existing conditions.

GHG emissions associated with the proposed Project were estimated using CO_2 emissions as a proxy for all GHG emissions. This is consistent with the current reporting protocol of the California Climate Action Registry (CCAR). Calculations of GHG emissions typically focus on CO_2 because it is the most commonly produced GHG in terms of both volume and number of sources, and because it is the easiest GHG to measure. The CCAR provides a methodology for calculating GHG emissions and is designed to be applied to a single or limited number of entities or operations where detailed information on emissions sources is available (e.g., usage of electricity and natural gas, numbers and types of vehicles and equipment in a fleet, type and usage of heating and cooling systems, emissions from manufacturing processes). As the number and type of vehicles used to transport hazardous

waste to KHF are known and the number and type of onsite equipment used to dispose of hazardous waste at the B-18 Landfill are known, this methodology is applicable to the proposed Project.

The traffic analysis conducted as part of the Draft SEIR provides data used to estimate CO_2 emissions from Project-related vehicle trips. The proposed Project will result in the continuation of up to a maximum average of 400 vehicle round-trips per day with an average roundtrip distance of 200 miles to continue to transport hazardous waste and designated waste to KHF for disposal at the B-18 and B-20 Landfills. Therefore, the proposed continuation of transport of hazardous waste to KHF as part of the proposed Project would generate an average of 80,000 vehicle miles traveled (VMT) per day, or approximately 29 million VMT annually, the same number of miles as under the current operation of the B-18 Landfill at KHF. Approximately 11,700 tons of CO_2 per year would be generated by Project-generated vehicle trips, which is the same amount as currently generated by the existing operation of the B-18 Landfill. It is important to note that the CO_2 emissions estimate for vehicle trips associated with the proposed Project are not new emissions, as current operation of the B-18 Landfill at KHF already generates up to a maximum average of 400 vehicle round-trips per day. As a result, the proposed Project represents a continuation of the same rate of CO_2 emissions rather than new CO_2 emissions. Therefore, the proposed Project does not result in a net increase in global GHG emissions. An additional critical factor is that hazardous waste will continue to be generated in California regardless of the proposed Project, and this waste will need to be transported to a permitted Class I hazardous waste facility for disposal. Therefore, with or without the proposed Project, similar rates of CO_2 emissions from the transport of hazardous waste for disposal in California will occur.

The estimate of approximately 11,700 tons of CO_2 emitted per year from Project-related vehicle trips provides a starting point for further emissions calculations. Fossil fuel consumption in the transportation sector was the single largest source of California's GHG emissions in 2004, accounting for 40.7 percent of the total, while the industrial sector accounts for 20.5 percent of the total California GHG emissions (California Energy Commission 2006a). Making the assumption that the proportion of transportation and industrial sectors emissions from the proposed Project would be similar to the statewide results for 2004, overall CO_2 emissions from the proposed Project would be approximately 17,550 tons per year, which includes the transportation of waste by truck and the onsite landfill equipment used for disposal operations at the B-18/B-20 landfills. However, just as the vehicular related CO_2 emissions for the proposed Project are a continuation of existing emissions from the current operation of the B-18 Landfill at KHF, total estimated CO_2 emissions from the proposed Project represent a continuation of emissions rather than new

emissions. Therefore, the total CO_2 emissions for the proposed Project result in no net increase in global emissions of GHG.

The ongoing increase in GHG concentrations in the atmosphere has resulted in and will continue to result in increases in average global temperature and associated shifts in climatic and environmental conditions. Given the significant adverse environmental effects linked to global climate change induced by GHG, emissions of GHG are considered a significant impact. The challenge in assessing the significance of an individual project's contribution to global GHG emissions and associated global climate change is to determine whether a project's GHG emissions, which are arguably at a micro scale relative to global emissions, result in a considerable incremental contribution to a significant macro-scale impact.

In 2003, global emissions of carbon (i.e., only the carbon atoms within CO_2 molecules) solely from fossil fuel burning totaled an estimated 7,303 million metric tons (Marland et al. 2006). This translates to approximately 29,400 million tons of CO_2. This is only a portion of global CO_2 emissions because it addresses only fossil fuel burning and does not address other CO_2 sources such as burning of vegetation. Total estimated CO_2 emissions from all sources associated with the existing operation of the B-18 Landfill and the proposed Project are less than 0.00000008 percent of this partial global total. CO_2 emissions in California totaled approximately 541 million tons in 2004 (CEC 2006a). Based on total CO_2 emissions, as estimated above, the existing operation of the B-18 Landfill and the proposed Project-related emissions represent approximately 0.0003 percent of the 2004 statewide total.

For the purposes of this Draft SEIR, the proposed Project is considered to result in both Project-specific and cumulatively significant GHG emissions. Even with implementation of the Air Quality mitigation measures include in this Draft SEIR (see Table ES-1, page ES-22), the proposed Project will produce GHG emissions and that will result in an incremental contribution to the significant impact of global climate change. Therefore, because any substantial amount of GHG emissions is considered significant as related to their impact on global climate change, in part, because of the existing environment, the impact of the proposed Project on global climate change is considered *cumulatively* ***significant and unavoidable.*** If the proposed Project is approved, a statement of overriding considerations relative to GHG emissions and the proposed Project's incremental contribution to global climate change would be required by the Kings County Planning Commission.

ES.5.2 Cumulative Impacts

The Kings County Planning Agency has identified two types of projects that, in conjunction with the proposed Hazardous Waste Disposal Project, could contribute to cumulative impacts. The first type consists of projects at KHF that are independent of and not affected

by the Project proposed in this Draft SEIR (onsite projects). The second type of cumulative project consists of public or private projects near KHF (offsite projects). These also are independent of and not affected by the Project evaluated in this Draft SEIR.

ES.5.2.1 Onsite Projects

Two cumulative projects at KHF are evaluated. One is the KHF B-19 Landfill Bioreactor Project (Bioreactor Project). An NOP for the Bioreactor Project was issued on September 2, 2003. The Draft SEIR for the Bioreactor Project was distributed for public comment on November 1, 2004, and the Final SEIR was distributed to the public on May 23, 2005. The Kings County Planning Commission certified the SEIR and approved the Bioreactor Project on June 6, 2005.

The other onsite project is the B-17 Landfill Project. An NOP for the KHF B-17 Landfill Project was issued on March 1, 2004, and a Notice of Modification was issued on September 12, 2005. The Draft SEIR for the project was distributed for public comment on November 4, 2005, and the Final SEIR was distributed to the public on May 19, 2006. The Kings County Planning Commission certified the SEIR and approved the B-17 Landfill Project on May 30, 2006.

ES.5.2.2 Offsite Projects

The second type of cumulative project consists of those in the vicinity of KHF. Based on discussions with the Kings County Planning Agency (Zumwalt 2006), it was determined that four projects in the area have the potential to result in cumulative impacts. These are the Avenal Landfill Expansion (Avenal), the Westlake Farms Co-Composting Facility (Westlake Farms), California Department of Transportation (Caltrans) SR-41 Rehabilitation Project (Caltrans Project), and the Quay Valley Ranch Planned Community (Quay Valley).

The potential for cumulative impacts are evaluated for the environmental resource areas addressed in this Draft SEIR: Aesthetics, Air Quality, Biological Resources, Cultural and Paleontological Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Transportation/Traffic, and Greenhouse gas emissions.

ES.5.2.3 Cumulative Project Impact Summary

Based on the analysis, it was determined that the Project would contribute to less than significant cumulative impacts for all of the resources areas except Air Quality and public health, transportation and traffic, and GHG emission and resulting Project contribution to global climate change. Cumulative impacts for this resource area are summarized below. In addition, cumulative impacts to Transportation/Traffic also are summarized in Section ES.5.2.3.2.

ES.5.2.3.1 Air Quality Cumulative Impacts

The KHF onsite cumulative projects will increase emissions from KHF. The proposed Project and onsite cumulative projects do not exceed the California Ambient Air Quality Standards/National Ambient Air Quality Standards (CAAQS/NAAQS) for NO_x, ROG, SO_2, and CO at the KHF property boundary. However, as the SJVAB is designated as federal and state nonattainment for ozone, the proposed Project and onsite cumulative projects represent a cumulative significant impact for ozone.

In addition, the proposed Project and the onsite cumulative projects exceed both the 24-hour and annual CAAQS for PM_{10} and $PM_{2.5}$ at the KHF property boundary. As a result, because the SJVAB is designated as federal and state nonattainment for PM_{10}, the proposed Project and onsite cumulative projects represent a cumulatively significant impact for PM_{10}.

The proposed Project and the onsite cumulative projects exceed the cancer risk standards at the KHF property boundary and are therefore significant at that location. However, the proposed Project and the onsite cumulative projects do not exceed the cancer risk standards at a distance of 2,000 feet from the KHF site boundary and, therefore, are less than significant at this distance.

The offsite Avenal, Westlake Farms and Quay Valley Ranch projects would also contribute NO_x, ROG, PM_{10} and $PM_{2.5}$ emissions into the SJVAB, which is designated as nonattainment for ozone, PM_{10}, and $PM_{2.5}$. Therefore, the proposed Project and these offsite cumulative projects would contribute to cumulatively significant air quality impacts for criteria pollutants.

Due to the distance between the proposed Project and the Avenal, Westlake Farms, and Quay Valley projects, health risks are not cumulatively significant.

ES.5.2.3.2 Transportation and Traffic Cumulative Impacts

The beginning in 2026 and continuing until 2043, the proposed Project would contribute to existing traffic volumes of SR-41 and I-5. Traffic volumes on the segments of SR-41 from the entrance to KHF to I-5 and I-5 that will be used by vehicles related to the proposed Project will result in levels of service that range from LOS B to LOS F, depending on the specific roadway and the year analyzed. The General Plan considers LOS D or better to be acceptable for County thoroughfares, and Caltrans considers the transition from LOS C to LOS D or better to be acceptable for state highways.

The proposed B-18 Landfill expansion will extend the life of the existing B-18 Landfill by approximately 8 years. The subsequent B-20 Landfill is a replacement for the existing B-18 Landfill and has an estimated life of 32 years. When the B-18 Landfill expansion reaches its capacity, hazardous waste disposal operations will shift to the B-20 Landfill. However, the

two landfills may be operated concurrently for a limited period of time as the B-18 Landfill nears its final grades and disposal operations begin to be shifted to the B-20 Landfill. Up to a combined maximum average of 400 trucks per day may be bound for the B-18 Landfill or B-20 Landfill. There also will be truck trips to the B-18 Landfill during the closure that will be cumulative with B-20 Landfill waste disposal operations. There may be up to 5 truck trips per day during closure of the B-18 Landfill. Because the above numbers of onsite trucks would be within the normal variability of daily traffic within the KHF site, it would be considered less than significant.

A total of a maximum average of 400 truck round-trips per day related to ongoing hazardous waste operations at KHF is included under onsite cumulative operations and is reflected as such in the LOS analysis.

There will be a cumulative impact to traffic on SR-41 and I-5 beginning in 2026 and continuing until 2043 related to the proposed Project plus the KHF onsite projects, and the Avenal Landfill, Westlake Farms, and Quay Valley (Kings County 2007) projects. This impact is expected to be cumulatively significant.

ES.5.2.3.3 Greenhouse Gas and Global Climate Change Cumulative Impacts

In 2003, global emissions of carbon (i.e., only the carbon atoms within CO_2 molecules) solely from fossil fuel burning totaled an estimated 7,303 million metric tons. This translates to approximately 29,400 million tons of CO_2. This is only a portion of global CO_2 emissions because it addresses only fossil fuel burning and does not address other CO_2 sources such as burning of vegetation. Total estimated CO_2 emissions from all sources associated with the existing operation of the B-18 Landfill and the proposed Project are 0.00000008 percent of this partial global total. CO_2 emissions in California totaled approximately 541 million tons in 2004. Based on total CO_2 emissions, as estimated above, the existing hazardous waste transportation and onsite hazardous waste operations for the B-18 Landfill and the proposed Project-related emissions represent approximately 0.0003 percent of the 2004 statewide total emission of CO_2.

Even though the proposed Project's emissions of GHG represent a continuation of the emissions from the existing transports of hazardous waste to the B-18 Landfill and the existing operations of the B-18 Landfill at KHF, the proposed Project makes an incremental contribution to the significant cumulative impact of global climate change. Because all GHG emissions are considered significant as related to the global climate change, the impact of the proposed Project on global climate change is considered cumulatively significant.

ES.6 Project Alternatives

In compliance with CEQA, a reasonable range of alternatives was selected and evaluated relative to the ability of each alternative to feasibly attain most of the basic Project objectives and avoid or substantially lessen any of the significant effects of the proposed Project. The SEIR evaluates five alternatives to the proposed Project. The alternatives evaluated are:

- No Project Alternative
- B-18 Landfill Expansion/Reduced Size B-20 Landfill
- B-18 Landfill Expansion Only
- B-20 Landfill Only
- Offsite Alternative

ES.6.1 No Project Alternative

With the No Project alternative, hazardous waste disposal would cease at KHF when the existing B-18 Landfill reaches its capacity. The hazardous waste then would be transported for disposal at one or more sites outside of Kings County. If the No Project alternative were implemented, there would be no significant Project-related air quality impacts and no increase in cumulative air quality impacts. Further, traffic related to hazardous waste disposal operations at KHF would not contribute to a cumulative traffic impact. The No Project alternative would not meet any of the objectives of the proposed Project and, therefore, is not the preferred alternative.

ES.6.2 B-18 Landfill Expansion/Reduced Size B-20 Landfill

The B-18 Landfill Expansion/Reduced Size B-20 Landfill alternative would provide for hazardous waste disposal at KHF for approximately 23 years, compared to 32 years with the proposed Project. With this alternative, onsite and offsite project-specific and cumulative impacts associated with hazardous waste transport and disposal would occur over a shorter period of time. Also, potential onsite impacts to aesthetics, biological, and cultural and paleontological resources would be less due to the smaller area of disturbance for the reduced size B-20 Landfill. This alternative would not meet two of the five Project objectives and, therefore, is not the preferred alternative.

ES.6.3 B-18 Landfill Expansion Only

The B-18 Landfill Expansion Only alternative would provide for hazardous waste disposal at KHF for approximately 8 years, compared to 32 years with the proposed Project. With this alternative, onsite and offsite project-specific and cumulative impacts to air quality from hazardous waste transport and disposal would occur over a shorter period of time than with the proposed Project. Also, potential onsite impacts related to development of the new

B-20 Landfill, primarily related to aesthetics, biological, and cultural and paleontological resources, would not occur. This alternative would not meet three of the five Project objectives and, therefore, is not the preferred alternative.

ES.6.4 B-20 Landfill Only

The B-20 Landfill Only alternative would provide for hazardous waste disposal at KHF for approximately 24 years, compared to 32 years with the proposed Project. With this alternative, onsite and offsite project-specific and cumulative impacts to air quality from hazardous waste transport and disposal would occur over a shorter period of time than with the proposed Project. Also, potential onsite impacts related to development of the B-18 Landfill expansion would not occur. This alternative would not meet two of the five Project objectives and, therefore, is not the preferred alternative.

ES.6.5 Offsite Alternative

The Offsite alternative would require a new hazardous waste landfill to be constructed outside of the KHF property boundary. This alternative was determined to be infeasible because of the lengthy time period required to obtain and permit a new site consistent with County goals, and because the applicant, CWMI, does not own a suitable site within the region.

ES.6.6 Environmentally Superior Alternative

This discussion is included because, based on the analysis provided in Section 4.2.1, the No Project alternative is the environmentally superior alternative. In accordance with the CEQA Guidelines (Section 15126.6[e][2]):

> *"If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."*

Based on the analyses of alternatives provided in the previous sections, the No Project alternative is the environmentally superior alternative because it represents the baseline (existing) condition at the KHF site. If the No Project alternative were implemented, none of the significant or less than significant site-specific impacts of the proposed Project would occur. There would be no site-specific significant Project-related air quality impacts, GHG/global climate change impacts, or traffic impacts, and no Project-related increase in cumulatively significant air quality, GHG/global climate change, or traffic impacts.

However, under the No Project Alternative, hazardous waste still would be generated in the region and would need to be transported for disposal at some other facility. As a result, there still would be traffic related to hazardous waste transport, air quality and GHG/global climate change impacts related to emissions from hazardous waste transport trucks, and

emissions from hazardous waste disposal operations and equipment. Air quality impacts and GHG/global climate change impacts that would have occurred with operation of the proposed Project.

Among the other alternatives, the one that is environmentally superior to the proposed Project is the B-18 Landfill Expansion Only alternative. Over time, this alternative would reduce waste transport and operations emissions of criteria pollutants compared to the proposed Project, as hazardous waste disposal would occur over a shorter period of time (8 years) compared to the proposed Project (32 years). However, Project-specific and cumulative air quality and GHG/global climate change impacts would still be considered significant and unavoidable during operation of the B-18 Landfill expansion, as daily landfill operations would contribute to emissions of ozone, PM_{10}, and $PM_{2.5}$ into the SJVAB, which already is nonattainment for these criteria pollutants. In addition, this alternative would not meet two of the five Project objectives and, therefore, is not the preferred alternative.

ES.7 Environmental Issues Raised

The Kings County Planning Agency issued an NOP for the proposed KHF Continuation Project (which included the actions regarding the B-18 and B-20 Landfills) on March 1, 2004, and a second NOP on September 30, 2005. Both notices were distributed to the Governor's Office of Planning and Research and to responsible and trustee agencies. The two NOPs, and comments to the NOPs, are included in Appendices A, B, C, and D of this Draft SEIR. Comments were received from the California Department of Toxic Substances Control; California Department of Conservation; California Department of Transportation; California Integrated Waste Management Board; California Regional Water Quality Control Board – Central Valley Region; San Joaquin Valley Unified Air Pollution Control District; and the United States Environmental Protection Agency, Region IX. Verbal comments were also provided by members of the public at a scoping meeting held on October 19, 2005 in Kettleman City (a transcript of this meeting, in English and Spanish, is provided in Appendix E). Based on the comments received, the primary areas of interest were related to air quality, traffic, human health, and biological resources. These and other matters of interest are addressed in this Draft SEIR.

ES.8 References

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Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Aesthetics (3.2)			
AES-1: Changes in KHF Site Appearance The appearance of most features on the KHF site would remain unchanged, and an increase in the overall level of lighting at the site is not expected.	Less than significant	No mitigation is required.	Less than significant
AES-2: Changes in views of KHF site from SR-41 The B-18 Landfill expansion would have a limited effect on the area's overall appearance, and would not create a substantial change in the character or quality of the view. In the view from Viewpoint 1, the B-20 Landfill would be hidden behind the B-18 Landfill expansion and would not be visible.	Less than significant	No mitigation is required.	Less than significant
AES-3: Changes in views of KHF site from Utica Avenue The B-18 Landfill would not be visible from this viewpoint. The B-20 Landfill would appear similar to the ridge area in front of it, would have little effect on the area's overall appearance, and would not produce a substantial change in the area's existing visual character or quality.	Less than significant	No mitigation is required.	Less than significant
AES-4: Changes in views of KHF site from SR-41 at SR-33 The top portion of the B-18 Landfill expansion would be visible from SR-33 above the ridgeline slightly left of where SR-41 appears to merge into the hills. The upper portion of the B-20 Landfill would be visible above the ridgeline to the left of the B-18 Landfill expansion. The landfills would create a change in the profile of the ridgeline. However, because they would appear similar to the rest of the area, the change would not be readily apparent, and the B-18 and B-20 landfills would have a relatively small effect on the overall appearance of the view from Viewpoint 3.	Less than significant	No mitigation is required.	Less than significant

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Air Quality (3.3)			
AQ-1: Periodic Construction and Operations Impacts Because the SJVAB is nonattainment for the federal and state standards for ozone, PM_{10} and $PM_{2.5}$, the Project is found to have both Project-specific and cumulatively significant impacts on air quality.	Significant	**AQ-MM.1** For the proposed Project, the Project proponent shall implement the following: • All landfill operational equipment purchased shall meet applicable model year emission standards, and the emission standards shall be at least equivalent to the emission standards for the equipment being replaced. This measure does not apply to contractor provided construction equipment. • Onsite vehicles and equipment shall be properly maintained. • Fugitive dust emissions from the B-18 Landfill expansion and the B-20 Landfill shall be controlled to meet the requirements of SJVUAPCD Regulation VIII, as applicable, to include, but not be limited to, the following: – Watering active construction/disposal areas – Watering active unpaved roads – Watering of daily cover stockpiles and the unpaved roads used to access the daily cover stockpiles – Track-out controls would be installed at the transition of dirt roads to paved roads that provide access to B-18 and B-20 landfills • Vehicles and equipment shall be restricted to specific onsite roads. • Vehicle speed on onsite roads to/from the landfill shall be limited to 15 miles per hour on paved and unpaved roads. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction, operations and closure of the Project. **AQ-MM.2** The primary heavy-duty, diesel-powered landfill equipment (dozers) at the B-18 Landfill expansion and the B-20 Landfill shall meet the 2014 California emissions standards for off-highway, heavy-duty diesel equipment through either the purchase of new equipment or through the retrofit of existing equipment. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction, operations and closure of the Project.	Significant and unavoidable
AQ-2: Long-Term Operations Impacts Because the SJVAB is nonattainment for the federal and state standards for ozone, PM_{10} and $PM_{2.5}$, the Project is found to have both Project-specific significant impacts on air quality during onsite operations and from offsite mobile emissions for the transport of hazardous waste and designated waste to the B-18/B-20 Landfills for disposal.	Significant		Significant and unavoidable

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Air Quality (3.3) (continued)			
AQ-3: Local Mobile Source Carbon Monoxide The proposed Project would not result in an increase on the existing number of daily truck round-trips for the transport of waste to the B-18/B-20 Landfills, and the proposed Project would not result in an increase in Project-related mobile emissions. No intersection within ¼ mile of residential structures would have a decrease in level of service (LOS) to an unacceptable level (LOS D, E or F) due to Project-related vehicle traffic.	Less than significant	No mitigation is required.	Less than significant
AQ-4: Odor Impacts Due to the characteristics of hazardous waste, odors are generally not an issue at hazardous waste landfills. However, KHF does accept ammonia and other "cover immediately loads" and designated waste that may contain petroleum hydrocarbons, so there is a potential for unpleasant odors. The nearest residence is located 2.5 miles from KHF and there are no other permanent residences with 3.5 miles of KHF. These distances exceed the SJVUAPCD odor significance threshold of 1 mile. In addition, prevailing winds are not from KHF towards the closest residences or towards Kettleman City.	Less than significant	No mitigation is required.	Less than significant
AQ-5: Toxic Air Contaminants The proposed Project would result in a less than significant health risk at the KHF property boundary and at a distance of 2,000 feet from the KHF boundary. The proposed Project in combination with the onsite B-19 and B-17 Landfills cumulative projects would exceed the cancer risk standard at the KHF property boundary, but the cumulative impact is less than significant at a distance of 2,000 feet from the KHF boundary.	Less than significant Cumulative significant at the KHF property boundary; less than significant at 2,000 feet from KHF property boundary.	No mitigation is required.	Less than significant Cumulatively significant and unavoidable at the KHF property boundary, but cumulatively less than significant at the 2,000 from the KHF property boundary.
AQ-6: Naturally Occurring Asbestos Naturally occurring asbestos is not found at KHF.	No Impact	No mitigation is required.	Less than significant

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Air Quality (3.3) (continued)			
AQ-7: Air Quality Attainment Plan Consistency The proposed Project would be consistent with the Ozone and PM_{10} AQAPs based on the following: • The proposed Project would be in conformance with the County General Plan. • The proposed Project would not result in a direct population increase and would not be growth-inducing. • The proposed Project would implement feasible fugitive PM_{10} control measures, including the requirements of APCD Regulation VIII. The proposed Project would comply with applicable SJVUAPCD rules and regulations.	Less than significant	No mitigation is required.	Less than significant
Biological Resources (3.4)			
BR-1: The Loss of Habitat for Special-Status Plant Species The proposed Project would remove some individual gypsum-loving larkspur, Hoover's woollystar, cottony buckwheat and San Joaquin blue-curl plants, and these species are plants of limited distribution contained on the CNPS watch list. These species are not listed as rare, threatened or endangered under state or federal law and have scattered distributions on the property (as well as in the region). The loss of three small populations of gypsum-loving larkspur and two areas of Hoover's woollystar will not result in a significant impact to either species. Nevertheless, there will be compensation for loss of wildlife habitat and, indirectly, there will be land set aside that should be suitable habitat for the plant species as well.	Less than significant	No mitigation is required.	Less than significant
BR-2: The Loss of Potential Habitat and Effect on San Joaquin kit fox No critical habitat for the San Joaquin kit fox has been designated by the USFWS, however, suitable habitat for the kit fox is considered to have been generally affected by development and human activities in the San Joaquin Valley, including within the region in which KHF is located. There is a moderate potential for kit fox to occur in the vicinity of KHF. While the proposed Project would not substantially reduce regional habitat for the kit fox, the proposed Project could result in potential for direct and indirect effects to the kit fox.	Significant	**BR-MM.1** The following shall be implemented as general mitigation measures to reduce impacts to wildlife species and habitat: • To minimize disturbance to wildlife, lighting at the landfill working faces shall be downcast and shielded to minimize reflection, and shall be directed inward toward the landfill. Night lighting used on the landfills shall be of a low-intensity, low-glare design. • No firearms shall be allowed on the Project site, except in the possession of authorized personnel (e.g., sheriff, County agricultural commissioner, and other law enforcement personnel). • Upon completion of the Project, areas subject to temporary ground disturbance, including storage and staging areas, temporary roads, pipeline corridors, etc., shall be recontoured and revegetated, if necessary, to promote restoration of the area to	Less than significant

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Biological Resources (3.4) (continued)		pre-Project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the Project, but would not be subject to further disturbance after Project completion and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas shall be determined in consultation with the USFWS and CDFG. • Employees and construction supervising personnel shall be required to attend a Listed Species Education Program. These personnel shall participate in the program prior to initiation of construction activity, and new employees shall receive the training prior to working on the active site. At a minimum, the program shall cover the general behavior and ecology of the pertinent listed species, legal protection, penalties for state and federal law violations, and protective measures. Construction supervisors shall train their respective personnel in this program. A fact sheet conveying this information shall be made available to onsite personnel, construction workers, and anyone else who may enter the disposal site. • Permanent and temporary construction disturbances and other types of Project-related disturbance to habitat lands shall be minimized to the extent feasible. To minimize temporary disturbances, Project-related vehicle traffic shall be restricted to established roads, construction areas, and other designated onsite roads. These areas shall also be included in pre-construction surveys and, to the extent practicable, shall be established in locations disturbed by previous activities to prevent further impacts. • CWMI employees and construction workers shall be instructed to dispose of food-related trash in closed containers or remove the trash from the Project area. • Vehicles in active site areas shall observe a 15-mph speed limit except on County roads and state and federal highways; this is particularly important at night when San Joaquin kit foxes are most active. To the extent practicable, nighttime construction shall be minimized. • To prevent harassment or mortality of San Joaquin kit fox, or destruction of dens by dogs or cats, no pets shall be permitted on the active areas of KHF. Pets or guide dogs brought to the administrative areas of the site shall be restrained on a leash or otherwise confined. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction, operations and closure of the Project.	

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Biological Resources (3.4) continued		**BR-MM.2** Prior to the commencement of construction activities for the expansion of the B 18 Landfill outside of the existing 474-acre operational area, the Project Proponent shall dedicate in perpetuity land that the USFWS and CDFG agree is of similar type and habitat value as that affected by the Project, to a non-profit conservation or federal, state or local government conservation management entity, or purchase habitat credits in an approved offsite land mitigation bank, or a combination of dedication and purchase of habitat credit to compensate for the direct and indirect effects of the Project to suitable habitat for the rare, threatened and endangered wildlife species, including the San Joaquin kit fox. The land may be dedicated in fee or as part of a perpetual conservation easement. The amount of land dedicated or habitat credit purchased will be at a ratio of 3:1 (3 acres of dedicated land for each 1 acre of habitat loss) for permanent disturbance and 1.1:1 for area subject to temporary disturbance, or at a compensation ratio agreed upon by the USFWS and CDFG. As part of the TSCA permitting process, the US EPA will consult with the USFWS regarding impacts to the San Joaquin kit fox, as required under Section 7 of the federal Endangered Species Act, and will obtain, prior to issuing the TSCA permit, a biological option with an incidental take permit. The Project Proponent shall comply with such terms and conditions outlined in the biological opinion and shall provide the County with proof that the conditions have been satisfied. **Responsibility for Compliance:** Project Proponent **Timing:** Prior to the commencement of construction activities for the expansion of the B 18 Landfill outside the area included within KHF's existing Conditional Use Permits. **BR-MM.3** The Project proponent shall appoint a representative who will be the onsite contact person for any landfill employee or contractor who might inadvertently kill or injure a San Joaquin kit fox, or who finds a dead, injured, or entrapped animals. The representative will be identified during the education program for employees and construction supervising personnel. The representative's name and telephone number shall be provided to the USFWS and CDFG. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction, operations and closure of the Project.	

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Biological Resources (3.4) (continued)		**BR-MM.4** Any planned Project disturbance in areas outside the existing 474-acre operational area shall be subject to a pre-construction survey. The survey, conducted by a trained biologist, shall occur no more than 30 days prior to the beginning of ground disturbance and/or construction activities. A record of such construction or disturbance events, and the results of the pre-construction surveys, shall be submitted to the USFWS, CDFG, and Kings County annually, or at other frequency approved by the two wildlife agencies. Methods employed during these surveys shall follow the USFWS and CDFG approved techniques: • Surveys shall evaluate use by kit fox and, if possible, assess potential impacts to the kit fox by the proposed activity. The status of active/inactive dens shall be determined and recorded. For the purpose of these mitigation measures, a "trained biologist" is a person who is either a direct employee of the project proponent or a person retained by the project proponent who is very familiar with the wildlife in the area and who has been trained by a professional biologist. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction, operations and closure of the Project. **BR-MM.5** Limited destruction of unoccupied San Joaquin kit fox dens and potential kit fox dens may be allowed if avoidance is infeasible provided the following procedures are observed: • A trained biologist shall monitor the den for a minimum of three (3) days prior to disturbance to determine if the den is actually being used by kit fox. After the first three (3) days of monitoring, the den shall be partially filled a minimum of three (3) additional days to allow the animal to move to another den during its normal activities. • After the den is determined to be unoccupied (i.e., no kit fox are inside), it can be destroyed by careful excavation. The den shall be fully excavated, filled with dirt, and compacted to ensure that San Joaquin kit fox cannot use the den during the construction period. USFWS and CDFG encourage hand excavation, but realize that soil conditions may necessitate the use of excavating equipment. Excavation and compaction efforts shall be conducted or overseen by a trained biologist. • If, at any point, a kit fox is thought to be using the den, the plugging or excavation activity shall stop and USFWS and CDFG shall be contacted immediately, unless the wildlife agencies have agreed to a professional biologist overseeing den destruction.	

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Biological Resources (3.4) continued		• Natal or pupping dens that are occupied shall not be destroyed until the pups and adults have vacated, and then only after consultation with the USFWS and CDFG. Therefore, Project activities at some den sites shall be postponed if the dens are occupied. • If excavation of a den thought to be active (but not a natal or pupping den) is unavoidable, the Project Proponent (professional biologist) shall notify USFWS and CDFG in writing, before plugging or excavation activities may begin, of the intent to destroy subject dens and of the reasons why alternative courses of action are not possible. If given permission by these agencies, excavation plans may proceed as outlined below under the direction and supervision of the professional biologist. If the animal does not change dens, excavation of the den may have to occur when it is temporarily vacant (e.g., at night). Plugging and excavation activities shall be avoided to the extent feasible during the breeding season (January 15 through June 1), when most active dens are being used as reproductive or pupping dens. – The den shall be monitored for at least five (5) consecutive days in addition to the three (3) initial observation times. This time period will allow any resident animal to move to another den during its normal activity. This monitoring shall be conducted by a trained biologist. – Use of the den can be discouraged during this five-day period by partially plugging its entrance(s) with soil in such a manner that any resident animal can escape easily. This monitoring and plugging shall be conducted by a trained biologist. – When signs of activity at the den cease and the USFWS and CDFG (or a professional biologist) deem it safe to do so, the den can be dug out by hand tools to a point where it is certain no kit fox is using the den. The den shall be fully excavated and then filled with dirt and compacted to ensure that the kit fox cannot reenter the den during the construction period. USFWS and CDFG encourage hand excavation, but realize that soil conditions may necessitate the use of excavating equipment. This den destruction shall be conducted or overseen by a trained biologist.	

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Biological Resources (3.4) (continued)		• A trained biologist shall document and report den monitoring and plugging activities in writing to USFWS, CDFG, and Kings County annually, or at other frequency approved by the two wildlife agencies. • If a take authorization/permit has been obtained from the USFWS and CDFG, active den destruction may proceed consistent with the terms of the incidental take permit. If no take authorization/permit has been issued, then potential dens shall be monitored in accordance with the procedures included this mitigation measure. **Responsibility for Compliance:** Project Proponent Timing: Issuance of CUP and ongoing during construction, operations and closure of the Project. **BR-MM.6** To prevent inadvertent entrapment of San Joaquin kit foxes during the construction phase of the Project, excavated, steep-walled holes or trenches more than two (2) feet deep that are located outside of the chain-link fence 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 shall be thoroughly inspected for trapped animals. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animals to escape, or the USFWS and/or CDFG shall be contacted for advice. If at any time a trapped or injured San Joaquin kit fox is discovered, the procedures for notifying the proper authorities set forth below in BR-MM.7 shall be followed. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction, operations and closure of the Project.	

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Biological Resources (3.4) continued		**BR-MM.7** Any Project personnel who inadvertently kills or injures a San Joaquin kit fox or blunt-nosed leopard lizard or other protected wildlife, or who discovers a dead or injured San Joaquin kit fox or blunt-nosed leopard lizard or other protected wildlife, shall immediately report the incident to their representative or designee. This representative or designee shall contact the State Dispatch at (916) 445-0045 for immediate assistance in the case of a dead, injured, or entrapped San Joaquin kit fox or blunt-nosed leopard lizard. The Sacramento office of the USFWS and CDFG must be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox or blunt-nosed leopard lizard during Project-related activities. Notification shall include the date, time, and location of the incident or the finding of a dead or injured animal, and any other pertinent information. The USFWS Sacramento office contact is the Chief of the Division of Endangered Species, Susan Jones, or her successor, at 2800 Cottage Way, Room W2605, Sacramento, California 95825, (916) 414-6630. The CDFG contact for the written notification is Mr. Ron Schlorff, or his successor, at 1416 9th Street, Sacramento, California 95814, (916) 654-4262. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction, operations and closure of the Project. **BR-MM.8** Construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site at less than two feet aboveground, and that are located outside of the chain-link fence for one or more overnight periods, shall be thoroughly inspected for San Joaquin kit fox before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a San Joaquin kit fox is discovered inside a pipe, that section of pipe shall not be moved until the USFWS or CDFG has been consulted, or the animal has fled. If necessary, and under the direct supervision of a professional biologist, the pipe may be moved once to remove it from the path of construction activity, where it shall remain until the fox has escaped. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction, operations and closure of the Project.	

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Biological Resources (3.4) (continued)		**BR-MM.9** Use of rodenticides and herbicides in Project areas shall be restricted to those included on a list of acceptable rodenticides and herbicides provided by the USFWS. Use of such compounds shall observe label and other restrictions mandated by the United States Environmental Protection Agency (EPA), California Department of Food and Agriculture (CDFA), and other state and federal legislation, as well as additional Project-related restrictions deemed necessary by USFWS or CDFG. If rodent control must be conducted, zinc phosphide, or other rodenticide that may be approved in the future by the USFWS and SDFG, can be used because of proven lower risk to San Joaquin kit fox (USFWS, 1999). **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction, operations and closure of the Project.	
BR-3: The Loss of Potential Habitat for Blunt-nosed leopard lizard The blunt-nosed leopard lizard is a federal endangered, as well as state endangered and fully protected species. It has previously been recorded onsite in the early 1990s, although surveys in 2002, 2003 and 2007 did not observe blunt-nosed leopard lizards within the survey areas at KHF. Nevertheless, the proposed Project may degrade suitable blunt-nosed leopard lizard habitat.	Significant	**BR-MM.10** Flashing 24-inches in height, with at least 18-inches aboveground and 3-inches belowground, shall be installed around the area of the B 20 Landfill to deter blunt-nosed leopard lizards from entering that part of the Project area in future years. This flashing shall be inspected annually to ensure its integrity remains in place. **Responsibility for Compliance:** Project Proponent **Timing:** Prior to/during construction, and during operations and closure construction of the Project. **BR-MM.11** If blunt-nosed leopard lizards are observed at the work site during construction, construction shall cease within a 100-feet radius and the USFWS and CDFG shall be consulted to ensure no take will occur. After the USFWS and CDFG determine that no take will occur, construction will be allowed to resume in that area. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction, operation and closure construction of the Project.	Less than significant
BR-4: The Disturbance of Loggerhead Shrike during Nesting/Breeding Habitat The loggerhead shrike is listed as SSC and under the MBTA. It was recorded onsite during the 2002 and 2003 biological surveys (Bumgardner 2002; 2004). The proposed Project could disturb loggerhead shrike nesting/breeding habitat, depending on time of construction.	Significant	**BR-MM.12** To minimize potential nesting/breeding disturbance to the loggerhead shrike during construction, dense stands of saltbush or other shrubs shall be removed prior to the nesting/breeding season (February 1 through September 1). This removal process shall include areas in and within 50 feet of the construction zone. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction of the Project.	Less than significant

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Biological Resources (3.4) (continued)			
BR-5: The Loss of Habitat for the American badger The American badger, is listed as SSC. Dens and diggings were observed during the 2002 and 2003 biological surveys (Bumgardner 2002; 2004). The American badger does not have a designated status, but the CDFG maintains its inclusion on the special animal list. The mitigation for the San Joaquin kit fox by habitat compensation would also mitigate for any impacts to the badger, if it was required.	Significant	Implement BR-MM.1 and BR-MM-2.	Less than significant
Cultural and Paleontological Resources (3.5)			
CR-1: Disturbance of Unidentified Archaeological Resources Cultural resource investigations of KHF have concluded that the project area does not contain potentially significant archaeological resources. However, the potential exists for unidentified archaeological resources to be discovered during ground disturbance during Project construction. Therefore, there is the potential for disturbance of (as yet) unidentified archaeological resources. In such an event, impacts would be considered significant before mitigation.	Significant	**CR-MM.1** If unique archaeological resources are encountered during Project construction activities, earth-moving activity in the immediate area shall cease until a qualified archaeologist is contacted, and the archaeologist has examined the findings, determined their significance, and recommended appropriate measures per CEQA Guidelines Section 15064.5. The archaeologist shall prepare a final written report of his or her investigation, findings and recommendations and shall submit the final report to the County within 30 calendar days after the investigation is completed. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction of the Project. **CR-MM.2** If human remains or bone of unknown origin are found during the conduct of the proposed Project, work in the vicinity shall stop, and the County coroner shall be contacted, per California Health and Safety Code (HSC), Section 7050.5, and CEQA Guideline Section 15064.5. If the remains were determined to be Native American, the Coroner shall notify the Native American Heritage Commission, which would notify the person considered the most likely descendant. KHF personnel will then work with the most likely descendant to arrange for the remains to be reinterred. Work near the find shall resume after the human remains have been removed. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction and operations of the Project.	Less than significant Less than significant

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Cultural and Paleontological Resources (3.5) (continued)			
CR-2: Disturbance of Unidentified Paleontological Resources The proposed Project would impact portions of both the San Joaquin Formation, which has produced bones and teeth of terrestrial and marine vertebrates and invertebrates, and plant fossils, and the Tulare Formation, which has produced significant fossils of land mammals and fish at other locations. The general sensitivity of the proposed Project area for paleontological resources is considered potentially significant. Excavation and construction activities in the proposed Project area could result in the disturbance of fossil resources.	Significant	**CR-MM.3** For every 20,000 cubic yards (cy) of soil excavated as part of the Project, CWMI will have a qualified paleontologist conduct a detailed paleontological investigation that will document exposed geological formations, their potential for containing fossil remains, and direct observation of fossils and an assessment of their significance. The paleontologist shall prepare a final written report of his or her investigation, findings and recommendations, and shall submit the final report to the County within 30 calendar days after the investigation is completed. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction and operations of the Project. **CR-MM.4** CWMI shall provide 4 hours of training to equipment operators and field engineers on the identification of paleontological remains. The training shall be provided before the commencement of excavation activities in undisturbed areas and shall be conducted at the excavation site by a qualified paleontologist. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction and operations of the Project. **CR-MM.5** CWMI shall notify the County by letter if CWMI staff or paleontologists encounter significant remains during excavation and shall provide for a paleontological investigation. The paleontologist shall prepare a final written report of his or her investigation, findings and recommendations, and shall submit the final report to the County within 30 calendar days after the investigation is completed. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction and operations of the Project.	Less than significant Less than significant Less than significant

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Geology and Soils (3.6)			
GS-1: Potential Excessive or Differential Landfill Settlement Site conditions do not include the potential for collapsible soils or ground rupture due to faulting, subsidence, or liquefaction during earthquake ground shaking. Non-seismic geologic hazards (collapsible soils, excessive settlement or ground subsidence) have not been identified at KHF.	Less than significant	No mitigation is required.	Less than significant
GS-2: Potential to Encounter Naturally Occurring Asbestos Naturally occurring asbestos is not found at KHF.	No impact	No mitigation is required.	No impact
GS-3: Faulting and Seismic Shaking Ground shaking due to seismic activity could result in slope instability or failure and/or damage to landfill structures and systems. In accordance with regulatory requirements, the design of the landfill would take into account the PHGA from an earthquake on the North Dome Ramp Thrust fault segment (near-field) or San Andreas-Slack Canyon-Cajon Pass fault (far-field). These design standards will be in accordance with CCR Title 22 and 40 CFR, Part 264, Subparts B, G, and N.	Less than significant	No mitigation is required.	Less than significant
GS-4: Slope Stability While KHF is likely to experience ground shaking due to regional seismic activity, the results of the static stability and seismic stability analysis, and deformation analysis for the estimated ground motions due to seismic events show the proposed B-18 Landfill expansion and the new B-20 Landfill would withstand earthquake shaking effects.	Less than significant	No mitigation is required.	Less than significant

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Hazards and Hazardous Materials (3.7)			
HAZ-1: Release of Hazardous Materials through Routine Disposal The proposed Project will not create a substantial hazard to public health and safety. Potential health and safety concerns will be minimized by adherence to site procedures, federal and state regulations, and permit conditions for landfill design, operation, and closure/post-closure.	Less than significant	No mitigation is required.	Less than significant
HAZ-2: Accidental Release of Hazardous Material through Routine Transport or Through Upset or Accident Condition The proposed Project will not create new or different hazards that could require specialized mitigation measures to prevent upset conditions, or new specialized response in the event of an upset condition.	Less than significant	No mitigation is required.	Less than significant
HAZ-3: Release of Hazardous Material or Emission Within One-Quarter Mile of Existing or Proposed School The nearest school is the Kettleman City Elementary School located approximately 3.5 miles from KHF. Due to this distance, activities at KHF associated with the proposed Project would not impact the school or persons at the school.	No Impact	No mitigation is required.	No impact
HAZ-4: Create a Significant Hazard by Being Located on a Site Included on the List in Government Code Section 65962.5 The KHF is not on the list of "identified hazardous waste sites" for Kings County prepared in accordance with Government Code Section 65962.5. Therefore, the proposed Project would not affect or be affected by any existing hazardous waste site.	No Impact	No mitigation is required.	No impact
HAZ-5: Impair or Interfere with Implementation of Adopted Emergency Response Plan(s) For onsite operations, the existing KHF Contingency Plan would be applicable for the proposed Project, and the proposed Project will neither impair implementation of nor interfere with the existing KHF Contingency Plan or the existing KHF Emergency Response Plan.	Less than significant	No mitigation is required.	Less than significant
HAZ-6: Expose People or Structures to Significant Risk Involving Fire For onsite operations, in accordance with the procedure included in the existing KHF Contingency Plan, a surface fire would be quickly controlled, therefore, the proposed Project would not expose people or structures to a significant fire risk.	Less than significant	No mitigation is required.	Less than significant

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Hydrology and Water Quality (3.8)			
WQ-1: Increased Erosion Potential The proposed Project would include drainage and erosion control features that would be designed to accommodate the peak storm water flows in accordance with applicable regulations.	Less than significant	No mitigation is required.	Less than significant
WQ-2: Surface Water Quality The proposed Project would include drainage and erosion control features that would be designed to accommodate the peak storm water flows in accordance with applicable regulations.	Less than significant	No mitigation is required.	Less than significant
WQ-3: Groundwater Quality The proposed Project would be designed to meet state and federal requirements for hazardous waste and designated waste landfills, including but not limited to: landfill liner and leachate management systems, drainage control, groundwater monitoring, and installation of final cover.	Less than significant	No mitigation is required.	Less than significant
Land Use (3.9)			
LU-1: Compatibility with Agricultural Uses The proposed Project is consistent with the current General Plan designation of the site. Solid waste disposal is a conditional use within the site's AG-40 zone. The proposed Project will require issuance of a new Conditional Use Permit. The proposed Project would not involve any parcel included in Williamson Act contracts and would not affect offsite agricultural operations.	No impact	No mitigation is required.	No impact
LU-2: Compatibility with Kings County Hazardous Waste Management Plan The County's Hazardous Waste Management Plan (CHWMP) identifies KHF as a hazardous waste management facility that can be expanded. KHF is also identified in the plan as a facility that provides adequate and projected capacity for disposal of hazardous waste. The proposed Project is consistent with the CHWMP.	No impact	No mitigation is required.	No impact

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Land Use (3.9) (continued)			
LU-3: Compatibility with SJVUAPCD Air Quality Attainment Plans The proposed Project would be consistent with the Ozone and PM_{10} AQAPs based on the following: • The proposed Project would be in conformance with the County General Plan. • The proposed Project would not result in a direct population increase and would not be growth-inducing. • The proposed Project would implement feasible fugitive PM_{10} control measures, including the requirements of APCD Regulation VIII. • The proposed Project would comply with applicable SJVUAPCD rules and regulations.	Less than significant	No mitigation is required.	Less than significant
LU-4: Compatibility with Kings County General Plan, Noise Element The County General Plan includes a noise standard of 70 dBA for agricultural lands. The proposed Project would not result in noise levels that exceed 70 dBA at the KHF property boundary. Therefore, the proposed Project is consistent with the County Noise Standard	Less than significant	No mitigation is required.	Less than significant
LU-5: Compatibility with Kings County Regional Transportation Plan As discussed in Section 3.11 – Transportation and Traffic, the level of service (LOS) on the segments of SR-41 and I-5 that would be used to continue to transport hazardous waste and designated waste to the KHF as part of the Proposed Project are being affected by growth in the region. Beginning in 2017, the LOS on SR-41 and I-5 without roadway improvements are projected to reduce to LOS D or below, which would represent a significant impact. This reduction in LOS would occur with or without the proposed Project; however, the proposed Project does contribute to a cumulatively to the projected reductions in LOS of SR-41 and I-5.	Significant	The following mitigation measures are taken from Section 3.11 – Transportation and Traffic: **TT-MM.1** CWMI shall pay to Caltrans its prorated fair-share for the following traffic improvement projects on SR-41 and on I-5, through a percentage fair-share contribution based on the Project's percent contribution to the total future traffic-volume growth, as agreed to by Caltrans. • SR-41: add one lane in each direction from I-5 to the KHF entrance (2 lanes to 4 lanes total). Required for 2026. • I-5 – Northbound and Southbound: add two lanes in each direction in the vicinity of the I-5 interchange with SR-41. Required for 2034. **Responsibility for Compliance:** Project Proponent to pay prorated fair-share. **Timing:** At the time that specific highway capital improvement projects for these segments of SR-41 and I-5 are defined by Caltrans and Caltrans implements a specific fair-share mechanism for the capital improvement projects for these segments of SR-41 and I-5, depending on whether the Project is still operating.	Significant and unavoidable. The timing and implementation of roadway improvements are subject to Caltrans jurisdiction. Therefore, CWMI has no authority to implement or guarantee that roadway improvements will occur

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Land Use (3.9) (continued)			
LU-5 continued		**TT-MM.2** CWMI shall prepare a construction traffic management plan (TMP) for approval by the County and Caltrans to apply temporary traffic controls on SR-41 at the entrance to KHF when Project-related construction activities occur in 2009 and during periodic Project-related construction and closure periods through 2042. **Responsibility for Compliance**: Project Proponent **Timing:** Issuance of CUP and updated as necessary during the Project's periodic construction and closure phases from 2009 to 2042.	Less than significant
Noise (3.10)			
N-1: Operation of Heavy Equipment During Periodic Construction Activities at the B 18 Landfill Expansion Noise levels from proposed onsite operations at KHF would not exceed County standards in the vicinity of the landfill.	Less than significant	No mitigation is required.	Less than significant
N-2: Operation of Heavy Equipment During Periodic Construction Activities at the New B-20 Landfill Noise levels from proposed onsite operations at KHF would not exceed County standards in the vicinity of the landfill.	Less than significant	No mitigation is required.	Less than significant
N-3: Operation of Heavy Equipment During Disposal Operations at the B-18 Landfill Expansion Noise levels from proposed onsite operations at KHF would not exceed County standards in the vicinity of the landfill.	Less than significant	No mitigation is required.	Less than significant
N-4: Operation of Heavy Equipment During Disposal Operations at the New B-20 Landfill Noise levels from proposed onsite operations at KHF would not exceed County standards in the vicinity of the landfill.	Less than significant	No mitigation is required.	Less than significant
N-5: Ongoing Onsite Support Activities Noise levels from proposed onsite operations at KHF would not exceed County standards in the vicinity of the landfill.	Less than significant	No mitigation is required.	Less than significant
N-6: Offsite Traffic Noise The proposed Project will not result in increase traffic to KHF on SR-41 or I-5, therefore the proposed Project would not result in a Project specific increase to offsite traffic noise levels.	Less than significant	No mitigation is required.	Less than significant
N-7: Closure and Post-closure Activities Noise levels from proposed onsite operations at KHF would not exceed County standards in the vicinity of the landfill.	Less than significant	No mitigation is required.	Less than significant

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Transportation and Traffic (3.11)			
TT-1: LOS for 2009 to 2013 on I-5 north and south-bound of SR-41, and SR-41 west of I-5 to/from the KHF entrance Project traffic conditions on SR-41 west of I-5 to the KHF entrance and on I-5 north and south-bound of SR-41 from 2009 to 2013, both with and without the Proposed Project, and with cumulative growth in the region, remain at LOS B to C, depending on the segment, and remain acceptable.	Less than significant	**TT-MM.2** CWMI shall prepare a construction traffic management plan (TMP) for approval by the County and Caltrans to apply temporary traffic controls on SR-41 at the entrance to KHF when Project-related construction activities occur in 2009 and during periodic Project-related construction and closure periods through 2042. **Responsibility for Compliance**: Project Proponent **Timing:** Issuance of CUP and updated as necessary during the Project's periodic construction and closure phases from 2009 to 2042.	Less than significant
TT-2: LOS for 2017 and 2018 on I-5 north and south-bound of SR-41, and SR-41 west of I-5 to/from the KHF entrance Project traffic conditions on SR-41 west of I-5 to the KHF entrance and on I-5 north and south-bound of SR-41 in 2017 and 2018, both with and without the Proposed Project, and with cumulative growth in the region, remain at LOS B to C during the weekday afternoon peak traffic hour, depending on the segment, and remain acceptable. However, the LOS on SR-41 from I-5 to the KHF entrance decreases to LOS D during the Friday afternoon peak hour, with and without the Project. This decrease to LOS D represents a significant impact. However, specific roadway improvements based solely on the Friday afternoon peak hour condition are not expected to occur as the traffic engineering profession has adopted a standard that roadway designs are based on the roadway to handle normal peak traffic volumes rather than peak volumes that may occur periodically. Therefore, it is reasonable to assume that Caltrans would not implement a roadway improvement to handle this Friday afternoon peak hour condition.	Less than significant on a Project basis; cumulatively significant based on growth in the region	Roadway improvements not expected to occur to mitigate the Friday afternoon peak hour condition. **TT-MM.2** CWMI shall prepare a construction traffic management plan (TMP) for approval by the County and Caltrans to apply temporary traffic controls on SR-41 at the entrance to KHF when Project-related construction activities occur in 2009 and during periodic Project-related construction and closure periods through 2042. **Responsibility for Compliance**: Project Proponent **Timing:** Issuance of CUP and updated as necessary during the Project's periodic construction and closure phases from 2009 to 2042.	Cumulatively significant and unavoidable The timing and implementation of roadway improvements are subject to Caltrans jurisdiction. Therefore, CWMI has no authority to implement or guarantee that roadway improvements will occur. Less than significant

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Transportation and Traffic (3.11) (continued)			
TT-3: LOS for 2026 and 2028 on I-5 north and south-bound of SR-41, and SR-41 west of I-5 to/from the KHF entrance Project traffic conditions on SR-41 west of I-5 to the KHF entrance and on I-5 north and south-bound of SR-41 in 2026 and 2028, both with and without the Proposed Project, and with cumulative growth in the region, decrease to LOS D, E or F weekday afternoon and Friday afternoon peak traffic hour, depending on the segment.	Less than significant on a Project basis; cumulatively significant based on growth in the region	**TT-MM.1** CWMI shall pay to Caltrans its prorated fair-share for the following traffic improvement projects on SR-41 and on I-5, through a percentage fair-share contribution based on the Project's percent contribution to the total future traffic volume growth, as agreed to by Caltrans. • SR-41: add one lane in each direction from I-5 to the KHF entrance (2 lanes to 4 lanes total). • I-5 – Northbound and Southbound: add two lanes in each direction in the vicinity of the I-5 interchange with SR-41. **Responsibility for Compliance:** Project Proponent to pay prorated fair-share. **Timing:** At the time that specific highway capital improvement projects for these segments of SR-41 and I-5 are defined by Caltrans and Caltrans implements a specific fair-share mechanism for the capital improvement projects for these segments of SR-41 and I-5, depending on whether the Project is still operating. **TT-MM.2** CWMI shall prepare a construction traffic management plan (TMP) for approval by the County and Caltrans to apply temporary traffic controls on SR-41 at the entrance to KHF when Project-related construction activities occur in 2009 and during periodic Project-related construction and closure periods through 2042. **Responsibility for Compliance**: Project Proponent **Timing:** Issuance of CUP and updated as necessary during the Project's periodic construction and closure phases from 2009 to 2042.	Significant and unavoidable. The timing and implementation of roadway improvements are subject to Caltrans jurisdiction. Therefore, CWMI has no authority to implement or guarantee that roadway improvements will occur Less than significant

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Transportation and Traffic (3.11) (continued)			
TT-4: LOS for 2034 and 2036 on I-5 north and south-bound of SR-41, and SR-41 west of I-5 to/from the KHF entrance Project traffic conditions on SR-41 west of I-5 to the KHF entrance and on I-5 north and south-bound of SR-41 in 2034 and 2036, both with and without the Proposed Project, and with cumulative growth in the region, decrease to LOS D, E or F weekday afternoon and Friday afternoon peak traffic hour, depending on the segment.	Less than significant on a Project basis; cumulatively significant based on growth in the region	**TT-MM.1 – Same Mitigation as Required for 2026 and 2028** CWMI shall pay to Caltrans its prorated fair-share for the following traffic improvement projects on SR-41 and on I-5, through a percentage fair-share contribution based on the Project's percent contribution to the total future traffic-volume growth, as agreed to by Caltrans. • SR-41: add one lane in each direction from I-5 to the KHF entrance (2 lanes to 4 lanes total). • I-5 – Northbound and Southbound: add two lanes in each direction in the vicinity of the I-5 interchange with SR-41. **Responsibility for Compliance:** Project Proponent to pay prorated fair-share. **Timing:** At the time that specific highway capital improvement projects for these segments of SR-41 and I-5 are defined by Caltrans and Caltrans implements a specific fair-share mechanism for the capital improvement projects for these segments of SR-41 and I-5, depending on whether the Project is still operating. **TT-MM.2** CWMI shall prepare a construction traffic management plan (TMP) for approval by the County and Caltrans to apply temporary traffic controls on SR-41 at the entrance to KHF when Project-related construction activities occur in 2009 and during periodic Project-related construction and closure periods through 2042. **Responsibility for Compliance**: Project Proponent **Timing:** Issuance of CUP and updated as necessary during the Project's periodic construction and closure phases from 2009 to 2042.	Significant and unavoidable. The timing and implementation of roadway improvements are subject to Caltrans jurisdiction. Therefore, CWMI has no authority to implement or guarantee that roadway improvements will occur. Less than significant

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Transportation and Traffic (3.11) (continued)			
TT-5: LOS for 2042 and 2043 on I-5 north and south-bound of SR-41, and SR-41 west of I-5 to/from the KHF entrance Project traffic conditions on SR-41 west of I-5 to the KHF entrance and on I-5 north and south-bound of SR-41 in 2042 and 2043, both with and without the Proposed Project, and with cumulative growth in the region, decrease to LOS D, E or F weekday afternoon and Friday afternoon peak traffic hour, depending on the segment.	Less than significant on a Project basis; cumulatively significant based on growth in the region	**TT-MM.1 – Same Mitigation as Required for 2026 and 2028, and for 2034 and 2036** CWMI shall pay to Caltrans its prorated fair-share for the following traffic improvement projects on SR-41 and on I-5, through a percentage fair-share contribution based on the Project's percent contribution to the total future traffic-volume growth, as agreed to by Caltrans. . • SR-41: add one lane in each direction from I-5 to the KHF entrance (2 lanes to 4 lanes total). • I-5 – Northbound and Southbound: add two lanes in each direction in the vicinity of the I-5 interchange with SR-41. **Responsibility for Compliance:** Project Proponent to pay prorated fair-share. **Timing:** At the time that specific highway capital improvement projects for these segments of SR-41 and I-5 are defined by Caltrans and Caltrans implements a specific fair-share mechanism for the capital improvement projects for these segments of SR-41 and I-5, depending on whether the Project is still operating. **TT-MM.2** CWMI shall prepare a construction traffic management plan (TMP) for approval by the County and Caltrans to apply temporary traffic controls on SR-41 at the entrance to KHF when Project-related construction activities occur in 2009 and during periodic Project-related construction and closure periods through 2042. **Responsibility for Compliance**: Project Proponent **Timing:** Issuance of CUP and updated as necessary during the Project's periodic construction and closure phases from 2009 to 2042.	Significant and unavoidable. The timing and implementation of roadway improvements are subject to Caltrans jurisdiction. Therefore, CWMI has no authority to implement or guarantee that roadway improvements will occur. Less than significant

Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Greenhouse Gas Emissions and Global Climate Change (3.12)			
GHG-1: Development of the project could result in an incremental contribution to the significant impact of global climate change The total estimated CO_2 emissions (CO_2 is commonly used as a representative greenhouse gas for purposes of analysis) from all sources for the proposed Project are estimated to be 0.00000008 of total CO_2 emissions from the burning of fossil fuels worldwide, and 0.0003 percent of the CO_2 emissions from burning fossil fuels in California.	Significant	**AQ-MM.1 (As this mitigation is already included in Section 3.3 – Air Quality, a new mitigation number is not assigned for GHG)** For the Project, the Project proponent shall implement the following: • All landfill operational equipment purchased shall meet applicable model year emission standards, and the emission standards shall be at least equivalent to the emission standards for the equipment being replaced. This measure does not apply to contractor provided construction equipment. • Onsite vehicles and equipment shall be properly maintained. [The following components of AQ-MM.1 are not related to GHG emissions, but are included here for completeness.] • Fugitive dust emissions from the B 18 Landfill expansion and the B 20 Landfill shall be controlled to meet the requirements of SJVUAPCD Regulation VIII, as applicable, to include, but not be limited to, the following: – Watering active construction/disposal areas – Watering active unpaved roads – Watering of daily cover stockpiles and the unpaved roads used to access the daily cover stockpiles – Track-out controls would be installed at the transition of dirt roads to paved roads that provide access to B 18 and B 20 landfills • Vehicles and equipment shall be restricted to specific onsite roads. • Vehicle speed on onsite roads to/from the landfill shall be limited to 15 miles per hour on paved and unpaved roads. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction and operations of the Project. **AQ-MM.2 (As this mitigation is already included in Section 3.3 – Air Quality, a new mitigation number is not assigned for GHG)** The primary heavy-duty, diesel-powered landfill equipment (dozers) at the B 18 Landfill expansion and the B 20 Landfill shall meet the 2014 California emissions standards for off-highway, heavy-duty diesel equipment through either the purchase of new equipment or through the retrofit of existing equipment. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction and operations of the Project.	Less than significant on a Project basis. However, because all GHG emissions are considered significant as related to global climate change, the proposed Project's impact on global climate change is considered cumulatively significant.

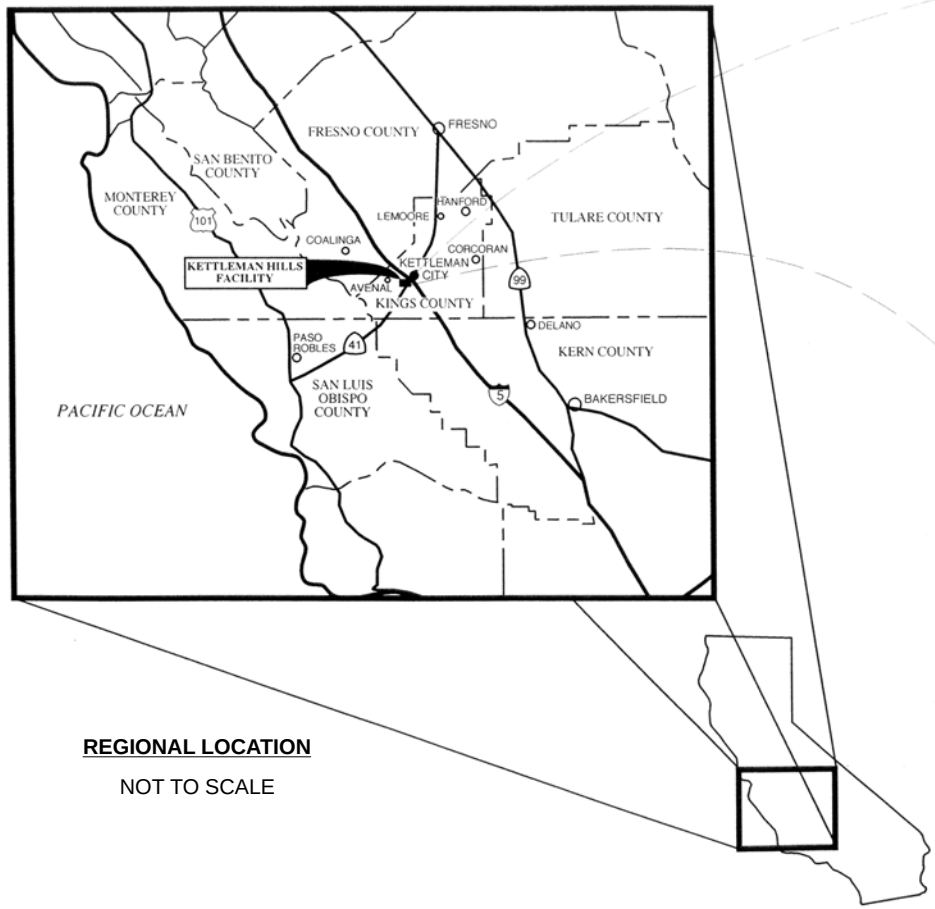
Table ES-1
Summary of Impacts and Mitigation Measures

Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Greenhouse Gas Emissions and Global Climate Change (3.12) (continued)			
GHG-2: Conflict with or obstruct implementation of the goals and/or strategies of Executive Orders S-3-05 and S-01-07, and the California Global Warming Solutions Act of 2006 The proposed Project would comply with the goals and strategies of EO S03-05 and EO S-07, and with the California Global Warming Solutions Action of 2006. Nothing in the proposed Project would obstruct or impeded the implementation of the goals and strategies of the Executive Orders or the Act.	No impact	No mitigation is required	No impact
GHG-3: Result in increased exposure to one or more of the potential adverse effects of global warming identified in the California Global Warming Solutions Act of 2006, Health and Safety Code Section 38501(a) The total estimated CO_2 emissions (CO_2 is commonly used as a representative greenhouse gas for purposes of analysis) from all sources for the proposed Project are estimated to be 0.00000008 of total CO_2 emissions from the burning of fossil fuels worldwide, and 0.0003 percent of the CO_2 emissions from burning fossil fuels in California.	Less than significant	**AQ-MM.1 (As this mitigation is already included in Section 3.3 – Air Quality, a new mitigation number is not assigned for GHG)** For the Project, the Project proponent shall implement the following: • All landfill operational equipment purchased shall meet applicable model year emission standards, and the emission standards shall be at least equivalent to the emission standards for the equipment being replaced. This measure does not apply to contractor provided construction equipment. • Onsite vehicles and equipment shall be properly maintained. [The following components of AQ-MM.1 are not related to GHG emissions, but are included here for completeness.] • Fugitive dust emissions from the B 18 Landfill expansion and the B 20 Landfill shall be controlled to meet the requirements of SJVUAPCD Regulation VIII, as applicable, to include, but not be limited to, the following: – Watering active construction/disposal areas – Watering active unpaved roads – Watering of daily cover stockpiles and the unpaved roads used to access the daily cover stockpiles – Track-out controls would be installed at the transition of dirt roads to paved roads that provide access to B 18 and B 20 landfills • Vehicles and equipment shall be restricted to specific onsite roads. • Vehicle speed on onsite roads to/from the landfill shall be limited to 15 miles per hour on paved and unpaved roads. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction and operations of the Project.	Less than significant on a Project basis. However, because all GHG emissions are considered significant as related to global climate change, the proposed Project's impact on global climate change is considered cumulatively significant.

Table ES-1
Summary of Impacts and Mitigation Measures

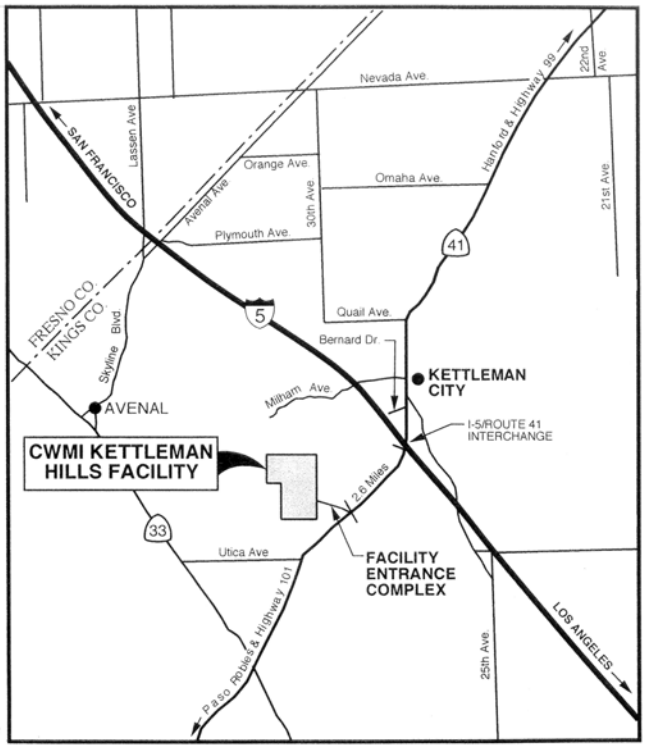
Environmental Resource/Impact	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Greenhouse Gas Emissions and Global Climate Change (3.12) (continued)			
		AQ-MM.2 (As this mitigation is already included in Section 3.3 – Air Quality, a new mitigation number is not assigned for GHG) The primary heavy-duty, diesel-powered landfill equipment (dozers) at the B 18 Landfill expansion and the B 20 Landfill shall meet the 2014 California emissions standards for off-highway, heavy-duty diesel equipment through either the purchase of new equipment or through the retrofit of existing equipment. **Responsibility for Compliance:** Project Proponent **Timing:** Issuance of CUP and ongoing during construction and operations of the Project.	

°C = degrees Celsius
CDFA = California Department of Food and Agriculture
CDFG = California Department of Fish and Game
CEQA = California Environmental Quality Act
CWMI = Chemical Waste Management, Inc.
cy = cubic yards
EPA = United States Environmental Protection Agency
HSC = California Health and Safety Code
KHF = Kettleman Hills Facility
LCRS = Leachate Collection and Recovery System
LOS = Level of Service
M = magnitude
MOU = Memorandum of Understanding
mph = miles per hour
PHGA = peak horizontal ground acceleration
$PM_{2.5}$ = particulate matter with diameter less than 2.5 microns
PM_{10} = particulate matter with diameter less than 10 microns
SJVAB = San Joaquin Valley Air Basin
SJVUAPCD = San Joaquin Valley Unified Air Pollution Control District
SR- = State Route
TMP = Traffic Management Plan
USFWS = United States Fish and Wildlife Service
WDRs = Waste Discharge Requirements



REGIONAL LOCATION

NOT TO SCALE



PROJECT LOCATION

NOT TO SCALE

N

Figure ES-1
Project Location Map
B-18/B-20 Hazardous Waste Disposal Project
Kettleman Hills Facility

CH2MHILL