

# STATEMENT OF BASIS

## Final Approval

### Toxic Substances Control Act Polychlorinated Biphenyls (PCB) Commercial Storage Facility and Chemical Waste Landfill

#### Chemical Waste Management, Inc. Kettleman Hills Facility

Kings County, California

U.S. EPA ID: CAT 000 646 117



July 29, 2020

Land, Chemicals & Redevelopment Division  
U.S. Environmental Protection Agency Region 9  
San Francisco, California



For further information on this Statement of Basis document, please contact:

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Most documents referenced in this Statement of Basis and many other documents relevant to this final Approval may be found on [www.regulations.gov](http://www.regulations.gov) [docket number EPA-R09-RCRA-2019-0088]. Several of the key documents may also be found at [www.epa.gov/ca/kettleman-hills](http://www.epa.gov/ca/kettleman-hills) and the Kettleman City Library (104 Becky Pease Street, Kettleman City, California) (Note: Availability of documents at the Kettleman City Library may be delayed due to Covid-19 epidemic-related closures of U.S. EPA's offices and the Kettleman City Library). Please contact the Kettleman Hills Project Manager for information on how to obtain copies of documents referenced in this Statement of Basis.



JULY 29, 2020

## EXECUTIVE SUMMARY

### STATEMENT OF BASIS — APPROVAL

# TOXIC SUBSTANCES CONTROL ACT POLYCHLORINATED BIPHENYLS (PCB) COMMERCIAL STORAGE FACILITY AND CHEMICAL WASTE LANDFILL CHEMICAL WASTE MANAGEMENT, INC. KETTLEMAN HILLS FACILITY

U.S. EPA is issuing an approval to store, treat for disposal, and dispose of polychlorinated biphenyls (“PCB”) waste at Chemical Waste Management, Inc.’s Kettleman Hills Facility. U.S. EPA proposed the Approval on August 27, 2019 and encouraged the public to comment on all aspects of the proposed Approval and its supporting determinations and analyses. U.S. EPA reviewed and responded in writing to all comments received prior to making the decision to issue this Approval. U.S. EPA thanks everyone who submitted comments.

Una traducción al español de este Resumen Ejecutivo se puede encontrar en el Apéndice A de esta Declaración de Bases.

The Kettleman Hills Facility is in Kings County, California, approximately 3.5 miles southwest of Kettleman City. It is a commercial hazardous waste treatment, storage and disposal facility that accepts PCB waste and other types of hazardous wastes. It is approved by U.S. EPA under the Toxic Substances Control Act (“TSCA”) to dispose of PCB waste in Landfill B-18 and to store and treat PCB waste at the PCB Flushing/Storage Unit. The PCB Flushing/Storage Unit has both an enclosed building and an outside containment area. There are also three closed landfills at the Facility which were used for PCB waste disposal — Landfills B-14, B-16, and B-19. These units as well as other storage, treatment, and disposal units at the Facility are permitted by the State of California’s Department of Toxic Substances Control (“DTSC”) under the Resource Conservation and Recovery Act.

The Approval results in the following PCB waste management changes to the Facility compared to its previous TSCA Approvals:

- Increases the TSCA-approved capacity of Landfill B-18 from 10.7 million cubic yards to 15.6 million cubic yards by approving the disposal of PCB waste in constructed and operating Phase III; and
- Sets a maximum PCB waste storage capacity at the PCB Flushing/Storage Unit of 36,420 gallons.

This Approval allows Chemical Waste Management, Inc. to:

- Dispose of PCB waste in all phases of Landfill B-18;
- Store PCB waste for up to one year from its removal from service date in the enclosed building at the PCB Flushing/Storage Unit;



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- Store PCB waste that is within thirty days of its removal from service date in the outside containment area at the PCB Flushing/Storage Unit;
  - Drain and flush PCB-containing electrical equipment at the PCB Flushing/Storage Unit; and
  - Bulk (combine small containers of waste into a larger container) and repackage PCB waste at the PCB Flushing/Storage Unit.
  - Perform bin-top and container-top solidification of incidental liquids at the PCB Flushing/Storage Unit.

To maintain compliance with the applicable TSCA regulations for storage, treatment for disposal, and disposal of PCB waste, the Approval requires Chemical Waste Management, Inc. to:

- Maintain records on Facility operations;
- Regularly inspect and maintain the Facility;
- Maintain and implement a contingency plan to respond to spills or other emergencies;
- Promptly report any PCB spill or emergency that requires implementation of the contingency plan;
- Test groundwater annually from wells monitoring active Landfill B-18 and every five years from wells monitoring closed Landfills B-14, B-16, and B-19 for PCBs and report the results;
- Test leachate annually from Landfills B-14, B-16, B-18, and B-19 for PCBs and report the results;
- Implement an air quality monitoring program that includes four monitoring sites and provide quarterly air monitoring reports.
- Test surfaces quarterly at the PCB Flushing/Storage Unit for PCB contamination and promptly clean up any PCB contamination found at or above 10 micrograms per 100 square centimeters;
- Promptly report any detection of PCBs in groundwater, leachate, air, or on surfaces at the PCB Flushing/Storage Unit;
- Maintain and implement post-closure plans, cost estimates, and financial assurance for post-closure care for closed Landfills B-14, B-16 and B-19;
- Maintain plans, cost estimates, and financial assurance for closure and post-closure care of Landfill B-18;
- Maintain a closure plan, cost estimates, and financial assurance for closure of the PCB Flushing/Storage Unit; and
- Follow public process requirements for many types of modifications to the Approval.



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U.S. EPA grants four waivers of regulatory requirements for PCB landfills. These waivers allow:

- Use of the DTSC-approved groundwater well purge method instead of the method listed in PCB regulations.
- Testing of groundwater using the same parameters and analytic methods required by State permits instead of the methods in the PCB regulations.
- Testing of leachate using the same parameters and analytic methods required by State permits instead of the methods in the PCB regulations.
- Disposal of small containers of ignitable waste in overpacked drums (lab packs) as an exception to the prohibition on the disposal of ignitable waste in PCB landfills in the PCB regulations.

U.S. EPA issues this Approval based in part on its finding that operations of the Kettleman Hills Facility, under the terms and conditions of the Approval, will not pose an unreasonable risk of injury to health or the environment from PCBs. This finding is based on the engineering and operational controls and monitoring requirements included in the Approval and on an assessment of the overarching weight of the scientific evidence regarding the relationship between Kettleman Hills Facility PCB releases and the likelihood and magnitude of adverse health impacts in the surrounding communities. U.S. EPA has analyzed a number of objective, site and media-specific, multidisciplinary scientific investigations which collectively assessed the exposure-threat and quantitative health-risk posed by PCB releases from the Kettleman Hills Facility.

Based upon its comprehensive review, U.S. EPA did not identify PCB concentrations above a level of concern in air, water, vegetation or soils in areas proximate to the Kettleman Hills Facility. In addition, U.S. EPA was not able to derive unacceptable health risk-estimates to either residents or on-site workers from Kettleman Hills Facility PCB releases. Finally, based on the available data, the concentration of PCBs found in environmental media proximate to the Facility are consistent with the concentration of PCBs found in many rural areas of California's Central Valley. These PCB concentrations are also consistent with the concentrations of PCBs found by a separate U.S. EPA investigation in undisturbed wilderness locations within the United States.

U.S. EPA issues this Approval based on its findings that the Kettleman Hills Facility complies with applicable requirements for PCB storage facilities and PCB landfills including meeting applicable design and operational requirements, personnel qualifications, and provision of closure and post-closure plans, cost estimates, and financial assurance.

U.S. EPA reviewed the compliance history of the Kettleman Hills Facility. While the Facility has violated applicable requirements in the past, these violations do not evidence a pattern of noncompliance that demonstrates Chemical Waste Management, Inc.'s unwillingness or inability to achieve and maintain compliance with the regulations applicable to it and its operations at the Kettleman Hills Facility. In addition, the corrective actions that the Facility implemented to address these past violations include physical and operational improvements which reduce the potential for future violations and prevent or contain future releases.

U.S. EPA prepared a Draft Environmental Justice Analysis to document that environmental justice concerns, including past outreach that sought the affected communities' involvement, were considered in the decision process for the Approval. During the public comment period on the



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proposed Approval, it sought community input on the proposed Approval and its supporting documents including the draft Environmental Justice Analysis.

U.S. EPA consulted with U.S. Fish and Wildlife Service to ensure that the Approval does not have an adverse impact on any endangered species. U.S. EPA also consulted with the California Office of Historic Preservation to ensure that the Approval does not adversely impact any historic properties. Finally, U.S. EPA evaluated the project to assure that it conforms to the San Joaquin Valley's plans to attain and maintain the national health-based air quality standards.

The proposed Approval was signed on August 27, 2019. Public comments on all aspects of the proposed Approval and its supporting determinations and analyses were accepted through Friday, November 22, 2019. U.S. EPA held a public meeting on the proposed Approval and its supporting determinations and analysis on October 10, 2019 and a public hearing on November 14, 2019 in Kettleman City. U.S. EPA accepted written and spoken comments at both the meeting and hearing. All comments that were received (both written and spoken) are included in the administrative record for the Approval. U.S. EPA thanks everyone who provided comments on the proposed Approval, spoke at the public hearing, and/or attended the public meeting and hearing. U.S. EPA has provided written responses to all comments received and has modified the proposed Approval and supporting determinations and analysis as appropriate to address the submitted comments. Changes to the proposed Approval and the supporting determinations and analysis made to address comments are discussed in the Statement of Basis and documented in the Administrative Record.

Copies of both the proposed and final Approval, the Statement of Basis and its appendices, the Draft Environmental Justice Analysis, the Updates and Revisions document for the Draft EJ Analysis, the application submitted by Chemical Waste Management, Inc., the Response to Comments document, and other key documents can be found on U.S. EPA's Kettleman Hills project website at <https://www.epa.gov/ca/kettleman-hills>; on [www.regulations.gov](http://www.regulations.gov) [docket number EPA-R09-RCRA-2019-0088]; and from the Kettleman Hills Project Manager listed below. A hard copy of the Approval, this Statement of Basis (including the Environmental Justice Analysis), and the application can be found at:

Kettleman City Library  
104 Becky Pease Street  
Kettleman City, CA 93239  
(559) 386-9804

(Note: Availability of documents at the Kettleman City Library may be delayed due to Covid-19-related closures of U.S. EPA's offices and the Kettleman City Library).



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Additional information about the final Approval and Statement of Basis can be obtained from:

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## **ACRONYMS, ABBREVIATIONS, AND FREQUENTLY CITED DOCUMENTS**

AAMP	Ambient Air Monitoring Program
CAA	Clean Air Act
CalEPA	California Environmental Protection Agency
CalRecycle	California Department of Resources Recycling and Recovery
CARB	California Air Resources Board
CBI	Confidential business information
CDPR	California Department of Pesticide Regulations
C.F.R.	Code of Federal Regulations
COC	Constituents of concern
CWM	Chemical Waste Management, Inc.
DTSC	California Department of Toxic Substances Control
ESA	Endangered Species Act
FWS	United States Fish and Wildlife Service
KHF	Kettleman Hills Facility
LCRS	Leachate collection and removal systems
MPars	Detection monitoring parameters
MRP	Monitoring and reporting program
NAHC	Native American Heritage Commission
NAAQS	National Ambient Air Quality Standard
NEIC	National Enforcement Investigations Center
NHPA	National Historic Preservation Act
NOD	Notice of deficiency
NON	Notice of noncompliance
PM <sub>2.5</sub>	Particulate matter less than 2.5 microns in diameter
PM <sub>10</sub>	Particulate matter less than 10 microns in diameter
PCB or PCBs	Polychlorinated biphenyls
PCB F/SU	PCB Flushing and Storage Unit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
RWQCB	Central Valley Regional Water Quality Control Board

## ACRONYMS, ABBREVIATIONS, AND FREQUENTLY-CITED DOCUMENTS

SB	Statement of Basis
SJVAPCD	San Joaquin Valley Air Pollution Control District
TSCA	Federal Toxic Substances Control Act
U.S. EPA	United States Environmental Protection Agency
µg/100 cm <sup>2</sup>	micrograms per 100 square centimeters
VOC	Volatile organic compound
WDR	Waste discharge restrictions
WSRA	Wild and Scenic Rivers Act

*Approval:* “Approval, Toxic Substances Control Act PCB Commercial Storage Facility and Chemical Waste Landfill, Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County, California.” U.S. EPA Region 9. July 29, 2020.

*MRP R5-2014-0003:* “Monitoring and Reporting Program R5-2014-0003 for Chemical Waste Management, Inc. Class I/II Waste Management Units Kettleman Hills Facility.” California Regional Water Quality Control Board Central Valley Region. January 16, 2014.

*Operation Plan:* “Hazardous Waste Facility Permit Renewal Application, Operation Plan,” Chemical Waste Management, Inc. Kettleman Hills Facility, Revision 4, July 31, 2019.

*PCB Regulations:* U.S. EPA’s regulations at 40 C.F.R. Part 761 that implement the PCB program under TSCA.

*Proposed Approval:* “Proposed Approval, Toxic Substances Control Act PCB Commercial Storage Facility and Chemical Waste Landfill, Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County, California.” U.S. EPA Region 9. August 27, 2019.

*Renewal Application:* “TSCA Permit Renewal Application, Chemical Waste Management, Kettleman Hills Facility.” Chemical Waste Management, Inc. Revisions 4: dated November 22, 2019.

*State RCRA Permit:* “Hazardous Waste Facility Permit, Permit Number: 02-SAC-03” Department of Toxic Substances Control. Effective June 16, 2003 (modified May 5, 2005, July 25, 2006, September 21, 2007, and May 21, 2014).

*TSCA Operation Plan:* “TSCA Operation Plan, Landfill B-18 Phases I, II, and III; PCB Building and Outside Containment Area.” Chemical Waste Management, Inc. Revision 4: November 22, 2019.

*WDR R5-2014-0003:* “Order R5-2014-0003 Waste Discharge Requirements for Chemical Waste Management, Inc. Class I/II Waste Management Units Kettleman Hills Facility Kings County.” Central Valley Regional Water Control Board. January 16, 2014.

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**STATEMENT OF BASIS — APPROVAL**  
**TOXIC SUBSTANCES CONTROL ACT POLYCHLORINATED BIPHENYLS (PCB)**  
**COMMERCIAL STORAGE FACILITY AND CHEMICAL WASTE LANDFILL**  
**CHEMICAL WASTE MANAGEMENT, INC. KETTLEMAN HILLS FACILITY**

**I. INTRODUCTION AND INFORMATION ON PUBLIC PARTICIPATION**

**A. INTRODUCTION**

This Statement of Basis (“SB”) document provides supporting information and analyses for the U.S. Environmental Protection Agency’s (“U.S. EPA”) Approval of a Toxic Substances Control Act (“TSCA”) polychlorinated biphenyl (“PCB”) Commercial Storage Facility and Chemical Waste Landfill at Chemical Waste Management, Inc.’s Kettleman Hills Facility in Kings County, California. This Approval is based on the application “TSCA Permit Renewal Application, Chemical Waste Management, Kettleman Hills Facility” dated November 22, 2019 (“Renewal Application”) [CWM 2019f] and documents submitted in support of the application. U.S. EPA proposed the Approval on August 27, 2019 [EPA 2019a]. This Statement of Basis also provides a brief description and history of the Kettleman Hills Facility. It also includes U.S. EPA’s responses to all comments received on the proposed Approval. See **Appendix K** “Response to Comments Document”.

**B. PUBLIC PARTICIPATION AND PUBLIC COMMENTS RECEIVED**

U.S. EPA proposed the Approval on August 27, 2019. On August 29, 2020, we published on our webpage a public notice and fact sheet in English and Spanish [U.S. EPA 2019d-g] summarizing the proposed Approval and its basis and announcing a public meeting and hearing on October 10, 2019 and the opening of a public comment period that would run until November 1, 2019. We also mailed or emailed the public notice and factsheet to all post office boxes in Kettleman City and to our mailing list of stakeholders and other interested parties. We encouraged comments on all aspects of the proposed Approval and its supporting determinations and analyses including the draft Environmental Justice Analysis. Subsequently, U.S. EPA provided a revised public notice changing the date for the public hearing to November 14, 2019 because of logistic issues with the hearing room [U.S. EPA 2019h-j]. We also extended the public comment period until November 22, 2019 [U.S. EPA 2019h].

Written comments were accepted on [www.regulations.gov](http://www.regulations.gov) [docket number EPA-R09-RCRA-2019-0088], by mail or email, or in person at the public meeting and hearing. US EPA provided an opportunity for spoken comments to be submitted at both the public meeting and at the hearing. In total, U.S. EPA received 14 comment letters, emails, or postcards and heard from nine speakers at the public hearing. A copy of each written comment received and the transcript of the public hearing are included in the Administrative Record and are posted on [www.regulations.gov](http://www.regulations.gov) [docket number EPA-R09-RCRA-2019-0088]. A list of commenters can be found in **Appendix K**.



U.S. EPA thanks everyone who provided comments on the proposed Approval, spoke at the public hearing, and/or attended the public meeting and hearing.

U.S. EPA reviewed, summarized and provided written responses to all comments received during the public comment period and at the public hearing prior to making a final decision on Chemical Waste Management, Inc.'s application to renew and modify its TSCA Approval for the Kettleman Hills Facility. See [Appendix K](#).

We sent a notice of the final Approval to each person who provided contact information (email and/or mailing address) and who submitted comments during the public comment period, including oral comments provided at the public hearing, or requested notice of the final TSCA permit decision.

Copies of both the proposed and final Approval, Statement of Basis, Response to Comments Document, the draft Environmental Justice Analysis and its Updates and Revisions Document, and other key documents can be found on U.S. EPA's Kettleman Hills project website at <https://www.epa.gov/ca/kettleman-hills>; on [www.regulations.gov](http://www.regulations.gov) [docket number EPA-R09-RCRA-2019-0088]; and obtained on request from the Kettleman Hills Project Manager at the address below. Additional information about the Approval and Statement of Basis can be obtained from:

Frances Wicher, Kettleman Hills Project Manager  
Permits Office, Land, Chemicals & Redevelopment Division (LND-4-2)  
U.S. Environmental Protection Agency Region 9  
75 Hawthorne Street  
San Francisco, CA 94105  
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Email: [wicher.frances@epa.gov](mailto:wicher.frances@epa.gov)

Información en español sobre la Aprobación y la Declaración de Bases se puede obtener por medio de:

Soledad Calvino  
U.S. Environmental Protection Agency Region 9  
Office: 415-972-3512  
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## II. BACKGROUND

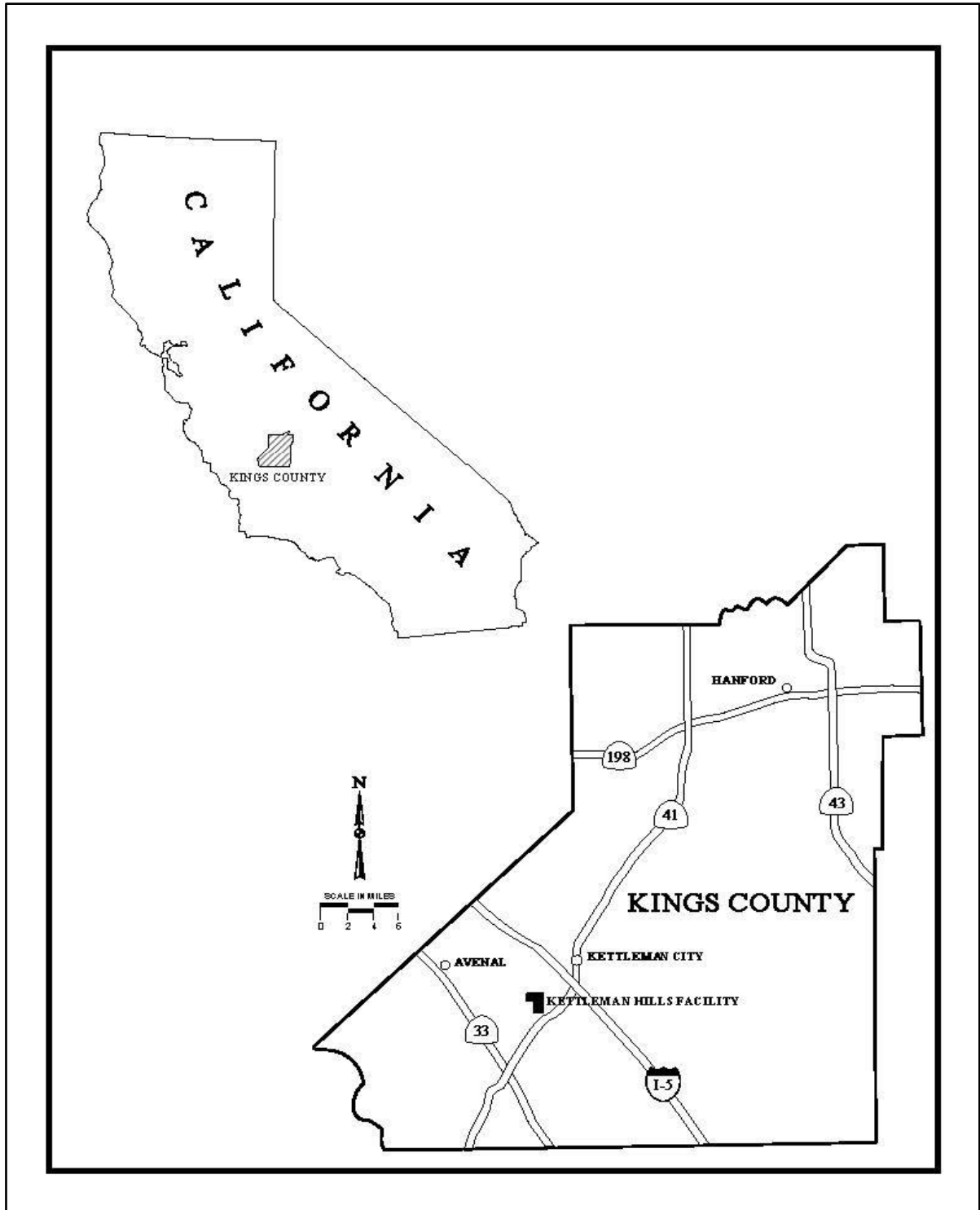
### A. FACILITY DESCRIPTION

The Kettleman Hills Facility is a commercial hazardous waste treatment, storage and disposal facility located in Kings County, California, southwest of the intersection of Interstate 5 and Highway 41, approximately 3.5 miles southwest of Kettleman City, and 6.5 miles southeast of Avenal. See **Figure 1**. The Facility owns and occupies approximately 1,600 acres of property, of which 695.5 acres are permitted by Kings County for the management of federal- and state-listed hazardous wastes, and municipal solid and designated wastes. Of these 695.5 acres, 555 acres are within the fenced operational area [CWM 2019d, p. 3-1]. See **Figure 2**.

The Facility is located on the southwestern edge of the Kettleman Hills, an area that has been used for natural gas and oil exploration and extraction and ranching. The Facility is currently surrounded by general agriculture and grazing lands for several miles in all directions with some oil and gas exploration operations. The closest non-agricultural/oil exploration areas and the nearest group of permanent residents are located in Kettleman City [CWM 2019d, p. 48-1].



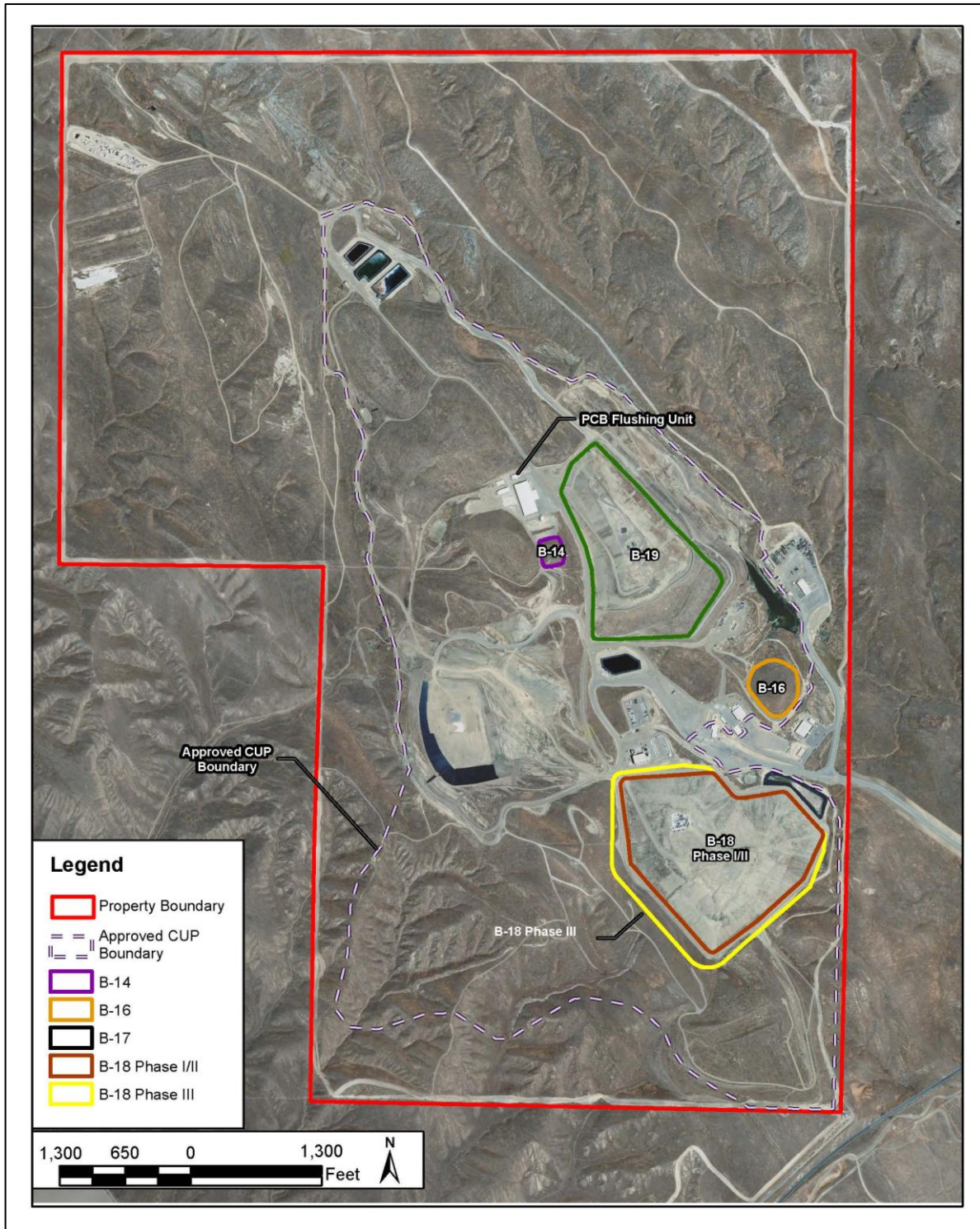




**FIGURE 1 – LOCATION OF THE KETTLEMAN HILLS FACILITY**

Source: RWQCB 2014a (modified).





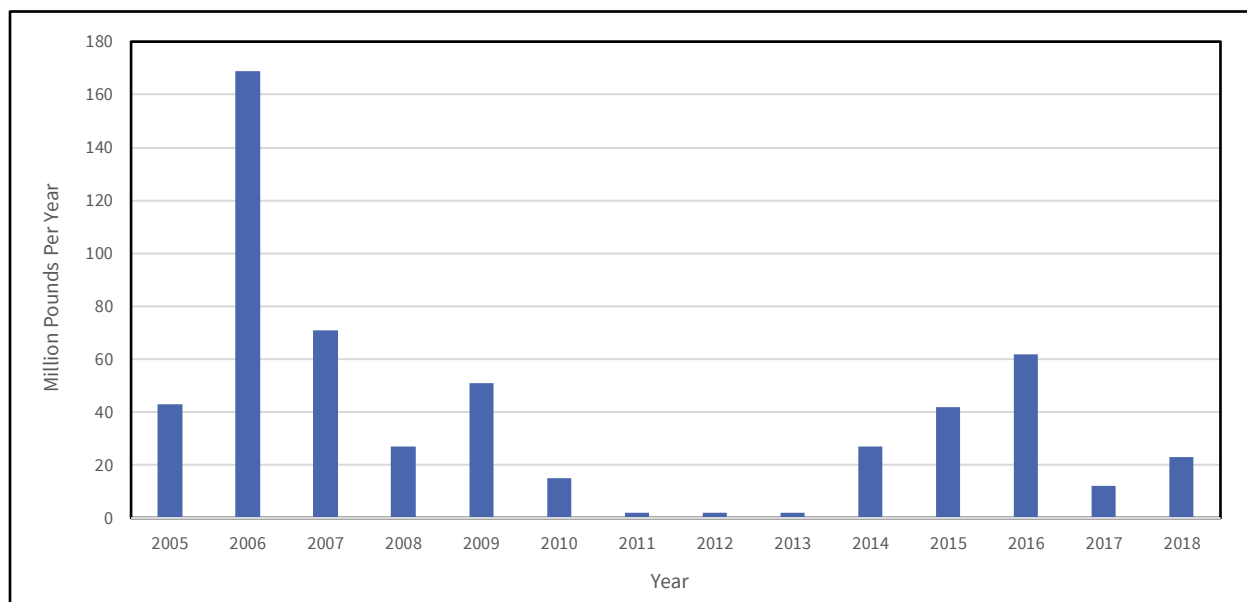
**FIGURE 2 – MAP OF THE KETTLEMAN HILLS FACILITY**

Source: Wenck 2011c (modified)



Most PCB waste received at KHF is soil, concrete, and other types of debris from cleanup sites contaminated with PCBs. Other types of PCB waste received are building debris with PCB-containing material such as caulk and paint, electrical equipment such as transformers and capacitors which contain PCB liquids, fluorescent light ballasts, and liquids containing PCBs (e.g., liquids generated during the decontamination of PCB items) [CWM 2006, 2007, 2008b, 2009b, 2010, 2011, 2012b, 2013, 2014, 2015, 2016, 2017a, 2018d, 2019b]. The annual amount of PCB waste received at the KHF has varied greatly. See Figure 3 for the amount of PCB waste received at KHF from 2005-2018.

**FIGURE 3 – PCB WASTE RECEIVED AT THE KETTLEMAN HILLS FACILITY FROM 2005-2018**



Source: CWM 2006, 2007, 2008b, 2009b, 2010, 2011, 2012b, 2013, 2014, 2015, 2016, 2017a, 2018d, 2019b

**1. PCB WASTE STORAGE, TREATMENT, AND DISPOSAL UNITS AND ACTIVITIES**

There are five waste management units at the Kettleman Hills Facility that are or have been used for the storage, treatment for disposal, or disposal of PCBs.

**a. PCB FLUSHING/STORAGE UNIT**

PCB waste storage and treatment for disposal at the Kettleman Hills Facility is conducted at the PCB Flushing/Storage Unit (“PCB F/SU”). The unit consists of a 65-foot by 35-foot enclosed building and a 65-foot by 35-foot outside containment area [CWM 2019d, Table 14-1]. The location of the PCB F/SU is shown on **Figure 2**. Diagrams of the PCB Flushing/Storage Unit are located in the Renewal Application, Attachment 5.



The enclosed building began operations in 1982. It has a roof, walls, and a continuous 1.5-foot-high concrete curb inside and adjacent to the walls of the building. The building's reinforced concrete floor has a vinyl epoxy resin surface and has no drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to flow from the curbed area [CWM 2019f, p. 27].

One 10,082 gallon above ground storage tank is located within the building for the storage of PCB liquid and flushing solution. The maximum allowable waste level in the tank is 7 feet which corresponds to a maximum working capacity of 5,900 gallons. [CWM 2019f, p. 29].

The outside containment area was constructed in 2010 [ADE 2011]. It has a reinforced concrete floor with a continuous 1.5-foot-high curb and has no drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to flow from the curbed area. The floor, curb, and sump are coated with vinyl epoxy resin. The outside containment area does not have a roof or walls. [CWM 2019f, p. 27].

The enclosed building at the PCB F/SU is currently used for the storage of TSCA-regulated PCB waste in containers and the tank, the draining and flushing of PCB-contaminated and PCB electrical equipment, and the repackaging and bulking of PCB waste [CWM 2019f, p. 9]. Under the Approval, the bin- or container-top solidification of incidental PCB liquids will be allowed in addition to the current operations. The outside containment area is currently used for the temporary storage of PCB waste consistent with 40 C.F.R. § 761.65(c)(1) (that is, storage of PCB waste that is within 30 days of its removal from service date) and the draining and flushing of PCB-contaminated and PCB electrical equipment [CWM 2019f, p. 9]. Under the Approval, the repackaging and bulking of PCB waste and the bin- and container-top solidification of incidental PCB liquids will also be allowed in the outside containment area.

Under 40 C.F.R. § 761.65(c)(2), which is incorporated into the Approval as Condition V.C.5., CWM is allowed to store non-leaking and structurally-undamaged PCB large high voltage capacitors and PCB-contaminated electrical equipment that have not been drained of free-flowing dielectric fluid to be stored on pallets next to the PCB F/SU. Storage under this section is allowed only when the storage unit has immediately available unfilled storage space equal to 10 percent of the volume of capacitors and equipment stored outside the unit. This section does not limit the time period for storage of an allowed PCB item to 30 days from its date of removal from services; however, § 761.65(a)(1) and Approval Condition IV.C.4. require a PCB item be disposed of within one year of its removal from service date, a requirement that functionally limits storage of an allowed PCB item to less than one year.

#### ***b. CHEMICAL WASTE LANDFILLS***

There is one active chemical waste landfill (that is, a landfill where PCB waste is disposed) at the Kettleman Hills Facility: Landfill B-18. There are three closed chemical waste landfills: Landfills B-14, B-16, and B-19. The location of these four landfills is shown on **Figure 2**. Diagrams of Landfill B-18 can be found in Golder 2019b, Appendix A-1.



Landfill B-18 is permitted as both a solid waste, Resource Conservation and Recovery Act (“RCRA”) and TSCA landfill. It was constructed in three phases. Phase I was constructed in 1991-1992 with hazardous waste disposal beginning in 1992. Phase II was constructed in 1992-1993 with waste disposal beginning in 1994. Phase III was constructed in 2014-2015 with waste disposal beginning in 2015 [Golder 2019b, p. 7, CWM 2019d, Figure 2-1]. All three phases are permitted by the California Department of Toxic Substances Control (“DTSC”) for the disposal of RCRA waste; however, only Phase I and II are currently approved for the disposal of nonliquid PCB waste. The Approval allows disposal of nonliquid PCB waste in Phase III.<sup>1</sup>

As now constructed, Landfill B-18 is 67 acres in area, has a maximum total capacity of 15,600,000 cubic yards inclusive of all disposed waste and cover, and a maximum elevation of 1,018 feet above mean sea level [CWM 2019d, Chapter 2, Attachment 4; Golder 2008, p. 29]. The current TSCA-approved portion of the landfill (Phases I and II) is 53 acres in area with an approved capacity of 10,700,000 cubic yards.

Landfill B-18 is constructed with primary and secondary liner systems; primary, secondary, and vadose zone leachate detection, collection and removal systems; run-on and runoff precipitation collection and holding facilities; and a groundwater monitoring system. More detailed information on Landfill B-18’s various systems is in the “Engineering and Design Report, Landfill B-18, Class 1 Landfill, Phase III Expansion and Final Closure, Kettleman Hills Facility, Kettleman City, California” (Golder Associates Inc., November 2008, Revised August 2011) [Golder 2008] which can be found in the Administrative Record for the Approval.

Kettleman Hills Facility TSCA landfills that have previously received PCB waste include:

- Landfill B-14: 0.8 acres, capacity 6,000 cubic yards, operated from 1982 to 1984, TSCA waste only, closed in 1985.
- Landfill B-16: 5 acres, capacity 290,000 cubic yards, operated from 1983 to 1987, approximately 230,000 cubic yards of TSCA waste only. In 2004, 60,000 cubic yards of non-hazardous waste was disposed of in Landfill B-16 to bring the unit up to final grade, and the unit was closed.
- Landfill B-19: 40 acres developed in four phases (Phase IA, IB, II and III), a mixed RCRA, TSCA, and municipal solid waste/designated waste landfill with a RCRA/TSCA waste capacity of 7,000,000 cubic yards in Phases IB, II, and III. RCRA/TSCA waste phases closed in 2006 [CWM 2019d, Table 42-2].

These three closed landfills are included in Kettleman Hills Facility’s post-closure care plan [Golder 2019b].

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<sup>1</sup> TSCA PCB regulations at 40 C.F.R. § 761.61(a)(5) and § 761.62(a) also allow certain PCB wastes to be disposed of in a RCRA hazardous waste landfill if that disposal is also allowed by the landfill’s other permits. CWM is currently allowed to dispose of certain PCB wastes, mainly PCB remediation waste from sites with U.S. EPA-approved PCB cleanup plans in Landfill B-18 Phase III, under the PCB regulations and its state RCRA permit.



## 2. OTHER WASTE MANAGEMENT UNITS AND ACTIVITIES

The Kettleman Hills Facility is currently operating under a RCRA hazardous waste permit issued by the Department of Toxic Substances Control (“Hazardous Waste Facility Permit, Permit Number: 02-SAC-03”) (“State RCRA Permit”) [DTSC 2003] issued June 16, 2003 and modified to allow construction and operation of Phase III of Landfill B-18 on May 21, 2014.<sup>2</sup> The State RCRA Permit has an expiration date of June 16, 2013; however, Chemical Waste Management, Inc. submitted a timely permit renewal application and continues to operate under the conditions of the 2003 Permit. DTSC is currently reviewing this permit renewal application.

In addition to PCB waste, the Kettleman Hills Facility accepts most types of solid, semi-solid, and liquid hazardous and extremely hazardous wastes except forbidden explosives, compressed gas cylinders (excluding aerosol cans), most radioactive waste, and biological agents or infectious wastes [DTSC 2003, p. 4]. The Facility conducts the following activities: solar evaporation; land disposal; and stabilization, solidification and storage of bulk and drummed wastes.

RCRA and California hazardous waste is stored, processed and disposed of in a number of units at the Facility. These units include:

- Landfill B-18
- Surface Impoundment P-9
- Surface Impoundment P-14
- Surface Impoundment P-16
- Bulk Storage Unit 1
- Bulk Storage Unit 2
- Final Stabilization Unit
- Drum Storage Unit

More information on these units and the activities permitted at each is in the State RCRA Permit and the most recently-submitted RCRA renewal application: “Hazardous Waste Facility Permit Renewal Application, Operation Plan,” Chemical Waste Management, Inc. Kettleman Hills Facility, Revision 4, July 31, 2020 [CWM 2019d].

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<sup>2</sup> California initially received authorization to administer the RCRA hazardous waste management program in lieu of the federal program effective on August 1, 1992 (57 FR 32726 (July 23, 1992)). RCRA state authorization is a rulemaking process by which U.S. EPA delegates the primary responsibility of implementing the RCRA hazardous waste program to individual states pursuant to Section 3006 of RCRA and 40 C.F.R. Part 271. California’s authorized hazardous waste program is established pursuant to the Hazardous Waste Control Law, Chapter 6.5 of Division 20 of the California Health and Safety Code, and the regulations promulgated thereunder at Title 22, Division 4.5 of the California Code of Regulations, 22 C.C.R. §§ 66001 et seq. A facility in California subject to RCRA must comply with the authorized State requirements in lieu of the corresponding federal requirements in order to comply with RCRA. Additionally, such facilities must comply with any applicable Federally-issued requirements and RCRA requirements that are not supplanted by authorized state-issued requirements. The State program is broader in scope than the federal RCRA program because it includes PCBs as a hazardous waste material and imposes requirements on facilities that manage PCBs.



The Kettleman Hills Facility is also permitted by several other State and local agencies including the Central Valley Regional Water Quality Control Board, the San Joaquin Valley Air Pollution Control District, and Kings County. A list of the Facility's current permits is in Table 2 of the Renewal Application.

The Kettleman Hills Facility also disposes of municipal/solid wastes (Class II/III wastes) in Landfill B-17. This landfill is permitted by the California Department of Resources Recycling and Recovery ("CalRecycle"). No RCRA or TSCA waste is allowed to be disposed of in Landfill B-17.

## B. FACILITY PERMITTING HISTORY

U.S. EPA has issued five TSCA approvals or amendments for the disposal and storage of PCB waste at the Kettleman Hills Facility:

- June 29, 1981 – Approval to dispose of nonliquid PCB waste in what would become known as Landfill B-14 [U.S. EPA 1981].
- February 16, 1983 – Approval to dispose of nonliquid PCB waste in Landfill B-16 (amended February 22, 1988 and November 30, 1990) [U.S. EPA 1983].
- February 22, 1988 – Approval to dispose of nonliquid PCB waste in Landfill B-19 and to continue disposal of nonliquid PCB waste in Landfill B-16 (amended November 30, 1990) [U.S. EPA 1988].
- November 30, 1990 – Amendment to the 1983 and 1988 Approval to include PCB storage requirements; to prohibit disposal of PCB waste in the closed Landfill B-14; and to set an expiration date for the 1988 Approval/1990 Amendments of January 1, 1998 [U.S. EPA 1990a; EPA 1990b].
- May 19, 1992 – Approval to dispose of nonliquid PCB waste in Landfill B-18 Phase I and, on approval of the construction certification report, Phase II (Approval granted on December 30, 1993). Approval expired May 19, 1997 [U.S. EPA 1992a; EPA 1992b].

The conditions of both the amended 1988 and 1992 Approvals were administratively extended by CWM's timely submittal of renewal applications in 1997 [CWM 1997a; CWM 1997b]; therefore, the Kettleman Hills Facility continued to operate under the terms and conditions of its amended 1988 and 1992 Approvals until the effective date of the 2020 Approval which is date of signature on the Approval. The 2020 Approval supersedes all five of the previous approvals/amendments. See Approval, section III.D.

A timeline of key waste disposal permitting actions by U.S. EPA, Kings County, the Central Valley Regional Water Quality Control Board, and DTSC (and its predecessor agency, the Department of Health Services) for the Kettleman Hills Facility is given in **Table 1** below.



**TABLE 1 – TIMELINE OF KEY KETTLEMAN HILLS FACILITY HAZARDOUS WASTE AND PCB PERMITTING ACTIONS**

<b>1960-1975</b>	<b>McKay Trucking Company uses site for the disposal of municipal sewage.</b>
<b>1975</b>	Kings County issues a Conditional Use Permit to the McKay Trucking Company for disposal of oilfield wastes on 60 acres. The Central Valley Regional Water Quality Control Board issues waste discharge requirements.
<b>1977</b>	Kings County revises the Conditional Use Permit to include evaporation ponds and land disposal of industrial wastes.
<b>1978</b>	The California Department of Health Services issues a Hazardous Waste Permit to the McKay Trucking Company to allow acceptance of more types of hazardous waste. McKay Trucking changes its name to Environmental Disposal Services, Inc.
<b>1979</b>	Kings County issues a Conditional Use Permit to Environmental Disposal Services, Inc. to operate a Class I (Hazardous Waste) treatment and disposal facility on 211 acres. The Central Valley Regional Water Quality Control Board issues a waste discharge requirements order reclassifying the site as a Class I disposal site. Chemical Waste Management, Inc. purchases the Kettleman Hills Facility from Environmental Disposal Services, Inc.
<b>1980</b>	Chemical Waste Management, Inc. submits a Part A RCRA Application and obtains interim status under RCRA.
<b>1981</b>	U.S. EPA issues a TSCA Approval allowing disposal of nonliquid PCB waste in Landfill B-14.
<b>1982</b>	The California Department of Health Services issues a Hazardous Waste Permit to Chemical Waste Management, Inc. allowing it to operate the Kettleman Hills Facility as a Class I disposal site (modified 1983).
<b>1983</b>	U.S. EPA issues a TSCA Approval allowing disposal of nonliquid PCB waste in Landfill B-16
<b>1985</b>	Kings County issues a Conditional Use Permit to include Landfills B-17, B-18 (Phases I and II), B-19 allowing hazardous waste operations on 499 acres.
<b>1987</b>	The Central Valley Regional Water Quality Control Board issues waste discharge requirements.
<b>1988</b>	California Department of Health Services and U.S. EPA issue a RCRA hazardous waste permit to Chemical Waste Management, Inc. (Permits were revised in 1989 and 1991.) U.S. EPA issues TSCA Approval allowing disposal of nonliquid PCB waste in Landfills B-16 and B-19.
<b>1990</b>	U.S. EPA issues modification to the 1988 TSCA Approval to include the PCB storage facilities and prohibit disposal of PCB waste in Landfill B-14.





**TABLE 1 (CONTINUED) – TIMELINE OF KEY KETTLEMAN HILLS FACILITY HAZARDOUS WASTE AND PCB PERMITTING ACTIONS**

<b>1992</b>	U.S. EPA issues TSCA Approval allowing disposal of nonliquid PCB waste in Landfill B-18, Phase I and Phase II. Disposal in Phase II is allowed only after approval of the construction quality assurance document for Phase II (approved in 1993).
<b>1993</b>	The California Department of Toxic Substances Control (successor organization for the Department of Health Services for hazardous waste permitting) renews 1988 RCRA permit.
<b>1997</b>	Chemical Waste Management, Inc. applies to U.S EPA to renew its TSCA Approvals for Landfill B-18, Phases I and II and PCB storage unit. (A timely application administratively extends the existing approval conditions.) Kings County modifies Conditional Use Permit to include municipal solid waste operations at Landfill B-19.
<b>1998</b>	The Central Valley Regional Water Quality Control Board issues a revised waste discharge requirements order. Chemical Waste Management converts a portion of Landfill B-19 to a Class II/III industrial non-hazardous/municipal solid waste landfill.
<b>2003</b>	The California Department of Toxic Substances Control issues a 10-year hazardous waste RCRA permit renewal. Chemical Waste Management, Inc. requests EPA to grant a TSCA coordinated approval.
<b>2007</b>	U.S. EPA proposes a TSCA PCB coordinated approval covering Landfill B-18 Phases I and II and PCB storage unit. (A coordinated approval recognizes the State RCRA permit as the primary TSCA approval document.) It holds a public meeting and hearing on proposed coordinated approval.
<b>2008</b>	Chemical Waste Management, Inc. submits a RCRA permit modification request to Department of Toxic Substances Control to expand the Landfill B-18 for RCRA waste. U.S. EPA requests Chemical Waste Management, Inc. carry out the PCB Congeners Study.
<b>2009</b>	Chemical Waste Management, Inc. submits application to U.S. EPA to expand the Landfill B-18 for PCB waste. Kings County modifies Conditional Use Permit to include Landfills B-18 Phase III and B-20 allowing hazardous waste operations on 696 acres.
<b>2011</b>	U.S. EPA informs Chemical Waste Management, Inc. that U.S. EPA would not be doing a Coordinated Approval with Department of Toxic Substances Control.
<b>2013</b>	Chemical Waste Management, Inc. submits RCRA permit renewal application.
<b>2014</b>	Department of Toxic Substances Control approves RCRA permit modification allowing construction and operation of Landfill B-18, Phase III. The Central Valley Regional Water Quality Control Board issues a revised waste discharge requirements order to include approval of Landfill B-18 Phase III.



**TABLE 1 (CONTINUED) – TIMELINE OF KEY KETTLEMAN HILLS FACILITY HAZARDOUS WASTE AND PCB PERMITTING ACTIONS**

<b>2017-2018</b>	Chemical Waste Management, Inc. submits revised approval renewal and permit renewal applications to U.S. EPA and Department of Toxic Substances Control for TSCA and RCRA, respectively.
<b>2019</b>	U.S. EPA proposes a TSCA approval for PCB F/SU and all phases of Landfill B-18 and post-closure care for Landfill B-14, B-16, and B-19. It holds a public meeting and hearing on proposed approval.

Sources: CWM 2018a, CWM 2018f, RWQCB 2014a



### III. FINAL APPROVAL

#### A. SUMMARY OF FINAL APPROVAL

The Approval covers the following units and activities at the Kettleman Hills Facility:

**TABLE 2 – APPROVED UNITS AND ACTIVITIES AT THE KETTLEMAN HILLS FACILITY**

<i>UNIT NAME</i>	<i>TYPE OF UNIT</i>	<i>AUTHORIZED ACTIVITY</i>	<i>MAXIMUM TOTAL CAPACITY</i>	<i>LOCATION IN APPROVAL</i>
<i>Landfill B-18 (Phases I to III)</i>	Landfill	Disposal of nonliquid PCB waste	15.6 million cubic yards	Section VI
<i>PCB Flushing/Storage Unit</i>	Storage Building	Storage, draining/ flushing, bulking, repackaging, and solidification	36,420 gallons	Section V
<i>Landfill B-14</i>	Closed Landfill	Post-closure care	Not applicable	Section VII
<i>Landfill B-16</i>	Closed Landfill	Post-closure care	Not applicable	Section VII
<i>Landfill B-19</i>	Closed Landfill	Post-closure care	Not applicable	Section VII

The Approval also includes leachate, groundwater, and air monitoring requirements as well as recordkeeping, reporting, inspection and emergency management (contingency) requirements. Finally, it includes requirements to maintain closure and post-closure plans, closure and post-closure cost estimates, and financial assurance for closure, post-closure, and sudden and non-sudden accidents.

The Approval includes the following changes from the Approvals issued in 1988 (as amended in 1990) and 1992:

- Increases the TSCA-approved capacity of Landfill B-18 from 10.7 million cubic yards to 15.6 million cubic yards by approving the disposal of PCB waste in Phase III.
- Increases the TSCA-approved height of Landfill B-18 from 965 feet to 1,018 feet by approving the disposal of PCB waste in Phase III;
- Increases the TSCA-approved footprint of Landfill B-18 from 53 to 67 acres by approving the disposal of PCB waste in Phase III;



- Sets a maximum storage capacity for the PCB Flushing/Storage Unit of 36,420 gallons in total and specific maximum storage capacities for the enclosed building of 13,200 gallons, the tank of 5,900 gallons, and the outside containment area of 17,320 gallons;
- Allows the bulking and repackaging of PCB waste and bin-top and container-top solidification of incidental liquids within the outside containment area at the PCB Flushing/Storage Unit;
- Allows the bin-top and container-top solidification of incidental liquids within the enclosed building at the PCB Flushing/Storage Unit;
- Requires quarterly testing of the PCB Flushing/Storage Unit for PCB contamination;
- Requires the maintenance and implementation of post-closure plans, cost estimates, and financial assurance for post-closure care for Landfills B-14, B-16 and B-19;
- Requires annual testing for PCBs of groundwater from wells monitoring active Landfill B-18 and every five years for wells monitoring closed Landfills B-14, B-16, and B-19;
- Requires annual testing of leachate from each leachate collection sump at Landfills B-14, B-16, B-18, and B-19;
- Requires the implementation of an air quality monitoring program which includes four monitoring sites and quarterly air monitoring reports; and
- Provides modification procedures that include public process for some approval modifications.

Many of the conditions in the Approval are already incorporated into the Kettleman Hills Facility's State RCRA Permit issued by DTSC and therefore reflect current operating practices at the Facility.

## **B. APPLICATION SUBMITTAL, REQUESTS FOR ADDITIONAL INFORMATION, AND NOTICES OF DEFICIENCIES**

40 C.F.R. § 761.65(d)(3) and § 761.75(c) require owners or operators of commercial PCB waste storage facilities and chemical waste landfills, respectively, to submit certain information to U.S. EPA to obtain approvals to operate. We apply these same requirements to renewal of existing approvals.

Chemical Waste Management, Inc. submitted the initial application for renewal of the 1990 Amended Approval for Landfills B-14, B-16, and B-19 and commercial storage activities on July 1, 1997 [CWM 1997a]. It submitted the initial application for renewal of the 1992 Approval for Landfill B-18 on April 1, 1997 [CWM 1997b]. After DTSC issued the Facility's RCRA Permit in 2003, CWM submitted a request for a coordinated TSCA approval under 40 C.F.R. § 761.77 [CWM 2003]. The request to include the Landfill B-18 Phase III expansion in the coordinated approval was submitted on June 26, 2009 [CWM 2009a].



Chemical Waste Management, Inc. also submitted revised applications or modifications on January 13, 2005 [CWM 2005], June 26, 2009 [CWM 2009a], November 21, 2011 [CWM 2011], July 15, 2017 [CWM 2017a], and April 19, 2018 [CWM 2018b]. All of these earlier applications were superseded by an October 2, 2018 submittal [CWM 2018f]. The October 2018 Application was the basis for U.S. EPA's August 27, 2019 proposed Approval. CWM submitted a revised application on November 22, 2019 [CWM 2019f]. The November 2019 Application is referred to in this document and the Approval as the "Renewal Application"). Changes between the October 2018 Application and the November 2019 Application are listed in Appendix D, Table D-4. As shown in Table D-4, the only significant change between the two Applications is a reduction in the maximum storage capacities at the PCB F/SU.<sup>3</sup>

Since receiving the initial applications in 1997, U.S. EPA has issued several requests for additional information and notices of deficiencies on the applications. The four most relevant for this Approval are the December 2, 2008 request for additional sampling of air, soil and vegetation for PCB congeners [U.S. EPA 2008b]; the December 20, 2016 request to update the 2011 application [U.S. EPA 2016]; the December 21, 2017 notice of deficiency ("NOD") [U.S. EPA 2017c], and the September 2, 2018 request for clarification on operations at the PCB Flushing/Storage Unit and additional information [U.S. EPA 2018h]. The 2008 request resulted in "Final Dioxin-Like Polychlorinated Biphenyl (PCB) Congeners Study Report" [Wenck 2010]. The 2016 request resulted in the submittal of the July 15, 2017 revised application [CWM 2017b and CWM 2017c]. The 2017 NOD, which addressed issues with the 2017 application, resulted in the submittal of the April 20, 2018 application [CWM 2018c and CWM 2018d]. The 2018 request resulted in the submittal of the October 1, 2018 application [CWM 2018f]. CWM further revised its application and submitted it on November 22, 2019 [CWM 2019f].

Copies of CWM's applications, U.S. EPA's requests for information, and CWM's responses can be found in the Administrative Record. A copy of the index to the Administrative Record and information on how to obtain copies of documents can be found in [Appendix C](#).

U.S. EPA has used checklists of 40 C.F.R. Part 761 requirements to document that the Renewal Application meets all applicable submittal and approval requirements for commercial storage facilities and chemical waste landfills in the PCB regulations. Copies of these checklists are in [Appendix D](#). Note that 40 C.F.R. § 761.75(c)(1) requires submittal of an "initial report" by the owner or operators of chemical waste landfill. CWM's Renewal Application is the "initial report" for the purposes of § 761.75(c)(1).

### C. REGULATORY REQUIREMENTS FOR CHEMICAL WASTE LANDFILL APPROVALS

The PCB regulations at 40 C.F.R. § 761.75(a) states that a landfill used for the disposal of PCB waste must be approved by the U.S. EPA, meet the list of specific requirements in § 761.75(b) (unless we waive a requirement under § 761.75(c)(4)) and meet other requirements that we may set under § 761.75(c)(3)(ii). The PCB regulations at 40 C.F.R. § 761.75(c) describes the process to obtain the required approval.

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<sup>3</sup> The November 2019 Renewal Application included the Facility's revised RCRA part B application "Hazardous Waste Facility Permit Renewal Application, Operation Plan," dated July 31, 2019 [CWM 2019d]. See CWM 2020c.



## **1. TECHNICAL AND OPERATIONAL REQUIREMENTS FOR CHEMICAL WASTE LANDFILL UNDER 40 C.F.R. §761.75(b)**

40 C.F.R. § 761.75(b) includes a list of technical and operational requirements for chemical waste landfills. The technical requirements include minimum standards for soils underlying the landfills, synthetic membrane liners (when required), site hydrologic conditions, flood protection, topography surface and groundwater monitoring, and leachate collection. The operational requirements include development and submittal of an operation plan with specific elements, restrictions on the type and placement of waste in the landfill, recordkeeping, and provision of support facilities.

U.S. EPA has evaluated the Renewal Application and TSCA Operation Plan [CWM 2019f & g] for compliance with each of these technical and operational requirements and has documented the results in the “Review Checklist for 40 C.F.R. Part 761 Requirements for Chemical Waste Landfills” found in **Appendix D-1**. As documented in this checklist, the Renewal Application and TSCA Operation Plan comply with each applicable Part 761 requirement except for few operational provisions from which Chemical Waste Management, Inc. has requested waivers under 40 C.F.R. § 761.75(c)(4). These waiver requests are discussed in the next section.

## **2. WAIVERS UNDER 40 C.F.R. § 761.75(c)(4)**

Under 40 C.F.R. § 761.75(c)(4), an owner or operator of a chemical waste landfill may submit information in its application that operation of the landfill will not present an unreasonable risk of injury to health or the environment from PCBs if a technical or operational requirement in 40 C.F.R. § 761.75(b) is not met. U.S. EPA may waive the requirement based on the submitted information and any other available information if it agrees that the requirement is not necessary to protect against such a risk.

Chemical Waste Management, Inc. requested the waiver of five 40 C.F.R. § 761.75(b) requirements [CWM 2019f, section 13.2]. Four of these requests are for renewals of waivers granted in the 1992 Approval. In most cases, it requested to use an alternative method to comply with the PCB regulations rather than to waive the requirement entirely. We proposed to grant four of these waiver requests and determined that fifth waiver request was unnecessary. No comments were received opposing these four waiver. U.S. EPA, therefore, grants CWM waiver requests as described below.

### ***a. PURGING OF GROUNDWATER MONITOR WELLS***

40 C.F.R. § 761.75(b)(6)(ii)(B) requires that groundwater monitoring wells at chemical waste landfills be pumped to remove the volume of liquid initially contained in the well before a sample for analysis is taken. Removal of water from a groundwater monitoring well prior to sampling the well is known as “purging”.

Chemical Waste Management, Inc. currently uses a different purging procedure at the Kettleman Hills Facility than the one in 40 C.F.R. § 761.75(b)(6)(ii)(B) and requested a waiver to use its current method. The current purging method is described in Section 6.2.4. of the RWQCB-



approved 2014 “Revised Site-Specific Groundwater Monitoring Plan Class I Waste Management Units, Kettleman Hills Facility, Kings County, California” [AMEC 2014] and summarized in the Renewal Application on p. 30. It is the same purge method in the 2001 Kettleman Hills site-specific monitoring plan [Geosyntec 2001] approved by DTSC. At the request of DTSC, CWM evaluated this purge method [Geomatrix 2007; DTSC 2008; AMEC 2008]. The evaluation concluded that this purge method provides a sample that is representative of in-situ groundwater conditions near the well [Geomatrix 2007, p. 12].

The requested well purging method provides representative samples of groundwater underlying the chemical waste landfills at the Kettleman Hills Facility, and its substitution for the method in the PCB regulations will not pose an unreasonable risk of injury to health or the environment. U.S. EPA therefore grants a waiver of the use of well-purging method in 40 C.F.R. § 761.75(b)(6)(ii)(B) and requires in its place the use of the procedures in “Groundwater Field Sampling Plan” in the *Site-Specific Groundwater Monitoring Plan, Class I Waste Management Units*, April 2014 [AMEC 2014]. See Approval Condition VIII.B.2.

#### ***b. GROUNDWATER SAMPLING AND ANALYSIS METHODS AND PARAMETERS***

40 C.F.R. § 761.75(b)(6)(iii) requires, at a minimum, that all groundwater samples from chemical waste landfills shall be analyzed for four specific parameters (PCBs, pH, specific conductance, chlorinated organic compounds) using the sampling methods and analytical procedures specified in 40 C.F.R. Part 136 as amended in 41 FR 52779 (December 1, 1976).

Chemical Waste Management, Inc. requested a waiver to substitute the parameters listed in the Kettleman Hills Facility’s Waste Discharge Restrictions Order (“WDR”) [RWQCB 2014a] and its incorporated WDR Monitoring and Reporting Program (WDR MRP) [RWQCB 2014b] and to use SW-846 Methods 6010, 8260, 8270, 8082, 8081, and other methods as required for those required by 40 C.F.R. § 761.75(b)(6)(iii) for the testing of PCBs and chlorinated organic compounds in groundwater samples.

As a condition of the Approval, U.S. EPA is requiring CWM to analyze groundwater samples from wells monitoring the Facility’s chemical waste landfills for PCBs using Test Method 8082 or 8082A<sup>4</sup> (the latest version of Test Method 8082). See Approval Condition VIII.B.2. These test methods are the analytic methods for PCBs in SW-846,<sup>5</sup> U.S. EPA’s official compendium of methods for use in complying with RCRA regulations. Test Method 8082 is the method generally required in the PCB regulations for testing for PCBs in all types of media including water (see, for example, 40 C.F.R. § 761.272). It is also the test method required by DTSC and RWQCB for analyzing groundwater for PCBs at the Kettleman Hills Facility. See State RCRA Permit, Condition III.4.B. [DTSC 2003] and WDR MRP, Table 2 [RWQCB 2014b].

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<sup>4</sup> In its proposed Approval, U.S. EPA required CWM to use of Test Method 8082A. CWM requested that it be allowed to also use Test Method 8082 because the California Environmental Laboratory Accreditation Program (“CA ELAP”) only certifies California laboratories to utilize Test Method 8082 and CWM uses CA ELAP-certified laboratories for required PCB analyses. U.S. EPA is allowing the use of Test Method 8082 in addition to Method 8082 because both methods are allowed by the PCB Regulations. See response to comment **B-4**.

<sup>5</sup> <https://www.epa.gov/hw-sw846/sw-846-compendium>



Test methods in 40 C.F.R. Part 136 are used to comply with Clean Water Act requirements. Additionally, the test methods in Part 136 have been extensively updated since 1976. Maintaining the testing requirement as written in 40 C.F.R. § 761.75(b)(6)(iii) would mean requiring testing for PCBs using outdated methods from a different media program.

U.S. EPA finds that substituting the most current version of the PCB test method recommended/required by the Agency for determining compliance with solid waste and PCB disposal requirements for outdated methods from a different media program will provide the most reliable measure of PCB concentrations in groundwater at the Kettleman Hills Facility and therefore does not present an unreasonable risk of injury to health or the environment from PCBs.

As a condition of the Approval, U.S. EPA is also requiring CWM to test all groundwater samples for the Detection Monitoring Parameters (MPars) listed in WDR MRP Table 2 using Test Method 8260B as substitute for the monitoring for chlorinated organic compounds in § 761.75(b)(6)(iii) using the test methods in 40 C.F.R. Part 136. Chlorinated organic compounds are no longer listed as such in 40 C.F.R. Part 136. The closest similar parameter still listed in Part 136 is “purgeable halocarbons”, a set of 29 halogenated compounds that is tested for using EPA Wastewater Test Method 601. The MPars include each of these 29 compounds. See 40 C.F.R. Part 136, Appendix A. The MPars are waste constituents, reaction products, hazardous constituents and physical parameters that provide a reliable indicator of a release from a waste management unit such as a landfill and for Kettleman Hills Facility are primarily chlorinated organic compounds [RWQCB 2014b, Condition C.2.].

As a condition of the Approval, U.S. EPA is also requiring testing for constituents of concern (COC) in lieu of the MPars every five years. These COC are listed in WDR MRP, Table 1. [RWQCB 2014b] The required U.S. EPA test methods are also listed in this table. Both DTSC and RWQCB currently require COC testing every five years. See State RCRA Permit, Condition III.4.B. [DTSC 2003] and WDR MRP, Condition C.1 [RWQCB 2014b]. The constituents of concern include all the MPars and a wide variety of other compounds.

U.S. EPA finds that substituting testing for the Detection monitoring parameters/constituents of concern in the WDR Monitoring and Reporting Program [RWQCB 2014b] using hazardous-waste specific test methods for the outdated “chlorinated organic compounds” parameter in the PCB regulations will provide a more reliable measure of chlorinated compounds in groundwater at the Kettleman Hills Facility and therefore will not present an unreasonable risk of injury to health or the environment from PCBs.

### ***c. LEACHATE SAMPLING AND ANALYSIS METHODS AND PARAMETERS***

40 C.F.R. §761.75(b)(7) requires leachate collection systems for a chemical waste landfill be monitored monthly for quantity and physicochemical characteristics of leachate and the sampling methods and analytical procedures used to test leachate comply with those specified in 40 C.F.R. Part 136 as amended in 41 FR 52779 (December 1, 1976).





Leachate at Kettleman Hills Facility is tested for two purposes: as part of the groundwater protection program (see WDR MRP, Condition D.3. [RWQCB 2014b]) and to determine the appropriate treatment and disposal method for the leachate (see TSCA Operation Plan, “Leachate Collection Systems” [CWM 2019g]). All leachate systems at operating and closed landfills at Kettleman Hills Facility are checked regularly for the presence of liquid in the sumps and the quantity of leachate removed, if any, recorded. See Operation Plan, Chapter 31 Inspection Program Plan, Table 31-3 [CWM 2019d] and Approval Conditions VI.E.3.d and e.

For groundwater protection purposes, U.S. EPA is waiving the requirement for the monthly testing of leachate in 40 C.F.R. §761.75(b)(7) and instead requiring annual testing of leachate for PCBs, pH, specific conductance, and MPars. Annual testing is consistent with the Facility’s current WDR (see WDR MRP, Condition D.3.) and State RCRA Permit (page 29). PCBs have been detected in only four leachate samples at the Kettleman Hills Facility since 1995 [CWM 2018h].<sup>6</sup> Given the rarity of PCB detection in recovered leachate, annual sampling is sufficient to identify any threat to groundwater from PCBs leaching from the Facility’s landfills.

For the same reasons discussed above for the testing of groundwater, U.S. EPA is requiring the leachate be tested annually for PCBs using Test Method 8082 or 8082A and MPars using Test Method 8260B. See Approval Condition VI.E.5.a. and VII.B.3. U.S. EPA finds that substituting these parameters and test methods for those required by 40 C.F.R. §761.75(b)(7) will provide a more reliable measure of their concentrations in leachate and therefore this substitution does not present an unreasonable risk of injury to health or the environment from PCBs.

For disposal purposes, all leachate removed from the hazardous waste landfills is considered a hazardous waste containing PCBs under the RCRA regulations at 40 C.F.R. Part 261. See Approval Condition VI.E.2.

#### *d. SUPPORTING FACILITIES - FENCING*

40 C.F.R. § 761.75(b)(9) requires that a six-foot woven mesh fence be placed around the site to prevent unauthorized persons and animals from entering.

Chemical Waste Management, Inc. requested that U.S. EPA approve its current fencing as meeting this requirement and to not require separate fencing around the PCB Flushing/Storage Unit and Landfill B-18. Currently, the entire Kettleman Hills Facility’s operations area (shown on **Figure 2**) is surrounded by an approximately 6-foot high chain link fence.

U.S. EPA does not believe that a waiver of this requirement is necessary as it does not interpret 40 C.F.R. § 761.75(b)(9) to require each TSCA unit at a site to be individually fenced if the site as a whole has fencing that prevents unauthorized persons and animals from reaching the TSCA units. The fencing already present at the Kettleman Hills Facility is sufficient to meet this requirement.

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<sup>6</sup> PCBs were detected in leachate from Landfill B-19 in 1995 at a concentration of 0.0019 milligrams per liter (mg/l) (0.0019 ppm), in leachate from Landfill B-18 Phase IA also in 1995 at a concentration of 0.0013 mg/l (0.0013 ppm), in B181B Leachate Tank in 2009 at 0.0011 milligrams/kilogram (mg/kg) (0.0011 ppm), and in B181A Leachate Tank in 2010 at 0.092 mg/kg (0.092 ppm) [CWM 2018i].



Note: The Facility's 1992 Approval included a temporary waiver of the fencing requirements because the fence was under construction at the time the Approval was issued [U.S. EPA 1992b, p. 8].

*e. DISPOSAL OF IGNITABLE WASTES IN LANDFILL B-18*

40 C.F.R. § 761.75(b)(8)(iii) prohibits the disposal of ignitable wastes in chemical waste landfills.

Chemical Waste Management, Inc. requested renewal of its existing waiver of this requirement to allow the disposal of small containers of hazardous waste in overpacked drums (lab packs) in Landfill B-18. It did not request to be allowed to dispose of any other types of ignitable waste in Landfill B-18.

Under its current State RCRA Permit (p. 27) and 1992 TSCA Approval, Attachment E, the only ignitable waste that can be disposed of in Landfill B-18 is small containers of hazardous waste in overpacked drums (lab packs) that meet the provisions of 40 C.F.R. § 264.316 and 22 California Code of Regulations (CCR) § 66264.316. All other types of wastes which exhibit the characteristic of ignitability as listed in 40 C.F.R. § 261.21 and 22 CCR § 66261.21 (liquid, solid, compressed gas, or oxidizers) are prohibited.

In its waiver application (Renewal Application, Section 12.1.5), CWM stated its belief that the purpose of 40 C.F.R. § 761.75(b)(8)(iii) is to prevent the disposal of significant quantities of ignitable liquid material which may create a potentially hazardous situation. It also stated that the overpacking requirements of the 40 C.F.R. § 264.316 and 22 CCR § 66264.316 effectively eliminate the possibility that any ignitable waste placed in the landfill would ignite or otherwise react adversely with PCB articles or any other TSCA or RCRA waste placed in the landfill and concluded that the overpacking of ignitable wastes provides adequate protection to prevent unreasonable risk of injury to health or the environment.

U.S. EPA agrees that small quantities of ignitable waste when overpacked to meet the requirements of 40 C.F.R. § 264.316 and 22 CCR § 66264.316 are unlikely to ignite or react in the landfill in a manner that would present any unreasonable risk of injury to health or the environment. U.S. EPA, therefore, grants a limited waiver of the 40 C.F.R. § 761.75(b)(8)(iii) prohibition on placing ignitable waste in Landfill B-18 and has included Approval Condition VI.C.1. in the Approval to implement this waiver.

**3. APPLICATION REQUIREMENTS FOR AN APPROVAL FOR A CHEMICAL WASTE LANDFILL**

40 C.F.R. § 761.75(c) lists the information that must be submitted to U.S. EPA to obtain an approval to dispose of PCB waste in a chemical waste landfill. § 761.75(c)(1) requires the owner or operator of the chemical waste landfill to submit an "initial report" that includes the information specified in this Part 761 section. Chemical Waste Management, Inc. submitted the latest version of Renewal Application on November 22, 2019. As noted before, the Renewal Application functions as the "initial report" for the purposes of § 761.75(c)(1). We have reviewed the Renewal



Application and found that it includes all the required information. Our finding is documented in the “Review Checklist for 40 C.F.R. Part 761 Requirements for PCB Chemical Waste Landfills” in **Appendix D-1**.

#### **4. REGULATORY REQUIREMENTS FOR CHEMICAL WASTE LANDFILL APPROVALS (40 C.F.R. § 761.75(c))**

40 C.F.R. § 761.75(c)(6) requires that an approval for a chemical waste landfill be in writing and signed by the Regional Administrator (or his designee) and state all requirements applicable to the landfill and include:

- A finding that the chemical waste landfill and its operations meet all the requirements in § 761.75(b) except for those that are waived under § 761.75(c)(4) [§ 761.75(c)(3)(i)];
- The inclusion of any other requirements that the U.S. EPA finds are necessary to ensure that operation of the chemical waste landfill does not present an unreasonable risk of injury to health or the environment from PCBs [§ 761.75(c)(3)(ii)]; and
- The designation of the persons who own and who are authorized to operate the chemical waste landfill [§ 761.75(c)(5)].

We have documented in the “Review Checklist for 40 C.F.R. Part 761 Requirements for PCB Chemical Waste Landfills” in **Appendix D-1** that Landfill B-18 and its operations meet all the requirements of § 761.75(b) except for those few that we are waiving and replacing with alternative compliance requirements. We have also provided a summary of the required findings in Appendix A of the Approval.

We have added a number of additional requirements to the Approval under the “omnibus” provision in § 761.75(c)(3)(ii), including requirements for closure and post-closure care and financial assurance, that we find are necessary to ensure that operations of Landfill B-18 do not present an unreasonable risk of injury to health or the environment from PCBs. We discuss these omnibus requirements in **section III.G**. We have listed and provided a justification for each omnibus requirement in **Appendix E**.

The Approval designates Chemical Waste Management, Inc. as the owner and operator of the Kettleman Hills Facility. See Approval Condition III.A.

#### **D. REGULATORY REQUIREMENTS FOR PCB COMMERCIAL STORAGE FACILITY APPROVALS**

40 C.F.R. §§ 761.65(b)(2) and (d) together require all commercial storers of PCB waste to apply for and obtain approval from U.S. EPA to operate a PCB waste storage facility. A “commercial storer of PCB waste” is defined in § 761.3 as an owner or operator of a facility that is subject to the PCB storage unit standards in § 761.65(b)(1) or (c)(7) or meets the alternate storage criteria of § 761.65(b)(2) and who engages in storage activities involving either PCB waste generated by



others or that was removed while servicing the equipment owned by others and brokered for disposal. The PCB waste storage operations at the Kettleman Hills Facility qualify Chemical Waste Management, Inc. as a commercial storer of PCB waste. 40 C.F.R. § 761.65(d) includes several options that could be used to approve PCB waste storage at the Kettleman Hills Facility: § 761.65(d)(2), § 761.65(d)(6), and § 761.65(d)(7).

40 C.F.R. §§ 761.65(d)(2) lists the determinations that U.S. EPA must make in order to issue a PCB storage approval under this section. These determinations cover the applicant's qualifications, the facility's capacity and design, a closure plan, financial assurance for closure, the risk of injury to health or the environment from the facility's operations, and the applicant's compliance history. A more detailed discussion of these determinations is in **section III.D.2.a.** below.

40 C.F.R. § 761.65(d)(6) provides that storage areas at RCRA-permitted facilities *may* be exempt from the separate TSCA storage approval under § 761.65(d)(2) upon a showing to the Regional Administrator's satisfaction that the facility's existing RCRA closure plan is substantially equivalent to this PCB regulation's closure plan standards, its closure cost estimate and financial assurance demonstration account for maximum PCB waste inventories, and the requirements of § 761.65(d)(3)(i) through (d)(3)(v) and (d)(3)(vii) are met. Section 761.65(d)(3) lists information that must be included in an application for a PCB waste storage approval. More detail on the information required in PCB storage applications is in **section III.D.1.** and "Review Checklist for 40 C.F.R. Part 761 Requirements for PCB Commercial Storage Facilities" in **Appendix D-2.**

40 C.F.R. § 761.65(d)(7) provides that storage areas ancillary to TSCA-approved disposal facilities *may* be exempt from a separate approval under § 761.65(d)(2) provided certain conditions are included in the TSCA disposal approval. These approval conditions include an expiration date for the Approval, closure and financial responsibility requirements for the storage unit, and operator qualifications. More information on the provisions of § 761.65(d)(7) can be found in "Review Checklist for 40 C.F.R. Part 761 Requirements for PCB Commercial Storage Facilities" in **Appendix D-2.** In 1990, we used this provision to include the PCB storage activities in the Approvals for Landfills B-16 and B-19 [U.S. EPA 1990a].

Approval requirements under §§ 761.65(d)(6) and (d)(7) are not as extensive as those under § 761.65(d)(2). U.S. EPA, therefore, chose to evaluate the application for PCB waste storage at the PCB Flushing/Storage Unit under the requirements of § 761.65(d)(2) as the most conservative approach for ensuring that the PCB waste storage operations at the Kettleman Hills Facility do not pose an unreasonable risk of injury to health or the environment. This choice is also based on the volume of storage (36,420 gallons) and the type of waste handling operations (drainage, flushing, repackaging, bulking, and solidification) that Chemical Waste Management, Inc. has requested to be approved for the Unit.<sup>7</sup> Additionally, this choice is consistent U.S. EPA's approval of the storage provisions pursuant to § 761.65(d)(2) in U.S. Ecology Nevada's TSCA storage, treatment, and disposal approval [U.S. EPA 2012b]. U.S. Ecology Nevada is the only other landfill approved

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<sup>7</sup> This requested maximum storage capacity is similar to or much greater than other § 761.65(d)(2)-approved PCB commercial storage facilities in U.S. EPA Region 9. There are three PCB commercial storage facilities in Region 9 that are not also disposal facilities. The approved maximum PCB storage capacities at these facilities are 44,190 gallons (Veolia, Phoenix) [U.S. EPA 2015]; the equivalent of 7,889 gallons (Lighting Resources, Phoenix) [U.S. EPA 2003]; and 7,920 gallons (Emerald Transformers, formerly Clean Harbors, Los Angeles) [U.S. EPA 2013].



under TSCA for the disposal of PCBs in U.S. EPA Region 9. Like the Kettleman Hills Facility, it also stores and treats PCB wastes.

## **1. APPLICATION REQUIREMENTS FOR PCB COMMERCIAL STORAGE FACILITIES**

40 C.F.R. § 761.65(d)(3) lists the information that must be submitted to U.S. EPA to obtain a commercial PCB waste storage approval under § 761.65(d)(2). This includes information, among other things, on the owners/operators of the storage facility, the technical qualifications and experience of the persons operating the facility, and past state or federal environmental violations. The application must also include an estimate of maximum PCB waste quantity to be handled, a closure plan and cost estimate, and financial assurance for closure. U.S. EPA has reviewed the Renewal Application to check that it contains all the information required by § 761.65(d)(3) and has documented the results in the “Review Checklist for 40 C.F.R. Part 761 Requirements for PCB Commercial Storage Facilities” which can be found in **Appendix D-2**. As documented in this checklist, the Renewal Application contained all required information.

## **2. REQUIRED CONTENTS OF A PCB COMMERCIAL STORAGE FACILITY APPROVAL**

40 C.F.R. § 761.65(d)(4) lists the required contents of a PCB storage approval under § 761.65(d)(2). These include certain regulatory determinations under § 761.65(d)(2), inclusion of the closure plan, conditions imposing maximum PCB storage capacity, and other conditions that U.S. EPA deems necessary to ensure that the operations of the PCB storage facility will not pose an unreasonable risk of injury to health or the environment. We address each of the required elements below and in Appendix A of the Approval. Except as noted below, we did not receive any comments objecting to our proposed regulatory determinations during the public comment period.

### ***a. 40 C.F.R. § 761.65(d)(4)(i) - REGULATORY DETERMINATIONS UNDER § 761.65(d)(2)***

40 C.F.R. § 761.65(d)(2) states that U.S. EPA Regional Administrator shall grant written, final approval to engage in the commercial storage of PCB waste upon a determination that the criteria in § 761.65(d)(2) have been met by the applicant.

U.S. EPA has evaluated the Renewal Application including the supporting documents and other information contained in the Administrative Record and finds that the requirements contained in 40 C.F.R. § 761.65(d)(2) have been met by the applicant Chemical Waste Management, Inc. We discuss these findings and our basis for them below.

### **(1) PERSONNEL REQUIREMENTS**

40 C.F.R. § 761.65(d)(2)(i) requires U.S. EPA to determine that the applicant, its principals, and its key employees responsible for the establishment or operation of the commercial storage facility are qualified to engage in the business of commercial storage of PCB waste.



U.S. EPA has determined that Chemical Waste Management, Inc., and its principals and key employees responsible for the operation of the PCB Flushing/Storage Unit at the Kettleman Hills Facility are qualified to engage in the business of commercial storage of PCB waste. This determination is based on U.S. EPA's evaluation of the experience of the personnel that manage the Facility as given in Renewal Application, Section 2.3. The determination is also based on the Facility's employee training program as described in Operation Plan, Chapter 36 "Training Plan" [CWM 2019d]. The Approval requires that CWM implement and maintain records of this training program. See Approval Conditions IV.E and O.2.

## (2) FACILITY CAPACITY REQUIREMENTS

40 C.F.R. § 761.65(d)(2)(ii) requires U.S. EPA to determine that the facility possesses the capacity to handle the quantity of PCB waste which the owner or operator has estimated will be the maximum quantity of PCB waste that will be handled at any one time.

U.S. EPA has determined that the PCB Flushing/Storage Unit possesses the capacity to handle the quantity of PCB waste which is the amount that Chemical Waste Management, Inc. estimates will be the maximum quantity of PCB waste that will be stored at any one time at the Unit. Approval Condition V.C.1 imposes a maximum storage capacity using these maximum capacities, which are set separately for the enclosed building, PCB storage tank, and outside containment area. These maximum capacities are listed in Table 1 of the Approval and replicated in **Table 3** below. These maximum capacities are based on the secondary containment calculations contained in Attachments 6 and 7 of the Renewal Application that demonstrate the maximum storage capacity quantities allow the Unit to meet the minimum containment requirements of § 761.65(b)(1)(ii).

*Change from Proposed Approval:* In response to comments from DTSC on its RCRA permit renewal application, CWM revised the maximum storage capacities in each area of the PCB F/SU to add room for maneuverability of a forklift or hand truck when storage within the unit is at capacity and to account for drainage from the upper pad in the exterior containment area. See CWM 2019e, p. 7 and CWM 2019c, Response to Specific Comment No. 61.

U.S. EPA has incorporated these reduced maximum capacities into the Approval (see Approval Condition V.C.1.) because they 1) meet the minimum containment requirements for PCB waste storage units in § 761.65(b)(1)(ii) (see CWM 2019f, Attachments 6 and 7), 2) are the same as the maximum storage capacity given for the PCB F/SU in the Facility's incorporated Closure Plan (see Golder 2019b, Appendix E, Table A-3), and 3) by reducing the maximum amount of PCB waste that may be stored at the PCB F/SU, lessen the risk from PCB waste storage operations over the risk considered in the proposed Approval.

## (3) CERTIFICATION OF COMPLIANCE WITH STORAGE FACILITY STANDARDS

40 C.F.R. § 761.65(d)(2)(iii) requires U.S. EPA to determine that the owner or operator of the PCB storage unit has certified compliance with the storage facility standards in § 761.65(b) and (c)(7) using the certification language in § 761.3.



U.S. EPA has determined that Chemical Waste Management, Inc. has met this requirement. This determination is based on the certification by the CWM's district manager with responsibility for operations at the Kettleman Hills Facility that the Facility meets the storage facility standards in 40 C.F.R. § 761.65(b) and (c)(7). See Renewal Application, Section 10. We have also independently assessed and determined that the enclosed building at the PCB Flushing/Storage Unit meets these requirements of § 761.65(b) as documented in "Review Checklist for 40 C.F.R. Part 761 Requirements for PCB Commercial Storage Facilities" found in **Appendix D-2**. The outside containment area at the PCB Flushing/Storage Unit, because it does not have a roof or walls, does not meet the storage facility standard in § 761.65(b)(1)(i). U.S. EPA, however, has authorized PCB waste storage in this area under § 761.65(c)(1) which allows PCB waste storage in areas that do not meet the storage facility standards but limits the types of PCB items that may be stored and also limits storage of these PCB Items to 30 days from their removal from service date. See Approval Condition V.C.4.

*Change from Proposed Approval:* As allowed by 40 C.F.R. § 761.65(c)(1)(iv), CWM may store PCB containers containing liquid PCB at concentrations of  $\geq 50$  ppm in the outside containment area of the PCB F/SU, provided it maintains a current Spill Prevention, Control and Countermeasure (SPCC) Plan pursuant to 40 C.F.R. part 112 that includes the outside containment area. See Approval Condition V.C.4.d. A SPCC Plan is intended to ensure that all appropriate measures in place to prevent spills and to properly respond to a spill. U.S. EPA proposed to incorporate the October 2016 revision of the Facility's SPCC [Golder 2016] into the permit. See proposed Approval, Appendix B-6.

CWM made various minor updates to its SPCC in November 2019. See **Appendix D-4**. None of these updates adversely affect U.S. EPA determination that PCB waste storage in the outside containment area at the PCB F/SU, under the terms and conditions of the Approval, meets applicable requirements of the PCB Regulations and does not pose an unreasonable risk of injury to health or the environment. U.S. EPA has incorporated the November 2019 SPCC Plan [CWM 2019h] into the Approval. See Approval, Appendix B-6.

#### (4) CLOSURE PLAN DEVELOPMENT

40 C.F.R. § 761.65(d)(2)(iv) requires U.S. EPA to determine that the owner or operator has developed a written closure plan for the facility that is acceptable under the closure plan standards of paragraph § 761.65(e).

40 C.F.R. § 761.65(e) contains a list of requirements for closure plans including a schedule for closure (that meets the requirements of § 761.65(e)(6)), description of how a storage facility will be closed including post-closure testing, and any activities that will be needed to prevent any post-closure release of PCBs.

The closure plan for the PCB Flushing/Storage Unit is in section 2.7 of the "Closure and Post-Closure Plans, Kettleman Hills Facility" [Golder 2019b] ("Closure Plan"). U.S. EPA reviewed this Closure Plan for compliance with the requirements of § 761.65(e) and documented the results in "Review Checklist for 40 C.F.R. Part 761 Requirements for PCB Commercial Storage Facilities"



**(Appendix D-2).** Based on its review, U.S. EPA has determined that Chemical Waste Management, Inc. has developed a written closure plan for the PCB Flushing/Storage Unit that is acceptable under the closure plan standards of 40 C.F.R. § 761.65(e).

The Approval requires implementation of the Closure Plan on closure. See Approval Condition V.I.5. The Closure Plan is incorporated into the Approval. See Approval, Appendix B-3.

The PCB Flushing/Storage Unit will be “clean” closed with no residual PCB contamination remaining at the site; therefore, no post-closure care plan is needed for the Unit [Golder 2019b, p. 43].

*Change from the Proposed Approval:* CWM made several changes to the closure and post-closure plans and closure and post-closure care cost estimates in July 2019 [Golder 2019b] and submitted the revised documents to U.S. EPA as part of the 2019 Renewal Application [CWM 2019f, p. 33]. A list of the changes to the plans and cost estimates can be found in Appendix D-4. Most of these changes come in response to comments made by DTSC in its review of CWM’s application to renew the KHF’s RCRA permit. See, for example, CWM 2019c, Response to Specific Comment No. 69; Response to ESPO Comment No 1; Response to ESPO Comment No. 3.

U.S. EPA has reviewed these changes and has determined that none affect compliance of the plans and cost estimates with applicable provisions of the PCB Regulations (see Appendix D-2), that they are consistent with other revisions to the TSCA Renewal Application and with our proposed Approval, and that none of these updates adversely affect U.S. EPA’s determination that PCB waste operations, under the terms and conditions of the Approval, do not pose an unreasonable risk of injury to health or the environment. U.S. EPA has incorporated excerpts of the July 2019 “Closure and Post-Closure Plan, Kettleman Hills Facility, Kings County, California.” See Approval, Appendix B-3.

#### **(5) DEMONSTRATION OF FINANCIAL RESPONSIBILITY FOR CLOSURE**

40 C.F.R. § 761.65(d)(2)(v) requires U.S. EPA to determine that the owner or operator has included in the application a demonstration of financial responsibility for closure that meets the financial responsibility standards of § 761.65(g). U.S. EPA has determined, , that Chemical Waste Management, Inc. has provided a demonstration of financial responsibility that meets the financial responsibility standards of 40 C.F.R. § 761.65(g). The current financial assurance mechanism is a surety bond guaranteeing payment into a closure/post-closure trust fund that meets applicable TSCA regulatory requirements for such mechanisms. See CWM 2020a and 2020b.

*Changes from the Proposed Approval:* CWM maintains financial assurance that covered the cost of closure and post-closure care for all RCRA units at the Kettleman Hills Facility including the PCB Flushing/Storage Unit and Landfill B-18 as required by 22 C.C.R. § 66264.140 *et seq.* and its State RCRA Permit. This financial assurance mechanism is a surety bond guaranteeing payment into a closure/post-closure trust fund that meets applicable RCRA regulatory requirements. See CWM 2018j. At the time of the proposal, U.S. EPA found that Chemical Waste Management, Inc.’s existing financial assurance mechanism was sufficient to demonstrate the required financial





responsibility for closure of the PCB Flushing/Storage Unit under the Facility's existing approvals. However, U.S. EPA noted that it, and not DTSC, is the agency with authority over the closure requirements that is named in the instruments required under § 761.65(g). Thus, U.S. EPA determined that in order for it to make the required finding under 40 C.F.R. § 761.65(d)(2)(v), CWM would need to submit for the PCB Flushing/Storage Unit one or more of the financial assurance mechanisms listed at 40 C.F.R. § 761.65(g) prior to U.S. EPA's issuance of a final approval. See proposed Condition IV.M.3. CWM submitted the required financial assurance documents in June 2020. See CWM 2020a and 2020b.

#### **(6) OPERATIONS WILL NOT POSE AN UNREASONABLE RISK OF INJURY TO HEALTH OR THE ENVIRONMENT**

40 C.F.R. § 761.65(d)(2)(vi) requires U.S. EPA to determine that operation of the storage facility will not pose an unreasonable risk of injury to health or the environment. As discussed in section V of this SB, U.S. EPA has determined that operations of the Kettleman Hills Facility, including the PCB waste storage and processing at the PCB Flushing/Storage Unit, as allowed and limited by the Approval will not pose an unreasonable risk of injury to health or the environment. This determination is based on the design, construction, and operations of the Unit as described in the Renewal Application, Approval conditions, studies performed to evaluate the impact of the Kettleman Hills Facility on surrounding areas, monitoring data, the Facility's compliance record, and findings on endangered species.

We received a number of comments opposing our proposed determination that operations of the Facility will not pose an unreasonable risk of injury to health or the environment. See section V for more information on these comments. We fully considered and responded to each comment prior to making the final decision to approve the Renewal Application. See Appendix K, section D.

#### **(7) COMPLIANCE HISTORY**

Under 40 C.F.R. § 761.65(d)(2)(vii), the environmental compliance history of the applicant, its principals, and its key employees may be deemed to constitute a sufficient basis for denial of an approval if the history of environmental civil violations or criminal convictions evidences in U.S. EPA's judgement a pattern or practice of noncompliance that demonstrates the applicant's unwillingness or inability to achieve and maintain compliance with the regulations.

U.S. EPA has carefully reviewed Chemical Waste Management, Inc.'s compliance history at the Kettleman Hills Facility. See section IV of this SB. This review included information in Table 6 of the Renewal Application [CWM 2019f], CWM's Response to NOD Comment 60 [CWM 2018c], U.S. EPA's inspection records, and DTSC's Envirostor database [https://www.envirostor.dtsc.ca.gov/public/hwmp\\_profile\\_report.asp?global\\_id=CAT000646117](https://www.envirostor.dtsc.ca.gov/public/hwmp_profile_report.asp?global_id=CAT000646117). The Facility's compliance history does not show unresolved violations, an inability to return to compliance after violations are found, or an unwillingness/inability to modify operations at the Facility to prevent repeat noncompliance. The corrective actions that Kettleman Hills Facility



implemented to address past violations include physical and operational improvements to reduce the potential for future violations and to prevent and contain future releases. Based on its review of this compliance history, U.S. EPA has determined that this history does not demonstrate the applicant's unwillingness or inability to achieve and maintain compliance with the regulations.

U.S. EPA received many comments objecting to its proposed determination that the Facility's compliance history did not provide grounds for either revoking the existing TSCA approvals or rejecting the Renewal Application. See **section IV** for more information on these comments. We fully considered and responded to each comment prior to making the final decision to approve the Renewal Application. See Appendix K, **section C**.

#### ***b. CLOSURE PLAN***

40 C.F.R. § 761.65(d)(4)(ii) requires that the closure plan be incorporated into the Approval. U.S. EPA has incorporated the Closure Plan [Golder 2019b] into the Approval. See Approval Conditions IV.A.3 and B.9. and Appendix B-3 .

*Change from Proposed Approval:* CWM made several changes to the closure and post-closure plans and closure and post-closure care cost estimates in July 2019 [Golder 2019b] and submitted the revised documents to U.S. EPA as part of the 2019 Renewal Application [CWM 2019f, p. 33]. A list of the changes to the plans and cost estimates can be found in Appendix D-4. Most of these changes come in response to comments made by DTSC in its review of CWM's application to renew the KHF's RCRA permit. See, for example, CWM 2019c, Response to Specific Comment No. 69; Response to ESPO Comment No 1; Response to ESPO Comment No. 3.

U.S. EPA has reviewed these changes and has determined that none affect compliance of the plans and cost estimates with applicable provisions of the PCB Regulations (see Appendix D-2), that they are consistent with other revisions to the TSCA Renewal Application and with our proposed Approval, and that none of these updates adversely affect U.S. EPA's determination that PCB waste operations, under the terms and conditions of the Approval, do not pose an unreasonable risk of injury to health or the environment. U.S. EPA has incorporated excerpts of the July 2019 "Closure and Post-Closure Plan, Kettleman Hills Facility, Kings County, California." See Approval, Appendix B-3.

#### ***c. MAXIMUM PCB STORAGE CAPACITY***

40 C.F.R. § 761.65(d)(4)(iii) requires that U.S EPA include a condition imposing a maximum PCB storage capacity which a facility cannot exceed during its PCB waste storage operations. This section of Part 761 also requires that maximum storage capacity imposed cannot be greater than the estimated maximum inventory of PCB waste included in the owner's or operator's application for final approval.

Approval Condition V.C.1. limits the maximum storage capacity at the PCB Flushing/Storage Unit to the values listed in Table 1 of the Approval. These maximum capacities are listed in **Table 3** below. Total maximum capacity for all parts of the Unit is 36,420 gallons, however, maximum capacities are set separately for the enclosed building, PCB storage tank, and outside containment



area. These maximum storage capacities are the same as in the Facility's incorporated Closure Plan [Golder 2019b, Appendix E, Table A-3].

**TABLE 3 – MAXIMUM STORAGE CAPACITIES AT THE PCB FLUSHING/STORAGE UNIT**

AREA	MAXIMUM UNIT STORAGE CAPACITY (GALLONS)	
	INDIVIDUAL COMPONENT	TOTAL
PCB F/SU – Enclosed Building – on floor or racks	13,200 gallons (equivalent of 240 55-gallon drums <sup>1</sup> )	19,100 gallons
PCB F/SU – Enclosed Building – PCB Storage Tank	5,900 gallons	
PCB F/SU – Outside Containment Area	17,320 gallons (equivalent of 224 55-gallon drums <sup>1</sup> and one 5,000-gallon container)	17,320 gallons <sup>2</sup>

<sup>1</sup> When doubled stacked on pallets.

<sup>2</sup> Storage limited to the PCB waste listed in Condition V.C.4. and to 30 days from removal from service date.

The Approval also contains conditions setting minimum aisle spacing and maximum container stacking height to facilitate safe operations at the PCB F/SU. See Approval Conditions V.D.2. and 3. We note that approval by U.S. EPA of a maximum PCB storage capacity does not relieve Chemical Waste Management, Inc. of any requirements related to safe container management including the required aisle spacing and maximum container stacking height.

*Change from the Proposed Approval:* The proposed Approval included higher maximum storage capacities for the Enclosed Building (e.g., 16,500 gallons, the equivalent of 300 55-gallon drums), the PCB Storage Tank (7,500 gallons) and the Outside Containment Area (20,015 gallons, the equivalent of 273 55-gallon drums and one 5,000-gallon container). See proposed Approval Condition V.C.1.

In response to comments from DTSC on its application to renew its RCRA permit, CWM reduced the maximum storage capacities in each area of the PCB F/SU to add room for maneuverability of a forklift or hand truck when storage within the unit is at capacity and to account for drainage from the upper pad in the exterior containment area. See CWM 2019e, p. 7 and CWM 2019c, Response to Specific Comment No. 61.

U.S. EPA has incorporated these reduced maximum capacities into the Approval (see Approval Condition V.C.1.) because they 1) meet the minimum containment requirements for PCB waste storage units in § 761.65(b)(1)(ii) (see CWM 2019f, Attachments 6 and 7), 2) are the same as the maximum storage capacity given for the PCB F/SU in the Facility's incorporated Closure Plan (see Golder 2019b, Appendix E, Table A-3), and 3) by reducing the maximum amount of PCB



waste that may be stored at the PCB F/SU, lessen the risk from PCB waste storage operations over the risk considered in the proposed Approval.

*d. OMNIBUS PROVISIONS*

40 C.F.R. § 761.65(d)(4)(iv) allows U.S. EPA to include other conditions in a PCB commercial storage facility approval as needed to ensure that the operations of the facility will not pose an unreasonable risk of injury to health or the environment. These additional conditions are known as “omnibus” provisions.

U.S. EPA has included a number of omnibus conditions in the Approval. These omnibus conditions are discussed further in section III.G. of this SB. Appendix E lists each omnibus condition and provides the reason for including each in the Approval.

**E. RECORDKEEPING AND REPORTING REQUIREMENTS**

40 C.F.R. § 761.180 includes the primary recordkeeping and reporting requirements for disposers and commercial storers of PCB waste. These requirements include annual documents, an annual document log, and an annual report. CWM addressed these requirements in its Renewal Application. See “Review Checklist for 40 C.F.R. Part 761 Requirements for Recordkeeping and Reporting” (Appendix D-3). All these requirements are included in the Approval. See Subsection IV.O. We have also included in the Approval the other applicable 40 C.F.R. Part 761 recordkeeping requirements such as those in § 761.65(c)(5) for records of inspections, maintenance, cleanup and disposal at storage facilities and § 761.75(b)(8)(iv)) for three dimensional burial coordinates in chemical waste landfills. See Approval Condition VI.D.5. requiring maintenance of records of waste locations within Landfill B-18 using a grid coordinate system; Condition IV.O.4 requiring the TSCA Operation Plan recordkeeping procedures to be followed, and IV.O.6 citing to PCB waste burial coordinates. The Approval also includes some omnibus recordkeeping and reporting requirements such as tracking PCB waste in the PCB F/SU to document that the maximum storage capacity is not exceeded and early reporting of any detection of PCBs in groundwater or leachate. See Approval Conditions IV.O.3. and VIII.B.6.

The Approval also requires CWM to submit a monthly report to U.S. EPA of any PCB waste received at the Kettleman Hills Facility during the previous month which resulted from spills, leaks, or other uncontrolled discharges of PCBs. See Approval Condition IV.O.11. This monthly report must also include a description of any occurrences that are not normal to the operation of the Facility as allowed/required by the Approval. Examples of occurrences that must be reported include accidents, spills, leaks, uncontrolled discharges, earthquake damage, excessive rain episodes, fires, explosions, etc. The Approval covers operations at the PCB F/SU and Landfills B-14, B-16, B-18, and B-19 (Phases IB, II, and III) as well as PCB Waste pre-acceptance and acceptance procedures, groundwater and air monitoring, stormwater control, road and fence maintenance, security, contingency plans, recordkeeping, etc. Any “not normal” occurrence that affects any of these operations or others covered in the Approval must be included in the monthly report. Events that are limited to the Class II/III Subtitle D Landfills or RCRA-only permitted units



do not need to be included in the monthly report unless they involved PCB items or PCB waste or otherwise affect PCB waste operations at the Facility.

A table of the reporting, notification, and submittal requirements included in the Approval can be found in **Appendix F** of this Statement of Basis.

## F. OTHER APPROVAL CONDITIONS

The Approval has a number of other conditions that are necessary to comply with 40 C.F.R. Part 761 requirements or to ensure that PCB waste disposal, storage, and processing at the Kettleman Hills Facility will not present an unreasonable risk to health or the environment. We briefly discuss some of these requirements below.

### 1. GROUNDWATER MONITORING REQUIREMENTS

The Kettleman Hills Facility has a current network of 41 groundwater wells monitoring both open and closed landfills and evaporative ponds. The TSCA (PCB) groundwater monitoring network is a subset of this larger groundwater monitoring system and has 23 wells monitoring the four TSCA landfills units. See “TSCA Groundwater Monitoring Addendum to Site-Specific Monitoring Plan” (April 17, 2018). Under its current DTSC permit, KHF is required to tests all wells quarterly. Under the current RWQCB order, wells are required to be tested semiannually. Quarterly/semiannual testing is limited to the Detection Monitoring Parameters (MPars) listed in MRP R5-2014-0003 Table 2 with testing for a more extensive list of constituents, including PCBs, every five years [RWQCB 2014b]. Because PCBs have been rarely been detected in groundwater at the Kettleman Hills Facility, the Approval requires that groundwater wells for the operating landfill, Landfill B-18, be tested annually for PCBs and wells in the closed landfills be tested every 5 years for PCBs.<sup>8</sup> See Approval Section VIII.B.

*Change from the proposal:* CWM requested that proposed Approval Condition VIII.B.2. be modified to allow groundwater sampling during the first half of the year when this sampling

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<sup>8</sup> PCBs have been detected twice in groundwater at the Kettleman Hills Facility [CWM 1999/CWM 2018h]:

A sample collected from corrective action monitoring (“CAM”) well A02 on May 21, 1985 detected Aroclor 1248 at 1.5 ug/l (0.0015 ppm) and Aroclor 1254 at 1.5 ug/l (0.0015 ppm). CAM well A02 monitors releases from closed ponds P-12 and P-12A. No subsequent sample detected any PCBs.

A sample collected from CAM well A05 on March 20, 1995 detected Aroclor 1232 at 2.0 ug/l (0.002 ppm). No subsequent quarterly sample has detected any PCBs. CAM well A02 monitors releases from pond P-9.

No PCBs have been detected in groundwater wells monitoring the four landfills approved for PCB waste disposal at KHF.

In 1995 and 2004, PCBs were detected in samples collected from sounding well B14MW2 [CWM 2018h]. Sounding well B14MW2 was one of four shallow (42 – 102 feet below ground level) sounding wells installed in 1981 on the perimeter of Landfill B-14 to monitor for and collect fluids that could potentially migrate out of the landfill [Geomatrix 2006]. The Landfill B-14 sounding wells were checked regularly for fluids. In 1995, surface water from heavy rains entered the B14MW2. Testing of the water in the well detected PCBs at a concentration of 0.002 ppm in February 1995 and 0.0007 ppm in March 1995 [CWM 2018h]. In 2004, all residual water was removed from the well and tested. PCBs were detected at a concentration of 0.0027 ppm [CWM 2018h]. All four Landfill B-14 sounding wells were decommissioned in 2009 with U.S. EPA’s approval [USEPA 2008a]. Potential releases to groundwater from Landfill B-14 are currently monitored by well K-50 [AMEC 2014].



schedule is required by the currently approved Site-Specific Groundwater Monitoring Plan. As proposed this Condition required annual groundwater sampling occurring in the second half of the year. Under KHF's approved *Site-Specific Groundwater Monitoring Plan* (April 2014), groundwater testing for constituents of concern ("COC"), including PCBs, is required every 4.5 years. The 4.5-year schedule is set to alternate sampling between spring (first half of the year) and fall (second half of the year). We have revised proposed Approval Condition VIII.B.2. to allow groundwater sampling for PCBs to occur during the first half of the year concurrently with the COC testing. This approach will reduce sampling costs without reducing sampling frequency for PCBs.

## 2. AIR QUALITY MONITORING REQUIREMENTS

Under our omnibus authority in 40 C.F.R. § 761.65(d)(4)(iv) and § 761.75(c)(3)(ii), U.S. EPA is requiring Chemical Waste Management, Inc. to continue to operate its current air monitoring program as described in the *Site-Specific Ambient Air Monitoring Plan* (January, 2016) ("AAMP") [Wenck 2016a] as approved by DTSC on May 11, 2016 [DTSC 2016] and Operation Plan, Chapter 26 Environmental Monitoring Programs, Section "Summary of Ambient Air Monitoring Program" [CWM 2019d]. See Approval Condition VIII.A. Air emissions are one of the main pathways that PCBs may be transported offsite from the Kettleman Hills Facility and potentially impact surrounding communities. Monitoring this pathway, therefore, is necessary to ensure that operations at the Facility do not pose an unreasonable risk of injury to health or the environment from PCBs.

The current Kettleman Hills Facility's air monitoring program measures PCBs, volatile organic compounds (VOCs), carbonyls, pesticides, metals, and particulate matter less than 10 microns (PM<sub>10</sub>) in order to evaluate the risk to human health from the Facility's emissions. The program includes four monitoring stations near the Facility's property line, one upwind, two southeast of Landfill B-18, and one between the Facility and Kettleman City. Ambient air samples are collected for a 24-hour period every 12-days at all four stations for VOCs, carbonyls, pesticides, PCBs, and PM<sub>10</sub> metals. In addition, a month-long PCB/pesticide sample is collected once per quarter at all four monitoring locations. The Approval also requires CWM to submit air monitoring reports quarterly. See Approval Condition VIII.A.2.

*Change from the proposal:* The proposed Approval included a requirement (proposed Approval Condition VIII.A.2.) that CWM revise the AAMP to add the fourth monitoring station, Downwind Monitoring Station 3, as an existing ambient air monitoring site to be operated in the same manner and on the same schedule as the other monitoring stations and submit the revised plan as a Class 1 modification to the U.S. EPA Project Manager within 180 days of the effective date of the Approval. In its comments on the proposed Approval, CWM requested deletion of this proposed condition because the current DTSC-approved version of the Site-Specific Ambient Air Monitoring Plan already includes this station. U.S. EPA agreed with this revision and has deleted the requirement. See Appendix K, Response to Comment **B-23**.



### 3. LEACHATE COLLECTION, REMOVAL, AND MONITORING REQUIREMENTS

Leachate is any liquid that has percolated through or drained from a hazardous waste landfill. Leachate is collected, removed, and monitored to protect a landfill's liners, provide early detection of possible leaks from a landfill, and to protect groundwater under the landfill.

The Approval requires Chemical Waste Management, Inc. to provide, maintain, and operate leachate collection and removal systems at Landfill B-18 and the closed Landfills B-14, B-16, and B-19 (Approval Conditions VI.E. and VII.B.3.b. and c.). These requirements include the weekly monitoring of the liquid level in each leachate collection sump at Landfill B-18 (Approval Condition VI.E.3.d.) and monthly monitoring of these levels at the closed Landfills B-14, B-16, and B-19 (Approval Condition VII.B.3.b.). It also requires the removal of leachate from each sump as needed to prevent liquid levels from exceeding a specified head or trigger level (Approval Conditions VI.E.3.b. and c. and VII.B.3.b.)

The Approval also requires annually testing leachate for PCBs from each leachate collection sump (Approval Conditions VI.E.5.a. and VII.B.3.b.), immediate reporting to U.S. EPA if any PCBs are detected (Approval Conditions VI.E.5.b. and VII.B.3.b.), and submittal of an annual report on the results of the leachate testing (Approval Conditions VI.E.5.b. and VII.B.3.b.).

### 4. SURFACE WATER MANAGEMENT AND MONITORING REQUIREMENTS

The Approval requires Chemical Waste Management, Inc. to provide, maintain, and operate stormwater diversion structures capable of diverting all surface water away from Landfill B-18 from a 24-hour, 25-year storm event of 2 inches in 24 hours (Approval Condition VI.F.1.). Currently stormwater run-on to the landfill is caught prior to contact with the waste and directed by surface drainage channels to stormwater discharge basins on the Facility (TSCA Operation Plan, "Surface Water Handling Procedures" [CWM 2019g]). All stormwater that enters or accumulates within the Landfill B-18 is collected. Under the Approval, this collected stormwater is to be stored, tested, and disposed of as leachate (Approval Condition VI.F.3.). A sample from the first collection of stormwater that contacts waste in Landfill B-18 after each storm event must be analyzed for PCBs (Approval Condition VI.F.4.). If PCBs are detected in a sample taken from the accumulated precipitation, CWM must notify U.S. EPA within 24 hours of reviewing the analytical report (Approval Condition VI.F.4.).

KHF maintains and implements a Stormwater Pollution Prevention Plan [Golder 2019a]. U.S. EPA is requiring compliance with this plan in its Approval and to incorporate this plan into the Approval. See Approval Condition VI.F.1.

*Change from Proposed Approval:* CWM made very minor updates to its Stormwater Pollution Prevention Plan in June 2019 and submitted the updated Plan in November 2019 [CWM 2019f and Golder 2019a]. See Statement of Basis, Appendix D-4 for a list of these updates. None of these updates adversely affect U.S. EPA's determination that PCB waste operations at the Kettleman Hills Facility, under the terms and conditions of the Approval, do not pose an unreasonable risk of



injury to health or the environment. U.S. EPA has incorporated the June 2019 Stormwater Pollution Prevention Plan into the Approval. See Approval, Appendix B-12.

#### 5. POST-CLOSURE CARE OF LANDFILLS B-14, B-16, AND B-19

We have previously approved disposal of nonliquid PCBs in Landfills B-14, B-16, and B-19 and each of these landfills has been closed and a final cover constructed [Golder 2019b]. Chemical Waste Management, Inc. currently maintains and implements post-closure care for these landfills [Golder 2019b]. Because PCB waste will remain in these closed landfills indefinitely, it is necessary to monitor conditions and maintain post-closure care into the future.

Under the omnibus authority in 40 C.F.R. § 761.75(c)(3)(ii), U.S. EPA is requiring Chemical Waste Management, Inc. to maintain and implement post-closure care plans for Landfills B-14, B-16, and B-19 for 30 years from the effective date of a final approval. See Approval Conditions VII.B.2. and B.3. Required post-closure care includes groundwater monitoring, leachate monitoring, and inspection and maintenance of the final cover. See Approval Condition VII.B.3. The Approval also requires CWM to maintain a post-closure care cost estimate for each landfill and sufficient financial assurance to cover these costs. See Approval Subsections IV.L. and M. Finally, the Approval, requires CWM to apply for a modification to update the post-closure care plan for an appropriate period prior to the end of the initial post-closure period. See Approval Condition VII.B.5.

These post-closure requirements are consistent with the provisions placed on Landfill B-18 discussed above at **section III.C.4**. We discuss these omnibus requirements in **section III.G**, and we have listed and provided a justification for each omnibus requirement in **Appendix E**.

*Change from Proposed Approval:* CWM made several changes to the closure and post-closure plans and closure and post-closure care cost estimates in July 2019 [Golder 2019b] and submitted the revised documents to U.S. EPA as part of the 2019 Renewal Application [CWM 2019f, p. 33]. A list of the changes to the plans and cost estimates can be found in Appendix D-4. Most of these changes come in response to comments made by DTSC in its review of CWM's application to renew the KHF's RCRA permit. See, for example, CWM 2019c, Response to Specific Comment No. 69; Response to ESPO Comment No 1; Response to ESPO Comment No. 3.

U.S. EPA has reviewed these changes and has determined that none affect compliance of the plans and cost estimates with applicable provisions of the PCB Regulations (see Appendix D-2), that they are consistent with other revisions to the TSCA Renewal Application and with our proposed Approval, and that none of these updates adversely affect U.S. EPA's determination that PCB waste operations, under the terms and conditions of the Approval, do not pose an unreasonable risk of injury to health or the environment. U.S. EPA has incorporated excerpts of the July 2019 "Closure and Post-Closure Plan, Kettleman Hills Facility, Kings County, California." See Approval, Appendix B-3.





## 6. FACILITY INSPECTION AND MAINTENANCE REQUIREMENTS

The Approval includes requirements that Chemical Waste Management, Inc. perform and document regular comprehensive inspections of the Facility including the PCB Flushing/Storage Unit and operating Landfill B-18 and its support systems. See Approval Section IV.I. and Approval Conditions IV.I.4.; V.H.1. and VI.G.1. These inspections cover all aspects of the Facility operations including site security, environmental monitoring systems, surface water management, safety and emergency equipment, leachate systems, and all waste management units on site. These inspections are to be documented. See Approval Conditions IV.I.4.; V.H.3., VI.G.3. and VII.B.1. CWM currently performs and documents inspections of the Kettleman Hills Facility under its State RCRA permit and TSCA approvals.

The Approval also requires CWM to evaluate and address all deficiencies identified during inspection and maintain records of any actions taken. See Approval Conditions IV.I.3. and 4.; V.H.2. and 3.; and VI.G.2 and 3.

*Quarterly PCB Sampling Plan.* Under the Approval, CWM must conduct random wipe sampling of the PCB Flushing/Storage Unit every quarter. See Approval Section V.G. Once per year, it must use a third party to conduct the sampling. See Approval Condition V.G.1. If PCB contamination above certain levels is discovered, CWM must notify U.S. EPA and initiate decontamination processes. See Approval Condition V.G.3. CWM is already conducting this wipe sampling [CWM 2018c, Answer 10 and NOD Comment 10 Attachments].

## 7. CONTINGENCY PLAN

The Approval requires Chemical Waste Management, Inc. to conduct any emergency response and spill prevention and cleanup activities at the Kettleman Hills Facility in accordance with its Contingency Plan. See Approval Condition IV.G.2. This Contingency Plan is incorporated into the Approval (see Appendix B-1-11 of the Approval). The Contingency Plan includes detailed information on emergency response procedures including remediation actions, emergency equipment that must be kept on site, and notification and reporting requirements. CWM is required to annually review and update information on PCB operations and stored materials at the Facility and the Contingency Plan as provided to local first-response agencies (for example, the fire department, county sheriff). See Approval Condition IV.G.8. It is also required to notify U.S. EPA once it completes the annual review and update. See Approval Condition IV.G.8. CWM may make this notification as part of the monthly report required by Approval Conditions IV.O.11.

The Approval also requires CWM to immediately report any incident involving PCBs that requires implementation the Contingency Plan and provide a more detailed report within 15 days of the incident. See Approval Conditions IV.G.3. and 4. It also requires reporting of any unauthorized entry, tampering, destruction, or loss which caused PCBs to be discharged. See Approval Condition IV.G.14.



There are also a number of other emergency response, spill prevention and control, and notice and reporting requirements in the Approval. For examples, see Approval Section IV.G. and Approval Condition V.B.3.

## 8. APPROVAL MODIFICATION PROCEDURES

U.S. EPA has included detailed procedures for modifying the approval (Approval Section IX). The PCB regulations contain few requirements for modifying approvals. In contrast, U.S. EPA's RCRA regulations contain detailed procedures for modifying RCRA permits. See 40 C.F.R. § 270.41 and § 270.42. We have used these RCRA requirements as a model for the approval modification procedures in the Approval. We have previously included similar procedures in the approval for PCB landfill and storage operations at U.S. Ecology's Beatty, Nevada facility. See EPA 2012c.

The Approval specifies the administrative procedures to modify, transfer ownership or operational control, revoke, suspend, deny, continue or renew an approval. These procedures are necessary to ensure that the Facility continues to operate under an approval that reflects current ownership and operation control as well as current operating procedures and contains the terms and conditions necessary to ensure that the Facility is operated in a manner that does not pose an unreasonable risk of injury to health or the environment.

The Approval provides for public notice and comment for certain types of modifications. Public participation in the modification process helps to ensure that all issues related to operations of the Facility that affect the surround community are known and approval conditions to address those issues and prevent an unreasonable risk of injury to health or the environment are included.

### G. USE OF THE OMNIBUS APPROVAL PROVISIONS AT 40 C.F.R. § 761.65(d)(4)(iv) AND 40 C.F.R. § 761.75(c)(3)(ii)

The PCB regulations at 40 C.F.R. § 761.65(d)(4)(iv) and 40 C.F.R. § 761.75(c)(3)(ii) allow U.S. EPA to include other requirements in an approval that the Agency finds necessary to ensure that PCB storage and disposal operations at a facility “will not pose an unreasonable risk of injury to health or the environment.”

The Approval for the Kettleman Hills Facility includes use of these provisions to include requirements that are not specifically delineated in the PCB regulations but are necessary to ensure that operations at the Facility do not present unreasonable risk. For example, the PCB regulations for chemical waste landfills (40 C.F.R. § 761.75) do not include the requirement for either a closure or post-closure care plan. Using the omnibus regulation 40 C.F.R. § 761.75(c)(3)(ii), U.S. EPA is requiring Landfill B-18 be included in the Facility Closure Plan [Golder 2019b] and that all four chemical waste landfills at the Facility (Landfills B-14, B-16, B-18, and B-19) be included in the Facility Post-Closure Care Plan.

U.S. EPA's justification for using the omnibus provisions of 40 C.F.R. § 761.65(d)(4)(iv) and 40 C.F.R. § 761.75(c)(3)(ii) in the Approval are provided in **Appendix E**.



#### IV. COMPLIANCE HISTORY

U.S. EPA reviews a facility's compliance history as part of its decision-making process as to whether to grant an approval under TSCA for several reasons. First, under 40 C.F.R. § 761.65(d)(2)(ii), the environmental compliance history of the applicant, its principals, and its key employees may provide a sufficient basis for denial of an approval if the history of environmental civil violations or criminal convictions establishes, in U.S. EPA's judgement, the applicant's unwillingness or inability to comply with the regulations. Second, remedies to noncompliance, such as changes to operational procedures, may need to be incorporated into an approval. Finally, information developed through compliance monitoring, and the inspection reports they generate, increases familiarity with a facility allowing for a better and more comprehensive permit.

Kettleman Hills Facility is inspected by U.S. EPA and a number of state and local agencies including DTSC, the Central Valley Regional Water Quality Control Board, San Joaquin Valley Air Pollution Control District (SJVAPCD), and Kings County. For this evaluation, we focused on our and DTSC's inspections and enforcement actions because they are most relevant to our Approval. We did, however, review five years of inspection reports by other agencies that inspect the Kettleman Hills Facility. Copies of these reports can be found in CWM's response to U.S. EPA's Notice of Deficiency [CWM 2018b]. We also reviewed the environmental violations at the Facility that have resulted in the assessment of penalties during the past ten years. In total, the Facility had civil penalties assessed for eleven violations during this period: two from DTSC, three from U.S. EPA, and six from the SJVAPCD. See Renewal Application, Table 6. Most of the air violations related to operations of the Facility's flare. See Renewal Application, Table 6. This flare controls gases from the municipal solid waste landfills and is not part of the Facility's hazardous or PCB waste operations. We discuss the DTSC and U.S. EPA enforcement actions below.

**Table 4** is a list of inspections by U.S. EPA and DTSC and their results over the past 20 years. The majority of inspections do not uncover any violations of regulations or permit conditions or other issues of concern. U.S. EPA found a number of violations of the PCB regulations during inspections at the Kettleman Hills Facility. Chemical Waste Management also self-disclosed some violations. We describe several of these violations below as well as RCRA violations that DTSC and U.S. EPA found. Each of these violations have been remedied and, in some cases, approval terms have been added to help prevent reoccurrences.

U.S. EPA received many comments on the Kettleman Hills Facility's compliance history during the public comment period on the proposed Approval. The comments state that U.S. EPA should deny the permit because the Facility history of noncompliance shows that CWM cannot comply with its permit or safely manage PCB wastes. U.S. EPA acknowledges that CWM has been cited for violations multiple times for a variety of issues. Each of these violations has been remedied and, in some cases, operational or physical changes have been made at the Facility and conditions have been added to the permit to prevent reoccurrences. After careful review of this history and consideration of public comments, it is U.S. EPA's judgment that the history of violations at the Facility does not evidence a pattern or practice of noncompliance that demonstrates CWM's



unwillingness or inability to achieve and maintain compliance with the regulations. See responses to comments **C-1 to C-13** in the Appendix K.

U.S. EPA does not find that the compliance history of the Kettleman Hills Facility suggests a pattern or practice of noncompliance that establishes in U.S. EPA's judgement CWM's unwillingness or inability to comply with the regulations.

#### A. TSCA VIOLATIONS

*In February 2004*, Chemical Waste Management disclosed that it had failed to perform required monthly monitoring of lysimeters at one of four PCB disposal units from June 1996 to November 2003 [CWM 2004]. A consent agreement between U.S. EPA and CWM for these violations included a \$10,000 penalty and \$37,500 to purchase emergency response equipment for the Kings County Environmental Health Services [U.S. EPA 2005]. The Approval includes weekly inspection of the leachate removal systems in Landfill B-18 and monthly inspections in the closed Landfills B-14, B-16, and B-19. See Approval Conditions VI.E.3.d. and e. and VII.B.3.b.

*In August 2005*, U.S. EPA's National Enforcement Investigations Center ("NEIC") conducted a TSCA investigation of the Kettleman Hills Facility (Phase 1 of its multi-media investigation) and found several areas of noncompliance including improperly calibrating laboratory instruments analyzing PCBs [U.S. EPA 2006]. We issued a Notice of Noncompliance ("NON") which required documentation of appropriate laboratory procedures [U.S. EPA 2007c; U.S. EPA 2007d]. CWM provided the required information [CWM 2008a]. Accordingly, we found that CWM had remedied the issues of noncompliance and did not assess a penalty [U.S. EPA 2010a].

*In February and June 2010*, US EPA inspectors documented violations of the Approval and TSCA PCB regulations, including [U.S. EPA 2010b; EPA 2010c]:

- Failure to indicate removal from service date on PCB containers. PCB regulations require disposal of PCB waste within one year of its removal from service and the labeling of PCB Items including containers with this date.
- Failure to properly complete manifests by not including removal from service dates or weights on some manifests;
- Continued use of a PCB-contaminated building. PCB regulations prohibit the continued use of items and structures that are contaminated with PCBs unless they are first appropriately decontaminated.
- Improper disposal of PCBs. High-levels of PCBs were found in the building and in the soil around the PCB Flushing/Storage Unit that were the result of leaks and spills, both of which are considered disposal.

To settle these violations, CWM was required to clean-up the contamination around the PCB F/SU and to pay a penalty of over \$300,000 [U.S. EPA 2010d, U.S. EPA 2010e, AMEC 2010]. DTSC also took enforcement action against CWM for PCB releases around the PCB F/SU and required the Facility to take corrective action [DTSC 2011]. The final corrective action remedy included



construction of the outside containment area at the PCB F/SU with a sealed concrete floor and curb to prevent releases to soil around the Unit [ADE 2011].

*In May 2012*, CWM self-reported that it failed to test leachate from Landfill B-18 prior to its disposal as required by conditions in its 1992 Approval [CWM 2012a]. Subsequent testing of the remaining leachate, however, did not detect the presence of PCBs. CWM paid a penalty of \$9,750 [U.S. EPA 2012a].

U.S. EPA most recently inspected KHF in 2017 and found no violations [U.S. EPA 2017b].

## **B. RCRA VIOLATIONS**

*In December 2005*, NEIC conducted a follow-up RCRA/TSCA investigation (Phase 2 of its multi-media investigation). The focus of this investigation was on the CWM's testing and sampling methodologies and protocols. In its investigation report, NEIC documented problems with CWM's hazardous waste sampling, laboratory and testing protocols indicating CWM may have improperly disposed hazardous wastes that do not meet RCRA treatment standards [U.S. EPA 2007a].

*In February 2010*, U.S. EPA and DTSC jointly conducted an inspection of the Kettleman Hills Facility. As a result of the inspection, we found the following alleged violations [U.S. EPA 2011b]:

- Failure to determine whether waste meets the hazardous waste Land Disposal Treatment Standards prior to land disposal. Specifically, the Facility generated leachate from its hazardous waste landfill and surface impoundments and did not thoroughly evaluate whether the waste met treatment standards before land disposal.
- Impermissible land disposal of prohibited hazardous waste. The Facility reported instances where it excavated hazardous waste that was land disposed without proper treatment. In addition, U.S. EPA review of laboratory analysis found instances where the Facility disposed of hazardous waste that did not fully meet treatment standards.
- Failure to comply with the Hazardous Waste Permit – Noncompliance with EPA Method Lab Methods (Test Method 6010B). Both the Facility's RCRA permit and state and federal RCRA regulations require that the Facility comply with a particular laboratory method for analysis of hazardous waste. During review of laboratory records, U.S. EPA found that the Facility did not follow specific laboratory quality control requirements.
- Failure to comply with container requirements for several universal waste fluorescent lamps stored in the drum storage unit.

*In August 2011*, U.S. EPA and CWM reached a \$1 million settlement for these violations [U.S. EPA 2011b]. The settlement required CWM to pay \$400,000 penalty and spend an estimated \$600,000 to make physical and operational improvements at the Kettleman Hills Facility. The compliance activities include:



- Continued use of an outside laboratory for post-treatment metals analysis for a minimum of two years until an independent audit demonstrates that the Facility can produce reliable results;
- Replacing lab equipment;
- Installing new laboratory software;
- Annual characterization of landfill leachate;
- Covering and eliminating stormwater from entering the leachate tanks;
- Modifying cyanide treatment procedures; and
- Sampling liquids and sludge from onsite surface impoundment P-16.

*In March 2013*, DTSC penalized CWM over \$290,000 for failure to report 72 hazardous waste spills at the Kettleman Hills Facility over a four-year period from June 2008 to 2012 [DTSC 2013]. The penalty also addressed violations identified during the DTSC's April 2012 inspection. DTSC reviewed these spills, including the size, location, offsite consequences, cleanup response, and causes of these spills. Of the 72 spills, the largest spill was estimated at five to eight gallons, and 13 spills were less than a pint. The largest number of spills involved non-RCRA hazardous waste between a quart and a gallon. Most of these spills (60 out of 72) occurred at the sampling platforms and untarpping racks, where the Facility samples incoming loads for analysis [DTSC 2012].

DTSC required CWM to construct a containment system at the sampling platforms and untarpping racks to isolate any spills of hazardous waste from contact with the ground [DTSC 2003]. Construction of the containment system was completed in 2016 [Golder 2017].



**TABLE 4 – KHF RCRA/TSCA INSPECTIONS FROM 1992 TO PRESENT**

<b>DATE</b>	<b>TYPE OF INSPECTION</b>	<b>AGENCY</b>	<b>FINDINGS</b>
05/07/1992	Financial Record Review	DTSC	No violations.
05/11-12/1992	Compliance Evaluation Inspection	DTSC	RCRA violations – \$65,000 penalty (penalty also included violations found during 1990 and 1991 inspections). Return to compliance 06/25/1992.
05/14/1992	Compliance Evaluation Inspection	U.S. EPA	No violations.
08/15/1992	Operations and Maintenance Inspection	DTSC	No violations.
09/18/1992	Follow-up Inspection (to 05/12/1992 inspection)	DTSC	RCRA violations – \$65,000 penalty. Return to compliance 08/08/1993.
11/03/1992	Compliance Evaluation Inspection	DTSC	RCRA violations – One 55-gallon container and 2 bags of PCB waste not labeled. Two containers of incompatible waste stored next to each other. Penalty of \$1,100. Return to compliance 01/21/1993.
11/12/1992	Financial Record Review	DTSC	No violations.
03/27/1993	Operations and Maintenance Inspection	DTSC	No violations.
04/23/1993	Compliance Evaluation Inspection	U.S. EPA	RCRA violations related to land disposal restrictions and container management. Return to compliance 12/14/1993
11/01/1993	Compliance Evaluation Inspection	DTSC	No violations.
12/08/1993	TCA PCB Inspection	U.S. EPA	No violations.
04/05/1994	Compliance Evaluation Inspection	U.S. EPA	RCRA violations related to land disposal restrictions and container management. Return to compliance 10/05/1994.



**TABLE 4 (CONTINUED) – KHF RCRA/TSCA INSPECTIONS FROM 1992 TO PRESENT**

<b>DATE</b>	<b>TYPE OF INSPECTION</b>	<b>AGENCY</b>	<b>FINDINGS</b>
11/07/1994	Compliance Evaluation Inspection	DTSC	No violations.
05/03/1995	Compliance Evaluation Inspection	U.S. EPA	RCRA violations. Return to compliance 10/13/1995.
05/15/1995	Operations and Maintenance Inspection	DTSC	No violations.
08/31/1995	TSCA PCB Inspection	DTSC (as grantee to U.S. EPA)	No violations.
11/07/1995	Compliance Evaluation Inspection	DTSC	RCRA violations: Return to compliance 11/17/1995.
04/15/1996	Operations and Maintenance Inspection	DTSC	RCRA violations related to groundwater monitoring. Return to compliance 07/19/1996.
10/18/1996	Financial Record Review	DTSC	No violations.
11/19/1996	Compliance Evaluation Inspection	DTSC	No violations.
02/12/1997	Compliance Evaluation Inspection	DTSC	No violations.
03/31/1997	Compliance Evaluation Inspection	DTSC	No violations.
04/01/1997	Compliance Evaluation Inspection	DTSC	No violations.
04/08/1997	TSCA PCB Inspection	DTSC (as grantee to U.S. EPA)	No violations.
05/12/1997	Compliance Evaluation Inspection	DTSC	No violations.
06/23/1997	Compliance Evaluation Inspection	DTSC	No violations.
10/03/1997	Compliance Evaluation Inspection	DTSC	No violations.





**TABLE 4 (CONTINUED) – KHF RCRA/TSCA INSPECTIONS FROM 1992 TO PRESENT**

<b>DATE</b>	<b>TYPE OF INSPECTION</b>	<b>AGENCY</b>	<b>FINDINGS</b>
10/22/1997	Compliance Evaluation Inspection	DTSC	No violations.
11/19/1997	Compliance Evaluation Inspection	DTSC	No violations.
12/03/1997	Compliance Evaluation Inspection	DTSC	No violations.
02/23/1998	Compliance Evaluation Inspection	DTSC	No violations.
04/13/1998	Compliance Evaluation Inspection	DTSC	No violations.
05/12/1998	Compliance Evaluation Inspection	DTSC	No violations.
06/18/1998	Compliance Evaluation Inspection	DTSC	No violations.
07/21/1998	Compliance Evaluation Inspection	DTSC	No violations.
08/27/1998	Compliance Evaluation Inspection	DTSC	No violations.
10/06/1998	Compliance Evaluation Inspection	DTSC	RCRA violation. Emergency shower not operational. Return to compliance 10/09/1998.
10/14/1998	TSCA PCB Inspection	U.S. EPA	No violations.
11/24/1998	Compliance Evaluation Inspection	DTSC	No violations.
12/30/1998	Compliance Evaluation Inspection	DTSC	No violations.
02/02/1999	Compliance Evaluation Inspection	DTSC	No violations.
03/10/1999	Follow-up Inspection	DTSC	No violations.
04/30/1999	Follow-up Inspection	DTSC	No violations.
05/21/1999	Follow-up Inspection	DTSC	No violations.



**TABLE 4 (CONTINUED) – KHF RCRA/TSCA INSPECTIONS FROM 1992 TO PRESENT**

<b>DATE</b>	<b>TYPE OF INSPECTION</b>	<b>AGENCY</b>	<b>FINDINGS</b>
06/16/1999	Compliance Evaluation Inspection	DTSC	No violations.
09/08/1999	Compliance Evaluation Inspection	U.S. EPA	No violations.
09/28/1999	Follow-up Inspection	DTSC	No violations.
11/18/1999 – 11/19/1999 & 12/01/1999 – 12/02/1999	Financial Records Review	DTSC	RCRA violation. CWM reduced the face amount of their closure insurance without written approval from DTSC. \$5,000 penalty. Return to compliance 03/21/2000.
04/06/2000	Financial Record Review	U.S. EPA	No violations.
10/30/2000 – 11/03/2000	Compliance Evaluation Inspection	DTSC	RCRA violation. Biennial report data error from 1996-2000 and broken eyewash unit in the lab. Return to compliance 11/03/2000.
05/02/2001	Groundwater Operation and Maintenance Inspection	DTSC	No violations.
09/17/2001	Compliance Evaluation Inspection	DTSC	No violations.
10/25/2001	TSCA PCB Inspection	U.S. EPA	No violations.
02/26/2002	Groundwater Operation and Maintenance Inspection	DTSC	No violations.
09/16/2002	Compliance Evaluation Inspection	DTSC	No violations.
11/19/2002	Closure/Post-Closure Inspection	U.S. EPA	No violations.
06/10/2003	Groundwater Monitoring Evaluation	DTSC	RCRA violation. Violation related to sampling procedures - written informal enforcement action. Return to compliance 06/20/2003.
01/21/2004	Compliance Evaluation Inspection	DTSC	No violations.



**TABLE 4 (CONTINUED) – KHF RCRA/TSCA INSPECTIONS FROM 1992 TO PRESENT**

<b>DATE</b>	<b>TYPE OF INSPECTION</b>	<b>AGENCY</b>	<b>FINDINGS</b>
02/13/2004	Facility Self Disclosure	CWM	<b>TSCA violations. See description in narrative.</b>
03/15/2004	Compliance Evaluation Inspection	DTSC	<b>No violations.</b>
04/14/2004	TSCA PCB Inspection	U.S. EPA	<b>No violations.</b>
06/15/2004	Groundwater Operation and Maintenance Inspection	DTSC	<b>No violations.</b>
09/30/2004	Financial Records Review	DTSC	<b>No violations.</b>
10/15/2004	Compliance Evaluation Inspection	U.S. EPA	<b>No violations. RCRA inspection only.</b>
11/09/2004	Compliance Evaluation Inspection	DTSC	<b>No violations.</b>
03/23/2005	Compliance Evaluation Inspection	DTSC	<b>No violations.</b>
08/22/2005 – 08/23/2005	Multimedia - TSCA/RCRA	U.S. EPA (NEIC)	<b>TSCA violations. See description in narrative.</b>
12/5/2005 – 12/16/2005	Multimedia - TSCA/RCRA	U.S. EPA (NEIC)	<b>RCRA violations. See description in narrative.</b>
01/11/2006	Compliance Evaluation Inspection	DTSC	<b>No violations.</b>
09/22/2006	Financial Records Review	U.S. EPA	<b>No violations.</b>
11/06/2006 – 11/16/2006	Compliance Evaluation Inspection	DTSC	<b>No violations.</b>
03/01/2007	Financial Records Review	DTSC	<b>No violations.</b>
11/15/2007	Compliance Evaluation Inspection	DTSC	<b>No violations.</b>
10/02/2008	Compliance Evaluation Inspection	DTSC	<b>No violations.</b>



**TABLE 4 (CONTINUED) – KHF RCRA/TSCA INSPECTIONS FROM 1992 TO PRESENT**

<b>DATE</b>	<b>TYPE OF INSPECTION</b>	<b>AGENCY</b>	<b>FINDINGS</b>
10/29/2008	Compliance Evaluation Inspection	DTSC	No violations
03/13/2009	Financial Records Review	DTSC	No violations
09/15/2009	Compliance Evaluation Inspection	DTSC	No violations.
10/06/2009	Financial Records Review	DTSC	No violations.
02/07/2010 – 02/12/2010	Compliance Evaluation Inspection & TSCA PCB Inspection	DTSC/U.S. EPA	RCRA violations and TSCA violations. See description in narrative.
06/02/2010	TSCA PCB Inspection	U.S. EPA	TSCA violations. See description in narrative.
11/12/2010	Air Monitoring of Evaporation Ponds	U.S. EPA	No violations.
02/22/2012	Operation and Maintenance Inspection	DTSC	No violations.
04/9/2012 – 04/10/2012 04/12-13/2012 – 04/13/2012	Compliance Evaluation Inspection	DTSC/U.S. EPA	RCRA violation. Failure to properly treat hazardous waste prior to disposal and failure to resolve a significant manifest discrepancy within 15 days of discovery. Minor, failure to sign and check the certification on CWM-KHF's Waste Treatment and Disposal Form. Return to compliance 03/22/2013.
05/09/2012	Facility Self Disclosure	CWM	TSCA violations. See description in narrative.
06/12/2012	Financial Records Review	DTSC	No violations.
11/29/2012	TSCA PCB Inspection	U.S. EPA	No violations.
04/23/2013 – 04/24/2013	Compliance Evaluation Inspection	DTSC	No violations.
05/20/2013	Financial Records Review	DTSC	No violations.



**TABLE 4 (CONTINUED) – KHF RCRA/TSCA INSPECTIONS FROM 1992 TO PRESENT**

<b>DATE</b>	<b>TYPE OF INSPECTION</b>	<b>AGENCY</b>	<b>FINDINGS</b>
02/14/2014	Facility Self Disclosure	CWM	<b>RCRA violations. One load of hazardous waste was disposed of in Landfill B-18 that exceeded the Universal Treatment Standard for selenium. Return to compliance 03/29/2014.</b>
02/19/2014	Focused Compliance Inspection (Groundwater)	DTSC	<b>No violations.</b>
03/18/2014	Compliance Evaluation Inspection	DTSC	<b>No violations.</b>
08/11/2014	Financial Records Review	DTSC	<b>No violations.</b>
09/24/2014	Focused Compliance Inspection	DTSC	<b>No violations.</b>
12/10/2014	Focused Compliance Inspection	DTSC	<b>No violations.</b>
03/17/2015 – 03/18/2015	Compliance Evaluation Inspection	DTSC	<b>RCRA violations. Failure to enter most appropriate hazardous waste code for manifest in two manifests and the appropriate unit volume in one manifest. Return to compliance 03/18/2015.</b>
04/28/2015	Financial Records Review	DTSC	<b>No violations.</b>
09/30/2015	Focused Compliance Inspection	DTSC	<b>No violations.</b>
10/02/2015	Facility Self-Disclosure		<b>RCRA violations. Storage of hazardous waste for more than 30 days in temporary storage area (KHF laboratory). Return to compliance 10/02/2015.</b>
12/29/2015	Focused Compliance Inspection	DTSC	<b>No violations.</b>
02/09/2016	Compliance Evaluation Inspection	DTSC	<b>RCRA violation. Failure to enter a California waste code on a manifest. Return to compliance 02/09/2016.</b>
02/29/2016	Financial Records Review	DTSC	<b>No violations.</b>



**TABLE 4 (CONTINUED) – KHF RCRA/TSCA INSPECTIONS FROM 1992 TO PRESENT**

<b>DATE</b>	<b>TYPE OF INSPECTION</b>	<b>AGENCY</b>	<b>FINDINGS</b>
09/14/2016	Focused Compliance Inspection	DTSC	No violations.
10/13/2016	Non-Financial Record Review	DTSC	RCRA violations. Failure to conduct and analyze the monitoring parameters listed in the Operation Plan of its RCRA Permit. DTSC concluded the groundwater data required were not received for many evaluation monitoring program wells for the 2014 calendar year. Additionally, wells within the Class I monitoring program were not monitored quarterly. Return to compliance 10/13/2016.
02/01/2017	Compliance Evaluation Inspection	DTSC	RCRA violation. Failure to label one hazardous waste container per RCRA regulations. Return to compliance 02/01/2017.
03/15/2017	Financial Records Review	DTSC	No violations.
05/02/2017– 05/03/2017	Focused Compliance Inspection (Groundwater)	DTSC	No violations.
08/17/2017	Compliance Evaluation Inspection	DTSC	No violations.
09/28/2017	TSCA Compliance Evaluation Inspection	U.S. EPA	No violations.
03/27-28/2018	Compliance Evaluation Inspection	DTSC	RCRA violations. Mistake on manifest paperwork and failure to close a single 55-gallon drum containing used oil filters. Return to compliance 04/26/2018.
04/10/2018	Financial Records Review	DTSC	No violations.
6/28/2018	Focused Compliance Inspection	DTSC	No violations.
09/11/2018	Focused Compliance Inspection	DTSC	No violations.



**TABLE 4 (CONTINUED) – KHF RCRA/TSCA INSPECTIONS FROM 1992 TO PRESENT**

<b>DATE</b>	<b>TYPE OF INSPECTION</b>	<b>AGENCY</b>	<b>FINDINGS</b>
02/07/2019	Focused Compliance Inspection	DTSC	No violations.
04/16/2019	Compliance Evaluation Inspection	DTSC	Minor violations. Failure to label a container of hazardous waste container; failure to contain universal waste (batteries) in a structurally sound container. Return to compliance: 04/16/2019
05/21/2019	Financial Records Review	DTSC	No violations.
12/04/2019	Focused Compliance Inspection	DTSC	No violations
03/04/2020	Compliance Evaluation Inspection	DTSC	RCRA Minor violation. Two employees failed to complete all required training. Return to compliance 04/01/2020.
04/10/2020	Financial Records Review	DTSC	No violations.

Sources: U.S. EPA 2018h, CWM 2018f, [https://www.envirostor.dtsc.ca.gov/public/erp\\_profile\\_report.asp?global\\_id=3002354](https://www.envirostor.dtsc.ca.gov/public/erp_profile_report.asp?global_id=3002354)



## V. EVALUATION OF RISK OF INJURY TO HUMAN HEALTH AND THE ENVIRONMENT FROM PCB OPERATIONS AT THE KETTLEMAN HILLS FACILITY

40 C.F.R. § 761.65(d)(2)(vi) requires U.S. EPA to determine that a PCB commercial storage facility will not pose an unreasonable risk of injury to health or the environment before granting an approval for its operations. 40 C.F.R. § 761.75(c)(3)(ii) allows U.S. EPA to include any requirements that we find necessary to ensure that operations of a chemical waste landfill do not pose an unreasonable risk of injury to health or the environment from PCBs.

### A. EVALUATION OF RISK

While there are many definitions of health and ecological risk, in this context U.S. EPA considers risk to be a measure of the likelihood of developing adverse human health or ecological impacts from exposure to environmental stressors. See <https://www.epa.gov/risk/about-risk-assessment#whatisrisk>.

A stressor is any physical, chemical, biological or social entity that can induce an adverse health impact. In this case we are assessing the risk, or likelihood of developing adverse human or ecological health impacts, from exposure to PCBs potentially released from the Kettleman Hills Facility.

In general terms, the likelihood of developing adverse health and ecological impacts from PCBs is influenced by the following factors:

- The amount (concentration) of PCBs in the environment (e.g., soil, water, air)
- The extent and nature of exposure that an individual or ecosystem has with the contaminant, and
- The intrinsic toxicity or potency of the PCB family of chemicals.

#### 1. PCB ADVERSE HEALTH IMPACTS

PCBs have been demonstrated to cause a variety of adverse health impacts. They have been shown to increase the likelihood (risk) of developing cancer in animals as well as several systemic, non-cancer health effects. Those include adverse impacts on the immune, reproductive, nervous and endocrine systems [ATSDR 2000]. For additional information on the health effects of PCBs, see <https://www.epa.gov/pcbs/learn-about-polychlorinated-biphenyls-pcbs#healtheffects>.

#### 2. KETTLEMAN HILLS FACILITY CONCEPTUAL SITE MODEL AND POTENTIAL ROUTES OF PCB EXPOSURE

A conceptual site model (CSM) is a representation of the linkages among contaminant sources, release mechanisms, and the potential pathways of human or ecosystem exposure. An exposure pathway describes the pathway a chemical or physical agent takes from its source to the exposed





individual (receptor). An exposure pathway analysis links the sources, locations and types of environmental releases with population locations and receptor activity patterns. A complete exposure pathway generally consists of four elements:

- a source and mechanism of chemical release,
- a retention or transport medium or media (e.g., soil, air),
- a point of potential human or ecological contact with the contaminated medium (referred to as the exposure point), and
- an exposure route (inhalation, ingestion or dermal uptake) at the contact point.

The likelihood, or risk, of developing adverse health impacts is dependent on all four elements of this exposure pathway remaining complete. If any element of this exposure pathway is missing, then the pathway is considered incomplete and the resultant health-risk to either humans or the environment is mitigated.

For the Kettleman Hills Facility, PCBs may be released from the Facility as either air emissions or in contamination of water. Air dispersion of PCBs can occur from volatilization (evaporation) of PCB liquids from open containers, from spills and leaks, and from the surface of the landfill. It can also occur if PCB-containing soils become airborne during storage, treatment or disposal operations or during high winds. Water contamination can occur if stormwater contacts PCB waste and is not properly managed onsite and if leaks from the PCB landfills or from the storage containment areas impact groundwater.

A schematic conceptual site model (CSM) for the landfills at Kettleman Hills Facility is provided in **Figure 4** below.

### 3. NUMERICAL ESTIMATES OF HEALTH-RISK

U.S. EPA's National Oil and Hazardous Substances Pollution Contingency Plan (NCP) [40 C.F.R. Part 300] and risk-assessment guidance<sup>9</sup> specifies the Agency's acceptable threshold for cancer-causing constituents. Cancer risk is a measure of the likelihood of developing cancer from exposure to a cancer-causing contaminant. The acceptable risk-range for carcinogens spans from 1 additional case of cancer in 1 million exposed individuals ( $1E^{-6}$ ) to 100 additional cases of cancer in 1 million ( $1E^{-4}$ ) exposed individuals. See 40 C.F.R. § 300.430(e)(2)(i)(A)(2). The current background incidence of cancer in the United States is 1 case in 3. See <https://seer.cancer.gov/statfacts/html/all.html>.

U.S. EPA assesses the potential for developing non-cancer or systemically-toxic adverse health impacts from chemical exposures by initially identifying the minimum concentration of the contaminant that has not been associated with inducing an adverse health impact. This contaminant concentration is then reduced by a number of safety and modifying factors to further reduce the

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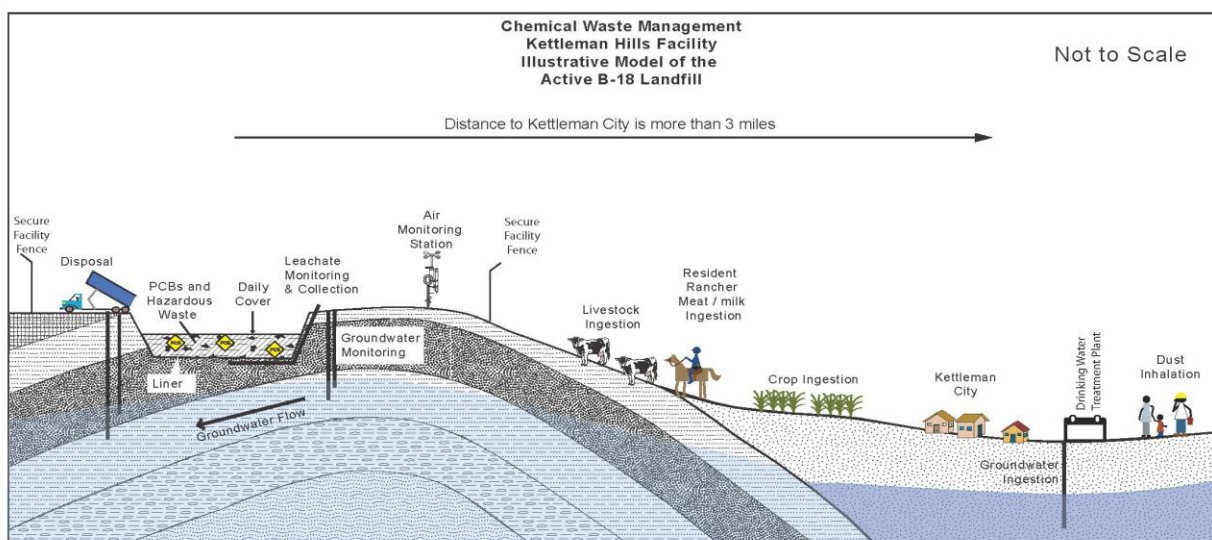
<sup>9</sup> See "Risk Assessment Guidance for Superfund (RAGS) – Volume 1 Human Health Evaluation Manual (EPA/540/1-89/002)." U.S. EPA. December 1989 found at [https://www.epa.gov/sites/production/files/2015-09/documents/rags\\_a.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/rags_a.pdf)



contaminant concentration below a level of concern even for sensitive individuals or subgroups. See 40 C.F.R. § 300.430(e)(2)(i)(A)(1).

This conceptual approach allows U.S. EPA to arrive at an estimate of a daily exposure amount for PCBs that is likely to be without appreciable risk of deleterious impacts over a lifetime. This exposure amount is referred to as a reference dose (RfD) for oral (ingestion) exposures and/or a reference concentration (RfC) for inhalation exposures. The RfD for PCBs is  $2 \times 10^{-5}$  milligrams of PCBs per kilogram of body weight per day (mg/kg-day).

**FIGURE 4 – CONCEPTUAL SITE MODEL FOR THE KETTLEMAN HILLS FACILITY**



What	How	Who	Control	Monitored?	Protective?
Dust	Inhalation Dermal Contact	Adult, Child, or Local Ranch Family	On-site dust control Distance	Yes	Yes
Groundwater	Ingestion	Adult, Child, or Local Ranch Family	Opposite groundwater flow direction; Distance	Yes	Yes
Livestock	Ingestion	Adult, Child, or Local Ranch Family	Limited Grazing Season Fence	No*	Yes
Crops	Ingestion	Adult, Child, or Local Ranch Family	On-site dust control Distance	Yes	Yes

\* PCB congener study evaluated potential impacts to grazing cattle

**B. EXISTING PCB SCIENTIFIC AND PUBLIC HEALTH STUDIES**

There have been several multidisciplinary studies and investigations evaluating potential public health and environmental impacts of the Kettleman Hills Facility. We focus in this section on those that evaluate PCBs. We discuss other non-PCB related studies and investigations in **section V.F.** below.



## 1. THE PCB CONGENERS STUDY AND RISK ASSESSMENT

In response to community concerns, U.S. EPA requested Chemical Waste Management, Inc. to study possible off-site impacts that PCB disposal operations at Kettleman Hills Facility may present to human health or the environment [U.S. EPA 2008b]. U.S. EPA requested the collection of soil, vegetation and air samples at the perimeter of the Facility and analysis of these samples for the 12 most toxic PCB congeners.<sup>10</sup> This sampling took place during 2009. The results of this sampling were then used to assess risk to human health and the environment from PCB operations at the Facility. These studies are collectively referred to as the Dioxin-Like PCB Congeners Study Report (“PCB Congeners Study”) [Wenck 2010].

U.S. EPA worked closely with Chemical Waste Management to: 1) design the study; 2) review and approve all sampling plans to ensure that Agency standards and protocols were met; 3) oversee sample collection; 4) collect soil split samples; 5) review all of the data against Agency quality assurance/quality control standards; and 6) review and approve the risk analysis report. We also worked closely with the community, including providing multiple opportunities for study design input.<sup>11</sup>

U.S. EPA reviewed the PCB Congeners Study report and its associated risk analysis report. The study found no evidence suggesting that PCB congeners from operations at KHF migrate off-site at concentrations that would adversely impact the health of nearby residents or the environment. Based on the study results, U.S. EPA concluded the following:

- Concentrations of the most toxic PCB congeners in soil samples collected at the perimeter of the Kettleman Hills Facility are significantly below U.S. EPA’s health-based clean-up levels.
- Risk of health impacts from PCB congener concentrations measured in soils, vegetation, and air near the perimeter of the Facility are in the same range as risk of health impacts in other rural areas without known PCB activities or sources.
- Concentrations of PCB congeners measured in soils, vegetation and air at the Facility perimeter as well as those collected at the Landfill B-18 landfill drainage swale do not adversely affect ecological species.
- There is no evidence suggesting that PCBs are migrating off-site at concentrations that would adversely affect the health of local community residents or the environment.

More information on the results and conclusions of the PCB Congeners Study can be found in the study’s final report a copy of which is located in the administrative record for this action.

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<sup>10</sup> PCBs are a group of man-made chemicals that contain 209 individual compounds known as congeners. Twelve of these 209 congeners have been identified by the World Health Organization as having dioxin-like properties and most toxic to human health and the environment. Typically, PCBs are analyzed for Aroclors, which are a mixture of PCB congeners; however, for the PCB Congeners Study, U.S. EPA required the collected samples to be analyzed for the subset of 12 dioxin-like congeners because they are the most significant contributors to risk from PCBs.

<sup>11</sup> More information on this community outreach and involvement is in section 6.1 of the Draft Environmental Justice Analysis which can be found in [Appendix G](#) of this SB.



During the public comment period, U.S. EPA received comments that it improperly relied on the PCB Congeners Study in making the determination that operations at the Kettleman Hills Facility, under the terms and conditions of the Approval, would not pose an unreasonable risk of injury to health or the environment. The PCB Congeners Study was one of several studies that U.S. EPA evaluated to determine the health risk from PCB releases from the Kettleman Hills Facility. Because any individual study may suffer from flaws that undermine its conclusions, U.S. EPA relied on conclusions drawn from multiple studies in making the determination of no unreasonable risk. See Appendix K, responses to comments D-21 and D-22.

## 2. THE KETTLEMAN CITY COMMUNITY EXPOSURE ASSESSMENT

The Community Exposure Assessment was conducted by the California Environmental Protection Agency (CalEPA) to assess potential environmental contamination in the air, groundwater and soils in Kettleman City that could cause birth defects and other potential health risks to the community [CalEPA 2010]. The Assessment was concurrent with and in support of California Department of Public Health's (CDPH) investigation into an increase in the number of birth defects in Kettleman City during 2007-2010.<sup>12</sup> The list of chemicals evaluated included PCBs as well as a broad range of industrial and commercial chemicals (volatile and semi-volatile organic compounds), metals, and pesticides [CalEPA 2010, pp. Cal/EPA-9 - 15].

Responsibility for the Assessment was divided among several CalEPA boards and departments including the California Air Resource Board (CARB), DTSC, and the California Department of Pesticide Regulations (CDPR). More detailed discussion of each agency's investigation as it relates to PCBs is below. More details on the investigations as they related to other chemicals and metals can be found in Draft Environmental Justice Analysis. See section VI and Appendix G.

During the public comment period, U.S. EPA received a number of comments stating that there were significant flaws with the 2010 Investigation of Birth Defects and Kettleman City Community Exposure Assessment and that U.S. EPA improperly relied on the Investigation and Assessment in making the determination that operations at the Kettleman Hills Facility, under the terms and conditions of the Approval, would not pose an unreasonable risk of injury to health or the environment. The Investigation and Assessment are two of several studies that U.S. EPA evaluated to determine the health risk from PCB releases from the Kettleman Hills Facility. Because any individual study may suffer from flaws that undermine its conclusions, U.S. EPA relied on conclusions drawn from multiple studies in making the determination of no unreasonable risk. See Appendix K, responses to comments D-21 and D-23 through D-33.

### a. KETTLEMAN CITY AIR QUALITY ASSESSMENT

Air monitoring as part of the Community Exposure Assessment was planned and carried out by CARB with analyses of the PCB congener samples done by the U.S. EPA Laboratory [CalEPA

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<sup>12</sup> The final report for this investigation "Investigation of Birth Defects and Community Exposures in Kettleman City, CA" was issued jointly by the CDPH and CalEPA in December 2010 and consists of an executive summary and two parts. Part 1 contains the "Investigation of Birth Defects in Kettleman City" and "An Evaluation of the Pattern of Cancer Occurrences in the Vicinity of Kettleman City" both by CDPH. Part 2 is the "Kettleman City Community Exposure Assessment" by CalEPA. The final report without its appendices is listed in the reference section of this SB under CalEPA 2010. The appendices, when referenced in this SB, are listed separately.



2010, p. Cal/EPA-23]. Air monitoring was conducted at three sites: Kettleman City Elementary School and the upwind monitoring site and downwind air monitoring site #2 at the Kettleman Hills Facility. Results from the monitoring showed that PCBs were found in the ambient air at concentrations similar to other parts of California with the concentration found at the Kettleman City Elementary School monitoring site a little higher than found upwind and downwind of the Facility. The ambient concentrations of PCB congeners found at all these sites were well below the level of health concern [CalEPA 2010, p. Cal/EPA-57].

Overall, CalEPA concluded that the air monitoring indicated that the Kettleman Hills Facility did not affect the ambient concentrations of the chemicals found in the air of Kettleman City. It also concluded that it was not likely that airborne contaminants measured during the study at the Facility pose health risks to the residents of Kettleman City [CalEPA 2010, part 2, p. 58].

#### ***b. KETTLEMAN CITY WATER QUALITY ASSESSMENT***

Sampling of water in Kettleman City as part of the Community Exposure Assessment was planned and carried out by DTSC with analyses of the samples done primarily by the U.S. EPA Region 9 Richmond Laboratory [CalEPA 2010, p. Cal/EPA-28]. Water samples were taken from eleven home kitchen sink faucets, the three community water wells, the California Aqueduct, and an agricultural drainage canal. Three of the residential water samples and all well and canal samples were analyzed for PCBs. No PCBs were detected in any sample [CalEPA 2010, pp. Cal/EPA-51, 53, and 54].

Multiple lines of scientific evidence have indicated that groundwater beneath Kettleman Hills Facility is not hydraulically connected to the groundwater underlying Kettleman City [CalEPA 2010, p. Cal/EPA-17; RWQCB 2014a, p. 3]. This means that groundwater below the Facility is hydraulically isolated from any drinking water source, and that groundwater is not considered to be a possible exposure pathway to residents through the consumption of contaminated drinking water.

#### ***c. KETTLEMAN CITY SOIL CONTAMINATION ASSESSMENT***

Sampling of soil in Kettleman City as part of the Community Exposure Assessment was planned and carried out by DTSC with analyses of the samples done primarily by the U.S. EPA Region 9 Richmond Laboratory [CalEPA 2010, pp. Cal/EPA-28]. Nine samples from residences distributed evenly across the community and four additional samples from the base of utility poles that had transformers<sup>13</sup> attached to them were analyzed for PCBs [CalEPA 2010, p. Cal/EPA-28; ACS 2010]. No PCBs were detected in any of the soil samples [CalEPA, p. Cal/EPA-55].

### **3. THE KETTLEMAN HILLS FACILITY 2011 HEALTH RISK ASSESSMENT**

DTSC required Chemical Waste Management, Inc. to establish an Ambient Air Quality Monitoring Program (AAMP) as part the Facility's 2003 RCRA permit. The AAMP was designed to assess releases of VOCs, semi-volatile compounds (including PCBs), metals, and particulates

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<sup>13</sup> Dielectric fluid in electrical transformers is the most common historical uses of PCBs. Leaks or other releases from PCB-containing transformers could contaminate the ground around the base of utility poles.



from the Facility. Historic waste profiles and the Facility's 1994 characterization study<sup>14</sup> were used to establish the list of chemicals of concern. The AAMP originally established three monitoring locations near the Facility's property line: two fixed locations downwind (south-southeast and east) and one fixed location upwind (north-northwest).<sup>15</sup> [Wenck 2016a]. More information on the AAMP can be found in **section III.F.2.** of this SB.

In 2011, the Kettleman Hills Facility evaluated ambient air quality data from the three sampling stations between 2006 and 2010 and performed a risk assessment using these data to evaluate potential risks to human health in the area surrounding the Facility from emissions from the Facility [Wenck 2011c].

This study included two components, an "Inhalation Health Risk Assessment" (HRA) and a "Residential HRA." The Inhalation HRA evaluated risks from potential emissions from the Facility to a hypothetical ranch worker working next to the Facility's property line and for a hypothetical commercial/industrial worker working at a facility located next to the property line. The "Residential HRA" evaluated risks from potential emissions from the Facility for four different scenarios. Three scenarios covered residential areas in and around Kettleman City (Kettleman City, Kettleman Junction and the nearest resident to the Facility). The fourth scenario was a hypothetical long-term resident rancher living right next to the Facility's property line. All four residential risk assessments evaluated risks associated with potential emissions from KHF. The assessment found that potential emissions of PCBs as well as VOCs, pesticides, metals, and particulates from Kettleman Hills Facility do not pose health risks in residential areas in and around Kettleman City for the following reasons:

- The risk results for additional lifetime cancer risks and noncancer health effects at all three residential locations in and around Kettleman City were well below target risk levels identified by U.S. EPA.
- The calculated risks in and around Kettleman City associated with KHF emissions were at least 1,000 times lower than the calculated background inhalation risk.
- The potential worst-case additional lifetime cancer risks for a hypothetical long-term resident rancher living at the maximum impact property boundary location, were within U.S. EPA's target risk management range.
- The potential lifetime cancer risks due to the Facility's emissions for a hypothetical commercial/industrial worker working at the maximum impact property boundary

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<sup>14</sup> Under DTSC guidelines, an independent firm conducted the "1994 Topographical, Meteorological and Airborne Contaminant Characterization at Kettleman Hills Facility" [Rust 1995]. The purpose of this study was to "identify and quantify hazardous constituents being emitted into the air from the facility and to fully characterize the topography and meteorological conditions at the facility which would affect their transport." [Rust 1995, p. v].

<sup>15</sup> The 2014 RCRA permit modification required installation of a fourth permanent station between the Facility and Kettleman City. DTSC approved the siting of this new monitor in May 2016 [DTSC 2016] and it began operating later that year. This additional ambient air monitoring location was added to assess releases of VOCs, semi-volatile organic compounds (including PCBs), metals and particulates that are emitted when the predominant wind direction is toward Kettleman City.



location were at the low end of USEPA's benchmark risk management range, and marginally higher than the DTSC benchmark risk level.

- The risk results for noncancer health effects for all scenarios (the Hazard Index) were well below target risk levels identified by U.S. EPA.

Chemical Waste Management, Inc. annually prepares and submits to DTSC a screening level human risk evaluation which updates the 2011 Health Risk Assessment using the most recent year's ambient air monitoring data. Annual screening reports have been submitted for 2012, 2013, 2014, 2015, 2016, 2017, and 2018. None have shown substantial differences in human health risks from Facility air emissions compared to the 2011 assessment [Wenck 2012c, Wenck 2013b, Wenck 2014a, Wenck 2015b, Wenck 2016b, Wenck 2017a, Wenck 2018a].

### C. AIR QUALITY AND GROUNDWATER MONITORING

U.S. EPA reviewed available ambient air quality monitoring data that has been collected at the Kettleman Hills Facility's monitoring stations since the conclusion of the PCB Congeners Study. We also reviewed groundwater monitoring data collected after completion of the Kettleman City Community Exposure Assessment. We reviewed this data to determine if PCB releases from the Facility have been detected since these studies concluded.

The air quality and groundwater monitoring programs at the Kettleman Hills Facility have been on-going for many years under the Facility's state RCRA permit and waste discharge order [DTSC 2003; RWQCB 2014b]. The Facility's previous TSCA approvals also required groundwater monitoring [U.S. EPA 1992b].

Since the current program of air monitoring at the Facility started in October 2006 until 2016, air samples for PCB analysis were collected once every 12 days for 24-hours each.<sup>16</sup> In 2016, month long sampling for PCBs was added [Wenck 2016; DTSC 2016]. U.S. EPA reviewed air monitoring reports submitted by the Facility between 2011 and 2018 to determine if PCBs have been detected at the Facility's air monitors.<sup>17</sup> No PCBs have been detected above the applicable detection limits. [Wenck 2011a, b, & d; Wenck 2012a, b, d, & e; Wenck 2013a & c-e; Wenck 2014b-d; Wenck 2015a& c-e; Wenck 2016a& c-e; Wenck 2017b-e; Wenck 2018b-e; Wenck 2019a-d; Wenck 2020a].

Groundwater monitoring data has been collected at the Kettleman Hills Facility for over 30 years. Currently, groundwater samples are tested for PCBs once every five years as part of the constituents of concern (COC) testing required by the RWQCB and DTSC. The last COC testing was conducted in the fourth quarter of 2016 (October through December 2016) [AMEC 2017].

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<sup>16</sup> From mid-April 2008 until early January 2011, PCB monitoring under the Facility's AAMP was discontinued with DTSC's approval because no PCBs above the detection limits had been identified in the 18 months of sampling prior to 2008 [Wenck 2010, p. 2-6.]. However, during this period, air monitoring for PCBs was conducted throughout 2009 as part of the PCB Congeners Study [Wenck 2010, p. 3-5] and again between mid-June and September, 2010 for the Kettleman City Environment Assessment [CARB 2010].

<sup>17</sup> Air monitoring data prior to 2009 were reviewed as part of the PCB Congeners Study. No PCBs were identified above the detection limit [Wenck 2010, p. 2-6].



Previous COC testing was performed in the first quarter of 2012 [AMEC 2012]. PCBs were not detected in either of these tested samples.

#### **D. EXISTING AND NEW PHYSICAL AND OPERATIONAL CONTROLS TO LIMIT RISK**

The design of the PCB Units and required operational controls at Kettleman Hills Facility address each of the pathways that PCBs may travel offsite to reduce the potential for PCB releases.

The potential for air emissions of PCBs is reduced through requirements for:

- keeping containers closed when waste is not being transferred in or out (Approval Condition V.D.5.),
- a carbon filter on PCB Storage Tank vent (Approval Condition V.F.7.),
- swift cleanup of spills (Approval Conditions IV.G.1. and 2.),
- regularly inspection of containers and tanks for leaks (Approval Condition V.H.1.),
- solidification of liquids prior to landfilling (Approval Conditions VI.B.1.i. and r.),
- daily landfill cover (Approval Condition VI.D.7.),
- dust management practices (Approval Conditions IV.F.5. and VI.D.8.), and
- cessation of landfilling operations during high wind events (Approval Condition VI.D.8.).

The potential for PCB contamination of stormwater is reduced through requirements for:

- design of landfill to prevent run on and runoff (Approval Conditions VI.F.1. and 2. and VII.B.3.e.),
- collection of stormwater that contacts waste (collected stormwater is treated as hazardous waste) (Approval Conditions VI.F.1., 2. and 3.),
- implementation of a pollution prevention program for stormwater (Approval Condition VI.F.1.),
- limiting amount of PCB waste that can be stored to 25 percent of available containment volume (Approval Condition V.C.1.),
- PCB Waste handling and storage operations to occur within containment areas (Approval Conditions V.E.1.), and
- sizing of outside containment area to account for a maximum rain event (Approval Condition V.C.1. and Renewal Application, Attachment 7).

The potential for PCB contamination of groundwater is reduced through requirements for:

- no disposal of PCB liquids in Landfill B-18 (Approval Condition VI.C.2.),





- lined landfills (Renewal Application, Section 5.1),
- leachate collection and removal systems (Approval Conditions VI.E. and VII.B.3.b.);
- inspection and maintenance of covers on closed landfills ( Approval Condition VII.B.3.d.),
- maintenance of the containment areas at the PCB F/SU (Approval Conditions V.H.4), and
- the conditions listed previously to reduce PCB contamination by stormwater.

#### **E. MONITORING REQUIREMENTS TO IDENTIFY PCB RELEASES**

The Kettleman Hills Facility has ambient air and groundwater monitoring programs that can detect releases of PCBs. These programs were designed in conjunction with the DTSC (air and groundwater) and the Central Valley Regional Water Quality Control Board (groundwater) to provide the information needed to protect human health and the environment. In addition to these environmental monitoring program, the Facility has a comprehensive facility inspection program which requires daily, weekly, and monthly checks of all aspects of the Facility's operations and quarterly tests the PCB Flushing/Storage Unit for PCB contamination. These programs are described in **section III.F.** of this SB.

#### **F. FINAL DETERMINATION**

U.S. EPA has determined that PCB waste storage, treatment for disposal, and disposal operations at the Kettleman Hills Facility as allowed and limited by the Approval will not pose an unreasonable risk of injury to health or the environment.

This risk-based determination is predicated on the analysis of a number of objective, site-specific and multidisciplinary scientific investigations which collectively assessed the exposure threat and health-risk posed by potential PCB releases from the Kettleman Hills Facility. This risk-based determination is also contingent upon the multimedia monitoring and surveillance requirements for PCBs, as discussed above, as well as design and operational controls imposed on the Facility in the Approval.

Any individual scientific study or environmental investigation may suffer from data gaps, study-design limitations and confounding factors that collectively serve to undermine the findings or conclusions that can be drawn from that study. Because of these vulnerabilities, rather than rely on any single study, this determination relies on the findings and conclusions drawn from a number of multidisciplinary and complementary site or community-specific scientific investigations. This strategic approach allows U.S. EPA to assess the overarching weight of the scientific evidence regarding the exclusive relationship between potential PCB releases and the likelihood or magnitude of adverse health impacts within the Kettleman City community. Collectively, these studies focused on the potential relationship between PCBs released from the Facility and the wide-ranging public health impacts documented in Kettleman City (see Environmental Justice



Analysis, section 3.4). These studies were not able to identify PCB concentrations above a level of concern, nor unacceptable health risk-estimates to either residents or Facility (on-site) workers. Further, based on comprehensive monitoring and surveillance information, the concentration of PCBs found at locations proximate to the Facility are consistent with the concentrations of PCBs found in many rural areas of California's Central Valley [Wenck 2010; EPA 2007b]. These PCB concentrations are also consistent with the concentration of PCBs found by a separate U.S. EPA investigation in undisturbed wilderness locations of the U.S. [Wenck 2010; EPA 2007b].

U.S. EPA acknowledges this determination is predicated exclusively on the potential PCB releases and consequences from the Kettleman Hills Facility. By definition then, the scientific criteria evaluated in support of this determination are not inclusive of the social determinants of health which negatively impact the residents of Kettleman City. Unfortunately, other environmental and social stressors which potentially impact the public health status of this community—such as high levels of arsenic in drinking water and low incomes—remain beyond the scope of this regulatory action under TSCA. U.S. EPA has evaluated these stressors for the Kettleman City community in the Environmental Justice Analysis that accompanies this final action. See **section VI**, and **Appendix G**. Nevertheless, TSCA does allow U.S. EPA to impose PCB control and monitoring requirements as necessary to ensure that the Kettleman Hills Facility does not pose an unreasonable risk to public health or the environment. U.S. EPA believes the multimedia controls and monitoring requirements included in the Approval ensure this level of protection.

U.S. EPA received numerous comments objecting to its determination that PCB operations at the Kettleman Hills Facility under the terms and conditions of the Approval would not pose an unreasonable risk to health or the environment. It also received comments raising issues with the investigations underlying the determination. We evaluated and responded to each comment received. See Appendix K, **section D**. No comments raised issues or provided new information that lead U.S. EPA to revise its determination.

A number of other environmental and health studies and investigations have evaluated potential contaminants other than PCBs in Kettleman City and the Kettleman Hills Facility. These studies and investigations were not able to correlate or characterize a causal relationship between facility operations, facility releases and the public health impacts that have been previously documented within the Kettleman City community. A synopsis of these studies found in the Draft Environmental Justice Analysis in **Appendix G**.

## VI. ENVIRONMENTAL JUSTICE ANALYSIS

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Achieving environmental justice is a U.S. EPA priority and is an integral part of the U.S. EPA's mission to protect human health and the environment.



As part of its decision process on CWM's application to renew and modify its TSCA approvals, U.S. EPA prepared an Environmental Justice (EJ) Analysis (**Appendix G**). U.S. EPA focused the EJ Analysis on Kettleman City. The Kettleman City community has a long history of advocating for environmental justice in local, state, and federal decisions related to the Facility. This history of advocacy has already helped the community in the ways discussed in the EJ Analysis and has also helped U.S. EPA to prepare the Analysis and the proposed and final Approval.

Prior to proposing the Approval, U.S. EPA considered publicly available data, tools, studies, and concerns expressed by the community to focus on potential health and environmental impacts that are within U.S. EPA's legal authority to address during the permitting process. Multiple objective, site-specific and multidisciplinary scientific investigations have been completed since 2007, giving U.S. EPA information to better understand any exposure threat or potential health risks posed by Facility operations. Previous and more recent outreach activities have also helped U.S. EPA engage with Kettleman City to identify and address community concerns both inside and outside the scope of the PCB action. U.S. EPA's findings, based on the information detailed in the analysis, can be summarized as follows:

- U.S. EPA acknowledges that the majority of Kettleman City residents are minority and low-income. It also shows that Kettleman City has an above average number of residents whose primary language is Spanish and above average number of adults that did not graduate high school. Kettleman City faces several environmental burdens including poor air quality and drinking water that exceeds the state drinking water quality standards for arsenic. In past years, the community suffered an increased occurrence of birth defects. Mortality rates in Kings County are higher than the state-wide rates and children and older adults in Kings County are more impacted by asthma than the state average.
- U.S. EPA reviewed air monitoring between 2011 and 2018. PCBs have not been detected above the applicable detection limits.
- Groundwater monitoring has been conducted at the Facility for over 30 years. PCBs have rarely been detected.
- The PCB Congeners Study found no evidence suggesting that PCB congeners from operations at the Facility are migrating off-site at concentrations that would adversely affect the health of local community residents or the environment.
- CWM has been responsive to RCRA and TSCA compliance issues. While KHF has violated applicable requirements in the past, the corrective actions that the Facility implemented to address these violations include physical and operational improvements to reduce the potential for future violations and to prevent and contain future releases.
- The Approval conditions will prevent or reduce releases, quickly discover and correct situations that could lead to releases or minimize releases that may happen and continue Facility-specific air and groundwater monitoring for PCBs.



U.S. EPA's determination is that the Approval will ensure that PCB operations at the Kettleman Hills Facility will not pose an unreasonable risk of injury to health or the environment. The Approval includes engineering and operational controls that prevent or reduce the likelihood of PCB releases from the facility. It also includes facility PCB monitoring requirements for air and water that will provide additional information to protect the community. The Approval decision is supported by a number of multidisciplinary public health investigations conducted or required by local, state and federal agencies. Collectively, these studies have shown no increased human health risk to the community from PCB operations at this facility.

U.S. EPA has prepared an Updates and Revisions document to supplement the Draft EJ Analysis. These updates and revisions include information reflecting comments received on the proposed permit and Draft EJ Analysis, updated information, and other revisions and corrections. The EJ Analysis including the Updates and Revisions document can be found in **Appendix G**. U.S. EPA also received numerous comments on the Draft EJ Analysis. The Agency has summarized, evaluated and responded to each comment received. See Appendix K, **section E**.

## VII. SUPPORTING DETERMINATIONS

U.S. EPA requested comments on its determinations supporting the proposed Approval of CWM's Renewal Application. No comments were received objecting to any of these supporting determinations.

### A. NATIONAL HISTORIC PRESERVATION ACT

Section 106 of the National Historic Preservation Act ("NHPA"), 54 U.S.C. §100101 *et seq.*, requires federal agencies to account for the effects of their undertakings on historic properties, and afford consulting parties and the public reasonable opportunity to comment. The requirements of NHPA apply to the U.S. EPA for the renewal and modification of the TSCA Approvals for CWM to manage PCB waste at the Facility because issuance of this Approval is an "undertaking" pursuant to NHPA.

Pursuant to 36 C.F.R. § 800.4(d)(1), U.S. EPA made the determination of "No Effect to Historic Properties" for the renewal and modification of the Approvals in a letter to the California Office of Historic Preservation ("OHP") on September 17, 2018 [U.S. EPA 2018f]. The OHP's State Historic Preservation Officer concurred with U.S. EPA's determination in a letter dated October 8, 2018 [COHP 2018].

On September 28, 2017, U.S. EPA submitted a request for a Sacred Lands File and Native American Contacts List to the Native American Heritage Commission (NAHC), located in Sacramento, California [U.S. EPA 2017a]. In an October 17, 2017 letter to U.S. EPA, the NAHC indicated that a Sacred Lands File Search was completed for the Area of Potential Effect with negative results [NAHC 2017]. NAHC also responded with a Native American Contact List which the U.S. EPA used to contact Tribes listed via certified mail on July 25, 2018, with a written



description of the project and a request for each tribe to become a consulting party [U.S. EPA 2018a-e]. We received confirmation of receipt for all letters. No Tribes responded to our request.

Key documents related to U.S. EPA's determination under the NHPA can be found in **Appendix H**. Additional information is located in the administrative record.

## **B. ENDANGERED SPECIES ACT**

Section 7(a)(2) of the Endangered Species Act ("ESA") [16 U.S.C. § 1536(a)(2)] requires all Federal agencies, in consultation with the United States Fish and Wildlife Service ("FWS"), to insure that any action they carry out, fund, or authorize (such as through a permit) is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat.

U.S. EPA considers issuance of a TSCA approval as an action subject to the ESA. To assist the Agency in fulfilling its obligations under Section 7 of the ESA, U.S. EPA required that Chemical Waste Management, Inc. identify any listed species (e.g., Kit Fox) and designated critical habitat that may be present at or near the Facility; conduct soil, air, and vegetation sampling for PCB congeners [U.S. EPA 2008b]; develop an ecological risk assessment; and develop a biological assessment. On September 20, 2011, U.S. EPA requested formal consultation with FWS on CWM's application for the renewal and modification of its TSCA Approval for the Kettleman Hills Facility [U.S. EPA 2011c]. FWS responded with a final Biological Opinion dated August 15, 2012 [FWS 2012a], which was amended on September 5, 2012 [FWS 2012b] and July 23 and 30, 2014 [FWS 2014a and FWS 2014b]. A copy of the amended 2012 Biological Opinion that includes conditions of the Biological Opinion is included in the Administrative Record. These conditions include:

- CWM and KHF employees and/or contractors must adhere to the standard operational measures set forth in the FWS's revised January 2011 (as updated) *Standard Measures for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance Construction and Operation Requirements*. Requirement is included in Approval Condition IV.B.3.
- Disturbance to all San Joaquin kit fox dens shall be avoided to the maximum extent possible and if dens or potential dens are identified monitoring and/or excavation of those dens shall take place. This requirement is included in Approval Condition IV.B.3.
- All exclusionary fencing shall be inspected monthly to ensure proper integrity and if gaps and/or holes are discovered operational activities shall cease and the project footprint shall be resurveyed for San Joaquin kit fox. Requirement is included in Approval Condition IV.I.2.



- EPA shall verify the CWM purchase of San Joaquin kit fox conservation credits at a conservation bank with an appropriate service are and at a ratio of three acres of conservation habitat purchased for every one acre of habitat lost.<sup>18</sup>

**Table 5** provides the FWS species list of federal endangered and threatened species that may be present in the area of the Proposed Project (operations at the Kettleman Hills Facility). Of the species on that list, the Proposed Project could affect the following federally and state listed species. U.S. EPA has checked that FWS has not revised the list of federal endangered and threatened species that may be present at the Kettleman Hills Facility and has determined that the species and conditions have not changed since the proposed Approval [EPA 2020] and **Appendix I**.

**TABLE 5 – FEDERAL ENDANGERED AND THREATENED SPECIES POTENTIALLY PRESENT AT THE KETTLEMAN HILLS FACILITY**

SPECIES	CRITICAL HABITAT	STATUS	EFFECTS DETERMINATION
San Joaquin kit fox ( <i>Vulpes macrotis mutica</i> )	None	Federally Endangered, State Threatened	May affect, and is likely to adversely affect
Blunt-nosed leopard lizard ( <i>Gambelia sila</i> )	None	Federally and State Endangered, State Fully Protected	May affect, but not likely to adversely affect
San Joaquin woolly-threads ( <i>Lambertia congdonii</i> )	None	Federally Endangered	May affect, but not likely to adversely affect
<b>California jewelflower (<i>Caulanthus californicus</i>)</b>	<b>None</b>	<b>Federally and State Endangered</b>	<b>May affect, but not likely to adversely affect</b>

On October 11, 2018, U.S. EPA concluded that the reinitiation of formal consultation with FWS was not needed [U.S. EPA 2018i]. U.S. EPA determined that none the of the four conditions for reinitiation of formal consultation, as provided in the 2012 Biological Opinion, were met and therefore the scope of the Approval has been addressed in the Biological Opinion. On December 7, 2018, FWS concurred with U.S. EPA’s determination [FWS 2018]. See **Appendix I**.

**C. WILD AND SCENIC RIVERS ACT**

The Wild and Scenic Rivers Act, (“WSRA”) 16 U.S.C. § 1273, *et seq.* Section 7 of the WSRA prohibits federal agencies from assisting the licensing or construction of any water resources project that would have a direct, adverse effect on the values for which a national wild and scenic river was established.

The issuance of TSCA Approval to the Kettleman Hills Facility is not subject to the WSRA because it is a not a water resources project as defined in section 16(b) of the WSRA and the

<sup>18</sup> CWM purchased the required San Joaquin kit fox credits at the Kreyenhagen Hills Conservation Bank on March 27, 2013 [WDLN 2013].



Facility is not located within the bed or banks upstream, downstream, or on a tributary to a Wild and Scenic River corridor.

#### **D. COASTAL ZONE MANAGEMENT ACT**

The Coastal Zone Management Act, 16 U.S.C. § 1451, *et seq.* Section 307(c) of the Coastal Zone Management Act, and its implementing regulations at 15 C.F.R. Part 930, prohibit federal agencies from issuing a permit for an activity affecting land or water use in the coastal zone until the applicant certifies that the proposed activity complies with the state Coastal Zone Management program, and the state or its designated agency concurs with the certification (or the Secretary of Commerce overrides the State's non-concurrence).

The Coastal Zone Management Act does not apply to this Approval because the Kettleman Hills Facility does not lie within the California Coastal Zone management program as defined by the State of California. See <https://www.coastal.ca.gov/maps/czb/>

#### **E. FISH AND WILDLIFE COORDINATION ACT**

The Fish and Wildlife Coordination Act, 16 U.S.C. § 661, *et seq.* requires federal agencies, before issuing a permit proposing or authorizing the impoundment (with certain exemptions), diversion, or other control or modification of any body of water, consult with the appropriate state agency exercising jurisdiction over wildlife resources to conserve those resources.

The Fish and Wildlife Coordination Act does not apply to this Approval because it neither proposes nor authorizes the impoundment, diversion, or other control or modification of any body of water.

#### **F. GENERAL CONFORMITY UNDER THE CLEAN AIR ACT**

##### **1. GENERAL CONFORMITY REQUIREMENTS**

Section 176(c) of the Clean Air Act (CAA) [42 U.S.C. § 7506(b)] requires all federal agencies ensure their actions conform to states' plans to attain and maintain the National Ambient Air Quality Standards (NAAQS). Conformity to a state's air quality plan means that a federal activity will not cause new violations of the NAAQS, increase the frequency or severity of NAAQS violations, or delay timely attainment of the NAAQS or any interim milestone toward attainment. The conformity process ensures that emissions of air pollutants from planned federal activities would not affect the state's ability to attain and maintain the NAAQS.

A general conformity determination is based on emissions from the federal action. Federal agencies must evaluate and address both direct and indirect emissions that are likely to occur from an action. More information on general conformity requirements can be found at <https://epa.gov/general-conformity>.

U.S. EPA has adopted regulations at 40 C.F.R. Part 93, Subpart B to implement the CAA's general conformity requirements. The requirements of Part 93, Subpart B apply in areas where U.S. EPA has not approved a state (or tribal) General Conformity rule. See 40 C.F.R. § 93.151. Where U.S.



EPA has approved a state conformity rule, a conformity evaluation is governed by the approved state criteria and procedures. The Kettleman Hills Facility is located in jurisdictional boundaries of the San Joaquin Valley Air Pollution Control District (“SJVAPCD”). U.S. EPA approved the SJVAPCD’s general conformity rule, Rule 9110 (adopted October 20, 1994), on April 23, 1999 (64 FR 19916). We have, therefore, followed Rule 9110 for the purposes of this conformity analysis.

## 2. GENERAL CONFORMITY APPLICABILITY ANALYSIS

As noted above general conformity applies to non-transportation-related federal actions that take place in areas designated as nonattainment or maintenance for a NAAQS. The first step in the general conformity process is to determine if there is a federal action that requires a general conformity determination under 40 C.F.R. Part 93, Subpart B. This is the “applicability analysis” as defined in 40 C.F.R. § 93.152 and required by § 93.153.

The Approval for the Kettleman Hills Facility is a federal action that takes place in an area that is designated nonattainment or maintenance for a NAAQS. The Kettleman Hills Facility is located in Kings County which is part of the San Joaquin Air Basin. The San Joaquin Valley Air Basin is currently designated as nonattainment and classified as extreme for all ozone NAAQS, designated nonattainment and classified as serious for all fine particulate matter (PM<sub>2.5</sub>) NAAQSs and designated as a maintenance area for coarse particulate matter (PM<sub>10</sub>) NAAQS (40 C.F.R. § 81.305).

The General Conformity applicability requirements in Rule 9110 § 51.853 and 40 C.F.R. § 93.153 lists several types of projects that are exempted from the requirement for a general conformity determination, including 40 C.F.R. § 93.153(c)(ii)/Rule 9011 § 51.853(c)(2)(ii) which addresses continuing and recurring activities such as permit renewals where activities conducted will be similar in scope and operation to activities currently being conducted. The Approval for the Kettleman Hills Facility includes approval of both continuing and new activities, therefore, some portions of the Approval can be exempted from this general conformity applicability. However, we have chosen to include emissions from both continuing and new activities in this applicability analysis to be conservative in our estimate of potential emissions.

To determine if the Kettleman Hills Facility’s Approval is exempt from a general conformity determination due to de minimis emissions, U.S. EPA estimated the total direct and indirect emissions that could be emitted as a consequence of a final approval. As shown in **Table 6** below, total estimated direct and indirect emissions are well below de minimis emissions thresholds. In addition, Rule 9110 subjects any otherwise exempt federal project whose emissions are 10 percent or great of the nonattainment or maintenance area’s total emissions to a general conformity determination. Total direct and indirect emissions from a final approval are also well below 10 percent of the San Joaquin Valley air basin’s total emission inventories. Based our emission calculations, U.S. EPA’s TSCA Approval for Chemical Waste Management, Inc.’s Kettleman Hills Facility is exempt from a conformity determination under CAA section 176(c), SJVAPCD





Rule 9110, and 90 C.F.R. Part 93, Subpart B. A more detailed analysis is in **Appendix J** to this SB.

**TABLE 6 – ESTIMATED EMISSIONS FROM PCB OPERATIONS COMPARED TO APPLICABLE DE MINIMIS LEVELS – KETTLEMAN HILLS FACILITY**

	<b>NO<sub>x</sub></b>	<b>VOC</b>	<b>SO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>CO</b>
	<i>tons per year</i>					
<b>PCB F/SU operations</b>	0.017	0.007	—	0.019	0.006	—
<b>Landfill B-18 PCB waste operations</b>	1.22	0.11	0.00	1.05	0.35	0.5
<b>Total PCB operations</b>	1.237	0.117	0.00	1.069	0.356	0.5
<b>De minimis level</b>	10	10	70	100	70	70
<b>Above de minimis level?</b>	No	No	No	No	No	No
<b>10% of regional emissions</b>	7,811	10,877	N/A	9,673	N/A	1,679
<b>Above 10% of regional emissions?</b>	No	No	N/A	No	N/A	No
<b>Subject to general conformity determination?</b>	No	No	No	No	No	No



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## APPENDICES

**APPENDIX A –  
EXECUTIVE SUMMARY IN SPANISH**



## 29 DE JULIO DE 2020

# RESUMEN EJECUTIVO

### DECLARACIÓN DE FUNDAMENTOS — APROBACIÓN LEY DE CONTROL DE SUSTANCIAS TÓXICAS BIFENILOS POLICLORADOS (PCB) INSTALACIÓN DE ALMACENAMIENTO COMERCIAL Y VERTEDERO DE RESIDUOS QUÍMICOS INSTALACIÓN KETTLEMAN HILLS DE CHEMICAL WASTE MANAGEMENT, INC.

La EPA está emitiendo una aprobación para el almacenamiento, el tratamiento para la eliminación y la eliminación de residuos de bifenilos policlorados (PCB) en la instalación Kettleman Hills de Chemical Waste Management, Inc. La EPA propuso la aprobación el 27 de agosto de 2019 y alentó al público a realizar comentarios sobre todos los aspectos de la Aprobación propuesta, así como sobre sus determinaciones y análisis de respaldo. La EPA revisó y respondió por escrito a todos los comentarios recibidos antes de tomar la decisión de emitir esta aprobación. La EPA agradece a todos los que enviaron comentarios.

Las instalación Kettleman Hills en el condado de Kings, California, aproximadamente a 3.5 millas al suroeste de Kettleman City. Es una instalación comercial de eliminación, almacenamiento y tratamiento de residuos peligrosos que acepta residuos de PCB y otros tipos de residuos peligrosos. Está aprobada por la EPA en virtud de la Ley de Control de Sustancias Tóxicas (por sus siglas en inglés y de aquí en adelante, TSCA) para eliminar los residuos de PCB en el vertedero B-18, así como para almacenar y tratar los residuos de PCB en la Unidad de Lavado/Almacenamiento de PCB. La Unidad de Lavado/Almacenamiento de PCB cuenta con un recinto cerrado y un área de contención exterior. También hay tres vertederos cerrados en la instalación que se utilizaron para la eliminación de residuos de PCB: los vertederos B-14, B-16 y B-19. Estas unidades, así como otras unidades de almacenamiento, tratamiento y eliminación de la instalación, están autorizadas por el Departamento de Control de Sustancias Tóxicas (por sus siglas en inglés y de aquí en adelante, DTSC) del Estado de California en virtud de la Ley de Conservación y Recuperación de Recursos.

La Aprobación da como resultado los siguientes cambios en el manejo de residuos de PCB en la instalación en comparación con sus aprobaciones de TSCA anteriores:

- Aumenta la capacidad aprobada por TSCA del Relleno Sanitario B-18 de 10.7 millones de yardas cúbicas a 15.6 millones de yardas cúbicas al aprobar la eliminación de los desechos de PCB en la Fase III construida y operativa; y
- Establece una capacidad máxima de almacenamiento de residuos de PCB en la unidad de lavado/almacenamiento de PCB de 36,420 galones.

Esta aprobación permite a Chemical Waste Management, Inc. a:

- Eliminar los residuos de PCB en todas las etapas de el vertedero B-18;



- Almacenar los residuos de PCB por hasta un año desde su eliminación de la fecha de servicio en el recinto cerrado de la Unidad de Lavado/Almacenamiento de PCB.
- Almacenar los residuos de PCB que estén dentro de los treinta días de su retirada de la fecha de servicio en el área externa de contención de la Unidad de Lavado/Almacenamiento de PCB.
- Drenar y descargar equipos eléctricos que contienen PCB en la Unidad de Lavado/Almacenamiento de PCB.
- Combinar de forma masiva (combinar pequeños contenedores de residuos en un gran contenedor) y reempaquetar residuos de PCB en el la Unidad de Lavado/Almacenamiento de PCB.
- Llevar a cabo una solidificación en la parte superior de los contenedores de líquidos incidentales de la Unidad de Lavado/Almacenamiento de PCB.

Con el objetivo de conservar el cumplimiento con las regulaciones aplicables de la TSCA en cuanto al almacenamiento, el tratamiento para la eliminación y la eliminación de los residuos de PCB, la Aprobación también requiere que Chemical Waste Management, Inc. hiciera lo siguiente:

- Conservar registros sobre las operaciones de la instalación.
- Inspeccionar y mantener periódicamente la instalación.
- Mantener e implementar un plan de contingencia para responder ante derrames u otro tipo de emergencias.
- Informar debidamente todo tipo de derrame de PCB o emergencia que tengan lugar y que requieran de la implementación del plan de contingencia.
- Realizar pruebas anuales de las aguas subterráneas de los pozos y monitorear de manera activa el vertedero B-18, y, cada cinco años, las aguas subterráneas de los pozos de los vertederos cerrados B-14, B-16 y B-19 en lo que respecta a PCB e informar los resultados.
- Realizar pruebas anuales de los lixiviados de los vertederos B-14, B-16, B-18 y B-19 en lo que respecta a PCB, e informar los resultados.
- Implementar un programa de monitoreo de la calidad del aire que incluya cuatro sitios de monitoreo y proporcionar informes trimestrales de monitoreo del aire.
- Realizar pruebas trimestrales en la Unidad de Lavado/Almacenamiento de PCB para detectar contaminación por PCB y limpiar en tiempo y forma toda contaminación por PCB que se detecte por encima de los 10 microgramos por cada 100 centímetros cuadrados.



- Informar a la brevedad todo tipo de detección de PCB en aguas subterráneas, lixiviados, aire u otras superficies en la Unidad de Lavado/Almacenamiento de PCB.
- Mantener e implementar planes posteriores al cierre, estimaciones de costos y garantía financiera para el cuidado posterior al cierre de los vertederos cerrados B-14, B-16 y B-19.
- Mantener planes, estimaciones de costos y garantía financiera para el cuidado al cierre y posterior al cierre del vertedero B-18.
- Mantener un plan de cierre, estimaciones de costos y garantía financiera para el cierre de la Unidad de Lavado/Almacenamiento de PCB.
- Cumplir con los requisitos del proceso público en lo que respecta a los distintos tipos de modificaciones a la Aprobación.

La EPA propone concedir cuatro exenciones de los requisitos regulatorios para los vertederos de PCB. Estas exenciones permiten lo siguiente:

- El uso del método de purga de pozos de aguas subterráneas aprobado por DTSC en lugar del método que figura en las regulaciones de PCB.
- Pruebas de aguas subterráneas mediante los mismos parámetros y métodos analíticos requeridos por los permisos estatales en lugar de los métodos de las regulaciones de PCB.
- Pruebas de lixiviados mediante los mismos parámetros y métodos analíticos requeridos por los permisos estatales en lugar de los métodos de las regulaciones de PCB.
- Eliminación de pequeños contenedores de residuos inflamables en tambores demasiado cargados (paquetes de laboratorio) como excepción a la prohibición de la eliminación de residuos inflamables en vertederos de PCB en las regulaciones PCB.

La EPA emitirá esta Aprobación basada en parte en su conclusión de que las operaciones de la instalación Kettleman Hills, en virtud de los términos y condiciones de la Aprobación, no representarán un riesgo irrazonable de daños para la salud o el medio ambiente a causa de los PCB. Esta conclusión se basa en los controles de ingeniería y operativos, así como en los requisitos de monitoreo incluidos en la Aprobación, y en una evaluación del peso general de la evidencia científica con respecto a la relación entre las emisiones de PCB de la instalación Kettleman Hills y la probabilidad y magnitud de los impactos adversos para la salud en las comunidades circundantes. La EPA ha analizado una serie de investigaciones científicas multidisciplinarias, objetivas, específicas del lugar y de los medios, que evaluaron colectivamente la amenaza de



exposición y el riesgo cuantitativo para la salud que representan las emisiones de PCB de la instalación Kettleman Hills.

Según una revisión exhaustiva, la EPA no identificó concentraciones de PCB por encima de un nivel de preocupación en el aire, el agua, la vegetación o los suelos en áreas próximas a la instalación Kettleman Hills. Además, la EPA no pudo obtener estimaciones de riesgo inaceptable para la salud de los residentes o de los trabajadores del sitio de las emisiones de PCB de la instalación Kettleman Hills. Por último, en función de los datos disponibles, la concentración de PCB que se encontró en los medios ambientales próximos a la instalación concuerda con la concentración de PCB que se encontró en muchas áreas rurales del Valle Central de California. Estas concentraciones de PCB también concuerdan con las concentraciones de PCB detectadas en una investigación individual de la EPA en lugares silvestres no alterados dentro de los Estados Unidos.

La EPA emite esta Aprobación en función de conclusiones de que la instalación Kettleman Hills cumple con los requisitos aplicables a las instalaciones de almacenamiento de PCB y a los vertederos de PCB, incluido el cumplimiento de los requisitos de diseño y operativos aplicables, las calificaciones del personal y la provisión de planes de cierre y posteriores al cierre, las estimaciones de costos y la garantía financiera.

La EPA ha revisado el historial de cumplimiento de la instalación Kettleman Hills. Si bien la instalación ha violado los requisitos aplicables en el pasado, estas violaciones no evidencian un patrón de incumplimiento que demuestre la falta de voluntad o incapacidad de Chemical Waste Management, Inc. para lograr y mantener el cumplimiento de las regulaciones aplicables a la misma y a sus operaciones en la instalación Kettleman Hills. Además, las acciones correctivas implementadas por la instalación para abordar estas violaciones del pasado incluyen mejoras físicas y operativas que reducen la posibilidad de que se produzcan violaciones en el futuro, así como evitan o contienen futuras emisiones.

La EPA ha preparado un Borrador del Análisis de Justicia Ambiental para documentar que las inquietudes de justicia ambiental, incluyendo el alcance hecho en el pasado que buscó la participación de las comunidades afectadas, se consideraron en el proceso de decisión para la aprobación. Durante el período de comentarios públicos sobre la Aprobación propuesta, buscó aportes de la comunidad sobre la Aprobación propuesta y sus documentos de respaldo, incluido el borrador del Análisis de Justicia Ambiental.

La EPA ha consultado al Servicio de Pesca y Vida Silvestre de EE. UU. para asegurarnos de que la Aprobación no tiene un impacto adverso en ninguna especie en peligro de extinción. La EPA también ha consultado a la Oficina de Preservación Histórica de California para asegurarnos de que la Aprobación no afecte negativamente a ningún bien histórico. Por último, hemos evaluado el proyecto para asegurarnos de que se ajusta a los planes del Valle de San Joaquin para alcanzar y mantener los estándares nacionales de calidad del aire basados en la salud.



La Aprobación propuesta se firmó el 27 de agosto de 2019. Los comentarios del público sobre todos los aspectos de la Aprobación propuesta, así como sobre las determinaciones y los análisis de respaldo fueron aceptados hasta el viernes 22 de noviembre de 2019. LA EPA organizó una reunión pública sobre la aprobación propuesta y sus determinaciones y análisis de apoyo el 10 de octubre de 2019 y una audiencia pública el 14 de noviembre de 2019 en Kettleman City.

La EPA aceptó comentarios escritos y orales tanto en la reunión como en la audiencia. Todos los comentarios que fueron recibidos (tanto orales como escritos) están incluidos en el registro administrativo correspondiente a la Aprobación. La EPA agradece a todos los que proporcionaron comentarios sobre la Aprobación propuesta, hablaron en la audiencia pública y/o asistieron a la reunión y audiencia pública. La EPA ha proporcionado respuestas por escrito a todos los comentarios recibidos y ha modificado la aprobación propuesta y las determinaciones y análisis de apoyo según corresponda para abordar los comentarios enviados. Los cambios en la Aprobación propuesta y las determinaciones y análisis de respaldo realizados para abordar los comentarios se analizan en la Declaración de Base y se documentan en el Registro Administrativo.

Copias de la Aprobación propuesta y final, la Declaración de Fundamentos y sus apéndices, el borrador del Análisis de Justicia Ambiental, los documento de actualizaciones y revisiones para el borrador del análisis de EJ, la solicitud presentada por Chemical Waste Management, Inc., el documento de respuesta a comentarios y otros documentos clave en el sitio web del proyecto de Kettleman Hills de la EPA de EE. UU. en <https://www.epa.gov/ca/kettleman-hills>; en [www.regulations.gov](http://www.regulations.gov) [número de expediente EPA-R09-RCRA-2019-0088]; o bien, puede solicitarla al gerente de proyectos de Kettleman Hills mencionado abajo. Puede encontrar una copia impresa de la Aprobación, esta Declaración de Fundamentos (incluido el Análisis de Justicia Ambiental) y la solicitud en:

Biblioteca de Kettleman City  
104 Becky Pease Street  
Kettleman City, CA 93239  
(559) 386-9804

(Nota: la disponibilidad de documentos en la Biblioteca de la ciudad de Kettleman puede retrasarse debido al cierre de las oficinas de la EPA y la Biblioteca de la ciudad de Kettleman relacionada con Covid-19).

Se puede obtener información adicional sobre la aprobación final y la declaración de fundamentos, contactando a:

Frances Wicher, gerente de proyectos de Kettleman Hills Oficina de permisos,  
División Tierras, Productos Químicos y Reurbanización (LND-4-2)  
Agencia de Protección Ambiental, Región 9  
75 Hawthorne Street  
San Francisco, CA 94105  
Número de teléfono 415-972-3957  
Correo electrónico: [wicher.frances@epa.gov](mailto:wicher.frances@epa.gov)





Se puede solicitar información en español sobre la Aprobación y la Declaración de Fundamentos a:

Soledad Calvino  
Agencia de Protección Ambiental, Región 9  
Oficina: 415-972-3512  
Correo electrónico: [calvino.maria@epa.gov](mailto:calvino.maria@epa.gov)



**APPENDIX B –  
RESERVED**

**APPENDIX C –  
ADMINISTRATIVE RECORD INDEX**

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### **Availability of Administrative Record Documents**

Electronic versions of many documents listed in this Administrative Record are available on **[www.regulations.gov](http://www.regulations.gov)** [docket number EPA-R09-RCRA-2019-0088].

Please contact the Kettleman Hills Project Manager for information on how to obtain documents not available on Regulations.gov. Please note that not all Administrative Record documents (or portions of certain documents) are available for public release. Release of documents to the public are governed by applicable confidential business information, copyright, and privacy protection requirements.

Frances Wicher  
Kettleman Hills Project Manager  
Land, Chemicals & Redevelopment Division (LND-4-2)  
U.S. Environmental Protection Agency Region 9  
75 Hawthorne Street  
San Francisco, California 94105  
(415) 972-3957  
[wicher.frances@epa.gov](mailto:wicher.frances@epa.gov)



## I. PROPOSED APPROVAL AND APPENDICES

- A. “Proposed Approval – Toxic Substances Control Act PCB Commercial Storage Facility and Chemical Waste Landfill, Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County, California, U.S. EPA ID: CAT 000 646 117.” Land, Chemicals & Redevelopment Division, U.S. EPA Region 9. August 27, 2019.
1. “Appendix B – Incorporated Documents – Volume 1”. August 27, 2019.
  2. “Appendix B – Incorporated Documents – Volume 2”. August 27, 2019.
  3. “Appendix B – Incorporated Documents – Volume 3”. August 27, 2019.
  4. “Appendix B – Incorporated Documents – Volume 4”. August 27, 2019.
  5. “Appendix B – Incorporated Documents – Volume 5”. August 27, 2019.
  6. “Appendix B – Incorporated Documents – Volume 6”. August 27, 2019.
  7. “Appendix B – Incorporated Documents – Volume 7”. August 27, 2019.

## II. STATEMENT OF BASIS, APPENDICES, AND REFERENCES DOCUMENTS

Note: The Environmental Justice Analysis and reference documents are listed in Section III.

### A. STATEMENT OF BASIS

1. “Statement of Basis – Proposed Approval Toxic Substance Control Act Polychlorinated Biphenyls (PCBs) Commercial Storage Facility and Chemical Waste Landfill, Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County, California, U.S. EPA ID: CAT 000 646 117.” Land, Chemicals & Redevelopment Division, U.S. EPA Region 9. August 27, 2019 with Appendices:
  - a. Appendix A – Executive Summary in Spanish
  - b. Appendix B – Public Notices and Fact Sheet (English and Spanish)
  - c. Appendix C – Administrative Record Index
  - d. Appendix D – U.S. EPA TSCA Review Checklists for the Proposed Approval
  - e. Appendix E – Justifications for Use of Omnibus Provisions
  - f. Appendix F – Reporting, Notification, and Submittal Requirements in the Kettleman Hills Facility Proposed TSCA Approval
  - g. Appendix G – Environmental Justice Analysis (See Section III)
  - h. Appendix H – National Historic Preservation Act Determination
  - i. Appendix I – Endangered Species Act Determination



## j. Appendix J – Clean Air Act Conformity Applicability Analysis

**B. REFERENCES FOR THE STATEMENT OF BASIS**

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147. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – First Quarter 2018 Report.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. June 27, 2018. With enclosure: “Ambient Air Monitoring Program Quarterly Report January 2018 – March 2018 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. June 2018.
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### C. REFERENCES FOR APPENDIX D – U.S. EPA TSCA APPLICATION REVIEW CHECKLISTS

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2. “Amendment of Approval to Operate a Chemical Waste Landfill for PCB Disposal.” U.S. EPA, Region IX. November 30, 1990.
3. “Hazardous Waste Facility Permit – Chemical Waste Management, Inc. Kettleman Hills Facility (Permit Number: 02-SAC-03).” Department of Toxic Substances Control. Effective June 16, 2003 (modified May 5, 2005, July 25, 2006, September 21, 2007, and May 21, 2014).
4. “Request for Additional Sampling of Air, Soil, and Biota/Vegetation and Analysis for PCB Congeners.” Letter, Cheryl Nelson, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. December 2, 2008.
5. “Surface Water Control Program for Kettleman Hills Facility,” Centra Consulting, Inc. October 23, 2009.
6. “U.S. Environmental Protection Agency (“U.S. EPA”) Completeness Review of Chemical Waste Management, Inc. – Kettleman Hills Facility Request to Modify Toxic Substance Control Act (“TSCA”) Polychlorinated Biphenyl (“PCB”) Coordinated Approval Request for Landfill B-18 (Phase III).” Letter, Cheryl Nelson, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. November 25, 2009.
7. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to Landfill B-18 Phase III Coordinated Approval Completeness Review.” Letter, Paul Turek, Chemical Waste Management, Inc. to Chip Poalinelli, U.S. EPA Region 9. December 22, 2009.
8. “Final Dioxin-Like Polychlorinated Biphenyl (PCB) Congeners Study Report, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. November 2010.
9. “Engineering and Design Report, B-18 Class 1 Landfill, Phase III Expansion and Final Closure, Kettleman Hills Facility, Kettleman City California, Revision 2.” Golder Associates, Inc. August 2011.
10. “Notice of Deficiency (“NOD”) for Toxic Substances Control Act (“TSCA”) Permit Renewal and Modification Applications dated April 1, 1997, as revised, and May 10, 2010; Chemical Waste Management Kettleman Hills Facility (CAT 000646117).”



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- Caleb Shaffer, U.S. EPA Region 9, to Bob Henry, Chemical Waste Management, Inc. September 22, 2011.
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  12. “Revised Site-Specific Groundwater Monitoring Plan Class I Waste Management Units, Kettleman Hills Facility, Kings County California,” AMEC Environmental & Infrastructure, Inc., April 14, 2014.
  13. “Site-Specific Ambient Air Monitoring Plan, Chemical Waste Management, Inc., Kettleman Hills Facility (KHF), Kings County, California.” Wenck Associates, Inc. January 2016.
  14. “Stormwater Pollution Prevention Plan Chemical Waste Management, Inc., – Kettleman Hills Facility.” Golder Associates and SWT Engineering. March 2016.
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  16. Letter, Tom Huetteman, U.S. EPA Region 9, to Robert Henry, CWMI. December 20, 2016.
  17. “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised TSCA Permit Renewal Application – Revision 1.” Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. July 13, 2017.
  18. Letter, Barbara Gross, U.S. EPA Region 9, to Reyna Verdin, Chemical Waste Management, Inc. December 21, 2017. With enclosure:
    - a. “Notice of Deficiency, TSCA Permit Renewal Application (dated July 1, 2017), Chemical Waste Management, Inc. – Kettleman Hills Facility, EPA ID. NO CAT 000 646 117.” U.S. EPA Region 9. December 21, 2017.
  19. “Hazardous Waste Facility Permit Renewal Application, Operation Plan, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 3: March 16, 2018. [REDACTED for posting on regulations.gov]
  20. “Notice of Annual Meeting and Proxy Statement and Annual Report on Form 10-K for the Year Ended December 31, 2017.” Waste Management. March 27, 2018.
  21. “TSCA Groundwater Monitoring Addendum to Site-Specific Monitoring Plan, Kettleman Hills Facility, Kings County, California.” AMEC Foster Wheeler. April 17, 2018.
  22. “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised TSCA Permit Renewal Application – Revision 2”. Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. April 19, 2018.
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25. “TSCA Permit Renewal Application, Chemical Waste Management, Kettleman Hills Facility.” Chemical Waste Management, Inc., Revision 3: October 1, 2018.
26. “TSCA Operation Plan, Landfill B-18 Phases I, II, and III; PCB Building and Outside Containment Area.” Chemical Waste Management, Inc., Revision 3: October 1, 2018.
27. “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised TSCA Permit Renewal Application – Revision 3”. Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. October 2, 2018.
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**D. REFERENCES FOR APPENDIX H – NATIONAL HISTORIC PRESERVATION ACT DETERMINATION**

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2. “Supplemental Cultural Resources Survey, Proposed Expansion, Kettleman Hills Facility – Chemical Waste Management, Inc., Kings County, California.” TRC Companies, Inc. May 2004. [Confidential Business Information]
3. “Order #EP079000258: CWM Kettleman Hills Facility Project.” Adele Baldwin, California Historical Resources Information System to Max Weintraub, U.S. EPA Region 9. November 23, 2007.



4. “Sacred Lands file & Native American Contacts List Request: Kettleman Hills – Chemical Waste Management B-18 Expansion.” Fax, Edwin Poalinelli, U.S. EPA to Native American Heritage Commission. August 26, 2008.
5. “Compliance with Section 106 of the National Historic Preservation Act for the Renewal and Modification of Toxic Substance Control Act (“TSCA”) Polychlorinated Biphenyls (“PCBs”) B-18 Permit – Kettleman Hills Facility.” Letter, Cheryl Nelson, U.S. EPA Region 9, to Tristan Tozer, State Historian, Office of Historic Preservation. December 21, 2009.
6. “Modification of TSCA PCB B-18 Permit – Kettleman Hills Facility.” Email, Edwin Poalinelli, U.S. EPA Region 9, to Tristan Tozer, State Historian, Office of Historic Preservation. January 11, 2010.
7. “Request for a Sacred Lands File Search and Native American Contacts List for a Proposed “Kettleman Hills Chemical Waste Management – B-18 Expansion Project, under a TSCA Permit to Store and Dispose of Waste Containing PCBs” located in western Kings County, California 2.6 miles west of Interstate 5 where it intersects with State Route 41.” Letter, Dave Singleton, Native American Heritage Commission to Edwin Poalinelli, U.S. EPA Region 9. March 4, 2010. [REDACTED for posting on regulations.gov].
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  16. “Landfill B-18 Permit Renewal and Expansion of Chemical Waste Management Kettleman Hills Facility, Kettleman Hills, California.” Letter, Milford Wayne Donaldson, State Historic Preservation Officer to Caleb Shaffer, U.S. EPA Region 9. October 28, 2011.
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  18. “Chemical Waste Management Kettleman Hills Facility Permit and Expansion, Kings County.” Letter, Sharaya Souza, Native American Heritage Commission. October 17, 2017.
  19. Letter, Barbara Gross, U.S. EPA Region 9, to Stan Alec, Chairman, Kings River Choinumni Tribe. July 25, 2018.
  20. Letter, Barbara Gross, U.S. EPA Region 9, to Ruben Barrios, Chairman, Santa Rosa Indian Community of the Santa Rosa Rancheria. July 25, 2018.
  21. Letter, Barbara Gross, U.S. EPA Region 9, to Neil Peyron, Chairman, Tule River Indian Tribe. July 25, 2018.
  22. Letter, Barbara Gross, U.S. EPA Region 9, to Leanne Walker-Grant, Chairwoman, Table Mountain Rancheria of California. July 25, 2018.
  23. Letter, Barbara Gross, U.S. EPA Region 9, to Kenneth Woodrow, Chairman, Wuksache Indian Tribe/Eshom Valley Band. July 25, 2018.
  24. Letter, Barbara Gross, U.S. EPA Region 9, to Tristan Tozer, California Office of Historic Preservation. July 25, 2018.
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Barbara Gross, U.S. EPA Region 9. October 8, 2018.

**E. REFERENCES FOR APPENDIX I – ENDANGERED SPECIES ACT  
DETERMINATION**

1. “Request for Formal Consultation Under Section 7 of the Endangered Species Act on TSCA Permit Application for Chemical Waste Management Kettleman Hills Facility.” Letter, Caleb Shaffer, U.S. EPA to Thomas Leeman, U.S. Fish and Wildlife Service. September 20, 2011. With enclosure: “CWM Kettleman Hills Facility, B-18 Landfill Expansion Project, Section 7 Biological Assessment.” Berryman Ecological. July 2011.
2. “Request for Formal Consultation and Receipt of Initiation Package for the Toxic Substances Control Act Permit Application for Chemical Waste Management’s Kettleman Hills Facility Landfill Expansion.” Letter, Daniel Russell, U.S. Fish and Wildlife Service to Caleb Shaffer, U.S. EPA Region 9. December 7, 2011.
3. “Summary of Surface Water Controls for Landfill B-18.” Letter, Robert Henry, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. December 14, 2011.
4. “Chemical Waste Management, Inc. – Kettleman Hills Facility Section 7 Biological Assessment – January 2012 Revision.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. January 24, 2012. With enclosure: “CWM Kettleman Hills Facility, B-18 Landfill Expansion Project, Section 7 Biological Assessment.” Berryman Ecological. July 2009. Rev: January 2012.
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7. “Re: Biological Opinion Revision.” Email, Edwin Poalinelli, U.S. EPA to Kevin Aceituno, U.S. Fish and Wildlife Service. February 3, 2012.
8. “Follow-up Re: Kettleman Hills PCB Facility Expansion Consultation.” Email, John Beach, U.S. EPA, to Kevin Aceituno, U.S. Fish and Wildlife Service. February 9, 2012.
9. “Follow-up Re: Kettleman Hills PCB Facility Expansion Consultation.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to John Beach, U.S. EPA Region 9. February 9, 2012. With enclosure: “General Rare Plant Survey Guidelines.” Ellen A. Cypher, California State University, Stanislaus, Revised July 2002.
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12. “Follow-up Re: Kettleman Hills PCB Facility Expansion Consultation.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to Edwin Poalinelli, U.S. EPA Region 9. February 17, 2012.
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18. “Rare Plant Survey Results for the Proposed Chemical Waste Management, Inc. B-18 Landfill Expansion, Kings County, California.” McCormick Biological, Inc. April 2012.
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  23. “First Amendment to Kreyenhagen Hills Conservation Bank Agreement for Sale of Conservation Credits (Service File No. 81420-2012-F-0044 and 81420-2012-F-004402). Wildlife Inc. March 27, 2013.
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  25. “Endangered Species Survey – B18III Fence.” Email, Paul Turek, Chemical Waste Management, Inc. to John Moody, U.S. EPA, June 16, 2014. With attachments: 1) “Chemical Waste Management, Inc. – Kettleman Hills Facility TSCA Permit Renewal. Biological Opinion – B18III Preconstruction Survey –Fence.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to John Moody, U.S. EPA, June 16, 2014. 2) Letter, Michael Bumgardner, Bumgardner Biological Consulting to Paul Turek, Chemical Waste Management, Inc. June 15, 2014.
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34. “Response from Chemical Waste Management regarding 2012 Biological Opinion.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to John Moody, U.S. EPA Region 9. July 9, 2014.
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- a. Executive Summary (en español)
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  114. “Quarterly Ambient Air Monitoring Program Data Report July 2012 – September 2012 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. November 2012.
  115. “Quarterly Ambient Air Monitoring Program Data Report October 2012 – December 2012 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. March 2013.
  116. “Quarterly Ambient Air Monitoring Program Data Report January 2013 – March 2013 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. June 2013.
  117. “Quarterly Ambient Air Monitoring Program Data Report April 2013 – June 2013 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. August 2013.



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118. “Quarterly Ambient Air Monitoring Program Data Report July 2013 – September 2013 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. December 2013.
  119. “Quarterly Ambient Air Monitoring Program Data Report October 2013 – December 2013 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. March 2014.
  120. “Quarterly Ambient Air Monitoring Program Data Report January 2014 – March 2014 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. May 2014.
  121. “Quarterly Ambient Air Monitoring Program Data Report April 2014 – June 2014 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. August 2014.
  122. “Quarterly Ambient Air Monitoring Program Data Report July 2013 – September 2013 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. December 2014.
  123. “Ambient Air Monitoring Program Quarterly Report October 2014 – December 2014 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. February 2015.
  124. “Ambient Air Monitoring Program Quarterly Report January 2015 – March 2015 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. June 2015.
  125. “Ambient Air Monitoring Program Quarterly Report April 2015 – June 2015 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. September 2015.
  126. “Ambient Air Monitoring Program Quarterly Report July 2015 – September 2015 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. December 2015.
  127. “Ambient Air Monitoring Program Quarterly Report October 2015 – December 2015 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. March 2016.
  128. “Ambient Air Monitoring Program Quarterly Report January 2016 – March 2016 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. June 2016.
  129. “Ambient Air Monitoring Program Quarterly Report April 2016 – June 2016 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. September 2016.
  130. “Ambient Air Monitoring Program Quarterly Report July 2016 – September 2016 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. December 2016.





131. “Site-Specific Ambient Air Monitoring Plan, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. January 2016.
132. “Ambient Air Monitoring Program Quarterly Report October 2016 – December 2016 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. March 2017.
133. “Ambient Air Monitoring Program Quarterly Report January 2017 – March 2017 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. June 2017.
134. “Ambient Air Monitoring Program Quarterly Report April 2017 – June 2017 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. September 2017.
135. “Ambient Air Monitoring Program Quarterly Report July 2017 – September 2017 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. December 2017.
136. “Ambient Air Monitoring Program Quarterly Report October 2017 – December 2017 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. March 2018.
137. “Ambient Air Monitoring Program Quarterly Report January 2018 – March 2018 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. June 2018.
138. “Ambient Air Monitoring Program Quarterly Report April 2018 – June 2018 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. September 2018.
139. “Ambient Air Monitoring Program Quarterly Report July 2018 – September 2018 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. December 2018.
140. “Air Quality Monitoring at the Kettleman Hills Facility.” Wenck Associates, Inc. April 2019.
141. “Kettleman Hills Facility Groundwater and Unsaturated Zone – 2018 Annual Summary.” Wood Environment & Infrastructure Solutions, Inc. April 2019.

### **C. OTHER DOCUMENTS**

1. “Is There a Toxic Monster in Kettleman City? Why the State of California’s Draft Report and Investigation of Kettleman City Birth Defects are Incomplete, Flawed, and Misleading.” El Pueblo Para El Air y Agua Limpio and GreenAction for Health and Environmental Justice. December 2, 2010.
2. “Kettleman City Community Canvass, Community Forum Kettleman City Library.” Slide Presentation, Public Health Institute. June 2017.



3. “Resources & Contacts. Recursos y Contactos Kettleman City, California.” Public Health Institute. June 27, 2017.
4. “Kettleman City Community Health Canvass, Final Report.” Public Health Institute for Kings County Department of Public Health. June 29, 2017.

#### **IV. PUBLIC PARTICIPATION DOCUMENTS**

##### **A. 2019 PROPOSED APPROVAL**

1. “U.S. EPA Requests Public Comment on Proposed PCB Permit for Kettleman Hills Facility.” Land, Chemicals and Redevelopment Division, U.S. EPA Region 9. August 27, 2019.
2. “La EPA solicita comentarios publicos sobre el permiso propuesto para realizar operaciones con PCB en la instalación Kettleman Hills.” Land, Chemicals and Redevelopment Division, U.S. EPA Region 9. August 27, 2019.
3. “Kettleman Hills Facility – Proposed PCB Permit; Public Meeting & Hearing.” U.S. EPA Region 9. August 27, 2019.
4. “Instalación Kettleman Hills – Permiso Propuesto de PCB; Reunión Pública y Audiencia.” U.S. EPA Region 9. August 27, 2019.

##### **B. HISTORICAL PUBLIC PARTICIPATION DOCUMENTS**

1. 2007 Public Hearing
  - a. “U.S. EPA Requests Public Comments on the Draft Permit and Draft Environmental Justice Assessment for the Chemical Waste Management, Inc., Kettleman Hills Facility.” U.S. EPA Region 9. January 2007.
  - b. “United States Environmental Protection Agency (EPA) Seeks Public Comment on Draft Permit and Draft Environmental Justice (EJ) Assessment for Chemical Waste Management, Inc. – Kettleman Hills Facility.” U.S. EPA Region 9. January 2007.
  - c. “U.S. EPA Requests Public Comments on the Draft Permit and Draft Environmental Justice Assessment for the Chemical Waste Management, Inc., Kettleman Hills Facility.” U.S. EPA Region 9. March 2007.
  - d. “U.S. EPA holds public workshop on draft permit and environmental justice assessment for Kettleman Hills landfill.” Media Advisory. U.S. EPA Region 9. March 8, 2007.
  - e. “Agenda U.S. EPA (EPA) Workshop and Public Hearing about Draft Permit for PCB Activities at Chemical Waste Management, Inc. – Kettleman Hills Facility and Draft Environmental Justice (EJ) Assessment.” U.S. EPA March 27, 2007. Includes other materials handed out at meeting.



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- f. “U.S. EPA Extends Public Comment Period on the Draft Permit and Draft Environmental Justice (EJ) Assessment for Chemical Waste Management, Inc. – Kettleman Hills Facility until June 4, 2007.” U.S. EPA Region 9. May 2007.
2. 2009/2010 U.S. EPA Meetings
- a. “United States Environmental Protection Agency (EPA) Chemical Waste Management, Inc. – Kettleman Hills Facility PCB Permit Renewal Update Meeting – February 4, 2009.” Notice. January 2009.
- b. “Kettleman Hills Facility PCB Congener Sampling, March 31-April 1, 2009.” Photos. U.S. EPA Region 9. March-April 2009.
- c. “Possible meeting dates/times on PCB data in Kettleman City.” Email, Cheryl Nelson, U.S. EPA Region 9, to Bradley Angel, Greenaction. November 9, 2009.
- d. “Informe de Campo Sobre Muestras Separadas, Chemical Waste Management, Incorporated, Kettleman Hills, California.” Handout. U.S. EPA Region 9. November 30, 2009.
- e. “PCB Congener Study Preliminary Results Discussion. Agenda.” U.S. EPA Region 9. December 16, 2009. Includes copies of handouts.
- f. “PCB Congener Study Preliminary Results Discussion. Agenda.” U.S. EPA Region 9, December 16, 2009. Includes color copies of handouts.
- g. “EPA Factsheet on PCBs.” U.S. EPA Region 9. September 24, 2010.
3. 2011 U.S. EPA Meeting
- a. “Fact Sheet on United States Environmental Protection Agency’s Compliance Investigation and Enforcement at Chemical Waste Management, Kettleman Hills.” U.S. EPA Region 9. November 2011.
- b. “Kettleman Community Workshop & Meeting. Thursday, November 17<sup>th</sup>.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
- c. “Air, Soil Vapor, Surface Water, and Groundwater Monitoring, Waste Management, Inc. – Kettleman Hills Facility (MAP).” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
- d. “Regulación de Aire, Vapor del Suelo, Agua Superficial y Agua Subterránea Waste Management, Inc. – Instalación Kettleman Hills (MAP).” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
- e. “Air, Soil Vapor, Surface Water, and Groundwater Monitoring, Waste Management, Inc. – Kettleman Hills Facility.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.



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- f. “Regulación de Aire, Vapor del Suelo, Agua Superficial y Agua Subterránea Waste Management, Inc. – Instalación Kettleman Hills.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
  - g. “Hazardous Waste Permitting – Map, Waste Management, Inc. – Kettleman Hills Facility.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
  - h. “Permisos para Desechos Peligrosos – Diagrama, Waste Management, Inc. – Instalación Kettleman Hills.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
  - i. “Hazardous Waste Permitting – Activity, Waste Management, Inc. – Kettleman Hills Facility.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
  - j. “Permisos para Desechos Peligrosos – Actividades, Waste Management, Inc. – Instalación Kettleman Hills.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
  - k. “Enforcement Program, Waste Management, Inc. – Kettleman Hills Facility.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
  - l. “Programa de Cumplimiento, Waste Management, Inc. – Instalación Kettleman Hills.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
  - m. “Kettleman Hills Facility Permitting Process, Waste Management, Inc. – Kettleman Hills Facility.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
  - n. “Instalación Kettleman Hills Proceso de Tramitación de Permisos, Waste Management, Inc. – Instalación Kettleman Hills.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
  - o. “Kettleman Hills Facility Permitting Process – Water Board, Waste Management, Inc. – Kettleman Hills Facility.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
  - p. “Instalación Kettleman Hills Proceso de Tramitación de Permisos, Waste Management, Inc. – Kettleman Hills Facility.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
  - q. “Human Health Risk Assessment at K.H. Facility, Waste Management, Inc. – Kettleman Hills Facility.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.



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- r. “Evaluación de Riesgos Para la Salud Humana en la Instalación K.H. Waste Management, Inc. – Instalación Kettleman Hills.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
  - s. “Critical Distances Affecting Human Health Risk, Waste Management, Inc. – Kettleman Hills Facility.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
  - t. “Distancias Críticas Que Afectan los Riesgos Para la Salud Humana, Waste Management, Inc. – Instalación Kettleman Hills.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
  - u. “RCRA and TSCA Compliance History of Chemical Waste Management, Inc.” U.S. EPA Region 9. November 2011.
  - v. “Historial de Cumplimiento de RSCA y TSCA de Chemical Waste Management, Kettleman Hills.” U.S. EPA Region 9. November 2011.
  - w. “Agenda Workshop/Public Meeting Thursday, November 17, 2011.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2011.
  - x. “Pesticide Sampling Poster.” U.S. EPA Region 9. November 2011.
  - y. “Pesticide Safety Project: Preventing Pesticide Exposure among Women of Childbearing Age in Kettleman City, California.” U.S. EPA Region 9, November 2011.
  - z. “Project Summary & Update – Update on Chemical Waste Management – Kettleman Hills Facility PCB Permit Application Project.” U.S. EPA Region 9. November, 2011.
  - aa. “Untitled.” Presentation. U.S. EPA Region 9. November 16, 2011.
  - bb. “Kettleman City Community Workshop Public Workshop November 17, 2011 (sic) Sign-In sheet.” U.S. EPA Region 9. November 16, 2011. [REDACTED for posting on regulations.gov]
4. Community Fair 2017
- a. “Visit our booth at the Kings County Public Safety Event.” Postcard, Department of Toxic Substances Control and U.S. EPA to Kettleman City post office boxes. October 2017.
  - b. Safety Fair Booth Posters (English). U.S. EPA Region 9. October 2017.
  - c. Safety Fair Booth Posters (Spanish). U.S. EPA Region 9. October 2017.
  - d. Letter, Frances Wicher, U.S. EPA Region 9, to Kettleman City Residents who signed up to receive more information on the Kettleman Hills Project at the October 2017 Safety Fair. November 8, 2017.



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5. Public Meeting 2017
    - a. “Save the Date! DTSC & USEPA Community Meeting.” Department of Toxic Substances Control and U.S. EPA Region 9. November 2017.
    - b. “How Does the EPA Decision Process Work?” Poster, U.S. EPA Region 9. November 16, 2017 (English & Spanish).
    - c. “What Does the Facility Want to Do?” Poster, U.S. EPA Region 9. November 16, 2017.
    - d. “Qué quiere hacer la instalación?” Poster, U.S. EPA Region 9. November 16, 2017.
    - e. “What Should I Know About PCBs?” Poster, U.S. EPA Region 9. November 16, 2017.
    - f. “Qué debería saber sobre los PCBs?” Poster, U.S. EPA Region 9. November 16, 2017.
    - g. “November 16, 2017 Community Meeting Applications for Chemical Waste Management’s Kettleman Hills Facility (Agenda).” Handout. Department of Toxic Substances Control and U.S. EPA Region 9. November 16, 2017.
    - h. “PCB Application Review Process Under TSCA – Chemical Waste Management – Kettleman Hills Facility.” Presentation, U.S. EPA Region 9. November 16, 2017.
    - i. “Proceso de revisión de la solicitud de PCB bajo la ley TSCA – Chemical Waste Management – Kettleman Hills Facility.” Presentation, U.S. EPA Region 9. November 16, 2017.
  6. Community Notice and Community Fair 2018
    - a. “Community Update.” Department of Toxic Substances Control. April 2018. (English and Spanish)
    - b. “Major Changes Requested in Permit Renewal Application”/“Revisión de la aplicación, Comentarios público y Proceso de decisión.” Posters. U.S. EPA Region 9. October 2018.

### C. CWM COMMUNITY MEETINGS

1. “Kettleman Hills Facility – Three Decades of Community Support” Waste Management. January 2012.
2. “Annual Community Meeting Notification” Letter, Robert Henry, Chemical Waste Management, Inc to Chairman, Kings County Board of Supervisors. March 24, 2017.
3. “Kettleman Hills Facility 2016 Groundwater and Unsaturated Zone Annual Summary.” AMEC Foster Wheeler. April 2017.



4. “Resumen Anual 2016 de Las Aguas Subterráneas y Zonas Insaturadas de las Instalaciones de Kettleman Hills.” AMEC Foster Wheeler. April 2017.
5. “Air Quality Monitoring at the Kettleman Hills Facility.” Wenck Associates, Inc. April 2017.
6. “Control de Calidad del Aire en las Instalaciones de Kettleman Hills.” Wenck Associates, Inc. April 2017.
7. “Chemical Waste Management, Inc- Kettleman Hills Facility DTSC Permit Number: 02-SAC-03; DTSC Permit Condition: Part III. General Conditions, Condition 4. (C)” Letter, Robert Henry to Department of Toxic Substances Control, April 18, 2017.
8. “Kettleman Hills Facility 2nd Annual Informational Meeting.” Flyer, Chemical Waste Management, Inc. April 25, 2017.
9. “Instalación de Kettleman Hills 2ª Reunión Informativa Annual.” Flyer, Chemical Waste Management, Inc. April 25, 2017.
10. “Waste Management Kettleman Hills Facility Annual Community Meeting” Presentation.” Waste Management. April 25, 2017.
11. “2nd Annual Community Meeting.” Email, Bob Henry, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. April 29, 2017.
12. “Annual Community Meeting Notification” Letter, Robert Henry, Chemical Waste Management, Inc to Chairman, Kings County Board of Supervisors. March 27, 2018.
13. “Air Quality Monitoring at the Kettleman Hills Facility.” Wenck Associates, Inc. April 2018.
14. “Control de Calidad del Aire en las Instalaciones de Kettleman Hills.” Wenck Associates, Inc. April 2018.
15. “Kettleman Hills Facility 2017 Groundwater and Unsaturated Zone Annual Summary.” AMEC Foster Wheeler. April 2018.
16. “Resumen Anual 2017 de Las Aguas Subterráneas y Zonas Insaturadas de las Instalaciones de Kettleman Hills.” AMEC Foster Wheeler. April 2018.
17. “Kettleman Hills Facility 3rd Annual Informational Meeting.” Flyer, Chemical Waste Management, Inc. April 26, 2018.
18. “Instalación de Kettleman Hills 2ª Reunión Informativa Annual.” Flyer, Chemical Waste Management, Inc. April 26, 2018.
19. “Air Quality Monitoring at the Kettleman Hills Facility.” Wenck Associates, Inc. April 2019.
20. “Control de Calidad del Aire en las Instalaciones de Kettleman Hills.” Wenck Associates, Inc. April 2019.
21. “Kettleman Hills Facility 2018 Groundwater and Unsaturated Zone Annual Summary.” AMEC Foster Wheeler. April 2019.



22. “Resumen Anual 2018 de Las Aguas Subterráneas y Zonas Insaturadas de las Instalaciones de Kettleman Hills.” AMEC Foster Wheeler. April 2019.
23. “Kettleman Hills Facility 4th Annual Informational Meeting.” Flyer, Chemical Waste Management, Inc. April 23, 2019.
24. “Instalación de Kettleman Hills 4ª Reunión Informativa Annual.” Flyer, Chemical Waste Management, Inc. April 23, 2019.

#### **D. PUBLIC COMMENTS AND OTHER PUBLIC RESPONSES RECEIVED**

1. Comments Received on the 2007 Proposed Coordinated Approval
  - a. “In Re: US Environmental Protection Agency (EPA) Workshop and Public Hearing About Draft Permit for PCB Activities at Chemical Waste Management, Inc. Kettleman Hills Facility and Draft Environmental Justice Assessment.” Condensed Transcript. Diana K. Morris, CSR No. 12451. March 27, 2007.
  - b. “Comment Sheet for Draft Permit for CWM Kettleman Hills Facility and/or Draft Environmental Justice Assessment, Public Comments.” March 27, 2007. [REDACTED for posting on regulations.gov].
  - c. “Comments on the Draft Environmental Justice Assessment for Chemical Waste Management’s Kettleman Hills Facility” Comment Letter, Center on Race Poverty and the Environment, April 23, 2007. [REDACTED for posting on regulations.gov].
  - d. “Declarations of Residents of Kettleman City and Avenal City.” Transcribed and Translated Public Comments. May 1, 2007. [REDACTED for posting on regulations.gov]
  - e. “Why the US EPA’s Draft Environmental Justice Assessment and PCB Permit are Wrong!” El Pueblo’s Bullet Points on EJ Assessment, May 1, 2007.
  - f. “U.S. EPA’s Draft Environmental Justice Assessment of the Chemical Waste Management Hazardous Waste Facility in Kettleman City, California is Environmental Racism and Injustice.” Statement. Maricela Mares Alatorre, El Pueblo, et al. May 1, 2007.
  - g. “Comments of Greenaction for Health and Environmental Justice and El Pueblo Para El Aire Y Agua Limpia/ People for Clean Air and Water documenting why US EPA must rescind their “Draft Environmental Justice Assessment” and reject the proposed permit for the Chemical Waste Management Kettleman Hills Facility.” Letter, Maricela Mares-Alatorre, El Pueblo Para el Aire y Agua Limpio and Erica Swinney, Greenaction for Health and Environmental Justice to Max Weintraub/Debbie Lowe, U.S. EPA Region 9. May 21, 2007.
  - h. “Chemical Waste Management, Inc. – Kettleman Hills Facility Comments on Draft Coordinated Approval.” Letter Robert Henry, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. June 1, 2007.





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- i. “Kettleman City Draft EJ Assessment.” Letter, Steven Morgan, Chemical Waste Management, Inc to Max Weintraub and Debbie Lowe, U.S. EPA Region 9. June 1, 2007.
  - j. “Kettleman Elementary Hearing, March 27, 2007.” Letter, Alexis Yalon, Paulson Reporting and Litigation Services to Max Weintraub, U.S. EPA Region 9. June 18, 2007. With enclosure: ”In Re: US Environmental Protection Agency (EPA) Workshop and Public Hearing About Draft Permit for PCB Activities at Chemical Waste Management, Inc. Kettleman Hills Facility and Draft Environmental Justice Assessment.” Original Transcript. Diana K. Morris, CSR No. 12451. March 27, 2007.
2. Comments Received on the 2019 Proposal Approval (prior to start of comment period)
- a. “Kettleman City PCB Permit.” Email, Maricela Mares-Alatorre, El Pueblo of Kettleman City to Frances Wicher, et al., U.S. EPA Region 9. May 20, 2019.
  - b. “Proposed Dates for EPA Kettleman City Public Meeting.” Email, Bradley Angel, Greenaction to Frances Wicher, U.S. EPA Region 9. July 15, 2019.
  - c. “Proposed Dates for EPA Kettleman City Public Meeting.” Email, Maricela Mares-Alatorre, El Pueblo of Kettleman City to Frances Wicher, et al., U.S. EPA Region 9. July 15, 2019.
3. Other Comments Received
- a. “Civil Rights and Environmental Justice Discrimination in Kettleman City, CA.” Letter, Center on Race, Poverty & the Environment to Senator Barbara Boxer. September 29, 2008.
  - b. “Kettleman City Listening Session Kettleman Community Center, Kettleman, CA, Wednesday, August 12, 2009.” Transcript. August 12, 2009. [REDACTED for posting on regulations.gov].
  - c. “Dear State of California EPA/Department of Toxic Substances Control.” Public Petition. April 2010. [REDACTED for posting on regulations.gov].
  - d. Letter, Jared Blumenfeld, Regional Administrator, U.S. EPA Region 9, to Senator Diane Feinstein. April 8, 2010.
  - e. “Padres Hacia una Vida Mejor, et al v. California Environmental Protection Agency, Department of Toxic Substances Control, et al, Complaint No. 01R-95-R9.” Letter, Center on Race Poverty & the Environment, et al to Lisa Jackson, Administrator, U.S.EPA. June 8, 2010.
  - f. “Questions and EPA Responses Received from Greenaction/Center on Race, Poverty, and the Environment Regarding CWM PCB Congener Study Report.” U.S. EPA Region 9. January 2011.



- g. “FW: Responses to Mr. Angel Concerning CWM Kettleman Hills, March 14, 2016.” Email, Barbara Gross, U.S. EPA Region 9, to Bradley Angel, Greenaction, et al. March 30, 2016.
- h. “Request regarding November 16 Kettleman City public meeting.” Emails, Tom Huetteman, et al. U.S EPA Region 9 to Bradley Angel, Greenaction, et al. November 9, 2017.
- i. “Questions on landfill liners.” Email, Frances Wicher, U.S. EPA Region 9, to Maricela Mares-Alatorre, El Pueblo. December 15, 2017.
- j. “Touch base on Kettleman Hills Facility PCB application.” Email, Frances Wicher, to Maricela Mares-Alatorre, El Pueblo of Kettleman City. May 28, 2019.

## **V. CHEMICAL WASTE MANAGEMENT, INC. APPLICATION FOR TSCA APPROVAL RENEWAL**

### **A. OCTOBER 2018 APPLICATION**

1. “TSCA Permit Renewal Application, Chemical Waste Management, Kettleman Hills Facility.” Chemical Waste Management, Inc., Revision 3: October 1, 2018.
2. “TSCA Permit Renewal Application, Chemical Waste Management, Kettleman Hills Facility.” Chemical Waste Management, Inc., Revision 3: October 1, 2018. Redlined.
3. “TSCA Operation Plan, Landfill B-18 Phases I, II, and III; PCB Building and Outside Containment Area.” Chemical Waste Management, Inc., Revision 3: October 1, 2018.
4. “TSCA Operation Plan, Landfill B-18 Phases I, II, and III; PCB Building and Outside Containment Area.” Chemical Waste Management, Inc., Revision 3: October 1, 2018. Redlined.
5. “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised TSCA Permit Renewal Application – Revision 3.” Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. October 2, 2018.
6. “Chemical Waste Management, Inc. – Kettleman Hills Facility Class 1 Permit Modification: Contingency Plan and Training Plan.” Reyna Verdin, Chemical Waste Management, Inc. to Camille Rogado, Department of Toxic Substances Control. May 30, 2019. [REDACTED for posting on regulations.gov].

### **B. APRIL 2018 APPLICATION**

1. “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: TSCA Permit Renewal Application – Revision 1: July 15, 2017.” Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. February 14, 2018.
2. “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised TSCA Permit Renewal Application – Revision 2.” Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. April 19, 2018.



3. “TSCA Permit Renewal Application, Chemical Waste Management, Kettleman Hills Facility.” Revision 2: April 20, 2018.
4. “Hazardous Waste Facility Permit Renewal Application, Operation Plan, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 3: March 16, 2018. [REDACTED for posting on regulations.gov]
5. “Closure and Post-Closure Plans, Kettleman Hills Facility, Kings County, California.” Golder Associates, Inc. March 15, 2018.

### C. PREVIOUS APPLICATIONS

1. “TSCA Approval Renewal for Landfill Unit B-18, Chemical Waste Management, Inc. – Kettleman Hills Facility, CAT 000646 0117.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Yoshiro Tokiwa, U.S. EPA Region 9. April 1, 1997 with Enclosures.
2. “TSCA Approval Renewal for Landfill Unit B-14, B-16 and B-19 and Ancillary Commercial Storage Activities, Chemical Waste Management, Inc. – Kettleman Hills Facility, CAT 000646 0117.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Yoshiro Tokiwa, U.S. EPA Region 9. July 1, 1997. With enclosure.
3. “TSCA Approval Renewal for Landfill Unit B-18, Chemical Waste Management, Inc. – Kettleman Hills Facility, CAT 000646 0117.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Yoshiro Tokiwa, U.S. EPA Region 9. July 28, 1997. With enclosure.
4. Letter, Max Weintraub, U.S. EPA Region 9, to Paul E. Turek, Chemical Waste Management, Inc. August 21, 1998.
5. “Status of B-14 and B-19 Landfills Related to TSCA Letter of Authorization Renewal Request, Chemical Waste Management, Kettleman Hills Facility.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. August 26, 1998.
6. “Chemical Waste Management, Inc. – Kettleman Hills Facility Request for Submittal for Approval – Revised PCB Operation Plan.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. April 14, 1999. With enclosure: “Operation Plan, Landfill Unit B-18 and B-16; Closed Landfill Unit B-14, In Closure Landfill Unit B-19, Kettleman Hills Facility Chemical Waste Management, Inc.” Chemical Waste Management, Inc. April 1999.
7. “Chemical Waste Management, Inc. – Kettleman Hills Facility Request for TSCA PCB Coordinated Approval.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Wayne Nastri, U.S. EPA Region 9. October 20, 2003. With enclosure.
8. “TSCA Approval Modification for Certain PCB Activities.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. January 13, 2005. With enclosure.



9. “TSCA Approval Modification for Certain PCB Activities.” Letter, Paul Bisson, U.S. EPA Region 9, to Paul E. Turek, Chemical Waste Management, Inc. March 8, 2005.
10. “Chemical Waste Management, Inc. – Kettleman Hills Facility Request for to Modify TSCA PCB Coordinated Approval.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. June 26, 2009. With enclosures: “Initial Report TSCA Approval Request Chemical Waste Management, Inc. Kettleman Hills Facility Landfill Unit B-18, Phases I, II, and III.” and “Operation Plan, Landfill Unit B-18, Phases I, II, and III Kettleman Hills Facility Chemical Waste Management, Inc.” Chemical Waste Management, Inc. Revision 1: June 26, 2009.
11. “Chemical Waste Management, Inc. – Kettleman Hills Facility Request for to Modify TSCA PCB Coordinated Approval.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. July 28, 2009. With enclosures: “Operation Plan, Landfill Unit B-18, Phases I, II, and III Kettleman Hills Facility Chemical Waste Management, Inc.” Chemical Waste Management, Inc. Revision 1: July 27, 2009 and other documents documenting approval of waste disposal in Landfill B-18 Phases I and II.
12. “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised Initial Report, Omission from Response to Landfill B-18 Phase III Coordinated Approval Completeness Review.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Chip Poalinelli, U.S. EPA Region 9. February 18, 2010. With Enclosure: “Initial Report, TSCA Approval Request, Chemical Waste Management, Inc. Kettleman Hills Facility, Landfill Unit B-18, Phase I, II, and III.” Chemical Waste Management, Inc. February 17, 2010.
13. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to Notice of Deficiency – TSCA Permit Renewal and Modification.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. November 21, 2011 with Enclosures: 1) “Chemical Waste Management, Inc. – Kettleman Hills Facility (KHF), EPA-IX Notice of Deficiency for TSCA Permit Renewal and Modification Applications – Attachment A, dated September 22, 2011.” Chemical Waste Management, Inc. (November 21, 2011); 2) “TSCA Application – Supplemental Information.” Chemical Waste Management, Inc. (November 21, 2011); 3) “Initial Report, TSCA Approval Request, Chemical Waste Management, Inc. Kettleman Hills Facility, Landfill Unit B-18, Phase I, II, and III.” Chemical Waste Management, Inc. November 21, 2011 and 4) “TSCA Operation Plan, landfill Unit B-18, Phases I, II, and III, Kettleman Hills Facility, Chemical Waste Management, Inc.” Chemical Waste Management, Inc. November 21, 2011.
14. “Chemical Waste Management, Inc. – Kettleman Hills Facility TSCA Certification” Letter, Robert G. Henry, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. January 24, 2012.
15. “Additional Permit Requests for the PCB Building.” Email, Bob Henry, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. February 4, 2013.



16. “Chemical Waste Management, Inc. – Kettleman Hills Facility TSCA Permit Renewal – Supplemental Information.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. March 8, 2013. With enclosure.
17. “TSCA Supplemental Information – NOD 3/23/13 Response.” Spreadsheet, Chemical Waste Management. March 27, 2013.
18. “Chemical Waste Management Inc. – Kettleman Hills Facility Revised TSCA Permit Renewal Application – Revision 1.” Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA, July 13, 2017. With enclosures:
19. “TSCA Permit Renewal Application, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc., Revision 1: July 15, 2017.
20. “Hazardous Waste Facility Permit Renewal Application, Operation Plan, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 2: July 15, 2017. [REDACTED]

## **VI. REQUESTS FOR INFORMATION, NOTICES OF DEFICIENCIES, AND RESPONSES**

### **A. U.S. EPA 2016 REQUEST FOR UPDATE AND RESPONSE/DEPARTMENT OF TOXIC SUBSTANCES CONTROL FIRST NOTICE OF DEFICIENCY**

1. 2016 U.S. EPA Request for Update and Department of Toxic Substances Control First Notice of Deficiency
  - a. “Notice of Deficiency for the Permit Renewal Application for the Chemical Waste Management, Inc., Kettleman Hills Facility Hazardous Waste Facility, 35251 Old Skyline Road, Kettleman City, Kings County, California, 93239, Environmental Protection Agency Identification Number: CAT000646117.” Letter, Ryan Batty, Department of Toxic Substance Control, to Bob Henry, Chemical Waste Management, Inc. November 18, 2016. With enclosures.
  - b. Letter, Tom Huetteman, U.S. EPA Region 9, to Robert Henry, Chemical Waste Management, Inc. December 20, 2016.
  - c. “Letter following up on the discussions at the November 30, 2016 meeting.” Email, Bob Henry, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. January 13, 2017.
  - d. “Letter following up on the discussions at the November 30, 2016 meeting.” Email, Frances Wicher, U.S. EPA Region 9 to Bob Henry, Chemical Waste Management, Inc. January 17, 2017.
  - e. “Request for a Response Extension for the Notice of Deficiency for the Permit Renewal Application for the Chemical Waste Management, Inc., Kettleman Hills Facility Hazardous Waste Facility, 35251 Old Skyline Road, Kettleman City, Kings County, California, 93239, Environmental Protection Agency Identification Number: CAT000646117.” Letter, Reyna Verdin, Chemical Waste



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Management, Inc. to Ryan Batty, Department of Toxic Substances Control. February 7, 2017.

- f. “Approval of Extension to Respond to Notice of Deficiency, Permit Renewal for the Chemical Waste Management, Inc., Kettleman Hills Facility, Kings, County, California; EPA ID. No. CAT000646117.” Letter, Ryan Batty, Department of Toxic Substances Control to Reyna Verdin, Chemical Waste Management, Inc. February 14, 2017.
  - g. “Revised submittal schedule for the TSCA application.” Email, Frances Wicher, U.S. EPA to Bob Henry, Chemical Waste Management, Inc. February 21, 2017.
  - h. “Revised submittal schedule for the TSCA application.” Email, Frances Wicher, U.S. EPA to Bob Henry, Chemical Waste Management, Inc. February 24, 2017.
  - i. “March 7, 2017 DTSC (GSU) Meeting Notes.” Email Bob Henry, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. March 9, 2017 with attachment: “Proposed Changes to Table 1 (Draft).”
  - j. “FW: Minutes for Kettleman Hills meeting.” Email, Ryan Batty, Department of Toxic Substances Control, to Bob Henry, Chemical Waste Management, Inc. March 10, 2017.
2. Response to 2016 Request for Update/Department of Toxic Substances Control First Notice of Deficiency

a. **First Incremental Submittal**

- (1) “Responses to the Permit Renewal Application Notice of Deficiency. Submittal No. 1 (March 15, 2017) Kettleman Hills Facility – Kings, County, California; EPA ID. NO. CAT000646117.” Letter, Michelle Kampen and Ryan Hillman, Golder Associates to Ryan Batty, Department of Toxic Substances Control, and Frances Wicher, U.S. EPA Region 9. March 15, 2017 including 3 Attachments.

b. **Second Incremental Submittal**

- (1) “Responses to the Permit Renewal Application Notice of Deficiency. Submittal No. 2 (April 15, 2017) Kettleman Hills Facility – Kings, County, California; EPA ID. NO. CAT000646117.” Letter, Michelle Kampen and Ryan Hillman, Golder Associates to Ryan Batty, Department of Toxic Substances Control, and Frances Wicher, U.S. EPA Region 9. April 15, 2017 including 12 attachments.
- (2) “Exposure Information Report for the Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County California. EPA ID No. CAT000646117.” August 8, 1985.



- (3) “Potential Release Report for the Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County California. EPA ID No. CAT000646117.” September 6, 1985.
- (4) “Response to July 1985 Second Notice of Deficiency – Engineering Plans, Specifications and Certification Reports for Existing Surface Impoundment Units, Kettleman Hills Facility, Kings County, California.” EMCON Associates. September 7, 1985.
- (5) “Final Environmental Impact Report – Chemical Waste Management, Inc. Kettleman Hills Hazardous Waste Treatment, Storage, and Disposal Facility.” CH2M Hill. October 1985.
- (6) “State Siting Criteria Equivalency Assessment for Chemical Waste Management’s Inc. Kettleman Hills Facility.” Meredith/Boli & Associates, Inc. October 28, 1985.
- (7) “Inorganic Chemical Characterization of Ground Water, Kettleman Hills Facility, Kettleman Hills, California.” EMCON Associates. April 1, 1986.
- (8) “Interim Status Period Ground-Water Monitoring Results Kettleman Hills Facility, Kettleman Hills Facility, Kettleman Hills, California.” EMCON Associates. April 1, 1986.
- (9) “Construction Certification Report Pond P-16 Kettleman Hills Facility, Kings County, California.” EMCON Associates. May 23, 1986.
- (10) “Construction Certification Report Pond P-9 Kettleman Hills Facility, Kings County, California.” EMCON Associates. May 27, 1986.
- (11) “Chemical Waste Management, Inc. – Quality Assurance Manual for the Installation of the Soil Components of Lining and Final Cover Systems.” Golder Associates, Inc. June 1, 1986.
- (12) “Construction Certification Report Pond P-14 Kettleman Hills Facility Kings County, California.” EMCON Associates. July 9, 1986.
- (13) “Faulting/Seismicity Report Kettleman Hills Facility for Chemical Waste Management, Inc.” Dames & Moore. November 10, 1986.
- (14) “Neutralization/Filtration Unit Operation Plan for Chemical Waste Management, Inc.’s Kettleman Hills Facility, Kings County, California.” Chemical Waste Management, Inc. November 10, 1986.
- (15) “RCRA Facility Assessment of Solid Waste Management Units at Chemical Waste Management, Inc.’s Kettleman Hills Facility, Kettleman City, California.” A.T. Kearney, Inc. February 20, 1987.
- (16) ““Certification and Signatory”” page for October 1985 Interim Status Monitoring Plan for Chemical Waste Management’s Kettleman Hills Facility.” EMCON. December 27, 1987. Includes “Hydrogeologic



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- Characterization, Kettleman Hills Facility, Kings County, California.” EMCON Associates. December 1986.
- (17) “Proposed Evaporative Tank System, Application to Modify the Kettleman Hills Facility Part B Permit (CAT000646117).” Meredith/Boli & Associates, Inc. August 12, 1988.
- (18) “California Regional Water Quality Control Board Central Valley Region, Resolution No. 88-155, Amendment to the Water Quality Control Plan for the Tulare Lake Basin (5D).” California Regional Water Quality Control Board – Central Valley Region. August 11, 1989.
- (19) “Certification Report September 12, 1989 for Drum Storage Unit Kettleman Hills Facility, Kings County, California.” Engineering Services, Inc. September 12, 1989.
- (20) “Bid Documents for Evaporative Tank Farm Kettleman Hills Facility, Kettleman City, California.” ESI Engineering Services, Inc. September 26, 1989.
- (21) “State Water Resource Control Board Resolution No. 90-5 – Approval of an Amendment to the Water Quality Control Plan for Tulare Lake Basin (Basin 5D) Deleting a Beneficial Use Designation for Specific Ground Waters in the Vicinity of Kettleman Hills.” California Regional Water Quality Control Board – Central Valley Region. January 18, 1990.
- (22) “Certification Report February 13, 1990 for Final Stabilization Unit, Kettleman Hills Facility, Kings County, California.” Engineering Services, Inc. February 13, 1990.
- (23) “Phase I Holocene Surface Faulting Study Nunez Fault and Kettleman Hills Facility for Chemical Waste Management, Inc.” Roger Foott Associates, Inc. April 2, 1990.
- (24) “Evaporative Tank Farm Design Drawings.” ESI Engineering Services Inc. May 11, 1990.
- (25) “Quality Assurance Manual for the Installation of the Geosynthetic Lining Systems.” Chemical Waste Management, Inc. June 15, 1990.
- (26) “Stabilized Bulk Waste Storage Area Design Plans and Specifications Kettleman Hills Facility.” Golder Associates, Inc. June 27, 1990.
- (27) “Second Generation Stabilization Engineering Report for Chemical Waste Management, Inc. Kettleman Hills Facility, Kettleman City, California. Vol. 1.” RUST. July 27, 1990.
- (28) “Second Generation Stabilization Engineering Report for Chemical Waste Management, Inc. Kettleman Hills Facility, Kettleman City, California. Vol. 2.” RUST. July 27, 1990.
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- (29) “Second Generation Stabilization Engineering Report for Chemical Waste Management, Inc. Kettleman Hills Facility, Kettleman City, California. Vol. 3.” RUST. July 27, 1990.
  - (30) “Kettleman Hills Facility CAT 000 646 117 Evaporative Tank System EPA/DHS Permit Conditions III.K.2. and III.K.3.” Letter, Carol J. Carollo, Chemical Waste Management, Inc. to Director Hazardous Waste Management Division, U.S. EPA Region IX. July 30, 1990 with Attachment “Quality Assurance Plan, Chemical Waste Management, Inc. Kettleman Hills Facility, Evaporative Tank System.” July 30, 1990.
  - (31) “Construction Specifications and Quality Assurance Plan, Landfill Unit B-18 Phases I and II and Final Closure, Kettleman Hills Facility, Kings County, California.” Environmental Solutions, Inc. July 31, 1990.
  - (32) “Landfill Unit B-18 Phases I and II and Final Closure Volume II.” Environmental Solutions, Inc. August 1, 1990.
  - (33) “Transmittal Engineering and Design Report Landfill Unit B-18, Kettleman Hills Facility, Kings County, California.” Environmental Solutions, Inc. August 15, 1990.
  - (34) “Bulk Storage Unit Phase 2 Design Plans and Specifications Kettleman Hills Facility.” Golder Associates, Inc. November 1, 1991.
  - (35) “Clay Source Report Landfill B-18, Phases II and IB Kettleman Hills Facility, Kettleman City, California.” Environmental Construction Services, Inc. November 25, 1991.
  - (36) “Subgrade Geologic Mapping and Chemical Analysis for Landfill B-18, Phase I Kettleman Hills Facility, California.” Golder Associates, Inc. November 1991.
  - (37) “Secondary Clay Liner Report Landfill B-18, Phases IA and IB, Kettleman Hills Facility, Kettleman City, California.” Environmental Construction Services, Inc. January 6, 1992.
  - (38) “Potential Chemical Similarities between the B-19 and B-18 Clay, Kettleman Hills Facility.” Environmental Solutions, Inc. January 9, 1992.
  - (39) “Secondary HDPE Liner and Leachate Collection System Report Landfill B-18, Phases IA and IB Kettleman Hills Facility, Kettleman City, California, Volume A.” Environmental Construction Services, Inc. January 13, 1992.
  - (40) “Secondary HDPE Liner and Leachate Collection System Report Landfill B-18, Phases IA and IB Kettleman Hills Facility, Kettleman City, California, Volume A.” Environmental Construction Services, Inc. January 13, 1992.



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- (41) “Primary Clay Liner Report Landfill B-18, Phases IA and IB, Kettleman Hills Facility, Kettleman City, California.” Environmental Construction Services, Inc. January 13, 1992.
  - (42) “Secondary HDPE Liner and Leachate Collection System Report Landfill B-18, Phases IA and IB Kettleman Hills Facility, Kettleman City, California Volume A” Environmental Construction Services, Inc. January 13, 1992.
  - (43) “Secondary HDPE Liner and Leachate Collection System Report Landfill B-18, Phases IA and IB Kettleman Hills Facility, Kettleman City, California Volume B” Environmental Construction Services, Inc. January 13, 1992.
  - (44) “Primary HDPE Liner and Leachate Collection System Report Landfill B-18, Phases IA and IB Kettleman Hills Facility, Kettleman City, California Volume B” Environmental Construction Services, Inc. January 20, 1992.
  - (45) “Test Fill and Infiltrometer Test Results Landfill Unit B-18 Phases I and II and Final Closure.” Environmental Solutions, Inc. January 23, 1992.
  - (46) “Summary Construction Report Landfill B-18, Phases IA and IB Kettleman Hills Facility, Kettleman City, California.” Environmental Construction Services, Inc. February 18, 1992.
  - (47) “Design Changes and Design Clarifications Landfill B-18, Phases IA and IB Kettleman Hills Facility, Kettleman City, California.” Environmental Construction Services, Inc. February 18, 1992.
  - (48) “Field Observations and Field and Laboratory Testing for the Construction of Phase 2 Bulk Storage Unit (BSU), Revision 1.” Golder Construction Services, Inc. May 1, 1992.
  - (49) “Field Observations, and Field and Laboratory Testing for the Construction of Phase I Stabilized Bulk Waste Storage Area (SBWSA).” Golder Construction Services, Inc. May 1, 1992.
  - (50) “Response Action Plan, Landfill B-18, Kettleman Hills Facility.” SEC Donohue, Inc. June, 1992.
  - (51) “Operational Features Report Landfill B-18, Phases IA and IB, Kettleman Hills Facility, Kettleman City, California.” Environmental Construction Services, Inc. June 26, 1992.
  - (52) “Vadose Zone Response Plan Landfill B-18, Kettleman Hills Facility.” SEC Donohue, Inc. June 1992.
  - (53) “Landfill Unit B-18, Phases IIA and IIB Construction Reports, Volume 1 – Clay Liner Source Report.” Golder Construction Services, Inc. May 1, 1993.
  - (54) “Landfill B-18, Phases IIA and IIB Construction Reports, Volume 2 – Subgrade Geologic Mapping and Chemical Analysis Report.” Golder Construction Services, Inc. May 1, 1993.



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- (55) “Revised Intermediate Waste Fill Plan Landfill Unit B-18, Phase I, Kettleman Hills Facility, Kings County, California.” Environmental Solutions, Inc. August 1, 1993.
- (56) “Final Report, Construction Reports for Landfill B-18, Phases IIA and IIB, Kettleman City, California, Excavation and Structural Fill Replacement Construction Report Volume 3.” Golder Construction Services, Inc. August 27, 1993.
- (57) “Final Report Construction Reports for Landfill B-18, Phases IIA and IIB, Kettleman City, California, Excavation and Structural Fill Replacement Construction Report Volume 3 – Attachment 1 (OVS).” Golder Construction Services, Inc. August 27, 1993.
- (58) “Final Report Construction Reports for Landfill B-18, Phases IIA and IIB, Kettleman City, California, Excavation and Structural Fill Replacement Construction Report Volume 3 – Attachment 2 (OVS).” Golder Construction Services, Inc. August 27, 1993.
- (59) “Final Report Construction Reports for Landfill B-18, Phases IIA and IIB, Kettleman City, California, Secondary Clay Liner Construction Report, Volume 4.” Golder Construction Services, Inc. September 13, 1993.
- (60) “Final Report Construction Reports for Landfill B-18, Phases IIA and IIB, Kettleman City, California, Secondary and Vadose HDPE Liner and Leachate Collection System Construction Report Volume 5.” Golder Construction Services, Inc. October 20, 1993.
- (61) “Landfill B-18 Phases IIA and IIB Construction Reports, Volume 5A – Secondary and Vadose HDPE Liner and Leachate Collection System Report (Appendices A-D).” Golder Construction Services, Inc. October 1993.
- (62) “Landfill B-18, Phases IIA and IIB Construction Reports Volume 5B – Secondary and Vadose HDPE Liner and Leachate Collection System Report (Appendix E).” Golder Construction Services, Inc. October 1993.
- (63) “Landfill B-18, Phases IIA and IIB Construction Reports, Volume 5C – Secondary and Vadose HDPE Liner and Leachate Collection System Report (Appendices F-O).” Golder Construction Services, Inc. October 20, 1993.
- (64) “Construction Report Landfill B-18, Phases IIA and IIB Volume 6 – Primary Clay Liner.” Golder Construction Services, Inc. October 20, 1993.
- (65) “Landfill B-18, Phases IIA and IIB Construction Reports Volume 7A – Primary HPDE Liner and Leachate Collection System Report (Appendices).” Golder Construction Services, Inc. November 8, 1993.
- (66) “Final Report to Chemical Waste Management, Inc. Kettleman Hills Facility, Kettleman City, California. Construction Reports for Landfill B-18, Phases IIA and IIB, Kettleman City, California, Primary HDPE Liner and



- Leachate Collection System Construction Report, Volume 7.” Golder Construction Services, Inc. November 8, 1993.
- (67) “Landfill B-18, Phases IIA and IIB Construction Reports, Volume 8 – Summary Construction Report.” Golder Construction Services, Inc. November 1993.
- (68) “Final Report to Chemical Waste Management, Inc. Kettleman Hills Facility, Kettleman City, California. Construction Reports for Landfill B-18, Phases IIA and IIB, Kettleman City, California, Operational Features Report, Volume 9.” Golder Construction Services, Inc. December 6, 1993.
- (69) “Kettleman Hills Landfill B-18 Phase II & IIB Response Action Plan Update.” Rust Environment & Infrastructure, Inc. January 29, 1994.
- (70) “Construction Quality Assurance Report for Surface Impoundment P-15 Emergency Retrofit Kettleman Hills Facility.” Golder Construction Services, Inc. February 1, 1995.
- (71) “Partial Closure Certification Report for Surface Impoundment P-15.” Rust Environment & Infrastructure, Inc. January 17, 1997.
- (72) “Draft Subsequent Environmental Impact Report. B-18/B-20 Hazardous Waste Disposal Project Kettleman Hills Facility Chemical Waste Management, Inc.” CH2MHill. March 2008.
- (73) “Draft Subsequent Environmental Impact Report – Volume II: Appendices. B-18/B-20 Hazardous Waste Disposal Project Kettleman Hills Facility Chemical Waste Management, Inc.” CH2MHill. March 2008.
- (74) “Revised Project Description and Analysis; Draft Subsequent Environmental Impact Report. B-18/B-20 Hazardous Waste Disposal Project Kettleman Hills Facility Chemical Waste Management, Inc.” CH2MHill. May 1, 2008.
- (75) “Recirculated Portions of Draft Subsequent Environmental Impact Report Draft. B-18/B-20 Hazardous Waste Disposal Project Kettleman Hills Facility.” CH2MHill. May 1, 2009.
- (76) “Engineering and Design Report B-18 Class I Landfill Phase III Expansion and Final Closure Kettleman Hills Facility.” Golder Associates, Inc. August 1, 2011.
- (77) “Assessment of Increasing Groundwater Levels and Trichloroethene Concentrations in the K40 Corrective Action Area.” AMEC Environmental & Infrastructure. July 18, 2012.
- (78) “Transmittal of Adopted Waste Discharge Requirements Order R5-2014-0003, Chemical Waste Management, Inc., Kettleman Hills Facility, Kings County.” Letter Regional Water Quality Control Board – Central Valley Region to Jim Sook, Chemical Waste Management, Inc. February 6, 2014.



- With enclosures: 1) “Order R5-2014-0003 Waste Discharge Requirements for Chemical Waste Management, Inc. Class I/II Waste Management Units Kettleman Hills Facility Kings County.” California Regional Water Quality Control Board Central Valley. January 14, 2014.
- (79) “Construction Quality Assurance (CQA) Report for Landfill B-18 Phase III Expansion – Volume 1: Phase IIIA Subgrade and Secondary Clay Liner.” Golder Associates, Inc. January 2015.
- (80) “Construction Quality Assurance (CQA) Report for Landfill B-18 Phase III Expansion – Volume 2: Phase IIIA Geosynthetics and Operations Layer.” Golder Associates, Inc. February 2015.
- (81) “Construction Quality Assurance (CQA) Report for Landfill B-18 Phase III Expansion – Volume 3: Phase IIIB Phase IIIB subgrade and Secondary Clay Liner.” Golder Associates, Inc. November 2015.
- (82) “Construction Quality Assurance (CQA) Report for Landfill B-18 Phase III Expansion – Volume 4: Phase IIIB Geosynthetics, Phase IIIB Operations Layer, and Phase III Operations Features.” Golder Associates, Inc. December 2015 (Revised April 2016).
- (83) “Operations and Maintenance Plan for the Spill Isolation and Containment System at the Sampling Platforms and Untarping Racks.” Golder Associates, Inc. May 2016.
- (84) “Construction Quality Assurance (CQA) Report for the Phase 1 Construction of the Spill Isolation and Containment System at the Sampling Platforms and Untarping Racks, Kettleman Hills Facility – Kings County, California.” Letter, Golder Associates, Inc. to Rober Henry, Chemical Waste Management, Inc. May 27, 2016.
- (85) “Responses to DTSC Review Comments on the Phase 1 and Phase 2 Construction Quality Assurance (CQA) Reports Spill Isolation and Containment System at the Sampling Platforms and Untarping Racks, Kettleman Hills Facility – Kings County, California.” Letter, Ryan Hillman, Golder Associates, Inc. to Rena Verdin, Chemical Waste Management, Inc. March 2, 2017.
- (86) “Closure and Post-Closure Plans, Kettleman Hills Facility, Kings County, California.” Golder Associates, Inc. April 15, 2017.

**c. Third Incremental Submittal**

- (1) “Responses to the Permit Renewal Application Notice of Deficiency. Submittal No. 3 (April 30, 2017) Kettleman Hills Facility – Kings, County, California; EPA ID. NO. CAT000646117.” Letter, Michelle Kampen and Ryan Hillman, Golder Associates to Ryan Batty, Department of Toxic Substances Control, and Frances Wicher, U.S. EPA Region 9. April 30, 2017. Including attachments – Responses to Specific Comments 1-7.



**d. Fourth Incremental Submittal**

- (1) “Responses to the Permit Renewal Application Notice of Deficiency. Submittal No. 4 (May 1, 2017) Kettleman Hills Facility – Kings, County, California; EPA ID. NO. CAT000646117.” Letter, Michelle Kampen and Ryan Hillman, Golder Associates to Ryan Batty, Department of Toxic Substances Control, and Frances Wicher, U.S. EPA Region 9. May 1, 2017. Including attachments Responses to HERO Memorandum General Comment #1 and Specific Comments #1-15.
- (2) “Kettleman Hills Facility, Air Monitoring – Technical Work Plan.” NUS Corporation. February 24, 1986.
- (3) “California Regional Water Quality Control Board Central Valley Region, Resolution No. 88-051, Determination of the Existence of Absence of a Potential Source of Drinking Water Within One-Half Mile of the Surface Impoundments at Kettleman Hills Facility.” California Regional Water Quality Control Board – Central Valley Region. March 25, 1988.
- (4) “Air Quality Solid Waste Assessment Test Report, Kettleman Hills Facility, Kettleman City, California.” NUS Corporation. October 1988.
- (5) “Gaseous Tracer Study at the Chemical Waste Management Kettleman Hills Facility, November 7 -17, 1988.” Tracer Technologies. November 15, 1988.
- (6) “1994 Topographical, Meteorological and Airborne Contaminant Characterization at Kettleman Hills Facility – Volume I.” Rust Environment & Infrastructure, Inc. April 1995.
- (7) “1994 Topographical, Meteorological and Airborne Contaminant Characterization at Kettleman Hills Facility – Volume II.” Rust Environment & Infrastructure, Inc. April 1995.
- (8) “1994 Topographical, Meteorological and Airborne Contaminant Characterization at Kettleman Hills Facility – Volume III.” Rust Environment & Infrastructure, Inc. April 1995.
- (9) “1994 Topographical, Meteorological and Airborne Contaminant Characterization at Kettleman Hills Facility – Volume IV.” Rust Environment & Infrastructure, Inc. April 1995.
- (10) “1994 Topographical, Meteorological and Airborne Contaminant Characterization at Kettleman Hills Facility – Volume V.” Rust Environment & Infrastructure, Inc. April 1995.
- (11) “1994 Topographical, Meteorological and Airborne Contaminant Characterization at Kettleman Hills Facility – Volume VI.” Rust Environment & Infrastructure, Inc. April 1995.
- (12) “Subject: Air Toxics Information and Assessment Act, Chemical Waste Management, Inc. – Prioritization Score and Ranking Based on the Toxic



- Emissions Inventory Submitted for the 1992 Reporting Year, Facility ID#: 40029.” Letter, Seyed Sadredin, San Joaquin Valley Unified Air Pollution Control District to Paul Turek, Chemical Waste Management, Inc. June 25, 1996.
- (13) “Final Ambient Monitoring Plan.” EarthTech. February 2006.
- (14) “Site-Specific Ambient Monitoring Plan – First Revision.” EarthTech. February 2007.
- (15) “Site-Specific Ambient Monitoring Plan – Second Revision.” EarthTech. July 2007.
- (16) “Dispersion Modeling Report Associated with the PCB Congener Study – Appendix G Laboratory Analytical Data TestAmerica.” Wenck Associates, Inc. May 9, 2009.
- (17) “Final Subsequent Environmental Impact Report. B-18/B-20 Hazardous Waste Disposal Project Kettleman Hills Facility.” CH2MHill. September 1, 2009. First Part.
- (18) “Final Subsequent Environmental Impact Report. B-18/B-20 Hazardous Waste Disposal Project Kettleman Hills Facility.” CH2MHill. September 1, 2009. Second Part.
- (19) “Final Subsequent Environmental Impact Report. B-18/B-20 Hazardous Waste Disposal Project Kettleman Hills Facility.” CH2MHill. September 1, 2009. Third Part.
- (20) “Dispersion Modeling Report Associated with the PCB Congener Study.” Wenck Associates, Inc. October 1, 2009.
- (21) “Dispersion Modeling Report Associated with the PCB Congener Study – Appendix D Soil and Vegetation Sampling Field Book, Photo Logs, Data Sheets, etc.” Wenck Associates, Inc. October 1, 2009.
- (22) “Surface Water Control Program for Kettleman Hills Facility,” Centra Consulting, Inc. October 23, 2009.
- (23) “Site-Specific Ambient Air Monitoring Plan – Third Revision.” EarthTech. May 2010.
- (24) “Site-Specific Ambient Air Monitoring Plan – Fourth Revision” EarthTech. November 2010.
- (25) “Final Dioxin-Like Polychlorinated Biphenyl (PCB) Congeners Study Report, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. November 2010.
- (26) “Final 2011 Health Risk Assessment.” Wenck Associates, Inc. November 2011.



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- (27) “Final Annual Screening Level Health Risk Assessment October 2010 – September 2011, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF)” Wenck Associates, Inc. July 2012.
  - (28) “Annual Screening Level Health Risk Assessment October 2011 – September 2012, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF)” Wenck Associates, Inc. March 2013.
  - (29) “Annual Screening Level Health Risk Assessment October 2012 – September 2014, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF)” Wenck Associates, Inc. March 2014.
  - (30) “Annual Screening Level Health Risk Assessment October 2013 – September 2014, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF)” Wenck Associates, Inc. March 2015.
  - (31) “Site-Specific Ambient Air Monitoring Plan – Fifth Revision.” Wenck Associates, Inc. January 2016.
  - (32) “Annual Screening Level Health Risk Assessment October 2014 – September 2015, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF)” Wenck Associates, Inc. March 2016.
  - (33) “Storm Water Pollution Prevention Plan Chemical Waste Management, Inc. – Kettleman Hills Facility.” Golder Associates, Inc. June 2015 (amended March 2016).
  - (34) “Annual Screening Level Health Risk Assessment October 2015 – September 2016, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF)” Wenck Associates, Inc. March 2017.

**e. Fifth Incremental Submittal**

(1) Department of Toxic Substances Control/EPA Submittal

- (a) “Responses to the Permit Renewal Application Notice of Deficiency. Submittal No. 5 (May 15, 2107) Kettleman Hills Facility -- Kings, County, California; EPA ID. NO. CAT000646117.” Letter, Michelle Kampen and Ryan Hillman, Golder Associates to Ryan Batty, Department of Toxic Substances Control, and Frances Wicher, U.S. EPA Region 9. May 15, 2017. With included attachments, responses to NOD General Comment #1, Specific Comments #8-39, GSU Memorandum Specific Comments #4-6. With separate attachment:
  - (i) Example Analytic Results. Curtis and Tompkins. [REDACTED for posting on regulations.gov]
  - (ii) Example 10.1: Manifest: NH30283117 [REDACTED]
  - (iii) Example 10.2: Manifest: 016881648JJK [REDACTED]
  - (iv) Example 10.3: Manifest: 016123755JJK [REDACTED]





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(2) TSCA Submittal

- (a) “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised TSCA Permit Renewal Application.” Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. May 15, 2017.
- (b) “TSCA Permit Renewal Application, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc., Revision 0: May 15, 2017. With included appendices and attachments.

f. **Sixth Incremental Submittal**

- (1) “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised TSCA Permit Renewal Application – Revision 1.” Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. July 13, 2017.
- (2) “TSCA Permit Renewal Application, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc., Revision 0: May 15, 2017. With included appendices and attachments.
- (3) “Hazardous Waste Facility Permit Renewal Application, Operation Plan, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 2: July 15, 2017. [REDACTED for posting on regulations.gov]
- (4) “Hazardous Waste Facility Permit Renewal Application, Operation Plan, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 2: July 15, 2017 (redline). [REDACTED for posting on regulations.gov]
- (5) “Site-Specific Water Quality and Soil-Gas Monitoring Plan 2017 Class I Waste Management Units – Kettleman Hills Facility, Kings County, California.” Amec Foster Wheeler Environment & Infrastructure, Inc. July 12, 2017.
- (6) “Engineering Feasibility Study 2017 Class I Waste Management Units, Kettleman Hills Facility, Kings County, California. Amec Foster Wheeler Environment & Infrastructure, Inc. July 12, 2017.

**B. 2017 U.S. EPA NOTICE OF DEFICIENCY AND RESPONSE**

1. 2017 U.S. EPA NOD

- a. “KHF Update.” Email, Bob Henry, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. August 10, 2017.



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- b. “U.S. EPA-IX Conference Call November 1, 2017.” Email, Bob Henry, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. October 27, 2017.
  - c. Letter, Barbara Gross, U.S. EPA Region 9, to Reyna Verdin, Chemical Waste Management, Inc. December 21, 2017. With enclosure:
    - (1) “Notice of Deficiency, TSCA Permit Renewal Application (dated July 1, 2017), Chemical Waste Management, Inc. – Kettleman Hills Facility, EPA ID. NO CAT 000 646 117.” U.S. EPA Region 9. December 21, 2017.
2. Response to 2017 U.S. EPA NOD
- a. “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: TSCA Permit Renewal Application, Revision 1: July 15, 2017.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. February 14, 2018.
  - b. “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: Sufficiency of Groundwater Monitoring Program.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. February 17, 2018. With enclosure: “Sufficiency of Groundwater Monitoring Program.” AMEC Foster Wheeler. February 7, 2018
  - c. “Closure and Post-Closure Plans, Kettleman Hills Facility, Kings County, California.” Golder Associates, Inc. March 15, 2018.
  - d. “Hazardous Waste Facility Permit Renewal Application, Operation Plan, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 3: March 16, 2018. [REDACTED for posting on regulations.gov]
  - e. “Hazardous Waste Facility Permit Renewal Application, Operation Plan, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 3: March 16, 2018 (redlined). [REDACTED for posting on regulations.gov]
  - f. “First Notice of Deficiency for TSCA Permit Renewal Application, Chemical Waste Management, Inc. – Kettleman Hills Facility, EPA ID. NO CAT 000 646 117 (Response to Comments).” Chemical Waste Management, Inc. April 2018. [REDACTED for posting on regulations.gov].
  - g. “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised TSCA Permit Renewal Application – Revision 2.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. April 19, 2018.
  - h. “TSCA Permit Renewal Application, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc., Revision 2: April 20, 2018.



- i. “TSCA Permit Renewal Application, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc., Revision 2: April 20, 2018 (redlined).

## C. 2018 U.S. EPA REQUEST FOR INFORMATION

### 1. 2018 Request for Information

- a. “Memorandum to File (CAT 000 646 117 Chemical Waste Management, Inc. TSCA Approval), Subject: September 7, 2018 Call with Chemical Waste Management, Inc. Kettleman Hills Facility.” Frances Wicher, U.S. EPA Region 9. September 17, 2018.

### 2. Response to 2018 Request for Information Response

- a. “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised TSCA Permit Renewal Application – Revision 3.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. October 2, 2018.
- b. “TSCA Permit Renewal Application, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc., Revision 3: October 2, 2018.
- c. “TSCA Operation Plan, Landfill B-18 Phases I, II, and III; PCB Building and Outside Containment Area.” Chemical Waste Management, Inc., Revision 3: October 1, 2018.
- d. “TSCA Permit Renewal Application, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc., Revision 3: October 2, 2018 (redlined).
- e. “TSCA Operation Plan, Landfill B-18 Phases I, II, and III; PCB Building and Outside Containment Area.” Chemical Waste Management, Inc., Revision 3: October 1, 2018 (redlined).
- f. “Engineer’s Certification for the Outside Containment System for the PCB Flushing/Storage Unit at the Kettleman Hills Facility – Kings County, California (EPA ID NO.: CAT000646117).” Ryan Hillman, Golder Associates, Inc. to Reyna Verdin, Chemical Waste Management, Inc., October 1, 2018.
- g. “Engineer’s Certification for the Interior Containment System for the PCB Flushing/Storage Unit at the Kettleman Hills Facility – Kings County, California (EPA ID NO.: CAT000646117).” Ryan Hillman, Golder Associates, Inc. to Reyna Verdin, Chemical Waste Management, Inc., October 1, 2018.
- h. “Business Confidential - Percentage TSCA Disposal to Total Disposal 2002-2017.” Chemical Waste Management, Inc., October 2, 2019. [Confidential Business Information]



- i. “Closure and Post-Closure Plans, Kettleman Hills Facility, Kings County, California.” Golder Associates, Inc. March 15, 2018.
- j. “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised Site-Specific Groundwater Monitoring Plan Revised Site-Specific Unsaturated Zone Monitoring Plan.”, Letter, Paul E. Turek, Chemical Waste Management, Inc. to Regional Water Quality Control Board. April 15, 2014. With enclosure: “Revised Site-Specific Groundwater Monitoring Plan Class I Waste Management Units, Kettleman Hills Facility, Kings County, California.” AMEC Environment & Infrastructure, Inc. April 14, 2014.
- k. “Notifications correspondence from KHF to EPA-IX for PCB detections in groundwater monitoring results and leachate analytic results for TSCA-regulated units from 1992 – 2018. Compiled by Chemical Waste Management, Inc. October 2, 2018.
- l. “In the Matter of Certifying the Final Subsequent Environmental Impact Report for the Kettleman Hills Facility B-18/B-20 Hazardous Waste Disposal Project, Resolution No. 09-12.” Kings County Planning Commission. October 19, 2009.
- m. “In the Matter of Approving Conditional Use Permit Application Number CUP 05-10 And Adopting the CEQA Findings ff Fact and a Statement ff Overriding Considerations, Adopting the Mitigation Monitoring Plan, and Adopting the Conditions of Approval for the Kettleman Hills Facility B-18/B-20 Hazardous Waste Disposal Project, Resolution No. 09-13.” Kings County Planning Commission. October 19, 2009.

#### **D. 2019 U.S. EPA REQUESTS FOR INFORMATION AND RESPONSE**

1. “CWM-KHF Information Request.” Email, Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. July 15, 2019.
2. “CWM-KHF Information Request.” Email, Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. July 18, 2019.
3. “July 3, 2019 Call with Chemical Waste Management, Inc. Kettleman Hills Facility.” Memorandum, Frances Wicher, U.S. EPA to File (CAT 000 646 117 Chemical Waste Management, Inc. TSCA Approval). July 24, 2019.

#### **E. PRE-2016 U.S. EPA NOTICES OF DEFICIENCIES AND RESPONSES**

1. Letter, Paula Bisson, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. June 4, 1999. With enclosure “Information Needed to Review the Application for Renewal of TSCA Approval at the CWMI Kettleman Hills Facility.”
2. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to TSCA Permit Renewal Questions.” Letter, Paul Turek, Chemical Waste Management, Inc. to Paula Bisson, U.S. EPA Region 9. July 7, 1999. With enclosures.
3. “Information Request #2 for Data Relevant to the Renewal of TSCA Approvals – CWMI Kettleman Hills Facility.” Letter, Paula Bisson, U.S. EPA Region 9, to Paul



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- Turek, Chemical Waste Management, Inc. September 16, 1999. With enclosure “Information Request #2 for Review the Application for Renewal of TSCA Approval at the CWMI Kettleman Hills Facility.”
4. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to TSCA Permit Renewal Information Request #2.” Letter, Paul Turek, Chemical Waste Management, Inc. to Paula Bisson, U.S. EPA Region 9. October 11, 1999. With enclosures.
  5. “Information Request #3 for Data Relevant to the Renewal of TSCA Approvals – CWMI Kettleman Hills Facility.” Letter, Paula Bisson, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. December 16, 1999. With enclosure “Information Request #3 for Review the Application for Renewal of TSCA Approval at the CWMI Kettleman Hills Facility.”
  6. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to TSCA Permit Renewal Information Request #3.” Letter, Paul Turek, Chemical Waste Management, Inc. to Paula Bisson, U.S. EPA Region 9. January 10, 2000. With enclosures.
  7. “Amendment of reference documents submitted for the renewal of TSCA approvals.” Letter, Paula Bisson, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. March 14, 2000.
  8. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to TSCA Permit Renewal Information Request #5.” Letter, Paul Turek, Chemical Waste Management, Inc. to Paula Bisson, U.S. EPA Region 9. March 22, 2000.
  9. “March 14, 2000 Request for Amendment of Reference Documents.” Letter, Paula Bisson, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. May 19, 2000.
  10. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to TSCA Permit Renewal Information Request #5.” Letter, Paul Turek, Chemical Waste Management, Inc. to Paula Bisson, U.S. EPA Region 9. June 8, 2000.
  11. “TSCA approval.” Email, Max Weintraub, U.S. EPA to Paul Turek, Chemical Waste Management, Inc. November 27, 2000.
  12. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to TSCA Permit Renewal Information Request #6.” Letter, Paul Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. December 4, 2000.
  13. “Application for Renewal of TSCA Approval” Letter, Paula Bisson, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. April 4, 2001.
  14. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to TSCA Permit Renewal Information Request #7.” Letter, Paul Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. May 11, 2001. With enclosures.



15. “Closure of TSCA Units” Letter, Paula Bisson, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. December 5, 2002.
16. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to TSCA Permit Renewal Information Request #8.” Letter, Paul Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. January 21, 2003.
17. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to TSCA Permit Renewal Information Request #8.” Letter, Paul Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. April 11, 2003.
18. “U.S. EPA (“U.S. EPA”) Completeness Review of Chemical Waste Management, Inc. – Kettleman Hills Facility Request to Modify Toxic Substances Control Act (“TSCA”) Polychlorinated Biphenyl (“PCB”) Coordinated Approval Request for Landfill Unit B-18 (Phase III).” Letter, Cheryl Nelson, U.S. EPA to Paul Turek, Chemical Waste Management, Inc. November 25, 2009. With enclosure “U.S. EPA Completeness Review Comments (Engineering) Chemical Waste Management, Inc. Kettleman Hills Facility Request to Modify TSCA PCB Coordinated Approval Request (June 26, 2009) for Landfill Unit B-18 (Phase III). November 25, 2009.
19. “Completeness Review Comments – Request to Modify TSCA PCB Coordinated Approval Request for Landfill B-18.” Email, Edwin Poalinelli, U.S. EPA to Paul Turek, Chemical Waste Management. December 15, 2009 (a).
20. “Completeness Review Comments – Request to Modify TSCA PCB Coordinated Approval Request for Landfill B-18.” Email, Edwin Poalinelli, U.S. EPA to Paul Turek, Chemical Waste Management. December 15, 2009 (b).
21. “Completeness Review Comments – Request to Modify TSCA PCB Coordinated Approval Request for Landfill B-18.” Email, Edwin Poalinelli, U.S. EPA to Paul Turek, Chemical Waste Management. December 15, 2009 (c).
22. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to Landfill B-18 Phase III Coordinated Approval Completeness Review.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Chip Poalinelli, U.S. EPA Region 9. December 22, 2009. With enclosures 1-4 included in file. Additional Attachments:
23. “Response to Comments, U.S. EPA Completeness Review of Chemical Waste Management, Inc. Kettleman Hills Request o Modify TSCA PCB Coordinated Approval Request for Landfill Unit B-18 (Phase III).” Golder Associates, Inc. December 17, 2009.
24. “Site Specific Groundwater Monitoring Plan, Kettleman Hills Facility, Kings County, California.” GeoSyntec Consultants. May 2001.
25. “Hydrogeologic Characterization, Kettleman Hills Facility, Kings County, California.” EMCON Associates. December 1986.
26. “Surface Water Control Program for Kettleman Hills Facility,” Centra Consulting, Inc. October 23, 2009.



27. “State Siting Criteria Equivalency Assessment for Chemical Waste Management’s Inc. Kettleman Hills Facility.” Meredith/Boli & Associates, Inc. October 28, 1985.
28. “Transmittal of Adopted Waste Discharge Requirements for Chemical Waste Management, Inc., Kettleman Hills Facility, Kings County.” Letter, William F. Pfister, California Regional Water Quality Control Board Central Valley Region to Robert g. Henry, Chemical Waste Management, Inc. March 11, 1998. With enclosure: “Order No. 98-058, Waste discharge Requirements for Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County.” California Regional Water Quality Control Board Central Valley Region. February 27, 1998.
29. “Completeness Review – Clarification.” Email, Edwin Poalinelli, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. February 9, 2010. With attachment.
30. “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised Initial Report, Omission from Response to Landfill B-18 Phase III Coordinated Approval Completeness Review.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Chip Poalinelli, U.S. EPA Region 9. February 18, 2010. With enclosure: “Initial Report, TSCA Approval Request, Chemical Waste Management, Inc. Kettleman Hills Facility, Landfill Unit B-18, Phase I, II, and III.” Chemical Waste Management, Inc. February 17, 2010. With enclosure:
  - a. “Surface Water Control Program for Kettleman Hills Facility,” Centra Consulting, Inc. October 23, 2009.
31. “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: Notice of Violation – EPA I.D. Number CAT000646117.” Letter, Paul Turek, Chemical Waste Management, Inc. to Christopher Rollins, U.S. EPA Region 9. May 10, 2010.
32. “Chemical Waste Management, Inc. Kettleman Hills Facility, Information Request Regarding B-18 Capacity and Surveying.” Letter, Robert Henry, Chemical Waste Management, Inc. to Christopher Rollins, U.S. EPA Region 9, October 15, 2010. With enclosures (REDACTED).
33. “Notice of Deficiency (“NOD”) for Toxic Substances Control Act (“TSCA”) Permit Renewal and Modification Applications dated April 1, 1997, as revised and May 10, 2010; Chemical Waste Management Kettleman Hills Facility (CAT 000646117).” Letter, Caleb Shaffer, U.S. EPA Region 9, to Bob Henry, Chemical Waste Management, Inc. September 22, 2011. With enclosure “Notice of Deficiency – Attachment A Chemical Waste Management (“CWM”) Inc., Kettleman Hills, California – July 1, 1997/May 10, 2010 (Request for a Coordinated Polychlorinated Biphenyl (“PCB”) Approval) Toxic substances Control Act Permit Application (“TSCA Application” Kettleman Hills Facility, 35251 Old Skyline Road, Kettleman City, California (the “Facility”).
34. “Call re Kettleman Hills NOD.” Email, Andrew M. Kenefick, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. November 17, 2011.



35. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to Notice of Deficiency – TSCA Permit Renewal and Modification.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. November 21, 2011 with Attachments:
36. “Chemical Waste Management, Inc. – Kettleman Hills Facility (KHF), EPA-IX Notice of Deficiency for TSCA Permit Renewal and Modification Applications – Attachment A, dated September 22, 2011.” Chemical Waste Management, Inc. (November 21, 2011);
37. “TSCA Application – Supplemental Information.” Chemical Waste Management, Inc. (November 21, 2011);
38. “Initial Report, TSCA Approval Request, Chemical Waste Management, Inc. Kettleman Hills Facility, Landfill Unit B-18, Phase I, II, and III.” Chemical Waste Management, Inc. November 21, 2011
39. “TSCA Operation Plan, landfill Unit B-18, Phases I, II, and III, Kettleman Hills Facility, Chemical Waste Management, Inc.” Chemical Waste Management, Inc. November 21, 2011.
40. “Site Specific Groundwater Monitoring Plan, Kettleman Hills Facility, Kings County, California.” GeoSyntec Consultants. May 2001.
41. “Chemical Waste Management, Inc. – Kettleman Hills Facility TSCA Permit Renewal – Supplemental Information.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. March 8, 2013. With enclosure.
42. “U.S. EPA Evaluation of TSCA Renewal/Modification Application for Landfill Unit B-18, Supplemental Information, dated March 8, 2013. EPA ID CAT000646117.” Letter, Caleb Shaffer, U.S. EPA to Bob Henry, Chemical Waste Management, Inc. March 22, 2013.
43. “TSCA Supplemental Information – NOD 3/23/13 Response.” Spreadsheet, Chemical Waste Management. March 27, 2013.
44. “Poly-Air Activated Carbon Vent Filters.” Rex-Bac-T Technologies. Undated.
45. “Kettleman Hills Facility – PCB Building Secondary Containment Volume.”: Scott Summer, P.E.” Chemical Waste Management, Inc. February 8, 2012.
46. “Kettleman Hills Facility – PCB Building Secondary Containment Volume.”: Scott Summer, P.E.” Chemical Waste Management, Inc. May 17, 2012.

**F. DEPARTMENT OF TOXIC SUBSTANCES CONTROL NOTICES OF DEFICIENCIES AND RESPONSES**

1. Department of Toxic Substances Control First Notice of Deficiency (November 2016) – see Section VI.A. for response documents
  - a. “Notice of Deficiency for the Permit Renewal Application for the Chemical Waste Management, Inc., Kettleman Hills Facility Hazardous Waste Facility,





35251 Old Skyline Road, Kettleman City, Kings County, California, 93239, Environmental Protection Agency Identification Number: CAT000646117.” Ryan Batty, Department of Toxic Substances Control to Bob Henry, Chemical Waste Management, Inc. November 18, 2016.

2. Department of Toxic Substances Control Second Notice of Deficiency (November 2017) and Response

a. **Department of Toxic Substances Control Second Notice of Deficiency**

- (1) “Second Notice of Deficiency for Revised Permit Renewal Application for the Chemical Waste Management, Inc., Kettleman Hills Facility Hazardous Waste Facility, 35251 Old Skyline Road, Kettleman City, California, Environmental Protection Agency Identification Number: CAT000646117.” Ryan Batty, Department of Toxic Substances Control to Bob Henry, Chemical Waste Management, Inc. November 6, 2017. With enclosures:
  - (a) “Second Notice of Deficiency Chemical Waste Management, Inc. Kettleman Hills Facility EPA ID. NO.: CAT 000 646 117.” Department of Toxic Substances Control. November 6, 2017.
  - (b) “Used Oil Testing Language.” Department of Toxic Substances Control. November 6, 2017. Attachment to Second Notice of Deficiency Chemical Waste Management, Inc. Kettleman Hills Facility.
  - (c) “Review of the Closure and Post-Closure Cost Estimate for Financial Assurance, Chemical Waste Management Kettleman Hills Facility CAT000646117 (Site Code 100032-33).” Memorandum, William Kilgore, Department of Toxic Substances Control to Ryan Batty, Department of Toxic Substances Control. October 26, 2017.
  - (d) “Part B Permit Renewal Application, Chemical Waste Management Kettleman Hills Facility, Kings County, California, Project No. 25040/100032-33/20042986.” Memorandum, Matthew Farris and Jeff Brown, Department of Toxic Substances Control to Ryan Batty, Department of Toxic Substances Control. November 6, 2017.
  - (e) “Review of Hazardous Waste Facility Permit Renewal Application Operation Plan and Closure and Post-Closure Plans, Kettleman Hills Facility CAT000646117 (Site Code 100032-33).” Memorandum, Peter Gathungu, Department of Toxic Substances Control to Ryan Batty, Department of Toxic Substances Control. November 6, 2017.

b. **Second Department of Toxic Substances Control Notice of Deficiency Response**



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- (1) “Second Notice of Deficiency for Chemical Waste Management, Inc. – Kettleman Hills Facility, EPA ID NO. CAT 000646117.” Chemical Waste Management, Inc. March 16, 2017
  - (2) “Hazardous Waste Facility Permit Renewal Application, Operation Plan, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 3: March 16, 2018. [REDACTED for posting on regulations.gov]
  - (3) “Hazardous Waste Facility Permit Renewal Application, Operation Plan, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 3: March 16, 2018 (redline). [REDACTED for posting on regulations.gov]
  - (4) “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: Sufficiency of Groundwater Monitoring Program.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Chemical Waste Management, Inc. February 17, 2018.
  - (5) “Sufficiency of Groundwater Monitoring Program, Kettleman Hills Facility, Kings County, California.” AMEC Foster Wheeler. February 7, 2018.
  - (6) “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: Ambient Air Monitoring Plan – Technical Memorandum for Proposed Ambient Air Increase Criteria & Detection Monitoring Plan Approach.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Camille Rogado, Department of Toxic Substances Control. March 26, 2019. With enclosure:
    - (a) “Proposed Ambient Air Increase Criteria & Detection Monitoring Plan Approach.” Technical Memo, Halley H. Roberts, Wenck to Reyna Verdin, Chemical Waste Management, Inc. March 25, 2019.
3. Department of Toxic Substances Control Third Notice of Deficiency (March 2019)
- a. “Third Notice of Deficiency for Revised Permit Renewal Application for the Chemical Waste Management, Inc., Kettleman Hills Facility Hazardous Waste Facility, 35251 Old Skyline Road, Kettleman City, California, Environmental Protection Agency Identification Number: CAT000646117.” Ryan Batty, Department of Toxic Substances Control to Bob Henry, Chemical Waste Management, Inc. March 29, 2019.
    - (1) “Third Notice of Deficiency Chemical Waste Management, Inc. Kettleman Hills Facility EPA ID. NO.: CAT 000 646 117.” Department of Toxic Substances Control. March 29, 2019.
    - (2) “Technical Completeness Checklist.” Department of Toxic Substances Control. March 26, 201. Attachment to Third Notice of Deficiency Chemical Waste Management, Inc. Kettleman Hills Facility.



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- (3) “Review of the Closure and Post-Closure Cost Estimate for Financial Assurance (March 2018), Chemical Waste Management Kettleman Hills Facility, Kings County, California (Site Code: DTSC100032-33).” Memorandum, Perry Myers, Department of Toxic Substances Control to Ryan Batty, Department of Toxic Substances Control. February 12, 2019.
  - (4) “2018 Engineering Feasibility Study, Chemical Waste Management Kettleman Hills Facility, Kings County, California, Project No. 25040/100032-33/20042986.” Memorandum, Jeff Brown, Department of Toxic Substances Control to Ryan Batty, Department of Toxic Substances Control. March 4, 2019.
  - (5) “Review of Hazardous Waste Facility Permit Renewal Application Operation Plan, and Closure and Post-Closure Plans, Kettleman Hills Facility, Kings County, California (Site Code: DTSC100032-33).” Memorandum, Peter Gathungu, Department of Toxic Substances Control to Ryan Batty, Department of Toxic Substances Control. February 20, 2019.
- b. “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: Ambient Air Monitoring Plan – Technical Memorandum for Proposed Diesel Particulate Matter Air Dispersion Modeling Analysis.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Raminder Bola, Department of Toxic Substances Control. June 27, 2019. With enclosure: “Kettleman Hills Facility Diesel Particulate Matter Air Dispersion Modeling Analysis.” Technical Memo, Charlene Becka, Wenck to Reyna Verdin, Chemical Waste Management, Inc. June 25, 2019.
  - c. “CWM-KHF – Proposed Diesel Particulate Matter Air Dispersion Analysis.” Email, Camille Rogado, Department of Toxic Substances Control to Reyna Verdin, Chemical Waste Management, Inc. July 2, 2019.
  - d. “Request for a Response Extension for the Third Notice of Deficiency for the Permit Renewal Application for The Chemical Waste Management, Inc., Kettleman Hills Facility Hazardous Waste Facility, 35251 Old Skyline Road, Kettleman City, Kings County, California, 93239, Environmental Protection Agency Identification Number: CAT000646117.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Raminder Bola, Department of Toxic Substances Control. July 3, 2019.
  - e. Approval of Extension Request for Third Notice of Deficiency for Permit Renewal Application, Chemical Waste Management, Inc.- Kettleman Hills Facility, Kings County, California (EPA ID NO. CAT 000 646117). Letter, Raminder Bola, Department of Toxic Substances Control to Reyna Verdin, Chemical Waste Management, Inc. July 16, 2019.



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**VII. KETTLEMAN HILL FACILITY OPERATION DOCUMENTS****A. HAZARDOUS WASTE OPERATION PLAN**

1. “Operation Plan, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc. June 16, 2003.
2. “Class 3 Permit Modification Request, 22 CCR 66270.42(c) Landfill B-18 Phase III Expansion.” Letter, Carol J. Carollo, Chemical Waste Management, Inc. to Ruth Cayabyab, Department of Toxic Substances Control. December 12, 2008. With enclosure: “Markup Copes of [Operation Plan] Pages with Changes.”; “Clean Copies of Affected Text in Application.”;

**B. NON-TSCA KETTLEMAN HILLS FACILITY PERMITS**

1. “In the Matter of Certifying the Final Subsequent Environmental Impact Report for the Kettleman Hills Facility B-18/B-20 Hazardous Waste Disposal Project, Resolution No. 09-12.” Kings County Planning Commission. October 19, 2009.
2. “In the Matter of Approving Conditional Use Permit Application Number CUP 05-10 And Adopting the CEQA Findings of Fact and a Statement of Overriding Considerations, Adopting the Mitigation Monitoring Plan, and Adopting the Conditions of Approval for the Kettleman Hills Facility B-18/B-20 Hazardous Waste Disposal Project, Resolution No. 09-13.” Kings County Planning Commission. October 19, 2009.
3. “Order R5-2014-0003 Waste Discharge Requirements for Chemical Waste Management, Inc. Class I/II Waste Management Units Kettleman Hills Facility Kings County.” Central Valley Regional Water Control Board. January 16, 2014.
4. “Hazardous Waste Facility Permit – Chemical Waste Management, Inc. Kettleman Hills Facility (Permit Number: 02-SAC-03).” Department of Toxic Substances Control. Effective June 16, 2003 (modified May 5, 2005, July 25, 2006, September 21, 2007, and May 21, 2014).
5. “Authority to Construct Permit No: C-283-11-6.” San Joaquin Valley Air Pollution Control District. Expiration Date: May 23, 2014.
6. “Permit to Operate C-283-0-3.” San Joaquin Valley Air Pollution Control District. Expiration Date: August 31, 2022.

**C. LANDFILL CLOSURE AND POST-CLOSURE REPORTS**

1. Landfill B-14 Closure and Post-Closure Documents
  - a. “Kettleman Hills Facility B-14 Closure Certification DHS Permit Condition IV.D.2.e.” Letter, Christopher Hansen, Chemical Waste Management, Inc. to Section Chief Northern California Section Department of Health Services Toxic Substance Control Division. April 13, 1988.
  - b. “Kettleman Hills Facility, I.D. CAT 000646117 – Landfill B-14 Record of Survey and Record of Wastes.” Letter, Christopher W. Hansen, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. May 10, 1989.



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- c. “Landfill B-14 Post-Closure Inspection Kettleman Hills Facility.” Woodward-Clyde Consultants. November 1, 1991.
  - d. “Post-Closure Inspection Landfill Unit B-14, Kettleman Hills Facility.” TRC. October 2001.
  - e. “Chemical Waste Management, Inc. – Kettleman Hills Facility Decommissioning Plan for Landfill B-14 Sounding Wells.” Letter, Paul Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. January 19, 2006.
  - f. “Decommissioning Landfill Unit B-14 Sounding Wells.” Letter, Adrienne Priselac, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. August 28, 2008.
2. Landfill B-16 Closure and Post – Closure Documents
- a. “Construction Specification, Chemical Waste Management, Inc., Kettleman Hills Class I Disposal Site, Kings County, CA.” Burial Area 16, PCB Disposal Facility.” Chemical Waste Management, Inc. June 1982.
  - b. “Closure Plan for Landfill B-16 Kettleman Hills Facility, Kettleman City, California DHS Permit Condition IV.D.6.d.” Letter, Michael Cranston, Chemical Waste Management, Inc. to Director Hazardous Waste Management Division, U.S. EPA Region 9. August 27, 1990.
  - c. “Kettleman Hills Facility CAT 000 646 117, Landfill Capacity.” Letter, Carol Carollo, Chemical Waste Management, Inc. to William Veile, Department of Toxic Substances Control. October 14, 1992.
  - d. “Kettleman Hills Facility CAT 000 646 117 Updated Status and Request for Revised Schedule Approval, Facility Closure Construction Project.” Letter, Michael Cranston, Chemical Waste Management, Inc. to Director Hazardous Waste Management Division, U.S. EPA Region 9. March 10, 1993.
  - e. “Closure Plan for Landfill B-16, Kettleman Hills Facility, Kettleman City, California, Revision 1, Final Report to Chemical Waste Management, Inc.” Golder Associates, March 11, 1993.
  - f. “Landfill B-16 Closure Schedule Chemical Waste Management, Inc – Kettleman Hills Facility (CAT00646117).” Letter, Kamal Azzam, Chemical Waste Management, Inc. to Permitting Branch Region 1, Department of Toxic Substances Control. September 5, 1996.
  - g. “Updated Facility Closure Status and Schedule Chemical Waste Management, Inc. Kettleman Hills Facility.” Letter, Kamal Azzam, Chemical Waste Management, Inc. to Permitting Branch Region 1, Department of Toxic Substances Control, August 21, 1997.
  - h. “TSCA Capacity for B-16.” Letter, Paula Bisson, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. August 13, 1999.
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- i. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to TSCA Capacity for B-16.” Letter, Paul Turek, Chemical Waste Management, Inc. to Paula Bisson, U.S. EPA Region 9. September 3, 1999.
  - j. “Landfill B-16 Closure Approval Cover System Slope Stability Analysis.” Letter, Carol Carollo, Chemical Waste Management, Inc., to Max Weintraub, U.S. EPA Region 9. January 15, 2004.
  - k. “Chemical Waste Management, Inc. – Kettleman Hills Facility Landfill B-16 Closure Project” Letter, Carol Carollo, Chemical Waste Management, Inc., to Max Weintraub, U.S. EPA Region 9. March 12, 2004.
  - l. “Requested Information on Landfill B-16 LCRS Sump.” Letter, Paul Turek, Chemical Waste Management Inc. to Max Weintraub, U.S. EPA Region 9. June 1, 2004.
  - m. “Construction Quality Assurance Report on Final Closure of Landfill B-16 Kettleman Hills Facility.” Golder Associates, Inc. December 2004.
  - n. “Landfill Unit B-16 Closure Construction Certification Report DTSC Permit V.5(A) and 22 CCR 66264.115, WDR Provisions C.7., 23 CCR 2590(c)(6).” Letter, Fred Paap and Carol Carollo, Waste Management, Inc. to Janice Yonekura, Department of Toxic Substances Control; Jim Dowdall, Regional Water Quality Control Board; and Max Weintraub, U.S. EPA Region 9. December 15, 2004.
  - o. “Chemical Waste Management, Inc. – Kettleman Hills Facility Landfill Unit B—16 Closure Construction Certification Report.” Letter, James Dowdall and Shelton Gray, Regional Water Quality Control Board, to Fred Paap and Carol Carollo, Chemical Waste Management, Inc. February 15, 2005.
  - p. “Landfill Unit B-16 Closure Construction Certification Report Response to RWQCB Comments and Report Revision Letter, Fred Paap and Carol Carollo, Chemical Waste Management, Inc. to Janice Yonekura, Department of Toxic Substances Control; Jim Dowdall, Regional Water Quality Control Board; and Max Weintraub, U.S. EPA Region 9. March 16, 2003.
  - q. “Revised Text – Construction Quality Assurance Report on Final Closure of Landfill B-16 Kettleman Hills Facility.” Golder Associates, Inc. December 2004 Revised March 2005.
  - r. “Closure Certification Acknowledgement for the Landfill Unit B-16 Chemical Waste Management, Inc, Kettleman Hills Facility Kettleman California, US EPA ID Number CAT000646117.” Letter, James Pappas, Department of Toxic Substances to Paul Turek, Chemical Waste Management, Inc. June 30, 2005.
3. Landfill B-19 Closure and Post-Closure Documents
- a. “Begin Construction of the Initial Phare of Landfill B-19 Class II/III and Closure of the Existing Landfill B-19 Class I. Chemical Waste Management, Inc. –



- Kettleman Hills Facility CAT 000 646 117.” Letter, Kamal Azzam, Chemical Waste Management, Inc. to Shelton Gray, Regional Water Quality Control Board and William Veile, Department of Toxic Substances Control. July 8, 1998.
- b. “Notice of Decision to Approve of Landfill Unit B-19 Modified Closure Plan, September 1998.” Department of Toxic Substances Control. September 1998.
  - c. “Final Closure Certification Statements for the Landfill Unit B-19 Class I Partial Closure. Chemical Waste Management, Inc. – Kettleman Hills Facility CAT 000 646 117.” Letter, Kamal Azzam, Chemical Waste Management, Inc. to John McCarroll, U.S. EPA Region 9; Department of Toxic Substances Control; and, Regional Water Quality Control Board. December 30, 1998.
  - d. “Chemical Waste Management, Incorporated (CWMI) Kettleman Hills Facility, Kings County, EPA I.D. #CAT 000 646 117, Certification of Closure for the Landfill B-19.” Letter, Robert Crandell, Department of Toxic Substances Control to Robert Henry, Chemical Waste Management, Inc. “June 20, 1999.
  - e. “Landfill Unit B19 – Record of Survey and Record of Waste Chemical Waste Management, Inc. – Kettleman Hills Facility CAT 000 646 117.” Letter, Kamal Azzam, Chemical Waste Management, Inc. to John McCarroll, U.S. EPA Region 9. July 2, 1999.
  - f. “Construction Quality Assurance Report on Landfill B-19 Perimeter Berm 2004 Construction Kettleman Hills Facility, Kettleman City, California.” Golder Associates, Inc. May 2005.
  - g. “Revisions to the As-Build Construction and Partial Closure Report for Landfill B-19 Perimeter Berm 2004 Construction, WDR No. 98-058 Discharge Specification B.8. and Provisions C.7. 27 CCR §§20323 and 20324; 22 CCR §6664.115 (in part).” Letter, Fred Papp, Chemical Waste Management, Inc. to Jim Koponen, Department of Toxic Substances Control and Jim Dowdall, Regional Water Quality Control Board. August 10, 2005.
  - h. “Construction Quality Assurance Report on Landfill B-19 Perimeter Berm 2005 Construction Kettleman Hills Facility, Kettleman City, California.” Golder Associates, Inc. June 2006.
  - i. “Construction Quality Assurance Report on Landfill B-19 Class I Final Closure, Stability Berm and Drainage 2006 Construction Kettleman Hills Facility, Kettleman City, California.” Golder Associates, Inc. December 2006.
  - j. “Landfill Unit B-19 Closure Documents Recorded by Kings County.” Letter, Carol Carollo, Chemical Waste Management, Inc. to Ruth Cayabyab, Department of Toxic Substances Control and Jim Dowdall, Regional Water Quality Control Board. August 10, 2005.
  - k. “Modification 2 to Landfill B-19 Closure Plan for Class I Portion.” Letter, Chemical Waste Management, Inc. to Ruth Cayabyab, Department of Toxic



Substances Control and Jim Dowdall, Regional Water Quality Control Board. April 14, 2006. With Enclosures: “03/17/06 Landfill B-19 Addendum Closure Plan Meeting Summary and Response to Comments.” Chemical Waste Management, Inc. April 14, 2006 and “Modification No. 2 to Landfill Unit B-19 Closure Plan for Class I Portion, Kettleman Hills Facility.” Golder Associates, Inc. April 2006.

- l. “Temporary Authorization Request, Supplemental Information on Landfill B-19 Closure.” Letter, Robert Henry, Chemical Waste Management, Inc. to Pauline Batarseh, Department of Toxic Substances Control. June 2, 2006. With enclosure: “Response to DTSC Comments on Modification No. 2 Landfill Unit B-19 Closure Plan for Class I Portion, Kettleman Hills Facility.” Letter, Scott G. Sumner, Golder Associates to Chemical Waste Management, Inc. May 2, 2006.

#### 4. Post-Closure Inspection Reports

- a. “Chemical Waste Management, Inc., – Kettleman Hills Facility 2008 Annual Post-Closure Inspection Report & 2008 Annual Facility Inspection Certification.” Letter, Paul Turek, Chemical Waste Management, Inc. to Ruth Cayabyab, Department of Toxic Substances Control and Jim Dowdall, Regional Water Quality Control Board. October 1, 2008.
- b. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2009 Annual Post-Closure Inspection Report & 2009 Annual Facility Inspection Certification.” Letter, Paul Turek, Chemical Waste Management, Inc. to Ruth Cayabyab, Department of Toxic Substances Control and Jim Dowdall, Regional Waste Quality Control Board. September 29, 2009.
- c. “2010 Annual Post-Closure Inspection Kettleman Hills Facility Kettleman City, California.” Golder Associated, Inc. September 28, 2010.
- d. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2010 Annual Post-Closure Inspection Report & 2010 Annual Facility Inspection Certification.” Letter Paul Turek, Chemical Waste Management, Inc. to Wayne Lorentzen, Department of Toxic Substances Control and Jim Dowdall, Regional Waste Quality Control Board. September 30, 2010.
- e. “2011 Annual Post-Closure Inspection Kettleman Hills Facility Kettleman City, California.” Golder Associated, Inc. September 2011.
- f. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2011 Annual Post-Closure Inspection & 2011 Annual Facility Inspection Certification.” Letter Paul Turek, Chemical Waste Management, Inc. to Wayne Lorentzen, Department of Toxic Substances Control and Jim Dowdall, Regional Waste Quality Control Board.t.” Golder Associated, Inc. for Chemical Waste Management, Inc. September 29, 2011.
- g. “Report on 2011 Annual Post-Closure Inspection, Kettleman Hills Facility Kettleman City California.” Golder Associates, Inc. September 2011.





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- h. “Report on 2012 Annual Post-Closure Inspection, Kettleman Hills Facility Kings County, California.” Golder Associates, Inc. September 2012.
  - i. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2012 Annual Post-Closure Inspection Report & 2012 Annual Facility Inspection Certification.” Letter Paul Turek, Chemical Waste Management, Inc. to Wayne Lorentzen, Department of Toxic Substances Control and Jim Dowdall, Regional Waste Quality Control Board. September 26, 2012.
  - j. “Report on 2013 Annual Post-Closure Inspection Kettleman Hills Facility Kings County, California.” Golder Associates, Inc. September 2013.
  - k. “Report on 2014 Annual Post-Closure Inspection Kettleman Hills Facility Kings County, California.” Golder Associates, Inc. September 2014.
  - l. “Report on 2015 Annual Post-Closure Inspection Kettleman Hills Facility Kings County, California.” Golder Associates, Inc. September 2015.
  - m. “Report on 2016 Annual Post Closure Inspection Kettleman Hills Facility, Kings County, California.” Golder Associates, Inc. September 2016.
  - n. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2016 Annual Post-Closure Inspection Report & 2016 Annual Facility Inspection Certification.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Muzhda Ferouz, Department of Toxic Substances Control and Daniel Carlson, Regional Water Quality Control Board. September 26, 2016.
  - o. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2017 Annual Post-Closure Inspection Report & 2017 Annual Facility Inspection Certification.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control and Daniel Carlson, Regional Water Quality Control Board. September 29, 2017.
  - p. “Chemical Waste Management, Inc. – Kettleman Hills Facility Proposed Workplan for Annual Surveys of Hazardous Waste Management Units in Post-Closure Care at the Kettleman Hills Facility.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control and Daniel Carlson, Regional Water Quality Control Board. March 30, 2018.
  - q. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2018 Annual Post-Closure Inspection Report & 2018 Annual Facility Inspection Certification.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control and Daniel Carlson, Regional Water Quality Control Board, September 28, 2018. With enclosure: “Report on 2018 Annual Post Closure Inspection Kettleman Hills Facility, Kings County, California.” Golder Associates, Inc. September 2018.



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**D. LANDFILL B-18 CONSTRUCTION DOCUMENTS**

1. “Kettleman Hills Facility CAT 0006461176 Request for Approval on Landfill B18 Detailed Design.” Letter, Chemical Waste Management, Inc. to Department of Health Services; U.S. EPA Region 9; and Regional Water Quality Control Board. July 31, 1990. With enclosure: “Construction Specifications and Quality Assurance Plan Landfill Unit B-18 Phases I and II and Final Closure, Kettleman Hills Facility Kings County, California. Environmental Solutions, Inc. July 31, 1990.
2. “Construction Specifications and Quality Assurance Plan Landfill Unit B-18 Phases I and II and Final Closure, Kettleman Hills Facility Kings County, California. Environmental Solutions, Inc. July 31, 1990.
3. “Engineering and Design Report Landfill Unit B-18 Kettleman Hills Facility Kings County, California.” Environmental Solutions, Inc. August 15, 1990.
4. “Subgrade Geologic Mapping and Chemical Analysis for Landfill B-18, Phase I Kettleman Hills Facility Kettleman, California.” Golder Associates, Inc. November 27, 1991.
5. “Clay Source Report Landfill B-18, Phases IA and IB Kettleman Hills Facility Kettleman City, California.” Environmental Construction Services, Inc. November 25, 1991.
6. “Secondary Clay Liner Report Landfill B-18, Phases IA and IB Kettleman Hills Facility Kettleman City California.” Environmental Construction Services, Inc. January 6, 1992.
7. “Potential Chemical Similarities between the B-19 and B-18 Clay, Kettleman Hill Facility.” Letter, Kerry Parkinson, Environmental Solutions, Inc. to Robert Henry, Chemical Waste Management, Inc. January 9, 1992.
8. “Primary Clay Liner Report Landfill B-18, Phases IA and IB Kettleman Hills Facility Kettleman City California.” Environmental Construction Services, Inc. January 13, 1992.
9. “Secondary HDPE liner and Leachate Collection System Report Landfill B-18, Phases IA and IIB, Volume B, Kettleman Hills Facility Kettleman City, California.” Environmental Construction Services, Inc. January 13, 1992.
10. “Secondary HDPE liner and Leachate Collection System Report Landfill B-18, Phases IA and IIB, Volume A, Kettleman Hills Facility Kettleman City, California.” Environmental Construction Services, Inc. January 13, 1992.
11. “Primary HDPE Liner and Leachate Collection System Report, Landfill B-18, Phases IA and IB Kettleman Hills Facility, Kettleman City, California.” Environmental Construction Services, Inc. January 20, 1992.
12. “Test Fill and Infiltration Test Results Landfill Unit B-18 Phases I and II and Final Closure.” Environmental Solutions Inc. January 23, 1992.



13. “Design Changes and Design Clarification Landfill B-18, Phases IA and IB, Kettleman Hills Facility, Kettleman City California.” Environmental Construction Services, Inc. February 18, 1992.
14. “Summary Construction Report Landfill B-18 Phases IA and IB.” Environmental Construction Services, Inc. February 18, 1992.
15. “Final Inspection – Landfill B-18 Phases IA and IB – Chemical Waste Management, Inc.’s Kettleman Hills Facility – Kings County.” Letter, Shelton Gray, California Regional Water Quality Control Board to Rich Zweig, Chemical Waste Management, Inc. February 28 1992.
16. “Approval of the Certification Reports and As-Built Drawings for the Landfill B-18, Phase I, DTSC Permit Condition IV.C.9., Chemical Waste Management, Inc., Kettleman Hills Facility, EPA ID No. CAT 000646117.” Letter, Val Siebal, Department of Toxic Substances Control to Mark Langowski, Chemical Waste Management, Inc. March 10, 1992.
17. “Kettleman Hills Facility CAT 000646117 TSCA Approval Request for Landfill Unit B-18.” Letter, Carol Corollo, Chemical Waste Management, Inc., to Greg Czajkowski, U.S. EPA Region 9. April 10, 1992.
18. “Chemical Waste Management, Inc., Kettleman Hills Facility TSCA Approval to Operate Landfill Unit B-18.” Letter, David Howekamp, U.S. EPA Region 9, to Leo Stahlecker, Chemical Waste Management, Inc. May 15, 1992.
19. “Response Action Plan Landfill B-18 Kettleman Hills Facility.” SEC Donohue, Inc. for Chemical Waste Management, Inc. June 1, 1992.
20. “Operational Features Report Landfill B-18, Phases IA and IB, Kettleman Hills Facility, Kettleman City California.” Environmental Construction Services, Inc. June 26, 1992.
21. “Kettleman Hills Facility CAT 000646117 TSCA Approval to Operate Landfill Unit B-18.” Letter, Richard Zweig, Chemical Waste Management, Inc. to David Howekamp, U.S. EPA Region 9. August 18, 1992.
22. “Landfill B-18, Phases IA and IB, Construction Reports, Volume 1 – Clay Liner Source Report.” Golder Construction Services and ACZ Engineering and Environmental Services. May 1, 1993.
23. “Landfill B-18, Phases IA and IB, Construction Reports, Volume 2 – Subgrade Geologic Mapping and Chemical Analysis Report.” Golder Construction Services and ACZ Engineering and Environmental Service. May 1, 1993.
24. “Revised Intermediate Waste Fill Plan – Landfill Unit B-18, Phase I, Kettleman Hills Facility, Kings County, California.” Environmental Solutions, Inc. August 1993.
25. “Landfill Unit B-18 Phases IIA/IIB Volume 3 Extension Basin Detail (Design).” Stamped by Michael Cranston for Chemical Waste Management Inc. August 27, 1993.



26. “Construction Reports for Landfill B-18, Phases IIA and IIB, Kettleman City California Excavation and Structural Fill Placement Construction Report – Volume 3.” Golder Construction Services and ACZ Engineering, Inc. August 27, 1993.
27. “Construction Reports for Landfill B-18, Phases IIA and IIB, Kettleman City California – Secondary Clay Liner Volume 4, Final Report.” Golder Construction Services, Inc. and ACZ Engineering Inc. September 13, 1993.
28. “Construction Reports for Landfill B-18, Phases IIA and IIB, Kettleman City California – Secondary and Vadose HDPE Liner and Leachate Collection System Construction Report Volume 5, Final Report.” Golder Construction Services, Inc. and ACZ Engineering Inc. October 20, 1993.
29. “Construction Reports for Landfill B-18, Phases IIA and IIB, Kettleman City California – Volume 5A – Secondary Vadose HDPE Liner and Leachate Collection System Report (Appendices A-D), Report.” Golder Construction Services, Inc. and ACZ Engineering Inc. October 20, 1993.
30. “Construction Reports for Landfill B-18, Phases IIA and IIB, Kettleman City California – Volume 5B – Secondary Vadose HDPE Liner and Leachate Collection System Report (Appendix E), Report.” Golder Construction Services, Inc. and ACZ Engineering Inc. October 20, 1993.
31. “Construction Reports for Landfill B-18, Phases IIA and IIB, Kettleman City California – Volume 5C – Secondary Vadose HDPE Liner and Leachate Collection System Report (Appendices F-O), Report.” Golder Construction Services, Inc. and ACZ Engineering Inc. October 20, 1993.
32. “Construction Reports for Landfill B-18, Phases IIA and IIB, Kettleman City California – Volume 6 – Primary Clay Liner Construction Report.” Golder Construction Services, Inc. and ACZ Engineering Inc. October 20, 1993.
33. “Construction Reports for Landfill B-18, Phases IIA and IIB, Primary HPDE Liner and Leachate Collection System Report (Appendices), Volume 7A.” Golder Construction Services, Inc. and ACZ Engineering Inc. November 8, 1993.
34. “Construction Reports for Landfill B-18, Phases IIA and IIB, Construction Reports for Primary HPDE Liner and Leachate Collection System– Volume 7 –Report.” Golder Construction Services, Inc. and ACZ Engineering Inc. November 8, 1993.
35. “Landfill B-18, Phases IIA and IIB Construction Reports Volume 8 – Summary Construction Report.” Golder Construction Services and ACZ Engineering and Environmental Services. November 8, 1993.
36. “Construction Reports for Landfill B-18, Phases IIA and IIB, Kettleman City, California, Operations Features Report, Volume 9, Final Report.” Golder Construction Services, Inc. and ACZ Engineering, Inc. December 6, 1993.
37. “Chemical Waste Management, Inc. (CWM) – Landfill Unit B-18 Phase II Final Inspection and Construction Certification Report.” Letter, William Pfister and Shelton



- Gray, California Regional Water Quality Control Board Central Valley Region to Rich Zweig, Chemical Waste Management, Inc. December 8, 1993.
38. “Approval of the Certification Reports and as Built Drawings for the Landfill b-18, Phase II, DTSC Permit Condition IV.C.9.C Chemical Waste Management, Incorporated, Kettleman hills Facility, EPA I.D. No. CAT 000646117.” Letter, James Pappas, Department of Toxic Substances Control Region 1 to Richard Zweig, Chemical Waste Management, Inc. December 23, 1993.
  39. “TSCA Approval Request for Landfill B-18 Phase II, Chemical Waste Management Inc.’s Kettleman Hills Facility”, Letter, Catherine Pool, Chemical Waste Management, Inc., to Vince Mancus, U.S. EPA Region 9, December 27, 1993.
  40. “Re; Chemical Waste Management, Inc., Kettleman Hills Facility TSCA Approval to Operate Landfill Unit B-18, Phase II”, Letter, David Howekamp, US Environmental Protection Agency Region 9 to Leo Stahlecker, Chemical Waste Management, Inc., December 30, 1993.
  41. “Kettleman Hills Landfill B-18 Phase IIA & IIB Response Action Plan Update Based on As-built Conditions.” Letter, Robert Fifarek, RUST Environment & Infrastructure to Catherine Poole, Chemical Waste Management, Inc. January 29, 1994.
  42. “Engineering and Design Report, Landfill Unit B-18, Kettleman Hills Facility, Kettleman City California.” Golder Associates, Inc. August 2011.
  43. “Construction Quality Assurance (CQA) Report for Landfill B-18 Phase III Expansion, Volume 1: Phase IIIA Subgrade and Secondary Clay Liner, Kettleman Hills Facility, Kings County, California.” Golder Associates, Inc. January 2015.
  44. “Construction Quality Assurance (CQA) Report for Landfill B-18 Phase III Expansion, Volume 2: Phase IIIA Geosynthetics and Operations Layer, Kettleman Hills Facility, Kings County, California.” Golder Associates, Inc. February 2015.
  45. “Construction Quality Assurance (CQA) Report for Landfill B-18 Phase III Expansion, Volume 4: Phase IIIB Geosynthetics, Phase IIIB Operations Layer, and Phase III Operations Features, Kettleman Hills Facility, Kings County, California.” Golder Associates, Inc. December 2015 (Revised April 2016).
  46. “Construction Quality Assurance (CQA) Report for Landfill B-18 Phase III Expansion, Volume 3: Phase IIIB Subgrade and Secondary Clay Liner, Kettleman Hills Facility, Kings County, California.” Golder Associates, Inc. November 2015.

#### **E. PCB FLUSHING AND STORAGE UNIT**

1. “PCB Building Containment Area.” Email, Bob Henry, Chemical Waste Management to Edwin Poalinelli, U.S. EPA Region 9. July 1, 2010.
2. Letter, Robert Henry, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. August 25, 2010. With enclosure: “Kettleman Hills Facility PCCB Building Self-Implementing Cleanup Plan, 40 CFR §762.61(a).” Waste Management, Inc. August 2010.



3. “Polychlorinated Biphenyls (PCBs) – USEPA Conditional Approval Under 40 CFR 761.61(a), Toxic Substances Control Act, Self-Implementing Cleanup of PCBs at PCB Building, Waste Management Kettleman Hills Facility.” Letter, Arlene Kabei, U.S. EPA Region 9, to Robert Henry, Chemical Waste Management, Inc. September 23, 2010.
4. “Chemical Waste Management, Inc. Kettleman Hills Facility PCB Cleanup Completion Report.” Letter, Robert Henry, Chemical Waste Management, Inc. to Carmen Santos, U.S. EPA Region 9. December 16, 2010. With enclosures.
5. “PCB Outside Pad Replacement and Cleanup Completion Report, Kettleman Hills Facility, Kings County, CA.” Associated Design & Engineering, Inc. January 10, 2011.
6. “March 24, 2011 Letter re CWMI’s PCB Outside Pad Replacement and Cleanup Completion Report – Kettleman Hills Facility (EPA Identification No. CAT 000646117).” Letter, Paul Turek, Chemical Waste Management, Inc. to Wayne Lorentzen, Department of Toxic Substance Control. May 6, 2011.
7. “DTSC Review of Response to Comments on the IM Corrective Action Completion Report, Chemical Waste Management, Inc., Kettleman Hills Facility, 35251 Old Skyline Road, Kettleman City, Kings County, California 93239, Environmental Protection Agency Identification Number CAT000646117.” Letter, Wayne Lorentzen, Department of Toxic Substance Control to Paul Turek, Chemical Waste Management, Inc. June 21, 2011.
8. “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised IM Corrective Action Completion Report: PCB Outside Pad Replacement and Cleanup report, PCB Cleanup Completion Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Wayne Lorentzen, Department of Toxic Substance. July 21, 2011. With Enclosures
  - a. “PCB Outside Pad Replacement and Cleanup Completion Report, Kettleman Hills Facility Kings Count, CA.” Associated Design & Engineering, Inc. January 10, 2011 (revised July 20, 2011).
9. “Acceptance of the Interim Measures Corrective Action Completion Report, Chemical Waste Management, Inc. Kettleman Hills Facility, 35251 Old Skyline Road, Kettleman City, Kings County, California 93239, Environmental Protection Agency Identification Number CAT000646117.” Letter, Wayne Lorentzen, Department of Toxic Substances Control to Paul Turek, Chemical Waste Management, Inc. August 17, 2011.
10. “Notice of Decision – Approval of the Interim Measures Corrective Action Completion Report.” Public Notice, Wayne Lorentzen, Department of Toxic Substances Control to Whom it May Concern. February 13, 2012.
11. “Final Statement of Basis -- Selected Remedy for the PCB Storage Building Cleanup Chemical Waste Management, Inc. Kettleman Hills Facility, 35251 Old Skyline Road, Kettleman City, Kings County, California 93239, Environmental Protection Agency Identification Number CAT000646117.” Department of Toxic Substances Control to Whom it May Concern. February 13, 2012.



12. “Engineer’s Certification for the Outside Containment System for the PCB Flushing/Storage Unit at the Kettleman Hills Facility – Kings County, California (EPA ID NO.: CAT000646117).” Letter from Ryan Hillman, Golder Associates to Reyna Verdin, Chemical Waste Management, Inc. October 1, 2018.
13. “Engineer’s Certification for the Interior Containment System for the PCB Flushing/Storage Unit at the Kettleman Hills Facility – Kings County, California (EPA ID NO.: CAT000646117).” October 1, 2018.

## F. OTHER KETTLEMAN HILLS FACILITY WIDE PLANS

### 1. Ambient Air Monitoring Plans

- a. “Air Monitoring – Technical Work Plan.” Kettleman Hills Facility.” NUS Corporation. February 1986.
- b. “Ambient Air Monitoring Plan, Final.” EarthTech, Inc. February 2006.
- c. “Approval of the Final Ambient Air Monitoring Plan, February 2006, Kettleman Hills Facility, Kings County, California, United States Environmental Protection Agency (USEP) ID Number CAT000646117.” Letter, Pauline Batarseh, Department of Toxic Substances Control to Paul Turek, Chemical Waste Management, Inc. March 29, 2006.
- d. “Chemical Waste Management, Inc., Kettleman Hills Facility requested Air Modeling Data” Letter, Paul Turek, Chemical Waste Management, Inc. to Lily Lee, U.S. EPA Region 9. July 27, 2006.
- e. “Site-Specific Ambient Air Monitoring Plan.” EarthTech, Inc. February 2007.
- f. “Site-Specific Ambient Air Monitoring Plan.” EarthTech, Inc. Second Revision, July 2007.
- g. “Risk analysis.” Letter from Paula Bisson, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. September 8, 2008.
- h. “Site-Specific Ambient Monitoring Plan.” Wenck Associates, Inc. Fourth Revision, November 2010.
- i. “Site-Specific Ambient Air Monitoring Plan.” EarthTech, Inc. Third Revision, May 2010.
- j. “Comments on Site Specific Air Monitoring Plan, Third Revision, Chemical Waste Management, Inc., Kettleman Hills Facility, 35251 Old Skyline Road, Kettleman City, Kings County, California 93239, Environmental Protection Agency Identification Number CAT000646117.” Letter, Wayne Lorentzen, Department of Toxic Substances Control to Paul Turek, Chemical Waste Management, Inc. August 10, 2010.
- k. “Site-Specific Ambient Air Monitoring Plan.” Wenck Associated, Inc. Fifth Revision, January 2016.



1. “Revised Site-Specific Ambient Air Monitoring Plan (SSAAMP) for Location of Additional Downwind Monitoring Station and Month-Long PCB Sample, Chemical Waste Management, Inc., Kettleman Hills Facility, 35251 Old Skyline Roan, Kettleman City, Kings County, California 93239, Environmental Protection Agency Identification Number CAT000646117.” Letter, Edward Nieto, Department of Toxic Substances to Robert Henry, Chemical Waste Management, Inc. May 11, 2016.
2. Groundwater Monitoring Plans
  - a. ““Certification and Signatory”” page for October 1985 Interim Status Monitoring Plan for Chemical Waste Management’s Kettleman Hills Facility.” EMCON. December 27, 1987. Includes “Hydrogeologic Characterization, Kettleman Hills Facility, Kings County, California.” EMCON Associates. December 1986.
  - b. “Transmittal of Adopted Waste Discharge Requirements for Chemical Waste Management, Inc., Kettleman Hills Facility, Kings County.” Letter, William F. Pfister, California Regional Water Quality Control Board Central Valley Region to Robert g. Henry, Chemical Waste Management, Inc. March 11, 1998. With enclosure: “Order No. 98-058, Waste discharge Requirements for Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County.” California Regional Water Quality Control Board Central Valley Region. February 27, 1998.
  - c. “Site-Specific Groundwater Monitoring Plan, Kettleman Hills Facility, Chemical Waste Management, Inc., Kings County, California.” Geosyntec Consultants. May 2001.
  - d. “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised Site-Specific Ground Water Monitoring Plan Revised Site-Specific Unsaturated Zone Monitoring Plan.” Letter, Paul Turek, Chemical Waste Management, Inc. to Executive Officer, Regional Water Quality Control Board. April 15, 2014. With enclosure: “Revised Site-Specific Groundwater Monitoring Plan Class I Waste Management Units, Kettleman Hills Facility, Kings County, California.” AMEC Environment & Infrastructure, Inc. April 14, 2014.
  - e. “Kettleman Hills Facility – TSCA Groundwater Monitoring Requirements.” Letter, Andrew M. Kenefick, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. May 30, 2018. With enclosures.
3. Surface and Storm Water Plans
  - a. “Surface Water Control Program for Kettleman Hills Facility,” Centra Consulting, Inc. October 23, 2009.
  - b. “Stormwater Pollution Prevention Plan Chemical Waste Management, Inc., – Kettleman Hills Facility.” Golder Associates and SWT Engineering. March 2016.





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#### 4. SPCC Plan

- a. “Spill Prevention Control and Countermeasure Plan (SPCC) prepared for Chemical Waste Management, Inc. Kettleman Hills Facility.” Golder Associates, Inc. and Waste Management. October 2016.

### G. OTHER DOCUMENTS

1. “Chemical Waste Management, Inc. – Kettleman Hills Facility Seismic Hazard Assessment for the Kettleman Hills Facility, Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control, December 28, 2017.

## VIII. COMPLIANCE AND MONITORING DOCUMENTS

### A. COMPLIANCE AND ENFORCEMENT DOCUMENTS

#### 1. TSCA Inspection Reports

- a. “Inspection Report. Facility: Kettleman Hills Facility, Chemical Waste Management, Inc.” U.S. EPA Region 9. Date of Inspection: December 8, 1993.
- b. “Inspection Report. Facility: Chemical Waste Management, Inc., Kettleman City, California.” Department of Toxic Substances Control. Date of Inspection: August 31, 1995; Date of Report: September 22, 1995.
- c. “Inspection Report. Facility: Chemical Waste Management, Inc., Kettleman Hills Facility.” Department of Toxic Substances Control. Date of Inspection: April 8, 1997; Date of Report: July 14, 1997.
- d. “Inspection Report. Purpose: TSCA Section 6(e) PCB Inspection. Inspection Date: October 14-15, 1998. Facility: Chemical Waste Management, Inc., Kettleman Hills Facility.” U.S. EPA Region 9. No date.
- e. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to TSCA Inspection Follow-Up Questions.” Letter, Paul Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. March 22, 1999.
- f. “Inspection Report. Purpose: TSCA Section 6(e) PCB Inspection. Inspection Date: October 25-26, 2001. Facility: Chemical Waste Management, Inc., Kettleman Hills Facility.” U.S. EPA Region 9. No date.
- g. “Inspection Report. Purpose: TSCA Section 6(e) PCB Inspection. Inspection Date: April 14-15, 2004. Facility: Chemical Waste Management, Inc., Kettleman Hills Facility.” U.S. EPA Region 9. No date.
- h. “Transmittal of Final Report – Multimedia Compliance Investigation: Phase 1; Chemical Waste Management, Inc. Kettleman Hills, CA NEIC Project No.: VP0686.” Memorandum, Diana Love, NEIC U.S. EPA to Christopher Rollins, U.S. EPA Region 9. January 17, 2006. With enclosure: “Multimedia Compliance



Investigation: Phase 1; Chemical Waste Management, Inc. Kettleman Hills, CA NEIC Project No.: VP0686.” NEIC, U.S. EPA. January 2006.

- i. “TSCA Compliance Evaluation Inspection Report, February 8-12, 2010, Chemical Waste Management, Inc.” U.S. EPA Region 9. March 12, 2010.
- j. “TSCA Compliance Evaluation Inspection Report, June 2, 2010, Chemical Waste Management, Inc.” U.S. EPA Region 9. July 27, 2010.
- k. “TSCA Compliance Evaluation Inspection Report, November 29, 2012, Chemical Waste Management, Inc.” U.S. EPA Region 9. January 10, 2013.
- l. “Inspection Report, Waste Management, Inc. – Kettleman Hills Facility, date of inspection: September 28, 2017.” U.S. EPA Region 9. October 27, 2017.

2. RCRA Inspection Reports

- a. Letter, Astrid L. Brown, Department of Toxic Substances Control to Paul Turek, Chemical Waste Management, Inc. February 8, 2005. With enclosure: “Inspection Report: November 9, 10 and 30, 2004.” Department of Toxic Substances Control. February 8, 2005.
- b. “Multimedia Compliance Investigation: Phase 2; Chemical Waste Management, Inc. Kettleman Hills, CA NEIC Project No.: VP0686.” NEIC, U.S. EPA. April 2007. [REDACTED].
- c. “Financial Responsibility Review Findings – Chemical Waste Management, 35251 Old Skyline Road, Kettleman City, California 93239, Environmental Protection Agency Identification Number CAT000646117.” Letter, Keith Kihara, Department of Toxic Substances Control to Paul Turek, Chemical Waste Management, Inc. March 16, 2009. With enclosure: “Financial Responsibility Review Findings.” Department of Toxic Substances Control. March 13, 2009.
- d. “Financial Responsibility Review Findings – Chemical Waste Management, 35251 Old Skyline Road, Kettleman City, California 93239, Environmental Protection Agency Identification Number CAT000646117.” Letter, Keith Kihara, Department of Toxic Substances Control to Paul Turek, Chemical Waste Management, Inc. October 8, 2009. With enclosure: “Financial Responsibility Review Findings.” Department of Toxic Substances Control. October 6, 2009.
- e. “Inspection Report: September 15-16, 2009.” Department of Toxic Substances Control. October 21, 2009.
- f. Letter, Amy Miller, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. February 25, 2011. With enclosure: “Inspection Report, Waste Management, Kettleman Hills Facility (Inspection date: November 12, 2010).” U.S. EPA Region 9. February 25, 2011.
- g. “Financial Responsibility Review Findings – Chemical Waste Management, 35251 Old Skyline Road, Kettleman City, California 93239, Environmental



- Protection Agency Identification Number CAT000646117.” Letter, Jerry Barnes, Department of Toxic Substances Control to Paul Turek, Chemical Waste Management, Inc. June 12, 2012. With enclosure: “Financial Responsibility Review Findings.” Department of Toxic Substances Control. June 12, 2012.
- h. “Groundwater Operation and Maintenance (O&M) Inspection Report, Chemical Waste Management – Kettleman Hills Facility, Kings County, California.” Department of Toxic Substances Control. September 9, 2012.
- i. “Financial Responsibility Review Findings – Chemical Waste Management, 35251 Old Skyline Road, Kettleman City, California 93239, Environmental Protection Agency Identification Number CAT000646117.” Letter, Jerry Barnes, Department of Toxic Substances Control to Paul Turek, Chemical Waste Management, Inc. May 20, 2013. With enclosure: “Financial Responsibility Review Findings.” Department of Toxic Substances Control. May 17, 2013.
- j. Letter, Ignacio R. Dominguez, Department of Toxic Substances Control, to Paul Turek, Chemical Waste Management, Inc. June 25, 2013. With enclosure: “Inspection Report: April 23-24, 2013.” Department of Toxic Substances Control. June 24, 2013.
- k. “Transmittal of Groundwater Audit Report for February 19, 2014 Chemical Waste Management, Kettleman Facility, Kings County, California, CAT000646117.” Letter, Jeff Brown, Department of Toxic Substances Control to Paul Turek, Chemical Waste Management, Inc. April 8, 2014. With enclosure: “Groundwater Audit Report, Chemical Waste Management – Kettleman Hills Facility, Kings County, California.” Department of Toxic Substances Control. April 7, 2014.
- l. Letter, Dan Lynch, Department of Toxic Substances Control, to Jim Sook, Chemical Waste Management, Inc. July 24, 2014. With enclosure: “Inspection Report: March 18, 2014.” Department of Toxic Substances Control. July 24, 2014.
- m. “Financial Responsibility Review Findings.” Department of Toxic Substances Control. August 12, 2014.
- n. Letter, Dan Lynch, Department of Toxic Substances Control, to Bob Henry, Chemical Waste Management, Inc. December 3, 2014. With enclosure: “Inspection Report: September 24, 2014.” Department of Toxic Substances Control. November 19, 2015.
- o. Letter, Dan Lynch, Department of Toxic Substances Control, to Bob Henry, Chemical Waste Management, Inc. December 18, 2014. With enclosure: “Inspection Report: December 10, 2014.” Department of Toxic Substances Control. December 3, 2014.
- p. “Financial Responsibility Review Findings.” Department of Toxic Substances Control. April 28, 2015.



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- q. Letter, Robert Easley, Department of Toxic Substances Control, to Bob Henry, Chemical Waste Management, Inc. June 30, 2015. With enclosure: “Inspection Report: March 17 and 18, 2015.” Department of Toxic Substances Control. June 30, 2015.
  - r. Letter, Dan Lynch, Department of Toxic Substances Control, to Paul Turek, Chemical Waste Management, Inc. December 4, 2015. With enclosure: “Inspection Report: September 30, 2015.” Department of Toxic Substances Control. December 4, 2015.
  - s. Letter, Dan Lynch, Department of Toxic Substances Control, to Paul Turek, Chemical Waste Management, Inc. February 16, 2016. With enclosure: “Inspection Report: December 29, 2015.” Department of Toxic Substances Control. February 16, 2016.
  - t. “Financial Responsibility Review Findings.” Department of Toxic Substances Control. February 29, 2016.
  - u. Letter, Robert Easley, Department of Toxic Substances Control, to Paul Turek, Chemical Waste Management, Inc. April 1, 2016. With enclosure: “Inspection Report: February 9 and 10, 2016.” Department of Toxic Substances Control. April 1, 2016.
  - v. Letter, Robert Easley, Department of Toxic Substances Control, to Reyna Verdin, Chemical Waste Management, Inc. September 28, 2016. With enclosure: “Inspection Report: September 14, 2016.” Department of Toxic Substances Control. September 28, 2016.
  - w. “Financial Responsibility Review Findings.” Department of Toxic Substances Control. March 10, 2017.
  - x. Letter, Dan Lynch, Department of Toxic Substances Control, to Reyna Verdin, Chemical Waste Management, Inc. April 4, 2017. With enclosure: “Inspection Report: February 1-2, 2017.” Department of Toxic Substances Control. April 4, 2017.
  - y. “Transmittal of Groundwater Audit Report for May 2, 2017 Chemical Waste Management, Kettleman Facility, Kings County, California, CAT000646117.” Letter, Matthew Farris, Department of Toxic Substances Control to Reyna Verdin, Chemical Waste Management, Inc. May 31, 2017. With enclosure: “Focused Groundwater Audit Report, Chemical Waste Management – Kettleman Hills Facility, Kings County, California.” Department of Toxic Substances Control. June 6, 2017.
  - z. Letter, Robert Easley, Department of Toxic Substances Control, to Reyna Verdin, Chemical Waste Management, Inc. June 21, 2017. With various enclosures.



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- aa. Letter, April Ranney, Department of Toxic Substances Control, to Reyna Verdin, Chemical Waste Management, Inc. September 28, 2017. With enclosure: “Summary of Observations.” Department of Toxic Substances Control. August 17, 2017.
  - bb. “Financial Responsibility Review Findings.” Department of Toxic Substances Control. April 9, 2018.
  - cc. Letter, Robert Easley, Department of Toxic Substances Control, to Reyna Verdin, Chemical Waste Management, Inc. October 2, 2018. With enclosure: “Inspection Report: September 11, 2018.” Department of Toxic Substances Control. October 2, 2018.
  - dd. “Inspection Report, Kettleman Hills Facility: April 17, 2019.” Department of Toxic Substances Control. May 14, 2019.
3. Compliance Documents
- a. “Chemical Waste Management, Inc – Kettleman Hills Facility Monitoring of Landfill B-16 Lysimeters.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. February 13, 2004.
  - b. “Chemical Waste Management’s Voluntary Disclosure of a Possible TSCA Violation.” Letter, Paula Bisson, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. May 6, 2004.
  - c. “Chemical Waste Management, Inc – Kettleman Hills Facility Voluntary Disclosure Questionnaire Landfill B-16 Lysimeters.” Letter, Paul Turek, Chemical Waste Management, Inc. to Paula Bisson, U.S. EPA Region 9. May 24, 2004.
  - d. “TSCA Information Request Letter.” Letter, Paula Bisson, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. June 3, 2004.
  - e. “Chemical Waste Management, Inc – Kettleman Hills Facility Voluntary Disclosure Landfill B-16 Lysimeters.” Letter, Andrew M. Kenefick, Chemical Waste Management, Inc. to David Kim, U.S. EPA Region 9. August 20, 2004. [Confidential Settlement Communication].
  - f. Letter, Enrique Manzanilla, U.S. EPA Region 9 to Andrew M. Kenefick, Chemical Waste Management, Inc. May 3, 2005. With enclosure: “Docket No. TSCA-09-2005-0002 Consent Agreement and Final Order Pursuant to 40 C.F.R. §§ 22.13 and 22.18.” U.S. EPA Region 9. May 3, 2005.
  - g. “Notice of Noncompliance for Violations of Toxic Substances Control Act.” Letter, Paula Bisson, U.S. EPA to Paul Turek, Chemical Waste Management, Inc. June 26, 2007.



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- h. “Aviso de incumplimiento para violaciones de la ley de control de sustancias tóxicas.” Letter, Paula Bisson, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. 26 de junio de 2007.
  - i. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to 06/26/07 TSCA Notice of Noncompliance PCB Analytical Methodology.” Letter, Paul Turek, Chemical Waste Management, Inc. to Christopher Rollins, U.S. EPA Region 9. August 1, 2007. With enclosure.
  - j. “Notice of Noncompliance Follow Up Letter.” Letter, Paula Bisson, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. November 28, 2007.
  - k. “Chemical Waste Management, Inc. – Kettleman Hills Facility Response to TSCA Notice of Noncompliance Follow-Up Letter PCB Performance Evaluation Samples.” Letter, Paul Turek, Chemical Waste Management, Inc. to Christopher Rollins, U.S. EPA Region 9. December 20, 2007.
  - l. “Chemical Waste Management, Inc. - Kettleman Hills Facility Response to TSCA Notice of Noncompliance Follow-Up Letter PCB Performance Evaluation Samples - Second Set.” Letter, Paul Turek, Chemical Waste Management, Inc. to Christopher Rollins, U.S. EPA Region 9. February 12, 2008.
  - m. “Notice of Violation.” Letter, Amy Miller, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. January 26, 2010.
  - n. “Aviso de Violación.” Letter, Amy Miller, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. 26 de enero de, 2010.
  - o. “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: Notice of Violation – EPA I.D. Number CAT000646117.” Letter, Paul Turek, Chemical Waste Management, Inc. to Kandace Bellamy, U.S. EPA Region 9. January 29, 2010.
  - p. “Notice of Violation.” Letter, Amy Miller, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. February 4, 2010.
  - q. “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: Notice of Violation – EPA I.D. Number CAT000646117.” Letter, Paul Turek, Chemical Waste Management, Inc. to Kandace Bellamy, U.S. EPA Region 9. February 26, 2010.
  - r. “Kettleman Hills Facility, Kettleman City, CA EPA Identification Number CAT 000 646 117.” Letter, Amy Miller, U.S. EPA Region 9 to Andrew Kenefick, Chemical Waste Management, Inc. April 8, 2010. With enclosure: “Multimedia Compliance Investigation: Phase 2; Chemical Waste Management, Inc. Kettleman Hills, CA NEIC Project No.: VP0686.” NEIC, U.S. EPA. April 2007 [REDACTED].



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- s. “Aviso de violaciones de la Ley de Control de Sustancias Tóxicas.” Letter, Amy Miller, U.S. EPA Region 9 to Andrew Kenefick, Chemical Waste Management, Inc. 8 de abril; del 2010.
  - t. “60-Day Notice of Unacceptability Under the CERCLA Off-Site Rule and Opportunity for Informal Conference.” Letter, Amy Miller, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. April 8, 2010.
  - u. “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: Notice of Violation – EPA I.D. Number CAT000646117.” Letter, Paul Turek, Chemical Waste Management, Inc. to Christopher Rollins, U.S. EPA Region 9. May 10, 2010.
  - v. “Chemical Waste Management, Inc., Kettleman Hills Facility Laboratory.” Letter, Jeff Scott, U.S. EPA Region 9 to Andrew Kenefick, Chemical Waste Management, Inc. May 27, 2010.
  - w. “Laboratorio de la Instalación de Kettleman Hills de Chemical Waste Management, Inc.” Letter, Jeff Scott, U.S. EPA Region 9 to Andrew Kenefick, Chemical Waste Management, Inc. 27 de mayo de 2010.
  - x. “Chemical Waste Management, Inc., Kettleman Hills Facility Laboratory.” Letter, Andrew Kenefick, Chemical Waste Management, Inc. to Letitia Moore, U.S. EPA Region 9. June 7, 2010. With enclosures.
  - y. “Request for Meeting Regarding Kettleman Hills Facility.” Letter, Duane Woods, Chemical Waste Management, Inc. to Jared Blumenfeld, U.S. EPA Region 9. June 9, 2010. With enclosure: “Chemical Waste Management, Inc., Kettleman Hills Facility Laboratory.” Letter, Andrew Kenefick, Chemical Waste Management, Inc. to Letitia Moore, U.S. EPA Region 9. June 7, 2010.
  - z. “Resolution of April 8, 2010 Off-Site Rule Notice letter.” Letter, Jeff Scott, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. July 8, 2010.
  - aa. “Resolución de la notificación del 8 de abril de 2010 bajo el reglamento sobre la disposición fuera del sitio (“Off-Site Rule).” Letter, Jeff Scott, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. 8 de julio de 2010
  - bb. “60-Day Notice of Unacceptability Under the CERCLA Off-Site Rule and Opportunity for Informal Conference.” Letter, Amy Miller, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. July 15, 2010. With enclosure: 58 FR 49200 (September 22, 1993) “Amendment to the National Oil and Hazardous Substances Pollution Contingency Plan; Procedures for Planning and Implementing Off-Site Response Actions.”
  - cc. “Notice of Toxic Substances Control Act Violation. Kettleman Hills Facility, Kettleman City, CA EPA Identification Number CAT 000 646 117.” Letter, Amy Miller, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. July 15, 2010.



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- dd. “Aviso de violaciones de la Ley de control de Sustancias Tóxicas. Instalación Kettleman Hills, Kettleman City, Número de Identificación de la EPA CAT 000 646 117.” Letter, Amy Miller, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. 15 de julio de 2010.
- ee. “TSCA Compliance Evaluation Inspection Report and Notice of Violation.” Letter, Amy Miller, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. September 8, 2010.
- ff. “Informe de Inspeccion de Evaluacion de Cumplimiento bajo TSCA y Aviso de violaciones .” Letter, Amy Miller, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. 8 de septiembre de 2010.
- gg. “Polychlorinated Biphenyls (PCBs) – USEPA Conditional Approval Under 40 CFR 761.61(a), Toxic Substances Control Act, Self-Implementing Cleanup of PCBs at PCB Building, Waste Management Kettleman Hills Facility.” Letter, Arlene Kabei, U.S. EPA Region 9, to Robert Henry, Chemical Waste Management, Inc. September 23, 2010.
- hh. “Bifeniles Policlorados (PCBs) – Aprobación Condicional de USEPA bajo 40 CFR 761.61(a), Ley de Control de Sustancias Tóxicas, Limpieza Independiente de PCBs en el Edificio de PCB, Instalación Waste Management Kettleman Hills.” Letter, Arlene Kabei, U.S. EPA Region 9, to Robert Henry, Chemical Waste Management, Inc. 23 de septiembre de 2010.
- ii. “Corrective Action Consent Order, Chemical Waste Management, Inc. Kettleman Hills Facility, 35251 Old Skyline Road, Kettleman City, Kings County, California 93239, Environmental Protection Agency Identification Number CAT 000646117.” Letter, Wayne Lorentzen, Department of Toxic Substances Control to Robert Henry, Chemical Waste Management, Inc. October 18, 2010. With enclosure “Docket HWCA P1-10/11-001 Corrective Action Consent Order, Health and Safety Code Section 25187.” Department of Toxic Substances Control. October 14, 2010.
- jj. “Summary of Violations – Chemical Waste Management – Kettleman Hills.” Department of Toxic Substances Control. October 19, 2010.
- kk. “Consent Agreement and Final Order in the Matter of Chemical Waste Management, Inc.” Letter, Jeff Scott, U.S. EPA Region 9 to Bob Henry, Chemical Waste Management, Inc. November 29, 2010. With enclosure: “Docket No. TSCA-09-2011-0001 Consent Agreement and Final Order Pursuant to 40 C.F.R. §§ 22.13 and 22.18.” U.S. EPA Region 9. November 29, 2010.
- ll. “Orden No. TSCA-09-0211-0001 Acuerdo de Consentimiento y Orden Final Conforme A 40 C.F.R. §§ 22.13 and 22.18.” U.S. EPA Region 9. 29 de noviembre de 2010.
- mm. “Notice of Violation.” Letter, Amy Miller, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. February 25, 2011.





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- nn. “In the matter of Chemical Waste Management, Inc. Enforcement Order.” Department of Toxic Substances Control. May 20, 2011.
  - oo. “Docket No. RCRA-09-2011-0016 Consent Agreement and Final Order Pursuant to 40 C.F.R. §§ 22.13 and 22.18.” U.S. EPA Region 9. August 23, 2011.
  - pp. “Orden No. TSCA-09-21-011-0016 Acuerdo de Consentimiento y Orden Final Conforme A 40 C.F.R. §§ 22.13 and 22.18.” U.S. EPA Region 9. 23 de agosto de 2011.
  - qq. “DTSC proposes approval of the Kettleman Hills Facility’s cleanup of PCB storage building spills.” Factsheet. Department of Toxic Substances Control. September 2011.
  - rr. “Fact Sheet on United States Environmental Protection Agency’s Compliance Investigation and Enforcement at Chemical Waste Management, Kettleman Hills.” Factsheet (English and Spanish). November 2011.
  - ss. “Docket No. TSCA-09-2012-0009 Consent Agreement and Final Order Pursuant to 40 C.F.R. §§ 22.13 and 22.18.” U.S. EPA Region 9. September 7, 2012.
  - tt. Letter, Ignacio R. Dominguez, Department of Toxic Substances Control to Bob Henry, Chemical Waste Management, Inc. October 22, 2012. With enclosure: “Summary of Violations.” Department of Toxic Substances Control. October 22, 2012.
  - uu. “CWM Kettleman Hills Facility RCRA/TSCA Inspections 1983 – Present.” Department of Toxic Substances Control. March 2013.
  - vv. “California v. Chemical Waste Management, Inc. Complaint for Civil Penalties and Injunctive Relief, Case No. BC503092.” Department of Toxic Substances Control. March 18, 2013.
  - ww. “California v. Chemical Waste Management, Inc. Final Judgment on Consent and Permanent Injunction, Case No. BC503093.” Department of Toxic Substances Control. March 23, 2013.
  - xx. Letter, Dan Lynch, Department of Toxic Substances Control to Reyna Verdin, Chemical Waste Management, Inc. October 13, 2016. With enclosures.
  - yy. Letter, LeeAnn Young, Department of Toxic Substances Control to Reyna Verdin, Chemical Waste Management, Inc. August 10, 2017.
  - zz. “Summary of Violations – Chemical Waste Management – Kettleman Hills.” Department of Toxic Substances Control. March 28, 2018.
  - aaa. Letter, April Ranney, Department of Toxic Substances Control to Reyna Verdin, Chemical Waste Management, Inc. July 24, 2018. With enclosures.
  - bbb. Letter, Maria G. Durand, Department of Toxic Substances Control to Reyna Verdin, Chemical Waste Management, Inc. May 28, 2019. With enclosure.



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#### 4. Other Compliance-Related Documents

- a. “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: “Other” Noncompliance Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Wayne Lorentzen, Department of Toxic Substances Control. December 28, 2011.
- b. “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: “Other” Noncompliance Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Wayne Lorentzen, Department of Toxic Substances Control. May 23, 2012.
- c. “Chemical Waste Management, Inc. – Kettleman Hills Facility re: Supplemental Information re Voluntary Disclosure of Noncompliance (Feb. 14, 2014)” Letter, Paul Turek, Chemical Waste Management, Inc. to Wayne Lorentzen, Department of Toxic Substances Control. March 28, 2014.
- d. “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: “Other” Noncompliance Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Muzhda Ferouz, Department of Toxic Substances Control. August 3, 2015.
- e. “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: “Other” Noncompliance Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Muzhda Ferouz, Department of Toxic Substances Control. October 2, 2015.
- f. “Chemical Waste Management, Inc. – Kettleman Hills Facility re: “Other” Noncompliance Report.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. August 10, 2017.
- g. “Chemical Waste Management, Inc. – Kettleman Hills Facility re: Supplemental Information re Voluntary Disclosure of Noncompliance (August 10, 2017)” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. November 6, 2017.
- h. “Comprehensive Compliance Monitoring and Enforcement Report – LAD000777201 Chemical Waste Management, Inc. Sulpher, Louisiana.” U.S. EPA. September 18, 2018. [Enforcement sensitive data].
- i. “Comprehensive Compliance Monitoring and Enforcement Report – ORD089452353 Chemical Waste Management, Inc. Arlington, Oregon.” U.S. EPA. September 18, 2018. [Enforcement sensitive data].
- j. “Comprehensive Compliance Monitoring and Enforcement Report – NYD04836679 Chemical Waste Management, Inc. Model City, New York.” U.S. EPA. September 19, 2018. [Enforcement sensitive data].
- k. “Chemical Waste Management, Inc. – Kettleman Hills Facility, Written Release Report.” Reyna Verdin, Chemical Waste Management, Inc. to Camille Rogado, Department of Toxic Substances Control. August 16, 2019.



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**B. GROUNDWATER MONITORING**1. Annual Groundwater Reports

- a. “Annual Graph Report for Data Through 2008, Kettleman Hills Facility, Kings County, CA.” AMEC Geomatrix, Inc. March 23, 2009.
- b. “Chemical Waste Management, Inc. – Kettleman Hills Facility Annual Graph Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Jim Dowdall, Regional Water Quality Control Board and Wayne Lorentzen, Department of Toxic Substances. March 1, 2011. With enclosure: “Annual Graph Report for Data Through 2010, Kettleman Hills Facility, Kings County, CA.” AMEC Environment & Infrastructure, Inc. March 1, 2011.
- c. “Annual Graph Report for Data through 2011, Kettleman Hills Facility, Kings County, CA.” AMEC Environment & Infrastructure, Inc. February 16, 2012.
- d. “Annual Graph Report for Data Through 2012, Kettleman Hills Facility, Kings County, CA.” AMEC Environment & Infrastructure, Inc. February 25, 2013.
- e. “Annual Graph Report for Data Through 2013, Kettleman Hills Facility, Kings County, CA.” AMEC Environment & Infrastructure, Inc. February 25, 2014.
- f. “Chemical Waste Management, Inc. – Kettleman Hills Facility Annual Graph Report (Data Through 2014).” Letter, Paul Turek, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board and Muzhda Ferouz, Department of Toxic Substance Control. February 26, 2015. With enclosure: “Annual Graph Report for Data Through 2014, Kettleman Hills Facility, Kings County, CA.” AMEC Foster Wheeler. February 23, 2014.
- g. “Chemical Waste Management, Inc. – Kettleman Hills Facility Annual Graph Report (Data Through 2015). Letter, Paul Turek, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board and Muzhda Ferouz, Department of Toxic Substance Control. February 26, 2016. With enclosure: “Annual Graph Report for Data Through 2015, Kettleman Hills Facility, Kings County, CA.” AMEC Foster Wheeler. February 23, 2015.
- h. “Chemical Waste Management, Inc. – Kettleman Hills Facility Annual Evaluation of Soil-Gas Data Through 2016.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Regional Water Quality Control Board and Department of Toxic Substance Control. February 28, 2017. With enclosure: “Annual Graph Report for Data Through 2016, Kettleman Hills Facility, Kings County, CA.” AMEC Foster Wheeler. February 24, 2016.
- i. “Chemical Waste Management, Inc. – Kettleman Hills Facility Annual Graph Report (Data Through 2017), Reyna Verdin, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board and Ryan Batty, Department of Toxic Substance Control. February 28, 2018. With enclosure:



“Annual Graph Report for Data Through 2017, Kettleman Hills Facility, Kings County, CA.” AMEC Foster Wheeler. February 23, 2018.

- j. “Chemical Waste Management, Inc. – Kettleman Hills Facility Annual Graph Report” (Data Through 2018)”. Letter, Reyna Verdin, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board and Ryan Batty, Department of Toxic Substance Control. February 28, 2019. With enclosure: “Annual Graph Report for Data Through 2014, Kettleman Hills Facility, Kings County, CA.” Wood Environment & Infrastructure Solutions, Inc. February 27, 2019.

2. Groundwater Monitoring Reports

- a. “First Quarter 2007 Groundwater and Unsaturated Zone Monitoring Report for Title 22 and 23 Regulated Waste Management Units. Kettleman Hills Facility, Kettleman City, California.” Letter, Bradley A. Loewen, Geomatrix, to Paul Turek, Chemical Waste Management, Inc. June 19, 2007. With enclosure: “First Quarter 2007 Groundwater and Unsaturated Zone Monitoring Report for Title 22 and 23 Regulated Waste Management Units. Kettleman Hills Facility, Kettleman City, California.” Geomatrix. June 19, 2007.
- b. “Second Quarter 2007 Groundwater and Unsaturated Zone Monitoring Report for Title 22 and 23 Regulated Waste Management Units. Kettleman Hills Facility, Kettleman City, California.” Letter, Bradley A. Loewen, Geomatrix, to Paul Turek, Chemical Waste Management, Inc. September 26, 2007. With enclosure: “Second Quarter 2007 Groundwater and Unsaturated Zone Monitoring Report for Title 22 and 23 Regulated Waste Management Units. Kettleman Hills Facility, Kettleman City, California.” Geomatrix. September 2007.
- c. “Third Quarter 2007 Groundwater and Unsaturated Zone Monitoring Report for Class I Waste Management Units. Kettleman Hills Facility, Kettleman City, California.” Letter, Bradley A. Loewen, Geomatrix, to Paul Turek, Chemical Waste Management, Inc. December 19, 2007. With enclosure: “Third Quarter 2007 Groundwater and Unsaturated Zone Monitoring Report for Class I Waste Management Units. Kettleman Hills Facility, Kettleman City, California.” Geomatrix, December 2007.
- d. “Fourth Quarter 2007 Groundwater Constituents of Concern and Unsaturated Zone Monitoring Report for Class I Waste Management Units. Kettleman Hills Facility, Kettleman City, California.” Letter, Bradley A. Loewen, Geomatrix, to Paul Turek, Chemical Waste Management, Inc. April 9, 2008. With enclosure: “Fourth Quarter 2007 Groundwater Constituents of Concern and Unsaturated Zone Monitoring Report for Class I Waste Management Units. Kettleman Hills Facility, Kettleman City, California.” Geomatrix. April 2008.
- e. “First Quarter 2008 Groundwater and Unsaturated Zone Monitoring Report for Class I Waste Management Units. Kettleman Hills Facility, Kettleman City, California.” Letter, Bradley A. Loewen, Geomatrix, to Paul Turek, Chemical



- Waste Management, Inc. June 17, 2008. With enclosure: “First Quarter 2008 Groundwater and Unsaturated Zone Monitoring Report for Class I Waste Management Units, Kettleman Hills Facility, Kettleman City, California” Geomatrix, June 2008.
- f. “Second Quarter 2008 Groundwater and Unsaturated Zone Monitoring Report for Class I Waste Management Units. Kettleman Hills Facility, Kettleman City, California.” Letter, Bradley A. Loewen, Geomatrix, to Paul Turek, Chemical Waste Management, Inc. September 22, 2008. With enclosure: “Second Quarter 2008 Groundwater and Unsaturated Zone Monitoring Report for Class I Waste Management Units. Kettleman Hills Facility, Kettleman City, California.” Geomatrix. September 23, 2008.
- g. “Third Quarter 2008 Groundwater and Unsaturated Zone Monitoring Report for Class I Waste Management Units. Kettleman Hills Facility, Kettleman City, California.” Letter, Bradley A. Loewen, Geomatrix, to Paul Turek, Chemical Waste Management, Inc. December 22, 2008. With enclosure: “Third Quarter 2008 Groundwater and Unsaturated Zone Monitoring Report for Class I Waste Management Units. Kettleman Hills Facility, Kettleman City, California.” Geomatrix. December 22, 2008.
- h. “Fourth Quarter 2008 Groundwater and Unsaturated Zone Monitoring Report for Class I Waste Management Units. Kettleman Hills Facility, Kettleman City, California.” Letter, Bradley A. Loewen, Geomatrix, to Paul Turek, Chemical Waste Management, Inc. March 17, 2009. With enclosure: “Fourth Quarter 2008 Groundwater and Unsaturated Zone Monitoring Report for Class I Waste Management Units. Kettleman Hills Facility, Kettleman City, California.” Geomatrix. March 17, 2009.
- i. “First Quarter 2009 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, Amec, to Paul Turek, Chemical Waste Management, Inc. June 18, 2009. With enclosure: “First Quarter 2009 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC Geomatrix. June 18, 2009.
- j. “Second Quarter 2009 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Alex O. Olsen, Amec, to Paul Turek, Chemical Waste Management, Inc. September 17, 2009. With enclosure: “Second Quarter 2009 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC Geomatrix. September 17, 2009.
- k. “Third Quarter 2009 Groundwater and Unsaturated Zone Monitoring Report for Class I Waste Management Units. Kettleman Hills Facility, Kettleman City,



- California.” Letter, Alex O. Olsen, Geomatrix, to Paul Turek, Chemical Waste Management, Inc. December 22, 2008. With enclosure: “Third Quarter 2009 Groundwater and Unsaturated Zone Monitoring Report for Class I Waste Management Units. Kettleman Hills Facility, Kettleman City, California.” Geomatrix. December 22, 2009.
- l. “Fourth Quarter 2007 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Alex Olsen, AMEC, to Paul Turek, Chemical Waste Management, Inc. March 16, 2010. With enclosure: “Fourth Quarter 2007 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC. March 16, 2010.
  - m. “First Quarter 2010 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Alex O. Olsen, AMEC, to Paul Turek, Chemical Waste Management, Inc. June 18, 2010. With enclosure: “First Quarter 2010 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC Geomatrix. June 18, 2010.
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  - o. “Third Quarter 2010 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Alex O. Olsen, AMEC, to Paul Turek, Chemical Waste Management, Inc. December 21, 2010. With enclosure: “Third Quarter 2010 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC Geomatrix. December 21, 2010.
  - p. “Chemical Waste Management, Inc. – Kettleman Hills Facility, Forth Quarter 2010 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Paul Turek, Chemical Waste Management, Inc to Executive Officer, Regional Water Quality Control Board. March 1, 2011. With enclosure: “Fourth Quarter 2010 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC Geomatrix. March 1, 2011.



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- q. “First Quarter 2011 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. June 13, 2011. With enclosure: “First Quarter 2011 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC Geomatrix. June 13, 2011.
- r. “Chemical Waste Management, Inc. – Kettleman Hills Facility, Second Quarter 2011 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units.” Letter, Paul Turek, Chemical Waste Management, Inc to Executive Officer, Regional Water Quality Control Board. September 20, 2011. With enclosure: “Second Quarter 2011 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC Geomatrix. September 19, 2011.
- s. “Third Quarter 2011 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. December 20, 2011. With enclosure: “Third Quarter 2011 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC Geomatrix. December 20, 2011.
- t. “Fourth Quarter 2011 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. February 21, 2012. With enclosure: “Fourth Quarter 2011 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC Geomatrix. February 21, 2012.
- u. “First Quarter 2012 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. June 20, 2012. With enclosure: “First Quarter 2012 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC Geomatrix. June 20, 2012.
- v. “Second Quarter 2012 Groundwater and Unsaturated Zone Monitoring Constituents of Concern Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. September 25, 2012. With enclosure: “Second Quarter 2012 Groundwater and Unsaturated Zone Monitoring and Constituents of Concern Report for Class 1 Waste Management Units.



- Kettleman Hills Facility, Kings County, California.” AMEC. September 25, 2012.
- w. “Third Quarter 2012 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. December 12, 2012. With enclosure: “Third Quarter 2012 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC. December 12, 2012.
- x. “Fourth Quarter 2012 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. February 26, 2013. With enclosure: “Fourth Quarter 2012 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC Geomatrix. February 26, 2013.
- y. “First Quarter 2013 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. June 25, 2013. With enclosure: “First Quarter 2013 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC Geomatrix. June 25, 2013.
- z. “Second Quarter 2013 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. September 17, 2013. With enclosure: “Second Quarter 2013 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC. September 17, 2013.
- aa. “Third Quarter 2013 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. December 19, 2013. With enclosure: “Third Quarter 2012 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC. December 13, 2013.
- bb. “Fourth Quarter 2013 Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. February 25, 2014. With enclosure: “Fourth Quarter 2012





- Groundwater and Unsaturated Zone Monitoring Report for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC Geomatrix. February 25, 2014.
- cc. “First Quarter 2014 Groundwater and Unsaturated Zone Monitoring Data Report,. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. June 27, 2014. With enclosures.
- dd. “First Semiannual 2014 Groundwater and Unsaturated Zone Monitoring for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. September 26, 2014. With enclosure: “First Semiannual 2014 Groundwater and Unsaturated Zone Monitoring for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC. September 26, 2014.
- ee. “Third Quarter 2014 Groundwater and Unsaturated Zone Monitoring Data Report,. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. December 8, 2014. With enclosures.
- ff. “Second Semiannual 2014 Groundwater and Unsaturated Zone Monitoring for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. February 25, 2015. With enclosure: “Second Semiannual 2014 Groundwater and Unsaturated Zone Monitoring for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC. February 23, 2015.
- gg. “First Quarter 2015 Groundwater and Unsaturated Zone Monitoring Data Report,. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. June 16, 2015. With enclosures.
- hh. “First Semiannual 2015 Groundwater and Unsaturated Zone Monitoring for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. September 21, 2015. With enclosure: “First Semiannual 2015 Groundwater and Unsaturated Zone Monitoring for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC. September 21, 2015.
- ii. “Second Semiannual 2015 Groundwater and Unsaturated Zone Monitoring for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Paul Turek, Chemical Waste Management, Inc. March 18, 2016. With enclosure: “Second Semiannual 2015 Groundwater and Unsaturated Zone Monitoring for Class 1 Waste Management



- Units. Kettleman Hills Facility, Kings County, California.” AMEC. March 18, 2016.
- jj. “First Semiannual 2016 Groundwater and Unsaturated Zone Monitoring for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” Letter, Bradley A. Loewen, AMEC, to Reyna Verdin, Chemical Waste Management, Inc. September 22, 2016. With enclosure: “First Semiannual 2016 Groundwater and Unsaturated Zone Monitoring for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC. September 22, 2016.
- kk. “Chemical Waste Management, Inc. Kettleman Hills Facility, Third Quarter 2016 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Permitting Division, Department of Toxic Substances Control. December 2, 2016. With enclosure: “Third Quarter 2016 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” AMEC. November 30, 2016.
- ll. “Chemical Waste Management, Inc. Kettleman Hills Facility, Fourth Quarter 2016 Monitoring and Constituents of Concern Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Permitting Division, Department of Toxic Substances Control. February 28, 2017. With enclosure: “Fourth Quarter 2016 Monitoring and Constituents of Concern Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” AMEC. February 24, 2017.
- mm. “Chemical Waste Management, Inc. Kettleman Hills Facility, First Quarter 2017 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Permitting Division, Department of Toxic Substances Control. June 26, 2017. With enclosure: “First Quarter 2017 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” AMEC. June 15, 2017.
- nn. “Chemical Waste Management, Inc. Kettleman Hills Facility, Second Quarter 2017 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. September 15, 2017. With enclosure: “Second Quarter 2017 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” AMEC. September 13, 2017.
- oo. “Chemical Waste Management, Inc. Kettleman Hills Facility, First Semiannual 2017 Groundwater and UZ Monitoring – Class 1 Waste Management Units.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Permitting Division,



- Department of Toxic Substances Control. September 28, 2017. With enclosure: “First Semiannual 2017 Groundwater and Unsaturated Zone Monitoring for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC. September 27, 2017.
- pp. “Chemical Waste Management, Inc. Kettleman Hills Facility, Third Quarter 2017 Monitoring Report for Class I Waste Management Units as Required by Department of Toxic Substances Control on March 6, 2015.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. December 22, 2017. With enclosure: “Third Quarter 2017 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” AMEC. December 20, 2017.
- qq. “Chemical Waste Management, Inc. Kettleman Hills Facility, Fourth Quarter 2017 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. February 28, 2018. With enclosure: “Fourth Quarter 2017 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” AMEC. February 23, 2018.
- rr. “Chemical Waste Management, Inc. Kettleman Hills Facility, Second Semiannual 2017 Groundwater and UZ Monitoring – Class 1 Waste Management Units.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Permitting Division, Department of Toxic Substances Control. March 29, 2018. With enclosure: “Second Semiannual 2017 Groundwater and Unsaturated Zone Monitoring for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC. March 26, 2018.
- ss. “Chemical Waste Management, Inc. Kettleman Hills Facility, First Quarter 2018 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. June 26, 2018. With enclosure: “First Quarter 2018 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Wood. June 21, 2018.
- tt. “Chemical Waste Management, Inc. Kettleman Hills Facility, Second Quarter 2018 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. September 21, 2018. With enclosure: “Second Quarter 2018 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Wood. September 21, 2018.
- uu. “Chemical Waste Management, Inc. Kettleman Hills Facility, Third Quarter 2018 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to



Ryan Batty, Department of Toxic Substances Control. December 19, 2018. With enclosure: “Third Quarter 2018 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Wood. December 13, 2018.

vv. “Chemical Waste Management, Inc. Kettleman Hills Facility, Fourth Quarter 2018 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. February 21, 2019. With enclosure: “Fourth Quarter 2018 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Wood. February 18, 2019.

ww. “Chemical Waste Management, Inc. Kettleman Hills Facility, First Quarter 2019 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Camille Rogado, Department of Toxic Substances Control. June 27, 2019. With enclosure: “First Quarter 2019 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Wood. June 21, 2019.

3. **Other Documents Related Groundwater Monitoring Results**

- a. “Kettleman City Well Question.” Email, Jim Dowdall, Regional Water Quality Control Board, to Edwin Poalinelli, U.S. EPA Region 9. July 30, 2010.
- b. “Notifications correspondence from KHF to EPA-IX for PCB detections in groundwater monitoring results and leachate analytic results for TSCA-regulated units from 1992 – 2018. Compiled by Chemical Waste Management, Inc. October 2, 2018.

C. **LEACHATE MONITORING REPORTS**

1. **Annual LCRS Fluid Analysis Reports**

- a. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2009 Annual LCRS Fluid Analysis Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Jim Dowdall, Regional Water Quality Control Board. April 9, 2010. With enclosures.
- b. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2010 Annual LCRS Fluid Analysis Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Jim Dowdall, Regional Water Quality Control Board. April 19, 2011. With enclosures.
- c. “Chemical Waste Management, Inc. – Kettleman Hills Facility Corrections to 2010 Annual LCRS Fluid Analysis Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Jim Dowdall, Regional Water Quality Control Board. May 5, 2011. With enclosures.



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- d. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2012 Annual LCRS Fluid Analysis Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Dean Hubbard, Regional Water Quality Control Board. April 8, 2013. With enclosures.
  - e. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2014 Annual LCRS Fluid Analysis Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Daniel Carlson, Regional Water Quality Control Board. April 16, 2015. With enclosures.
  - f. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2015 Annual LCRS Fluid Analysis Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Daniel Carlson, Regional Water Quality Control Board. April 28, 2016. With enclosures.
  - g. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2016 Annual LCRS Fluid Analysis Report.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Daniel Carlson, Regional Water Quality Control Board. April 27, 2017. With enclosures.
  - h. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2017 Annual LCRS Fluid Analysis Report.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Daniel Carlson, Regional Water Quality Control Board. May 1, 2018. With enclosures.
  - i. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2018 Annual LCRS Fluid Analysis Report.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Daniel Carlson, Regional Water Quality Control Board. April 30, 2019. With enclosures.
2. Annual Monitoring Report and LCRS Integrity Report
- a. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2012 Annual Monitoring Summary Report & LCRS Integrity Testing.” Letter, Paul Turek, Chemical Waste Management, Inc. to Regional Water Quality Control Board. February 27, 2012. With enclosure.
  - b. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2014 Annual Monitoring Summary Report & LCRS Integrity Testing.” Letter, Paul Turek, Chemical Waste Management, Inc. to Regional Water Quality Control Board. February 26, 2014. With enclosure.
  - c. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2015 Annual Monitoring Summary Report & LCRS Integrity Testing.” Letter, Paul Turek, Chemical Waste Management, Inc. to Regional Water Quality Control Board. February 27, 2015. With enclosure.
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- d. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2016 Annual Monitoring Summary Report & LCRS Integrity Testing.” Letter, Paul Turek, Chemical Waste Management, Inc. to Regional Water Quality Control Board. February 26, 2016. With enclosure.
  - e. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2017 Annual Monitoring Summary Report & LCRS Integrity Testing.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Regional Water Quality Control Board. February 28, 2017. With enclosure.
  - f. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2018 Annual Monitoring Summary Report & LCRS Integrity Testing.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Regional Water Quality Control Board. February 28, 2018. With enclosure.
  - g. “Chemical Waste Management, Inc. – Kettleman Hills Facility 2019 Annual Monitoring Summary Report & LCRS Integrity Testing.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Regional Water Quality Control Board. February 28, 2019. With enclosure.
3. Monthly Monitoring Reports
- a. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – May 2014.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. June 9, 2014. With enclosures.
  - b. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – June 2014.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. July 11, 2014. With enclosures.
  - c. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – July 2014.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. August 13, 2014. With enclosures.
  - d. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – August 2014.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. September 10, 2014. With enclosures.
  - e. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – September 2014.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. October 24, 2014. With enclosures.
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- f. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – October 2014.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. November 12, 2014. With enclosures.
  - g. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – November 2014.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. December 11, 2014. With enclosures.
  - h. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – December 2014.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. January 14, 2015. With enclosures.
  - i. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – January 2015.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. February 10, 2015. With enclosures.
  - j. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – February 2015.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. March 12, 2015. With enclosures.
  - k. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – March 2015.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. April 14, 2015. With enclosures.
  - l. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – April 2015.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. May 14, 2015. With enclosures.
  - m. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – May 2015.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. June 9, 2015. With enclosures.
  - n. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – June 2015.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. July 14, 2015. With enclosures.



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- o. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – July 2015.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. August 12, 2015. With enclosures.
  - p. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – August 2015.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. September 14, 2015. With enclosures.
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  - v. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – February 2016.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. March 14, 2016. With enclosures.
  - w. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – March 2016.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. April 14, 2016. With enclosures.





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- x. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – April 2016.” Letter, John Prill, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board. May 11, 2016. With enclosures.
  - y. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – May 2016.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. June 10, 2016. With enclosures.
  - z. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – June 2016.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. July 13, 2016. With enclosures.
  - aa. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – July 2016.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. August 11, 2016. With enclosures.
  - bb. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – August 2016.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. September 15, 2016. With enclosures.
  - cc. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – September 2016.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. October 12, 2016. With enclosures.
  - dd. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – October 2016.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. November 11, 2016. With enclosures.
  - ee. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – November 2016.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. December 14, 2016. With enclosures.
  - ff. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – December 2016.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. January 11, 2017. With enclosures.



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- gg. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – January 2017.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. February 14, 2017. With enclosures.
  - hh. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – February 2017.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. March 13, 2017. With enclosures.
  - ii. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – March 2016.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. April 14, 2016. With enclosures.
  - jj. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – April 2017.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. May 15, 2017. With enclosures.
  - kk. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – May 2017.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. June 13, 2017. With enclosures.
  - ll. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – June 2017.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. July 13, 2017. With enclosures.
  - mm. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – July 2017.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. August 14, 2017. With enclosures.
  - nn. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – August 2017.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. September 14, 2017. With enclosures.
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- pp. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – October 2017.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. November 14, 2017. With enclosures.
- qq. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – November 2017.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. December 14, 2017. With enclosures.
- rr. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – December 2017.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. January 11, 2018. With enclosures.
- ss. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – January 2018.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. February 13, 2018. With enclosures.
- tt. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – February 2018.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. March 14, 2018. With enclosures.
- uu. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – March 2018.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. April 13, 2018. With enclosures.
- vv. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – April 2018.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. May 14, 2018. With enclosures.
- ww. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – May 2018.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. June 14, 2018. With enclosures.
- xx. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – June 2018.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. July 11, 2018. With enclosures.



- yy. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – July 2018.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. August 13, 2018. With enclosures.
- zz. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – Correction to July 2018 Report” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. August 22, 2018. With enclosures.
- aaa. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – August 2018.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. September 13, 2018. With enclosures.
- bbb. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – September 2018.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. October 15, 2018. With enclosures.
- ccc. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – October 2018.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. November 9, 2018. With enclosures.
- ddd. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – November 2018.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. December 11, 2018. With enclosures.
- eee. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – December 2018.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. January 10, 2019. With enclosures.
- fff. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – January 2019.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. February 14, 2019. With enclosures.
- ggg. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – February 2019.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. March 14, 2019. With enclosures.



- hhh. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – March 2019.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. April 15, 2019. With enclosures.
- iii. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – April 2019.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. May 14, 2019. With enclosures.
- jjj. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – May 2019.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. June 14, 2019. With enclosures.
- kkk. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – June 2019.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. July 15, 2019. With enclosures.
- lll. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – July 2019.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. August 15, 2019. With enclosures.

#### **D. AIR MONITORING REPORTS**

1. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – Fourth Quarter 2010 Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Wayne Lorentzen, Department of Toxic Substances Control. March 25, 2011. With enclosure: “Quarterly Ambient Air Monitoring Program Data Report January 2011 – March 2011 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. June 2011.
2. “Quarterly Ambient Air Monitoring Program Data Report January 2011 – March 2011 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. June 2011.
3. “Quarterly Ambient Air Monitoring Program Data Report April 2011 – June 2011 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. September 2011.
4. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – Third Quarter 2011 Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Wayne Lorentzen, Department of Toxic Substances Control. December 23, 2011. With enclosure: “Quarterly Ambient Air Monitoring Program Data



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- Report July 2011 -September 2011 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. December 2011.
5. “Quarterly Ambient Air Monitoring Program Data Report September 2011 – December 2011 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. March 2012.
  6. “Quarterly Ambient Air Monitoring Program Data Report January 2012 – March 2012 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. June 2012.
  7. “Quarterly Ambient Air Monitoring Program Data Report April 2012 – June 2012 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. August 2012.
  8. “Quarterly Ambient Air Monitoring Program Data Report July 2012 -September 2012 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. November 2012.
  9. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – Forth Quarter 2012 Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Wayne Lorentzen, Department of Toxic Substances Control. March 5, 2013. With enclosure: “Quarterly Ambient Air Monitoring Program Data Report October 2012 – December 2012 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. March 2013.
  10. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – First Quarter 2013 Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Wayne Lorentzen, Department of Toxic Substances Control. June 5, 2013. With enclosure: “Quarterly Ambient Air Monitoring Program Data Report January 2013 – March 2013 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. May 2013.
  11. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – Second Quarter 2013 Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Wayne Lorentzen, Department of Toxic Substances Control. August 30, 2013. With enclosure: “Quarterly Ambient Air Monitoring Program Data Report April 2013 -June 2013 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. August 2013.
  12. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – Third Quarter 2013 Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Wayne Lorentzen, Department of Toxic Substances Control. December 4, 2013. With enclosure: “Quarterly Ambient Air Monitoring Program Data Report July 2013 -September 2013 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. December 2013.
  13. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – Fourth Quarter 2013 Report.” Letter, Paul Turek, Chemical Waste
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- Management, Inc. to Wayne Lorentzen, Department of Toxic Substances Control. March 4, 2014. With enclosure: “Quarterly Ambient Air Monitoring Program Data Report October 2013 – December 2013 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. February 2014.
14. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – First Quarter 2014 Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Wayne Lorentzen, Department of Toxic Substances Control. June 9, 2014. With enclosure: “Quarterly Ambient Air Monitoring Program Data Report January 2014 -March 2014 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. May 2014.
  15. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – Second Quarter 2014 Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Muzhda Ferouz, Department of Toxic Substances Control. September 4, 2014. With enclosure: “Quarterly Ambient Air Monitoring Program Data Report April 2014 – June 2014 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. August 2014.
  16. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – Third Quarter 2014 Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Muzhda Ferouz, Department of Toxic Substances Control. December 5, 2014. With enclosure: “Quarterly Ambient Air Monitoring Program Data Report July 2014 – September 2014 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. December 2014.
  17. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – Fourth Quarter 2014 Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Muzhda Ferouz, Department of Toxic Substances Control. March 4, 2014. With enclosure: “Ambient Air Monitoring Program Quarterly Report October 2014 – December 2015 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. February 2015.
  18. “Ambient Air Monitoring Program Quarterly Report January 2015 – March 2015 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. June 2015.
  19. “Ambient Air Monitoring Program Quarterly Report April 2015 -June 2015 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. September 2015.
  20. “Ambient Air Monitoring Program Quarterly Report July 2015 – September 2015 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. December 2015.
  21. “Ambient Air Monitoring Program Quarterly Report October 2015 – December 2015 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. March 2016.



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22. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – First Quarter 2016 Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Muzhda Ferouz, Department of Toxic Substances Control. June 23, 2016. With enclosure: “Ambient Air Monitoring Program Quarterly Report January 2016 – March 2016 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. June 2016.
  23. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – Second Quarter 2016 Report.” Letter, Paul Turek, Chemical Waste Management, Inc. to Muzhda Ferouz, Department of Toxic Substances Control. September 22, 2016. With enclosure: “Ambient Air Monitoring Program Quarterly Report April 2016 – June 2016 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. September 2016.
  24. “Ambient Air Monitoring Program Quarterly Report July 2016 – September 2016 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. December 2016.
  25. “Ambient Air Monitoring Program Quarterly Report October 2016 – December 2016 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. March 2017.
  26. “Ambient Air Monitoring Program Quarterly Report January 2017 – March 2017 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. June 2017.
  27. “Ambient Air Monitoring Program Quarterly Report April 2017 – June 2017 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. September 2017.
  28. “Ambient Air Monitoring Program Quarterly Report July 2017 – September 2017 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. December 2017.
  29. “Ambient Air Monitoring Program Quarterly Report October 2017 – December 2017 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. March 2018.
  30. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – First Quarter 2018 Report.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. June 27, 2018. With enclosure: “Ambient Air Monitoring Program Quarterly Report January 2018 – March 2018 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. June 2018.
  31. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – Second Quarter 2018 Report.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. September 24, 2018. With enclosure: “Ambient Air Monitoring Program Quarterly Report April





- 2018 – June 2018 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. September 2018.
32. “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: Response to DTSC Review of Ambient Air Monitoring Program Quarterly Report, January 2018-March 2018.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. November 2, 2018.
33. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – Third Quarter 2018 Report.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. December 21, 2018. With enclosure: “Ambient Air Monitoring Program Quarterly Report July 2018 – September 2018 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. December 2018.
34. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – Fourth Quarter 2018 Report.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Camille Rogado, Department of Toxic Substances Control. March 27, 2019. With enclosure: “Ambient Air Monitoring Program Quarterly Report October 2018 – December 2018 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. March 2019.
35. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – First Quarter 2019 Report.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Camille Rogado, Department of Toxic Substances Control. June 27, 2019. With enclosure: “Ambient Air Monitoring Program Quarterly Report January 2019 – March 2019 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. June 2019.

## **E. MONTHLY AND ANNUAL PCB REPORTS**

### **1. Monthly PCB Reports**

- a. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – January 2008.” Letter, Paul Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. February 13, 2008.
- b. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – February 2008.” Letter, Paul Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. March 12, 2008.
- c. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – March 2008.” Letter, Paul Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. April 10, 2008.
- d. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – April 2009.” Letter, Paul Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. May 15, 2008.



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- e. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – May 2008.” Letter, Paul Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. June 13, 2008.
  - f. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – June 2006.” Letter, Paul Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. July 15, 2008.
  - g. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – July 2008.” Letter, Paul Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. August 14, 2008.
  - h. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – August 2008.” Letter, Paul Turek, Chemical Waste Management, Inc. to Max Weintraub, U.S. EPA Region 9. September 15, 2008.
  - i. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – September 2008.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. October 14, 2008.
  - j. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – October 2008.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. November 12, 2008.
  - k. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – November 2008.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. December 11, 2008.
  - l. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – December 2008.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. January 12, 2009.
  - m. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – January 2009.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. February 12, 2009.
  - n. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – February 2009.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. March 14, 2009.
  - o. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – March 2009.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. April 14, 2009.
  - p. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – April 2009.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. May 15, 2009.



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- q. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – May 2009.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. June 11, 2009.
  - r. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – June 2009.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. July 14, 2009.
  - s. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – July 2009.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. August 12, 2009.
  - t. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – August 2009.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. September 11, 2009.
  - u. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – September 2009.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. October 13, 2009.
  - v. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – October 2009.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. November 13, 2009.
  - w. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – November 2009.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. December 15, 2009.
  - x. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – December 2009.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. January 11, 2010.
  - y. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – January 2010.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. February 15, 2010.
  - z. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – February 2010.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. March 10, 2010.
  - aa. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – March 2010.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. April 12, 2010.
  - bb. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – April 2010.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. May 12, 2010.



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- cc. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – May 2010.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. June 10, 2010.
  - dd. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – June 2010.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. July 15, 2010.
  - ee. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – July 2010.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. August 10, 2010.
  - ff. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – August 2010.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. September 7, 2010.
  - gg. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – September 2010.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. October 6, 2010.
  - hh. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – October 2010.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. November 8, 2010.
  - ii. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – November 2010.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. December 7, 2010.
  - jj. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – December 2010.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. January 11, 2011.
  - kk. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – January 2011.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. February 9, 2011.
  - ll. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – February 2011.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. March 8, 2011.
  - mm. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – March 2011.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. April 21, 2011.
  - nn. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – April 2011.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. May 5, 2011.



- oo. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – May 2011.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. June 8, 2011.
- pp. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – June 2011.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. July 12, 2011.
- qq. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – July 2011.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. August 4, 2011.
- rr. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – August 2011.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. September 12, 2011.
- ss. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – September 2011.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. October 13, 2011.
- tt. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – October 2011.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. November 10, 2011.
- uu. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – November 2011.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. December 20, 2011.
- vv. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – December 2011.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. January 23, 2012.
- ww. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – January 2012.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. February 16, 2012.
- xx. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – February 2012.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. March 15, 2012.
- yy. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – March 2012.” Letter, John Prill, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. April 26, 2012.
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- ttt. “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – December 2013.” Letter, John Prill, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. January 21, 2014.
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## 2. Annual PCB Reports

- a. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2005 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. June 21, 2006. With enclosure: “2005 PCB Annual Report.” Chemical Waste Management, Inc.
- b. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2006 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. June 26, 2007. With enclosure: “2006 PCB Annual Report.” Chemical Waste Management, Inc.
- c. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2007 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. August 4, 2008. With enclosure: “2007 PCB Annual Report.” Chemical Waste Management, Inc.



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- d. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2008 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 15, 2009. With enclosure: “2008 PCB Annual Report.” Chemical Waste Management, Inc.
  - e. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2009 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 8, 2010. With enclosure: “2009 PCB Annual Report.” Chemical Waste Management, Inc.
  - f. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2010 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 13, 2011. With enclosure: “2010 PCB Annual Report.” Chemical Waste Management, Inc.
  - g. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2011 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 6, 2012. With enclosure: “2011 PCB Annual Report.” Chemical Waste Management, Inc.
  - h. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2012 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 8, 2013. With enclosure: “2012 PCB Annual Report.” Chemical Waste Management, Inc.
  - i. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2013 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 9, 2014. With enclosure: “2013 PCB Annual Report.” Chemical Waste Management, Inc.
  - j. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2014 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 8, 2015. With enclosure: “2014 PCB Annual Report.” Chemical Waste Management, Inc.
  - k. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2015 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 20, 2016. With enclosure: “2015 PCB Annual Report.” Chemical Waste Management, Inc.



- l. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2016 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 5, 2017. With enclosure: “2016 PCB Annual Report.” Chemical Waste Management, Inc.
- m. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2017 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 9, 2018. With enclosure: “2017 PCB Annual Report.” Chemical Waste Management, Inc.
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## **IX. ENVIRONMENTAL AND PUBLIC HEALTH STUDIES**

### **A. 2010 DIOXIN-LIKE PCB CONGENERS STUDY**

1. “Risk Analysis.” Letter, Paula Bisson, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. September 8, 2006.
2. “Pilot Survey of Levels of Polychlorinated Dibenzo-p-dioxins, Polychlorinated Dibenzofurans, Polychlorinated Biphenyls, and Mercury in Rural Soils of the United States.” Report EPA/600/R-05048F. U.S. EPA. April 2007.
3. “Update on Chemical Waste Management, – Kettleman Hills Facility PCB Permit Project.” Email, Kevin Wong, U.S. EPA Region 9, to Maricela Mares-Alatorre, et al. November 2, 2008. [REDACTED for posting on regulations.gov]
4. “Request for Additional Sampling of Air, Soil, and Biota/Vegetation and Analysis for PCB Congeners.” Letter, Cheryl Nelson, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. December 2, 2008.
5. “Draft Dioxin-Like Polychlorinated Biphenyl (PCB) Congeners Study Workplan.” Wenck Associates, Inc. January 2009.
6. “EPA Region IX Comments on CWM’s Draft Dioxin-like Polychlorinated Biphenyl (PCB) Congener Study Workplan.” Email, Kevin Wong, U.S. EPA Region 9, to Paul Turek Chemical Waste Management, Inc. February 12, 2009. With attachment: “Draft Dioxin-Like Polychlorinated Biphenyl (PCB) Congeners Study Workplan Technical Review.” Memorandum, Kevin Wong, U.S. EPA Region 9, to Chemical Waste Management – Kettleman Hills Hazardous Waste Landfill Facility Technical Support Team, U.S. EPA Region 9. February 2009.
7. “Chemical Waste Management, Inc. Kettleman Hills Facility, Draft Dioxin-Like PCB Congeners Study Workplan, Revision 1.” Letter, Paul Turek, Chemical Waste



- Management, Inc., to Cheryl Nelson, U.S. EPA Region 9. March 3, 2009. With Enclosure: “Draft Dioxin-Like Polychlorinated Biphenyl (PCB) Congeners Study Workplan Technical Review.” Memorandum, Kevin Wong, U.S. EPA Region 9, to Chemical Waste Management – Kettleman Hills Hazardous Waste Landfill Facility Technical Support Team, U.S. EPA Region 9. No date. With Chemical Waste Management, Inc.’s incorporated responses to U.S. EPA’s comments. And:
- a. “Draft Dioxin-Like Polychlorinated Biphenyl (PCB) Congeners Study Workplan (Revision 1).” Wenck Associates, Inc. January 2009 (Rev. March 2009).
8. “EPA Review Comments – CWM-KHF Revised PCB Congener Workplan.” Email, Kevin Wong, U.S. EPA Region 9, to Paul Turek Chemical Waste Management, Inc. March 12, 2009. With attachment: “Technical Review: “Draft Dioxin-Like Polychlorinated Biphenyl (PCB) Congeners Study Work Plan, Revision 1, Revised March 2009 – Chemical Waste Management.” Memorandum, Kevin Wong, U.S. EPA Region 9, to Chemical Waste Management – Kettleman Hills Hazardous Waste Landfill Facility Technical Support Team, U.S. EPA Region 9. March 2009.
  9. “Chemical Waste Management, Inc. Kettleman Hills Facility, Draft Dioxin-Like PCB Congeners Study Workplan, Revision 2.” Letter, Paul Turek, Chemical Waste Management, Inc., to Cheryl Nelson, U.S. EPA Region 9. March 20, 2009. With Enclosure: “Chemical Waste Management’s Responses to EPA’s Memorandum: Technical Review: “Draft Dioxin-Like Polychlorinated Biphenyl (PCB) Congeners Study Work Plan, Revision 1, Revised March 2009 – Chemical Waste Management.” Chemical Waste Management, Inc. March 2009. (Responses incorporated into U.S. EPA’s memorandum).
  10. “Analytical Results – Soil Samples March-April 2009.” TestAmerica. May 19, 2009.
  11. “Analytical Results – Air Samples March 2009.” TestAmerica. May 19, 2009.
  12. “Analytical Results – Vegetation Samples March-April 2009 (Set 1).” TestAmerica. May 19, 2009.
  13. “Analytical Results – Vegetation Samples March-April 2009 (Set 2).” TestAmerica. May 19, 2009.
  14. “Final Analytical Report – Kettleman Hills Waste Management Facility.” U.S. EPA Region 3 Environmental Science Center. May 21, 2009.
  15. “Analytical Results – Air Samples January 2009.” TestAmerica. May 28, 2009.
  16. “Analytical Results – Air Samples February 2009.” TestAmerica. May 28, 2009.
  17. “Analytical Results – Air Samples April 2009.” TestAmerica. June 8, 2009.
  18. “Analytical Results – Air Samples May 2009.” TestAmerica. June 23, 2009.
  19. “Analytical Results – Air Samples June 2009.” TestAmerica. July 31, 2009.
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21. “Analytical Results – Air Samples August 2009 and Fresno.” TestAmerica. September 30, 2009.
22. “Analytical Results – Vegetation Samples August 2009.” TestAmerica. September 30, 2009.
23. “Analytical Results – Air Samples September 2009.” TestAmerica. November 11, 2009.
24. “Review of Ecological Components of Section 5.0 Risk Assessment submitted by Chemical Waste Management on October 27, 2009 – Toxic Substances Control Act (“TSCA”) B-18 Application Kettleman Hills Facility.” Letter, Cheryl Nelson, U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. November 25, 2009. With enclosure: “U.S. EPA Review of Ecological Components of Section 5.0, Risk Assessment Submitted by Chemical Waste Management on October 27, 2009 – Toxic Substances Control Act (“TSCA”) B-18 Application Kettleman Hills Facility (“KHF”).” November 23, 2009.
25. “Analytical Results – Air Samples October 2009.” TestAmerica. November 27, 2009.
26. “Split Sampling Field Report – Chemical Waste Management, Inc. Kettleman Hills, California.” U.S. EPA Region 9. November 30, 2009.
27. “Informe de Campo Sobre Muestras Separadas, – Chemical Waste Management, Inc. Kettleman Hills, California.” U.S. EPA Region 9. November 30, 2009.
28. “Kettleman Hills PCB Risk Assessment Comments .” Email, John Beach, U.S. EPA Region 9, to Bill Brown, Wenck Associates, Inc. December 8, 2009.
29. “KHF PCB Risk Assessment Comments .” Emails, John Beach, U.S. EPA Region 9, to/from Steve Dillard, AECOM. December 11-14, 2009.
30. “KHF PCB Risk Assessment Comments – % lipid.” Emails, John Beach, U.S. EPA Region 9, to/from Steve Dillard, AECOM. December 14, 2009.
31. “PCB Congener Study Preliminary Results Discussion, December 16, 2009.” Agenda and attendance sheets. U.S. EPA Region 9. December 16, 2009. [REDACTED for posting on regulations.gov]
32. “PCB Congener Study Preliminary Results Discussion, December 16, 2009.” Agenda and handouts. U.S. EPA Region 9. December 16, 2009.
33. “Analytical Results – Air Samples November 2009.” TestAmerica. December 30, 2009.
34. “Air Dispersion Model (December 16, 2009 Action Item).” Email, Edwin Poalinelli, U.S. EPA Region 9, to/from Bill Brown, Wenck Associates, Inc. December 18, 2009 – January 6, 2010.
35. “FW: Response to Comments and Updated ERA.” Email, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. January 19, 2010. With attachments: 1) “Response to Comments, USEPA Review of Ecological Components of Section 5.0, Risk Assessment, Comment Letter Dated November 25, 2009.” Wenck





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  - b. “Chemical Waste Management, Inc. – Kettleman Hills Facility, Responses to Comments, USEPA Review of ecological components (Section 5.1, 5.2., and 5.4) of the revised risk assessment submitted by Chemical Waste Management on January 19, 2010 – Toxic Substance Control Act (“TSCA”) B-18 Application Kettleman Hills Facility. Comment Memorandum dated February 5, 2010.” Wenck Associates, March 12, 2010.
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66. “WM KHF HHRA Response to Comments.” Emails, Edwin Poalinelli, U.S. EPA Region 9, to/from Bill Brown, Wenck Associates, Inc. April 7-8, 2010.
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  71. “EPA Comments on the Draft Congener Study Report.” Email, Edwin Poalinelli, U.S. EPA Region 9, to Bob Henry, Chemical Waste Management, Inc. August 19, 2010. With attachment:
    - a. “U.S. EPA Review of the Draft Congener Study Report Submitted by Chemical Waste Management on April 7, 2010 – Toxic Substances Control Act (“TSCA”) B-18 Application Kettleman Hills Facility (CAT 000646117).” Letter, Cheryl Nelson, U.S. EPA Region 9, to Bob Henry, Chemical Waste Management, Inc. August 19, 2010. With enclosure: “Environmental Protection (“EPA”) Review of the Draft Congener Study Report Submitted by Chemical Waste Management on April 7, 2010 – Toxic Substances Control Act (“TSCA”) B-18 Application Kettleman Hills Facility (“KHF”)” August 19, 2010.
  72. “EPA Comments on Draft Congener Study Report.” Emails, Edwin Poalinelli. U.S. EPA Region 9, to/from Paul Turek, Chemical Waste Management, Inc. August 24, 2010.
  73. “EPA Comments on the Draft Congener Study Report.” Emails, Paul Turek, Chemical Waste Management, Inc. to/from Chip Poalinelli, U.S. EPA Region 9. August 30, 2010.
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  75. “Follow-up to the 9-14-10 CWM/EPA Draft Congener Study Conference Call (Discussion on Comment #17[b])” Email, Edwin Poalinelli. U.S. EPA Region 9, to Bob Henry, Chemical Waste Management, Inc. September 16, 2010.
  76. “Follow-up to the 9-14-10 CWM/EPA Draft Congener Study Conference Call (Discussion on Comment #17[b])” Email, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli. U.S. EPA Region 9. September 20, 2010.
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79. “Chemical Waste Management, Inc. – Kettleman Hills Facility, Draft Congeners Study Report – Response to Comments.” Letter, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. October 22, 2010. With Enclosure: Chemical Waste Management, Inc. – Kettleman Hills Facility Response to Comments, Environmental Protection Agency (“EPA”) Review of the Draft Congeners Study Report Submitted by Chemical Waste Management on April 7, 2010 – Toxic Substance Control Act (“TSCA”) B-18 Application Kettleman Hills Facility (“KH”) August 19, 2010.” October 22, 2010.
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81. “Minor Comments on the Draft Final Congener Report.” Email, Edwin Poalinelli. U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. November 1, 2010.
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83. “Two Additional Comments Regarding the ERA Sections.” Emails, Edwin Poalinelli. U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. November 2, 2010.
84. “Minor Comments on the Draft Final Congener Report.” Emails, Paul Turek, Chemical Waste Management, Inc. to/from Edwin Poalinelli. U.S. EPA Region 9. November 3, 2010 (1:38 pm).
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86. “Minor Comments on the Draft Final Congener Report.” Emails, Edwin Poalinelli. U.S. EPA Region 9, to/from Paul Turek, Chemical Waste Management, Inc. November 3, 2010 (4:13 pm).
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88. “[DRAFT] Executive Summary -Final Dioxin-Like Polychlorinated Biphenyl (PCB) Congeners Study Report.” Wenck Associates, Inc. November 2010.



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89. “Congener Study Report Executive Summary.” Email, Edwin Poalinelli. U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. November 4, 2010. (8:17 am)
  90. “Congener Study Report Comments and Proposed Schedule.” Email, Edwin Poalinelli. U.S. EPA Region 9, to Paul Turek, Chemical Waste Management, Inc. November 4, 2010 (8:24 am).
  91. “Congener Study Report Comments and Proposed Schedule.” Email, Edwin Poalinelli. U.S. EPA Region 9, to/from Paul Turek, Chemical Waste Management, Inc. November 4, 2010 (9:05 am).
  92. “Minor Comments on the Draft Final Congener Report.” Emails, Edwin Poalinelli. U.S. EPA Region 9, to/from Paul Turek, Chemical Waste Management, Inc. November 4, 2010 (10:47 am).
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  94. “Congener Study Report Comments and Proposed Schedule.” Emails, Edwin Poalinelli. U.S. EPA Region 9, to/from Paul Turek, Chemical Waste Management, Inc. November 8, 2010.
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    - a. Appendices A – O (except for Appendices D and G) -- “Dispersion Modeling Report Associated with the PCB Congener Study.” Wenck Associates, Inc. October 2009.
    - b. Appendix D – Field Notes/Data Sheets/Photo Log for Soil and Vegetation Sampling (No date).
    - c. Appendix G – Laboratory Analytical Data.
  96. “Resumen Ejecutivo, Informe Final: Estudio de Congéneres de Bifenilos Policlorados (PCB) de Tipo Dioxina.” Wenck Associations, Inc. November 2010.
  97. “Questions and EPA Responses Received from Greenaction/Center on Race, Poverty, and the Environment Regarding CWM PCB Congener Study Report.” U.S. EPA Region 9. December 2010.
  98. “EPA Information Sheet – Results of the Polychlorinated Biphenyls (PCB) Congener Study Chemical Waste Management Kettleman Hills Facility.” U.S. EPA Region 9. January 2011. (English and Spanish)
  99. “CWM Kettleman Hills Polychlorinated Biphenyls (PCB) Congener Study, EPA’s Quality Assurance/Oversight Efforts.” Memorandum, EPA’s Kettleman PCB Congener Study Team to Cheryl Nelson, U.S. EPA Region 9. January 3, 2011.



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**B. 2010 ENVIRONMENTAL ASSESSMENT**

1. “Comments on draft Kettleman Sampling and Analysis Plan.” Email, Katherine Baylor, U.S. EPA Region 9, to Katherine Baylor, U.S. EPA Region 9. March 29, 2010.
2. “Benzene in Water Supply Wells, Kettleman City, Kings County.” Memorandum, Greg Issinghoff, California Regional Water Quality Control Board, Central Valley Region to Russell W. Walls and others, California Regional Water Quality Control Board, Central Valley Region. October 13, 2010.
3. “Appendix DTSC Report – Kettleman City Site Investigation Report Sampling Results Addendum.” ACS Associates. October 25, 2010.
4. “Investigation of Birth Defects and Community Exposures in Kettleman City, CA. Public Review Draft” California Environmental Protection Agency and California Department of Public Health. November 2010.
5. “Investigation of Birth Defects and Community Exposures in Kettleman City, CA.” California Environmental Protection Agency and California Department of Public Health. December 2010 (revised February 24, 2011).
6. “Investigación de defectos de nacimiento y exposiciones ambientales en la comunidad de Kettleman City, CA.” California Environmental Protection Agency and California Department of Public Health. diciembre del 2010 (24 de Febrero de 2011).
7. “Report to the Office of Environmental Health Hazard Assessment, Kettleman City Air Quality Assessment.” California Air Resources Board, December 2010.
8. “Kettleman City Community Exposure Assessment, Evaluation of Pesticides in Air.” Department of Pesticide Regulation. December 2010.
9. “Response to Public Comments on the Investigation of Birth Defects and Community Exposures in Kettleman City, CA.” California Environmental Protection Agency and California Department of Public Health. February 1, 2011.
10. “Respuesta a comentarios publicos sobre la Investigación de defectos de nacimiento y exposiciones ambientales en la comunidad de Kettleman City, CA.” California Environmental Protection Agency and California Department of Public Health. February 2, 2011.
11. “Question about asthma data in Kettleman City Report.” Email, Meredith Milet, California Department of Public Health, to Debbie Lowe, U.S. EPA Region 9. February 17, 2011.
12. “Errata to Investigation of Birth Defects and Community Exposures in Kettleman City, CA.” California Environmental Protection Agency and California Department of Public Health. February 24, 2011.
13. “Erratum to Investigation of Birth Defects and Community Exposures in Kettleman City, CA.” California Environmental Protection Agency and California Department of Public Health. February 24, 2011.



14. “California Department of Public Health and California Environmental Protection Agency Follow-Up to Kettleman City Investigation: An Update.” California Department of Public Health and California Environmental Protection Agency. October 2011.
15. “Departamento de Salud Publica de California Agencia de Proteccion Ambiental de California Seguimiento a la Investigación en Kettleman City: Actualización.” California Department of Public Health and California Environmental Protection Agency. October 2011.
16. “Birth Defects in Kettleman City and Surrounding Areas 2009-2011 Update.” California Department of Public Health, California Birth Defect Monitoring Program. June 2012.

**C. HEALTH RISK ASSESSMENTS (Department of Toxic Substances Control Requirement)**

1. “Comments on the Draft 2011 Health Risk Assessment, Chemical Waste Management, Inc. Kettleman Hills Facility, 35251 Old Skyline Road, Kettleman City, Kings County, California 93239, Environmental Protection Agency Identification Number CAT 000646117.” Letter, Wayne Lorentzen, Department of Toxic Substances Control to Paul Turek, Chemical Waste Management, Inc. August 4, 2011. With Enclosure: “Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County, California CAT 000646117 Draft 2011 Health Risk Assessment.” Memorandum, Brian Endlich, Department of Toxic Substances Control to Wayne Lorentzen, Department of Toxic Substances Control. July 27, 2011.
2. “Final 2011 Health Risk Assessment.” Wenck Associates, Inc. September 2011.
3. “Final 2011 Health Risk Assessment.” Wenck Associates, Inc. November 2011.
4. “Final Annual Screening Level Health Risk Assessment October 2010 – September 2011, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF)” Wenck Associates, Inc. July 2012.
5. “Annual Screening Level Health Risk Assessment October 2011 – September 2012, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF)” Wenck Associates, Inc. March 2013.
6. “Annual Screening Level Health Risk Assessment October 2012 – September 2014, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF)” Wenck Associates, Inc. March 2014.
7. “Annual Screening Level Health Risk Assessment October 2013 – September 2014, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF)” Wenck Associates, Inc. March 2015.
8. “Annual Screening Level Health Risk Assessment October 2014 – September 2015, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF)” Wenck Associates, Inc. March 2016.





9. “Annual Screening Level Health Risk Assessment October 2015 – September 2016, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF)” Wenck Associates, Inc. March 2017.
10. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – Annual Screening Level, Health Risk Assessment.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. March 27, 2018. With enclosure “Annual Screening Level Health Risk Assessment October 2016 – September 2017, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF)” Wenck Associates, Inc. March 2018.
11. “Chemical Waste Management, Inc. – Kettleman Hills Facility Ambient Air Monitoring Program – Annual Screening Level, Health Risk Assessment.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Ryan Batty, Department of Toxic Substances Control. March 27, 2019. With enclosure “Annual Screening Level Health Risk Assessment October 2017 – September 2018, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF)” Wenck Associates, Inc. March 2019.

#### **D. CALIFORNIA ENVIRONMENTAL QUALITY ACT DOCUMENTS**

1. “Traffic Impact Study, Chemical Waste Management, Inc. Kettleman Hills Facility.” TPG Consulting. February 2009.
2. “Kettleman Hills Facility B-18/B-20 Landfill (Chemical Waste Management, Inc.); Revised Analysis: Hazardous Waste Truck Trips as Percentage of Total Truck Trips on I-5 at State Route 41 and on State Route 41 from Quail Avenue to I-5.” Revised Memorandum, Robert Mason, Ch2M HILL to Bob Henry, Chemical Waste Management, Inc. March 1, 2012.
3. “Environmental Document Analysis – Hazardous Waste Facility Permit Renewal, Chemical Waste Management, Inc. Kettleman Hills Facility.” Department of Toxic Substances Control. May 2019.

#### **E. BIOLOGICAL ASSESSMENT**

1. “Mitigation and Monitoring Plan for the Chemical Waste Management, Inc. Kettleman Hills Facility in King County, California, Revision 6.” Chemical Waste Management, April 1, 2008.
2. “Biological Assessment.” Email, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. January 19, 2010. With attachment: “Map Perimeter Fence Relocation, Kettleman Hills, California.”
3. “Chemical Waste Management, Inc. – Kettleman Hills Facility Section 7 Biological Assessment – March 2010 Revision.” Email, Paul Turek, Chemical Waste Management, Inc. to Cheryl Nelson, U.S. EPA Region 9. March 12, 2010. With enclosure:
  - a. “Section 7 Draft Biological Assessment B-18/B-20 Hazardous Waste Disposal Project, CWM Kettleman Hills Facility.” Berryman Ecological. March 2010.



4. “Kettleman Hills Facility B-18/B-20 Expansion Project.” Letter, Robert Uram, Sheppard, Mullin, Richter & Hampton, LLP. to Jeff Scott, U.S. EPA Region 9. May 6, 2010.
5. “Chemical Waste Management, Inc. Kettleman Hills Facility B-18 Landfill Expansion Project PCB Permit Application Renewal and Expansion Kettleman City, CA.” Letter, Jeff Scott, U.S. EPA Region 9, to Robert Uram, Sheppard Mullin Richter & Hampton, LLP. June 21, 2010.
6. “Other Species.” Email, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. November 10, 2010.
7. “Other Species.” Email, Edwin Poalinelli, U.S. EPA Region 9, to Paul Turek and Bob Henry, Chemical Waste Management, Inc. November 19, 2010.
8. “Memo to File – Biological Assessment CWM Briefing.” Email, Edwin Poalinelli, U.S. EPA Region 9, to Edwin Poalinelli, U.S. EPA Region 9. January 26, 2011.
9. “Section 7 Draft Biological Assessment B-18/B-20 Hazardous Waste Disposal Project, CWM Kettleman Hills Facility, Berryman Ecological. April 7, 2011.
10. “Section 7 Draft Biological Assessment B-18/B-20 Hazardous Waste Disposal Project, CWM Kettleman Hills Facility, Berryman Ecological. May 2011.
11. “Chemical Waste Management, Inc. – Kettleman Hills Facility Section 7 Biological Assessment – July 2011 Revision.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. July 12, 2011. With enclosure:
  - a. “Section 7 Draft Biological Assessment B-18/B-20 Hazardous Waste Disposal Project, CWM Kettleman Hills Facility, Berryman Ecological. July 2011.
12. “Chemical Waste Management, Inc. – Kettleman Hills Facility Section 7 Biological Assessment – February 2012 Revision.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. February 21, 2012. With enclosure: “Section 7 Draft Biological Assessment B-18/B-20 Hazardous Waste Disposal Project, CWM Kettleman Hills Facility, Berryman Ecological. February 2012.
13. “Chemical Waste Management, Inc. – Kettleman Hills Facility Section 7 Biological Assessment – March 2012 Revision.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. March 6, 2012. With enclosure: “CWM Kettleman Hills Facility, B-18 Landfill Expansion Project, Section 7 Biological Assessment.” Berryman Ecological. July 2009. Rev: March 2012
14. “Chemical Waste Management, Inc. – Kettleman Hills Facility Section 7 Biological Assessment – March 2012 Revision 2.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. March 13, 2012. With enclosure: “CWM Kettleman Hills Facility, B-18 Landfill Expansion Project, Section 7 Biological Assessment.” Berryman Ecological. July 2011. Rev: March 2012 (Rev 2).



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**F. PESTICIDE-RELATED STUDIES**

1. “Preventing Pesticide Exposure in Kettleman City, California – An EPA Region 9 Pesticide Program Outreach Initiative.” Pam Cooper and Fabiola Estrada, U.S. EPA Region 9. February 1, 2010.
2. “Muestro Residencial en Kettleman City.” Pesticides Factsheet Spanish, Agencia de Proteccion Ambiental de los Estados Unidos. Julio 2011.
3. “Kettleman City Residential Sampling, Kettleman City Indoor Pesticide Sampling.” U.S. EPA Region 9. July 2011.
4. “Kettleman City Residential Sampling, Kettleman City Indoor Pesticide Sampling: Status Update.” Factsheet, U.S. EPA Region 9. November 2011.
5. “Mujer Saludable es Familia Saludable (A Healthy Woman is a Healthy Family) Prevention of Pesticide Exposure Project.” Final Report. Vision y Compromiso. December 8, 2011.

**X. OTHER DOCUMENTS****A. PREVIOUS APPROVALS**

1. Letter, Sheila M. Prendiville, U.S. EPA Region IX to Don McCombs, Waste Management, Inc. June 29, 1981 with Attachment: “Approval to Operate a Chemical Waste Landfill for PCB Disposal.” U.S. EPA, Region IX. June 29, 1981.
2. Letter, Sonia F. Crow, U.S. EPA Region IX to Craig McKenzie, Chemical Waste Management, Inc. February 16, 1993 with Attachment: “Approval to Operate a Chemical Waste Landfill for PCB Disposal.” U.S. EPA, Region IX. February 16, 1983.
3. “Approval to Operate a Chemical Waste Landfill for PCB Disposal.” U.S. EPA, Region IX. February 22, 1988.
4. “Amendment of Approval to Operate a Chemical Waste Landfill for PCB Disposal.” U.S. EPA, Region IX. November 30, 1990.
5. Letter, John Wise, U.S. EPA Region IX to Mark Langowski, Chemical Waste Management, Inc. December 3, 1990.
6. “Approval of B-18 Phase I As-Built Drawings and Certification Report, and Approval of B-18 Acceptance of Waste, EPA I.D. CAT 000646 117.” Letter, Jeffry Zelikson, U.S. EPA Region 9, to Mark Langowski, Chemical Waste Management, Inc. March 12, 1992.
7. “Chemical Waste Management, Inc., Kettleman Hills Facility TSCA Approval to Operate Landfill Unit B-18.” Letter, David P. Howekamp, U.S. EPA Region IX to Leo Stahlecker, Chemical Waste Management, Inc. May 19, 1992 with Attachment: “Approval to Operate a Chemical Waste Landfill for PCB Disposal.” U.S. EPA, Region IX. May 19, 1992.



8. “TSCA Approval Request for Landfill B-18 Phase II, Chemical Waste Management, Inc.’ Kettleman Hills Facility.” Letter, Catherine R. Pool, Chemical Waste Management, Inc. to Vince Mancus, U.S. EPA Region 9. December 27, 1993.
9. “Chemical Waste Management, Inc., Kettleman Hills Facility TSCA Approval to Operate Landfill Unit B-18 Phase II.” Letter, David P. Howekamp, U.S. EPA to Leo Stahlecker, Chemical Waste Management, Inc. December 30, 1993.
10. Letter, Edward Csira, Chemical Waste Management, Inc. to David P. Howekamp, U.S. EPA Region 9. November 14, 1995.
11. “Modification of PCB Landfill Operation Plan.” Letter, David P. Howekamp, U.S.EPA Region 9 to Robert Henry, Chemical Waste Management, Inc. February 12, 1996.
12. “Extension of Commercial Storage Approval: EPA ID CAT 000 646 117.” Letter, Paula Bisson, U.S. EPA Region IX to Paul E. Turek, Chemical Waste Management, Inc. May 28, 1997.
13. “Extension of Commercial Storage Approval: EPA ID CAT 000 646 117.” Letter, Paula Bisson, U.S. EPA Region IX to Paul E. Turek, Chemical Waste Management, Inc. July 30, 1997.
14. “TSCA PCB Permits, Chemical Waste Management Kettleman Hills Facility.” Letter, Luke Cole, Center on Race, Poverty & the Environment to Felicia Marcus, U.S. EPA Region 9. January 14, 1998.
15. “Chemical Waste Management PCB Landfills, Kettleman City, California.” Letter, Felicia Marcus, U.S. EPA Region 9, to Luke Cole, Center on Race, Poverty & the Environment. April 8, 1998.

## **B. FINANCIAL ASSURANCE AND LIABILITY INSURANCE**

1. “Chemical Waste Management, Inc. – Kettleman Hills Facility 22 CCR Financial Assurance for Closure and Post-Closure Costs.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Julie Mullins, Department of Toxic Substances Control. December 31, 2018. With enclosures: “Performance Bond SUR0047833” Argonaut Insurance Company. Effective January 1, 2019. And “Closure/Post Closure Trust Agreement D068134NS.” U.S. Bank National Association. January 1, 2019.
2. “Chemical Waste Management, Inc. – Kettleman Hills Facility 22 CCR Financial Assurance for Closure and Post-Closure Costs.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Julie Mullins, Department of Toxic Substances Control. January 17, 2019. With enclosures: “Rider to Performance Bond SUR0047833” Argonaut Insurance Company. Effective January 1, 2019. And “Schedule A to Closure/Post Closure Trust Agreement D068134NS.” U.S. Bank National Association. Revised January 9, 2019.
3. “Chemical Waste Management, Inc. – Kettleman Hills Facility 22 CCR Sudden and Non-sudden Accidental Liability Coverage.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Permitting Branch, Department of Toxic Substances Control. June



27, 2019. With enclosure: “Liability Certificate of Insurance” Great American E&S Insurance Company. Effective July 1, 2019.

### **C. TECHNICAL ASSISTANCE SERVICES FOR COMMUNITY REPORTS TO KETTLEMAN CITY RESIDENTS**

1. “Memo #1 Some observations and suggestions regarding California Environmental Protection Agency’s Proposed Exposure Assessment for Kettleman City.” Memorandum, Daniel Wartenberg, Technical Assistance Services for Communities Program to Kettleman City Residents. April 6, 2010.
2. “Memo No. 1. Algunas observaciones y sugerencias sobre la propuesta de evaluación de la exposición a sustancias contaminantes en la Ciudad de Kettleman, de la Agencia de Protección Ambiental de California.” Memorandum, Daniel Wartenberg, Programa de Servicios de Asistencia Técnica a Comunidades (TASC) para Residentes de la Ciudad de Kettleman. 6 de abril de 2010.
3. “Memo #2 Some Consideration of the Reported Health Status of Residents of Kettleman City And suggestions for Next Activities.” Memorandum, Daniel Wartenberg, Technical Assistance Services for Communities Program to Kettleman City Residents. April 14, 2010.
4. “Memo #1 Brief.” Memorandum, Daniel Wartenberg, Technical Assistance Services for Communities Program to Kettleman City Residents. June 16, 2010.
5. “Memorandum Breve #1.” Daniel Wartenberg, Programa de Servicios de Asistencia Técnica a Comunidades (TASC) para Residentes de la Ciudad de Kettleman. 16 de junio de 2010.
6. “Memo #2 Brief.” Memorandum, Daniel Wartenberg, Technical Assistance Services for Communities Program to Kettleman City Residents. June 16, 2010.
7. “Memorandum Breve #2.” Daniel Wartenberg, Programa de Servicios de Asistencia Técnica a Comunidades (TASC) para Residentes de la Ciudad de Kettleman. 16 de junio de 2010.
8. “Memo #3 Brief: What can help Kettleman City residents NOW?.” Memorandum, Daniel Wartenberg, Technical Assistance Services for Communities Program to Kettleman City Residents. October 4, 2010.
9. “BREVIARIO del memorándum No. 3 ¿Qué puede ayudar a los residentes de la ciudad de Kettleman AHORA?” Daniel Wartenberg, Programa de Servicios de Asistencia Técnica a Comunidades (TASC) para Residentes de la Ciudad de Kettleman. 4 de octubre de 2010.
10. “Memo #3: What can help Kettleman City residents NOW?.” Memorandum, Daniel Wartenberg, Technical Assistance Services for Communities Program to Kettleman City Residents. October 4, 2010.
11. “Memorandum No. 3 ¿Qué puede ayudar a los residentes de la ciudad de Kettleman AHORA?” Daniel Wartenberg, Programa de Servicios de Asistencia Técnica a



- Comunidades (TASC) para Residentes de la Ciudad de Kettleman. 4 de octubre de 2010.
12. “Memo #4: Comments and Recommendations in Response to the California Department of Public Health (CalDPH) and California Environmental Protection Agency’s (CalEPA) INVESTIGATION OF BIRTH DEFECTS AND COMMUNITY EXPOSURES IN KETTLEMAN CITY, CA PUBLIC REVIEW DRAFT released November 22, 2010.” Memorandum, Daniel Wartenberg, Technical Assistance Services for Communities Program to Kettleman City Residents. December 1, 2010.
  13. “Memorándum #4: Los comentarios y las Recomendaciones en Respuesta al Departamento de California de Sanitaria (CalDPH) y la Organización de Protección del Medio Ambiente de California (CalEPA) INVESTIGACION DE DEFECTOS de NACIMIENTO Y EXPOSICIONES de COMUNIDAD EN la CIUDAD de KETTLEMAN, CA GIRO que PUBLICO de REVISION soltó el 22 de noviembre de, CA PUBLIC REVIEW DRAFT released November 22, 2010.” Daniel Wartenberg, Programa de Servicios de Asistencia Técnica a Comunidades (TASC) para Residentes de la Ciudad de Kettleman. 1 de diciembre de 2010.
  14. “Memo #4 Brief: Comments and Recommendations in Response to the California Department of Public Health (CalDPH) and California Environmental Protection Agency’s (CalEPA) INVESTIGATION OF BIRTH DEFECTS AND COMMUNITY EXPOSURES IN KETTLEMAN CITY, CA PUBLIC REVIEW DRAFT released November 22, 2010.” Memorandum, Daniel Wartenberg, Technical Assistance Services for Communities Program to Kettleman City Residents. December 27, 2010.
  15. “Memorándum #4 Comentarios y las Recomendaciones BREVIARIO en Respuesta al Departamento Sanitario de California de (CalDPH) y la Agencia de Protección del Medio Ambiente de California (CalEPA) la INVESTIGACION DE DEFECTOS de NACIMIENTO Y EXPOSICIONES de COMUNIDAD EN la CIUDAD de KETTLEMAN, CA de REVISION PUBLICO soltado el 22 de noviembre de 2010.” Daniel Wartenberg, Programa de Servicios de Asistencia Técnica a Comunidades (TASC) para Residentes de la Ciudad de Kettleman. 3 de enero de 2011.
  16. “Memo #5: Comments and Recommendations in Response to the California Department of Public Health (CalDPH) and California Environmental Protection Agency’s (CalEPA) INVESTIGATION OF BIRTH DEFECTS AND COMMUNITY EXPOSURES IN KETTLEMAN CITY, CA PUBLIC REVIEW DRAFT released November 22, 2010 (PART 2).” Memorandum, Daniel Wartenberg, Technical Assistance Services for Communities Program to Kettleman City Residents. November 20, 2011.
  17. “Memorándum #5: Comentarios y las Recomendaciones en Respuesta al Departamento de Salud Pública del Estado de California (California Department of Public Health o Cal DPH) y de la Agencia de Protección Ambiental del Estado de California (California Environmental Protection Agency o Cal EPA) INVESTIGACION DE DEFECTOS de NACIMIENTO Y EXPOSICIONES de COMUNIDAD EN la CIUDAD de KETTLEMAN, CA PROYECTO DE REVISIÓN PÚBLICA publicado 22 de



noviembre 2010 (Segunda Parte).” Daniel Wartenberg, Programa de Servicios de Asistencia Técnica a Comunidades (TASC) para Residentes de la Ciudad de Kettleman. 20 de noviembre de 2011.

18. “Memo #6: Incidence Patterns of Birth Defects and Cancer in Kettleman City and California’s Central Valley including California Department of Public Health’s (CDPH’s) Response to Community Concerns.” Memorandum, Daniel Wartenberg, Technical Assistance Services for Communities Program to Kettleman City Residents. August 20, 2012.
19. “Memorandum #6: Modelos de incidencia de los defectos congénitos y cáncer en la ciudad de Kettleman y el Valle Central de California, incluyendo la respuesta del Departamento de Salud Pública de California (CalDPH, por sus siglas en inglés) a las preocupaciones de la Comunidad.” Daniel Wartenberg, Programa de Servicios de Asistencia Técnica a Comunidades (TASC) para Residentes de la Ciudad de Kettleman. 20 de Agosto de 2012.

#### **D. MISCELLANEOUS DOCUMENTS**

1. 40 Code of Federal Regulations Part 136 – Guidelines Establishing Test Procedures for the Analysis of Pollutants (1982 ed.).
2. “Confirmation to Include Public Notice and Comment Prior to Issuance of PCB Commercial Storage or Fixed-site Disposal Approvals.” Memorandum, Katherine Taylor, U.S. EPA Region 9, to Lynn R. Goldman, MD, Assistant Administrator, U.S. EPA. May 2, 1995. With enclosure “Region IX Public Notice Procedure for PCB Permits.” U.S. EPA Region 9, toxics Section. May 2, 1995.
3. “2002 Modification of PCB Disposal Approval for RMU-1 to add Cell 11/13 CWM Chemical Services, LLC, EPA I.D. No. NYD049836679.” Letter, Jane Kenny, U.S. EPA Region 2 to Dennis Vacco, CWM Chemical Services. December 4, 2002.
4. “Approval for Commercial Storage, Processing, and Landfill Disposal of Polychlorinated Biphenyls (PCBs) and PCB Items.” Letter, Beverly Bannister, U.S. EPA Region 4 to Roger Henson, Chemical Waste Management, Inc. April 16, 2007.
5. “PCB Mega Rule Implementation at KHF.” Email, Bob Henry, Chemical Waste Management, to Muzhda Ferouz, Department of Toxic Substances Control, and John Moody, U.S. EPA Region 9. December 16, 2015.
6. “Responses to Mr Angel Concerning CWM Kettleman Hills, March 14, 2016.” Email, Barbara Gross to Bradley Angel, Greenaction and Maricela Mares-Alatorre, El Pueblo. March 30, 2016.
7. “Agenda.” Email, Bob Henry, Waste Management to Frances Wicher, U.S. EPA Region 9. July 20, 2016.
8. “Region 9 Land Division Trip Report for TSCA approval/RCRA permit Chemical Waste Management Kettleman Hills Facility.” U.S. EPA Region 9. May 18, 2017.



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**XI. FINAL ACTION****A. FINAL ACTION**

1. “Approval – Toxic Substances Control Act PCB Commercial Storage Facility and Chemical Waste Landfill, Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County, California, U.S. EPA ID: CAT 000 646 117.” Land, Chemicals & Redevelopment Division, U.S. EPA Region 9. July 29, 2020.
  - a. “Appendix B – Incorporated Documents – Volume 1”. July 29, 2020.
  - b. “Appendix B – Incorporated Documents – Volume 2”. July 29, 2020.
  - c. “Appendix B – Incorporated Documents – Volume 3”. July 29, 2020.
  - d. “Appendix B – Incorporated Documents – Volume 4”. July 29, 2020.
  - e. “Appendix B – Incorporated Documents – Volume 5”. July 29, 2020.
  - f. “Appendix B – Incorporated Documents – Volume 6”. July 29, 2020.
  - g. “Appendix B – Incorporated Documents – Volume 7”. July 29, 2020.

**B. STATEMENT OF BASIS**

1. Statement of Basis
  - a. “Statement of Basis – Approval Toxic Substance Control Act Polychlorinated Biphenyls (PCBs) Commercial Storage Facility and Chemical Waste Landfill, Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County, California, U.S. EPA ID: CAT 000 646 117.” Land, Chemicals & Redevelopment Division, U.S. EPA Region 9. July 29, 2020 with Appendices:
    - (1) Appendix A – Executive Summary in Spanish
    - (2) Appendix B – Reserved
    - (3) Appendix C – Administrative Record Index
    - (4) Appendix D – U.S. EPA TSCA Review Checklists for the Proposed Approval
    - (5) Appendix E – Justifications for Use of Omnibus Provisions
    - (6) Appendix F – Reporting, Notification, and Submittal Requirements in the Kettleman Hills Facility Proposed TSCA Approval
    - (7) Appendix G – Environmental Justice Analysis (See Section III)
    - (8) Appendix H – National Historic Preservation Act Determination
    - (9) Appendix I – Endangered Species Act Determination
    - (10) Appendix J – Clean Air Act Conformity Applicability Analysis
    - (11) Appendix K – Response to Comments Documents
    - (12) Appendix L – Changes to the Proposed Approval





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2. References for the Statement of Basis

(Note: only references added for final action are included here. See section II.C. for other Statement of Basis references)

- a. “PCB Cleanup Completion Report, Kettleman Hills Facility, Kings County, CA.” Letter, Bradley A. Loewen and William T. Aravanis, AMEC Geomatrix, Inc. to Paul Turek, Chemical Waste Management, Inc. December, 16, 2010. With enclosure “PCB Cleanup Completion Report, Kettleman Hills Facility, Kings County, CA.” AMEC Geomatrix, Inc. December 16, 2010.
- b. “Chemical Waste Management, Inc., (CWMI) Kettleman Hills Facility (KHF) CAT 000 646 117 2018 PCB Annual Report.” Letter, Tracy Reddick, Waste Management, Inc. to Regional Administrator Region 9, July 11, 2019.
- c. “Third Notice of Deficiency Chemical Waste Management, Inc. – Kettleman Hills Facility EPA ID No. CAT 000646117 Responses to Comments.” Chemical Waste Management, Inc. July 31, 2019.
- d. “Hazardous Waste Facility Permit Renewal Application, Operation Plan, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 4: July 31, 2019.
- e. “Chemical Waste Management, Inc. – Kettleman Hills Facility Comments – Proposed Commercial Storage Facility and Chemical Waste Landfill Facility: Chemical Waste Management, Inc., U.S. EPA ID Number: CAT 000646 117.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. November 22, 2019.
- f. “TSCA Permit Renewal Application, Chemical Waste Management, Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 4: November 22, 2019.
- g. “TSCA Operation Plan, Landfill B-18 Phases I, II, and III; PCB Building and Outside Containment Area.” Chemical Waste Management, Inc. Revision 4: November 22, 2019.
- h. “Spill Prevention Control and Countermeasure Plan (SPCC).” Chemical Waste Management, Inc. and Golder Associates, Inc. Revised November 2019.
- i. “Performance Bond – Kettleman Hills Facility / PCB Flushing/Storage Unit.” Western Surety Company. June 18, 2020. (Confidential information)
- j. “Standby Trust Agreement.” Executed by Chemical Waste Management, Inc., Grantor, and U.S. Bank National Association, Trustee. June 19, 2020. With Exhibits A & B (Confidential information).
- k. “KHF-TSCA Permit Financial Assurance and Part B Permit Reference.” Email, Reyna Reyes Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. June 26, 2020.



- l. “Response to Comments, Chemical Waste Management Request for Class 3 Permit Modification, Expansion of Kettleman Hills Hazardous Waste Landfill. Part III, DTSC Response to Comments.” California Department of Toxic Substances Control. May 2014.
- m. “Proposed Approval – Toxic Substances Control Act PCB Commercial Storage Facility and Chemical Waste Landfill, Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County, California, U.S. EPA ID: CAT 000 646 117.” Land, Chemicals & Redevelopment Division, U.S. EPA Region 9. August 27, 2019.
- n. “Statement of Basis – Proposed Approval Toxic Substance Control Act Polychlorinated Biphenyls (PCBs) Commercial Storage Facility and Chemical Waste Landfill, Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County, California, U.S. EPA ID: CAT 000 646 117.” Land, Chemicals & Redevelopment Division, U.S. EPA Region 9. August 27, 2019 with Appendices.
- o. “Environmental Justice Analysis – Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County, California, U.S. EPA ID: CAT 000 646 117.” Land, Chemicals, and Revitalization Division, U.S. EPA Region 9. August 19, 2019.
- p. “Kettleman Hills PCB Approval Review, EPA Endangered Species Act Determination.” Memorandum, Sara Ziff, U.S. EPA Region 9 to Frances Wicher, U.S. EPA Region 9. June 16, 2020. With attachment: “Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.” Letter. Fish and Wildlife Service. June 16, 2020.
- q. “Storm Water Pollution Prevention Plan Chemical Waste Management, Inc. – Kettleman Hills Facility.” Golder Associates. June 2015, Amended June 2019.
- r. “Closure and Post-Closure Plan, Kettleman Hills Facility, Kings County, California.” Golder Associates. July 31, 2019.
- s. “Ambient Air Monitoring Program Quarterly Report April 2019 – June 2019 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. September 2019.
- t. “U.S. EPA Requests Public Comment on Proposed PCB Permit for Kettleman Hills Facility.” Land, Chemicals and Redevelopment Division, U.S. EPA Region 9. August 27, 2019.
- u. “La EPA solicita comentarios publicos sobre el permiso propuesto para realizar operaciones con PCB en la instalación Kettleman Hills.” Land, Chemicals and Redevelopment Division, U.S. EPA Region 9. August 27, 2019.
- v. “Kettleman Hills Facility – Proposed PCB Permit; Public Meeting & Hearing.” U.S. EPA Region 9. August 27, 2019.



- w. “Instalación Kettleman Hills – Permiso Propuesto de PCB; Reunión Pública y Audiencia.” U.S. EPA Region 9. August 27, 2019.
  - x. “Kettleman Hills Facility – Proposed PCB Permit; Public Hearing/Instalación Kettleman Hills – Permiso Propuesto de PCB; Audiencia.” U.S. EPA Region 9. October 2019.
  - y. “U.S. EPA Requests Public Comment on Proposed PCB Permit for Kettleman Hills Facility.” Land, Chemicals and Redevelopment Division, U.S. EPA Region 9. October 2019.
  - z. “La EPA solicita comentarios publicos sobre el permiso propuesto para realizar operaciones con PCB en la instalación Kettleman Hills.” Land, Chemicals and Redevelopment Division, U.S. EPA Region 9. October 2019.
  - aa. “Ambient Air Monitoring Program Quarterly Report April 2019 – June 2019 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. September 2019.
  - bb. “Ambient Air Monitoring Program Quarterly Report July 2019 – September 2019 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. December 2019.
  - cc. “Ambient Air Monitoring Program Quarterly Report October 2019 – December 2019 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. March 2020.
3. References For Appendix D – U.S. EPA TSCA Application Review Checklists  
(Note: only references added for final action are included here. See section II.C. for other Statement of Basis references)
- a. “Chemical Waste Management, Inc., (CWMI) Kettleman Hills Facility (KHF) CAT 000 646 117 2018 PCB Annual Report.” Letter, Tracy Reddick, Waste Management, Inc. to Regional Administrator Region 9, July 11, 2019.
  - b. “Hazardous Waste Facility Permit Renewal Application, Operation Plan, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 4: July 31, 2019.
  - c. “TSCA Permit Renewal Application, Chemical Waste Management, Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 4: November 22, 2019.
  - d. “TSCA Operation Plan, Landfill B-18 Phases I, II, and III; PCB Building and Outside Containment Area.” Chemical Waste Management, Inc. Revision 4: November 22, 2019.
  - e. “Performance Bond – Kettleman Hills Facility / PCB Flushing/Storage Unit.” Western Surety Company. June 18, 2020. (Confidential information)



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- f. “Standby Trust Agreement.” Executed by Chemical Waste Management, Inc., Grantor, and U.S. Bank National Association, Trustee. June 19, 2020. With Exhibits A & B (Confidential information).
  - g. “Spill Prevention Control and Countermeasure Plan (SPCC).” Chemical Waste Management, Inc. and Golder Associates, Inc. Revised November 2019
  - h. “Closure and Post-Closure Plan, Kettleman Hills Facility, Kings County, California.” Golder Associates. July 31, 2019.
  - i. “Closure and Post-Closure Cost Estimate, Kettleman Hills Facility.” Golder Associates. July 31, 2019.
  - j. “Storm Water Pollution Prevention Plan Chemical Waste Management, Inc. – Kettleman Hills Facility.” Golder Associates. June 2015, Amended June 2019.
4. References For Appendix I – Endangered Species Act Determination  
(Note: only references added for final action are included here. See section II.D. for other Statement of Basis references)
- a. “Kettleman Hills PCB Approval Review, EPA Endangered Species Act Determination.” Memorandum, Sara Ziff, U.S. EPA Region 9 to Frances Wicher, U.S. EPA Region 9. June 16, 2020. With attachment: “Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.” Letter. Fish and Wildlife Service. June 16, 2020.
5. References for Appendix K – Response to Comments Document
- a. “PCB Cleanup Completion Report, Kettleman Hills Facility, Kings County, CA.” Letter, Bradley A. Loewen and William T. Aravanis, AMEC Geomatrix, Inc. to Paul Turek, Chemical Waste Management, Inc. December, 16, 2010. With enclosure “PCB Cleanup Completion Report, Kettleman Hills Facility, Kings County, CA.” AMEC Geomatrix, Inc. December 16, 2010.
  - a. “Toxicological Profile for Polychlorinated Biphenyls (PCBs).” Agency for Toxic Substances and Disease Registry. November 2000.
  - b. “Polychlorinated Biphenyls - ToxFAQS” Agency for Toxic Substances and Disease Registry. July, 2014.
  - c. “Investigation of Birth Defects and Community Exposures in Kettleman City, CA.” California Environmental Protection Agency and California Department of Public Health. December 2010.
  - d. “Response to Public Comments on the Investigation of Birth Defects and Community Exposures in Kettleman City, CA.” California Environmental Protection Agency and California Department of Public Health. February 1, 2011.



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- e. “CalEnviroScreen 3.0.” California Environmental Protection Agency and Office of Environmental Health Hazard Assessment. January 2017.
  - f. “CalEnviroScreen: Download Data” [Data File].” Retrieved July 7, 2019 from [www.oehha.ca.gov/calenviroscreen/maps-data/download-data](http://www.oehha.ca.gov/calenviroscreen/maps-data/download-data).
  - g. “Report to the Office of Environmental Health Hazard Assessment, Kettleman City Air Quality Assessment.” California Air Resources Board, November 2010.
  - h. “Kings County Mobile Source Emissions 2010 & 2020.” Extracted from [https://www.arb.ca.gov/app/emsinv/fcemssumcat/fcemssumcat2016.php?\\_ga=2.43697061.124198679.1587053776-1838587060.1587053776](https://www.arb.ca.gov/app/emsinv/fcemssumcat/fcemssumcat2016.php?_ga=2.43697061.124198679.1587053776-1838587060.1587053776) on April 20, 2020.
  - i. “RE: U.S. EPA Seeking Birth Defects Data from CBDMP.” Barbara Warmerdam, California Birth Defects Monitoring Program to Sarah Samples and Patrick Wilson, U.S. Environmental Protection Agency. August 23, 2019.
  - j. “Draft Subsequent Environmental Impact Report B-18/B-20 Hazardous Waste Disposal Project Kettleman Hills Facility, Chemical Waste Management, Inc.” CH2MHill, March 2008.
  - k. “Kettleman Hills Facility B-18/B-20 Landfill (Chemical Waste Management, Inc.); Revised Analysis: Hazardous Waste Truck Trips as Percentage of Total Truck Trips on I-5 at State Route 41 and on State Route 41 from Quail Avenue to I-5.” Revised Memorandum, Robert Mason, Ch2M HILL to Bob Henry, Chemical Waste Management, Inc. March 1, 2012.
  - l. “In the Matter Of: Receiving Public Comments EPA’s Proposed Permit for Kettleman Hills Facility. EPA Region Public Hearing, November 14, 2019, Original Transcript.” Court Scribes, Inc. November 29, 2019.
  - m. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2005 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. June 21, 2006. With enclosure: “2005 PCB Annual Report.” Chemical Waste Management, Inc. [Redacted]
  - n. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2006 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. June 26, 2007. With enclosure: “2006 PCB Annual Report.” Chemical Waste Management, Inc.
  - o. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2007 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. August 4, 2008. With enclosure: “2007 PCB Annual Report.” Chemical Waste Management, Inc.



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- p. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2008 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 15, 2009. With enclosure: “2008 PCB Annual Report.” Chemical Waste Management, Inc.
- q. “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: Notice of Violation EPA ID Number CAT0000646117.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Christopher Rollins, U.S. EPA Region 9. May 10, 2010.
- r. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2009 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 8, 2010. With enclosure: “2009 PCB Annual Report.” Chemical Waste Management, Inc.
- s. Letter, Robert Henry, Chemical Waste Management, Inc. to U.S. EPA Region Administrator, U.S. EPA Region 9. August 25, 2010.
- t. “Chemical Waste Management, Inc. – Kettleman Hills Facility Re: Notice of Violation (September 8, 2010)”. Letter, Andrew M. Kenefick, Chemical Waste Management, Inc. to Christopher Rollins, U.S. EPA Region 9. September 23, 2010. With Attachments.
- u. “In re: Chemical Waste Management, Inc., No. TSCA-09-2011-0001 Certification of PCB Cleanup.” Letter, Robert G Henry, Chemical Waste Management, Inc. to Christopher Rollins, U.S. EPA Region 9. December 16, 2010.
- v. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2010 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 13, 2011. With enclosure: “2010 PCB Annual Report.” Chemical Waste Management, Inc.
- w. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2011 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 6, 2012. With enclosure: “2011 PCB Annual Report.” Chemical Waste Management, Inc.
- x. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2012 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 8, 2013. With enclosure: “2012 PCB Annual Report.” Chemical Waste Management, Inc.
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- y. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2013 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 9, 2014. With enclosure: “2013 PCB Annual Report.” Chemical Waste Management, Inc.
  - z. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2014 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 8, 2015. With enclosure: “2014 PCB Annual Report.” Chemical Waste Management, Inc.
  - aa. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2015 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 20, 2016. With enclosure: “2015 PCB Annual Report.” Chemical Waste Management, Inc.
  - bb. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2016 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 5, 2017. With enclosure: “2016 PCB Annual Report.” Chemical Waste Management, Inc.
  - cc. “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised TSCA Permit Renewal Application – Revision 2”. Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. April 19, 2017 (Confidential Business Information)
  - dd. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2017 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 9, 2018. With enclosure: “2017 PCB Annual Report.” Chemical Waste Management, Inc.
  - ee. “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 111 2018 PCB Annual Report.” Letter, Tracy Reddick, Chemical Waste Management, Inc. to Regional Administrator, U.S. EPA Region 9. July 11, 2019. With enclosure: “2018 PCB Annual Report.” Chemical Waste Management, Inc.
  - ff. “Third Notice of Deficiency for Chemical Waste Management, Inc. – Kettleman Hills Facility EPA ID No. CAT 000646117 Responses to Comments.” Chemical Waste Management, Inc. July 31, 2019.
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- Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. November 22, 2019.
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## C. DRAFT ENVIRONMENTAL JUSTICE ANALYSIS AND REFERENCES

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#### **D. PUBLIC PARTICIPATION DOCUMENTS**

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  - b. “La EPA solicita comentarios publicos sobre el permiso propuesto para realizar operaciones con PCB en la instalación Kettleman Hills.” Land, Chemicals and Redevelopment Division, U.S. EPA Region 9. August 27, 2019.
  - c. “Kettleman Hills Facility – Proposed PCB Permit; Public Meeting & Hearing.” U.S. EPA Region 9. August 27, 2019.
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  - f. “U.S. EPA Requests Public Comment on Proposed PCB Permit for Kettleman Hills Facility.” Land, Chemicals and Redevelopment Division, U.S. EPA Region 9. October 2019.
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  - i. “Tarjeta de comentarios para el permiso propuesto de PCB por la EPA de EE. UU. para la instalación Kettleman Hills.” U.S. EPA Region 9. August 27, 2019.
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  - h. Letter, Teresa Paris to Permits Office, U.S. EPA Region 9. November 20, 2019.
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  - l. “Comments Regarding PCB Permit for Kettleman Hills Facility.” Email, James Dowdall to Frances Wicher, U.S. EPA Region 9. November 22, 2019.
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  - n. “Chemical Waste Management, Inc. – Kettleman Hills Facility Comments – Proposed Commercial Storage Facility and Chemical Waste Landfill Facility: Chemical Waste Management, Inc., U.S. EPA ID Number: CAT 000646 117.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. November 22, 2019. With Attachments:
    - (1) “TSCA Permit Renewal Application, Chemical Waste Management, Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 4: November 22, 2019.
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    - (3) “Closure and Post-Closure Plan, Kettleman Hills Facility, Kings County, California.” Golder Associates. July 31, 2019.
  - o. “In the Matter Of: Receiving Public Comments EPA’s Proposed Permit for Kettleman Hills Facility. EPA Region Public Hearing, November 14, 2019, Original Transcript.” Court Scribes, Inc. November 29, 2019.





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**E. CHEMICAL WASTE MANAGEMENT, INC. APPLICATION FOR TSCA APPROVAL RENEWAL**1. November 2019 Application

- a. “Chemical Waste Management, Inc. – Kettleman Hills Facility Comments – Proposed Commercial Storage Facility and Chemical Waste Landfill Facility: Chemical Waste Management, Inc., U.S. EPA ID Number: CAT 000646 117.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. November 22, 2019. With Attachments:
  - (1) “TSCA Permit Renewal Application, Chemical Waste Management, Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 4: November 22, 2019.
  - (2) “Storm Water Pollution Prevention Plan Chemical Waste Management, Inc. – Kettleman Hills Facility.” Golder Associates. June 2015, Amended June 2019.
  - (3) “Closure and Post-Closure Plan, Kettleman Hills Facility, Kings County, California.” Golder Associates. July 31, 2019.
- b. “KHF-TSCA Permit Financial Assurance and Part B Permit Reference.” Email, Reyna Reyes Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. June 26, 2020.
- c. “Hazardous Waste Facility Permit Renewal Application, Operation Plan, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 4: July 31, 2019.
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**F. KETTLEMAN HILL FACILITY OPERATION DOCUMENTS**1. Non-TSCA Kettleman Hills Facility Permits

- a. “Nonhazardous, Nonputrescible, Industrial Solid Waste Codisposal Registration Permit (SWIS #16-AA0023). Letter, Troy Hommerding, Kings County Department of Public Health to Reyna Verdin, Chemical Waste Management, Inc. March 11, 2020. With enclosure: “Registration Permit 16-AA-0023 – Chemical Waste Management, Inc. – Kettleman Hills Facility.” March 12, 2020.

**G. OTHER KETTLEMAN HILLS FACILITY WIDE PLANS**1. Surface and Storm Water Plans

- a. “Storm Water Pollution Prevention Plan Chemical Waste Management, Inc. – Kettleman Hills Facility.” Golder Associates. June 2015, Amended June 2019.

2. SPCC Plan

- a. “Spill Prevention Control and Countermeasure Plan (SPCC).” Chemical Waste Management, Inc. and Golder Associates, Inc. Revised November 2019.

## H. COMPLIANCE AND MONITORING DOCUMENTS

### 1. Compliance and Enforcement Documents

#### a. RCRA Inspection Reports

- (1) “Summary of Violations, Kettleman Hills Landfill.” Department of Toxic Substances Control. March 28, 2018.
- (2) “Inspection Report, Chemical Waste Management, Inc. Kettleman Hills Facility.” Department of Toxic Substances Control. May 30, 2018.
- (3) “Summary of Observations, Chemical Waste Management, Kettleman.” Department of Toxic Substances Control. December 4, 2019.
- (4) “Inspection Report, Chemical Waste Management, Inc. Kettleman Hills Facility.” Department of Toxic Substances Control. December 31, 2019.
- (5) “Issuance of Inspection Report and Notice of Provisional Inspection Violation Score.” Letter, Kevin Sanchez, Department of Toxic Substances Control to Reyna Verdin, Chemical Waste Management, Inc. January 10, 2020.
- (6) “Inspection Report, Chemical Waste Management, Inc. Kettleman Hills Facility.” Department of Toxic Substances Control. April 20, 2020.

### 2. Groundwater Monitoring

#### a. Annual Groundwater Reports

- (1) “Chemical Waste Management, Inc. – Kettleman Hills Facility Annual Graph Report” (Data Through 2018)”. Letter, Reyna Verdin, Chemical Waste Management, Inc. to Dan Carlson, Regional Water Quality Control Board and Ryan Batty, Department of Toxic Substance Control. February 27, 2020. With enclosure: “Annual Graph Report for Data Through 2019, Kettleman Hills Facility, Kings County, CA.” Wood Environment & Infrastructure Solutions, Inc. February 25, 2020.

#### b. Groundwater Monitoring Reports

- (1) “Chemical Waste Management, Inc. Kettleman Hills Facility, Second Quarter 2019 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Camille Rogado, Department of Toxic Substances Control. September 24, 2019. With enclosure: “Second Quarter 2019 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Wood. September 23, 2019.



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- (2) “Chemical Waste Management, Inc. Kettleman Hills Facility, First Semiannual 2019 Groundwater and UZ Monitoring – Class 1 Waste Management Units.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Permitting Division, Land Disposal Branch Department of Toxic Substances Control. September 25, 2019. With enclosure: “First Semiannual 2019 Groundwater and Unsaturated Zone Monitoring for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC. September 24, 2019.
  - (3) “Chemical Waste Management, Inc. Kettleman Hills Facility, Third Quarter 2019 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Omer Ghaleb, Department of Toxic Substances Control. December 19, 2018. With enclosure: “Third Quarter 2019 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Wood. December 18, 2019.
  - (4) “Chemical Waste Management, Inc. Kettleman Hills Facility, Fourth Quarter 2019 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Omer Ghaleb, Department of Toxic Substances Control. February 27, 2020. With enclosure: “Fourth Quarter 2019 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Wood. February 25, 2020.
  - (5) “Chemical Waste Management, Inc. Kettleman Hills Facility, First Quarter 2019 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Camille Rogado, Department of Toxic Substances Control. June 27, 2019. With enclosure: “First Quarter 2019 Monitoring Report for Class I Waste Management Units as Required by DTSC on March 6, 2015.” Wood. June 21, 2019.
  - (6) “Chemical Waste Management, Inc. Kettleman Hills Facility, Second Semiannual 2017 Groundwater and UZ Monitoring – Class 1 Waste Management Units.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Permitting Division, Land Disposal Branch Department of Toxic Substances Control. March 27, 2020. With enclosure: “Second Semiannual 2019 Groundwater and Unsaturated Zone Monitoring for Class 1 Waste Management Units. Kettleman Hills Facility, Kings County, California.” AMEC. March 25, 2020.
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- a. Annual LCRS Fluid Analysis Reports
    - (1) “Chemical Waste Management, Inc. – Kettleman Hills Facility 2019 Annual LCRS Fluid Analysis Report.” Letter, Reyna Verdin, Chemical Waste



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Management, Inc. to Scott Hatton, Regional Water Quality Control Board. April 30, 2020. With enclosures.

b. Monthly Monitoring Reports

- (1) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – August 2019.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. September 12, 2019. With enclosures.
- (2) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – September 2019.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. October 15, 2019. With enclosures.
- (3) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – October 2019.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. November 12, 2019. With enclosures.
- (4) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – November 2019.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. December 13, 2019. With enclosures.
- (5) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – December 2019.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. January 14, 2020. With enclosures.
- (6) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – January 2020.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. February 13, 2020. With enclosures.
- (7) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – February 2020.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. March 19, 2020. With enclosures.
- (8) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – March 2020.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. April 14, 2020. With enclosures.
- (9) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – April 2020.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. May 15, 2020. With enclosures.



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- (10) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly Monitoring Report – May 2020.” Letter, John Prill, Chemical Waste Management, Inc. to Kristen Gomes, Regional Water Quality Control Board. June 12, 2020. With enclosures.

4. Air Monitoring Reports

- a. “Ambient Air Monitoring Program Quarterly Report April 2019 – June 2019 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. September 2019.
- b. “Ambient Air Monitoring Program Quarterly Report July 2019 – September 2019 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. December 2019.
- c. “Ambient Air Monitoring Program Quarterly Report October 2019 – December 2019 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. March 2020.
- d. “Ambient Air Monitoring Program Quarterly Report January 2020 – March 2020 Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. June 2020.

5. Monthly and Annual Pcb Reports

a. Monthly PCB Reports

- (1) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – June 2019.” Letter, John Prill, Chemical Waste Management, Inc. to Frances P. Wicher, U.S. EPA Region 9. July 29, 2019.
- (2) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – July 2019.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances P. Wicher, U.S. EPA Region 9. August 29, 2019.
- (3) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – August 2019.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances P. Wicher, U.S. EPA Region 9. September 18, 2019.
- (4) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – September 2019.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances P. Wicher, U.S. EPA Region 9. October 29, 2019.
- (5) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – October 2019.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances P. Wicher, U.S. EPA Region 9. November 13, 2019.



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- (6) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – November 2019.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances P. Wicher, U.S. EPA Region 9. December 13, 2019.
  - (7) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – December 2019.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances P. Wicher, U.S. EPA Region 9. January 9, 2020.
  - (8) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – January 2019.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances P. Wicher, U.S. EPA Region 9. February 13, 2020.
  - (9) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – February 2020.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances P. Wicher, U.S. EPA Region 9. March 19, 2020.
  - (10) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – March 2020.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances P. Wicher, U.S. EPA Region 9. April 25, 2020.
  - (11) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – April 2020.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances P. Wicher, U.S. EPA Region 9. May 21, 2020.
  - (12) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – May 2020.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances P. Wicher, U.S. EPA Region 9. June 24, 2020.
  - (13) “Chemical Waste Management, Inc. – Kettleman Hills Facility Monthly TSCA Monitoring Report – June 2020.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances P. Wicher, U.S. EPA Region 9. July 9, 2020.
- b. Annual PCB Reports
- (1) “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 117 2019 PCB Annual Report.” Letter, Tracy Reddick, CWM to Regional Administrator, U.S. EPA Region 9. June 23, 2020.



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**I. OTHER DOCUMENTS**1. Financial Assurance And Liability Insurance

- a. “Performance Bond – Kettleman Hills Facility / PCB Flushing/Storage Unit.” Western Surety Company. June 18, 2020. (Confidential information)
- b. “Standby Trust Agreement.” Executed by Chemical Waste Management, Inc., Grantor, and U.S. Bank National Association, Trustee. June 19, 2020. With Exhibits A & B (Confidential information).



**APPENDIX D –  
U.S. EPA TSCA APPLICATION REVIEW CHECKLISTS**



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**APPENDIX D-1 –  
REVIEW CHECKLIST FOR 40 C.F.R. PART 761 REQUIREMENTS FOR CHEMICAL WASTE LANDFILLS**

**November 22, 2019 TSCA Renewal Application for  
Chemical Waste Management Kettleman Hills Facility (EPA I.D. CAT 000 646 117)  
Kettleman City, California  
Toxic Substances Control Act Requirements  
40 C.F.R. 761**

This Checklist documents how Chemical Waste Management Inc.'s ("CWM") application to renew and modify its Approval to dispose polychlorinated biphenyls ("PCB") waste in the Landfill B-18 at its Kettleman Hills Facility ("KHF" or "Facility") meets the requirements of the Toxic Substances Control Act ("TSCA") regulations at 40 C.F.R. Part 761. It is based on U.S. EPA's review of the renewal application, titled "TSCA Permit Renewal Application, Chemical Waste Management, Inc., Kettleman Hills Facility" Revision 4: November 22, 2019 ("Renewal Application"). This Checklist identifies if the required information is present and complete, whether the information is acceptable under the applicable regulatory requirement, and where the information can be found in the Renewal Application.

Note: This checklist addresses regulatory requirements applicable to Landfill B-18. The applicable regulatory requirements for the closed/inactive Landfills B-14, B-16, and B-19 are addressed in the review of the Facility's closure and post-closure plan.

Documents frequently referenced in the checklist are listed below. A complete list of references is provided at the end of the checklist.

Renewal Application: "TSCA Permit Renewal Application, Revision 4." CWM KHF. November 22, 2019.

TSCA Operation Plan: "TSCA Operation Plan, Landfill B-18 Phases I, II, and III; PCB Building and Outside Containment Area." Chemical Waste Management, Inc. Revision 4: November 22, 2019.

Operation Plan: "Hazardous Waste Facility Permit Renewal Application, Operation Plan." CWM KHF. Revision 4, July 31, 2019.

Phase III E&D Report: "Engineering and Design Report, B-18 Class 1 Landfill, Phase III Expansion and Final Closure, Kettleman Hills Facility, Kettleman City California, Revisions 2." Golder Associates. August 2011.

SSMP: "Revised Site-Specific Groundwater Monitoring Plan Class I Waste Management Units, Kettleman Hills Facility, Kings County California." AMEC Environmental & Infrastructure, Inc.. April 14, 2014.

TSCA Groundwater Addendum: "TSCA Groundwater Monitoring Addendum to Site-Specific Monitoring Plan, Kettleman Hills Facility, Kings County, California." AMEC Foster Wheeler. April 17, 2018. (Attachment 4 to the Renewal Application).



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
761.75(a) General	<p>A chemical waste landfill used for the disposal of PCBs and PCB Items shall be approved by the Agency Regional Administrator pursuant to § 761.75(c).</p> <p>The landfill shall meet all of the requirements specified in § 761.75(b), unless a waiver from these requirements is obtained pursuant to § 761.75(c)(4).</p> <p>In addition, the landfill shall meet any other requirements that may be prescribed pursuant to § 761.65(c)(3).</p>	N/R	—	<p>See § 761.75(c) requirements.</p> <p>See § 761.75(b) requirements.</p> <p>KHF has requested a number of waivers (Renewal Application, Section 13.2). See below for discussion of individual waiver requests and Statement of basis, section III.C.2.</p> <p>A list of § 761.65(c)(3) requirements (also known as “omnibus requirements”) are included in the Statement of Basis, <b><u>Appendix E</u></b></p>
761.75(b) Technical Requirements	Requirements for chemical waste landfills used for the disposal of PCBs and PCB Items are as follows:		See below	
761.75(b)(1) Soils	<p>The landfill site shall be located in thick, relatively impermeable formations such as large-area clay pans. Where this is not possible, the soil shall have a high clay and silt content with the following parameters:</p> <p>(i) In-place soil thickness, 4 feet or compacted soil liner thickness, 3 feet;</p>	<p>Renewal Application, Section 5.1</p> <p>Renewal Application, Section 5.1</p>	<p>Yes/Yes</p> <p>Yes/Yes</p>	<p>Landfill B-18 has liner that meets the requirements of § 761.75(b)(2).</p> <p>Phase III E&amp;D Report, Section 4.7.2.1.</p>



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
	(ii) Permeability (cm/sec), equal to or less than $1 \times 10^{-7}$ ;	Renewal Application, Section 5.1	Yes/Yes	Operation Plan Table 19-1 and Phase III E&D Report, Section 4.7.2.1.
	(iii) Percent soil passing No. 200 Sieve, >30;  (iv) Liquid Limit, >30; and  (v) Plasticity Index >15	Renewal Application, Section 5.1  Renewal Application, Section 5.1  Renewal Application, Section 5.1	Yes/Yes  Yes/Yes  Yes/Yes	Phase III E&D Report, Section 3.5.2.  Phase III E&D Report, Section 3.5.2.  Phase III E&D Report, Section 3.5.2.
761.75(b)(2) Synthetic Membrane Liners	Synthetic membrane liners shall be used when, in the judgment of the Regional Administrator, the hydrologic or geologic conditions at the landfill require such a liner in order to provide at least a permeability equivalent to the soils in § 761.75(b)(1).  Whenever a synthetic liner is used at a landfill site, special precautions shall be taken to insure that its integrity is maintained  Whenever a synthetic liner is used at a landfill site, it is chemically compatible with PCBs.	Renewal Application, Section 5.1  Phase III E&D Report, Section 4.7  Renewal Application, Section 5.1	Yes/Yes  Yes/Yes  Yes/Yes	Operation Plan Table 19-1, Phase III E&D Report, Section 4.7.    Operation Plan Table 19-1, Phase III E&D Report, Section 3.6.



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
	<p>Adequate soil underlining and soil cover shall be provided to prevent excessive stress on the liner and to prevent rupture of the liner.</p> <p>The liner must have a minimum thickness of 30 mils.</p>	<p>Renewal Application, Section 5.1</p> <p>Renewal Application, Section 5.1</p>	<p>Yes/Yes</p> <p>Yes/Yes</p>	<p>Phase III E&amp;D Report, Section 4.7</p> <p>Operation Plan Table 19-1, Phase III E&amp;D Report, Section 4.7.2.</p>
<p>761.75(b)(3) Hydrologic conditions</p>	<ul style="list-style-type: none"> <li>• The bottom of the landfill shall be above the historical high groundwater table as provided below.</li> <li>• Floodplains, shorelands, and groundwater recharge areas shall be avoided.</li> <li>• There shall be no hydraulic connection between the site and standing or flowing surface water.</li> <li>• The site shall have monitoring wells and leachate collection.</li> <li>• The bottom of the landfill liner system or natural in-place soil barrier shall be at least fifty feet from the historical high water table.</li> </ul>	<p>Renewal Application, Section 5.2</p> <p>Renewal Application, Section 5.2</p> <p>Renewal Application, Section 5.2</p> <p>Renewal Application, Section 5.5 &amp; Section 5.6</p> <p>Renewal Application, Section 5.2</p>	<p>Yes/Yes</p> <p>Yes/Yes</p> <p>Yes/Yes</p> <p>Yes/Yes</p> <p>Yes/Yes</p>	<p>See also, Phase III E&amp;D Report, Section 2.6.</p> <p>Landfill B-18 is not in a floodplain, near a shore, or in a groundwater recharge area.</p> <p>There is no standing or flowing surface water at the Facility.</p> <p>Operation Plan, Chapter 26 and 27; TSCA Groundwater Addendum.</p> <p>Phase III E&amp;D Report, Section 2.6.</p>



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
761.75(b)(4) Flood Protection	(i) If the landfill site is below the 100-year floodwater elevation, the operator shall provide surface water diversion dikes around the perimeter of the landfill site with a minimum height equal to two feet above the 100-year floodwater elevation.	Renewal Application, Section 5.3 & Attachment 2	N/A	Landfill B-18 is above the 100-year floodwater elevation.
Diversion structures	(ii) If the landfill site is above the 100-year floodwater elevation, the operators shall provide diversion structures capable of diverting all of the surface water runoff from a 24-hour, 25-year storm.	Renewal Application, Section 5.3.2 Operation Plan Section 19.2(a)(4)	Yes/Yes	2019 Stormwater Pollution Prevention Plan. 2009 Surface Water Control Program. Phase III E&D Report, Section 5.5. Note: KHF’s stormwater system is designed to handle a 24-hour probably maximum. precipitation event of 10.3 inches. A 24-hour 25-year storm event at the Facility is 1.95 inches. See “Surface Water Control Program”, p. 5.
761.75(b)(5) Topography	The landfill site shall be located in an area of low to moderate relief to minimize erosion and to help prevent landslides or slumping.	Renewal Application, Section 5.4	Yes/Yes	Renewal Application, Attachment 2. Operation Plan, Chapter 4. Phase III E&D Report, Section 2.3.
761.75(b)(6) Monitoring systems Water sampling	(i) (A) For all sites receiving PCBs, the ground and surface water from the disposal site area shall be sampled prior to commencing operations under an approval provided in § 761.75(c) for use as baseline data.	Renewal Application, Section 5.5.1; Tables 4.1 to 4.4 and 5.1 to 5.4	Yes/Yes	There was no pre-existing surface water at the Facility. Operation Plan, section 24.



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
Monitoring systems Groundwater monitoring wells	(B) Any surface watercourse designated by the Regional Administrator using the authority provided in § 761.75(c)(3)(ii) shall be sampled at least monthly when the landfill is being used for disposal operations.	N/A	—	The Regional Administrator has not designated any surface watercourses at or near KHF using the omnibus authority in § 761.75(c)(3)(ii).
	(C) Any surface watercourse designated by the Regional Administrator using the authority provided in § 761.75(c)(3)(ii) shall be sampled for a time period specified by the Regional Administrator on a frequency of no less than once every six months after final closure of the disposal area.	N/A	—	The Regional Administrator has not designated any surface watercourses at or near KHF using the omnibus authority in § 761.75(c)(3)(ii).
	(ii) (A) If underlying earth materials are homogenous, impermeable, and uniformly sloping in one direction, only three sampling points shall be necessary. These three points shall be equally spaced on a line through the center of the disposal area and extending from the area of highest water table elevation to the area of the lowest water table elevation on the property.	Renewal Application, Section 5.5.2 and Attachment 4	Yes/Yes	Operation Plan, Chapters 26 and 27. SSMP, section 3 and Figure 2. TSCA Groundwater Addendum.



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
Monitoring systems Water analysis	<p>(B) All monitor wells shall be cased and the annular space between the monitor zone (zone of saturation) and the surface shall be completely backfilled with Portland cement or an equivalent material and plugged with Portland cement to effectively prevent percolation of surface water into the well bore. The well opening at the surface shall have a removable cap to provide access and to prevent entrance of rainfall or stormwater runoff. The well shall be pumped to remove the volume of liquid initially contained in the well before obtaining a sample for analysis. The discharge shall be treated to meet applicable state or federal discharge standards or recycled to the chemical waste landfill.</p>	<p>Renewal Application, Section 5.5.2, Section 5.5.3, &amp; Section 13.2.1.</p>	<p>Yes/Yes</p>	<p>TSCA Operation Plan, p. 9. SSMP, Table .6 SSMP, section 6.2.4. TSCA Groundwater Addendum.</p> <p>Chemical Waste Management, Inc. has requested a 40 C.F.R. 761.75(c)(4) waiver from the requirement that the well shall be pumped to remove the volume of liquid initially contained in the well before obtaining a sample for analysis (i.e., purging). U.S. EPA granted this waiver. See Statement of Basis, <b><u>section III.C.2.</u></b></p>
	<p>(iii) As a minimum, all samples shall be analyzed for the following parameters, and</p>	<p>Renewal Application, Section 5.5.3</p>	<p>Yes/Yes</p>	<p>TSCA Operation Plan, p. 10. TSCA Groundwater Addendum.</p>
	<p>all data and records of the sampling and analysis shall be maintained as required in § 761.180(d)(1).</p>	<p>Renewal Application, Section 5.5.3</p>	<p>Yes/Yes</p>	<p>TSCA Operation Plan, p. 3.</p>



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
	<p>Sampling methods and analytical procedures for these parameters shall comply with those specified in 40 C.F.R. Part 136 as amended in 41 FR 52779 on December 1, 1976.</p>	<p>Renewal Application, Section 5.5.3, Section 13.2.2</p>	<p>Yes/Yes</p>	<p>TSCA Operation Plan, p. 9. TSCA Groundwater Addendum. Chemical Waste Management, Inc. has requested a 40 C.F.R. 761.75(c)(4) waiver from the requirement that sampling methods and analytical procedures for these parameters shall comply with those specified in 40 C.F.R. Part 136 as amended in 41 FR 52779 on December 1, 1976. U.S. EPA granted this waiver. See Statement of Basis, <b><u>section III.C.2.</u></b></p>
(A) PCBs		<p>Renewal Application, Section 5.5.3</p>	<p>Yes/Yes</p>	<p>TSCA Operation Plan, p. 9. TSCA Groundwater Addendum.</p>
(B) pH.		<p>Renewal Application, Section 5.5.3</p>	<p>Yes/Yes</p>	<p>TSCA Operation Plan, p. 9. TSCA Groundwater Addendum.</p>
(C) Specific conductance.		<p>Renewal Application, Section 5.5.3</p>	<p>Yes/Yes</p>	<p>TSCA Operation Plan, p. 9. TSCA Groundwater Addendum.</p>





CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
	(D) Chlorinated organics	Renewal Application, Section 5.5.3, Section 13.2.2	Yes/Yes	TSCA Operation Plan, p. 9. TSCA Groundwater Addendum. Chemical Waste Management, Inc. has requested a 40 C.F.R. 761.75(c)(4) waiver from the list of parameters required to be monitored. U.S. EPA granted this waiver. See Statement of Basis, <b>section III.C.2.</b>
761.75(b)(7) Monitoring systems Leachate collection	<p>A leachate collection monitoring system shall be installed above the chemical waste landfill.</p> <p>Leachate collection systems shall be monitored monthly for quantity and physicochemical characteristics of leachate produced.</p> <p>The leachate should be either treated to acceptable limits for discharge in accordance with a state or federal permit or disposed of by another state or federally approved method.</p>	<p>Renewal Application, Section 5.6.1 TSCA Operation Plan, p. 7.</p> <p>Renewal Application, Section 5.6.2, TSCA Operation Plan, pp. 8 - 10</p> <p>Renewal Application, Section 5.6.2, TSCA Operation Plan, p. 8.</p>	<p>Yes/Yes</p> <p>Yes/Yes</p> <p>Yes/Yes</p>	<p>KHF uses the system described under § 761.75(b)(7). Phase III E&amp;D Report, Section 4.8.</p> <p>Monitoring: Operation Plan Table 31-3; WAP Appendix B-1. System is monitored weekly. Leachate is tested prior to disposal and annually.</p> <p>Operation Plan, Chapter 12 - WAP Appendix B-1.</p>



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
	<p>Water analysis shall be conducted as provided in § 761.75(b)(6)(iii).</p> <p>Acceptable leachate monitoring/collection systems shall be any of the following designs, unless a waiver is obtained pursuant to § 761.75(c)(4).</p>	<p>Renewal Application, Sections 5.6.2 and 13.2.3.</p> <p>Renewal Application, Section 5.6.1;</p>	<p>Yes/Yes</p> <p>Yes/Yes</p>	<p>Operation Plan, Chapter 12 - WAP Section 3 and Tables 3-1, 3-2 and 3-3.</p> <p>Chemical Waste Management, Inc. has requested a 40 C.F.R. 761.75(c)(4) waiver from the required leachate analysis (parameters and methods). U.S. EPA has granted this waiver. See Statement of Basis, <b>section III.C.2.</b></p> <p>TSCA Operation Plan, p. 7.</p>
<p>761.75(b)(7)(i) Monitoring systems Simple leachate collection</p> <p>761.75(b)(7)(ii) Monitoring systems Compound leachate collection</p>	<p>(i) This system consists of a gravity flow drainfield installed above the waste disposal unit liner.</p> <p>(ii) This system consists of a gravity flow drainfield installed above the waste disposal unit liner and above a secondary installed liner.</p>	<p>N/A</p> <p>Renewal Application, Section 5.6.1</p>	<p>—</p> <p>Yes/Yes</p>	<p>This system design is not used at KHF.</p> <p>Phase III E&amp;D Report, Section 4.8.</p>



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
761.75(b)(7)(iii) Monitoring systems Suction lysimeters	(iii) This system consists of a network of porous ceramic cups connected by hoses/tubing to a vacuum pump. The porous ceramic cups or suction lysimeters are installed along the sides and under the bottom of the waste disposal unit liner.	N/A	—	This system design is not used at KHF.
761.75(b)(8) Prevent damage to containers or articles  Segregate incompatible waste	(i) PCBs and PCB Items shall be placed in a landfill in a manner that will prevent damage to containers or articles.  Other wastes placed in the landfill that are not chemically compatible with PCBs and PCB Items including organic solvents shall be segregated from the PCBs throughout the waste handling and disposal process.	Renewal Application, Section 5.8  Renewal Application, Section 5.8	Yes/Yes  Yes/Yes	Operation Plan, Chapter 34 and Chapter 19, Section 19.2(a)(2)(A).
Operation plan	(ii) An operation plan shall be developed and submitted to the Regional Administrator for approval as required in § 761.75(c). This plan shall include detailed explanations of the procedures to be used for  Recordkeeping,	TSCA Operation Plan  TSCA Operation Plan, p. 2	Yes/Yes  Yes/Yes	Provided as Attachment 1 to the Renewal Application.  See Checklist for Recordkeeping and Reporting Requirements found in <b>Appendix D-3</b> .



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
	Surface water handling procedures	TSCA Operation Plan, p. 3	Yes/Yes	Renewal Application, Section 5.3. Operation Plan, Chapter 6 and Chapter 19, Section 19.2(a)(4). 2019 Stormwater Pollution Prevention Plan 2009 Surface Water Control Program.
	Excavation and backfilling	TSCA Operation Plan, p. 6	Yes/Yes	Operation Plan Sections 19.1 and 19.2(a)(3).
	Waste segregation burial coordinates	TSCA Operation Plan, p. 7	Yes/Yes	Operation Plan Sections 19.1.
	Vehicle and equipment movement,	TSCA Operation Plan, p. 7	Yes/Yes	Renewal Application, Section 5.9.
	Use of roadways	TSCA Operation Plan, p. 7	Yes/Yes	Renewal Application, Section 5.9.
	Leachate collection systems	TSCA Operation Plan, p. 7	Yes/Yes	Renewal Application, Section 5.6.
	Monitoring wells	TSCA Operation Plan, p. 9	Yes/Yes	Renewal Application, Section 5.5.
	Sampling and monitoring procedures	TSCA Operation Plan, p. 9	Yes/Yes	Renewal Application, Sections 5.5 through 5.7.
	Environmental emergency contingency plans	TSCA Operation Plan, p. 11	Yes/Yes	Operation Plan, Chapter 35.



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
Security	Security measures to protect against vandalism and unauthorized waste placement	TSCA Operation Plan, p. 11	Yes/Yes	Renewal Application, Section 5.9. Operation Plan, Chapter 30.
Disposal of liquid waste	<p>If the facility is to be used to dispose of liquid wastes containing between 50 ppm and 500 ppm PCB, the Operation Plan must include:</p> <p>Procedures to determine that liquid PCBs to be disposed of at the landfill do not exceed 500 ppm PCB and</p> <p>Measures to prevent the migration of PCBs from the landfill.</p>	<p>TSCA Operation Plan, p. 6</p> <p>TSCA Operation Plan, p. 6</p> <p>Renewal Application, Section 5</p>	<p>Yes/Yes</p> <p>Yes/Yes</p> <p>Yes/Yes</p>	<p>KHF may dispose of liquid PCB waste from incidental sources, such as precipitation, condensation, leachate or load separation and are associated with PCB Articles or nonliquid PCB waste in the landfill provided it has determined that the liquids do not exceed 500 ppm PCB and are not an ignitable waste (see § 761.60(a)(3)) and solidified the waste.</p> <p>See sections in the Renewal Application on landfill design (Section 5.1), groundwater monitoring (Section 5.5), and leachate collection and monitoring (Section 5.6).</p>



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
	<p>Bulk liquids not exceeding 500 ppm PCBs may be disposed of provided such waste is pretreated and/or stabilized (e.g., chemically fixed, evaporated, mixed with dry inert absorbent) to reduce its liquid content or increase its solid content so that a non-flowing consistency is achieved to eliminate the presence of free liquids prior to final disposal in a landfill.</p> <p>PCB Container of liquid PCBs with a concentration between 50 and 500 ppm PCB may be disposed of if each container is surrounded by an amount of inert absorbent material capable of absorbing all of the liquid contents of the container.</p>	<p>TSCA Operation Plan, p. 6</p>          <p>N/A</p>	<p>Yes/Yes</p>          <p>—</p>	<p>Operation Plan, Chapter 12 - WAP Sections 6.3.1; 6.3.2. and 6.3.3.1.</p>          <p>Except for PCB liquids from incidental sources, liquid PCBs must be disposed of through incineration or other high-temperature thermal treatment (§ 761.60(a)). PCB liquids from incidental sources must be solidified prior to disposal.</p> <p>Disposal in the landfill of liquid waste or containers with free liquids is prohibited unless the liquids are stabilized/solidified or lab-packed. See RCRA Permit, p. 27 and 22 CCR § 66264.314(c).</p>



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
Ignitable wastes	<p>(iii) Ignitable wastes shall not be disposed of in chemical waste landfills.</p> <p>(iv) Records shall be maintained for all PCB disposal operations and shall include information on:</p> <p style="padding-left: 40px;">The PCB concentration in liquid wastes</p> <p style="padding-left: 40px;">The three-dimensional burial coordinates for PCBs and PCB Items.</p> <p>Additional records shall be developed and maintained as required in § 761.180.</p>	<p>Renewal Application, Section 13.2.5</p> <p>TSCA Operation Plan, p. 2</p> <p>TSCA Operation Plan, p. 2</p> <p>TSCA Operation Plan, pp. 3 and 7</p> <p>TSCA Operation Plan, p. 3</p>	<p>Yes/Yes</p> <p>Yes/Yes</p> <p>Yes/Yes</p> <p>Yes/Yes</p> <p>Yes/Yes</p>	<p>Operation Plan, Chapter 34. Chemical Waste Management, Inc. has requested a § 761.75(c)(4) waiver from the requirement that no ignitable waste be disposed on in Landfill B-18 to allow the landfilling of small containers of hazardous waste in overpacked drums (lab packs) as allowed under § 264.316. U.S. EPA has granted this waiver. See Statement of Basis, <b><u>section III.C.2.</u></b></p>
761.75(b)(8) Fence	<p>(i) A six-foot woven mesh fence, wall, or similar device shall be placed around the site to prevent unauthorized persons and animals from entering.</p>	<p>Renewal Application, Section 5.9</p>	<p>Yes/Yes</p>	<p>TSCA Operation Plan, p. 11. Chemical Waste Management, Inc. has requested a § 761.75(c)(4) waiver for a fence around each TSCA unit. No waiver is necessary, see Statement of Basis, <b><u>section III.C.2.</u></b></p>



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
Road maintenance	(ii) Roads shall be maintained to and within the site which are adequate to support the operation and maintenance of the site without causing safety or nuisance problems or hazardous conditions.	Renewal Application, Section 5.9	Yes/Yes	TSCA Operation Plan, p. 7. Operation Plan, Chapter 10.
Safety	(iii) The site shall be operated and maintained in a manner to prevent safety problems or hazardous conditions resulting from spilled liquids and windblown materials.	Renewal Application, Section 5.9	Yes/Yes	Operation Plan, Chapter 10.
761.75(c) Landfill Approval	Prior to the disposal of any PCBs and PCB Items in a chemical waste landfill, the owner or operator of the landfill shall receive written approval of the Agency Regional Administrator for the Region in which the landfill is located.	N/R	—	KHF received a TSCA PCB permit in 1992 allowing placement of nonliquid PCB waste in Landfill B-18 Phases I and II. Placement of PCB waste, unless otherwise allowed under 40 C.F.R. Part 761, in Phase III is prohibited until EPA issues a written approval.
761.75(c)(1) Initial approval application report	The owner or operator shall submit to the Regional Administrator an initial report which contains:	Renewal Application in general	Yes/Yes	The Renewal Application is the “initial report” for the purposes of § 761.75(c).
Landfill location	(i) The location of the landfill	Renewal Application, Section 2.1	Yes/Yes	Operation Plan, Chapters 3 and 4.





CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
Landfill site and design	(ii) A detailed description of the landfill including general site plans and design drawings.	Renewal Application, Section 2.2	Yes/Yes	Phase III E&D Report.
Landfill engineering report	(iii) An engineering report describing the manner in which the landfill complies with the requirements for chemical waste landfills specified in § 761.75(b).	Operation Plan, Chapter 19	Yes/Yes	Phase III E&D Report
Sampling and monitoring	(iv) Sampling and monitoring equipment and facilities available	Renewal Application, sections 5.5 – 5.7	Yes/Yes	Other documents listed in TSCA Operation Plan, Appendix A.
Waste volume	(v) Expected waste volumes of PCBs	Renewal Application, Section 7	Yes/Yes	2016 Site-Specific Ambient Air Monitoring Plan. Operation Plan, Chapters 12 and 26.
Wastes accepted	(vi) General description of waste materials other than PCBs that are expected to be disposed of in the landfill.	Renewal Application, Section 8	Yes/Yes	TSCA Operation Plan, p. 1.
Operation plan	(vii) Landfill Operation Plan as required in § 761.75(b).	Renewal Application, Attachment 1	Yes/Yes	Operation Plan, Chapter 19
Other permits	(viii) Any local, state, or federal permits or approvals	Renewal Application, Table 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
Compliance schedule	(ix) Any schedules or plans for complying with the approval requirements of these regulations	Renewal Application, Section 12	Yes/Yes	No compliance schedules or plans were required.
761.75(c)(2) Additional information for permit decision	In addition to the information contained in the report described in § 761.75(c)(1), the Regional Administrator may require the owner or operator to submit any other information that the Regional Administrator finds to be reasonably necessary to determine whether a chemical waste landfill should be approved. Such other information shall be restricted to the types of information required in § 761.75(c)(1)(i) through (ix).	Misc. See Additional Cites/Notes	Yes/Yes	Request for additional sampling of air, soil and biota/vegetation and analysis for PCB congeners sent 12/2/08 (congeners study request); final response received November 2010 (Final congeners study report). NOD #1 issued November 14, 2009; Response received on December 22, 2009. NOD #2 issued September 22, 2011; Response received on November 21, 2011. Request for update sent December 20, 2016; Final response received on July 13, 2017. NOD issued December 21, 2017. Response received on April 19, 2018. Additional information/clarifications requested on September 7, 2018; response received on October 2, 2018. Additional information requested on July 3, 2019; response received on July 15 and 18, 2019.



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
761.75(c)(3) Permit decision	(i) Except as provided in § 761.75(c)(4) the Regional Administrator may not approve a chemical waste landfill for the disposal of PCBs and PCB Items, unless he finds that the landfill meets all of the requirements of § 761.75(b).	N/R	—	
No unreasonable risk	(ii) In addition to the requirements of § 761.75(b), the Regional Administrator may include in an approval any other requirements or provisions that the Regional Administrator finds are necessary to ensure that operation of the chemical waste landfill does not present an unreasonable risk of injury to health or the environment from PCBs.	N/R	—	
Approval expiration date	Such provisions may include a fixed period of time for which the approval is valid.	N/R	—	
Notice of PCB detection during monitoring	The approval may also include a stipulation that the operator of the chemical waste landfill report to the Regional Administrator any instance when PCBs are detectable during monitoring activities conducted pursuant to § 761.75(b)(6).	N/R	—	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
761.75(c)(4) Waivers	An owner or operator of a chemical waste landfill may submit evidence to the Regional Administrator that operation of the landfill will not present an unreasonable risk of injury to health or the environment from PCBs when one or more of the requirements of § 761.75(b) are not met. On the basis of such evidence and any other available information, the Regional Administrator may in his discretion find that one or more of the requirements of § 761.75(b) is not necessary to protect against such a risk and may waive the requirements in any approval for that landfill. Any finding and waiver under this paragraph will be stated in writing and included as part of the approval.	Renewal Application, Section 13.2	—	Chemical Waste Management, Inc. requested waivers for five § 761.75 requirements. U.S. EPA has granted four of these waivers and has determined that the fifth is unnecessary. See Statement of Basis, <b><u>section III.C.2.</u></b>
761.75(c)(5) Persons approved	Any approval will designate the persons who own and who are authorized to operate the chemical waste landfill, and will apply only to such persons, except as provided by § 761.75(c)(7).	N/R	—	
761.75(c)(6) Final approval signature Final approval contents	Approval of a chemical waste landfill will be in writing and will be signed by the Regional Administrator. The approval will state all requirements applicable to the approved landfill.	N/R N/R	— —	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPTABLE?	ADDITIONAL CITES/NOTES
761.75(c)(7) Transfer	Any person who owns or operates an approved chemical waste landfill must notify EPA at least 30 days before transferring ownership in the property or transferring the right to conduct the chemical waste landfill operation. The transferor must also submit to EPA, at least 30 days before such transfer, a notarized affidavit signed by the transferee which states that the transferee will abide by the transferor’s EPA chemical waste landfill approval. Within 30 days of receiving such notification and affidavit, EPA will issue an amended approval substituting the transferee’s name for the transferor’s name, or EPA may require the transferee to apply for a new chemical waste landfill approval. In the latter case, the transferee must abide by the transferor’s EPA approval until EPA issues the new approval to the transferee.	N/R	—	

N/A – Regulatory provision does not apply to the Facility.

N/R – Regulatory provision is either optional, applies to EPA, or otherwise does not need to be addressed in the application



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**Documents referenced:**

1. “Hazardous Waste Facility Permit - Chemical Waste Management, Inc. Kettleman Hills Facility (Permit Number: 02-SAC-03).” California Department of Toxic Substances Control. Effective June 16, 2003 (modified May 5, 2005, July 25, 2006, September 21, 2007, and May 21, 2014) (“RCRA Permit”).
2. “Request for Additional Sampling of Air, Soil, and Biota/Vegetation and Analysis for PCB Congeners.” Letter, Cheryl Nelson, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. December 2, 2008.
3. “Surface Water Control Program for Kettleman Hills Facility,” Centra Consulting, Inc. October 23, 2009.
4. “U.S. Environmental Protection Agency (“U.S. EPA”) Completeness Review of Chemical Waste Management, Inc. - Kettleman Hills Facility Request to Modify Toxic Substance Control Act (“TSCA”) Polychlorinated Biphenyl (“PCB”) Coordinated Approval Request for Landfill B-18 (Phase III).” Letter, Cheryl Nelson, U.S. EPA Region 9 to Paul Turek, Chemical Waste Management, Inc. November 25, 2009.
5. “Chemical Waste Management, Inc. - Kettleman Hills Facility Response To Landfill B-18 Phase III Coordinated Approval Completeness Review.” Letter, Paul Turek, Chemical Waste Management, Inc. to Chip Poalinelli, U.S. EPA Region 9. December 22, 2009.
6. “Final Dioxin-Like Polychlorinated Biphenyl (PCB) Congeners Study Report, Chemical Waste Management, Inc. Kettleman Hills Facility (KHF).” Wenck Associates, Inc. November 2010.
7. “Engineering and Design Report, B-18 Class 1 Landfill, Phase III Expansion and Final Closure, Kettleman Hills Facility, Kettleman City California”, August 2011 Revisions 2011.
8. “Notice of Deficiency (“NOD”) for Toxic Substances Control Act (“TSCA”) Permit Renewal and Modification Applications dated April I, 1997, as revised, and May 10, 2010; Chemical Waste Management Kettleman Hills Facility (CAT 000646117).” Caleb Shaffer, U.S. EPA Region 9 to Bob Henry, Chemical Waste Management, Inc. September 22, 2011.
9. Chemical Waste Management, Inc. - Kettleman Hills Facility Response To Notice Of Deficiency -TSCA Permit Renewal And Modification.” Letter, Paul Turek, Chemical Waste Management, Inc. to Chip Poalinelli, U.S. EPA Region 9. November 21, 2011.
10. “Revised Site-Specific Groundwater Monitoring Plan Class I Waste Management Units, Kettleman Hills Facility, Kings County California,” AMEC Environmental & Infrastructure, Inc., April 14, 2014.



11. “Site-Specific Ambient Air Monitoring Plan, Chemical Waste Management, Inc., Kettleman Hills Facility (KHF), Kings County, California.” Wenck Associates, Inc. January 2016.
12. “Stormwater Pollution Prevention Plan Chemical Waste Management, Inc., - Kettleman Hills Facility.” Golder Associates and SWT Engineering. June 2019.
13. Letter, Tom Huetteman, U.S. EPA Region 9 to Robert Henry, CWMI. December 20, 2016.
14. “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised TSCA Permit Renewal Application – Revision 1”. Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. July 13, 2017.
15. Letter, Barbara Gross, U.S. EPA Region 9, to Reyna Verdin, CWMI. December 21, 2017 with enclosure: “Notice of Deficiency, TSCA Permit Renewal Application (dated July 1, 2017), Chemical Waste Management, Inc. – Kettleman Hills Facility, EPA ID. NO CAT 000 646 117.” U.S. EPA Region 9. December 21, 2017.
16. “Hazardous Waste Facility Permit Renewal Application, Operation Plan, Chemical Waste Management, Inc. Kettleman Hills Facility.” Chemical Waste Management, Inc. Revision 4: July 31, 2019.
17. “TSCA Groundwater Monitoring Addendum to Site-Specific Monitoring Plan, Kettleman Hills Facility, Kings County, California.” AMEC Foster Wheeler. April 17, 2018.
18. “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised TSCA Permit Renewal Application – Revision 2”. Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. April 19, 2018.
19. “Memorandum to File (CAT 000 646 117 Chemical Waste Management, Inc. TSCA Approval), Subject: September 7, 2018 Call with Chemical Waste Management, Inc. Kettleman Hills Facility.” Frances Wicher, U.S. EPA Region 9. September 17, 2018.
20. “Chemical Waste Management, Inc. – Kettleman Hills Facility Revised TSCA Permit Renewal Application – Revision 3”. Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. October 2, 2018.
21. “TSCA Permit Renewal Application, Chemical Waste Management, Kettleman Hills Facility.” Revision 4: November 22, 2019.
22. “TSCA Operation Plan, Landfill B-18 Phases I, II, and III; PCB Building and Outside Containment Area.” Chemical Waste Management, Inc. Revision 4: November 22, 2019.
23. “KHF-TSCA Permit Financial Assurance and Part B Permit Reference.” Email, Reyna Reyes Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. June 26, 2020.



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**APPENDIX D-2 –  
REVIEW CHECKLIST FOR 40 C.F.R. PART 761 REQUIREMENTS FOR PCB COMMERCIAL STORAGE FACILITIES**

**November 22, 2019 TSCA Renewal Application for  
Chemical Waste Management Kettleman Hills Facility (EPA I.D. CAT 000 646 117)  
Kettleman City, California  
Toxic Substances Control Act Requirements  
40 C.F.R. Part 761**

This Checklist documents how Chemical Waste Management, Inc.’s (“CWM”) application to renew and modify its Approval (permit) to store and treat polychlorinated biphenyls (“PCB”) waste at its Kettleman Hills Facility (KHF or “Facility”) meets the requirements of the Toxic Substances Control Act (“TSCA”) regulations at 40 C.F.R. Part 761. It is based on U.S. EPA’s review of the renewal application, titled “TSCA Permit Renewal Application, Chemical Waste Management, Inc., Kettleman Hills Facility” Revision 4: November 22, 2019 (“Renewal Application”). This Checklist identifies if the required information is present and complete, whether the information is acceptable, and where the information can be found in the Renewal Application. Storage of PCB waste at KHF is currently limited to the PCB Flushing/Storage Unit (PCB F/SU) unless otherwise allowed by 40 C.F.R. Part 761.

Documents frequently referenced in the checklist are listed below. A complete list of references is provided at the end of the checklist.

Renewal Application: “TSCA Permit Renewal Application.” CWM KHF. Revision 4: November 22, 2019.

TSCA Operation Plan: “TSCA Operation Plan, Landfill B-18 Phases I, II, and III; PCB Building and Outside Containment Area.” Chemical Waste Management, Inc. Revision 4: November 22, 2109.

Operation Plan: “Hazardous Waste Facility Permit Renewal Application, Operation Plan.” CWM KHF. Revision 4, July 31, 2019.

Closure Plan: “Closure and Post-Closure Plans, Kettleman Hills Facility.” Golder Associates. July 31, 2019.

Closure Cost Estimate: “Closure and Post-Closure Cost Estimate, Kettleman Hills Facility.” Golder Associates. July 31, 2019.





Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65 Applicability	40 C.F.R. § 761.65 applies to the storage for disposal of PCBs at concentrations of 50 ppm or greater and PCB Items with PCB concentrations of 50 ppm or greater.	Renewal Application, Section 4	—	KHF is requesting approval to store for disposal PCB waste with concentrations of 50 ppm or greater in the enclosed building and outside containment area at the PCB F/SU.
761.65(a)(1) Storage period	<i>Storage limitations.</i> Any PCB waste shall be disposed of as required by 40 C.F.R. Part 761, Subpart D within one year from the date it was determined to be PCB waste and the decision was made to dispose of it. This date is the date of removal from service for disposal and the point at which the 1-year time frame for disposal begins.	Operation Plan Section 14.3(a)	Yes/Yes	
761.65(a)(2) Storage period extension	<i>One-year extension.</i> Any person storing PCB waste that is subject to the 1-year time limit for storage and disposal in § 761.65(a)(1) may provide written notification to the EPA Regional Administrator for the Region in which the PCB waste is stored that their continuing attempts to dispose of or secure disposal for their waste within the 1-year time limit have been unsuccessful. Upon receipt of the notice by the EPA Regional Administrator, the time for disposal is automatically extended for 1 additional year (2 years total) if the following conditions are met:	Operation Plan Section 14.3(a)	Yes/Yes	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(a)(2) Storage period extension	(i) The notification is received by the EPA Regional Administrator at least 30 days before the initial 1-year time limit expires and the notice identifies the storer, the types, volumes, and locations of the waste and the reasons for failure to meet the initial 1-year time limit.	Operation Plan Section 14.3(a)	Yes/Yes	
	(ii) A written record documenting all continuing attempts to secure disposal is maintained until the waste is disposed of.	Operation Plan Section 14.3(a)	Yes/Yes	
	(iii) The written record required by § 761.65(a)(2)(ii) is available for inspection or submission if requested by EPA.	Operation Plan Section 14.3(a)	Yes/Yes	
	(iv) Continuing attempts to secure disposal were initiated within 270 days after the time the waste was first subject to the 1-year time limit requirement, as specified in § 761.65(a)(1). Failure to initiate and continue attempts to secure disposal throughout the total time the waste is in storage shall automatically disqualify the notifier from receiving an automatic extension under § 761.65(a)(2).	Operation Plan Section 14.3(a)	Yes/Yes	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/Acceptable?	Additional Cites/Notes
761.65(a)(3) Storage period extension	<i>Additional extensions.</i> Upon written request, the EPA Regional Administrator may grant additional extensions beyond the 1-year extension authorized in § 761.65(a)(2). At the time of the request, the requestor must supply specific justification for the additional extension and indicate what measures the requestor is taking to secure disposal of the waste or indicate why disposal could not be conducted during the period of the prior extension. The EPA Regional Administrator may require, as a condition to granting any extension under this paragraph, specific actions including, but not limited to, marking, inspection, recordkeeping, or financial assurance to ensure that the waste does not pose an unreasonable risk of injury to health or the environment.	Operation Plan Section 14.3(a)	Yes/Yes	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(a)(4) Storage at an approved facility	<i>Storage at an approved facility.</i> Increased time for storage may be granted as a condition of any TSCA PCB storage or disposal approval, by the EPA Regional Administrator for the Region in which the PCBs or PCB Items are to be stored or disposed, if EPA determines that there is a demonstrated need or justification for additional time, that the owner or operator of the facility is pursuing relevant treatment or disposal options, and that no unreasonable risk of injury to health or the environment will result from the increased storage time. In making this determination, EPA will consider such factors as absence of any approved treatment technology and insufficient time to complete the treatment or destruction process. EPA may require as a condition of the approval that the owner or operator submit periodic progress reports.	N/R	—	Optional requirement. KHF is not requesting increased storage time in its application.



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(b) Storage unit structure	Except as provided in § 761.65(b)(2), (c)(1), (c)(7), (c)(9), and (c)(10) owners or operators of any facilities used for the storage of PCBs and PCB Items designated for disposal shall comply with the following storage unit requirements:			See below for a discussion of the exceptions.
761.65(b)(1) Storage unit structure	<p>The facilities shall meet the following criteria:</p> <p>(i) Adequate roof and walls to prevent rain water from reaching the stored PCBs and PCB Items;</p> <p>(ii) An adequate floor that has continuous curbing with a minimum 6-inch high curb. The floor and curbing must provide a containment volume equal to at least two times the internal volume of the largest PCB Article or PCB Container or 25 percent of the total internal volume of all PCB Articles or PCB Containers stored there, whichever is greater.</p>	<p><i>PCB F/SU enclosed building:</i> Renewal Application, Section 10.1.1.</p> <p><i>PCB F/SU outside containment area:</i> Renewal Application, Section 10.1.1.</p> <p><i>PCB F/SU enclosed building:</i> Renewal Application, Section 10.1.1.</p>	<p>Yes/Yes</p> <p>Yes/No</p> <p>Yes/Yes</p>	<p>Operation Plan, Section 14.3(b.)</p> <p>Operation Plan, Section 14.3(b). PCB waste storage in the outside containment area of PCB F/SU will be managed per § 761.65(c)(1).</p> <p>Renewal Application, Attachment 6. Operation Plan, Section 14.3(b).</p>



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
Storage unit structure	(iii) No drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to flow from the curbed area;	<i>PCB F/SU outside containment area:</i> Renewal Application, Section 10.1.1.	Yes/Yes	Renewal Application, Attachment 7. Operation Plan, Section 14.3(b).
		<i>PCB F/SU enclosed building:</i> Renewal Application, Section 10.1.1.	Yes/Yes	Operation Plan, Section 14.3(b).
		<i>PCB F/SU outside containment area:</i> Renewal Application, Section 10.1.1.	Yes/Yes	Operation Plan, Section 14.3(b).
		<i>PCB F/SU enclosed building:</i> Renewal Application, Section 10.1.1.	Yes/Yes	Operation Plan, Section 14.3(b).
	(iv) Floors and curbing constructed of Portland cement, concrete, or a continuous, smooth, non-porous surface as defined at § 761.3, which prevents or minimizes penetration of PCBs.	<i>PCB F/SU outside containment area:</i> Renewal Application, Section 10.1.1.	Yes/Yes	Operation Plan, Section 14.3(b).



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/Acceptable?	Additional Cites/Notes
	(v) Not located at a site that is below the 100-year flood water elevation.	Renewal Application Figure 4-2-1	Yes/Yes	Operation Plan, Exhibit 5-1.
761.65(b)(2) Storage without TSCA permit or design	<p>No person may store PCBs and PCB Items designated for disposal in a storage unit other than one approved pursuant to § 761.65(d) or meeting the design requirements of § 761.65(b), unless the unit meets one of the following conditions:</p> <p>(i) Is permitted by EPA under section 3004 of RCRA to manage hazardous waste in containers, and spills of PCBs are cleaned up in accordance with 40 C.F.R. Part 761, Subpart G.</p> <p>(ii) Qualifies for interim status under section 3005 of RCRA to manage hazardous waste in containers, meets the requirements for containment at 40 C.F.R. 264.175, and spills of PCBs are cleaned up in accordance with 40 C.F.R. Part 761, Subpart G.</p>	<p>—</p> <p>N/A</p> <p>N/A</p>	<p>—</p> <p>—</p> <p>—</p>	<p>See below.</p> <p>No PCB storage units at KHF are permitted by EPA under RCRA section 3004.</p> <p>No PCB storage units at KHF qualify for interim status under RCRA section 3004.</p>



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
	(iii) Is permitted by a state authorized under section 3006 of RCRA to manage hazardous waste in containers, and spills of PCBs are cleaned up in accordance with 40 C.F.R. Part 761, Subpart G.	See Note	—	<p>The enclosed building at the PCB F/SU is permitted by DTSC under section 3006 of RCRA to store waste in containers; the outside containment area is currently permitted to process but not store waste. See RCRA Permit.</p> <p>The RCRA permit does not require that spills of PCB be cleaned up in accordance with 40 C.F.R. Part 761 Subpart G (Spill Clean Up Policy).</p>
761.65(b)(2) Storage without TSCA permit or design	<p>(iv) Is approved or otherwise regulated pursuant to a state PCB waste management program no less stringent in protection of health or the environment than the applicable TSCA requirements found 40 C.F.R. Part 761.</p> <p>(v) Is subject to a TSCA Coordinated Approval, which includes provisions for storage of PCBs, issued pursuant to § 761.77.</p> <p>(vi) Has a TSCA PCB waste management approval, which includes provisions for storage, issued pursuant to § 761.61(c) or § 761.62(c).</p>	<p>N/A</p> <p>N/A</p> <p>N/A</p>	<p>—</p> <p>—</p> <p>—</p>	<p>California has a State-operated PCB waste management program; however, no evaluation of comparable stringency to 40 C.F.R. Part 761 has been made.</p> <p>No PCB storage units at KHF have a TSCA Coordinated Approval.</p> <p>Although KHF has a TSCA PCB waste management approval which address the storage units, the approval does not include provisions for storage issued pursuant to § 761.61(c) or § 761.62(c).</p>





Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(c)(1) Temporary storage	<p>The following PCB Items may be stored temporarily in an area that does not comply with the requirements of § 761.65(b) for up to thirty days from the date of their removal from service, provided that a notation is attached to the PCB Item or a PCB Container (containing the item) indicating the date the item was removed from service:</p> <p>(i) Non-leaking PCB Articles and PCB Equipment;</p>	<p>Renewal Application, Section 4.2 and Section 10.1.1</p> <p>Renewal Application, Section 4.2</p>	<p>Yes/Yes</p> <p>Yes/Yes</p>	
761.65(c)(1) Temporary storage	<p>(ii) Leaking PCB Articles and PCB Equipment if the PCB Items are placed in a non-leaking PCB Container that contains sufficient sorbent materials to absorb any liquid PCBs remaining in the PCB Items;</p> <p>(iii) PCB Containers containing nonliquid PCBs such as contaminated soil, rags, and debris; and</p>	<p>Renewal Application, Section 4.2</p> <p>Renewal Application, Section 4.2</p>	<p>Yes/Yes</p> <p>Yes/Yes</p>	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
	(iv) PCB containers containing liquid PCBs at concentrations of 50 ppm, provided a Spill Prevention, Control and Countermeasure Plan has been prepared for the temporary storage area in accordance with 40 C.F.R. part 112 and the liquid PCB waste is in packaging authorized in the DOT Hazardous Materials Regulations at 49 C.F.R. parts 171 through 180 or stationary bulk storage tanks (including rolling stock such as, but not limited to, tanker trucks, as specified by DOT).	Renewal Application, Section 4.2 and Section 10.1.1	Yes/Yes	
761.65(c)(2) Storage adjacent to storage unit	<p>Non-leaking and structurally undamaged PCB Large High Voltage Capacitors and PCB-Contaminated Electrical Equipment that have not been drained of free-flowing dielectric fluid may be stored on pallets next to a storage facility that meets the requirements of § 761.65(b). Storage under this paragraph will be permitted only when the storage facility has immediately available unfilled storage space equal to 10 percent of the volume of capacitors and equipment stored outside the facility [and]</p> <p>The capacitors and equipment temporarily stored outside the facility shall be checked for leaks weekly.</p>	<p>Renewal Application, Section 4.2</p> <p>Renewal Application, Section 4.2</p>	<p>Yes/Yes</p> <p>Yes/Yes</p>	<p>Operation Plan, Table 31.2</p>



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(c)(3) Storage unit marking	Any storage area subject to the requirements of § 761.65(b) or § 761.65(c)(1) shall be marked as required in 40 C.F.R. Part 761, Subpart C (§ 761.40(a)(10)).	Renewal Application, Section 10	Yes/Yes	
761.65(c)(4) Storage unit equipment decontamination	No item of movable equipment that is used for handling PCBs and PCB Items in the storage units and that comes in direct contact with PCBs shall be removed from the storage unit area unless it has been decontaminated as specified in § 761.79.	Renewal Application, Section 4.2	Yes/Yes	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
<p>761.65(c)(5) Storage unit monthly leak checks</p>	<p>All PCB Items in storage shall be checked for leaks at least once every 30 days.</p> <p>Any leaking PCB Items and their contents shall be transferred immediately to properly marked non-leaking containers.</p> <p>Any spilled or leaked materials shall be immediately cleaned up and the materials and residues containing PCBs shall be disposed of in accordance with § 761.61.</p> <p>Records of inspections, maintenance, cleanup and disposal must be maintained in accordance with § 761.180(a) and (b).</p>	<p>Operation Plan Table 31.2</p> <p>Operation Plan Section 35A.2</p> <p>Operation Plan Section 35A.2</p> <p>TSCA Operation Plan, page 3</p>	<p>Yes/Yes</p> <p>Yes/Yes</p> <p>Yes/Yes</p> <p>Yes/Yes</p>	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
<p>761.65(c)(6) Storage and transport containers</p>	<p>Except as provided in § 761.65(c)(6)(i) and (c)(6)(ii), any container used for the storage of liquid or nonliquid PCB waste shall be in accordance with the requirements set forth in the DOT Hazardous Materials Regulations (HMR) at 49 C.F.R. parts 171 through 180. PCB waste not subject to the HMR (i.e., PCB waste at concentrations of &lt;20 ppm or &lt;1 pound of PCBs regardless of concentration) must be packaged in accordance with Packaging Group III, unless other hazards associated with the PCB waste cause it to require packaging in accordance with Packaging Groups I or II.</p> <p>For purposes of describing PCB waste not subject to DOT's HMR on a manifest, one may use the term "Non-DOT Regulated PCBs."</p> <p>(i) Containers other than those meeting HMR performance standards may be used for storage of PCB/radioactive waste provided the following requirements are met</p> <p>(A) Containers used for storage of liquid PCB/radioactive wastes must be non-leaking.</p>	<p>Renewal Application, Section 4.2</p> <p>N/A</p> <p>N/A</p>	<p>Yes/Yes</p> <p>—</p> <p>—</p>	<p>KHF does not handle nonliquid PCB/radioactive waste.</p> <p>KHF does not handle nonliquid PCB/radioactive waste.</p>



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
	<p>(B) Containers used for storage of nonliquid PCB/radioactive wastes must be designed to prevent the buildup of liquids if such containers are stored in an area meeting the containment requirements of § 761.65(b)(1)(ii), as well as all other applicable State or Federal regulations or requirements for control of radioactive materials.</p> <p>(ii) The following DOT specification containers that conform to the requirements of 49 40 C.F.R. chapter I, subchapter C in effect on September 30, 1991, may be used for storage and transportation activities that are not subject to DOT regulation, and may be used on a transitional basis as permitted at 49 40 C.F.R. § 171.14.</p>	<p>N/A</p> <p>N/A</p>	<p>—</p> <p>—</p>	<p>KHF does not handle nonliquid PCB/radioactive waste.</p> <p>Obsolete provision; transition period ended.</p>



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
<p>761.65(c)(7)</p> <p>Storage unit stationary container design</p>	<p>Stationary storage containers for liquid PCBs can be larger than the containers specified in § 761.65(c)(6) provided that:</p> <p>(i) The containers are designed, constructed, and operated in compliance with Occupational Safety and Health Standards, 29 40 C.F.R. § 1910.106, Flammable and combustible liquids. Before using these containers for storing PCBs, the design of the containers must be reviewed to determine the effect on the structural safety of the containers that will result from placing liquids with the specific gravity of PCBs into the containers (see 29 40 C.F.R. § 1910.106(b)(1)(i)(f)).</p>	<p>Renewal Application, Section 4.2</p> <p>Renewal Application, Section 4.2</p>	<p>Yes/Yes</p> <p>Yes/Yes</p>	<p>Operation Plan, Section 15.2(a) and Exhibits 15-1.1, 15.3-1, and 15.3-2.</p>



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
Storage unit stationary container spill prevention and response	(ii) The owners or operators of any facility using containers described in § 761.65(c)(7)(i), shall prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan as described in 40 C.F.R. Part 112. In complying with 40 C.F.R. Part 112, the owner or operator shall read “oil(s)” as “PCB(s)” whenever it appears. The exemptions for storage capacity, 40 C.F.R. § 112.1(d)(2), and the amendment of SPCC plans by the Regional Administrator, 40 C.F.R. § 112.4, shall not apply unless some fraction of the liquids stored in the container are oils as defined by section 311 of the Clean Water Act.	Renewal Application, Section 4.2; Section 10.1.1	Yes/Yes	The Facility’s SPCC is found in Renewal Application, Attachment 12
761.65(c)(8) Storage items managed by date	PCB Items shall be dated on the item when they are removed from service for disposal. The storage shall be managed so that the PCB Items can be located by this date. Storage containers provided in § 761.65(c)(7), shall have a record that includes for each batch of PCBs the quantity of the batch and date the batch was added to the container. The record shall also include the date, quantity, and disposition of any batch of PCBs removed from the container.	Renewal Application, Section 10.1.1 TSCA Operation Plan, p. 2 Operation Plan Section 14.3(a)	Yes/Yes	





Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(c)(9) Temporary storage	Bulk PCB remediation waste or PCB bulk product waste may be stored at the clean-up site or site of generation for 180 days subject to the [] conditions in [this section]:	N/R	—	
761.65(c)(10) Records	Owners or operators of storage facilities shall establish and maintain records as provided in § 761.180.	TSCA Operation Plan, pages 2-3	Yes/Yes	See “Recordkeeping and Reporting Requirement Checklist” in <b>Appendix D-3</b> .
761.65(d)(1) Approval of commercial storers of PCB waste	All commercial storers of PCB waste shall have interim approval to operate commercial facilities for the storage of PCB waste until August 2, 1990. Commercial storers of PCB waste are prohibited from storing any PCB waste at their facilities after August 2, 1990 unless they have submitted by August 2, 1990 a complete application for a final storage approval under § 761.65(d)(2). The period of interim approval shall continue until EPA makes a final decision on the storage application at which time such interim approval shall terminate.	N/A	—	KHF received a PCB storage approval under 40 C.F.R. § 761.65(d)(7)(i) (Storage areas ancillary to TSCA-approved disposal facilities) on November 30, 1990.
761.65(d)(2) Agency determination required to issue final approval	The Regional Administrator for the region in which the storage facility is located shall grant written, final approval to engage in the commercial storage of PCB waste upon a determination by the Regional Administrator, that the criteria in § 761.65(d)(2)(i) through (d)(2)(vii) have been met by the applicant:	N/R	—	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(d)(2) (i) Personnel qualifications	(i) The applicant, its principals, and its key employees responsible for the establishment or operation of the commercial storage facility are qualified to engage in the business of commercial storage of PCB waste.	N/R	—	See information under § 761.65(d)(3) below.
761.65(d)(2) (ii) Facility capacity	(ii) The facility possesses the capacity to handle the quantity of PCB waste which the owner or operator of the facility has estimated will be the maximum quantity of PCB waste that will be handled at any one time at the facility.	N/R	—	
761.65(d)(2) (iii) Certification of storage facility standards	(iii) The owner or operator of the unit has certified compliance with the storage facility standards in § 761.65(b) and (c)(7).	N/R	—	
761.65(d)(2) (iv) Storage closure plan	(iv) The owner or operator has developed a written closure plan for the facility that is deemed acceptable by the Regional Administrator under the closure plan standards of § 761.65(e).	N/R	—	
761.65(d)(2) (v) Storage financial assurance	(v) The owner or operator has included in the application for final approval a demonstration of financial responsibility for closure that meets the financial responsibility standards of § 761.65(g).	N/R	—	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(d)(2) (vi) No unreasonable risk	(vi) The operation of the storage facility will not pose an unreasonable risk of injury to health or the environment.	N/R	—	
761.65(d)(2) (vii) Compliance history	(vii) The environmental compliance history of the applicant, its principals, and its key employees may be deemed to constitute a sufficient basis for denial of approval whenever in the judgment of the Regional Administrator that history of environmental civil violations or criminal convictions evidences a pattern or practice of noncompliance that demonstrates the applicant’s unwillingness or inability to achieve and maintain compliance with the regulations.	N/R	—	
761.65(d)(3) Application content	Applicants for storage approvals shall submit a written application that includes any relevant information bearing upon the qualifications of the facility's principals and key employees to engage in the business of commercial storage of PCB waste. This information shall include, but is not limited to:	Renewal Application, Section 2.3	Yes/Yes	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(d)(3) Application content	(i) The identification of the owner and the operator of the facility, including all general partners of a partnership, any limited partner of a partnership, any stockholder of a corporation or any participant in any other type of business organization or entity who owns or controls, directly or indirectly, more than 5 percent of each partnership, corporation, or other business organization and all officials of the facility who have direct management responsibility for the facility.	Renewal Application, Section 2.3	Yes/Yes	Chemical Waste Management, Inc. is a subsidiary of Waste Management Holdings, Inc. which is a subsidiary of Waste Management, Inc. (WM), a publicly traded corporation. The three shareholders holding more than 5% are all institutions. See WM, 2017 Annual Report, p. 23.
	(ii) The identification of the person responsible for the overall operations of the facility (i.e., a plant manager, superintendent, or a person of similar responsibility) and the supervisory employees who are or will be responsible for the operation of the facility.	Renewal Application, Section 2.3	Yes/Yes	
	(iii) Information concerning the technical qualifications and experience of the persons responsible for the overall operation of the facility and the employees responsible for handling PCB waste or other wastes.	Renewal Application, Section 2.3	Yes/Yes	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(d)(3) Application content	(iv) Information concerning any past state or Federal environmental violations involving the same business or another business with which the principals or supervisory employees were affiliated directly that occurred within 5 years preceding the date of submission and which relate directly to violations that resulted in either a civil penalty (irrespective of whether the matter was disposed of by an adjudication or by a without prejudice settlement) or judgment of conviction whether entered after trial or a plea, either of guilt or nolo contendere or civil injunctive relief and involved storage, disposal, transport, or other waste handling activities.	Renewal Application Table 6	Yes/Yes	
	(v) A list of all companies currently owned or operated in the past by the principals or key employees identified in § 761.65(d)(3)(i) and (d)(3)(ii) that are or were directly or indirectly involved with waste handling activities.	761.65(d)(3) Application content	Yes/Yes	
	(vi) The owner's or operator's estimate of maximum PCB waste quantity to be handled at the facility.		Yes/Yes	<p><i>Enclosed building at PCB F/SU: 240 55-gallon drums (13,200 gallons) plus 5,900 gallons in one tank for a total of 19,100 gallons</i></p> <p><i>Outside containment area at PCB F/SU: 224 55-gallon drums (12,320 gallons) plus one 5000 gallon container for a total of 17,320 gallons</i></p>



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Accept- able?	Additional Cites/Notes
	<p>(vii) A written statement certifying compliance with § 761.65(b) or (c) and containing a certification as defined in § 761.3.</p> <p>(viii) A written closure plan for the facility, as described in § 761.65(e).</p> <p>(ix) The current closure cost estimate for the facility, as described in § 761.65(f).</p> <p>(x) A demonstration of financial responsibility to close the facility, as described in § 761.65(g).</p>	<p>Renewal Application, Section 14.2</p>	<p>Yes/Yes</p> <p>Yes/Yes</p>	<p>See review of Closure Plan requirements below.</p> <p>See also, “Chemical Waste Management, Inc. - Kettleman Hills Facility, 22 CCR Financial Assurance For Closure &amp; Post-Closure Costs.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Julie Mullins, DTSC. December 31, 2018 with enclosures.</p> <p>Chemical Waste Management, Inc.’s existing financial assurance mechanism is sufficient to demonstrate the required financial responsibility for closure of the PCB Flushing/Storage Unit under the Facility’s existing approvals. However, U.S. EPA (not DTSC) is the agency with authority over the closure requirements that is named in the instruments required under § 761.65(g). See Statement of Basis, <b><u>section III.D.2.a.(5).</u></b></p>



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(d)(4) Satisfaction of requirements	The written approval issued by EPA shall include, but not be limited to, the following:	N/R	—	
	(i) The determination that the applicant has satisfied the requirements set forth in § 761.65(d)(2), and a brief statement setting forth the basis for the determination.	N/R	—	
Storage closure plan	(ii) Incorporation of the closure plan submitted by the facility owner or operator and approved by EPA.	N/R	—	
Maximum storage capacity	(iii) A condition imposing a maximum PCB storage capacity which the facility shall not exceed during its PCB waste storage operations. The maximum storage capacity imposed under this condition shall not be greater than the estimated maximum inventory of PCB waste included in the owner's or operator's application for final approval.	N/R	—	
Other conditions	(iv) Such other conditions as deemed necessary by EPA to ensure that the operations of the PCB storage facility will not pose an unreasonable risk of injury to health or the environment.	N/R	—	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(d)(5) Storage area exemption for transfer facilities	Storage areas at transfer facilities are exempt from the requirement to obtain approval as a commercial storer of PCB waste under § 761.65(d)(5), unless the same PCB waste is stored at these facilities for a period of time greater than 10 consecutive days between destinations.	N/A	—	KHF is not a transfer facility. 40 C.F.R. § 761.3 defines a transfer facility as any transportation-related facility including loading docks, parking areas, and other similar areas where shipments of PCB waste are held during the normal course of transportation.
761.65(d)(6) Possible exemption for storage areas at RCRA permitted facilities	Storage areas at RCRA-permitted facilities may be exempt from the separate TSCA storage approval requirements in § 761.65(d) upon a showing to the Regional Administrator's satisfaction that the facility's existing RCRA closure plan is substantially equivalent to this rule's closure plan standards, and that such facility's closure cost estimate and financial assurance demonstration account for maximum PCB waste inventories, and the requirements of § 761.65(d)(3)(i) through (d)(3)(v) and (d)(3)(vii) are met. A pay-in period of longer than 3 years after approval of the storage facility pursuant to this rule, will be acceptable to EPA if that pay-in period has already been established for a valid RCRA facility or previously approved TSCA facility.	N/R	—	This is an optional provision. U.S. EPA is not invoking this section. See Statement of Basis, <b><u>section III.D.</u></b>





Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
<p>761.65(d)(7) Possible exemption for storage areas ancillary to approved disposal facilities</p>	<p>Storage areas ancillary to TSCA-approved disposal facilities may be exempt from a separate facility approval provided all of the following conditions are met:</p>	N/R	—	<p>This is an optional provision. U.S. EPA is not invoking this section. See Statement of Basis, <b><u>section III.D.</u></b></p>
	<p>(i) The current disposal approval contains an expiration date.</p>	N/R	—	
	<p>(ii) The current disposal approval's closure and financial responsibility conditions specifically extend to storage areas ancillary to disposal.</p>	N/R	—	
	<p>(iii) The current disposal approval's closure and financial responsibility conditions provide for annual adjustments for inflation, and for modification when changes in operation would affect closure costs.</p>	N/R	—	
	<p>(iv) The current disposal approval contains conditions on closure and financial responsibility that are at least as stringent as those in § 761.65(e) and (g). However, the provision for a 3-year closure trust pay-in period, as specified in § 761.65(g)(1)(i), would be waived in a case in which an approved TSCA facility or RCRA facility that covers PCB storage has a longer pay-in period for the trust.</p>	N/R	—	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
	(v) The current disposal approval satisfies the requirements of § 761.65(d)(3)(i) through (d)(3)(v).	N/R	—	
761.65(d)(8) Modification of deficient approvals for storage	The approval of any existing TSCA-approved disposal facility ancillary to a commercial storage facility that is deficient in any of the conditions of § 761.65(d)(7)(i) through (d)(7)(v) shall be called in by the Regional Administrator. The approval shall be modified to meet the requirements of § 761.65(d)(7) within 180 days of the effective date of this final rule, or a separate application for approval of the storage facility may be submitted to the Regional Administrator.	N/R	—	KHF's PCB disposal facility (Unit B-18) is not ancillary to a commercial storage facility, rather the storage facilities are ancillary to the disposal facility.
761.65(e)(1)	A commercial storer of PCB waste shall have a written closure plan that identifies the steps that the owner or operator of the facility shall take to close the PCB waste storage facility in a manner that eliminates the potential for post-closure releases of PCBs which may present an unreasonable risk to human health or the environment. An acceptable closure plan must include, at a minimum, all of the following:	Renewal Application, Section 14.1 Closure and Post-Closure Plan, section 2.7		See below. Note: Evaluation is for closure of the commercial storage unit (PCB Flushing/Storage unit).



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
Closure	(i) A description of how the PCB storage areas of the facility will be closed in a manner that eliminates the potential for post-closure releases of PCBs into the environment.	Renewal Application, Section 14.1 Closure and Post-Closure Plan, section 2.7		PCB F/SU will be completely demolished at time of closure. Soil will be tested and removed and backfilled if necessary to meet numerical cleanup standards. Closure Plan, Section 2.7.
Storage operations	(ii) An identification of the maximum extent of storage operations that will be open during the active life of the facility, including an identification of the extent of PCB storage operations at the facility relative to other wastes that will be handled at the facility.	Renewal Application, Section 4.1	Yes/Yes	
Maximum inventory	(iii) An estimate of the maximum inventory of PCB waste that could be handled at one time at the facility over its active life, and a detailed description of the methods or arrangements to be used during closure for removing, transporting, storing, or disposing of the facility's inventory of PCB waste, including an identification of any off-site facilities that will be used.	Closure Cost, Table A-3 (Quantities); page 6 and Table A-5 (off-site disposal facilities); Closure Plan, Section 2.7.2 (methods)	Yes/Yes	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
Decontamination of storage facility	(iv) A detailed description of the steps needed to remove or decontaminate PCB waste residues and contaminated containment system components, equipment, structures, and soils during closure in accordance with the levels specified in the PCB Spills Cleanup Policy in 40 C.F.R. Part 761, Subpart G, including a description of the methods for sampling and testing of surrounding soils, and the criteria for determining the extent of removal or decontamination.	Closure Plan, section 2.7	Yes/Yes	
Other activities	(v) A detailed description of other activities necessary during the closure period to ensure that any post-closure releases of PCBs will not present unreasonable risks to human health or the environment. This includes activities such as ground-water monitoring, run-on and run-off control, and facility security.	Closure Plan, Section 4.0	Yes/Yes	PCB F/SU will be completely demolished at time of closure. Soil will be tested and removed and backfilled if necessary to meet numerical cleanup standards. Closure Plan, Section 2.7.
Schedule	(vi) A schedule for closure of each area of the facility where PCB waste is stored or handled, including the total time required to close each area of PCB waste storage or handling, and the time required for any intervening closure activities.	Closure Plan, Figure 3	Yes/Yes	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
Expected year of closure	(vii) An estimate of the expected year of closure of the PCB waste storage areas, if a trust fund is opted for as the financial mechanism.	Closure Plan, section 3.0	Yes/Yes	Expected year of closure is not required because existing financial mechanism is not a trust fund that must receive payments sufficient to cover the cost of closure prior to the beginning of closure but rather a standby trust which is funded by a bond once closure commences. Should CWM opt for a trust fund as its financial mechanism, it will need to amend its application to include an estimate of the expected year of closure.
761.65(e)(2) Closure plan condition of approval	A written closure plan determined to be acceptable by EPA under § 761.65(e) shall become a condition of any approval granted under § 761.65(d).	N/R	—	
761.65(e)(3) Equivalent closure plans	A separate and new closure plan need not be submitted in cases where a facility is currently covered by a TSCA approval or a RCRA permit, upon a showing to the satisfaction of the Regional Administrator that the existing closure plan is substantially equivalent to closure plans required under § 761.65(d) through (g), and that the plan adequately accounts for PCB waste inventories.			



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(e)(4) Closure plan modifications	<p>The commercial storer of PCB waste shall submit a written request to the Regional Administrator for a modification to its storage approval to amend its closure plan, whenever:</p> <p>(i) Changes in ownership, operating plans, or facility design affect the existing closure plan.</p> <p>(ii) There is a change in the expected date of closure, if applicable.</p> <p>(iii) In conducting closure activities, unexpected events require a modification of the approved closure plan.</p>	<p>N/R</p> <p>N/R</p> <p>N/R</p> <p>N/R</p>	<p>—</p> <p>—</p> <p>—</p> <p>—</p>	
761.65(e)(5) Agency modifications of closure plans	<p>The Regional Administrator may modify the existing closure plan under the conditions described in § 761.65(e)(4).</p>	<p>N/R</p>	<p>—</p>	
761.65(e)(6) Closure schedule	<p>Commercial storers of PCB waste shall comply with the following closure schedule:</p> <p>(i) The commercial storer shall notify in writing the Regional Administrator at least 60 days prior to the date on which final closure of its PCB storage facility is expected to begin.</p>	<p>Closure Plan, Figure 3</p>	<p>Yes/Yes</p>	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
	<p>(ii) The date when a commercial storer of PCB waste “expects to begin closure” shall be no later than 30 days after the date on which the storage facility received its final quantities of PCB waste. For good cause shown, EPA may extend the date for commencement of closure for an additional 30-day period.</p> <p>(iii) Within 90 days after receiving the final quantity of PCB waste for storage, a commercial storer of PCB waste shall remove all PCB waste in storage at the facility from the facility in accordance with the approved closure plan. For good cause shown, EPA may approve a reasonable extension to the period for removal of the PCB waste.</p> <p>(iv) A commercial storer of PCB waste shall complete closure activities in accordance with the approved closure plan and within 180 days after receiving the final quantity of PCB waste for storage at the facility. For good cause shown, EPA may approve a reasonable extension to the closure period.</p>	<p>Closure Plan, Figure 3</p> <p>Closure Plan, Figure 3</p> <p>Renewal Application, Section 14.1; Closure Plan, Figure 3</p>	<p>Yes/Yes</p> <p>Yes/Yes</p> <p>Yes/Yes</p>	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(e)(7) Closure Facility cleanup	During the closure period, all contaminated system component equipment, structures, and soils shall be disposed of in accordance with the disposal requirements of 40 C.F.R. Part 761, Subpart D, or, if applicable, decontaminated in accordance with the levels specified in the PCB Spills Cleanup Policy at 40 C.F.R. Part 761, Subpart G. When PCB waste is removed from the storage facility during closure, the owner or operator becomes a generator of PCB waste subject to the generator requirements of 40 C.F.R. Part 761, Subpart J.	Closure Plan, section 2.7.2; Closure and Post-Closure Cost Estimate, Section 2.3.3.1 and Tables B-6, B-7, and B-8	Yes/Yes	
761.65(e)(8) Closure certification	Within 60 days of completion of closure of each facility for the storage of PCB waste, the commercial storer of PCB waste shall submit to the Regional Administrator, by registered mail, a certification that the PCB storage facility has been closed in accordance with the approved closure plan. The certification shall be signed by the owner or operator and by an independent registered professional engineer.	Closure Plan, Figure 3	Yes/Yes	A copy of the final closure certification report and plat map should be submitted to U.S. EPA.





Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(f) Closure cost estimate	A commercial storer of PCB waste shall have a detailed estimate, in current dollars, of the cost of closing the facility in accordance with its approved closure plan. The closure cost estimate shall be in writing, be certified by the person preparing it (using the certification defined in § 761.3) and comply with all of the following criteria:	Closure Plan, p. i (certification); Closure and Post-Closure Cost Estimates	Yes/Yes	
Maximum cost of closure	(i) The closure cost estimate shall equal the cost of final closure at the point in the PCB storage facility's active life when the extent and manner of PCB storage operations would make closure the most expensive, as indicated by the facility's closure plan.	Closure and Post-Closure Cost Estimates, Section 2.3.3.1	Yes/Yes	
Third party	(ii) The closure cost estimate shall be based on the costs to the owner or operator of hiring a third party to close the facility, and the third party shall not be either a corporate parent or subsidiary of the owner or operator, or member in joint ownership of the facility.	Closure and Post-Closure Cost Estimates, Section 2.2	Yes/Yes	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
Current market costs	(iii) The owner or operator shall include in the estimate the current market costs for off-site commercial disposal of the facility's maximum estimated inventory of PCB waste, except that on-site disposal costs may be used if on-site disposal capacity will exist at the facility at all times over the life of the PCB storage facility.	Closure and Post-Closure Cost Estimates, Section 2.3.3.1	Yes/Yes	
No salvage value	(iv) The closure cost estimate may not incorporate any salvage value that may be realized with the sale of wastes, facility structures or equipment, land, or other assets associated with the facility at the time of closure.	Closure and Post-Closure Cost Estimates, Section 2.2	Yes/Yes	
761.65(f)(2) Closure cost estimate Annual adjustment for inflation	During the active life of the PCB storage facility, the commercial storer of PCB waste shall adjust annually for inflation the closure cost estimate within 60 days prior to the anniversary date of the establishment of the financial instruments used to demonstrate financial responsibility for closure, except that owners or operators who use the financial test or corporate guarantee shall adjust their closure cost estimates for inflation within 30 days after the close of the storer's fiscal year. The adjustment may be made by recalculating the maximum costs of closure in current dollars, or by using an inflation factor derived	Renewal Application, Section 14.2	Yes/Yes	For the latest adjustment, see “Chemical Waste Management, Inc. – Kettleman Hills Facility 22 CCR Financial Assurance for Closure & Post-Closure Costs.” Letter, Reyna Verdin, CWM to Julie Mullins, DTSC. January 17, 2019.



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
	<p>from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its <i>Survey of Current Business</i>. The Implicit Price Deflator for Gross National Product is included in a monthly publication titled <i>Economic Indicators</i>, which is available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402. The inflation factor used in the latter method is the result of dividing the latest published annual Deflator by the Deflator for the previous year. The adjustment to the closure cost estimate is then made by multiplying the most recent closure cost estimate by the latest inflation factor.</p>			



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(f)(3) Closure cost estimate Adjustment for modifications	Where EPA approves a modification to the facility's closure plan, and that modification increases the cost of closure, the owner or operator shall revise the closure cost estimate no later than 30 days after the modification is approved. Any such revision shall also be adjusted for inflation in accordance with § 761.65(f)(2).	N/R	—	
761.65(f)(4) Closure cost estimate Copy at facility	The owner or operator of the facility shall keep at the facility during its operating life the most recent closure cost estimate, including any adjustments resulting from inflation or from modifications to the closure plan.	Renewal Application, Section 14.2	Yes/Yes	
761.65(g) Financial assurance for closure	A commercial storer of PCB waste shall establish financial assurance for closure of each PCB storage facility that he owns or operates. In establishing financial assurance for closure, the commercial storer of PCB waste may choose from the following financial assurance mechanisms or any combination of mechanisms:	Renewal Application, Section 14.2	Yes/Yes	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(g)(1) Closure trust fund	The “closure trust fund,” as specified in 40 C.F.R. 264.143(a) except for §264.143(a)(3).	N/A	—	KHF does not use a closure trust fund as its financial assurance mechanism.
761.65(g)(2) Financial assurance for closure Surety bond (payment)	The “surety bond guaranteeing payment into a closure trust fund,” as specified in 40 C.F.R. §264.143(b) including the use of the surety bond instrument specified at §264.151(b) and the standby trust specified at §264.143(b)(3). The use of the surety bonds, surety bond instruments, and standby trust agreements specified in §§264.143(b) and 264.151(b) shall be deemed to be in compliance with this Subpart.	N/A	Yes/No	See, “Performance Bond – Kettleman Hills Facility / PCB Flushing/Storage Unit.” Western Surety Company. June 18, 2020 and “Standby Trust Agreement.” Executed by Chemical Waste Management, Inc., Grantor, and U.S. Bank National Association, Trustee. June 19, 2020.
761.65(g)(3) Financial assurance for closure Surety bond (performance)	(i) The “surety bond guaranteeing performance of closure,” as specified at 40 C.F.R. §264.143(c) except for §264.143(c)(5). The submission and use of the surety bond instrument specified at §264.151(c) and the standby trust specified at §264.143(c)(3) shall be deemed to be in compliance with the requirements under this Subpart relating to the use of surety bonds and standby trust funds.	N/A	—	KHF does not use a surety bond guaranteeing performance of closure as its financial assurance mechanism.



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(g)(4) Financial assurance for closure Letter of credit	(i) The “closure letter of credit” specified in 40 C.F.R. §264.143(d), except for paragraph (d)(8). The submission and use of the irrevocable letter of credit instrument specified in §264.151(d) and the standby trust specified in §264.143(d)(3) shall be deemed to be in compliance with the requirements of this Subpart relating to the use of letters of credit and standby trust funds.	N/A	—	KHF does not use a closure letter of credit as its financial assurance mechanism.
761.65(g)(5) Financial assurance for closure Closure insurance	“Closure insurance,” as specified in 40 C.F.R. §264.143(e), utilizing the certificate of insurance for closure specified at §264.151(e). The use of closure insurance as specified in §264.143(e) and the submission and use of the certificate of insurance specified in §264.151(e) shall be deemed to be in compliance with the requirements of this Subpart relating to the use of closure insurance.	N/A	—	KHF does not use closure insurance as its financial assurance mechanism. .



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(g)(6) Financial assurance for closure Financial test	The “financial test and corporate guarantee for closure,” as described in 40 C.F.R. 264.143(f), including a letter signed by the owner's or operator's chief financial officer as specified at §264.151(f) and, if applicable, the written corporate guarantee specified at §264.151(h). The use of the financial test and corporate guarantee specified in §264.143(f), the submission and use of the letter specified in §264.151(f), and the submission and use of the written corporate guarantee specified at §264.151(h) shall be deemed to be in compliance with the requirements of this Subpart relating to the use of financial tests and corporate guarantees.	N/A	—	KHF does not use a financial test and corporate guarantee for closure as its financial assurance mechanism.
761.65(g)(7) Financial assurance for closure Corporate guarantee	The corporate guarantee as specified in §264.143(f)(10).	N/A	—	KHF does not use a corporate guarantee as its financial assurance mechanism.



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(g)(8) Financial assurance for closure Multiple mechanisms	The use of multiple financial mechanisms, as specified in §264.143(g) is permitted.	N/A	—	KHF currently uses a surety bond guaranteeing payment into a closure trust fund as its financial assurance mechanism but reserves the right to change mechanism.
761.65(g)(9) Financial assurance for closure Modifications	A modification to a facility storing PCB waste that increases the maximum storage capacity indicated in the permit requires that a new financial assurance mechanism be established or an existing one be amended. When such a modification occurs, the Director of the federal or state issuing authority must be notified in writing no later than 30 days from the completion of the modification. The new or revised financial assurance mechanism must be established and activated no later than 30 days after the Director of the federal or state issuing authority is notified of the completion of the modification, but prior to the use of the modified portion of the facility.	N/R	—	





Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(h) Release of owner or operator from closure financial assurance	Within 60 days after receiving certifications from the owner or operator and an independent registered professional engineer that final closure has been completed in accordance with the approved closure plan, EPA will notify the owner or operator in writing that the owner or operator is no longer required by § 761.65(h) to maintain financial assurance for final closure of the facility, unless EPA has reason to believe that final closure has not been completed in accordance with the approved closure plan. EPA shall provide the owner or operator with a detailed written statement stating the reasons why EPA shall provide the owner or operator with a detailed written statement stating the reasons why he believed closure was not conducted in accordance with the approved closure plan.	N/R	—	
761.65(i)(1) Exemption for laboratories and samples	A laboratory is conditionally exempt from the notification and approval requirements for a commercial storer under § 761.65(d) through (h) when it stores samples held for disposal in a facility that complies with the standards in § 761.65(b)(1)(i) through (b)(1)(iv).	N/A	—	KHF is not a laboratory as defined by 40 C.F.R. § 761.3.



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(i)(2) Exemption for laboratory samples	<p>A laboratory sample is exempt from the manifesting requirements in § 761.208 when:</p> <p>(i) The sample is being transported to a laboratory for the purpose of testing.</p> <p>(ii) The sample is being transported back to the sample collector after testing.</p> <p>(iii) The sample is being stored by the sample collector before transport to a laboratory for testing.</p> <p>(iv) The sample is being stored in a laboratory before testing.</p> <p>(v) The sample is being stored in a laboratory after testing but before it is returned to the sample collector.</p> <p>(vi) The sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).</p>	N/R	—	



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(i)(3) Exemption for laboratory samples – shipping	In order to qualify for the exemption in § 761.65(i)(2)(i) and (i)(2)(ii), a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector must:	N/R	—	
	(i) Comply with applicable U.S. Department of Transportation (DOT) or U.S. Postal Service (USPS) shipping requirements, found respectively in 49 40 C.F.R. 173.345 and U.S. Postal Regulations 652.2 and 652.3.	N/R	—	
	(ii) Assure that the following information accompanies the sample:	N/R	—	
	(A) The sample collector's name, mailing address, and telephone number.	N/R	—	
	(B) The laboratory's name, mailing address, and telephone number.	N/R	—	
	(C) The quantity of the sample.	N/R	—	
	(D) The date of shipment.	N/R	—	
	(E) A description of the sample.	N/R	—	
(iii) Package the sample so that it does not leak, spill, or vaporize from its packaging.	N/R	—		



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(i)(4) Disposal of PCB laboratory samples	When the concentration of the PCB sample has been determined, and its use is terminated, the sample must be properly disposed. A laboratory must either manifest the PCB waste to a disposer or commercial storer, as required under § 761.208, retain a copy of each manifest, as required under § 761.209, and follow up on exception reporting, as required under § 761.215(a) and (b), or return the sample to the sample collector who must then properly dispose of the sample. If the laboratory returns the sample to the sample collector, the laboratory must comply with the shipping requirements set forth in § 761.65(i)(3)(i) through (i)(3)(iii).	N/R	—	
761.65(j) Changes in storage facility ownership	The date of transfer of interim status or final approval shall be the date the EPA Regional Administrator provides written approval of the transfer. EPA will provide a final written decision within 90 days of receipt of the complete new or amended application. The Agency will approve the transfer if the following conditions are met:	N/R	—	Requirement will be a condition in any approval.



Cite	Federal Toxic Substances Control Act (TSCA) Regulation	Cite in Application	Complete/ Acceptable?	Additional Cites/Notes
761.65(j)(1) Changes in storage facility ownership	The transferee has established financial assurance for closure pursuant to § 761.65(g) using a mechanism effective as of the date of final approval so that there will be no lapse in financial assurance for the transferred facility.	N/R	—	
761.65(j)(2) Changes in storage facility ownership	The transferor or transferee has resolved any deficiencies (e.g., technical operations, closure plans, cost estimates, etc.) the Agency has identified in the transferor's application.	N/R	—	
761.65(k) Exemption for States and the Federal Government	States and the Federal Government are exempt from the requirements of § 761.65(f) and (g).	N/R	—	

N/A – REGULATORY PROVISION DOES NOT APPLY TO THE FACILITY.

N/R – REGULATORY PROVISION IS EITHER OPTIONAL, APPLIES TO EPA, OR OTHERWISE DOES NOT NEED TO BE ADDRESSED IN THE APPLICATION



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**Referenced Documents:**

1. “Amendment to the Approvals to Operate Chemical Waste Landfill for PCB Disposal.” U.S. EPA Region 9. November 30, 1990.
2. “Hazardous Waste Facility Permit - Chemical Waste Management, Inc. Kettleman Hills Facility (Permit Number: 02-SAC-03).” California Department of Toxic Substances Control. Effective June 16, 2003 (modified May 5, 2005, July 25, 2006, September 21, 2007, and May 21, 2014)
3. “Spill Prevention Control and Countermeasure Plan (SPCC) prepared for Chemical Waste Management, Inc. Kettleman Hills Facility.” Golder Associates, Inc. and Waste Management. November 2019.
4. “Notice of Annual Meeting and Proxy Statement and Annual Report on Form 10-K for the Year Ended December 31, 2017.” Waste Management. March 27, 2018.
5. “Chemical Waste Management, Inc. - Kettleman Hills Facility, 22 CCR Financial Assurance For Closure & Post-Closure Costs.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Julie Mullins, DTSC. December 31, 2018 with enclosures.
6. “Chemical Waste Management, Inc. – Kettleman Hills Facility 22 CCR Financial Assurance for Closure & Post-Closure Costs.” Letter, Reyna Verdin, CWM to Julie Mullins, DTSC. January 17, 2019.
7. “Performance Bond – Kettleman Hills Facility / PCB Flushing/Storage Unit.” Western Surety Company. June 18, 2020.
8. “Standby Trust Agreement.” Executed by Chemical Waste Management, Inc., Grantor, and U.S. Bank National Association, Trustee. June 19, 2020. With Exhibits A & B.
9. “KHF-TSCA Permit Financial Assurance and Part B Permit Reference.” Email, Reyna Reyes Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. June 26, 2020.

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**APPENDIX D-3 –  
REVIEW CHECKLIST FOR 40 C.F.R. PART 761 REQUIREMENTS FOR RECORDKEEPING AND REPORTING**

**November 22, 2019 TSCA Renewal Application for  
Chemical Waste Management Kettleman Hills Facility (EPA I.D. CAT 000 646 117)  
Kettleman City, California  
Toxic Substances Control Act Requirements  
40 C.F.R. Part 761**

This Checklist documents how Chemical Waste Management’s (“CWM”) application to renew and modify its Approval (permit) to store and treat polychlorinated biphenyls (“PCB”) waste at its Kettleman Hills Facility (“Facility”) meets the requirements of the Toxic Substances Control Act (“TSCA”) regulations at 40 C.F.R. Part 761. It is based on U.S. EPA’s review of the renewal application, titled “TSCA Permit Renewal Application, Chemical Waste Management, Inc., Kettleman Hills Facility” Revision 4: November 22, 2019 (“Renewal Application”). This Checklist identifies if the required information is present and complete, whether the information is acceptable, and where the information can be found in the Renewal Application.

Documents frequently referenced in the checklist are listed below. A complete list of references is provided at the end of the checklist.

TSCA Operation Plan: “TSCA Operation Plan, Landfill B-18 Phases I, II, and III; PCB Building and Outside Containment Area.” Chemical Waste Management, Inc. Revision 4: November 22, 2019.



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
<b>Subpart J—General Records and Reports</b>				
761.180 Records and monitoring.	40 C.F.R. § 761.180 contains recordkeeping and reporting requirements that apply to PCBs, PCB Items, and PCB storage and disposal facilities that are subject to the requirements of 40 C.F.R. Part 761.			
761.180(a) Records and monitoring.	PCBs and PCB Items in service or projected for disposal at facilities other than commercial storer or disposer of PCB waste.	N/A	—	The Kettleman Hills Facility is a disposer and commercial storer of PCBs; therefore, this section does not apply.
761.180(b) Records and monitoring for disposers and commercial storers of PCB waste.	<p><i>Disposers and commercial storers of PCB waste.</i> Beginning February 5, 1990, each owner or operator of a facility used for the commercial storage or disposal of PCBs and PCB Items shall:</p> <ul style="list-style-type: none"> <li>• Maintain annual records on the disposition of all PCBs and PCB items at the facility                             <ul style="list-style-type: none"> <li>○ The annual records shall be maintained for at each facility for at least 3 years after the facility is no longer used for the storage or disposal of PCBs and PCB Item.</li> </ul> </li> </ul>	TSCA Operation Plan, p. 2	Yes/Yes	
		TSCA Operation Plan, p. 2	Yes/Yes	
		TSCA Operation Plan, p. 2	Yes/Yes	





CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
<p>761.180(b) Records and monitoring for disposers and commercial storers of PCB waste.</p>	<ul style="list-style-type: none"> <li>○ The annual records shall be available at the facility for inspection by authorized representatives of the EPA.</li> </ul>	<p>TSCA Operation Plan, p. 2</p>	<p>Yes/Yes</p>	
	<ul style="list-style-type: none"> <li>● Prepare and maintain a written annual document log that includes the information required by § 761.180(b)(2) for PCBs and PCB Items that were handled as PCB waste at the facility.</li> </ul>	<p>TSCA Operation Plan, p. 2</p>	<p>Yes/Yes</p>	
	<ul style="list-style-type: none"> <li>○ The written annual document log shall be prepared by July 1 for the previous calendar year (January through December).</li> </ul>	<p>TSCA Operation Plan, p. 2</p>	<p>Yes/Yes</p>	
	<ul style="list-style-type: none"> <li>○ The written annual document log shall be maintained at each facility for at least 3 years after the facility is no longer used for the storage or disposal of PCBs and PCB Items [.]</li> </ul>	<p>TSCA Operation Plan, p. 2</p>	<p>Yes/Yes</p>	
	<ul style="list-style-type: none"> <li>● The written annual document log shall be available at the facility for inspection by authorized representatives of the EPA.</li> </ul>	<p>TSCA Operation Plan, p. 2</p>	<p>Yes/Yes</p>	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.180(b) Records and monitoring for disposers and commercial storers of PCB waste.	<ul style="list-style-type: none"> <li>From the written annual document log the owner or operator of a facility must prepare the annual report containing the information required by § 761.180(b)(3)(i) through (b)(3)(vi) for PCBs and PCB Items that were handled as PCB waste at the facility during the previous calendar year (January through December).</li> <li>The annual report must be submitted by July 15 of each year for the preceding calendar year.</li> <li>If the facility ceases commercial PCB storage or disposal operations, the owner or operator of the facility shall provide at least 60-days advance written notice to the Regional Administrator for the region in which the facility is located of the date the facility intends to begin closure.</li> </ul>	<p>TSCA Operation Plan, p. 2</p> <p>TSCA Operation Plan, p. 2</p> <p>TSCA Operation Plan, p. 2</p>	<p>Yes/Yes</p> <p>Yes/Yes</p> <p>Yes/Yes</p>	
761.180(b)(1) Annual Records	<p>The annual records shall include the following:</p> <p>(i) All signed manifests generated or received at the facility during the calendar year.</p>	<p>TSCA Operation Plan, p. 2</p> <p>TSCA Operation Plan, p. 2</p>	<p>Yes/Yes</p> <p>Yes/Yes</p>	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.180(b)(1) Annual Records	(ii) All Certificates of Disposal that have been generated or received by the facility during the calendar year.	TSCA Operation Plan, p. 2	Yes/Yes	
	(iii) Records of inspections and cleanups performed in accordance with § 761.65(c)(5).	TSCA Operation Plan, p. 2	Yes/Yes	
761.180(b)(2) Annual Log	The written annual document log shall include the following:	TSCA Operation Plan, p. 2	Yes/Yes	
	(i) The name, address, and EPA identification number of the storage or disposal facility covered by the annual document log and the calendar year covered by the annual document log.	TSCA Operation Plan, p. 2	Yes/Yes	
	(ii) For each manifest generated or received by the facility during the calendar year, the unique manifest number and the name and address of the facility that generated the manifest and the following information:	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.180(b)(2) Annual Log	(A) For bulk PCB waste ( <i>e.g.</i> , in a tanker or truck), its weight in kilograms, the first date PCB waste placed in the tanker or truck was removed from service for disposal, the date it was received at the facility, the date it was placed in transport for off-site disposal (if applicable), and the date of disposal, (if known ).	TSCA Operation Plan, p. 2	Yes/Yes	
	(B) The serial number or other means of identifying each PCB Article, not in a PCB Container or PCB Article Container, the weight in kilograms of the PCB waste in the PCB Article, the date it was removed from service for disposal, the date it was received at the facility, the date it was placed in transport for off-site disposal (if applicable), and the date of disposal (if known).	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.180(b)(2) Annual Log	(C) The unique number assigned by the generator identifying each PCB Container, a description of the contents of each PCB Container, such as liquid, soil, cleanup debris, etc., including the total weight of the PCB waste in kilograms in each PCB Container, the first date PCB waste placed in each PCB Container was removed from service for disposal, the date it was received at the facility, the date each PCB Container was placed in transport for off-site storage or disposal (as applicable), and the date the PCB Container was disposed of (if known).	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.180(b)(2) Annual Log	<p>(D) The unique number assigned by the generator identifying each PCB Article Container, a description of the contents of each PCB Article Container, such as pipes, capacitors, electric motors, pumps, etc., including the total weight in kilograms of the PCB waste in each PCB Article Container, the first date a PCB Article placed in each PCB Article Container was removed from service for disposal, the date it was received at the facility, the date each PCB Article Container was placed in transport for off-site storage or disposal (as applicable), and the date the PCB Article Container was disposed of (if known).</p>	TSCA Operation Plan, p. 2	Yes/Yes	
	<p>(E) Disposers of PCB waste shall include the confirmed date of disposal for items in § 761.180(b)(2)(ii)(A) through (b)(2)(ii)(D).</p>	TSCA Operation Plan, p. 2	Yes/Yes	
	<p>(iii) For any PCB waste disposed at a facility that generated the PCB waste or any PCB waste that was not manifested to the facility, the information required under § 761.65(b)(2)(ii)(A) through (b)(2)(ii)(E).</p>	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.180(b)(3)	<p>The owner or operator of a PCB disposal facility (including an owner or operator who disposes of his/her own waste and does not receive or generate manifests) or a commercial storage facility shall submit an annual report, which briefly summarizes the records and annual document log required to be maintained and prepared under § 761.180(b)(1) and (b)(2) to the EPA Regional Administrator of the Region in which the facility is located by July 15 of each year, beginning with July 15, 1991. The annual report shall contain no confidential business information. The annual report shall consist of the information listed in § 761.180(b)(3)(i) through (b)(3)(vi).</p> <p>(i) The name, address, and EPA identification number of the facility covered by the annual report for the calendar year.</p> <p>(ii) A list of the numbers of all signed manifests of PCB waste initiated or received by the facility during that year.</p>	<p>TSCA Operation Plan, p. 2</p> <p>TSCA Operation Plan, p. 2</p> <p>TSCA Operation Plan, p. 2</p>	<p>Yes/Yes</p> <p>Yes/Yes</p> <p>Yes/Yes</p>	<p>CWMI submitted its most recent annual report for the Kettleman Hills Facility on July 11, 2019. See “Chemical Waste Management, Inc., (CWMI) Kettleman Hills Facility (KHF) CAT 000 646 117 2018 PCB Annual Report.” Letter, Tracy Reddick, Waste Management, Inc. to Regional Administrator Region 9, July 11, 2019.</p>



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.180(b)(3)	<p>(iii) The total weight in kilograms of bulk PCB waste, PCB waste in PCB Transformers, PCB waste in PCB Large High or Low Voltage Capacitors, PCB waste in PCB Article Containers, and PCB waste in PCB Containers in storage at the facility at the beginning of the calendar year, received or generated at the facility, transferred to another facility, or disposed of at the facility during the calendar year. The information must be provided for each of these categories, as appropriate.</p>	TSCA Operation Plan, p. 2	Yes/Yes	
	<p>(iv) The total number of PCB Transformers, the total number of PCB Large High or Low Voltage Capacitors, the total number of PCB Article Containers, and the total number of PCB Containers in storage at the facility at the beginning of the calendar year, received or generated at the facility, transferred to another facility, or disposed of at the facility during the calendar year. The information must be provided for each of these categories, as appropriate.</p>	TSCA Operation Plan, p. 2	Yes/Yes	





CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.180(b)(3)	<p>(v) The total weight in kilograms of each of the following PCB categories: bulk PCB waste, PCB waste in PCB Transformers, PCB waste in PCB Large High or Low Voltage Capacitors, PCB waste in PCB Article Containers, and PCB waste in PCB Containers remaining in storage for disposal at the facility at the end of the calendar year.</p> <p>(vi) The total number of PCB Transformers, the total number of PCB Large High or Low Voltage Capacitors, the total number of PCB Article Containers, and the total number of PCB Containers remaining in storage for disposal at the facility at the end of the calendar year.</p> <p>(vii) The requirement to submit annual reports to the Regional Administrator continues until the submission of the annual report for the calendar year during which the facility ceases PCB storage or disposal operations. Storage operations have not ceased until all PCB waste, including any PCB waste generated during closure, has been removed from the facility.</p>	<p>TSCA Operation Plan, p. 2</p> <p>TSCA Operation Plan, p. 2</p> <p>TSCA Operation Plan, p. 2</p>	<p>Yes/Yes</p> <p>Yes/Yes</p> <p>Yes/Yes</p>	<p>CWMI submitted its most recent annual report for the Kettleman Hills Facility on July 11, 2019. See “Chemical Waste Management, Inc., (CWMI) Kettleman Hills Facility (KHF) CAT 000 646 117 2018 PCB Annual Report.” Letter, Tracy Reddick, Waste Management, Inc. to Regional Administrator Region 9, July 11, 2019.</p>



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.180(b)(4)	Whenever a commercial storer of PCB waste accepts PCBs or PCB Items at his storage facility and transfers the PCB waste off-site to another facility for storage or disposal, the commercial storer of PCB waste shall initiate a manifest under Subpart K 40 C.F.R. Part 761, for the transfer of PCBs or PCB Items to the next storage or disposal facility.	TSCA Operation Plan, p. 2	Yes/Yes	
761.180(b)(5)	For purposes of § 761.180(b)(5), PCB Voltage Regulators shall be recorded and reported as PCB Transformers.	N/R	—	
761.180(c)	40 C.F.R. § 761.180(c) pertain to records for incinerators	N/A	—	
761.180(d) Records for Chemical Waste Landfills	Each owner or operator of a PCB Chemical Waste Landfill facility shall collect and maintain until at least 20 years after the Chemical Waste Landfill is no longer used for the disposal of PCBs the following information in addition to the information required in § 761.180(b) of this section:	TSCA Operation Plan, p. 3	Yes/Yes	
761.180(d)(1)	(1) Any water analysis obtained in compliance with § 761.180(b); and	TSCA Operation Plan, p. 3	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.180(d)(2)	(2) any operations records including burial coordinates of wastes obtained in compliance with § 761.75(b)(8)(ii).	TSCA Operation Plan, p. 3	Yes/Yes	
761.180(e)	40 C.F.R. § 761.180(e) pertain to records for high efficiency boiler facilities.	N/A	—	
761.180(f)	Retention of special records by storage and disposal facilities. In addition to the information required to be maintained under § 761.180(b), (c), (d) and (e), each owner or operator of a PCB storage or disposal facility (including high efficiency boiler operations) shall collect and maintain for the time period specified in § 761.180(b) the following data:	TSCA Operation Plan, p 3	Yes/Yes	
761.180(f)(1)	All documents, correspondence, and data that have been provided to the owner or operator of the facility by any state or local government agency and that pertain to the storage or disposal of PCBs and PCB Items at the facility.	TSCA Operation Plan, p 3	Yes/Yes	
761.180(f)(2)	All documents, correspondence, and data that have been provided by the owner or operator of the facility to any state or local government agency and that pertain to the storage or disposal of PCBs and PCB Items at the facility.	TSCA Operation Plan, p 3	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.180(f)(3)	Any applications and related correspondence sent by the owner or operator of the facility to any local, State, or federal authorities in regard to waste water discharge permits, solid waste permits, building permits, or other permits or authorizations such as those required by § 761.70(d) and 761.75(c).	TSCA Operation Plan, p 3	Yes/Yes	
<b>Subpart K—PCB Waste Disposal Records and Reports</b>				
761.202(a) EPA Identification Numbers.	<i>General.</i> Any Generator, Commercial Storer, Transporter, or Disposer of PCB waste who is required to have an EPA Identification Number under Subpart K must notify EPA of his/her PCB waste handling activities, using the notification procedures and form described in § 761.205. EPA will confirm the EPA Identification Number of facilities already assigned one, and will assign an EPA Identification Number to facilities that do not have one.	—	Yes/Yes	CWMI filed the required EPA Notification Form 7710–53 for the Facility on February 22, 1990 and listed its type of PCB activities as generator, storer, and disposer. The Facility’s EPA ID number is CAT 000 646 117.
761.202(b)	<i>Prohibitions.</i> After June 4, 1990:	—	Yes/Yes	CWMI obtained the PCB EPA ID number for the Kettleman Hills Facility prior to June 4, 1990. See note for § 761.202(a).



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.202(b)(1) EPA Identification Numbers.	<p>A Generator of PCB waste shall not:</p> <p>(i) Process, store, dispose of, transport, or offer for transportation PCB waste without having received an EPA Identification Number from the Agency. A Generator of PCB waste who is exempted from notification under § 761.205(c)(1) or who notifies EPA in a timely manner under § 761.205(c)(2)(i), but has not yet received a unique identification number, shall be regarded as having received from EPA the identification number “40 CFR. PART 761.”</p> <p>(ii) Offer the PCB waste to Transporters, Disposers, or Commercial Storsers of PCB waste who have not received an EPA Identification Number.</p>	N/R  N/R	Yes/Yes  —	CWMI obtained the PCB EPA ID number for the Kettleman Hills Facility prior to June 4, 1990. See note for § 761.202(a).
761.202(b)(2)	<p>A Transporter of PCB waste shall not:</p> <p>(i) Transport PCB waste without having received an EPA Identification Number from EPA.</p> <p>(ii) Deliver PCB waste to Transporters, Disposers, or Commercial Storsers of PCB waste that have not received an EPA Identification Number.</p>	N/A  N/A  N/A	—  —  —	CWMI is not a transporter of PCB waste



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.202(b)(3)	A Commercial Storer of PCB waste shall not accept any PCB waste for storage without having received an EPA Identification Number from EPA.	N/R	Yes/Yes	CWMI obtained the PCB EPA ID number for the Kettleman Hills Facility prior to June 4, 1990. See note for § 761.202(a).
761.202(b)(4)	A Disposer of PCB waste shall not accept any PCB waste for disposal without having received an EPA Identification Number from EPA. A Disposer of PCB waste who owns more than one disposal facility or mobile treatment unit shall not accept waste unless the Disposer has received an EPA Identification Number for each facility or mobile unit.	N/R	Yes/Yes	CWMI obtained the PCB EPA ID number for the Kettleman Hills Facility prior to June 4, 1990. See note for § 761.202(a).



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.202(c)	<p><i>PCB waste handled prior to effective date of Subpart K. Generators (other than Generators exempt from notification under § 761.205(c)(1)), Commercial Storer, Transporters, and Disposers of PCB waste who are required to have EPA Identification Numbers under Subpart K, and who were engaged in PCB waste handling activities on or prior to February 5, 1990, are not subject to the prohibitions of § 761.202(b) if they have applied for an EPA Identification Number in accordance with the applicable notification procedures of § 761.205. Such persons shall use the EPA Identification Number “40 CFR PART 761,” or a number assigned to the persons by EPA or a state under RCRA, until EPA issues to such persons a specific identification number under § 761.205(a), (b), or (c).</i></p>	N/R	—	Obsolete provision
761.202(d)	<p><i>PCB waste first handled after effective date of Subpart K. Generators (other than Generators exempt from notification under § 761.205(c)(1)), Commercial Storer, Transporters, and Disposers of PCB waste who are required to have EPA Identification Numbers under Subpart K, and who first engage in PCB waste activities after February 5, 1990, are subject to the prohibitions in § 761.202(b).</i></p>	—	Yes/Yes	CWMI obtained the PCB EPA ID number for the Kettleman Hills Facility prior to June 4, 1990. See note for § 761.202(a).



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.205(a)(1) Notification of PCB Waste Activity (EPA Form 7710–53).	All Commercial Storers, Transporters, and Disposers of PCB waste who were engaged in PCB waste handling activities on or prior to February 5, 1990 shall notify EPA of their PCB waste activities by filing EPA Form 7710–53 with EPA by no later than April 4, 1990. Upon receiving the notification form, EPA will assign an EPA Identification Number to each entity that notifies.	—	Yes/Yes	CWMI filed the required EPA Notification Form 7710–53 for the Facility on February 22, 1990 and listed its type of PCB activities as storer and disposer. The Facility’s EPA ID number is CAT 000 646 117.
761.205(a)(2)	All Generators (other than Generators exempt from notification under § 761.205(c)(1)), Commercial Storers, Transporters, and Disposers of PCB waste who first engage in PCB waste handling activities after February 5, 1990, shall notify EPA of their PCB waste activities by filing EPA Form 7710–53 with EPA prior to engaging in PCB waste handling activities.	N/A	—	CWMI began PCB waste handling operations at the Kettleman Hills Facility prior to February 5, 1990.





CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.205(a)(3)	Any person required to notify EPA under this section shall file with EPA Form 7710–53. Copies of EPA Form 7710–53 are available from t EPA’s website at <a href="http://www.epa.gov/pcb">http://www.epa.gov/pcb</a> , or from the Program Management, Communications, and Analysis Office, Office of Resource Conservation and Recovery (5305P), 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001. Descriptive information and instructions for filling in the form are included in § 761.205(a)(4)(i) through (vii).	—	Yes/Yes	CWMI filed the required EPA Notification Form 7710–53 for the Facility on February 22, 1990 and listed its type of PCB activities as storer and disposer. The Facility’s EPA ID number is CAT 000 646 117.
761.205(a)(4)	All of the following information shall be provided to EPA on Form 7710–53: [List removed from checklist]	—	Yes/Yes	CWMI filed the required EPA Notification Form 7710–53 for the Facility on February 22, 1990 and listed its type of PCB activities as storer and disposer. The Facility’s EPA ID number is CAT 000 646 117.



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.205(b)	Generators (other than those Generators exempt from notification under § 761.205(c)(1)), Commercial Storers, Transporters, and Disposers of PCB waste who have previously notified EPA or a state of hazardous waste activities under RCRA shall notify EPA of their PCB waste activities under Part 761 by filing EPA Form 7710–53 with EPA by no later than April 4, 1990. The notification shall include the EPA Identification Number previously issued by EPA or the state and upon receipt of the notification, EPA shall verify and authorize the use of the previously issued identification number for PCB waste activities.	—	Yes/Yes	CWMI filed the required EPA Notification Form 7710–53 for the Facility on February 22, 1990 and listed its type of PCB activities as storer and disposer. The Facility’s EPA ID number is CAT 000 646 117.
761.205(c)(1)	Generators of PCB waste need not notify EPA and receive unique EPA Identification Numbers under this section, unless their PCB waste activities are described in § 761.205(c)(2). Generators exempted from notifying EPA under § 761.205(c)(1) shall use the generic identification number “40 C.F.R. PART 761” on the Manifests, records, and reports which they shall prepare under Subpart K, unless such Generators elect to use a unique EPA Identification Number previously assigned to them under RCRA by EPA or a State.	—	Yes/Yes	CWMI filed the required EPA Notification Form 7710–53 for the Facility on February 22, 1990 and listed its type of PCB activities as storer and disposer. The Facility’s EPA ID number is CAT 000 646 117



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.205(c)(2)	<p>Generators of PCB waste who use, own, service, or process PCBs or PCB Items shall notify EPA of their PCB waste activities only if they own or operate PCB storage facilities subject to the storage requirements of § 761.65(b) or (c)(7). Such Generators shall notify EPA in the following manner:</p> <p>(i) Generators storing PCB waste subject to the storage requirements of § 761.65(b) or (c)(7) shall notify EPA by filing EPA Form 7710–53 with EPA by no later than April 4, 1990.</p> <p>(ii) Generators who desire to commence storage of PCB waste after February 5, 1990 shall notify EPA and receive an EPA Identification Number before they may commence storage of PCBs at their facilities established under § 761.65(b) or (c)(7).</p> <p>(iii) A separate notification shall be submitted to EPA for each PCB storage facility owned or operated by Generators of PCB waste. Upon receiving these notifications, EPA will assign Generators unique EPA Identification Numbers for each storage facility notifying EPA under this section.</p>	—	Yes/Yes	<p>CWMI filed the required EPA Notification Form 7710–53 for the Facility on February 22, 1990 and listed its type of PCB activities as storer and disposer. The Facility’s EPA ID number is CAT 000 646 117</p>
		—	Yes/Yes	<p>CWMI filed the required EPA Notification Form 7710–53 for the Facility on February 22, 1990 and listed its type of PCB activities as storer and disposer. The Facility’s EPA ID number is CAT 000 646 117</p>
		—	Yes/Yes	<p>CWMI filed the required EPA Notification Form 7710–53 for the Facility on February 22, 1990 and listed its type of PCB activities storer and disposer. The Facility’s EPA ID number is CAT 000 646 117</p>
		—	Yes/Yes	<p>CWMI filed the required EPA Notification Form 7710–53 for the Facility on February 22, 1990 and listed its type of PCB activities as storer and disposer. The Facility’s EPA ID number is CAT 000 646 117</p>



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.205(d)	Persons required to notify under this section shall file EPA Form 7710–53 with EPA by mailing the form to the following address: Documents Control Officer, Office Resource Conservation and Recovery (5305P), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460.	—	Yes/Yes	CWMI filed the required EPA Notification Form 7710–53 for the Facility on February 22, 1990 and listed its type of PCB activities as storer and disposer. The Facility’s EPA ID number is CAT 000 646 117
761.205(e)	The requirements under this section to notify EPA and obtain EPA Identification Numbers shall in no case excuse compliance by any person subject to the 1-year limit on storage prior to disposal under § 761.65(a).	N/R	—	
761.205(f)	When a facility has previously notified EPA of its PCB waste handling activities using EPA Form 7710–53 and those activities change, the Facility must resubmit EPA Form 7710-53 to reflect those changes no later than 30 days from when a change is made. Examples of when a PCB waste handler must renotify the Agency include, but are not limited to the following: the company changes location of the Facility; or the company had notified solely as engaging in a certain type of PCB waste handling activity and now wishes to engage in another PCB waste activity (e.g., previously only commercially stored PCB waste and now wishes to transport PCB waste).	N/R	—	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.207(a) The manifest-general requirements.	A Generator who transports, or offers for transport PCB waste for commercial off-site storage or off-site Disposal, and Commercial Storage or disposal Facility who offers for transport a rejected load of PCB waste, must prepare a Manifest on EPA Form 8700-22, and, if necessary, a continuation sheet, according to the instructions included in the Appendix of 40 C.F.R. Part 262. The Generator shall specify:	TSCA Operation Plan, p. 2	Yes/Yes	
761.207(a)(1)	For each bulk load of PCBs, the identity of the PCB waste, the earliest Date of Removal from Service for Disposal, and the weight in kilograms of the PCB waste. (Item 15-Special Handling Instructions box)	TSCA Operation Plan, p. 2	Yes/yes	
761.207(a)(2)	For each PCB Article Container or PCB Container, the unique identifying number, type of PCB waste ( e.g., soil, debris, small capacitors), earliest Date of Removal from Service for Disposal, and weight in kilograms of the PCB waste contained. (Item 15-Special Handling Instructions box)	TSCA Operation Plan, p. 2	Yes/Yes	
761.207(a)(3)	For each PCB Article not in a PCB Container or PCB Article Container, the serial number if available, or other identification if there is no serial number, the Date of Removal from Service for Disposal, and weight in kilograms of the PCB waste in each PCB Article. (Item 15-Special Handling Instructions box)	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.207(b)	A Generator must designate on the Manifest one Facility which is approved to handle the PCB waste described on the Manifest.	TSCA Operation Plan, p. 2	Yes/Yes	
761.207(c)	A Generator may also designate on the Manifest one Alternate Facility which is approved to handle his PCB waste in the event an emergency prevents delivery of the waste to the primary Designated Facility.	TSCA Operation Plan, p. 2	Yes/Yes	
761.207(d)	If the Transporter is unable to deliver the PCB waste to the Designated Facility or the Alternate Facility, the Generator must either designate another Facility or instruct the Transporter to return the PCB waste.	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.207(e)	<p>The requirements § 761.207(e) apply only to PCB waste as defined in § 761.3. This includes PCB waste with PCB concentrations below 50 ppm where the PCB concentration below 50 ppm was the result of dilution; these PCB waste are required under § 761.1(b) to be managed as if they contained PCB concentrations of 50 ppm and above. An example of such a PCB waste is spill cleanup material containing &lt;50 ppm PCBs when the spill involved material containing PCBs at a concentration of 50 ppm. However, there is no Manifest requirement for material currently below 50 ppm which derives from pre-April 18, 1978 spills of any concentration, pre-July 2, 1979 spills of &lt;500 ppm PCBs, or materials decontaminated in accordance with § 761.79.</p>	TSCA Operation Plan, p. 2	Yes/Yes	
761.207(f)	<p>The requirements of Subpart K do not apply to the transport of PCB waste on a public or private right-of-way within or along the border of contiguous property under the control of the same person, even if such contiguous property is divided by a public or private right-of-way.</p>	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.208(a)(1) Obtaining manifests.	A Generator may use Manifests printed by any source so long as the source of the printed form has received approval from EPA to print the Manifest under 40 C.F.R. 262.21(c) and (e). A registered source may be a [list removed from checklist]	TSCA Operation Plan, p. 2	Yes/Yes	
761.208(a)(2)	A Generator must determine whether the Generator state or the consignment state for a shipment regulates PCB waste as a State-regulated hazardous waste. Generators also must determine whether the consignment state or Generator state requires the Generator to submit any copies of the Manifest to these states. In cases where the Generator must supply copies to either the Generator's state or the consignment state, the Generator is responsible for supplying legible photocopies of the Manifest to these states.	TSCA Operation Plan, p. 2	Yes/Yes	
761.209 Number of copies of a manifest.	The Manifest consists of at least the number of copies which will provide the Generator, each Transporter, and the owner or operator of the Designated Facility with one copy each for their records and another copy to be returned to the Generator.	TSCA Operation Plan, p. 2	Yes/Yes	
761.210(a) Manifest-Generator requirements	The Generator must:	TSCA Operation Plan, p. 2	Yes/Yes	





CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.210(a)(1)	Sign the Manifest certification by hand; and	TSCA Operation Plan, p. 2	Yes/Yes	
761.210(a)(2)	Obtain the handwritten signature of the initial Transporter and date of acceptance on the Manifest; and	TSCA Operation Plan, p. 2	Yes/Yes	
761.210(a)(3)	Retain one copy, in accordance with § 761.214(a)(1).	TSCA Operation Plan, p. 2	Yes/Yes	
761.210(b)	The Generator must give the Transporter the remaining copies of the Manifest.	TSCA Operation Plan, p. 2	Yes/Yes	
761.210(c)	For shipments of PCB waste within the United States solely by water (bulk shipments only), the Generator must send three copies of the Manifest dated and signed in accordance with this section to the owner or operator of the Designated Facility. Copies of the Manifest are not required for each Transporter.	N/A	—	The Kettleman Hills Facility does not ship solely by water.
761.210(d)	For rail shipments of PCB waste within the United States which originate at the site of generation, the Generator must send at least three copies of the Manifest dated and signed in accordance with this section to:	N/A	—	The Kettleman Hills Facility does not receive waste by rail.
761.210(e) Rejected Shipments	For rejected shipments of PCB waste that are returned to the Generator by the Designated Facility (following the procedures of § 761.215(f)), the Generator must:	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.210(e)(1)	Sign either: (i) Item 20 of the new Manifest if a new Manifest is used for the returned shipment; or (ii) Item 18c of the original Manifest if the original Manifest is used for the returned shipment;	TSCA Operation Plan, p. 2	Yes/Yes	
761.210(e)(2)	Provide the Transporter a copy of the Manifest;	TSCA Operation Plan, p. 2	Yes/Yes	
761.210(e)(3)	Within 30 days of delivery of the rejected shipment, send a copy of the Manifest to the Designated Facility that returned the shipment to the Generator; and	TSCA Operation Plan, p. 2	Yes/Yes	
761.210(e)(4)	Retain at the Generator's site a copy of each Manifest for at least three years from the date of delivery.	TSCA Operation Plan, p. 2	Yes/Yes	
761.211(a)(1) Manifest system-Transporter requirements.	A Transporter shall not accept PCB waste from a Generator unless it is accompanied by a Manifest signed by the Generator in accordance with § 761.210(a)(1), except that a Manifest is not required if any one of the following conditions exists:	N/A	—	The Kettleman Hills Facility is not a transporter of PCB waste as defined in 40 C.F.R. § 761.3.
761.211(b)	Before transporting the PCB waste, the Transporter must sign and date the Manifest acknowledging acceptance of the PCB waste from the Generator. The transporter must return a signed copy to the Generator before leaving the Generator's property.	N/A	—	The Kettleman Hills Facility is not a transporter of PCB waste as defined in 40 C.F.R. § 761.3.



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.211(c)	The Transporter shall ensure that the Manifest accompanies the PCB waste.	N/A	—	The Kettleman Hills Facility is not a transporter of PCB waste as defined in 40 C.F.R. § 761.3.
761.211(d)	A Transporter who delivers PCB waste to another Transporter or to the Designated Facility must:	N/A	—	The Kettleman Hills Facility is not a transporter of PCB waste as defined in 40 C.F.R. § 761.3.
761.211(e) Water transport	The requirements of § 761.211(c), (d) and (f) do not apply to water (bulk shipment) Transporters if: [subsection removed from checklist]	N/A	—	The Kettleman Hills Facility does not receive PCB waste by water transportation
761.211(f) Rail transport	or shipments involving rail transportation, the requirements of § 761.211(c), (d) and (e) do not apply and the following requirements do apply: [subsection removed from checklist]	N/A	—	The Kettleman Hills Facility does not receive PCB waste by rail transportation
761.212(a) Transporter compliance with the Manifest.	The Transporter must deliver the entire quantity of PCB waste which he has accepted from a Generator or a transporter to:	N/A	—	The Kettleman Hills Facility is not a transporter of PCB waste as defined in 40 C.F.R. § 761.3.
761.212(b)(1)	If the PCB waste cannot be delivered in accordance with § 761.212(a) because of an emergency condition other than rejection of the waste by the Designated Facility, then the Transporter must contact the Generator for further directions and must revise the Manifest according to the Generator's instructions.	N/A	—	The Kettleman Hills Facility is not a transporter of PCB waste as defined in 40 C.F.R. § 761.3.



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.212(b)(2)	If PCB waste is rejected by the Designated Facility while the Transporter is on the Facility's premises, then the transporter must obtain the following:	N/A	—	The Kettleman Hills Facility is not a transporter of PCB waste as defined in 40 C.F.R. § 761.3.
761.213(a)(1) Use of Manifest-Commercial storage and disposal facility requirements	If a Commercial Storage or Disposal Facility receives PCB waste accompanied by a Manifest, the owner, operator or his/her agent must sign and date the Manifest as indicated in § 761.213(a)(2) to certify that the PCB waste covered by the Manifest was received, that the PCB waste was received except as noted in the discrepancy space of the Manifest, or that the PCB waste was rejected as noted in the Manifest discrepancy space.	TSCA Operation Plan, p. 2	Yes/Yes	
761.213(a)(2)	<p>If a commercial storage or disposal Facility receives an off-site shipment of PCB waste accompanied by a Manifest, the owner or operator, or his agent, shall:</p> <p>(i) Sign and date, by hand, each copy of the Manifest;</p> <p>(ii) Note any discrepancies (as defined in § 761.215(a)) on each copy of the Manifest;</p> <p>(iii) Immediately give the Transporter at least one copy of the Manifest;</p> <p>(iv) Within 30 days of delivery, send a copy of the Manifest to the Generator; and</p>	<p>TSCA Operation Plan, p. 2</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p>	<p>Yes/Yes</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p>	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
	(v) Retain at the Facility a copy of each Manifest for at least three years from the date of delivery.	—	—	
761.213(b)	If a commercial storage or disposal Facility receives, from a rail or water (bulk shipment) Transporter, PCB waste which is accompanied by a shipping paper containing all the information required on the Manifest (excluding the EPA Identification Numbers, Generator's certification, and signatures), the owner or operator, or his agent, must... [subsection of § 761.213(b) omitted from checklist]	N/A	—	The Kettleman Hills Facility does not receive PCB waste by rail or water transportation
761.213(c)	Whenever an off-site shipment of PCB waste is initiated from a commercial storage or disposal Facility, the owner or operator of the commercial storage or disposal Facility shall comply with the Manifest requirements that apply to Generators of PCB waste (§ 761.207).	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.214(a)(1) Retention of Manifest records.	A Generator must keep a copy of each Manifest signed in accordance with § 761.210(a) for three years or until he receives a signed copy from the Designated Facility which received the PCB waste. This signed copy must be retained as a record for at least three years from the date the waste was accepted by the initial Transporter. A Generator subject to annual document requirements under § 761.180 shall retain copies of each Manifest for the period required by § 761.180(a).	TSCA Operation Plan, p. 2	Yes/Yes	
761.214(a)(2)	A Transporter of PCB waste must keep a copy of the Manifest signed by the Generator, himself, and the next designated Transporter or the owner or operator of the Designated Facility for a period of three years from the date the PCB waste was accepted by the initial Transporter.	N/A	—	The Kettleman Hills Facility is not a transporter of PCB waste as defined in 40 C.F.R. § 761.3.
761.214(b)	For shipments delivered to the Designated Facility by water (bulk shipment), each water (bulk shipment) Transporter must retain a copy of the shipping paper containing all the information required in § 761.211(e)(2) for a period of three years from the date the PCB waste was accepted by the initial transporter.	N/A	—	The Kettleman Hills Facility does not receive PCB waste by water transportation
761.214(c)	For shipments of PCB waste by rail within the United States:	N/A	—	The Kettleman Hills Facility does not receive PCB waste by rail transportation



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.214(c)(1)	The initial rail Transporter must keep a copy of the Manifest and shipping paper with all the information required in § 761.211(f)(2) for a period of three years from the date the PCB waste was accepted by the initial transporter; and	N/A	—	The Kettleman Hills Facility does not receive PCB waste by rail transportation
761.214(c)(2)	The final rail Transporter must keep a copy of the signed Manifest (or the shipping paper if signed by the Designated Facility in lieu of the Manifest) for a period of three years from the date the PCB waste was accepted by the initial transporter.  NOTE TO § 761.214(c): Intermediate rail Transporters are not required to keep records pursuant to these regulations.	N/A	—	The Kettleman Hills Facility does not receive PCB waste by rail transportation  The Kettleman Hills Facility does not receive PCB waste by rail transportation
761.214(d)	A Generator must keep a copy of each Exception Report for a period of at least three years from the due date of the report.	TSCA Operation Plan, p. 2	Yes/Yes	
761.214(e)	The periods of retention referred to in this Section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(a) Manifest discrepancies.	Manifest discrepancies are:	—	—	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.215(a)(1)	Significant differences (as defined by § 761.215(b)) between the quantity or type of PCB waste designated on the Manifest or shipping paper, and the quantity and type of PCB waste a Facility actually receives; or	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(a)(2)	Rejected wastes, which may be a full or partial shipment of PCB waste that the Designated Facility cannot accept.	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(b)	Significant differences in quantity are: For bulk waste, variations greater than 10 percent in weight or variations greater than 10 percent in weight of PCB waste in containers; for batch waste, any variation in piece count, such as a discrepancy of one PCB Transformer or PCB Container or PCB Article Container in a truckload. Significant differences in type are obvious differences which can be discovered by inspection or waste analysis, such as the substitution of solids for liquids or the substitution of high concentration PCBs (above 500 ppm) with lower concentration materials.	TSCA Operation Plan, p. 2	Yes/Yes	





CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.215(c)	Upon discovering a significant difference in quantity or type, the owner or operator must attempt to reconcile the discrepancy with the waste Generator or Transporter (e.g., with telephone conversations). If the discrepancy is not resolved within 15 days after receiving the waste, the owner or operator must immediately submit to the Regional Administrator a letter describing the discrepancy and attempts to reconcile it, and a copy of the Manifest or shipping paper at issue.	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(d)(1)	Upon rejecting the PCB waste, the Facility must consult with the Generator prior to forwarding the waste to another Facility that can manage the waste. If it is impossible to locate an alternative Facility that can receive the waste, the Facility may return the rejected waste to the Generator. The Facility must send the waste to the alternative Facility or to the Generator within 60 days of the rejection identification.	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.215(d)(2)	While the Facility is making arrangements for forwarding rejected wastes to another Facility under this section, it must ensure that either the delivering Transporter retains custody of the waste, or, the Facility must provide for secure, temporary custody of the waste, pending delivery of the waste to the first transporter designated on the Manifest prepared under § 761.215(e) or (f).	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(e)	Except as provided in § 761.215(e)(7), for full or partial load rejections that are to be sent offsite to an Alternate Facility, the Facility is required to prepare a new Manifest in accordance with § 761.207(a) and the following instructions:	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(e)(1)	Write the Generator's U.S. EPA ID number in Item 1 of the new Manifest. Write the Generator's name and mailing address in Item 5 of the new Manifest. If the mailing address is different from the Generator's site address, then write the Generator's site address in the designated space for Item 5.	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(e)(2)	Write the name of the alternate Designated Facility and the Facility's U.S. EPA ID number in the Designated Facility block (Item 8) of the new Manifest.	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.215(e)(3)	Copy the Manifest tracking number found in Item 4 of the old Manifest to the Special Handling and Additional Information Block of the new Manifest, and indicate that the shipment is a rejected waste from the previous shipment.	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(e)(4)	Copy the Manifest tracking number found in Item 4 of the new Manifest to the Manifest reference number line in the Discrepancy Block of the old Manifest (Item 18a).	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(e)(5)	Write the DOT description for the rejected load in Item 9 (U.S. DOT Description) of the new Manifest and write the container types, quantity, and volume(s) of waste.	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(e)(6)	Sign the Generator's/Offerrer's Certification to certify, as the offeror of the shipment, that the waste has been properly packaged, marked and labeled and is in proper condition for transportation, and mail a signed copy of the Manifest to the Generator identified in Item 5 of the new Manifest.	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.215(e)(7)	For full load rejections that are made while the Transporter remains present at the Facility, the Facility may forward the rejected shipment to the Alternate Facility by completing Item 18b of the original Manifest and supplying the information on the next destination Facility in the Alternate Facility space. The Facility must retain a copy of this Manifest for its records, and then give the remaining copies of the Manifest to the Transporter to accompany the shipment. If the original Manifest is not used, then the Facility must use a new Manifest and comply with § 761.215(e)(1), (2), (3), (4), (5), and (6).	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(f)	Except as provided in § 761.215(f)(7), for rejected wastes that must be sent back to the Generator, the Facility is required to prepare a new Manifest in accordance with § 761.207(a) and the following instructions:	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(f)(1)	Write the Facility's U.S. EPA ID number in Item 1 of the new Manifest. Write the Facility's name and mailing address in Item 5 of the new Manifest. If the mailing address is different from the Facility's site address, then write the Facility's site address in the designated space for Item 5 of the new Manifest.	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.215(f)(2)	Write the name of the initial Generator and the Generator's U.S. EPA ID number in the Designated Facility block (Item 8) of the new Manifest.	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(f)(3)	Copy the Manifest tracking number found in Item 4 of the old Manifest to the Special Handling and Additional Information Block of the new Manifest, and indicate that the shipment is a rejected waste from the previous shipment.	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(f)(4)	Copy the Manifest tracking number found in Item 4 of the new Manifest to the Manifest reference number line in the Discrepancy Block of the old Manifest (Item 18a).	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(f)(5)	Write the DOT description for the rejected load in Item 9 (U.S. DOT Description) of the new Manifest and write the container types, quantity, and volume(s) of waste.	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(f)(6)	Sign the Generator's/Offerrer's Certification to certify, as offeror of the shipment, that the waste has been and is in proper condition for transportation.	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.215(f)(7)	For full load rejections that are made while the Transporter remains at the Facility, the Facility may return the shipment to the Generator with the original Manifest by completing Item 18a and 18b of the Manifest and supplying the Generator's information in the Alternate Facility space. The Facility must retain a copy for its records and then give the remaining copies of the Manifest to the transporter to accompany the shipment. If the original Manifest is not used, then the Facility must use a new Manifest and comply with § 761.215(f)(1), (2), (3), (4), (5), (6), and (8).	TSCA Operation Plan, p. 2	Yes/Yes	
761.215(f)(8)	For full or partial load rejections that are returned to the Generator, the Facility must also comply with the exception reporting requirements in § 761.217(a).	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.215(g)	If a Facility rejects a waste after it has signed, dated, and returned a copy of the Manifest to the delivering Transporter or to the Generator, the Facility must amend its copy of the Manifest to indicate the rejected wastes in the discrepancy space of the amended Manifest. The Facility must also copy the Manifest tracking number from Item 4 of the new Manifest to the Discrepancy space of the amended Manifest, and must re-sign and date the Manifest to certify to the information as amended. The Facility must retain the amended Manifest for at least three years from the date of amendment, and must within 30 days, send a copy of the amended Manifest to the transporter and Generator that received copies prior to their being amended.	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.216(a) Unmanifested waste report.	If a Facility accepts for storage or disposal any PCB waste from an offsite source without an accompanying Manifest, or without an accompanying shipping paper as described by § 761.211(e), and the owner or operator of the commercial storage or disposal Facility cannot contact the Generator of the PCB waste, then he shall notify the Regional Administrator of the EPA region in which his Facility is located § 761.217 of the unmanifested PCB waste so that the Regional Administrator can determine whether further actions are required before the owner or operator may store or dispose of the unmanifested PCB waste, and additionally the owner or operator must prepare and submit a letter to the Regional Administrator within 15 days after receiving the waste. The unmanifested waste report must contain the following information:	TSCA Operation Plan, p. 2	Yes/Yes	
761.216(a)(1)	The EPA Identification Number, name and address of the Facility;	TSCA Operation Plan, p. 2	Yes/Yes	
761.216(a)(2)	The date the Facility received the waste;	TSCA Operation Plan, p. 2	Yes/Yes	
761.216(a)(3)	The EPA Identification Number, name and address of the Generator and the Transporter, if available;	TSCA Operation Plan, p. 2	Yes/Yes	





CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.216(a)(4)	A description and the quantity of each unmanifested PCB waste the Facility received;	TSCA Operation Plan, p. 2	Yes/Yes	
761.216(a)(5)	The method of storage or disposal for each PCB waste;	TSCA Operation Plan, p. 2	Yes/Yes	
761.216(a)(6)	Signature of the owner or operator of the Facility or his authorized representative; and,	TSCA Operation Plan, p. 2	Yes/Yes	
761.216(a)(7)	A brief explanation of why the waste was unmanifested, if known.	TSCA Operation Plan, p. 2	Yes/Yes	
761.216(a)(8)	<p>The disposition made of the unmanifested waste by the commercial storage or disposal Facility, including:</p> <p>(i) If the waste was stored or disposed by that Facility, was the Generator identified and was a Manifest subsequently supplied.</p> <p>(ii) If the waste was sent back to the Generator, why and when.</p>	TSCA Operation Plan, p. 2	<p>Yes/Yes</p> <p>Yes/Yes</p> <p>Yes/Yes</p>	
761.217(a)(1) Exception reporting.	A Generator of PCB waste, who does not receive a copy of the Manifest with the handwritten signature of the owner or operator of the Designated Facility within 35 days of the date the waste was accepted by the initial Transporter, shall immediately contact the transporter and/or the owner or operator of the Designated Facility to determine the status of the PCB waste.	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.217(a)(2)	<p>A Generator of PCB waste subject to the manifesting requirements shall submit an Exception Report to the EPA Regional Administrator for the Region in which the Generator is located if the Generator has not received a copy of the Manifest with the handwritten signature of the owner or operator of the Designated Facility within 45 days of the date the waste was accepted by the initial Transporter. The exception report shall be submitted to EPA no later than 45 days from the date on which the Generator should have received the Manifest. The Exception Report shall include the following:</p> <p>(i) A legible copy of the Manifest for which the Generator does not have confirmation of delivery;</p>	<p>TSCA Operation Plan, p. 2</p> <p>TSCA Operation Plan, p. 2</p>	<p>Yes/Yes</p> <p>Yes/Yes</p>	
	<p>(ii) A cover letter signed by the Generator or his authorized representative explaining the efforts taken to locate the PCB waste and the results of those efforts.</p>	<p>TSCA Operation Plan, p. 2</p>	<p>Yes/Yes</p>	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.217(b)	For rejected shipments of PCB waste that are forwarded to an Alternate Facility by a Designated Facility using a new Manifest (following the procedures of § 761.215(e)(1) through (6)), the Generator must comply with the requirements of § 761.217(a), as applicable, for the shipment forwarding the material from the Designated Facility to the Alternate Facility instead of for the shipment from the Generator to the Designated Facility. For purposes of § 761.217(a) for a shipment forwarding such waste to an Alternate Facility by a Designated Facility:	TSCA Operation Plan, p. 2	Yes/Yes	
761.217(b)(1)	The copy of the Manifest received by the Generator must have the handwritten signature of the owner or operator of the Alternate Facility in place of the signature of the owner or operator of the Designated Facility, and	TSCA Operation Plan, p. 2	Yes/Yes	
761.217(b)(2)	The 35- and 45-day timeframes begin the date the waste was accepted by the initial Transporter forwarding the PCB waste shipment from the Designated Facility to the Alternate Facility.	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.218(a) Certificate of disposal.	For each shipment of manifested PCB waste that the owner or operator of a disposal Facility accepts by signing the Manifest, the owner or operator of the disposal Facility shall prepare a Certificate of Disposal for the PCBs and PCB Items disposed of at the Facility, which shall include:	TSCA Operation Plan, p. 2	Yes/Yes	
761.218(a)(1)	The identity of the disposal Facility, by name, address, and EPA Identification Number.	TSCA Operation Plan, p. 2	Yes/Yes	
761.218(a)(2)	The identity of the PCB waste affected by the Certificate of Disposal including reference to the manifest number for the shipment.	TSCA Operation Plan, p. 2	Yes/Yes	
761.218(a)(3)	A statement certifying the fact of disposal of the identified PCB waste, including the date(s) of disposal, and identifying the disposal process used.	TSCA Operation Plan, p. 2	Yes/Yes	
761.218(a)(4)	A Certification as defined in § 761.3.	TSCA Operation Plan, p. 2	Yes/Yes	
761.218(b)	The owner or operator of the disposal Facility shall send the Certificate of Disposal to the Generator identified on the Manifest which accompanied the shipment of PCB waste within 30 days of the date that disposal of each item of PCB waste identified on the Manifest was completed unless the Generator and the disposer contractually agree to another time frame.	TSCA Operation Plan, p. 2	Yes/Yes	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.218(c)	The disposal Facility shall keep a copy of each Certificate of Disposal among the records that it retains under § 761.180(b).	TSCA Operation Plan, p. 2	Yes/Yes	
761.218(d)(1)	Generators of PCB waste shall keep a copy of each Certificate of Disposal that they receive from disposers of PCB waste among the records they retain under § 761.180(a).	TSCA Operation Plan, p. 2	Yes/Yes	
761.218(d)(2)	Commercial Storers of PCB waste shall keep a copy of each Certificate of Disposal that they receive from disposers of PCB waste among the records they retain under § 761.180(b).	TSCA Operation Plan, p. 2	Yes/Yes	
761.219(a) One-year exception reporting.	A disposer of PCB waste shall submit a One-year Exception Report to the EPA Regional Administrator for the Region in which the disposal Facility is located no later than 45 days from the end of the 1-year storage for disposal date when the following occurs:	N/R	—	
761.219(a)(1)	The disposal Facility receives PCBs or PCB Items on a date more than 9 months from the date the PCBs or PCB Items were removed from service for disposal, as indicated on the Manifest or continuation sheet; and	N/R	—	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.219(a)(2)	Because of contractual commitments or other factors affecting the Facility's disposal capacity, the disposer of PCB waste could not dispose of the affected PCBs or PCB Items within 1 year of the date of removal from service for disposal.	N/R	—	
761.219(b)	A Generator or Commercial Storer of PCB waste who manifests PCBs or PCB Items to a disposer of PCB waste shall submit a One-year Exception Report to the EPA Regional Administrator for the Region in which the Generator or Commercial Storer is located no later than 45 days from the date the following occurs:	N/R	—	
761.219(b)(1)	The Generator or Commercial Storer transferred the PCBs or PCB Items to the disposer of PCB waste on a date within 9 months from the date of removal from service for disposal of the affected PCBs or PCB Items, as indicated on the Manifest or continuation sheet; and	N/R	—	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
761.219(b)(2)	The Generator or Commercial Storer either has not received within 13 months from the date of removal from service for disposal a Certificate of Disposal confirming the disposal of the affected PCBs or PCB Items, or the Generator or Commercial Storer receives a Certificate of Disposal confirming disposal of the affected PCBs or PCB Items on a date more than 1 year after the date of removal from service.	N/R	—	
761.219(c) One-year Exception Report Contents	The One-year Exception Report shall include:	N/R	—	
761.219(c)(1)	A legible copy of any Manifest or other written communication relevant to the transfer and disposal of the affected PCBs or PCB Items.	N/R	—	
761.219(c)(2)	A cover letter signed by the submitter or an authorized representative explaining:  (i) The date(s) when the PCBs or PCB Items were removed from service for disposal.  (ii) The date(s) when the PCBs or PCB Items were received by the submitter of the report, if applicable.	N/R	—	
		N/R	—	
		N/R	—	



CITE	FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) REGULATION	CITE IN APPLICATION	COMPLETE/ACCEPT-ABLE?	ADDITIONAL CITES/NOTES
	(iii) The date(s) when the affected PCBs or PCB Items were transferred to a designated disposal Facility.	N/R	—	
	(iv) The identity of the Transporters, Commercial Storers, or disposers known to be involved with the transaction.	N/R	—	
	(v) The reason, if known, for the delay in bringing about the disposal of the affected PCBs or PCB Items within 1 year from the date of removal from service for disposal.	N/R	—	
761.219(d)	PCB/radioactive waste that is exempt from the 1-year storage for disposal time limit pursuant to § 761.65(a)(1) is also exempt from the exception reporting requirements of § 761.219(a), (b), and (c).	N/A	—	The Kettleman Hills Facility does not handle PCB/radioactive waste.

N/A – Regulatory provision does not apply to the Facility.

N/R – Regulatory provision is either optional, applies to EPA, or otherwise does not need to be addressed in the application

Referenced Documents:

1. “Kettleman Hills Facility CAT 0000646 117 Notification of PCB Waste Activity” Christopher W. Hansen, Chemical Waste Management, Inc. to Chief, Chemical Regulations Branch, U.S. EPA. February 22, 1990. With attached EPA Form No.7710-53 for Chemical Waste Management, Inc. Kettleman Hills Facility, dated February 22, 1990 and signed by Mark A. Langowski, Chemical Waste Management, Inc.
2. “Chemical Waste Management, Inc., (CWMI) Kettleman Hills Facility (KHF) CAT 000 646 117 2018 PCB Annual Report.” Letter, Tracy Reddick, Waste Management, Inc. to Regional Administrator Region 9, July 11, 2019.
3. “TSCA Operation Plan, Landfill B-18 Phases I, II, and III; PCB Building and Outside Containment Area.” Chemical Waste Management, Inc. Revision 4: November 22, 2019.





**APPENDIX D-4 –  
REVISIONS TO OCTOBER 1, 2018 TSCA RENEWAL APPLICATION INCORPORATED IN THE NOVEMBER 22, 2019  
RENEWAL APPLICATION**

**Chemical Waste Management Kettleman Hills Facility (EPA I.D. CAT 000 646 117)  
Kettleman City, California  
Toxic Substances Control Act Requirements  
40 C.F.R. Part 761**

CHANGE	LOCATION	DESCRIPTION
<b>TSCA APPLICATION</b>		
Application revision number	TSCA Application, cover	Revision 4 of the TSCA Renewal Application. Non-substantive change from proposed Approval.
Application date	TSCA Application, over, footers	Date of Revision 4: November 22, 2019. Non-substantive change from proposed Approval.
Closure and Post-Closure Plans	TSCA Application, p. 33	Revised Closure and Post-Closure Plans (July 31, 2019) replacing March 2018 version. Non-substantive change from proposed Approval.
Corporate structure	TSCA Application, p. 3	Changed district manager Jim Sook to senior district manager Rober Henry, Non-substantive change from proposed Approval.



CHANGE	LOCATION	DESCRIPTION
Employment and educational history	TSCA Application, pp. 3-4	Deleted information about Jim Sooks' employment and educational history. Non-substantive change from proposed Approval. Revised employment histories. Non-substantive change from proposed Approval.
Maximum storage capacities at PCB F/SU	TSCA Application, pp. 9-10, p. 28	Decreased number of drums from 300 to 240 in the enclosed building Changed from 8,422 (maximum capacity)/7500 gallons (working capacity) to 10,082 gallons/5,900 gallons (maximum capacity) in the PCB Tank Decreased from 273 to 224 55-gallon drums in the outside containment area Decreased from 20,000 gallons to 17,320 gallons in the maximum capacity of the outside containment area. See Statement of Basis, <b><u>section III.D.2.a(2)</u></b> .
Stormwater Pollution Prevention Plan	TSCA Application, p. 14	Revised to note revised Stormwater Pollution Prevention Plan. Non-substantive change from proposed Approval.
Certification statement	TSCA Application, p. 26	Updated certification statement. See Statement of Basis, <b><u>section III.D.2.a(3)</u></b> .
Configuration of storage at PCB F/SU	TSCA Application, p. 27	Revised from 150 drums on 38 pallets to 120 drums on 38 pallets. Change from 8,422 (maximum capacity)/7500 gallons (working capacity) to 10,082 gallons/5,900 gallons (maximum capacity) in the PCB Tank. See Statement of Basis, <b><u>section III.D.2.a(2)</u></b> .



CHANGE	LOCATION	DESCRIPTION
PCB Building Secondary Containment (Interior) Volume Calculation	TSCA Application, p. 28, Attachment 6	Revised calculations to incorporate reduced number of drums (from 300 to 240 55-gallon drums) and reduced maximum capacity of PCB Tank. Revised certification. See Statement of Basis, <b><u>section III.D.2.a(2)</u></b> .
PCB Building Secondary Containment (Exterior) Volume Calculation	TSCA Application, p. 28, Attachment 7	Revised calculations to incorporate reduced number of drums (from 273 to 224 55-gallon drums) and reduced maximum capacity (20,000 gallons to 17,320 gallons). Revised certification. See Statement of Basis, <b><u>section III.D.2.a(2)</u></b> .
Spill Prevention Control and Countermeasure Plan	TSCA Application, p. 28, Attachment 12	Revised to note revised <i>Spill Prevention Control and Countermeasure Plan</i> (November 2019) replacing 2016 plan. Non-substantive change from proposed Approval.
PCB Tank Capacity	TSCA Application, p. 29	Reduced maximum capacity from a maximum secondary capacity of 8,422 gallons and working capacity of 7,500 gallons to a maximum allowable waste level in the tank of 7 feet and a corresponding capacity of 5,900 gallons. See Statement of Basis, <b><u>section III.D.2.a(2)</u></b> .



CHANGE	LOCATION	DESCRIPTION
Container Storage Information Summary	TSCA Application, Table 1	<p>Reduced inside containment area capacity from 2,864 cubic feet to 2382 cubic feet.</p> <p>Reduced outside containment area from 3,040 cubic feet to 2371 cubic feet.</p> <p>Changed calculation from 10% of volume of containers stored to 25% of total internal volume of all containers and articles stored (change reflects difference between RCRA and TSCA requirements).</p> <p>Changed volume of 24-hour, 25 year rainfall from 350 cubic feet to 386 cubic feet.</p> <p>Changed description of provisions for removal of accumulated liquids.</p> <p>Revised footnotes to note applicable TSCA requirements.</p> <p>See Statement of Basis, <b><u>section III.D.2.a(2)</u></b>.</p>
Permits	TSCA Application, Table 2	<p>Revised date of Clean Air Act Title V permit from 6/19/15 to 3/1/18.</p> <p>Non-substantive change from proposed Approval.</p>
TSCA Operation Plan	TSCA Application, Attachment A, cover and footer	Revised version number and date. Non-substantive change from proposed Approval.
Miscellaneous typo corrections/text clarifications	TSCA Application, p. 10, Table 1	Miscellaneous typo corrections. Non-substantive changes from proposed Approval.
<p><b>CLOSURE AND POST CLOSURE PLANS</b></p> <p>This table only list those changes to the Closure and Post-Closure Plans that address TSCA units (Landfills B-14, B-16, B-18, and B-19 and the PCB F/SU).</p>		
Document Date	Closure Plan, Cover, header	Revised document date from March 15, 2018 to July 31, 2019. Non-substantive change from proposed Approval.



CHANGE	LOCATION	DESCRIPTION
Engineer's certification	Closure Plan, p. i	Revised date. Non-substantive change from proposal Approval.
Monitoring Programs	Closure Plan, p. 15; Table 1; Appendix E, various	Changed references to most current versions of the groundwater and soil-gas monitoring plan and the ambient air monitoring program. Non-substantive changes from proposed Approval.
Post-Closure Waste Settlement	Closure Plan, p. 24	Added explanation to support assumption that primary consolidation of waste material will occur during waste placement rather than during post-closure. Non-substantive changes from proposed Approval.
Cover Infiltration	Closure Plan, pp. 30-31; Appendix A-8	Revised to describe updated modeling and results used to design the geotextile drainage layer component of the final cover. Design of this layer remains unchanged from 2018 Closure Plan.
Protection from burrowing animals in final cover	Closure Plan, p.32	Added information on the monitoring and mitigation plan for burrowing animals.
PCB Tank and Piping	Closure Plan, p. 40; Appendix E, p. 10;	Clarified that the PCB Tank and associated piping will not require decontamination prior to their on-site disposal.
Notice in Deed to Property and Land Use Convent	Closure Plan, p. 48	Clarifying text added. Requirement for land use covenant to be recorded with Kings County added. Clarification improves long-term maintenance of landfills.
Post-Closure Disturbance of Final Covers	Closure Plan, p. 49; Appendix F	Added a "Post Closure Material Management Plan" to be used if disturbance of the final cover is necessary. Changes improves long-term maintenance of landfills.



CHANGE	LOCATION	DESCRIPTION
Closure Schedule	Closure Plan, Figure 3	Clarified that the PCB F/SU and PCB tank will be demolished and not decontaminated. Changes improve Closure Plan..
Technical Specifications	Closure Plan, Appendix A-2. Section 02751 HDPE Geomembranes	Revised test methods; added page 14 (missing in 2018 Closure Plan), revised Table 0275-1 (methods and values). Changes improve Closure Plan.
Technical Specifications	Closure Plan, Appendix A-2, Section 02752 Geotextiles	Change in test methods; Table 02752-1 (changes to required physical properties of non-woven geotextiles). Improves Closure Plan.
Closure and Post-Closure Cost Estimate	Closure Plan, Appendix E, various	Updated cost estimates to 2019 from 2018. Updates improves closure costs estimates.
Closure and Post-Closure Cost Estimates	Closure Plan, Appendix E, p. 6	Clarified that PCB liquids, even if solidified, must be incinerated and not landfilled by noting regulatory requirement. Non-substantive change to proposed Approval.
Closure and Post-Closure Cost Estimates	Closure Plan, Appendix E, p. 9	Clarified that PCB F/SU will be removed in its entirety and the area backfilled/regraded as necessary and addition of soil gas sampling for clean closure verification. Clarification improves Closure Plan.
Closure and Post-Closure Cost Estimates	Closure Plan, Appendix E, p. 13; Exhibit A-5	Added documentation supporting cost estimate for leachate disposal. Non-substantive change to proposed Approval.
Closure and Post-Closure Cost Estimates	Closure Plan, Appendix E, p. 14	Added security personnel included in post-closure care cost estimate. Addition improves Closure Plan.



CHANGE	LOCATION	DESCRIPTION
Closure and Post-Closure Cost Estimates	Closure Plan, Appendix 3, various (e.g., Table 3, Table 4, Table A-5, etc.)	Updated and/or revised closure and post-closure care cost estimates. Improves Closure Plan.
Closure and Post-Closure Cost Estimates	Closure Plan, Appendix 3, Table A-3, Table A-4, Table B-7-1	Reduced maximum quantity of waste inventory in PCB F/SU. See Statement of Basis, <b><u>section III.D.2.a(2)</u></b> .
Minor edits and corrections.	Closure Plan, various	Examples: added RCRA ID number; non-substantive wording changes; formatting changes; revised list of referenced documents. Non-substantive changes to proposed Approval.
<b>STORMWATER POLLUTION PREVENTION PLAN (SWPPP)</b>		
Updates	SWPPP, cover, project information and certification	Updated contacts and revision dates. Non-substantive change to proposed Approval.
Pollution Prevention Team	SWPPP, Table 1	Updated pollution prevention team list. Non-substantive change to proposed Approval.
<b>SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN (SPCC)</b>		
Dates, Contact and Certifications	SWPPP, Certifications, p. 3	Updated facility contacts, phone numbers, updated certifications, dates. Non-substantive change to proposed Approval.
Facility Storage	SWPPP, p. 5	Updated description of oil storage at KHF. Non-substantive change to proposed Approval.



CHANGE	LOCATION	DESCRIPTION
Aboveground Oil Storage Summary	SWPPP, Table 1	Updated information on tanks. Non-substantive change to proposed Approval.
Facility map and unit diagrams	SWPPP, Figures 2-6	Updated facility map and unit diagrams. Non-substantive change to proposed Approval.
Sample Inspection Program	SWPPP, Appendix B	Updated sample inspection program. Non-substantive change to proposed Approval.
Emergency Equipment List	SWPPP, Appendix C	Updated sample emergency equipment list. Non-substantive change to proposed Approval.
Substantial Harm Criteria Checklist	SWPPP, Appendix D	Updated substantial harm criteria checklist and certification. Non-substantive change to proposed Approval.
Cross Reference Matrix	SWPPP, Appendix E	Updated cross reference matrix for non-production facilities. Non-substantive change to proposed Approval.
<b>HAZARDOUS WASTE OPERATION PLAN – GENERAL CHANGES</b>		
Application date	Operation Plan, footers	Revised date to July 31, 2019. Non-substantive change from proposed Approval.
Headings	Operation Plan, various	Added of chapter numbers. Non-substantive changes to proposed Approval.
Various minor edits	Operation Plan, various	Revised cross references, grammatical corrections, updated table of contents, etc. Non-substantive change to proposed Approval.





CHANGE	LOCATION	DESCRIPTION
<b>HAZARDOUS WASTE OPERATIONS PLAN – CHAPTER 12 – WASTE ANALYSIS PLAN</b>		
Section 12.1.1 – Mitigation for Power & Network Outages	Operation Plan, p. 12-2	Changed requirement. Facility will halt acceptance or processing of waste if necessary is not available due to power or network outages. Revision is more restrictive than requirement in proposed Approval.
Section 12.0 – Sampling Methodology	Operation Plan, p. 12-3	Expanded explanation of rationale for selected sampling methodology for incoming waste. Non-substantive changes to proposed Approval.
Section 12.2 – Sampling Strategies	Operation Plan, p. 12-4	Identified sampling methods and tools that will be used for testing incoming waste. Non-substantive changes to proposed Approval.
Section 12.2.1 – Containers and Tanks	Operation Plan, p. 12-4.	Revised possible sampling device. Non-substantive changes to proposed Approval.
Section 12.3.0 – Analytical Rationale	Operation Plan, p. 12-6.	Revised waste management unit parameters that will be evaluated to determine if permit modifications are required. Non-substantive changes to proposed Approval.
Section 12.3.2 – Supplemental Analyses	Operation Plan, p. 12-7	Provided examples of when supplemental analyses will be performed. Non-substantive changes to proposed Approval.



CHANGE	LOCATION	DESCRIPTION
Section 12.4.1 – Procedural Requirements	Operation Plan, p. 12-8	Added specific information chemical and physical data that is provided by the generator. Deleted statement that CWM may retain samples. Revisions improve waste acceptance procedures.
Section 12.4.2.1 – Waste Profile.	Operation Plan, p. 12-10	Added requirement that generator will submit waste profile use CWM’s form, list of information to be included, and restrictions on use of profile numbers added. Revisions improve waste acceptance procedures.
Section 12.5.0. – Incoming Waste Shipment Procedures	Operation Plan, p. 12-12	Added information on visual inspections of incoming waste and conditions for rejection. Revisions improve waste acceptance procedures.
Section 12.5.1 – Receiving Procedures	Operation Plan, p 12-12	Revised container waste sampling and composting procedures. Revisions improve waste acceptance procedures.
Section 12.5.1.1 – Exceptions	Operation Plan, p. 12-13	Revised list of waste types exempted from certain receiving procedures. PCB waste were already exempt from most receiving procedures.
Section 12.5.2 – Decision Evaluation Logic, Step. 4 _ Evaluation of Whether Waste Found to be in Non-Conformance Can Still be Accepted or Should be Rejected	Operation Plan, p. 12-17	Clarified procedures for handling non-conforming waste shipments. Clarification improve waste acceptance procedures.



CHANGE	LOCATION	DESCRIPTION
Section 12.6.2 – Waste Repacking/Bulking Operations	Operation Plan, p.12-20	Clarified procedures for bulking operations. Clarifications improve waste handling procedures.
Section 12.6.3.1 – Bulk Container Top Solidification	Operation Plan, p.12-21	Clarified procedures for solidification operations. Clarifications improve waste handling procedures.
Section 12.6.3.2 – Container Top Solidification	Operation Plan, p.12-21	Clarified procedures for solidification operations. Clarifications improve waste handling procedures.
Section 12.6.4 – Final Disposal	Operation Plan, p.12-27	Clarified that certain waste with suspected free liquids will be tested for the presence of free liquids prior to disposal. Clarification consistent with prohibition on no free-liquid disposal in landfill.
Section 12.7.0 – Quality Assurance/Quality Control	Operation Plan, p.12-28	Revised reference to SW-846. Non-substantive changes to proposed Approval.
Table 12.2-1 – Sampling Methods and Equipment	No page number	Revised reference to SW-846. Non-substantive changes to proposed Approval.
Table 12.3-1 – Mandatory Analytical Procedures	No page number	Revised to update test methods and references to be consistent with current methods. Non-substantive changes to proposed Approval.



CHANGE	LOCATION	DESCRIPTION
Table 12.3-2 – Supplemental Analytical Procedures	No page number	Revised to update test methods and references to be consistent with current methods. Non-substantive changes to proposed Approval.
Table 12.3-3 – Additional Analytical Procedures	No page number	Revised to update test methods and references to be consistent with current methods. Non-substantive changes to proposed Approval.
Table 12.5-1 – Waste Analysis Plan Exemption Numbers	No page number	Revised to be consistent with text in Section 12.5.1.1 – Exceptions. Non-substantive changes to proposed Approval.
Appendix WAP-B – Land Disposal Restriction Sampling	No page number	Clarified requirements for handling of landfill leachate for disposal. Clarifications improve waste handling procedures.
<b>HAZARDOUS WASTE OPERATION PLAN – CHAPTER 14 – SPECIFIC INFORMATION FOR CONTAINERS</b>		
Section 14.1.1. – Repacking and Bulking Operations.	Operation Plan, p. 14-2	Revised description of bulking of liquids. Non-substantive change to proposed Approval. Revised requirement that bulking will require supplemental analysis. Revision improves requirement for analysis.
Section 14.1.2. – Labeling of Containers.	Operation Plan, p. 14-3	Clarified labeling requirements for off-site shipment of hazardous waste. Non-substantive change to proposed Approval; requirement already addressed by 40 C.F.R. part 172.



CHANGE	LOCATION	DESCRIPTION
Section 14.3 – PCB Flushing/Storage Unit.	Operation Plan, p. 14-8. Footnote 2	Clarified that CWM will notify US EPA prior to using a flushing solvent other than diesel to determine whether a permit modification is needed. Clarification reduces potential for releases.
Section 14.3(c) – Removal and Analysis of Collected Liquids.	Operation Plan, p. 14-10	Added description of actions to be taken if a spill or leak is discovered in the sump. Addition improves and clarifies requirements for responding to potential releases.
Table 14-1 – Container Storage Information Summary.	Operation Plan, p. 1 of 2	Reduced maximum storage capacity. See Statement of Basis, <b><u>section III.D.2.a(2)</u></b> .
Exhibit 14-1 – Containment Capacity Calculations for Containers	Operation Plan, Exhibit 14-1	Updated Engineer’s certification and calculations. See Statement of Basis, <b><u>section III.D.2.a(2)</u></b> .
<b>HAZARDOUS WASTE OPERATION PLAN – CHAPTER 15 – SPECIFIC INFORMATION FOR TANK SYSTEMS</b>		
Section 15.2 – PCB Flushing/Storage Unit.	Operation Plan, p. 15-2	Reduced maximum tank capacity. See Statement of Basis, <b><u>section III.D.2.a(2)</u></b> . Addition describes actions to be taken if a spill or leak is discovered in the sump. Addition improves and clarifies requirements for responding to potential releases.
Section 15.2(c) – New Installations.	Operation Plan, p. 15.3	Add text providing for annual testing of tank wall thickness and requiring a minimum tank wall thickness. Addition improves and clarifies requirements for the safe operation of the tank.



CHANGE	LOCATION	DESCRIPTION
Table 15-1 – Summary of Hazardous Waste Storage and Treatment Tanks.	Operation Plan, p. 1 of 1	Reduced maximum tank capacity. See Statement of Basis, <b><u>section III.D.2.a(2)</u></b> .
Exhibit 15-2 – Containment Capacity Calculations for Tanks at the PCB Flushing/Storage Unit.	Operation Plan, Exhibit 15-2	Updated Engineer’s certification and calculations. See Statement of Basis, <b><u>section III.D.2.a(2)</u></b> .
Exhibit 15-3.2 – Most Recent Tank Assessment and Certification Report for PCB Liquids Storage Tank.	Operation Plan, Exhibit 15-3.2	Updated to include most recent tank assessment and certification tanks with no change in conclusions. Non-substantive change from proposed Approval.
<b>HAZARDOUS WASTE OPERATION PLAN – CHAPTER 19 – SPECIFIC INFORMATION FOR LANDFILLS</b>		
Section 19.2(a)(3) – Control of Wind Dispersal of Particulate Matter. .	Operation Plan, p. 19-4.	Added description of existing requirement in KHF’s Waste Discharge Requirements. Revision does not change existing Facility operations.
Section 19.2(a)(4)(B)(1) – Erosion of Landfill Cover.	Operation Plan, p. 19-6	Revised and added text describes maintenance of landfill cover. Changes improve and clarify requirement to maintain landfill cover.



CHANGE	LOCATION	DESCRIPTION
<b>HAZARDOUS WASTE OPERATION PLAN – CHAPTER 26 – ENVIRONMENTAL MONITORING PROGRAMS</b>		
Introductory paragraph.	Operation Plan, p. 26-1	Added description of the purpose of the Site-Specific Air Monitoring Plan. Non-substantive change from proposed Approval.
Summary of Ambient Air Monitoring Program.	Operation Plan, p. 26-4	Minor text edits. Non-substantive change from proposed Approval.
<b>HAZARDOUS WASTE OPERATION PLAN – CHAPTER 30 – SECURITY PROCEDURES AND EQUIPMENT</b>		
Section 30.1 – Access Control.	Operation Plan, p. 30-1	Revised to provide for 24-hour on-site guard at site entrance. No change from proposed Approval. This requirement is consistent with the proposed Approval. See Proposed Approval, Appendix B-2.
<b>HAZARDOUS WASTE OPERATION PLAN – CHAPTER 31 – INSPECTION PROGRAM</b>		
Section 31.3(d) – Leachate Collection Recovery System (LCRS).	Operation Plan, p. 31-4	Added new section describing LCR systems, their inspections schedules, and Response Action Plans. Non-substantive change from proposed Approval; section does not change previous established requirements for LCRS or their operations.
<b>HAZARDOUS WASTE OPERATION PLAN – CHAPTER 33 – HAZARD PREVENTION</b>		
Section 33.6(a) – Engineering Controls	Operation Plan, p. 33-4	Minor edits.



CHANGE	LOCATION	DESCRIPTION
Section 33.6(b) – Administrative Controls	Operation Plan, p. 33-4	Added requirement that signs will be posted warning employees of potential exposure. Addition improves employee safety.
Section 33.8 – Mobile Equipment Decontamination	Operation Plan, p. 33-6	Expanded description of mobile equipment decontamination procedures. Procedures reduce potential releases.
Section 33.12 – Required Aisle Space	Operation Plan, p. 33-7	Revised to set minimum required aisle space of 30 inches. This aisle space is required by Approval Condition V.D.2.
Section 33.13 – Arrangements with Local Authorities	Operation Plan, p. 33-8	Added text repeats language in Operation Plan, Section 35.5. Non-substantive change from proposed Approval.
<b>HAZARDOUS WASTE OPERATION PLAN – CHAPTER 35 – CONTINGENCY PLAN</b>		
Section 35.1(b) – Notification Action Summary.	Operation Plan, p. 35-1	Updated contacts and phone numbers. Non-substantive change from proposed Approval.
Section 35.5 – Arrangements with Local Authorities.	Operation Plan, p. 35-8	Added statement that documentation will be maintained if any local agency refuses to enter into arrangement for emergency response to the Facility. Non-substantive change from proposed Approval.
Section 35.10 – Notification and Reporting Procedures.	Operation Plan, p. 35-10	Added text clarifying when spills must be reported to State. Notification requirements for PCB spills are included as conditions in the Approval.





CHANGE	LOCATION	DESCRIPTION
Exhibit 35A.2. – PCB Flushing/Storage Unit.	Operation Plan, p. 35-18	Deleted text related to future tank. Non-substantive change from proposed Approval. Added information on when leaks from the tank must be reported and contained. Revision improves and clarifies reporting requirements.
<b>HAZARDOUS WASTE OPERATION PLAN – CHAPTER 36 – TRAINING PLAN</b>		
Section 36.3(b) – Documentation of Training. Text added	Operation Plan, p. 36-3	Added requirement that training documentation is to be maintained on site. Revisions improve and clarify recordkeeping requirements.
Section 36.4 – Introductory Training. Category 1 – General Training.	Operation Plan, p. 36-3	Revised description of material covered during general awareness training. Revisions improve training requirements.
Section 36.4 – Introductory Training. Category 2 – Emergency Response Training.	Operation Plan, p. 36-4	Revised description and scope of emergency response training. Revisions improve and clarify training requirements.
Section 36.4 – Introductory Training. Category 3 – HAZWOPER Training.	Operation Plan, p. 36-5	Revised categorization of training. Revisions improve and clarify training requirements.
Section 36.4 – Introductory Training. Category 4 – Job Specific Training.	Operation Plan, p. 36-5	Revised description of training. Revisions improve and clarify training requirements.



CHANGE	LOCATION	DESCRIPTION
Section 36.5 – Extended Training. Category 5 – Special Skills Training.	Operation Plan, p. 36-6	Added requirement that training shall be completed prior to beginning assigned work. Revisions improve and clarify training requirements.
Section 36.6 – Continuing Training Program.	Operation Plan, p. 36-7	Added requirements for biennial and additional training. Revisions improve and clarify training requirements.



**APPENDIX E –  
JUSTIFICATIONS FOR USE OF OMNIBUS PROVISIONS**

**JUSTIFICATION FOR USE OF 40 CFR § 761.65(D)(4)(IV) AND § 761.75(C)(3)(II)  
OMNIBUS PROVISIONS IN CHEMICAL WASTE MANAGEMENT KETTLEMAN HILLS  
FACILITY PCB APPROVAL**

CONDITION	JUSTIFICATION
<b>III. Scope and Limitations of the Approval</b>	
C. – Expiration date	A fixed term for the approval allows for the regular review and updating of the approval to reflect current facility operations and the most current regulatory requirements and therefore necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
D. – Required use of approval modification procedures	The use of specific procedures to modify the approval allows changes to the Facility's operations to be incorporated into the approval and that the approval contains the terms and conditions necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
<b>IV. General Approval Conditions</b>	
B.1. – Maintain a printed copy of the Approval on-site	Maintaining a copy of the Approval on site is required so that Facility personnel have ready access to the information necessary for compliance with the Approval. Compliance with the Approval is necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
B.3. – Comply with the conditions of the FWS's Biological Assessment	Complying with the conditions of the FWS's Biological Assessment is necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to the environment in the form of endangered species and their habitat.
B.9. – Duty to correct any missing or incorrect application or submittal	Accurate information about the Facility and its operations is required to assure the Approval contains the necessary conditions and terms to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
B.10. – Closure plan for chemical waste landfill B-18	An adequate closure plan for Landfill B-18 is required so that the landfill is closed in a manner that will limit the possibility of future PCB releases and therefore is necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
B.11. – Post-closure plan for chemical waste landfills B-14, B-16, B-18, and B-19	A post-closure care plan is required so that the landfills are adequately maintained after closure. Continued maintenance of the landfill covers, leachate collection system and groundwater monitoring network is needed to prevent/mitigate releases of PCBs from the closed landfills into the environment and therefore are necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
B.12. – Notice of planned noncompliance	Timely notification of planned noncompliance with the terms and conditions of the Approval is necessary for U.S. EPA's oversight of the Facility. U.S. EPA's oversight monitors whether operations are carried out in a manner consistent with the Approval and therefore necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.



CONDITION	JUSTIFICATION
B.13. – Report noncompliance that endangers health or the environment	Timely notification of noncompliance that may endanger health or the environment is important so that appropriate actions are taken to minimize or prevent the endangerment and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment. Condition similar to 40 C.F.R. § 270.30(l)(6)
B.14. – Duty to minimize release of PCB and risk of noncompliance	Requiring that all reasonable steps are taken to minimize releases of PCBs is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
B.15. – Revisions to PCB operations in case of imminent hazard	Requiring changes to PCB waste operations at the Facility that are creating an imminent hazard is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
C.8. Management of reactive and incompatible waste	Appropriate management of reactive and incompatible waste is necessary to avoid explosions, fires, spills, and other potential releases of PCBs to the environment and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
C.9. Prevention of vaporization of PCBs	Preventing the heating of PCB-containing materials when processing reduces the vaporization and release of PCBs to the environment and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
D.1 – Waste acceptance procedures	Adequate waste acceptance procedures provide that only PCB waste types that can be safely managed and/or disposed of at the Kettleman Hills Facility will be accepted at the Facility. Safe management and disposal of PBC Waste is required to prevent releases of PCBs to the environment and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
D.2. – Ban on acceptance of PCB/Radioactive Waste	Kettleman Hills Facility is not designed to store or dispose of PCB/Radioactive Waste and therefore cannot routinely provide for its safe management. In addition, the Approval does not include conditions required by the PCB regulations for the storage of PCB/Radioactive Waste. Because the Facility does not have the ability to handle such waste, banning the acceptance of PCB/Radioactive Waste is necessary to prevent potential releases to the environment and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
E.1. and E.2. – Employee training/annual refresher	Appropriate employee training, including regular refresher classes, assists Facility employees to safely handle PCB waste, to respond to emergencies, and to prevent or minimize exposure to themselves and releases to the environment and therefore is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
F.1. – Hazardous prevention procedures	Establishing and implementing hazard prevention procedures is necessary to minimize potential accidents, spills, and other releases of PCBs to the environment and therefore is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.



CONDITION	JUSTIFICATION
F.2. – Comply with OSHA regulations	Conducting operations in compliance with applicable OSHA regulations helps to protect the health and safety of workers and to prevent releases to the environment and therefore is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
F.4. – Report injuries due to PCB exposure	Notifying U.S. EPA of any injuries or sickness due to PCB exposure allows U.S. EPA to timely evaluate the extent of risk to health and the environment of the incident and determine if additional remediation or changes to Facility operations or Approval are necessary to ensure that operations of the Facility do not pose an unreasonable risk of injury to health or the environment.
G.2. – Comply with Facility Contingency Plan in emergencies or spills	Implementing the KHF’s submitted contingency plan in case of an emergency or spills provides for timely and adequate responses to emergencies occur which will help prevent, minimize, and mitigate releases and therefore is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
G.3. – Verbal report if Contingency Plan is implemented G.4. – Written report if Contingency Plan is implemented	Notifying U.S. EPA of any incident involving PCB that requires implementation of the contingency plan and submitting a written report to U.S. EPA with details of the incident and response actions allows U.S. EPA to timely evaluate the risk to health and the environment of the incident and determine if additional remediation or changes to the contingency plan or Approval are necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
G.5. – Certify emergency readiness prior to resuming operations	Certifying emergency readiness and implementation of corrective actions prior to resuming operations provides that CWM is ready to respond to another emergency and that the likelihood of another similar incidence is reduced, both of which will reduce potential releases and therefore are necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
G.6. – Written investigation report for PCB spill > 1 lb G.7. – Written investigation report on PCB spill > 10 lb	Investigation and documentation of causes of spills allows for effective changes to operations thereby reducing the likelihood of such spills in the future and therefore is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
G.8. – Annual update of Contingency Plan	Annually updating the contingency plan accounts for any changes to Facility’s operations and notification to local first responders and U.S. EPA of any changes, improves the effectiveness of the plan in emergencies, and reduces the risk of injury and releases and therefore is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
G.9. – Post list of emergency contacts	Posting of emergency contacts and annual updates of the contact list allows employees to rapidly contact on- and off-site emergency services in case of emergency reducing the risk of injury and releases and therefore is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.



CONDITION	JUSTIFICATION
G.10. – Required list of emergency response equipment G.11. – Annual test of emergency response equipment	Requiring that certain emergency equipment be provided and maintained assures that basic emergency equipment is available during the initial response to emergencies, reducing the risk of injury and releases and therefore is necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
G.12. – Availability of emergency communication equipment	Requiring the availability of emergency communications device during PCB operations provides that, if needed, emergency assistance can be obtained rapidly reducing the risk of injury and releases and therefore is necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
G.13. –Emergency Coordinator	Requiring the availability of a responsible emergency coordinator with the authority to respond as needed to emergencies provide for rapid and appropriate response in case of emergencies to reduce the risk of injury and releases and therefore is necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
G.14. – Written report if unauthorized entry, etc. results in release of PCBs	Requiring timely notification of unauthorized entry or other incidences that cause PCB discharges allows U.S. EPA to timely evaluate the risk to health and the environment of the incident and determine if additional remediation or changes to the contingency plan or final Approval are necessary to ensure that operations of the Facility do not pose an unreasonable risk of injury to health or the environment.
G.15. – Required revisions to the Contingency Plan	Requiring revisions to the Contingency Plan if any of the listed events occurs provides that an adequate Contingency Plan is in place in case of an emergency to reduce the risk of injury and releases and therefore is necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
H.1. – Inspector access to the Facility	Requiring that U.S. EPA representatives have access to the Facility in order to determine compliance with applicable statutes, regulations and the final Approval conditions allows U.S. EPA to monitor that Facility operations are conducted in compliance with applicable requirements and therefore is necessary to ensure do not pose an unreasonable risk of injury to human health and the environment.
I.1. – Monthly Facility inspection and documentation	Regular inspections of the Facility are necessary to identify and correct potential problems as soon as possible so that they do not result in PCB releases and therefore are necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
I.2. – Monthly perimeter fence inspection and documentation	Regular inspections and follow-up repairs of the perimeter chain-link fence are necessary to prevent entry to the Facility of unauthorized persons and endangered species that could be harmed by contact with PCBs stored or disposed at the Facility and therefore are necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment. Documentation of the monthly inspections and any necessary repairs allows U.S. EPA to monitor activities at the Facility and check compliance with the final Approval and therefore necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.



CONDITION	JUSTIFICATION
I.3. – Correction of deficiencies identified during inspections	Correction of any deficiencies found during a Facility inspection prevents or minimizes PCB releases and therefore is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
I.4. – Documentation of Facility inspection	Documentation of Facility Inspections documents that CWM has performed the required inspections of the Facility. Regular inspections of the Facility are necessary to identify and correct potential problems as soon as possible so that they do not result in PCB releases. Documentation of inspections facilitates action by the Facility and effective regulatory oversight and therefore is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment. Documentation of inspections is also part of the recordkeeping requirements that allow U.S. EPA to monitor activities at the Facility and check compliance with the final Approval. U.S. EPA’s oversight monitors that operations are carried out in a manner consistent with the final Approval and these documentation requirements are therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
J.1. – Operation of a Security System	Operation of a security system at the Facility is necessary to prevent unauthorized access and prevent vandalism which may result in PCB releases and therefore is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
K.1. – Closure cost estimate for the Landfill B-18	Maintenance of a cost estimate for closure of Landfill B-18 is necessary so that there is adequate funding available for a third party to close the landfill if Chemical Waste Management, Inc. is unable to do so. Proper closure is necessary to prevent future releases of PCBs and therefore maintenance of a cost estimate is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
K.2. – Annual adjustment to closure cost estimate for Landfill B-18	Maintenance of a cost estimate for closure of Landfill B-18 that reflect current costs is necessary so that there is adequate funding available for a third party to close the landfill. Proper closure is necessary to prevent future releases of PCBs and therefore this requirement is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
K.3. – Modification to closure cost estimate for Landfill B-18 if Closure Plan changes	Revisions to the cost estimate for closure of Landfill B-18 if there are any approved changes to the closure plan that increases closure cost is necessary so that there is adequate funding available for a third part to close the landfill. Proper closure is necessary to prevent future releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
K.4. – Maintain closure cost estimate for Landfill B-18 on site	Maintaining the cost estimate onsite is part of the recordkeeping requirements that allow U.S. EPA to monitor activities at the Facility and check compliance with the Approval, and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.





CONDITION	JUSTIFICATION
L.1. – Post-closure cost estimate for Landfills B-14, B-16, B-18, and B-19	Maintenance of a cost estimate for post-closure care of the chemical waste landfills units is part of the process for providing adequate funding for post-closure care of these units. Post-closure care includes regular inspection, maintenance, and operation of the landfill covers, leachate collection systems and groundwater monitoring network, all of which are necessary to prevent future releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
L.2. – Annual adjustment to post-closure cost estimate for Landfills B-14, B-16, B-18, and B-19	Requiring that the post-closure care cost estimate for the chemical waste landfills be annually adjusted for inflation provides that the cost estimates reflect current costs for post-closure care. Proper post-closure care is necessary to prevent future releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
L.3. – Modification to post-closure cost estimates for Landfills B-14, B-16, B-18, and B-19	Revisions to the cost estimate for post-closure care of chemical waste Landfills if there are any approved changes to their post-closure care plan that increases post-closure care cost is necessary so that there is adequate funding available for a third part to provide post-closure care for the units. Proper post-closure care is critical to prevent future releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
L-4 – Maintain post-closure cost estimate for Landfills B-14, B-16, B-18, and B-19 on site	Maintaining the cost estimate onsite is part of the recordkeeping requirements that allow U.S. EPA to monitor activities at the Facility and check compliance with the final Approval, and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
M.1. – Maintain adequate financial assurance for closure and post-closure care for the TSCA Units and Landfills	Maintaining adequate funding for closure and post-closure care is necessary in order to ensure that all units that manage PCBs at the Kettleman Hills Facility will be closed and maintained in a manner that that reduces or eliminates the potential for future releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
M.2. –Financial assurance mechanisms for closure/post-closure care of TSCA Landfills.	The Approval limits the type of financial assurance mechanism that can be used for closure/post-closure care of the TSCA Landfills to those allowed under TSCA (40 C.F.R. § 761.65(g) or RCRA (40 C.F.R. Part 264 Subpart H, or California’s authorized hazardous waste program, Title 22, Division 4.5, Chapter 14, Article 8 of the California Code of Regulations, 22 C.C.R. §§ 66264.140 <i>et seq.</i> ). U.S. EPA has determined through regulation or authorization that these mechanisms provide the best methods for assuring adequate funds are available for closure and post-closure care. Proper closure and post-closure care are necessary to reduce or eliminate the potential for future releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
M.3. – Financial assurance mechanisms for closure of TSCA Units	The Approval limits the type of financial assurance mechanism that can be used for closure of TSCA Units to those listed at 40 C.F.R. § 761.65(g). U.S. EPA has determined through regulation that these mechanisms provide the best methods for assuring adequate funds are available for closure. Proper closure care is necessary to reduce or eliminate the potential for future releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.



CONDITION	JUSTIFICATION
M.4. – Approval of revisions to financial assurance mechanism	Provision of an appropriate financial assurance mechanism is necessary to assure that adequate funding is available for closure and post-closure care of the Facility. Proper closure and post-closure care are necessary to prevent future releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
M.5. – Annual submittal of financial assurance mechanism documents	Requiring the annual submittal of documentation of the current closure and post-closure care financial assurance allows U.S. EPA to determine that an adequate financial assurance mechanism continues to be in place to provide for proper closure and post-closure care of the PCB units at KHF. Proper closure and post-closure care are necessary to prevent future releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
M.6. – Revised financial assurance mechanism if maximum storage capacity at the PCB F/SU increases	The amount of financial assurance is based in part on the disposal costs for the maximum amount of PCB waste that is allowed to be stored at the PCB F/SU. Requiring update of the financial assurance mechanism if the maximum storage capacity increases assures that sufficient funding is available for closure of the unit in a manner that does not pose an unreasonable risk of injury to health or the environment and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
M.7. – Maintain current closure and post-closure care financial assurance documents on site	Requiring that the current closure and post-closure care financial assurance documents be kept on site is necessary because the financial assurance mechanism is part of the recordkeeping requirements that allow U.S. EPA to monitor activities at the Facility and check compliance with the Approval, and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
M.8. – Notification of bankruptcy proceeding	Requiring that U.S. EPA be notified if CWM is involved in a bankruptcy proceeding allows U.S. EPA to take timely steps to assure operations at the Facility will continue in a manner that does not pose an unreasonable risk of injury to health or the environment.
M.9. – Replacement of financial assurance/liability insurance in case of bankruptcy of issuing company	Bankruptcy of the company that provides the closure/post-closure care financial assurance and liability insurance for the Kettleman Hills Facility makes the future availability of funds for these required activities uncertain. Requiring timely establishment of replacement financial assurance and liability insurance assures the continuing availability of these funds. Adequate funding for closure/post-closure care and response to any major accidents or releases involving PCBs or other hazardous waste at the Facility is necessary to limit releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
M.10. – Revised financial assurance mechanism if U.S. EPA deems existing mechanism inadequate	Requiring timely establishment of revised financial assurance and liability insurance if the existing mechanism is inadequate assures the continuing availability of the funds necessary to close and provide post-closure care the Facility. Adequate funding for closure and post-closure care is necessary to limit releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.



CONDITION	JUSTIFICATION
N.1. – Liability Insurance	Maintaining the existing liability insurance. Liability insurance is important so that proper funding is available for responding to any major accidents or releases involving PCBs or other hazardous waste at the Facility, and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
N.2. – Copy of liability insurance policy be kept on site	Requiring that a copy of liability insurance be kept on site is part of the recordkeeping requirements that allow U.S. EPA to monitor activities at the Facility and check compliance with the Approval. U.S. EPA’s oversight ensures that operations are carried out in a manner consistent with the Approval and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
O.2. – Maintain records as provided for in Operation Plans O.3. – Maintain records as needed to determine compliance with maximum storage limitations O.4. – PCB material tracking system O.5. – Maintenance of records/operations during power/network outages O.8. – PCB waste sampling, analysis and data quality assurance records O.9. – PCB spill cleanup records and reports sampling	Implementation of the recordkeeping requirements described in the Renewal Application and some additional information to supplement what is required in the regulations is important to allow U.S. EPA to monitor activities at the Facility and check compliance with the Approval. U.S. EPA’s oversight ensures that operations are carried out in a manner consistent with the Approval and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
O.11. – Monthly report on PCB remediation waste receipts and unusual occurrences	Monthly reports on the PCB remediation waste receipts and unusual occurrences at the Facility allow U.S. EPA to monitor proper disposal of waste from PCB cleanup sites and timely oversight of events at the Facility that may not otherwise require reporting. U.S. EPA’s oversight ensures that operations are carried out in a manner consistent with the Approval and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
<b>V. CONDITIONS FOR COMMERCIAL STORAGE AND TREATMENT</b>	
B.2. – Comply with Operation Plan	Implement of the Facility’s Operation Plan provides procedures for the appropriate handling and storage of PCB waste at the PCB F/SU reducing or eliminating PCB releases to the environment and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
B.3. – Implementation of SPCC Plan	Implement of the Facility’s spill prevention controls and countermeasures plan will help reduce or prevent spills of PCBs at the PCB F/SU and thus reduce or eliminate PCB releases to the environment and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.



CONDITION	JUSTIFICATION
C.1. – Maximum storage capacity C.2. – Assumptions for calculating storage volumes C.3. – Prohibition on Unit modifications	Establishing maximum storage capacities for each portion of the PCB F/SU, identifying assumptions that must be used to calculate the amount of PCB waste stored at the PCB F/SU, and prohibiting changes to the PCB F/SU that may reduce its containment capacity are all necessary to prevent PCB releases to the environment that may result if the amount of PCB waste stored at the Unit exceeds its containment capacity. Prevention of PCB releases to the environment is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
C.4. – Temporary storage in outside containment area	Requiring storage in a curbed area with a sealed/impervious floor greatly reduces the potential release of PCB to the environment and therefore is necessary to ensure that operations of the Facility do not pose an unreasonable risk of injury to health or the environment.
C.5. – Adjacent storage - recordkeeping	Implementation of the recordkeeping requirements to track waste stored adjacent to the PCB F/SU is necessary to allow U.S. EPA to monitor activities at the Facility and check compliance with the requirements of the PCB regulations and the Approval, and therefore this requirement is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
D.2. – Aisle spacing D.3. – Drum storage D.4. – Storage on pallets	Prescribing a minimum aisle spacing, maximum number of drums that may be stacked, and the use of pallets is needed to allow for inspection of the containers for possible leaks and safe retrieval and to assure that drums are not stacked to heights that would be dangerous if drums fell. These requirements reduce or eliminate the potential for spills and releases of PCB and therefore are necessary to ensure the operations at the Facility do not pose an unreasonable risk of injury to health or the environment.
D.5. – Closed containers	Requiring containers be kept closed unless waste is being added or removed is necessary to prevent accidental spills and evaporative emissions from the containers. These requirements reduce or eliminate spills and releases of PCB and therefore are necessary to ensure the operations at the Facility do not pose an unreasonable risk of injury to health or the environment.
E.1. – Draining and flushing operations	U.S. EPA is approving the draining and flushing of PCB-containing transformers and other PCB items but is requiring such operations to be done only within the curbed and sealed containment areas at the PCB F/SU. Requiring the operations be performed only with these areas will reduce or eliminate the potential for releases of PCB and therefore is necessary to ensure the Facility’s operations do not pose an unreasonable is protective of health and the environment.
E.2. – Repacking and bulking operations	U.S. EPA is approving the repacking and bulking of PCB waste to facilitate storage and disposal but is requiring such operations to be done only within the curbed and sealed containment areas at the PCB F/SU. Requiring the operations be performed only with these areas will reduce or eliminate the potential for releases of PCB and therefore is necessary to ensure the Facility’s operations do not pose an unreasonable is protective of health and the environment.



CONDITION	JUSTIFICATION
E.3. – Bin and drum top solidification operations	The Approval allows the bin top and drum top solidification of PCB waste provided that the PCB waste meets the requirements of the PCB regulations for solidification (e.g., non-ignitable, incidental liquids < 500 ppm) and such operations are done only within the curbed and sealed containment areas at the PCB F/SU. Requiring the operations be performed only within these areas will reduce or eliminate the potential for releases of PCB and therefore is necessary to ensure the Facility's operations do not pose an unreasonable is protective of health and the environment.
E.4. – Spill prevention and cleanup	Establishing and implementing spill prevention procedures is necessary to minimize potential accidents, spills, and other releases of PCBs releases and therefore is necessary to ensure that operations at the Facility do not pose an unreasonable is protective of health and the environment.
E.8. – Recordkeeping for drained PCB Items and Liquids	Implementation of the recordkeeping requirements to tracking disposal of drained PCB Items and the drained Liquids allows U.S. EPA to monitor activities at the Facility and to check compliance with the Approval, and therefore is necessary to ensure that operations at the Facility do not pose an unreasonable is protective of health and the environment.
F.1. – PCB liquid storage	The PCB Tank at the PCB F/SU is the only tank at the Facility that U.S. EPA is approving for the storage of regulated PCB liquids. U.S. EPA has not evaluated the adequacy of any other tank at the Facility for the storage of PCB liquids, therefore, prohibiting storage in other tanks is necessary to prevent accidental releases of PCB Liquids from tanks that are not designed and approved to handle PCB Liquids and therefore necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
F.2. to F.6. – Tank operation requirements	Tank operation requirements are necessary to reduce or prevent accidental releases of PCB liquids from the PCB Tank to the environment and therefore are necessary to ensure that the Tank is operated in a manner that does not pose an unreasonable risk of injury to health or the environment.
F.7. – Tank carbon filter	Maintenance of a carbon filter on the PCB Tank's roof vent reduces or prevents release of PCB to the atmosphere and therefore is necessary to ensure that the Tank is operated in a manner that does not pose an unreasonable risk of injury to health or the environment.
G. – Quarterly wipe sampling of the PCB F/SU	The Approval requires quarterly random wipe sampling of surfaces in the PCB F/SU so accidental spills of PCBs are detected and adequately cleaned up to reduce potential exposure of workers and the environmental to PCBs and is therefore necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
H.1. to H.3. – Inspection of the PCB F/SU	Regular inspections of the PCB F/SU are necessary to identify and correct potential problems as soon as possible so that they do not result in PCB releases to the environment and is therefore necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
H.4. – Maintenance of the PCB F/SU structure	Maintenance of the PCB F/SU structure is necessary to correct potential problems as soon as possible so that they do not lead to PCB releases to the environment and is therefore necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.



CONDITION	JUSTIFICATION
H.5. – Inspection, removal and testing of liquids in sumps	Requiring inspection and removal of liquids from the non-discharging sumps at the PCB F/SU assure that contaminated liquids do not accumulated in the sumps and potentially overflow contaminating the Unit and are therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment. Testing of the liquids is necessary to assure appropriate disposal and is therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
I.3., I.4. & I.6.d. – Updated closure plan	A current and comprehensive closure plan is necessary to assure that the PCB F/SU is closed in a manner that prevents any future release of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment. Requiring submittal of a revised closure plan 90 days prior to the beginning of closure activities allows U.S. EPA to make sure that the plan reflects the most current operations at the Unit and therefore adequately provides for closure of the unit in a manner that is protective of health and the environment.
<b>VI. CONDITIONS FOR CHEMICAL WASTE LANDFILLS</b>	
B.2.– Maximum capacity and height	Setting a maximum capacity and height for Landfill B-18 prevents waste amounts being disposed in the landfill that would exceed the amount the landfill was designed to safely contain which could result in the potential failure of the landfill and release of PCB to the environment and therefore necessary to ensure that operations of the Facility do not pose an unreasonable risk of injury to health or the environment.
B.3. – Annual survey and report of remaining capacity	Tracking the amount of remaining capacity in Landfill B-18 provides that the maximum capacity that the landfill can safely contain is not exceeded and is therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
D.2. – Comply with Operation Plan	Appropriate management of Landfill B-18 is required to prevent releases of PCBs and is therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
D.4. – Minimum separation distance for incompatible waste	Appropriate management of incompatible wastes, including keeping a minimum separation between them, is necessary to avoid explosions, fires, spills, and other potential releases of PCBs to the environment and is therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
D.6. – Container disposal requirements	Requiring containers either to be full or crushed prevents their future collapse in the landfill which could result in uneven settling and damage to the final cover. An intact final cover prevents releases of waste from a landfill and is therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
D.7. – Daily cover requirement	Limiting VOC content of soil used for daily cover limits VOC emissions to the air. VOC emissions may contribute to ozone formation and is therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.



CONDITION	JUSTIFICATION
E.2.– Leachate management as hazardous waste	Requiring leachate to be managed as a hazardous waste containing PCBs restricts its storage and disposal to units that are designed to handle hazardous waste and thus reduces the likelihood of releases and is therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
E.3. and 4. – Leachate Collection and Removal System operations	Requiring the LRCS to be operated according to the procedures and protocols established in the Operation Plan, Response Action Plan, and Vadose Zone Action Plan greatly reduces the likelihood of releases of PCBs to groundwater. In addition, monitoring the leachate fluid levels, meeting the action response rates, and limiting the leachate fluid levels to a maximum of 1 foot provides that excessive hydraulic pressure does not build up on the protective landfill liner systems which could cause them to fail, leading to potential releases of PCBs to groundwater. These requirements are therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
E.5.b. – Leachate sampling and analysis - notification	Notification to U.S. EPA of any detection of PCBs in leachate allows U.S. EPA to timely evaluate any potential risk to health and the environment and to determine if any additional actions or changes to Facility operations are necessary to ensure that continuing operations of the Facility do not pose an unreasonable risk of injury to health or the environment.
E.5.c. – Leachate sampling and analysis - report	Regular reports on environmental monitoring results allows U.S. EPA to evaluate whether that the Facility’s Approval continues to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment or if revisions are necessary to prevent any unreasonable risk.
G.1. – Inspection	Regular inspections of the landfill and its supporting structures is necessary to identify and correct potential problems as soon as possible so that they do not result in PCB releases to the environment and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
G.2. – Correction of deficiencies	Correction of deficiencies found during an inspection of the landfill and its supporting structures prevents or minimizes potential problems so that they do not result in PCB releases to the environment and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
G.3. – Recordkeeping for inspections	The Facility’s inspection forms document that the required inspections have been performed and allow U.S. EPA to monitor compliance with the Approval. U.S. EPA’s oversight monitors that operations are carried out in a manner consistent with the Approval and this requirement is therefore necessary to ensure that operations at the Facility do not pose an unreasonable is protective of health and the environment.
H.1. – Closure Plan for Landfill B-18	Proper closure is necessary to prevent future releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
H.2. – Notification of closure	Notification to U.S. EPA prior to beginning closure of Landfill B-18 allows U.S. EPA to monitor implementation with the closure plan and that closure occurs in a manner that will prevent future releases of PCBs, and therefore necessary to ensure that operations at the Facility do not pose an unreasonable is protective of health and the environment.



CONDITION	JUSTIFICATION
H.3. – Reservation of space for closure debris	The current closure plan and cost estimate for the PCB F/SU assumes debris from that closure will be disposed of in Landfill B-18. If disposal space is not reserved in the landfill for this debris, then cost for closure of the PCB F/SU may exceed the available funds leading to inadequate closure and potential future releases of PCBs; therefore, reservation of space in Landfill B-18 is necessary to ensure that operations at the Facility do not pose an unreasonable risk of injury to health and the environment.
H.4. – Implementation of closure plan	Proper closure is necessary to prevent future releases of PCBs and therefore necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
H.5. – Inspection and maintenance during closure	Regular inspections of the landfill and its supporting structures is necessary to identify and correct potential problems as soon as possible so that they do not result in PCB releases to the environment and therefore necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment. This remains true even during the closure process which can take several months or longer.
H.6., 7., & 8. – Revisions to the closure plan	A current and comprehensive closure plan is necessary to assure that Landfill B-18 is closed in a manner that prevents any future release of PCBs and therefore necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment. Requiring submittal of a revised closure plan 90 days prior to the beginning of closure activities allows U.S. EPA to assure the plan adequately reflects the most current operations at the landfill and therefore provides for closure of the unit in a manner that does not pose an unreasonable risk of injury to health or the environment.
I.1. – Post-closure care for Landfill B-18	Maintenance of a post-closure care plan that includes establishes requirements for regular inspections, maintenance, and operation of the landfill covers, leachate collection systems, surface water controls, and groundwater monitoring network is necessary to prevent future releases of PCBs and therefore necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
I.2. – Implementation of post-closure care	Implementation of a post-closure care plan that includes regular inspection, maintenance, and operation of the landfill covers, leachate collection systems, surface water controls, and groundwater monitoring network is necessary to prevent future releases of PCBs and therefore necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.
I.3. – Post-closure care period	PCBs will remain in Landfills B-14, B-16, and B-19 indefinitely. Long-term implementation of post-closure care is necessary to prevent future releases of PCBs and therefore necessary to ensure the Facility's operations do not pose an unreasonable risk of injury to health or the environment.





CONDITION	JUSTIFICATION
I.4. – Revisions to and renewal of post-closure care plan	PCBs will remain in Landfills B-14, B-16, and B-19 indefinitely. Long-term implementation of post-closure care is necessary to prevent future releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment. Requiring a new post-closure plan at the end of each post-closure care period until such time that the U.S. EPA determines that post-closure care is no longer necessary will ensure that adequate post-closure care is maintained over the long-term.
I.5 – Discontinuation of post-closure care	Requiring the submittal of a demonstration that no additional post-closure care is necessary to prevent an unreasonable risk of injury to health or the environment and requiring U.S. EPA to approve it before discontinuing post-closure care is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
<b>VII. CONDITIONS FOR CLOSED CHEMICAL WASTE LANDFILLS B-14, B-16, AND B-19</b>	
B.1. – Inspection of Landfills B-14, B-16, and B-19	Regular inspections of closed PCB units at the Facility are necessary to identify and correct potential problems as soon as possible so that they do not result in PCB releases and therefore are necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
B.2. – Post-closure care for Landfills B-14, B-16, and B-19	Maintenance of a post-closure care plan that includes requirements for regular inspections, maintenance, and operation of the landfill covers, leachate collection systems, surface water controls, and groundwater monitoring network is necessary to prevent future releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
B.3. – Implementation of post-closure care	Implementation of a post-closure care plan that includes regular inspection, maintenance, and operation of the landfill covers, leachate collection systems, surface water controls, and groundwater monitoring network is necessary to prevent future releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
B.4. – Post-closure care period	PCBs will remain in Landfills B-14, B-16, and B-19 indefinitely. Long-term implementation of post-closure care is necessary to prevent future releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
B.5. – Revisions to and renewal of post-closure care plan	PCBs will remain in Landfills B-14, B-16, and B-19 indefinitely. Long-term implementation of post-closure care is necessary to prevent future releases of PCBs and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment. Requiring a new post-closure plan at the end of each post-closure care period until such time that the U.S. EPA determines that post-closure care is no longer necessary will ensure that adequate post-closure care is maintained over the long-term.
B.6 – Discontinuation of post-closure care	Requiring the submittal of a demonstration that no additional post-closure care is necessary to prevent an unreasonable risk of injury to health or the environment and requiring U.S. EPA to approve it before discontinuing post-closure care is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.



CONDITION	JUSTIFICATION
<b>VIII. ENVIRONMENTAL MONITORING</b>	
A.1. – Implement air monitoring program	One of the potential exposure routes of the public and the environment to PCBs from the Kettleman Hills Facility is through air emissions. Monitoring this route with a well-run air monitoring program is necessary to identify any emissions of PCBs from the Facility and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
A.2. – Air monitoring reports	Regular reports on environmental monitoring results allows U.S. EPA to evaluate whether that the Facility’s Approval continues to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment or if revisions are necessary to prevent any unreasonable risk and therefore necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
B.2. – Groundwater well sampling and testing	Testing of groundwater from closed landfills B-14, B-16, and B-19 is needed to ensure that any releases of PCBs to groundwater under the chemical waste landfills at the Facility are quickly found. Early identification of PCB releases allows for early corrective action and therefore is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
B.3. – Groundwater well operation and maintenance	Correct well operations and maintenance is needed to assure groundwater samples are available for testing. Testing of groundwater from closed landfills B-14, B-16, and B-19 is needed to ensure that any releases of PCBs to groundwater under the chemical waste landfills at the Facility are quickly found. Early identification of PCB releases allows for early corrective action and therefore is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
B.4. – Groundwater well abandonment	An adequate groundwater monitoring network is needed so that any releases of PCBs to groundwater under the chemical waste landfills at the Facility are quickly found. Early identification of PCB releases allows for early corrective action and therefore this requirement is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
B.5. – New groundwater wells	An adequate groundwater monitoring network is needed to ensure that any releases of PCBs to groundwater under the chemical waste landfills at the Facility are quickly found. Early identification of PCB releases allows for early corrective action and therefore is necessary to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment.
B.6. – Notification of PCB detection	Notification to U.S. EPA of any detection of PCBs in groundwater allows U.S. EPA to timely evaluate the risk to health and the environment from the PCB release and to determine if remediation or changes to Facility operations are necessary to ensure that continuing operations of the Facility do not pose an unreasonable risk of injury to health or the environment.
B.7. – Groundwater monitoring report	Regular reports on environmental monitoring results allows U.S. EPA to evaluate whether that the Facility’s Approval continues to ensure the Facility’s operations do not pose an unreasonable risk of injury to health or the environment or if revisions are necessary to prevent any unreasonable risk.



CONDITION	JUSTIFICATION
<b>IX. PROCEDURES TO MODIFY, TRANSFER OWNERSHIP OR OPERATIONAL CONTROL, REVOKE, SUSPEND, DENY, CONTINUE, OR RENEW APPROVAL</b>	
<p>A. – Procedures for modifications C.1. – Revocation or suspension of Approval</p>	<p>Specifying the administrative procedures to modify, revoke, or suspend an approval assures that the Facility continues to operate under an approval that reflects current operating procedures and contains the terms and conditions necessary to ensure that the Facility’s operations to do not pose an unreasonable risk of injury to health or the environment. Procedures to revoke and suspend an approval are necessary if U.S. EPA determines that the Facility cannot operate in a manner that does not pose an unreasonable an unreasonable risk of injury to health or the environment.</p> <p>Requiring public notice and comment for certain types of modifications is necessary because public participation helps ensure that all issues related to operations of the Facility that affect the surrounding community are known and approval conditions to address these issues and prevent an unreasonable risk of injury to health or the environment are included. Finally, while the PCB regulations at 40 C.F.R. § 761.65 and § 761.75 do not explicitly include provisions covering how to modify, revoke, or suspend, the approval, U.S. EPA interprets its authority under these provisions to issue an approval as also providing authority to undertake these associated permit processing actions.</p>
<p>E.1. – Renewal or closure</p>	<p>Establishing deadlines for submittal of renewal application or notice of closure prior to the expiration of the Approval allows U.S. EPA to provide appropriate oversight of the Facility which is necessary to ensure that the Facility operates in a manner that does not pose an unreasonable an unreasonable risk of injury to health or the environment. Update of the closure plan prior to the closure beginning assures that the closure plan reflects current Facility operations and therefore appropriate closure procedures are followed. Notification to U.S. EPA prior to closure beginning allows U.S. EPA to monitor implementation with the closure plan. U.S. EPA’s oversight ensures that closure occurs in a manner that will prevent future releases of PCBs and therefore necessary to ensure that the Facility’s operations do not pose an unreasonable is protective of health and the environment.</p>



**APPENDIX F –  
REPORTING, NOTIFICATION, AND SUBMITTAL REQUIREMENTS IN THE  
KETTLEMAN HILLS FACILITY TSCA APPROVAL**

**REPORTING, NOTIFICATIONS, AND SUBMITTALS REQUIREMENTS IN THE KETTLEMAN HILLS FACILITY  
PCB APPROVAL**

REPORT NAME	APPROVAL CONDITION	AGENCY CONTACT	FREQUENCY	DUE DATE	CONTENT/OTHER INFORMATION
<b>Routine Reports</b>					
<b>WASTE REPORTS AND LANDFILL CAPACITY</b>					
<b>PCB Annual Report</b>	Condition IV.O.7.d 40 CFR 761.180(b)(3)	U.S. EPA	Annually	July 15	Amount of PCB waste by category received, stored, transferred, disposed, and remaining at the Facility
<b>TSCA Monthly Report</b>	Condition IV.O.11.	U.S. EPA Project Manager	Monthly	By 25 <sup>th</sup> day of the following month	PCB Waste received that resulted from spills, leaks, or other uncontrolled discharges of PCBs; unusual events at the Facility
<b>Survey of landfill capacity</b>	Condition VI.B.3.	U.S. EPA Project Manager	Annually	March 1	Survey report on remaining capacity in Landfill B-18
<b>GROUNDWATER, SOIL GAS, STORMWATER, AND LCRS MONITORING</b>					
<b>Groundwater monitoring report</b>	Condition VIII.B.7.	U.S. EPA Project Manager	Annually	By March 31	Summary report of groundwater monitoring results and soil gas monitoring results. Facility may substitute Groundwater and Unsaturated Zone Monitoring Report for Class I Waste Management Unit and Annual Monitoring Summary Report required by the MRP provided the report includes PCB analysis results.
<b>LCRS sampling results</b>	Condition VI.E.5.c.	U.S. EPA Project Manager	Annually	By March 1	Results of the annual leachate sampling and analysis required by Conditions IV.E.5.a. and VII.B.3.b. CWM may substitute the Annual Leachate Collection and Removal System Report required by MRP R5-2014-0003 to meet this requirement



REPORT NAME	APPROVAL CONDITION	AGENCY CONTACT	FREQUENCY	DUE DATE	CONTENT/OTHER INFORMATION
<b>LCRS integrity report</b>	Condition VI.E.5.c.	U.S. EPA Project Manager	Annually	By March 1	Results of testing for proper operation of LCRS and comparison of results with earlier tests under comparable conditions.
<b>AIR MONITORING</b>					
<b>Air program monitoring report</b>	Condition VIII.A.2.	U.S. EPA Project Manager	Quarterly	90 days after end of reporting quarter	Summary report of the PCB Aroclors data collected during the ambient air sampling and meteorological data and description of waste received. Facility may substitute State report.
<b>CLOSURE AND POST-CLOSURE</b>					
<b>Post-closure report</b>	Conditions VI. I.2.h. and VII.B.3.g.	U.S. EPA Project Manager	Annually	By September 30	Documentation of post-closure inspections, maintenance activities, and survey results.
<b>Annual documentation of Financial Assurance</b>	Condition IV.M.4.	U.S. EPA Project Manager	Annually	March 1	Written documentation of continued financial assurance for the PCB units at the Facility including the current closure and post-closure cost estimates for the PCB units and the level of funding contained in the closure and post-closure financial assurance mechanism.
<b>OTHER</b>					
<b>PCB Storage Facility Sampling</b>	Condition V.G.2.	U.S. EPA Project Manager	Annually	July 15	Results from quarterly testing of the PCB F/SU (See Approval, Appendix B-4.1 for details)



REPORT NAME	APPROVAL CONDITION	AGENCY CONTACT	FREQUENCY	DUE DATE	CONTENT/OTHER INFORMATION
<b>INCIDENT REPORTS</b>					
<b>EMERGENCIES, SPILLS, AND OTHER RELEASES</b>					
<b>Emergency incident</b>	Condition IV.G.3.	U.S.EPA Program Manager	When required	ASAP but no later than 24 hours of becoming aware of the incident	Verbal report on any incident involving PCBs that requires implementation of the Contingency Plan.
<b>Follow up to emergency incident</b>	Condition VI.G.4.	U.S.EPA Project Manager	When required	15 days after formal or informal implementation of the contingency plan	Written report detailing incident involving PCBs, response, assessment of hazard to human health and environment, and other information listed in section VI.F.4.
<b>Operations after implementation of the Contingency Plan</b>	Condition IV.G.5.	U.S. EPA Project Manager	When required	Prior to resuming operations	Notifications that emergency equipment is ready for use and corrective measures have been implemented



REPORT NAME	APPROVAL CONDITION	AGENCY CONTACT	FREQUENCY	DUE DATE	CONTENT/OTHER INFORMATION
<b>Spill report – PCB quantities over 10 lbs</b>	Condition VI.G.7.	U.S. EPA Project Manager	When required	Within 24 hours of knowledge of release	Verbal report to U.S. EPA Project Manager
				Within 15 days of knowledge of release	Detailed written report to U.S. EPA Project Manager of full investigation of cause and response
<b>Spill report – PCB quantities over 1 lb in 24-hour period</b>	Condition VI.G.6.	U.S. EPA Project Manager	When required	Verbal: Within 24 hours of knowledge of release	Verbal report to National Emergency Response Center and U.S. EPA Project Manager
				Written: Within 15 days of knowledge of release	Written report to U.S. EPA Project Manager on the full investigation of cause and response
<b>Unauthorized entry, tampering, destruction or loss</b>	Condition VI.G.1 4.	U.S. EPA Project Manager	When required	Within 5 days of becoming aware of the incident	Written report of unauthorized entry, tampering, destruction, or loss which caused PCBs to be discharged. The report includes date of incident, a description, effect, and any corrective actions taken.
<b>Injury/illness caused by PCB exposure</b>	Condition IV.F.4.	U.S. EPA Project Manager	When required	Within 7 days	Written report of incident to include date, time, and type of incident; number of persons affected; type and extent of injury; and actions taken or planned to prevent future injuries





REPORT NAME	APPROVAL CONDITION	AGENCY CONTACT	FREQUENCY	DUE DATE	CONTENT/OTHER INFORMATION
<b>Exceedance of the action leakage rate (leachate)</b>	Condition V.I.E.4.	U.S. EPA Project Manager	When required	Within 7 days of determination	Written notification that action leakage rate (ALR) has been exceeded (see 1992 ARP, p. 30)
				Within 14 days of determination	Preliminary written assessment of amount of liquids, likely sources of liquid, possible location, size, and cause of any leaks, and short term actions taken and planned
				Within 30 days of notification	Results of analysis and results of actions taken and actions planned.
<b>Detection of PCBs in Media</b>					
<b>PCB Storage Facility sampling</b>	Condition V.G.3.	U.S. EPA Project Manager	When required	Within days 5 of test result showing $\geq 10$ ug/100 cm <sup>2</sup>	Verbal report of incident
				Within 30 days of test result showing $\geq 10$ ug/100 cm <sup>2</sup>	Documentation of building decontamination
<b>PCBs detected in leachate</b>	Condition V.I.E.5.b.	U.S. EPA Project Manager	When required	Within 24 hours of becoming aware of incident	Written report on source of leachate and detected levels
<b>PCB detected in stormwater</b>	Condition V.I.F.4.	U.S. EPA Project Manager	When required	Within 24 hours of becoming aware of detection	Written report with location the sample was taken and the PCB levels detected
<b>PCBs detected in groundwater</b>	Condition VIII.B.6.	U.S. EPA Project Manager	When required	Within 7 days of becoming aware of detection	The report shall include information on the levels of PCBs detected and identify the affected groundwater monitoring well and landfill affected.



REPORT NAME	APPROVAL CONDITION	AGENCY CONTACT	FREQUENCY	DUE DATE	CONTENT/OTHER INFORMATION
<b>PCB detected in air</b>	Condition VIII.A.4.	U.S. EPA Project Manager	When required	Within 7 days of becoming aware of detection	Written report with levels of each PCB Aroclor detected, the location of the monitor at which the PCBs were detected, and available information that may explain the detection (e.g., high winds, unusual PCB Waste disposal rates).
<b>Manifests</b>					
<b>Manifest discrepancy</b>	Condition IV.P.1.h.	PCB Inspector, Enforcement Division (ENF-4)	When required	Immediately if discrepancy is not resolved within 15 days	Description of the manifest discrepancy and efforts to reconcile it, and a copy of the manifest or shipping paper at issue
<b>Unmanifested waste</b>	Condition IV.P.1.i.	PCB Inspector, Enforcement Division (ENF-4)	When required	Immediately with follow up written report within 15 days	Information on waste, source, and disposition (full list at 40 CFR § 761.216(a))
<b>Exception reporting</b>	Condition IV.P.1.j.	PCB Inspector, Enforcement Division (ENF-4)	When required	Within 45 days of triggering event	Required when a generator has not received a signed manifest from the facility to which it sent PCB waste for storage or disposal. Report requires copy of manifest and information on efforts to located waste.
<b>One-year exception reporting</b>	Condition IV.P.1.l.	PCB Inspector, Enforcement Division (ENF-4)	When required	45 days from the end of the 1-year storage for disposal date	Required when PCB waste transferred from or received at a disposal more than 9 months from the date the waste was removed from service, the disposer could not dispose of the affected PCBs or PCB Items within 1 year of the date of removal from service, or a certificate of disposal is not received or is received more than 1 year after the date of removal from service. Report should include a copy of the manifest, date of removal from service, and other information required 40 CFR § 761.219



REPORT NAME	APPROVAL CONDITION	AGENCY CONTACT	FREQUENCY	DUE DATE	CONTENT/OTHER INFORMATION
<b>Noncompliance and Other</b>					
<b>Notification of noncompliance which may endanger health or the environment</b>	Condition IV.B.13	U.S. EPA Project Manager	When required	24 hours after becoming aware of incident  15 days after becoming aware of incident	Date, time, and type of incident, name and quantity of material involved, extent of injuries, if any; assessment of hazard to human health and environment, and estimated quantity and disposition of recovered materials  Written report. a description of the noncompliance and its cause; the period of noncompliance including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
<b>Endangered species</b>	Condition IV.B.3.	U.S. Fish and Wildlife Service	When Required	Within 3 days of finding any dead or injured endangered species	Report should include the date, time, and location of the incident or of the finding of a dead or injured endangered species, and any other pertinent information.
<b>Updated Closure Cost Estimate</b>	Condition IV.K.3.	U.S. EPA Project Manager	When Required	Within 30 days of approval of a modification to the Closure Plan that increase closure costs	Updated closure cost estimate.
<b>Updated Post-Closure Care Cost Estimate</b>	Condition IV.L.3.	U.S. EPA Project Manager	When Required	Within 30 days of approval of a modification to the Closure Plan that increase post-closure costs	Updated post-closure care cost estimate.



REPORT NAME	APPROVAL CONDITION	AGENCY CONTACT	FREQUENCY	DUE DATE	CONTENT/OTHER INFORMATION
<b>Updated Financial assurance</b>	Condition IV.M.6	U.S. EPA Project Manager	When Required	30 days after increase in maximum storage capacity	Written notification that a modification that increases the maximum storage capacity has been completed.
<b>Bankruptcy</b>	Condition IV.M.8.	U.S. EPA Project Manager	When Required	Within 10 days of bankruptcy procedures commencing	Written notification by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code.
<b>EPA Notification</b>	Condition IV.P.1.a.	As required on Form 7710-53	When Required	30 days from when a change is made	Resubmit EPA Form 7710-53 when PCB Waste handling operations change
<b>Closure</b>	Condition V.I.2.	U.S. EPA	When Required	At least 60 days prior to beginning closure of PCB F/SU	Written notification of intent to close the PCB F/SU.
<b>Closure</b>	Condition VI.H.2.	U.S. EPA	When Required	At least 60 days prior to beginning closure of Landfill B-19	Written notification of intent to close Landfill B-18.
<b>Renewal</b>	Condition IX.E.1.	U.S. EPA	When Required	At least 180 days prior to expiration	Either a written notice of its intent to seek renewal of the Approval or a revised Closure Plan to initiate the closure process for the TSCA Units and active TSCA Landfills at the Kettleman Hills Facility and necessary supporting documents (e.g., an renewal application).

NOTE: This table is for informational and summary purposes only. It does not alter any condition of the Approval. The omission of a required report, notification, or submittal from this table does not eliminate the requirement for that report, notification, or submittal. The table does not include notification requirements for approval modifications contained in Subsection IX.A. of the Approval.



**APPENDIX G –  
ENVIRONMENTAL JUSTICE ANALYSIS  
WITH UPDATES AND REVISIONS DOCUMENT**



STATEMENT OF BASIS  
PCB COMMERCIAL STORAGE AND CHEMICAL WASTE LANDFILL APPROVAL  
CHEMICAL WASTE MANAGEMENT, INC. – KETTLEMAN HILLS FACILITY

**Environmental Justice Analysis**  
**for the Kettleman Hills Facility Proposed TSCA Permit**  
**with**  
**Updates and Revisions Document**

**Kings County, California**  
**U.S. EPA ID: CAT 000 646 117**

Land, Chemicals, and Redevelopment Division  
U.S. Environmental Protection Agency Region 9  
San Francisco, California



July 2020



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**Disclaimer:** The Spanish version is a translation of the original in English for informational purposes only. In case of a discrepancy, the English original will prevail





## Updates and Revisions

### Environmental Justice Analysis for the Kettleman Hills Facility's Final TSCA Permit

July 29, 2020

On August 27, 2019, U.S. EPA proposed to issue a permit to Chemical Waste Management, Inc.'s (CWM) Kettleman Hills Facility (KHF or Facility) to renew and modify the permit that allows it to store, treat and dispose of polychlorinated biphenyls (PCBs). U.S. EPA prepared a Draft Environmental Justice (EJ) Analysis to ensure that environmental justice concerns are considered in the drafting of the proposed permit and in seeking community involvement in reaching a final permit decision.

U.S. EPA encouraged the public to comment on the proposed permit, draft EJ Analysis, and other supporting determinations and analyses. Seventeen individuals or groups submitted comment letters and nine people spoke at the public hearing held in Kettleman City on November 14, 2019. U.S. EPA thanks everyone who provided comments on the proposed permit, spoke at the public hearing, and/or attended the public meeting and hearing.

U.S. EPA is providing the following updates and revisions to the Draft EJ Analysis. These updates and revisions include information on comments received on the proposed permit and Draft EJ Analysis, updated information, and other revisions and corrections.

U.S. EPA's explanations of changes to the Draft EJ Analysis are *italicized*. Additions to the text of the Draft EJ Analysis are underlined. Deletions from the text are omitted for clarity. Unless noted below, cites to sections of the proposed Kettleman Hills Facility permit are to the same sections in the final permit.

The following updates to the Draft EJ Analysis are not individually noted:

- Cites to the October 2018 TSCA Renewal Application are revised to cite to the November 2019 TSCA Renewal Application [CWM 2019e].
- Cites to the October 2018 TSCA Operation Plan are revised to cite to the November 2019 TSCA Operation Plan [CWM 2019f].
- References to the Approval and Statement of Basis should be considered references to the final Approval (July 29, 2020) and final Statement of Basis (July 29, 2020).





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## Executive Summary

*The Executive Summary is updated to reflect the final permit and completion of the public comment period:*

*Page i, 2<sup>nd</sup> paragraph:*

U.S. EPA is issuing a permit to Chemical Waste Management, Inc.’s (CWM) Kettleman Hills Facility (KHF or Facility) to renew and modify the permit that allows it to store, treat and dispose of polychlorinated biphenyls (PCBs). U.S. EPA prepared a draft EJ Analysis (August 2019) to ensure that environmental justice concerns were considered in drafting the proposed permit and in seeking the affected community’s involvement in reaching a final permit decision.

*Page ii, 5<sup>th</sup> paragraph:*

U.S. EPA held a public meeting with a question and answer session on the proposed permit in Kettleman City on October 10, 2019. During the October 10 meeting, U.S. EPA also provided an opportunity for members of the public to provide formal spoken comments and to submit written comments. U.S. EPA also held a public hearing in Kettleman City on November 14, 2019 to accept spoken and written comments on the proposed permit and its supporting analyses. Simultaneous Spanish translation was provided at the meeting and hearing.

*Page. ii, 6<sup>th</sup> paragraph:*

Fourteen written comment letters, cards, or emails were received. Copies of the written comments are included in the administrative record for the final permit. Nine members of the public provided spoken comments at the public hearing. A transcript of the public hearing is also included in the administrative record for the final permit. A number of commenters specifically discussed the Draft EJ Analysis. U.S. EPA has carefully reviewed and responded to all comments received. These responses can be found in the Response to Comments document which is Appendix K to the Statement of Basis. Copies of the proposed and final permit, the statement of basis including the Response to Comments document, the Draft EJ Analysis, this Updates and Revisions Document, and other supporting information can be found at the Kettleman City Library<sup>1</sup> and on [www.regulations.gov](http://www.regulations.gov) [docket number EPA-R09-RCRA-2019-0088] and U.S. EPA’s Kettleman Hills website: <https://www.epa.gov/ca/kettleman-hills>.

For more information, please contact U.S. EPA’s Kettleman Hills Project Manager at

Frances Wicher, Kettleman Hills Project Manager  
U.S. Environmental Protection Agency Region 9  
75 Hawthorne Street  
San Francisco, CA 94105  
(415) 972-3957

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<sup>1</sup> Availability of documents at the Kettleman City Library may be delayed because of Covid-19 epidemic-related closures of U.S. EPA’s offices and the Kettleman City Library.



[wicher.frances@epa.gov](mailto:wicher.frances@epa.gov)

## 1. Introduction

*The second paragraph of this section is updated to reflect the final permit and public comment period:*

U.S. EPA is issuing an approval (permit<sup>2</sup>) to Chemical Waste Management, Inc.’s (CWM) Kettleman Hills Facility (KHF or Facility) to renew and modify the permit that allows it to store, treat and dispose of polychlorinated biphenyls (PCBs). U.S. EPA proposed the permit on August 27, 2019 and requested public comment on it and its supporting analyses. U.S. EPA prepared this Draft Environmental Justice (EJ) Analysis to ensure that environmental justice concerns were considered in the drafting of the proposed permit and in seeking community involvement in reaching a final permit decision.

## 2. Proposed Permit Action and Regulatory Framework

### 2.1 Proposed Permit Action

*U.S. EPA finalized the permit as proposed except as follows:*

- *Top of page 3:*
  - 2) Set maximum PCB waste storage capacity at the PCB Flushing/Storage Unit of 36,420 gallons. This is a reduction from the proposed maximum PCB waste storage capacity of 44, 015 gallons.

*In response to comments from Department of Toxic Substances Control on its application to renew its RCRA permit, CWM revised the maximum storage capacities in each area of the PCB Flushing/Storage Unit to add room for maneuverability of a forklift or hand truck when storage within the unit is at capacity and to account for drainage from the upper pad in the exterior containment area. See CWM 2019c, p. 7 and CWM 2019b, Response to Specific Comment No. 61.*

*U.S. EPA has incorporated these reduced maximum capacities into the final Approval (see Approval Condition V.C.1.) because they 1) meet the minimum containment requirements for PCB waste storage units in 40 C.F.R. § 761.65(b)(1)(ii), 2) are the same as the maximum storage capacity given for the PCB F/SU in the Facility’s incorporated Closure Plan, and 3) by reducing the maximum amount of PCB waste that may be stored at the PCB F/SU, lessen the risk from PCB waste storage operations over the risk considered in the proposed permit. More information on the reduction in storage*

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<sup>2</sup> While U.S. EPA’s proposed action is called an “approval” by the TSCA PCB regulations, it is most easily understood as a “permit” because that is the common term used in other regulatory programs; therefore, this document generally refers to any proposed or final TSCA approval as a proposed or final TSCA permit. However, in some instances the more precise regulatory term “approval” must be used.



*capacity can be found in the Statement of Basis, section III.D.2.a.2 “Facility Capacity Requirements”.*

- *Revised incorporated documents.*

*CWM submitted a revised TSCA application [CWM 2019e]; TSCA Operation plan [CWM 2019f]; Closure and Post-Closure Plan and Cost Estimate [Golder 2019b]; Spill Prevention, Control and Countermeasure Plan [CWM 2019g]; and Stormwater Pollution Prevention Plan on November 22, 2019 [Golder 2019a]. U.S. EPA has incorporated these plans into the final permit instead of the versions proposed for incorporation in the proposed permit. With the exception of the reduction in maximum storage capacity and conforming changes to the Closure Plan and Cost Estimate, changes between the final incorporated documents and the proposed incorporated documents are minor. A list of these changes is in Statement of Basis, Appendix D-4. U.S. EPA has reviewed all changes and has determined that none affect compliance of the plans with applicable regulatory requirements or U.S. EPA’s determinations that PCB operations at the Facility do not pose an unreasonable risk of injury to health or the environment. See Statement of Basis, sections III.D.2.b. “Closure Plan”, III.D.2.a.. “Certification of Compliance with Storage Facility Standards”, III.F.4. “Surface Water Management and Monitoring”.*

- *Other minor revisions and corrections*

*U.S. EPA made other minor corrections and revisions to the proposed permit prior to finalizing it. A list of these changes can be found in Statement of Basis, Appendix L. For the most part, these changes clarify or harmonize requirements, make minor modifications in response to comments, or reflect the revised application and updated plans submitted by CWM on November 22, 2019.*

## 2.2 Regulatory Framework

### 2.2.1 Toxic Substances Control Act

*The third paragraph of this section is updated to include the submittal of a revised TSCA Renewal Application:*

*KHF is currently operating under TSCA permits issued in 1988 (amended 1990) and 1992. CWM submitted applications to renew these permits in 1997 and 1998, respectively, and has since submitted several updated and revised applications. The latest TSCA Renewal Application submitted by CWM is dated November 22, 2019 [CWM 2019e] and replaces the October 18, 2018 Renewal Application that formed the basis of the proposed permit. A list of changes between the October 18, 2018 and November 22, 2019 applications can be found in the Statement of Basis, Appendix D-4. U.S. EPA*



has reviewed the 2019 renewal application and is issuing a TSCA permit. More information about the KHF’s history can be found in Section 4 of this document.

### 2.2.2 Other Regulations

*The first paragraph of this section is revised to include updated information:*

KHF submitted an application to renew its RCRA permit on May 15, 2013 and has updated and revised the application several times including the latest submittal that DTSC received on July 31, 2019 [CWM 2019c]. DTSC is reviewing the application and is in the technical review phase of the process that will lead to a permit decision.

*The webpage link in footnote 3 is no longer functional and is changed to [https://www.envirostor.dtsc.ca.gov/public/hwmp\\_profile\\_report.asp?global\\_id=CAT000646117](https://www.envirostor.dtsc.ca.gov/public/hwmp_profile_report.asp?global_id=CAT000646117)*

*Table 1 “Permits for KHF Operations.” is revised to note that on March 12, 2020 Kings County Department of Public Health approved CWM’s application to continue codisposal of nonhazardous, nonputrescible, industrial solid waste in Landfill B-18 [Kings 2020]:*

**TABLE 1** Permits for KHF Operations.

Agency/Permit	Description	Permit No.	Date Issued
CalRecycle/Registration Permit	Nonhazardous, Nonputrescible, Industrial Solid Waste in Landfill B-18	16-AA-0023	<u>2020</u>

## Section 3 – Community Information

*Except as noted below, U.S. EPA has not updated the information or data on environmental burdens, demographics, and health included in the Draft EJ Analysis. A review of the data sources did not find any more current information or any significant changes to the data.*

### 3.1 Description of Community

*The Draft EJ Analysis stated that there is one church in Kettleman City. A comment received during the public comment period noted that there are three churches in Kettleman City. The text in the first paragraph on page 7 is amended to reflect the updated information:*

There is one school, Kettleman City Elementary School, and three churches in Kettleman City [U.S. EPA 2018c; El Pueblo 2019].



## 3.2 Environmental Burdens

### 3.2.3 Drinking Water Quality

*This section is revised to add information on the new drinking water treatment plant:*

In November 2019, the Kettleman City Surface Water Treatment Plant began providing water to the residences in Kettleman City and the Kettleman City Elementary School. After a commissioning period (November 2019–March 2020) to prove the operation of the plant and water quality. Drinking water now meets all State drinking water standards [C. Fischer, personal communication, May 26, 2020]. The Plant, which draws water from the California Aqueduct, replaced the groundwater wells which provided the town’s and school’s drinking water previously.

## 3.3 Demographic Data

*For the Draft EJ Analysis, U.S. EPA used statistics on population characteristics obtained from the U.S. Census Bureau’s data portal “American Fact Finder”. In June 2019, the U.S. Census Bureau replaced “American Fact Finder” with “data.census.gov” as the portal for obtaining census data including population characteristics.<sup>3</sup> This change in portals does not affect the statistics used in the Draft EJ Analysis. U.S. Census Bureau’s demographic data can be accessed at <https://data.census.gov/cedsci/>.*

## 3.4 Health Data

### 3.4.2 Infant Health

#### **Birth Defects**

*Additional text is added to the end of this section (following Table 12) to discuss comments received on the proposed permit:*

To prepare the draft EJ Analysis, U.S. EPA obtained updated birth defects data and analysis for Kings County and the five-county area of Fresno, Kern, Kings, Madera, and Tulare counties from the California Birth Defects Monitoring Program (“CBDMP”). As part of its analysis, CBDMP stated that the 2008-2009 increase in birth defects was not statistically significant when compared to years 2006-2007 and 2010-2011 in Kings County.

One comment stated that increase in birth defects beginning in late 2007 was “far above the normal rate” and was not statistically “insignificant”. U.S. EPA notes that the term “significant” in the comparison of biennial birth defect rates in CBDMP’s analysis is used in its statistical meaning as applied to all births in Kings County and not just births in Kettleman City. The use of the term in its statistical meaning was

<sup>3</sup> See [https://ask.census.gov/prweb/PRServletCustom/YACFBEye-rFlz\\_FoGtyvDRUGg1Uzu5Mn\\*/!STANDARD?pyActivity=pyMobileSnapStart&ArticleID=KCP-5503](https://ask.census.gov/prweb/PRServletCustom/YACFBEye-rFlz_FoGtyvDRUGg1Uzu5Mn*/!STANDARD?pyActivity=pyMobileSnapStart&ArticleID=KCP-5503).



not intended to deny the importance of each instance of a child born with a birth defect. See response to comment D-34 in the Response to Comments Document.

**3.4.4 Asthma**

*The Draft EJ Analysis stated that “[f]rom 2006-2008, there were no asthma hospitalizations in Kettleman City...” One comment on the Draft EJ Analysis questioned whether this was due to there being no hospital in Kettleman City. It was U.S. EPA’s intent to address hospitalizations among Kettleman City residents. The second paragraph of this section is revised for clarity:*

As part of CDPH and CalEPA’s report “Investigation of Birth Defects and Community Exposures in Kettleman City, CA,” CDPH assessed the burden of asthma in Kettleman City and Kings County by examining the number of asthma-related hospital emergency department visits and the number of hospitalizations [CalEPA and CDPH 2010]. From 2005-2007, the rate of asthma-related emergency department visits was 35.7 visits per 10,000 residents in Kettleman City. This rate was lower than the rates estimated for Kings County and California, which were 61.5 and 43.6 visits per 10,000 residents, respectively. From 2006-2008, there were no asthma hospitalizations of Kettleman City residents, which was lower than the rates estimated for Kings County and California residents, which were 8.9 and 9.1 visits per 10,000 residents, respectively.

**4. Facility Information**

**4.2 Facility History**

*Table 15 “Timeline of Selected KHF Permitting Actions” is updated to include the August 2019 proposed TSCA permit and public process, July 2019 revised RCRA permit renewal application and November 2019 revised TSCA renewal application:*

**TABLE 2** Timeline of Selected KHF Permitting Actions.

Year	Event
<b>2019</b>	U.S. EPA proposes a TSCA approval for PCB F/SU and all phases of Landfill B-18 and post-closure care for Landfill B-14, B-16, and B-19. It holds a public meeting and hearing on proposed approval. CWM submits a revised permit renewal application to U.S. EPA and DTSC for TSCA and RCRA permits, respectively



#### 4.2.1 KHF PCB Operations

Figure 20 “PCB Waste Received at the Facility from 2006-2017” is revised to incorporate information on PCB waste receipts at the Facility in 2005 and 2018 [CWM 2006 and CWM 2019a].

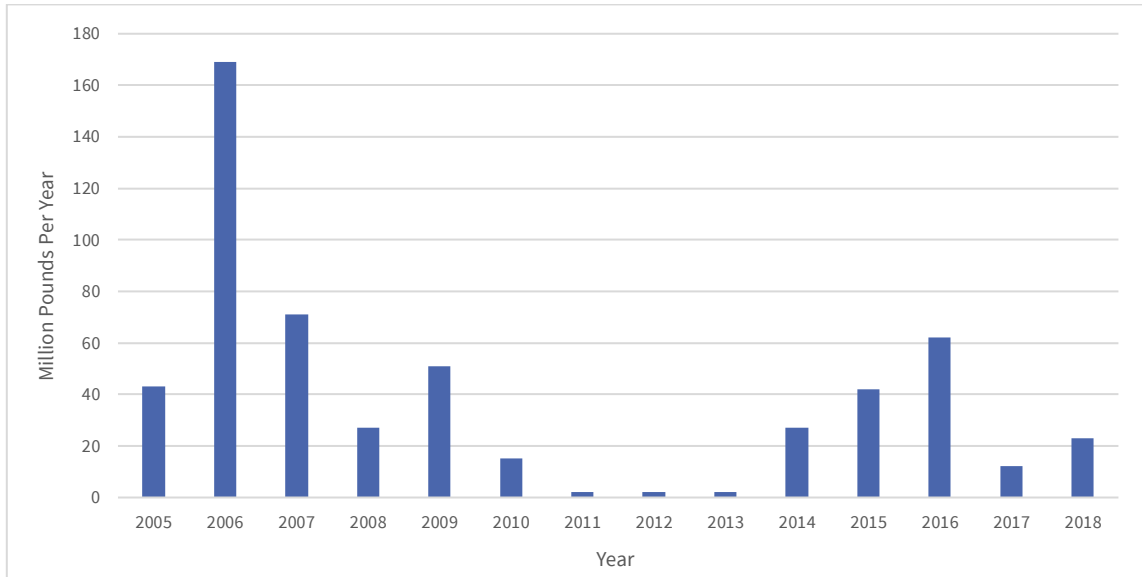


FIGURE 1 PCB Waste Received at the Facility from 2005-2018.

Footnote 29 is revised to reflect the revision number and date of the most recent RCRA permit renewal application:

This Waste Analysis Plan can be found in Chapter 12 of the Hazardous Waste Facility Permit Renewal Application, Operation Plan, CWM KHF Revision 4, July 31, 2019 [CWM 2019c].

#### 4.2.2 Potential Mechanisms for PCB Releases from KHF

This section is also updated to add information on a comment received on the proposed permit:

One comment received on the proposed permit stated that by acknowledging the possibility of air emissions from improper storage, U.S. EPA cannot then claim that there is no risk from PCB operations at KHF. U.S. EPA identified potential mechanisms for PCB releases in order to identify permit conditions necessary to prevent unreasonable risk. The identification of a release mechanism, such as air emissions of PCB liquids from open containers and from spills and leaks, does not mean that such

releases will occur or operations at the Facility are not safe. See response to comment D-8 in the Response to Comments document.

### 4.2.3 Monitoring Requirements

#### Facility Inspection Program

*This section is revised and Footnote 34 is deleted to correct information. The draft EJ Analysis stated that Facility inspections are documented on inspection forms and that completed inspection forms must be kept as part of the Facility's operating record. While this is the Facility's practice, neither the proposed nor final permit requires that inspections be documented on inspection forms and that the completed forms be kept as part of the operating record. The permit does require the Facility to document its inspections and maintain those records in its operating record. See, for example, final permit condition IV.I.4.*

*Footnote 34 stated the inspection forms were included in the Renewal Application and would be incorporated into any final permit (citing Appendix B-1.8 of the proposed permit) and that any changes to these inspection forms would need to be pre-approved by U.S. EPA before they could be used by CWM. This statement was incorrect. U.S. EPA did not propose to incorporate the inspection forms into the TSCA permit. Inspection requirements are provided in final permit sections and conditions IV.I., V.H., VI.G. and VII.B.1. and the Appendix B-1.8. Permit conditions and incorporated sections of the Facility's Inspection Plan provide sufficient details to ensure comprehensive inspections occur and are documented.*

*Corrected text for this section is:*

CWM employees inspect KHF in regularly scheduled intervals (daily, weekly and monthly) in order to identify and prevent issues that could cause a release of hazardous waste or PCBs to the environment and/or threaten health and safety. These inspections cover all aspects of the Facility, including site security, environmental monitoring systems, surface water management, safety and emergency equipment, leachate systems, and all waste management units on site. These inspections are documented and this documentation must be kept as part of the Facility's operating record. See, for example, final permit condition IV.I.4. These inspections will continue under the permit. See RCRA Operation Plan, Chapter 31 "Inspection Program Plan."





Stormwater Management.

*The second paragraph is revised to note the Facility’s updated the Stormwater Pollution Prevention Plan which was submitted to U.S. EPA on November 22, 2019:*

KHF maintains and implements a Stormwater Pollution Prevention Plan [Golder 2019a]. U.S. EPA proposes to require compliance with this in its proposed permit and to incorporate this Plan into the permit.

**4.3 Facility Compliance History**

*Table 16 “KHF RCRA/TSCA Inspections from 1992 to Present” is revised to:*

- *Add additional information on RCRA violations resulting from a Facility self-disclosure on October 2, 2015 and a DTSC inspection on April 16, 2019.*
- *Correct information on RCRA violations resulting from the March 27-28, 2018 DTSC inspection. Cracking in perimeter flooring of the drum storage unit with no mention of cracking in the weekly KHF report was noted in the initial inspection report under “other issues/concerns” [DTSC 2018a] but not as a violation in the final inspection report [DTSC 2018b].*
- *Add information on three DTSC inspections that occurred after the draft EJ Analysis was released in August 2019.*

**TABLE 3** KHF RCRA/TSCA Inspections from 1992 to Present.

Date	Type of Inspection	Agency	Findings
10/02/2015	Facility Self-Disclosure		RCRA violations – <u>Storage of hazardous waste for more than 30 days in temporary storage area (KHF laboratory).</u> Return to compliance 10/02/2015.
03/27-28/2018	Compliance Evaluation Inspection	DTSC	RCRA violations – Mistake on manifest paperwork and failure to close a single 55-gallon drum containing used oil filters. <u>cracking in perimeter flooring of the drum storage unit with no mention of cracking in the weekly KHF reports.</u> Return to compliance 04/26/2018.
04/16/2019	Compliance Evaluation Inspection	DTSC	Minor violations. <u>Failure to label a container of hazardous waste container; failure to contain universal waste (batteries) in a structurally sound container.</u> Return to compliance: 04/16/2019
<u>12/04/2019</u>	<u>Focused Compliance Inspection</u>	<u>DTSC</u>	<u>No violations.</u>
<u>03/04/2020</u>	<u>Compliance Evaluation Inspection</u>	<u>DTSC</u>	<u>RCRA Minor violation – Two employees failed to complete all required training. Return to compliance</u>
<u>04/10/2020</u>	<u>Financial Records Review</u>	<u>DTSC</u>	<u>No violations.</u>



*This section is updated to add information on comments received on the proposed permit:*

U.S. EPA received many comments on the Kettleman Hills Facility’s compliance history. The comments state that U.S. EPA should deny the permit because the Facility history of noncompliance shows that CWM cannot comply with its permit or safely manage PCB wastes. U.S. EPA acknowledges that CWM has been cited for violations multiple times for a variety of issues. Each of these violations has been remedied and, in some cases, operational or physical changes have been made at the Facility and conditions have been added to the permit to prevent reoccurrences. After careful review of this history and consideration of public comments, it is U.S. EPA’s judgment that the history of violations at the Facility does not evidence a pattern or practice of noncompliance that demonstrates CWM’s unwillingness or inability to achieve and maintain compliance with the regulations. See responses to comments C-1 to C-13 in the Response to Comments document.

## Section 5 - Public Participation and Outreach Activities

*This section is updated to include information on the public comment period and comments received on the proposed permit:*

During the public comment period, U.S. EPA offered an opportunity for the community to learn about and formally comment on the proposed permit decision, Statement of Basis, and supporting analyses and documents, including this Draft EJ Analysis (Section 5.2). Public comments on all aspects of the proposed permit and its supporting determinations and analyses were welcome. In total, U.S. EPA received 14 written comment letters, emails, or cards and nine people gave spoken comments at the public hearing. A list of commenters can be found in the Response to Comments document and copies of the written comments and a transcript of the public hearing can be found in the Administrative Record. U.S. EPA thanks everyone who provided comments on the proposed Approval, spoke at the public hearing, and/or attended the public meeting and hearing.

### 5.1 Outreach Activities for the Proposed Permit Action

*Footnote 38 is updated to include information on the November 22, 2019 revised TSCA application:*

U.S. EPA has received four revised TSCA permit renewal applications from CWM since 2017. The first was received on July 15, 2017. U.S. EPA reviewed this application and issued a Notice of Deficiency on December 21, 2017. CWM submitted a revised TSCA permit renewal application on April 20, 2018. CWM submitted another revised application on October 2, 2018, which included minor revisions to the April 2018 submittal. U.S. EPA based its August 2019 proposed permit on the October 2018 application. CWM submitted a fourth revised



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application on November 22, 2019 in which it reduced the maximum storage capacities in the PCB F/SU and made other minor updates. A list of these changes can be found in Appendix L of Statement of Basis. U.S. EPA is basing its final permit on the November 2019 application.

*Point 7 in the list of U.S. EPA's outreach activities since 2017 is revised to include updated information:*

- 1) U.S. EPA posted information related to KHF on its public website, at [www.epa.gov/ca/kettleman-hills](http://www.epa.gov/ca/kettleman-hills). The website contains information about the Facility, a discussion explaining the permit decision-making process for the Facility, the public participation process for this permitting action, public meeting announcements, and personnel at U.S. EPA Region 9 for interested parties to contact. The website has important documents, which include the revised permit application, final permit, Statement of Basis, Response to Comments Document, and other supporting analyses and documents (such as this Draft EJ Analysis).

*Point 8 in the list of U.S. EPA's outreach activities since 2017 is revised to include updated information:*

- 2) U.S. EPA has provided and will provide Spanish translation for community members. U.S. EPA has provided mailers and fact sheets in both English and Spanish, which also included a separate phone number for the Spanish language contact at U.S. EPA. U.S. EPA has provided and will provide translation services for public meetings. Information in Spanish can be found on the U.S. EPA website listed above. Documents that provide the public information on what the proposed permit contains, and certain parts of the Statement of Basis were translated into Spanish. A Spanish translation of this Draft EJ Analysis and this Updates and Revisions Document are available for community members. U.S. EPA stated that it would accept written comments in Spanish and would provide responses to those comments in Spanish as well. See footnote 58 in the Draft EJ Analysis. No comments were received in Spanish.

## 5.2 Public Meeting and Public Hearing

*This section has been updated to describe the public meeting and hearing:*

U.S. EPA wanted to hear from the public and held a public meeting and question and answer session to provide interested parties with additional information and an opportunity for informal discussion of the proposed permit, Statement of Basis, and this Draft EJ Analysis on October 10, 2019 at the Kettleman City Elementary School. U.S. EPA gave a short presentation on the proposed permit and draft EJ analysis and answered questions from the audience. The presentation was delivered twice to accommodate individuals' schedules. Approximately 20-25 people attended the meeting.

U.S. EPA held a public hearing to provide the public the opportunity to submit written or spoken comments and relevant data pertaining to the proposed permit. The public hearing



was held on November 14, 2019 at the Kettleman City Elementary School. Nine people provide spoken comments with several people speaking more than once.

Prior to 2017, the community voiced concerns about not having public events or meetings translated into Spanish or not allowing enough time for translation. U.S. EPA provided simultaneous translation services at both the public meeting and hearing. No comments were received in Spanish either in writing or verbally at the public hearing.

## 5.3 Public Comment Period

### 5.3.1 How to Submit Comments

*This section has been updated to include information on U.S. EPA's response to comments:*

U.S. EPA considered all written and spoken comments received during the public comment period, including those provided at the public hearing, before taking final action on the proposed permit decision.<sup>4</sup> Any interested person was able to submit written comments regarding the proposed permit, Statement of Basis, and other supporting documents. All written comments had to be submitted, postmarked or emailed on or before November 22, 2019. Written comments could be submitted on [www.regulations.gov](http://www.regulations.gov) [docket number U.S. EPA-R09-RCRA-2019-0088], or mailed or emailed to:

Frances Wicher, Kettleman Hills Project Manager  
Permits Office, Land, Chemical, and Redevelopment Division (LND-4-2)  
U.S. Environmental Protection Agency, Region 9  
75 Hawthorne Street  
San Francisco, CA 94105  
Phone Number: (415) 972-3957  
Email: [r9Landsubmit@epa.gov](mailto:r9Landsubmit@epa.gov) or [wicher.frances@epa.gov](mailto:wicher.frances@epa.gov)

All comments that were received by mail, email or through [www.regulations.gov](http://www.regulations.gov) are included in the administrative record for the permit without change and are available to the public, including any personal information provided with the comments.

### 5.3.2 U.S. EPA Response to Comments

*This section has been updated to include information on U.S. EPA's response to comments:*

U.S. EPA reviewed, summarized, and provided written responses to all comments received during the public comment period and at the public hearing prior to making a final decision on CWM's application to renew and modify its TSCA permit for the Facility. U.S. EPA sent notice of the final decision to each person who provided contact information (email and/or mailing address) and who: 1) submitted comments during the public comment period, including spoken comments provided at the public hearing, or 2) requested notice of the final permit decision. U.S. EPA also posted the

<sup>4</sup> Any comment made in Spanish will be responded to in Spanish. No comments were received in Spanish.



final decision, U.S. EPA’s Response to Comments document, a copy of the public hearing transcript, this Updates and Revisions document and other relevant documents on U.S. EPA’s Kettleman Hills website ([www.epa.gov/ca/kettleman-hills](http://www.epa.gov/ca/kettleman-hills)).

#### 5.4 Outreach Activities Prior to 2017

*The first paragraph has been updated to include information on the revised Renewal Application:*

This Draft EJ Analysis was prepared as part of the Statement of Basis for the 2019 proposed permit decision that is based on the renewal application submitted on October 2, 2018. CWM submitted a revised renewal application on November 22, 2019. See CWM 2019d. The final permit is based on the 2019 renewal application. U.S. EPA has been involved in many public participation activities related to prior permit applications. Table 17 lists the community outreach activities that occurred between 2007 and 2012.

#### 5.5 Community Concerns

*Table 18 is revised to add an additional community concern raised during the public comment process for the proposed permit.*

**TABLE 4** Concerns Voiced by the Kettleman City Community from 2007-2019.

Community Concern	Section*
Availability of potentially safer PCB disposal alternatives to landfilling	6.6.5.

## 6. Community Concerns and Actions Taken

### 6.1 PCB Contamination

#### 6.1.1 PCB Congeners Study

*This section is updated to discuss comments received on the proposed permit:*

U.S. EPA received a comment that it improperly relied on the PCB Congeners Study in making its determination that operations at the Kettleman Hills Facility under the terms and conditions of the permit would not pose an unreasonable risk of injury to health or the environment. The PCB Congeners Study was one of several studies that U.S. EPA evaluated to determine the health risk from PCB releases from the Kettleman Hills Facility. Because any individual study may suffer from flaws that undermine its conclusions, U.S. EPA relied on conclusions drawn from multiple studies in making the determination of no unreasonable risk. See responses to comments D-21 and D-22 in the Response to Comments document.

#### 6.1.3. Review of PCB Monitoring Data

*This section is updated to discuss the latest air quality monitoring reports:*



U.S. EPA reviewed the three ambient air monitoring quarterly reports submitted by the Facility after the proposed permit was issued in August 2019. These monitoring reports covered the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> quarters of 2019. No PCB were detected above the applicable detection limits [Wenck 2019a & b, Wenck 2020a].

## 6.2 Air Quality

### 6.2.3 Kettleman City Community Exposure Assessment

*This section is updated to discuss comments received on the proposed permit:*

U.S. EPA received a number of comments stating that there were significant flaws with the 2010 Investigation of Birth Defects and Kettleman City Community Exposure Assessment and that U.S. EPA improperly relied on the Investigation and Assessment in making its determination that operations at the Kettleman Hills Facility under the terms and conditions of the permit would not pose an unreasonable risk of injury to health or the environment. The Investigation of Birth Defects and Kettleman City Community Exposure Assessment are two of several studies that U.S. EPA evaluated to determine the health risk from PCB releases from the Kettleman Hills Facility. Because any individual study may suffer from flaws that undermine its conclusions, U.S. EPA relied on conclusions drawn from multiple studies in making the determination of no unreasonable risk. See responses to comments D-21 and D-23 through D-33 in the Response to Comments document.

#### Kettleman City Air Quality Assessment

*The webpage link in footnote 50 is no longer working and is changed to <https://www.arb.ca.gov/adam/toxics/toxics.html>.*

## 6.3 Water Quality

### 6.3.4 Kettleman City Community Exposure Assessment

*This section is updated to discuss comments received on the proposed permit:*

U.S. EPA received a number of comments stating that there were significant flaws with the 2010 Investigation of Birth Defects and Kettleman City Community Exposure Assessment and that U.S. EPA improperly relied on the Investigation and Assessment in making its determination that operations at the Kettleman Hills Facility under the terms and conditions of the permit would not pose an unreasonable risk of injury to health or the environment. The Investigation of Birth Defects and Kettleman City Community Exposure Assessment are two of several studies that U.S. EPA evaluated to determine the health risk from PCB releases from the Kettleman Hills Facility. Because any individual study may suffer from flaws that undermine its conclusions, U.S. EPA relied on conclusions drawn from multiple studies in making the determination of no



unreasonable risk. See responses to comments D-21 and D-23 through D-33 in the Response to Comments document.

### 6.3.5 New Drinking Water Source

*This section is revised to include information on the new drinking water treatment plant:*

In November 2019, the Kettleman City Surface Water Treatment Plant began providing water to the residences in Kettleman City and the Kettleman City Elementary School. After a commissioning period (November 2019– March 2020) to prove the operation of the plant and water quality, drinking water now meets all State drinking water standard [C. Fischer, personal communication, May 26, 2020]. The Plant which draws water from the California Aqueduct, replaced the groundwater wells which provided the town's and school drinking water previously.

## 6.4 Communication, Community Awareness, and Emergency Response

### 6.4.1 Air and Water Quality Monitoring Reports

*This section is updated with information on the 2020 annual summary of air and water quality monitoring reports:*

CWM mailed the latest annual summary covering 2019 monitoring data to Kettleman City residents in April, 2020 [CWM 2020, Wenck 2020b, Wenck 2020c; Wood 2020a, Wood 2020b].

### 6.4.2 Annual Community Education Meeting

*This section is updated with information on the 2020 Annual Informational Meeting:*

CWM normally schedules the Annual Informational Meeting at the end of April; however, due to . COVID-19 precautions, the 2020 meeting has been postponed. Once the meeting has been rescheduled, CWM will provide notice for meeting 30 days in advance. [Wenck 2020b]



### 6.4.3 CWM Report

*Table 20 is revised to update links to certain reports:*

**TABLE 5** KHF PCB and Hazardous Waste-Related Routine Reporting Requirements.

Report Name	Required By	Frequency	Content
<b>Waste Reports and Landfill Capacity</b>			
Annual Report	DTSC	Annually	Waste received, methods of transfer, treatment, storage and disposal of each hazardous waste, most recent closure and post-closure costs; environmental monitoring data; and other information required by 22 CCR 66264.75 (see <a href="https://dtsc.ca.gov/annual-biennial-report/">https://dtsc.ca.gov/annual-biennial-report/</a> ).
Biennial Report (odd years)	U.S. EPA/DTSC	Biennial	Information on types, amounts, and disposal of waste received and generated (see <a href="https://dtsc.ca.gov/annual-biennial-report/">https://dtsc.ca.gov/annual-biennial-report/</a> ).

## 6.5 Pesticides

### 6.5.1 Kettleman City Community Exposure Assessment

*This section is updated by adding the following paragraph to discuss comments received on the proposed permit:*

U.S. EPA received a number of comments stating that there were significant flaws with the 2010 Investigation of Birth Defects and Kettleman City Community Exposure Assessment and that U.S. EPA improperly relied on the Investigation and Assessment in making its determination that operations at the Kettleman Hills Facility under the terms and conditions of the permit would not pose an unreasonable risk of injury to health or the environment. The Investigation of Birth Defects and Kettleman City Community Exposure Assessment are two of several studies that U.S. EPA evaluated to determine the health risk from PCB releases from the Kettleman Hills Facility. Because any individual study may suffer from flaws that undermine its conclusions, U.S. EPA relied on conclusions drawn from multiple studies in making the determination of no unreasonable risk. See responses to comments D-21 and D-23 through D-33 in the Response to Comments document.

## 6.6 Other

### 6.6.1 Facility Compliance

*This section is updated by adding this paragraph to the end to discuss comments received on the proposed permit:*

U.S. EPA received a number of comments stating that the Facility's overall compliance record and specific instances of noncompliance demonstrated that it could not operate safely and that U.S. EPA should deny the permit on the basis of this compliance record. U.S. EPA has carefully considered and fully responded to each of these comments. See response to comments C-1 to C-7 and C-10 to C-13 in the Response to





Comments document. U.S. EPA acknowledges that the Facility has been cited for violations multiple times for a variety of issues. Each of these violations has been remedied and, in some cases, operational or physical changes have been made at the Facility and conditions have been added to the permit to prevent reoccurrences. Based on its review of the compliance history and the comments received, U.S. EPA determined that the Facility’s compliance history does not suggest a pattern or practice of noncompliance that demonstrates the CWM’s unwillingness or inability to comply with its permit or the applicable regulations.

### 6.6.2 Birth Defects Investigation

*This section is updated by adding this paragraph to the end to discuss comments received on the proposed permit:*

U.S. EPA received a number of comments stating that there were significant flaws with the 2010 Investigation of Birth Defects and Kettleman City Community Exposure Assessment and that U.S. EPA improperly relied on the Investigation and Assessment in making its determination that operations at the Kettleman Hills Facility under the terms and conditions of the permit would not pose an unreasonable risk of injury to health or the environment. The Investigation of Birth Defects and Kettleman City Community Exposure Assessment are two of several studies that U.S. EPA evaluated to determine the health risk from PCB releases from the Kettleman Hills Facility. Because any individual study may suffer from flaws that undermine its conclusions, U.S. EPA relied on conclusions drawn from multiple studies in making the determination of no unreasonable risk. See responses to comments D-21 and D-23 through D-33 in the Response to Comments document.

### 6.6.3 Biomonitoring

#### Biomonitoring for Birth Defects

*This section is updated by adding this paragraph to the end to discuss comments received on the Draft EJ Analysis:*

A comment stated that California’s failure to conduct biomonitoring of mothers and other Kettleman City residents during its birth defects investigation resulted in a “flawed and biased” study. U.S. EPA notes that California explained why biomonitoring was considered but not conducted for the investigation in its final report. See Appendix 2 of “Investigation of Birth Defects” and response to comment D-26 in the Response to Comments document.

### 6.6.4 Traffic

*This section is updated by adding this paragraph to discuss comments received on the Draft EJ Analysis:*



Several comments on the Draft EJ Analysis stated that Kettleman City is impacted by truck traffic on Highway 41 and Interstate 5. Two comments stated that the final permit would increase the already high levels of air pollution and heavy truck traffic next to and near the residential areas of the Kettleman City community. U.S. EPA evaluated traffic as one of the environmental burdens on Kettleman City (see section 3.2.2 of the Draft EJ Analysis). It does not believe that the final permit is likely to increase truck traffic in or around Kettleman City or increase air pollution in the area. The Approval does not increase the overall waste disposal capacity of Landfill B-18, the daily rate at which the Facility may dispose of allowed wastes, or the storage capacity at the PCB F/SU unit. See response to comment D-11 in the Response to Comments document.

*A new section is added to Section 6.6 – Other to address an additional concern raised by the community.*

#### 6.6.5 Alternatives Technologies for PCB Waste Disposal

Several comment on the Draft EJ Analysis stated that U.S. EPA must identify and develop safer alternatives to continued PCB disposal and management at Kettleman Hills Facility and require the use of any safer alternative. U.S. EPA has determined that PCB waste operations at the Facility under the terms of the final permit, do not pose an unreasonable risk to health or environment of the Kettleman City community. Almost all of the PCB waste received at the Kettleman Hills Facility for disposal in Landfill B-18 is PCB-containing soils, sediment, concrete and building debris from cleanup sites. U.S. EPA supports the development and implementation of methods for PCB remediation at these sites that do not involve the disposal of PCB wastes in landfills. We regularly provide information on current and new methods for the remediation of PCBs. See, for example, <https://www.epa.gov/remedytech/remediation-technologies-cleaning-contaminated-sites>. No individual method, however, is applicable across all or even the majority of cleanup sites since each cleanup site is unique. Disposal of PCB wastes in engineered and monitored landfills, such as Kettleman Hills Facility’s Landfill B-18, remains a safe method of disposing of PCB waste.

## 7. Conclusion

*The last paragraph is revised to reflect the final permit:*

U.S. EPA’s analysis is that the TSCA permit will ensure that PCB operations at KHF will not pose an unreasonable risk of injury to health and the environment. The permit includes engineering and operational controls that prevent or reduce the likelihood of PCB releases from the Facility. It also includes Facility PCB monitoring requirements for air and water that will provide additional information to protect the community. The permit decision is supported by a number of multidisciplinary public health investigations conducted or required by local, state and federal agencies. Collectively, these studies have shown no increased human health risk to the community from PCB operations at this Facility. U.S. EPA invited comments on the proposed permit decision, Draft EJ Analysis, and other documents as mentioned in Section 5.3. U.S. EPA



thanks each person who provided comments on the proposed Approval or attended the public meeting and hearing. U.S. EPA carefully considered and responded to all comments submitted on the proposed permit prior to deciding to issue the permit. The Response to Comments document can be found in Appendix K to the Statement of Basis.

*Table 22 is updated to reflect the final permit and correct the cite to the requirement for quarterly air monitoring reports:*

**TABLE 6** Examples of Permit Conditions to Limit the Potential for PCB Releases.

Permit Condition	Description
VIII.A.2.	Quarterly ambient air quality monitoring report



## 8. References

### *References added:*

- CWM 2019a “Chemical Waste Management, Inc., (CWMI) Kettleman Hills Facility (KHF) CAT 000 646 117 2018 PCB Annual Report.” Letter, Tracy Reddick, Waste Management, Inc. to Regional Administrator Region 9, July 11, 2019.
- CWM 2019b “Third Notice of Deficiency, Chemical Waste Management, Inc. – Kettleman Hills Facility EPA ID No. CAT 000646117 Responses to Comments.” Chemical Waste Management, Inc. July 31, 2019.
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# Draft Environmental Justice Analysis for the Kettleman Hills Facility Proposed TSCA Permit

Kings County, California  
U.S. EPA ID: CAT 000 646 117

Land, Chemicals, and Redevelopment Division  
U.S. Environmental Protection Agency Region 9  
San Francisco, California



August 2019



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**Disclaimer:** The Spanish version is a translation of the original in English for informational purposes only. In case of a discrepancy, the English original will prevail.







August 2019

## Executive Summary

### Draft Environmental Justice Analysis for the Kettleman Hills Facility's Proposed TSCA Permit

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws and policies. Achieving environmental justice is a United States Environmental Protection Agency (U.S. EPA) priority and is an integral part of the U.S. EPA's mission to protect human health and the environment.

U.S. EPA is proposing to issue a permit to Chemical Waste Management, Inc.'s (CWM) Kettleman Hills Facility (KHF or Facility) to renew and modify the permit that allows it to store, treat and dispose of polychlorinated biphenyls (PCBs). U.S. EPA has prepared this Draft Environmental Justice (EJ) Analysis to ensure that environmental justice concerns are considered in drafting the proposed permit and in seeking the affected community's involvement in reaching a final permit decision.

U.S. EPA focused the Draft EJ Analysis on Kettleman City, which is located approximately 3.5 miles northeast of the Facility and is the nearest residential area to KHF. The Kettleman City community has a long history of advocating for environmental justice in local, state, and federal decisions related to the Facility. This advocacy has positively assisted the community in the ways discussed in this Draft EJ Analysis and has also helped U.S. EPA to prepare this Draft EJ Analysis and the proposed permit.

Certain pre-existing social, economic, environmental, and health conditions may make a community more vulnerable and susceptible to harm from additional pollution. The Draft EJ Analysis includes information gathered from a variety of sources, including input from the local community, on the current social, economic, environmental, and health conditions in Kettleman City. This information shows that the majority of Kettleman City residents are minority and low-income. It also shows that Kettleman City has an above average number of residents whose primary language is Spanish and above average number of adults that did not graduate high school.

The Draft EJ Analysis documents that the Kettleman City community also bears multiple environmental burdens, including poor regional air quality, drinking water that exceeds the state drinking water quality standards for arsenic, and proximity to traffic from nearby major truck routes. The health data collected for this analysis show that children and older adults in Kings County have rates of asthma and mortality that are higher than the state averages and the community has limited access to health care. In 2007-2010, the community also suffered an increased occurrence of birth defects.

The Draft EJ Analysis describes the proposed PCB operations at the Facility and includes information on KHF's permitting, compliance, and monitoring history. It also describes how PCBs could potentially be released from KHF and the engineering, operating, and monitoring requirements included by U.S. EPA in the proposed permit to monitor and reduce or prevent such releases. For example, the proposed permit



includes dust control requirements to reduce dust emissions from the landfill and requirements to monitor the air for PCBs.

The permit decision-making process provides an opportunity for U.S. EPA to hear from the community about all types of issues that affect them – not just those directly related to the Facility requesting a permit. Over the past decade, U.S. EPA has held or participated in many community events in Kettleman City to provide information on its activities to the community but, more importantly, to hear and learn about community issues and concerns. The Draft EJ Analysis includes a chronicle of these events.

This Draft EJ Analysis also includes a discussion of the many concerns that the community has shared and discusses the work that U.S. EPA and California’s state environmental and health agencies have done to evaluate and to take actions to address these concerns. For example, U.S. EPA requested that CWM complete a PCB congeners study in response to community concerns that PCBs from KHF could either be deposited off-site and taken up into the food chain or could migrate as air emissions and impact Kettleman City. The resulting “PCB Congeners Study” found no evidence that PCBs from KHF migrate off-site at concentrations that would adversely impact the environment or health of nearby residents.

This Draft EJ Analysis is one step in U.S. EPA’s efforts to integrate environmental justice concerns into its permit actions for the Facility. U.S. EPA’s primary duty in acting on an application to renew or modify a TSCA permit is to determine that the facility’s operations will not pose an unreasonable risk of injury to health or the environment. TSCA regulations provide U.S. EPA with the authority to add permit conditions to prevent unreasonable risk. The involvement of the local community in the permit decision-making process helps identify potential risks that may be unique to that community. This Draft EJ Analysis documents how past involvement by the Kettleman City community has resulted in permit conditions to address community concerns.

U.S. EPA is proposing to issue a permit to KHF that contains the conditions necessary to prevent an unreasonable risk to health and the environment from storage, treatment and disposal of PCBs. U.S. EPA is now asking the Kettleman City community and any others with interest in this permit decision to review and comment on the proposed permit and U.S. EPA’s analysis of it, called the Statement of Basis, that includes this Draft EJ Analysis. Comments will be accepted until November 1, 2019.

U.S. EPA will be holding a public meeting with a question and answer session on the proposed permit in Kettleman City on October 10, 2019. This meeting will be followed by a public hearing at which spoken comments may be formally submitted. Simultaneous Spanish translation will be provided at the meeting and hearing. Written comments may be submitted until November 1, 2019 at any one of these addresses:

- [www.regulations.gov](http://www.regulations.gov) [docket number EPA-R09-RCRA-2019-0088];
- [R9LandSubmit@epa.gov](mailto:R9LandSubmit@epa.gov) or [wicher.frances@epa.gov](mailto:wicher.frances@epa.gov); or
- Frances Wicher, Kettleman Hills Project Manager



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U.S. Environmental Protection Agency Region 9  
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Comments, including any personal information provided, will be placed in the publicly available docket for this action. Copies of the proposed permit, the statement of basis, the Draft EJ Analysis, and other supporting information can be found at the Kettleman City Library, [www.regulations.gov](http://www.regulations.gov) [docket number EPA-R09-RCRA-2019-0088], and U.S. EPA's Kettleman Hills website: [www.epa.gov/ca/kettleman\\_hills](http://www.epa.gov/ca/kettleman_hills).



## Acronyms and Abbreviations

AADT	Annual Average Daily Traffic
AAMP	Ambient Air Monitoring Program
ACS	American Community Survey
CAA	Cleanup and Abatement Account
CalEnviroScreen	California Communities Environmental Health Screening Tool
CalEPA	California Environmental Protection Agency
CalRecycle	California Department of Resources, Recycling, and Recovery
CAM	Corrective Action Monitoring
CARB	California Air Resources Board
Caltrans	California Department of Transportation
CCR	California Cancer Registry
CBDMP	California Birth Defects Monitoring Program
CBI	Confidential Business Information
CDPH	California Department of Public Health
CDPR	California Department of Pesticide Regulation
CEHTP	California Environmental Health Tracking Program
C.F.R.	Code of Federal Regulations
CWM	Chemical Waste Management, Inc.
DHHS	United States Department of Health and Human Services
DTSC	California Department of Toxic Substances Control
DWP	Drinking Water Program
EJ Analysis	Environmental Justice Analysis
E.O.	Executive Order
Facility	Kettleman Hills Facility
Greenaction	Greenaction for Health and Environmental Justice
HPSA	Health Professional Shortage Area
HRSA	Health Resources and Services Administration
I-5	Interstate 5
KCCSD	Kettleman City Community Services District
KHF	Kettleman Hills Facility
LCRS	Leachate Collection and Removal Systems
µg/m <sup>3</sup>	Micrograms per Cubic Meter
NAAQS	National Ambient Air Quality Standards



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NEIC	National Enforcement Investigations Center
NON	Notice of Noncompliance
OEHHA	Office of Environmental Health Hazard Assessment
PCB(s)	Polychlorinated Biphenyls
PCB Congeners Study	Dioxin-Like PCB Congeners Study Report
PCB F/SU	PCB Flushing/Storage Unit
PM <sub>2.5</sub>	Particulate Matter Less than 2.5 Micrometers in Diameter
PM <sub>10</sub>	Particulate Matter Less than 10 Micrometers in Diameter
ppm	Parts Per Million
PWS	Public Water System
RCRA	Resource Conservation and Recovery Act
RWQCB	Central Valley Regional Water Quality Control Board
SJVAPCD	San Joaquin Valley Air Pollution Control District
SR-41	State Route 41
TASC	Technical Assistance Services for Communities
Water Board	State Water Resources Control Board
TSCA	Toxic Substances Control Act
U.S. EPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds



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## 1 Introduction

Environmental justice is the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws and policies. Achieving environmental justice is a United States Environmental Protection Agency (U.S. EPA) priority and is an integral part of the U.S. EPA’s mission to protect human health and the environment.

U.S. EPA is proposing to issue an approval (permit<sup>1</sup>) to Chemical Waste Management, Inc.’s (CWM) Kettleman Hills Facility (KHF or Facility) to renew and modify the permit that allows it to store, treat and dispose of polychlorinated biphenyls (PCBs). U.S. EPA has prepared this Draft Environmental Justice (EJ) Analysis to ensure that environmental justice concerns are considered in the drafting of the proposed permit and in seeking community involvement in reaching a final permit decision.

The Draft EJ Analysis was prepared pursuant to Executive Order (E.O.) 12898, entitled “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.” The E.O. directs federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations. The E.O. is intended to prevent discrimination in federal programs that affect human health and the environment, as well as to provide the opportunity for public participation and access to public information. The E.O. further mandates that federal agencies are required to implement this order consistent with, and to the extent permitted by, existing law.

This Draft EJ Analysis documents that U.S. EPA has incorporated environmental justice considerations into its permit application review that are within U.S. EPA’s legal authority to address in the permit decision-making process. U.S. EPA considered publicly available data, tools, and previous studies to focus on potential health and environmental impacts. U.S. EPA focuses this analysis on Kettleman City due to its location and proximity with respect to the Facility and history of community concerns about impacts related to the Facility. U.S. EPA recognizes that Kettleman City has multiple environmental burdens, as well as social and health issues that may make the community more vulnerable to the impacts of pollution. Most of these environmental burdens and their potential impacts fall outside of U.S. EPA’s legal authority to address during the permit decision-making process, but U.S. EPA supports referring these issues to other programs or organizations within or outside of U.S. EPA that may have authority and/or resources to mitigate potential burdens and impacts.

In this document, U.S. EPA summarizes information about the proposed action and its regulatory framework (Section 2), identifies existing environmental conditions and examines demographic and health data for Kettleman City and Kings County (Section 3), describes the Facility and its history (Section 4), lists the public participation and outreach activities for this proposed permit action and prior outreach activities (Section 5), describes community concerns raised during these outreach activities and actions

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<sup>1</sup> While U.S. EPA’s proposed action is called an “approval” by the TSCA PCB regulations, it is most easily understood as a “permit” because that is the common term used in other regulatory programs; therefore, this document generally refers to any proposed or final TSCA approval as a proposed or final TSCA permit. However, in some instances the more precise regulatory term “approval” must be used.



taken to better understand the Facility's potential impacts on the health of Kettleman City residents and the environment (Section 6), and includes a list of U.S. EPA's proposed permit conditions to protect human health and the environment (Section 7). More information on U.S. EPA's proposed permit can be found in the Statement of Basis.

## 2 Proposed Permit Action and Regulatory Framework

### 2.1 Proposed Permit Action

U.S. EPA's proposed permit for KHF, if made final, would replace U.S. EPA's existing permits<sup>2</sup> for the Facility with a modern permit. The proposed permit would allow CWM to continue to:

- 1) Dispose of PCB waste in Landfill B-18 Phase I and Phase II (Figure 1).
- 2) Store PCB waste in the PCB Flushing/Storage Unit (PCB F/SU) enclosed building (Figure 1).
- 3) Drain and flush PCB-containing electrical equipment at the PCB F/SU.
- 4) Bulk (combine small containers of waste into a larger container) and repackage PCB waste in the enclosed building at the PCB F/SU.

The proposed permit, if made final, would also allow CWM to:

- 1) Dispose of PCB waste in Landfill B-18 Phase III.
- 2) Store PCB waste that is within 30 days of its removal from service date in the outside containment area at the PCB F/SU.
- 3) Bulk and repackage PCB waste within the outside containment area at the PCB F/SU.
- 4) Perform bin-top and container-top solidification of incidental liquids at the PCB F/SU.

To maintain compliance with all applicable TSCA regulations for storage, treatment for disposal, and disposal of PCB waste, the proposed permit, if made final, would require CWM to:

- 1) Maintain records on Facility operations.
- 2) Regularly inspect and maintain the Facility.
- 3) Maintain and implement a contingency plan to respond to spills or other emergencies.
- 4) Promptly report any PCB spill or emergency that requires implementation of the contingency plan.
- 5) Test groundwater annually from wells monitoring active Landfill B-18 and every five years from wells monitoring closed Landfills B-14, B-16, and B-19 for PCBs and report the results.
- 6) Test leachate annually from Landfills B-14, B-16, B-18, and B-19 for PCBs and report the results.
- 7) Implement an air quality monitoring program that includes four monitoring sites and provide quarterly air monitoring reports.
- 8) Test surfaces quarterly at the PCB F/SU for PCB contamination and promptly clean up any PCB contamination found at or above 10 micrograms per 100 square centimeters.

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<sup>2</sup> KHF currently operates under permits issued in 1988 (amended in 1990) and 1992. See Section 4.2 for more information.

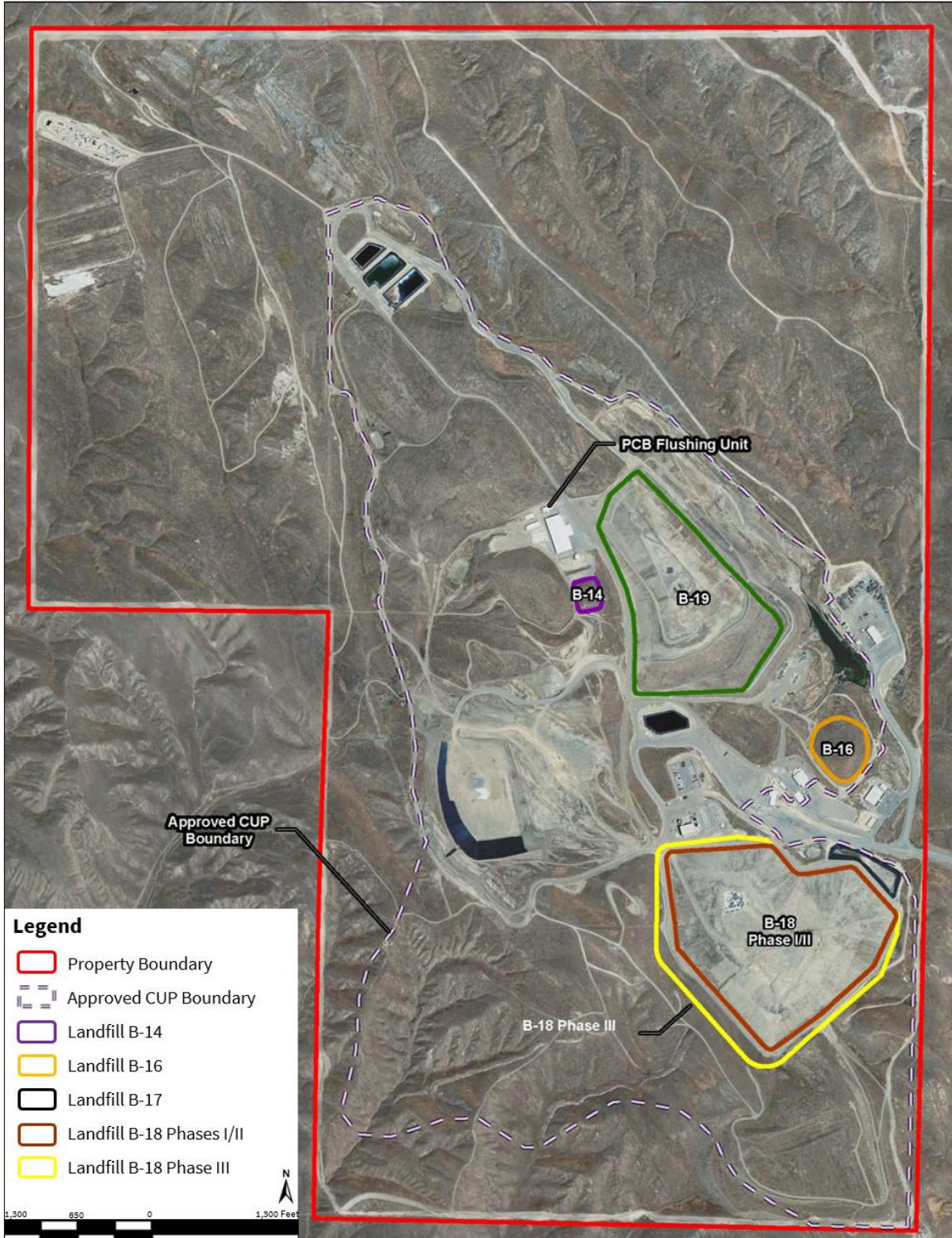


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- 9) Promptly report any detection of PCBs in groundwater, leachate, ambient air, or on surfaces at the PCB F/SU.
  - 10) Maintain and implement post-closure plans, cost estimates, and financial assurance for post-closure care for closed Landfills B-14, B-16 and B-19.
  - 11) Maintain plans, cost estimates, and financial assurance for closure and post-closure care of Landfill B-18.
  - 12) Maintain a closure plan, cost estimates, and financial assurance for closure of the PCB F/SU.
  - 13) Follow public process requirements for many types of modifications to the permit.

Overall, the proposed permit would result in the following changes to the Facility:

- 1) Increase the PCB waste-disposal capacity of Landfill B-18 from 10.7 million cubic yards to 15.6 million cubic yards by approving the disposal of PCB waste in Phase III (Figure 1).
- 2) Set a maximum PCB waste storage capacity at the PCB Flushing/Storage Unit of 44,015 gallons.





**FIGURE 2** Permitted Area for Management of RCRA and State-Only Hazardous Waste and Municipal Solid and Designated Waste at KHF [Wenck 2011a (modified)].



## 2.2 Regulatory Framework

### 2.2.1 Toxic Substances Control Act

U.S. EPA is responsible for implementing the TSCA PCB regulatory program as described in 40 Code of Federal Regulations (C.F.R.) Part 761.<sup>3</sup> Any person storing or disposing of regulated PCBs must comply with the TSCA PCB regulatory program including the storage and disposal regulations in 40 C.F.R. Part 761 Subpart D. Any person storing or disposing of PCBs is also responsible for determining and complying with all other applicable federal, state, and local laws (40 C.F.R. § 761.50(a)(6)).

For storage and disposal of PCB waste at the Facility, CWM must comply with 40 C.F.R. Part 761 and obtain all necessary permits from U.S. EPA. Sections 761.65 and 761.75 of Part 761 list the requirements that apply to the design and operations of TSCA PCB waste storage facilities and TSCA chemical waste landfills, respectively.<sup>4</sup> These sections also describe the findings that U.S. EPA must make prior to issuing a permit, including finding that PCBs from operations at the landfill or storage facility will not pose an unreasonable risk of injury to health or the environment.

KHF is currently operating under TSCA permits issued in 1988 (amended 1990) and 1992. CWM submitted applications to renew these permits in 1997 and 1998, respectively, and has since submitted several updated and revised applications, the latest of which is dated October 2, 2018. U.S. EPA has reviewed the 2018 renewal application and is proposing to issue a TSCA permit. More information about the KHF's history can be found in Section 4 of this document.

Certain nonliquid PCB waste may be disposed of in an approved TSCA chemical landfill.<sup>5</sup> The TSCA PCB regulatory program describes the PCB wastes that may be disposed in a TSCA chemical waste landfill and the procedures to be taken before such disposal, such as removal of free-flowing liquid PCBs from transformers.

TSCA PCB regulations also allow certain nonliquid PCB wastes to be disposed of in a Resource Conservation and Recovery Act (RCRA) hazardous waste landfill if that disposal is also allowed by the landfill's other permits.<sup>6</sup> CWM is currently allowed to dispose of certain PCB wastes,

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<sup>3</sup> TSCA PCB regulations are in Title 40 and Part 761 is in volume 34 of the C.F.R., which can be accessed at [www.ecfr.gov/](http://www.ecfr.gov/).

<sup>4</sup> The Statement of Basis Sections III.C. and III.D. provide additional information about the TSCA regulatory program as it applies to storage facilities and landfills.

<sup>5</sup> For example, PCB "articles" (e.g., transformers) and "containers" (e.g., drums) that contain PCB oils greater than or equal to 50 parts per million generally must be either disposed of at a TSCA chemical landfill (but only after all PCB oils are drained) or incinerated in a TSCA-approved incinerator. The drained oil must be sent to a TSCA-approved incinerator or otherwise disposed in accordance with the federal PCB regulations.

<sup>6</sup> For example, sections 761.61(a)(5) and 761.62 of Part 761 identify specific types of bulk PCB remediation waste and PCB bulk product wastes that may be disposed in a RCRA hazardous waste landfill or solid waste landfill and the requirements that must be followed for such disposal.





mainly PCB remediation waste from sites with U.S. EPA-approved PCB cleanup plans, in Landfill B-18 Phase III under the PCB regulations and its state RCRA permit.

This general overview is not a substitute for the full regulations, but it illustrates that the TSCA PCB regulatory program has specific requirements for the storage, treatment for disposal, and disposal of different types of PCB waste.

### 2.2.2 Other Regulations

KHF also operates under a RCRA permit that the California Department of Toxic Substances Control (DTSC) issued in 2003. DTSC modified the RCRA permit in 2014 to allow for the construction and operation of Landfill B-18 Phase III.<sup>7</sup> Phase III has been constructed and is currently accepting RCRA and state-only hazardous wastes and certain PCB remediation wastes and bulk product wastes. KHF submitted an application to renew its RCRA permit on May 15, 2013 and has updated and revised the application several times including the latest submittal that DTSC received on March 16, 2018. DTSC is reviewing the application and is in the technical review phase of the process that will lead to a permit decision.<sup>8</sup>

In addition to U.S. EPA and DTSC permits, KHF is also regulated by the California Department of Resources Recycling and Recovery (CalRecycle), the Central Valley Regional Water Quality Control Board (RWQCB), Kings County, and the San Joaquin Valley Air Pollution Control District (SJVAPCD) (Table 1).

**TABLE 7** Permits for KHF Operations.

Agency/Permit	Description	Permit No.	Date Issued
U.S. EPA/TSCA-Regulated Waste	Disposal of nonliquid PCB waste in Landfills B-14, B-16, and B-19 and PCB storage units	N/A	1988 (amended 1990)
	Disposal of nonliquid PCB waste in Landfill B-18, Phase I and Phase II; prohibition on disposal of PCB waste in Landfill B-14	N/A	1992
DTSC/Hazardous Waste	Disposal of RCRA and state-only hazardous waste	02-SAC-03	2003 (modified 2014)
SJVAPCD/Air Pollution	Facility-Wide Requirements	C-283-0	2017
	Emergency Generator Internal Combustion Engine	C-283-8	2017
	Landfill B-18	C-283-11	2017
	Impoundment P-9	C-283-14	2017
	Impoundment P-14	C-283-15	2017
	Impoundment P-16	C-283-17	2017
	Final Stabilization Unit 9	C-283-19	2017
	10,000-gallon Gasoline Underground Tank	C-283-20	2017
	Landfill B-19 Bioreactor	C-283-22	2017

<sup>7</sup> Greenaction for Health and Environmental Justice and El Pueblo para el Aire y Agua Limpia filed a complaint on March 19, 2015 with U.S. EPA's External Civil Rights Compliance Office under Title VI of the Civil Rights Act of 1964 and its implementing regulations. The complaint was against the California Environmental Protection Agency and DTSC for discriminating on the basis of race and national origin in approving the expansion of the Facility and in limiting the participation of the minority residents of Kettleman City in the permit decision-making process. The External Civil Rights Compliance Office accepted this complaint on April 17, 2015 and a settlement agreement was reached on August 10, 2016. More information can be found on DTSC's website at [dtsc.ca.gov/chemical-waste-management-inc-kettleman-hills-facility/](https://www.dtsc.ca.gov/chemical-waste-management-inc-kettleman-hills-facility/).

<sup>8</sup> More information about the RCRA permit and renewal application is available on DTSC's KHF website at [www.dtsc.ca.gov/HazardousWaste/Projects/CWMISiteDescription.cfm](http://www.dtsc.ca.gov/HazardousWaste/Projects/CWMISiteDescription.cfm).



Agency/Permit	Description	Permit No.	Date Issued
	Reagent “Guppy”	C-283-24	2017
	Landfill B-17	C-283-25	2017
<b>RWQCB/Waste Discharge Requirements</b>	Waste Discharge Requirements (Class II/III Landfills)	R5-2006-	2006
	Waste Discharge Requirements	R5-2014-	2014
<b>CalRecycle/Solid Waste Facility Permit</b>	Class II/III Wastes in Landfill B-17	16-AA-0027	2006
	Class II/III Wastes in Landfill B-19	16-AA-0021	2008
<b>CalRecycle/Registration Permit</b>	Nonhazardous, Non-putrescible, Industrial Solid Waste in Landfill B-18	16-AA-0023	2012
<b>Kings County Community Development Agency/Land Use Permits and Approvals</b>	Various Conditional Use Permits, Administrative Approvals, etc.	Various	Various

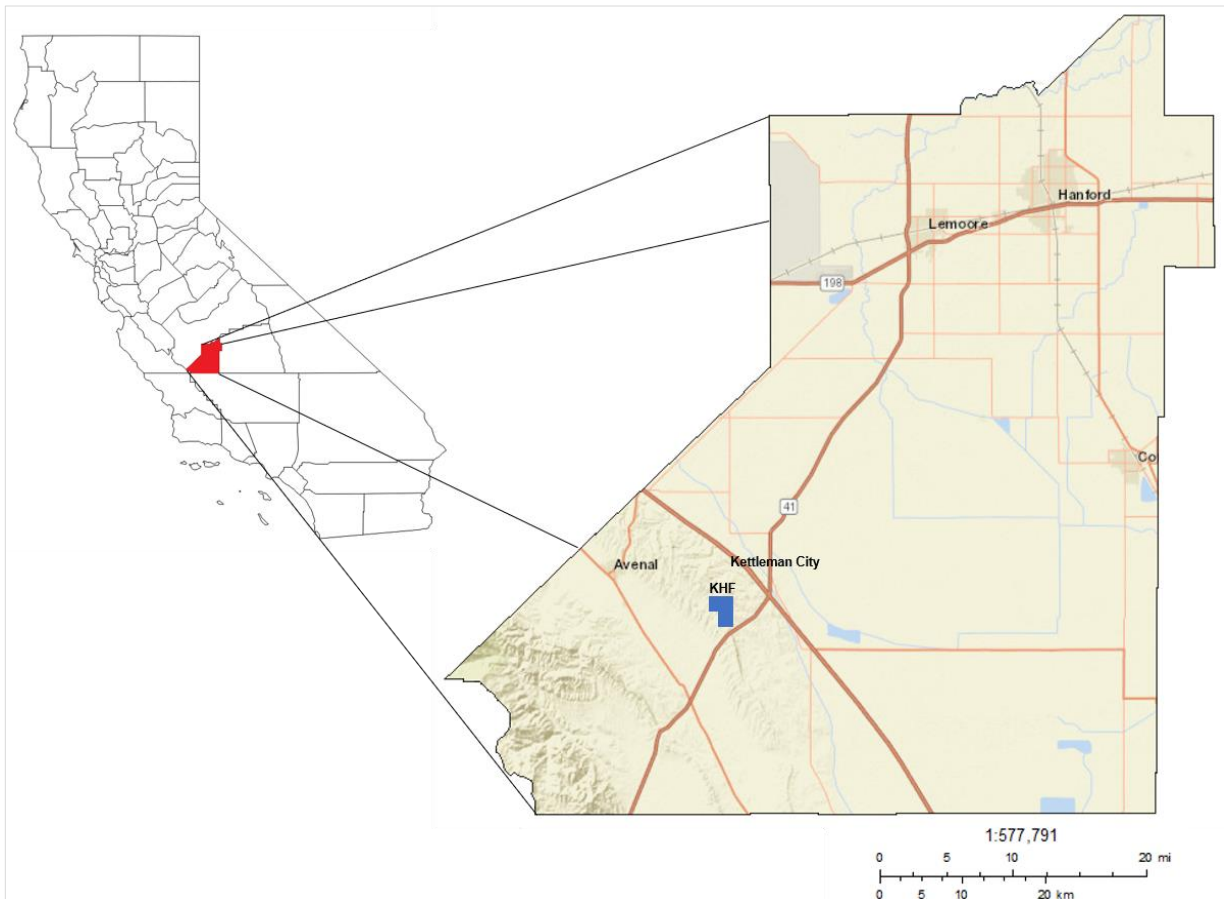


### 3 Community Information

In this section, U.S. EPA uses available data from several sources to identify environmental burdens and the presence of social and health factors that may make KHF's neighboring community more vulnerable to the impacts of pollution.

#### 3.1 Description of Kettleman City

U.S. EPA focuses this analysis on Kettleman City due to its location and proximity with respect to the Facility and history of community concerns about impacts related to the Facility (Figure 2). Avenal, the next closest city to KHF, is not included in this analysis due to its location and distance from KHF (approximately 6.5 miles northwest, upwind of KHF) and it not being on or near a truck route to KHF.



**FIGURE 3** Location of Kettleman City, Avenal, Kings County, and the Facility.

Kettleman City is approximately 3.5 miles northeast of the Facility, located along State Route 41 (SR-41) and two miles north of the Interstate 5 (I-5) and SR-41 intersection (Figures 3 and 4). Kettleman City is a rural, unincorporated area of Kings County with two distinct areas separated by the California

Aqueduct: a residential community to the north and a commercial area to the south. The residential area of Kettleman City is bounded to the north, east, and west by agricultural fields.

Kettleman City has a population of 1,574 with approximately 350 residential units averaging 1,100 square feet in size [U.S. Census Bureau 2019; California Environmental Protection Agency (CalEPA) and California Department of Public Health (CDPH) 2010]. Homes are found on both sides of SR-41. There is one school, Kettleman City Elementary School, and one church in Kettleman City [U.S. EPA 2018c]. Three oil pipelines, a Chevron oil processing facility, and an XPO Logistics freight transfer station are located at least 0.35 miles south of the residential area (Figure 4) [CalEPA and CDPH 2010].



FIGURE 4 Residential Communities Near KHF.



FIGURE 5 Land Use Near Kettleman City.

### 3.2 Environmental Burdens

#### 3.2.1 Air Quality

U.S. EPA has established National Ambient Air Quality Standards (NAAQS) for several pollutants considered harmful to public health and the environment, including ozone, particulate matter less than 2.5 micrometers in diameter ( $PM_{2.5}$ ), and particulate matter less than 10 micrometers in diameter ( $PM_{10}$ ).<sup>9</sup> Ground-level ozone and particulate matter pollution are associated with a number of health effects.<sup>10</sup>

Air quality near Kettleman City is above the NAAQS for ozone,  $PM_{2.5}$ , and  $PM_{10}$  (Table 2) [U.S. EPA 2018b]. In addition, the California Communities Environmental Health Screening Tool (CalEnviroScreen)<sup>11</sup> identifies that the census tract<sup>12</sup> that includes Kettleman City has  $PM_{2.5}$  values higher than 95 percent of all census tracts in California and ozone values higher than 85 percent of all census tracts in California [CalEPA 2019].

<sup>9</sup> More information about NAAQS is available at [www.epa.gov/criteria-air-pollutants/naaqs-table](http://www.epa.gov/criteria-air-pollutants/naaqs-table).

<sup>10</sup> More information about the health effects of ground-level ozone and particulate matter is available at [www.epa.gov/criteria-air-pollutants](http://www.epa.gov/criteria-air-pollutants).

<sup>11</sup> CalEnviroScreen is CalEPA's online screening tool that "identifies California communities by census tract that are disproportionately burdened by, and vulnerable to, multiple sources of pollution." More information is available at [www.oehha.ca.gov/calenviroscreen](http://www.oehha.ca.gov/calenviroscreen).

<sup>12</sup> A census tract is a geographic region used by the U.S. Census Bureau and defined for the purpose of taking a census.



**TABLE 8** 2015-2017 Design Values for Violating Air Quality Monitors Near Kettleman City.

NAAQS	2015-2017 Design Value <sup>a</sup>	Monitor Location <sup>d,e</sup>	Level of NAAQS
2015 Ozone 8-hour	0.084 ppm <sup>b</sup>	807 South Irwin St., Hanford, CA	0.070 ppm
2012 PM <sub>2.5</sub> Annual	22.2 µg/m <sup>3</sup> <sup>c</sup>	1520 Patterson Ave., Corcoran, CA	12.0 µg/m <sup>3</sup>
2006 PM <sub>2.5</sub> 24-hour	72 µg/m <sup>3</sup>	1520 Patterson Ave., Corcoran, CA	35 µg/m <sup>3</sup>
1987 PM <sub>10</sub> 24-hour	2.7 average estimated exceedances	1520 Patterson Ave., Corcoran, CA	1.0 average estimated exceedances

<sup>a</sup> A design value is a statistic that describes the air quality status of a given location relative to the level of NAAQS and is often based on concentrations measured over multiple years of data. The 2015-2017 PM<sub>2.5</sub> design values at Corcoran are based on data from January 1, 2015 to February 6, 2015 and from January 1, 2016 to December 31, 2017; data from February 7, 2015 to December 31, 2015 are not available due to a fire that destroyed the site. Based on design value calculation methodologies described in the regulations, these design values are considered valid despite the missing 2015 data. The 2015-2017 PM<sub>2.5</sub> design values at Hanford are 16.4 µg/m<sup>3</sup> for annual NAAQS and 54 for 24-hour NAAQS, and include data measured for three complete years (January 1, 2015 to December 31, 2017).

<sup>b</sup> Parts Per Million (ppm)

<sup>c</sup> Micrograms Per Cubic Meter (µg/m<sup>3</sup>)

<sup>d</sup> These monitors are part of the California Air Resource Board’s regulatory air monitoring network

<sup>e</sup> Kettleman City is approximately 26 miles from the Corcoran monitor location and 30 miles from the Hanford monitor location.

### 3.2.2 Traffic

Low-income and minority populations often live in or near areas with high traffic [CalEPA and Office of Environmental Health Hazard Assessment (OEHHA) 2017]. Major roads and highways can bring air pollutants into neighborhoods and can cause several different types of health problems [CalEPA and OEHHA 2017]. In Kettleman City, SR-41 runs through the community and Interstate 5 (I-5) is located less than a mile to the west. (Figure 5).

The California Department of Transportation’s (Caltrans) Traffic Census Program collects data on California’s state highway system. Traffic volumes may be estimated or counted at north and south or east and west of an intersection and represents the annual average daily traffic (AADT), which is the total volume for the year divided by 365 days. Caltrans data from 2002-2017 shows that AADT for all vehicles and truck-only traffic are increasing on I-5 at the I-5/SR-41 intersection (Figures 5-7) [Caltrans 2019a]. Trucks account for approximately 25-30 percent of all traffic on I-5 at this location (Figure 7) [Caltrans 2019a, 2019b].



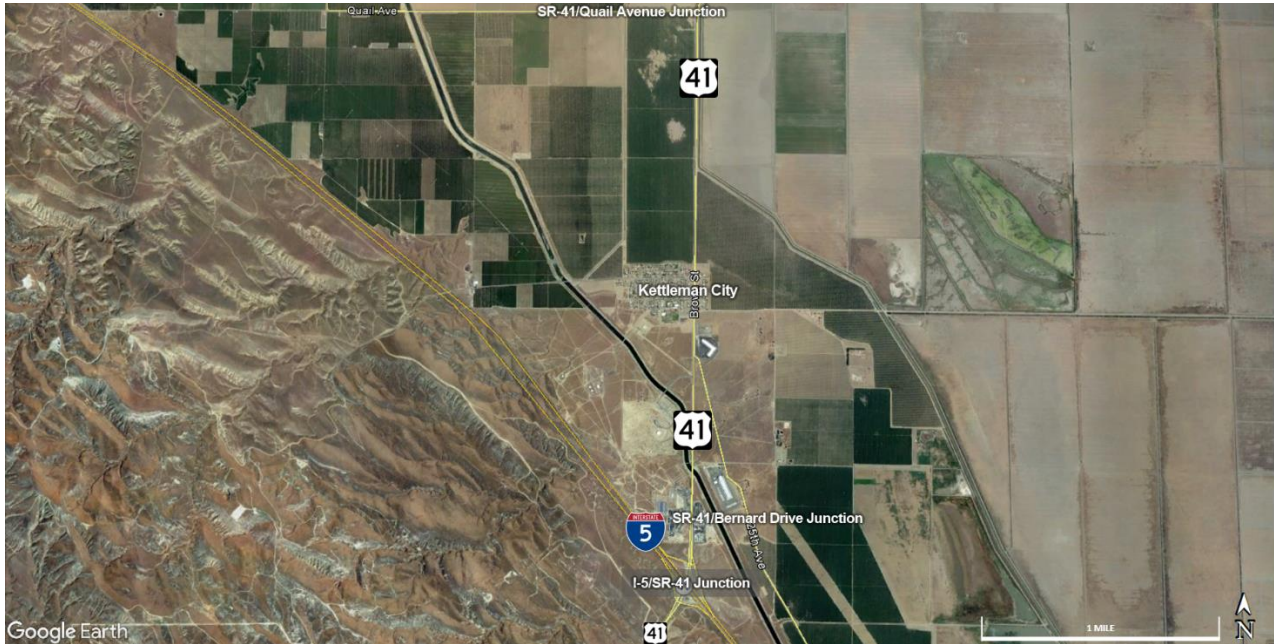


FIGURE 6 Major Intersections Near Kettleman City, California.

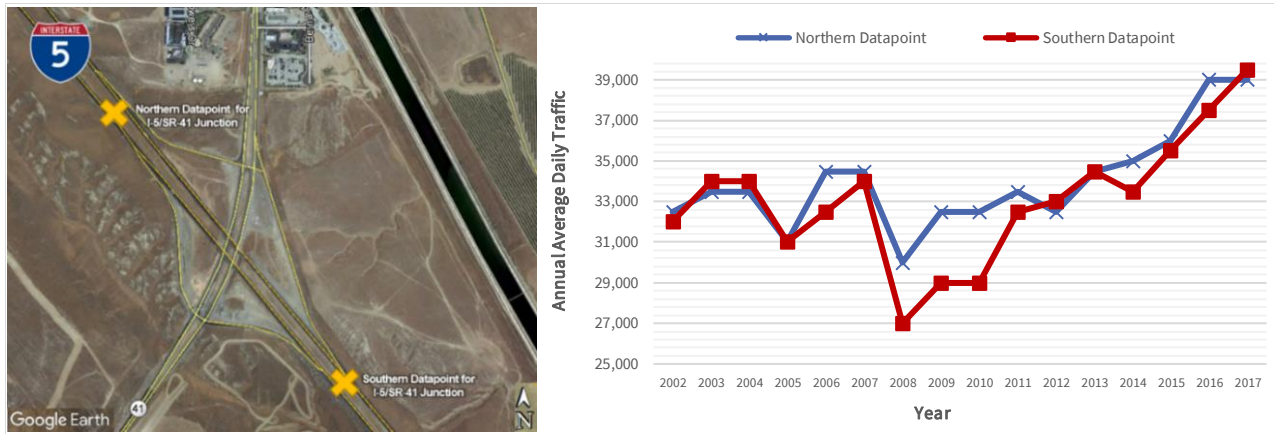


FIGURE 7 All-Vehicle AADT from 2002-2017 on I-5 at the I-5/SR-41 Intersection.



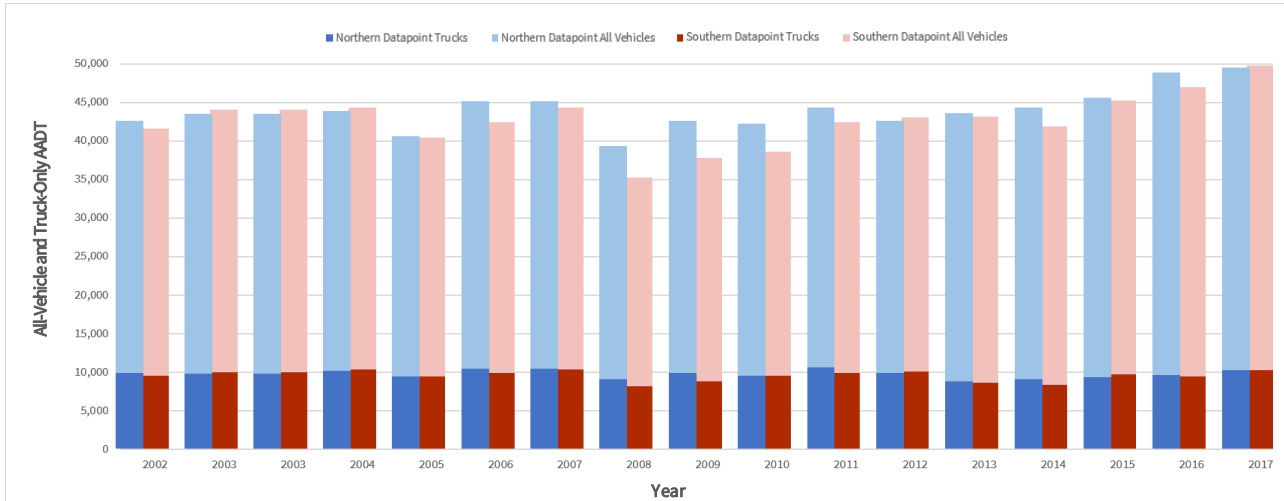


FIGURE 8 All-Vehicle and Truck-Only AADT from 2002-2017 on I-5 at the I-5/SR-41 Intersection.

From 2014-2017, Caltrans data shows a large increase in traffic at the SR-41/Bernard Drive intersection, a location that includes many amenities including gas stations, restaurants, and hotels (Figures 8 and 9) [Caltrans 2019a]. Data indicates this increase in vehicles returns to I-5 and does not result in a traffic increase in Kettleman City (Figures 9 and 10) [Caltrans 2019a, 2019b].

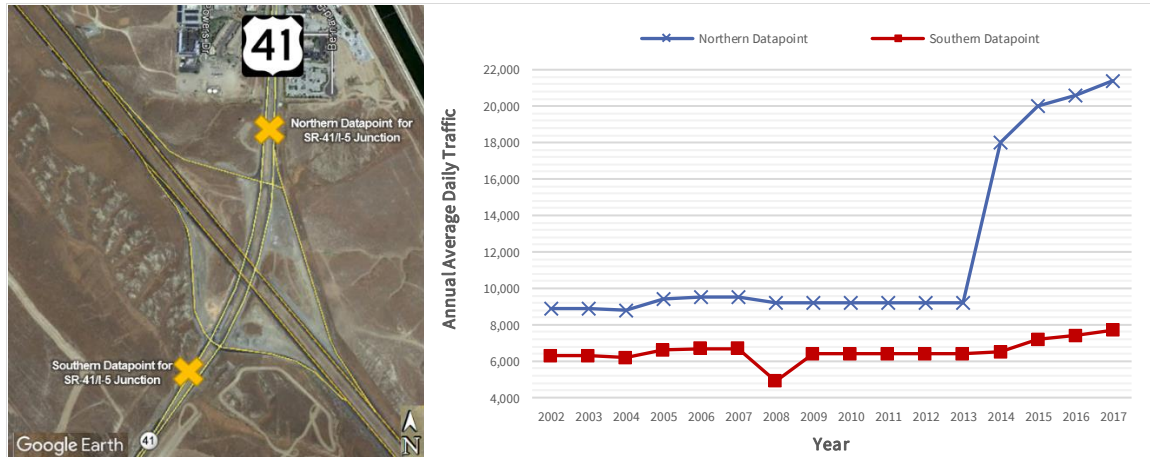


FIGURE 9 All-Vehicle AADT from 2002-2017 on SR-41 at the SR-41/I-5 Intersection.



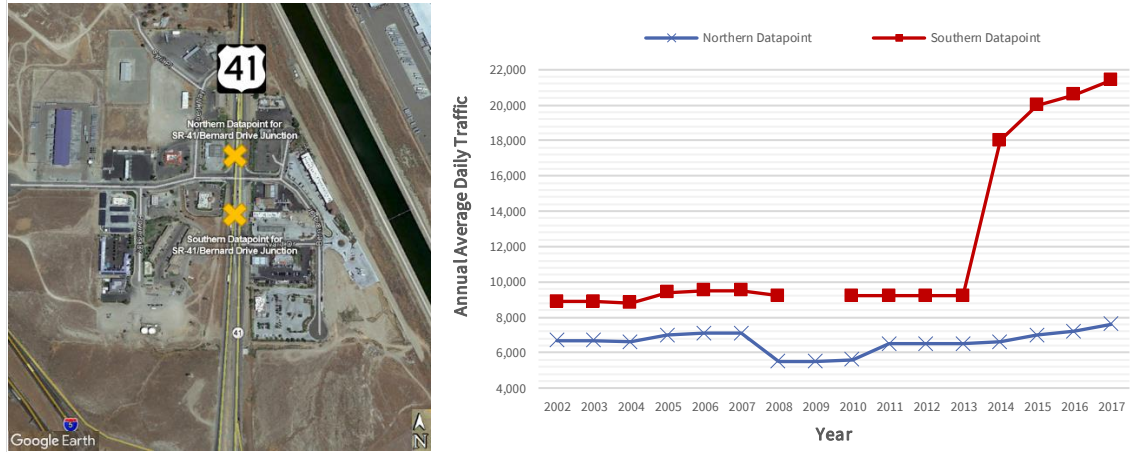


FIGURE 10 All-Vehicle AADT from 2002-2017 on SR-41 at the SR-41/Bernard Drive Intersection.

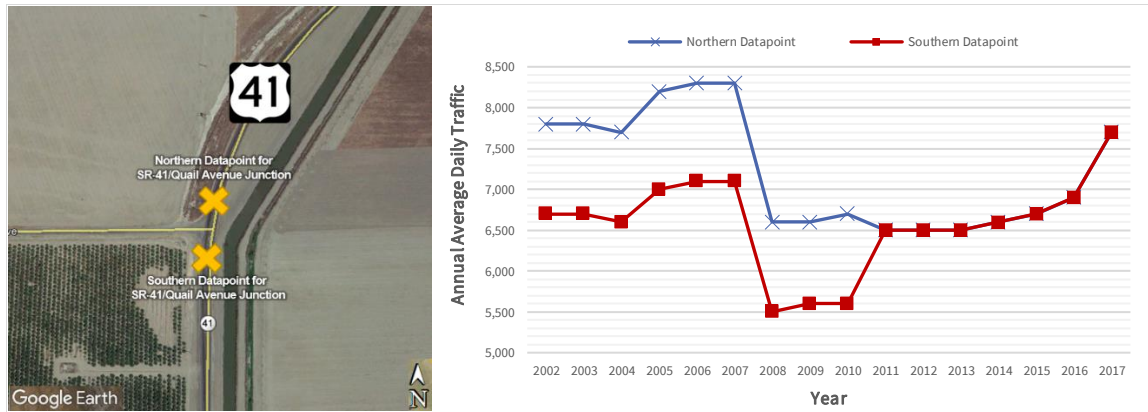


FIGURE 11 All-Vehicle AADT from 2002-2017 on SR-41 at the SR-41/Quail Avenue Intersection.

The Kettleman City truck-only AADT is estimated from the southern datapoint of the SR-41/Quail Avenue intersection (Figure 11) [Caltrans 2019b]. Truck traffic has slightly varied from 2008-2017 [Caltrans 2019b]. Data prior to 2008 is not available.

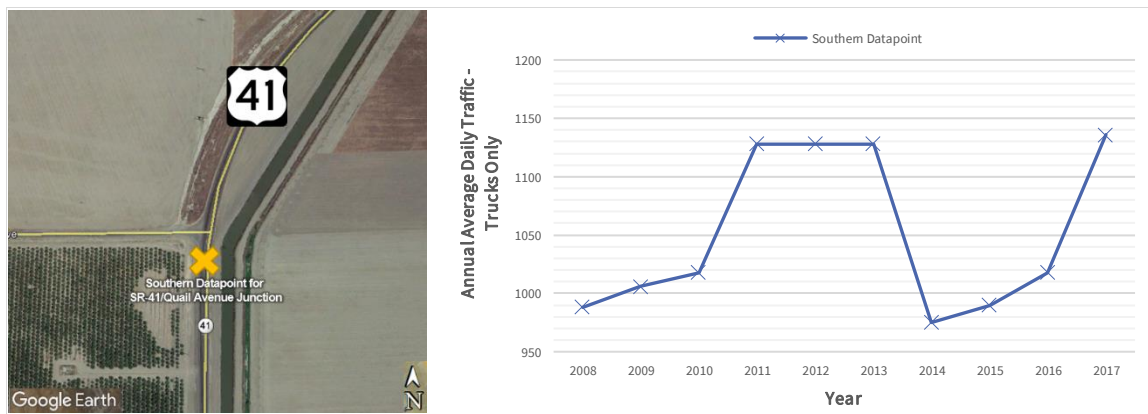


FIGURE 12 Truck AADT from 2008-2017 on SR-41 at the SR-41/Quail Avenue Intersection.

Traffic volume may result in higher levels of diesel particulate matter from the exhaust of diesel cars, trucks, or buses. Diesel particulate matter includes hundreds of different chemicals, of which many are harmful to health [CalEPA and OEHHA 2017]. Diesel particulate matter levels are often highest near freeways [CalEPA and OEHHA 2017].

CalEnviroScreen identifies that the census tract that includes Kettleman City has diesel particulate matter values lower than approximately 93 percent of all census tracts in California and traffic volumes lower than 89 percent of all census tracts in California [CalEPA 2019].

### 3.2.3 Drinking Water Quality

Kettleman City has been impacted by naturally-occurring arsenic and benzene in drinking water. Two different public water systems serve the community: Kettleman City Community Services District (KCCSD) Public Water System (PWS) with two wells and the Kettleman City Elementary PWS with one well. The two municipal wells have had benzene and arsenic concentrations measured above the state drinking water standards while the Kettleman Elementary School well has exceeded the state drinking water standard for arsenic [CalEPA and CDPH 2010].

In 1998, the city equipped the two municipal wells with an aeration treatment system to remove benzene to less than the state drinking water standard. However, aeration treatment does not remove arsenic. As a result, the treated water still contains arsenic above the state drinking water standard and city residents cannot safely drink water from the tap. KCCSD and the Reef-Sunset Unified School District<sup>13</sup> have been working with the State Water Resources Control Board (Water Board) towards a solution to treat and reduce arsenic concentrations to less than the state drinking water standard. More information can be found in Sections 6.3.5 and 6.3.6.

### 3.2.4 Pesticides from Agricultural Operations

Agricultural pesticides may migrate to Kettleman City primarily via drift of airborne particles or gases from the application site or by transport on wind-blown dust [California Department of Pesticide Regulation (CDPR) 2010]. Exposure to pesticides within the community may occur from air, food, water, soil, dust, surfaces, or work clothing.

Past pesticide data shows that based on pounds applied the most used pesticides between 2007-2009 within 5 miles of Kettleman City were metam potassium, sulfur, mineral oil, petroleum oil, and metam sodium, [CDPR 2010]. Recent pesticide use data shows a shift in the most used pesticides, most significantly no metam sodium was used in 2015 or 2016 (Table 3) [CDPR 2018]. Table 4 shows the top pesticide application crop sites for 2015 and 2016 within one and five miles of Kettleman City based on pounds applied [CDPR 2018].

<sup>13</sup> Kettleman City Elementary School is part of the Reef-Sunset Unified School District.



CalEnviroScreen identifies that the census tract that includes Kettleman City has 1,719 pounds of pesticide applied per square mile,<sup>14</sup> which is higher than 91 percent of all census tracts in California [CalEPA 2019]. More information about pesticides can be found in Section 6.5.

TABLE 9 Top Five Pesticide Active Ingredient Applications Near Kettleman City, California.

Rank	5 Miles - 2015	5 Miles - 2016	1 Mile - 2015	1 Mile - 2016
1	Mineral Oil	Mineral Oil	Mineral Oil	Mineral Oil
2	Metam Potassium	Metam Potassium	Petroleum Oil	Sulfur
3	Sulfur	Sulfur	Sulfur	Petroleum Oil
4	Petroleum Oil	Petroleum Oil	Ziram	Ziram
5	Ziram	Kaolin	Glyphosate (Potassium Salt)	Glyphosate (Potassium Salt)

TABLE 10 Top Five Pesticide Application Crop Sites Near Kettleman City, California.

Rank	5 Miles - 2015	5 Miles - 2016	1 Mile - 2015	1 Mile - 2016
1	Almond	Almond	Almond	Almond
2	Soil Fumigation	Onion	Apricot	Pistachio
3	Peach	Tomatoes (for Processing)	Pistachio	Nectarine
4	Nectarine	Peach	Nectarine	Apricot
5	Pistachio	Soil fumigation	Plum	Plum

### 3.3 Demographic Data

U.S. EPA’s evaluation of demographic (that is, social) data for potential environmental justice concerns focused on Kettleman City (as described in Section 3.1) and compared this data with information available for Kings County, California, and the nation (Table 5) [U.S. Census Bureau 2019].<sup>15</sup> This information shows that the majority of Kettleman City residents are minority and low-income and that Kettleman City has an above average number of adults with less than a high school education and an above average number of linguistically isolated residents.

Metric	Kettleman City	Kings County	California	National
Population	1,574	150,183	38,982,847	321,004,407
Percent Population Under 5 Years of Age	7.4%	7.9%	6.4%	6.2%
Percent Population Over 65 Years of Age	4.6%	9.5%	13.3%	14.9%
Percent Minority Population	98.2%	66.9%	62.1%	38.5%
Percent Low Income Population	28.7%	20.9%	15.1%	14.6%
Percent Linguistically Isolated Population	22.0%	9.0%	10.0%	5.0%
Percent Less than High School Education	68.2%	44.6%	17.5%	12.6%

TABLE 11 Demographic Information for Kettleman City, Kings County, California, and the Nation.

<sup>14</sup> This value is calculated from 2012-2014 data of 70 of the most **pesticide active ingredients** that people may be exposed in California agriculture [CalEPA and OEHHA 2017, CalEPA 2019].

<sup>15</sup> Data is generated from the U.S. Census Bureau’s 2013-2017 American Community Survey, a nationwide survey that collects and produces information on social, economic, housing, and demographic characteristics [U.S. Census Bureau 2017].



### 3.3.1 Minority Population

Minority population refers to individuals who list their racial status as a race other than white. Minority communities may bear greater exposure and disease burdens associated with where they live, work, or play that can increase their risk of adverse health effects from environmental hazards [U.S. EPA 2016]. Almost all people in Kettleman City are minority (Latino), which is higher than the county, state, and national percentages (Table 5) [U.S. Census Bureau 2019].

### 3.3.2 Children and Elderly Populations

In this analysis, children and elderly populations are sensitive groups that can be more susceptible to environmental pollution [U.S. EPA 2016]. The most sensitive groups consist of populations under the age of five (5) and over the age of 64. Table 5 shows the percentage of the Kettleman City population under the age of five (5) is approximately seven (7) percent and over the age of 64 is approximately five (5) percent [U.S. Census Bureau 2019]. The population under the age of five (5) is similar to the county rate and higher than the state and national average. The elderly population in Kettleman City is more than two times lower than the county, state, and national percentages.

### 3.3.3 Low-Income Population

In this analysis, low-income refers to the population where the income is two times below the poverty threshold.<sup>16</sup> Low-income populations may bear greater exposure to pollution and suffering from health effects compared to more affluent communities [CalEPA and OEHAA 2017]. One out of three persons in Kettleman City is considered low-income (Table 5) [U.S. Census Bureau 2019]. CalEnviroScreen shows the poverty level of the census tract that includes Kettleman City is 86 percent higher than all census tracts in California [CalEPA 2019].

### 3.3.4 Linguistically Isolated Population

Linguistic isolation may limit a population's capacity to engage in the regulatory process [U.S. EPA 2016]. Twenty-two percent of Kettleman City households are linguistically isolated, which means that no one over the age of 14 speaks English well, speaks English at all, or speaks a language other than English [U.S. EPA 2018a]. According to the U.S. Census Bureau's 2013-2017 American Community Survey (ACS), approximately 98.6 percent of Kettleman City residents speak Spanish [U.S. Census Bureau 2019b]. The percentage of linguistically isolated households in Kettleman City is higher than the county, state, and national percentages [U.S. EPA 2018a].

### 3.3.5 Population with Less Than High School Education

Education level may influence susceptibility and vulnerability to environmental pollution [U.S. EPA 2016]. Almost 70 percent of persons over the age of 25 in Kettleman City do not hold a high school diploma [U.S. Census Bureau 2019]. CalEnviroScreen also shows that over half of the persons over the age of 25 in the census tract that includes Kettleman City have less than a high

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<sup>16</sup> The poverty threshold is the income dollar amount used by the U.S. Census Bureau as a standard for comparison to determine a household's poverty status.



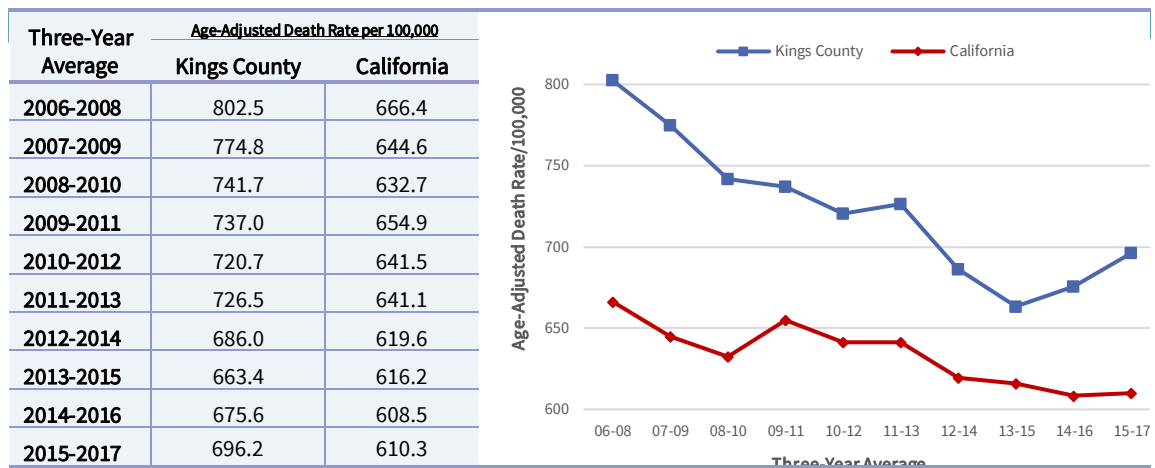
school education and that the percent of adults without a high school diploma is higher than 93 percent of all census tracts in California [CalEPA 2019].

**3.4 Health Data**

**3.4.1 Mortality**

General and infant mortality are measures of health status in a population [U.S. EPA 2018d]. The CDPH’s County Health Status Profiles<sup>17</sup> age-adjusted death rates due to all causes for Kings County and California from 2006-2017 (three-year averages) show that Kings County death rates have decreased but remain above the state-wide rate (Table 6 and Figure 12) [CDPH 2010-2019].

**TABLE 12 / FIGURE 13** Age-Adjusted Death Rates Due to All Causes for Kings County and California from 2006-2017 (Three-Year Averages).



The California infant death rate has decreased consistently as seen in Table 7 [CDPH 2010-2019]. U.S. EPA reviewed the information available on infant mortality in Kings County but could not assess the infant death rate because the number of deaths was too few to generate a reliable infant death rate according to CDPH [CDPH 2010-2019]. Table 7 also lists the number of live births and the total number of infant deaths under the age of one (1) in Kings County from 2006-2017 (three-year averages) [CDPH 2010-2019].

<sup>17</sup> More information can be found at [www.cdph.ca.gov/Programs/CHSI/Pages/County-Health-Status-Profiles.aspx](http://www.cdph.ca.gov/Programs/CHSI/Pages/County-Health-Status-Profiles.aspx).



**TABLE 13** California Infant Death Rate and Kings County Infant Live Births and Deaths Under One-Year of Age from 2006-2017 (Three-Year Averages).

Three-Year Average	Per 1,000 Live Births California Infant Death Rate	Kings County Live Births	Kings County Infant Deaths (< One Year of Age)
2006-2008	5.3	2,673.0	15.3
2007-2009	5.3	2,725.3	16.0
2008-2010	5.2	2,712.0	11.7
2009-2011	5.0	2,620.7	14.3
2010-2012	4.9	2,572.0	15.3
2011-2013	4.8	2,476.3	16.0
2012-2014	4.7	2,438.7	14.3
2013-2015	4.6	2,364.7	12.0
2014-2016	4.4	N/A*	N/A*
2015-2017	4.4	2,288.7	<11.0

\* Data was not provided based on CDPH's data de-identification guidelines.

**3.4.2 Infant Health**

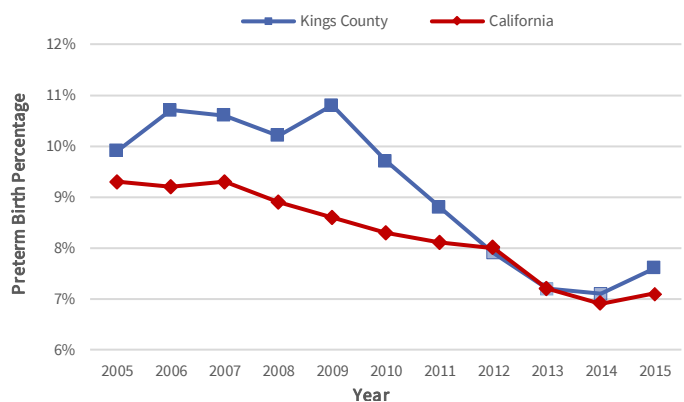
Infant health can determine the health of the next generation [U.S. EPA 2018d]. Preterm birth, low birth weight, access to prenatal care, and birth defects can lead to infant death or lifelong health disabilities [United States Department of Health and Human Services (DHHS) 2018].

**Preterm Birth**

Preterm birth is defined as a birth prior to 37 weeks of gestation. The California Environmental Health Tracking Program (CEHTP)<sup>18</sup> Maternal and Infant Health Data Query's [2019b] preterm birth percentages for Kings County and California from 2005-2015 show that, as the preterm births have decreased, Kings County is getting closer to the state-wide average (Table 8, Figure 13) [CEHTP 2019b].

**TABLE 14 / FIGURE 14** Preterm Birth Percentages for Kings County and California from 2005-2015.

Year	Kings County	California
2005	9.9%	9.3%
2006	10.7%	9.2%
2007	10.6%	9.3%
2008	10.2%	8.9%
2009	10.8%	8.6%
2010	9.7%	8.3%
2011	8.8%	8.1%
2012	7.9%	8.0%
2013	7.2%	7.2%
2014	7.1%	6.9%
2015	7.6%	7.1%



<sup>18</sup> CEHTP is a collaboration of CDPH and the Public Health Institute and is funded by the Centers for Disease Control and Prevention. More information can be found at [www.cehtp.org/page/main](http://www.cehtp.org/page/main).

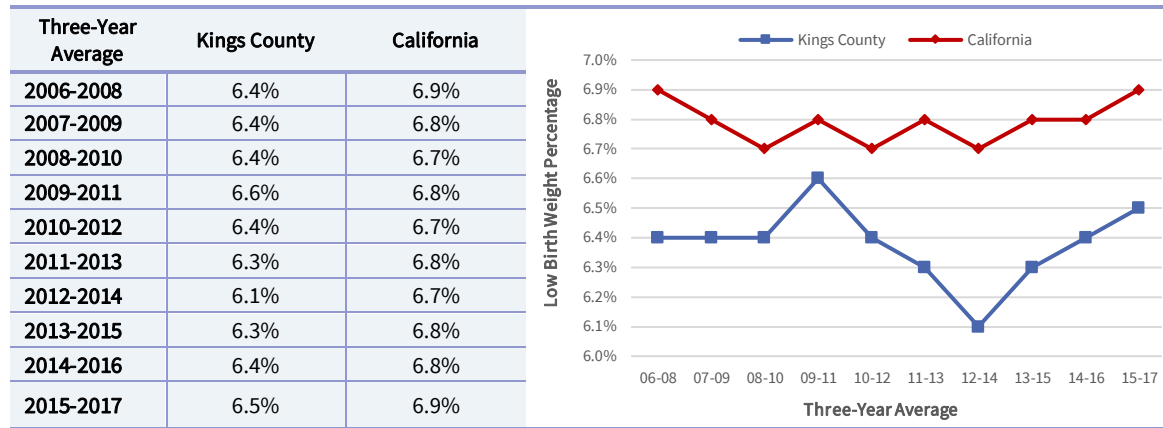


**Low Birth Weight**

As part of the “Investigation of Birth Defects and Community Exposures in Kettleman City” report, CDPH assessed the low birth weight rate for the census tract that includes Kettleman City from 2000-2006. CDPH modeled rates because the number of babies born in Kettleman City during this time was too small to compute rates conventionally. CDPH concluded that the rates were not different from the rates for Kings County or California during the same period.

Recent infant health data from CDPH’s County Health Status Profiles show that Kings County low birth weight percentages from 2006-2017 (three-year averages) were similar to California, with both remaining relatively consistent over time (Table 9, Figure 14) [CDPH 2010-2019].

**TABLE 15/FIGURE 15** Low Birth Weight Percentages in Kings County and California from 2006-2017 (Three-Year Averages).



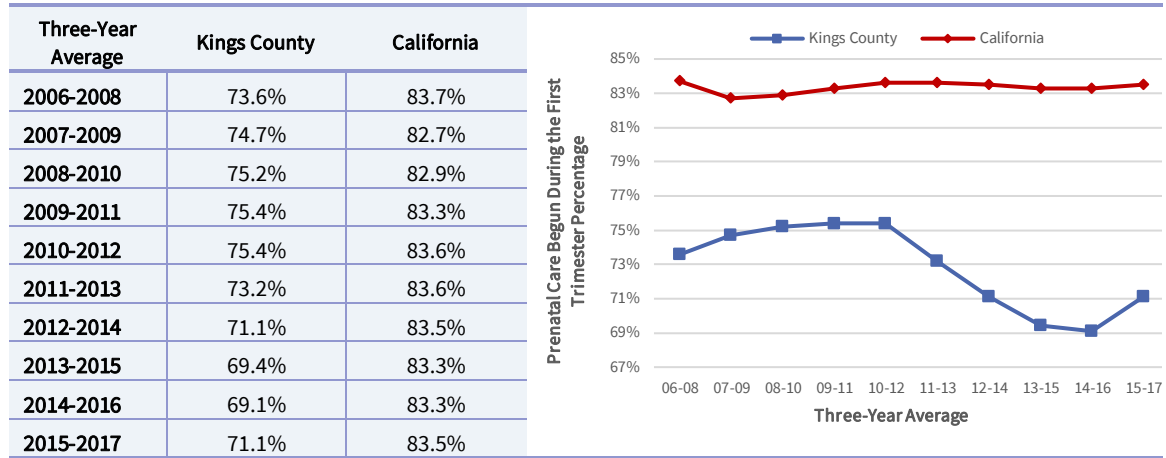
**Access to Prenatal Care**

CDPH’s County Health Status Profiles show that women in Kings County are receiving less prenatal care in the first trimester and less overall adequate prenatal care<sup>19</sup> than the state from 2006-2017 (three-year averages) (Tables 10 and 11, Figures 15 and 16) [CDPH 2010-2019]. Fewer women in Kings County received care over the past decade.

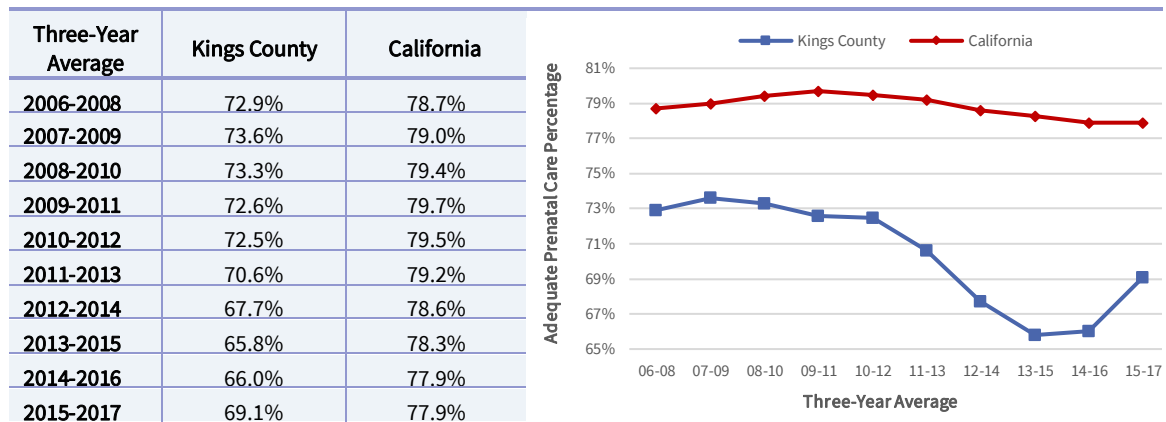
<sup>19</sup> Adequate prenatal care refers to care that began by the fourth month of pregnancy and received at least 80 percent of the recommended visits [CDPH 2018].



**TABLE 16 / FIGURE 16** Prenatal Care Begun During the First Trimester Percentages in Kings County and California from 2006-2017 (Three-Year Averages).



**TABLE 17 / FIGURE 17** Adequate Prenatal Care Percentages in Kings County and California from 2006-2017 (Three-Year Averages).



**Birth Defects**

The report “Investigation of Birth Defects and Community Exposures in Kettleman City, CA” evaluated the number of infants born with birth defects to Kettleman City residents from 2007 through March 31, 2010 and concluded that this number was higher than expected based on the historical pattern. Eleven children whose mothers lived in Kettleman City for part or all of their pregnancies were born with birth defects during this time. CDPH determined that three of the children born during this time died during the first year of life [CalEPA and CDPH 2010]. Additional discussion on the investigation is provided in Section 6.6.2.

The California Birth Defects Monitoring Program (CBDMP) provided U.S. EPA updated birth defects data<sup>20</sup> for Kings County and the five-county area of Fresno, Kern, Kings, Madera, and Tulare counties. Table 12 includes CBDMP registry data collected on infants born with birth

<sup>20</sup> CBMP data collection staff review medical records at hospitals, genetic offices and certain laboratories and collect data on all live births and pregnancy losses with eligible birth defects [B. Warmerdam, personal communication, August 23, 2019].





defects from 1988-2016 (two-year averages). The types of birth defects include select chromosomal defects (trisomy 13, trisomy 18 and Down syndrome); orofacial defects; heart defects; neural tube defects; and specific eye, ear, gastrointestinal, genitourinary, and musculoskeletal defects [CBDMP 2019].

According to CBDMP’s analysis, the overall rate of these specific birth defects in the five-county area has remained relatively stable over the span of twenty-nine years (1988-2016). Kings County birth defect rates have also remained stable with the exception of the increase seen in years 2008-2009 [CBDMP 2019]. CBDMP stated the 2008-2009 increase was not statistically significant when compared to years 2006-2007 and 2010-2011 in Kings County [CBDMP 2019]. According to CBDMP, birth defect rates in Kings County appear to have since returned to rates seen before 2008-2009 [CBDMP 2019]. CBDMP continues to monitor birth defects in the five-county area and to expedite the review of all possible cases of birth defects in Kings County [CBDMP 2019].

**TABLE 18** Two-Year Rates of Birth Defects (Cases Per 100 Live Births) in Kings County and the Five-County Area.

Two-Year Average	Cases per 100 Live Births	
	Kings County	Five-County Area*
1988-1989	1.00	1.02
1990-1991	0.85	0.92
1992-1993	0.80	0.91
1994-1995	0.90	0.99
1996-1997	0.97	0.87
1998-1999	0.98	0.96
2000-2001	0.92	0.91
2002-2003	1.20	0.86
2004-2005	1.02	1.03
2006-2007	1.01	1.03
2008-2009	1.61	1.02
2010-2011	1.16	0.97
2012-2013	1.12	0.95
2014-2015	0.87	0.98
2016**	1.16	0.97

\*Fresno, Kern, Kings, Madera, and Tulare  
\*\*One-year rate

### 3.4.3 Cancer

Several factors can influence the development of cancer, including genetics, health behavior, diet, physical or biological agents, and certain chronic environmental exposures. In response to community concerns about potential elevated cancer rates, the California Cancer Registry (CCR) conducted an evaluation<sup>21</sup> of cancer occurrence in the Kettleman City area as part of the

<sup>21</sup> The report, “An Evaluation of the Pattern of Cancer Occurrence in the Vicinity of Kettleman City, California,” can be found in Part 1.B. of the “Investigation of Birth Defects and Community Exposures in Kettleman City, CA.”



“Investigation of Birth Defects and Community Exposures in Kettleman City, CA” report [CalEPA and CDPH 2010].

In its report, CCR evaluated cancer incidence rates<sup>22</sup> from 1996-2008 for the census tract that includes Kettleman City. CCR looked at 30 different types of cancer, including urinary bladder, liver, lung, breast, prostate, and acute lymphocytic leukemia, to determine if the occurrence of cancer in Kettleman City’s census tract is relatively high or low compared to the state [CalEPA and CDPH 2010]. CCR also calculated rates for specific types of cancer that have been associated with arsenic and PCBs, which include urinary bladder, liver, and lung cancers. The results from the study revealed no unusual patterns of any type of cancer occurrence in the census tract [CalEPA and CDPH 2010].

For updated cancer incidence rates, U.S. EPA used the CCR data query<sup>23</sup> and used data from 1996 to the most recently published data in 2015. This data is for Kings County while the information from CCR’s 2010 evaluation was calculated for the census tract that includes Kettleman City. Figure 17 indicates a decreasing cancer incidence trend across time for both Kings County and California [CCR 2019].

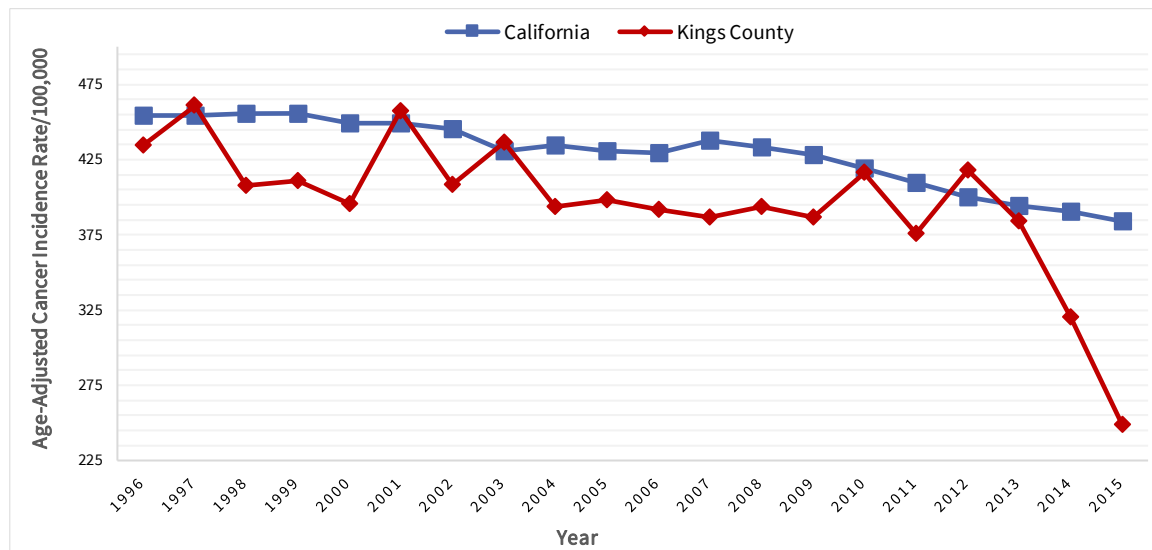


FIGURE 18 California and Kings County Cancer Incidence Rates from 1996-2015.

### 3.4.4 Asthma

Exposures to ground-level ozone and particulate matter pollution are associated with irritation of the respiratory system, including aggravation of asthma. Exposure to particulate matter pollution has also been linked to an increase in asthma-related hospital admissions and

<sup>22</sup> The National Cancer Institute defines a cancer incidence rate as the number of new cancers of a specific site/type occurring in a specified population during a year, usually expressed as the number of cancers per 100,000 population at risk. More information can be found at [www.seer.cancer.gov/statistics/types/incidence.html](http://www.seer.cancer.gov/statistics/types/incidence.html).

<sup>23</sup> The data query is available at [www.cancer-rates.info/ca/](http://www.cancer-rates.info/ca/).



emergency department visits [U.S. EPA 2019]. Children and older adults are among the most susceptible populations to ground-level ozone and particulate matter pollution.

As part of CDPH and CalEPA’s report “Investigation of Birth Defects and Community Exposures in Kettleman City, CA,” CDPH assessed the burden of asthma in Kettleman City and Kings County by examining the number of asthma-related hospital emergency department visits and the number of hospitalizations [CalEPA and CDPH 2010]. From 2005-2007, the rate of asthma-related emergency department visits was 35.7 visits per 10,000 residents in Kettleman City. This rate was lower than the rates estimated for Kings County and California, which were 61.5 and 43.6 visits per 10,000 residents, respectively. From 2006-2008, there were no asthma hospitalizations in Kettleman City, which was lower than the rates estimated for Kings County and California, which were 8.9 and 9.1 visits per 10,000 residents, respectively.

The following tables and figures present more recent asthma data for Kings County and California for three age categories: zero to four (0-4) years old, 65 years old and over, and all ages [CEHTP 2019a]. Table 13 and Figure 14 show age-adjusted hospitalization rates due to asthma per 10,000 residents from 2006-2016. Between 2009 and 2015, Kings County exceeded the state average for all three age categories. The Kings County rate for 65 years and older was nearly twice as high as the state from 2011-2013. The data shows an overall decrease of asthma-related hospitalizations for all three age categories in California.

Table 14 and Figure 15 show age-adjusted asthma-related emergency department visit rates per 10,000 residents from 2006-2016 [CEHTP 2019]. Kings County rates were higher for almost every year for all three age categories. The Kings County zero to four (0-4) asthma-related emergency department visit rate was twice as high as the state from 2008-2012. All ages and 65 years old and over were also approximately twice as high as the state from 2012-2013.

**TABLE 19** Age-Adjusted Hospitalization Rates Due to Asthma in Kings County and California from 2006-2016.

Year	Hospitalizations per 10,000 People					
	Kings County			California		
	0-4	65+	All Ages	0-4	65+	All Ages
2006	24.1	20.5	8.9	25.4	20.7	9.4
2007	24.3	23.8	8.5	23.9	20.3	9.0
2008	26.3	19.4	9.0	23.2	22.8	9.5
2009	35.8	31.1	11.3	24.6	22.0	10.0
2010	41.2	29.8	13.1	24.2	21.4	9.5
2011	27.8	38.2	15.2	21.9	20.0	8.8
2012	36.9	42.3	15.8	22.0	18.0	8.6
2013	21.4	42.6	12.4	20.6	18.0	8.1
2014	22.1	27.1	12.1	19.5	15.2	7.6
2015	20.2	30.1	10.1	18.2	14.1	7.0
2016	10.1	N/A	4.0	16.9	4.6	4.8



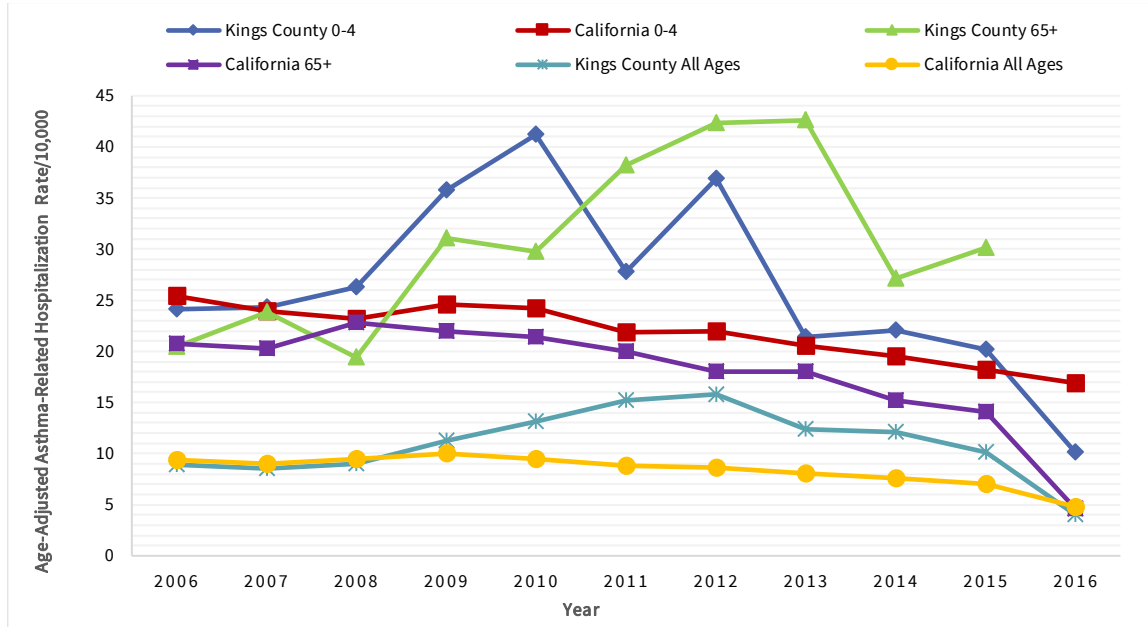
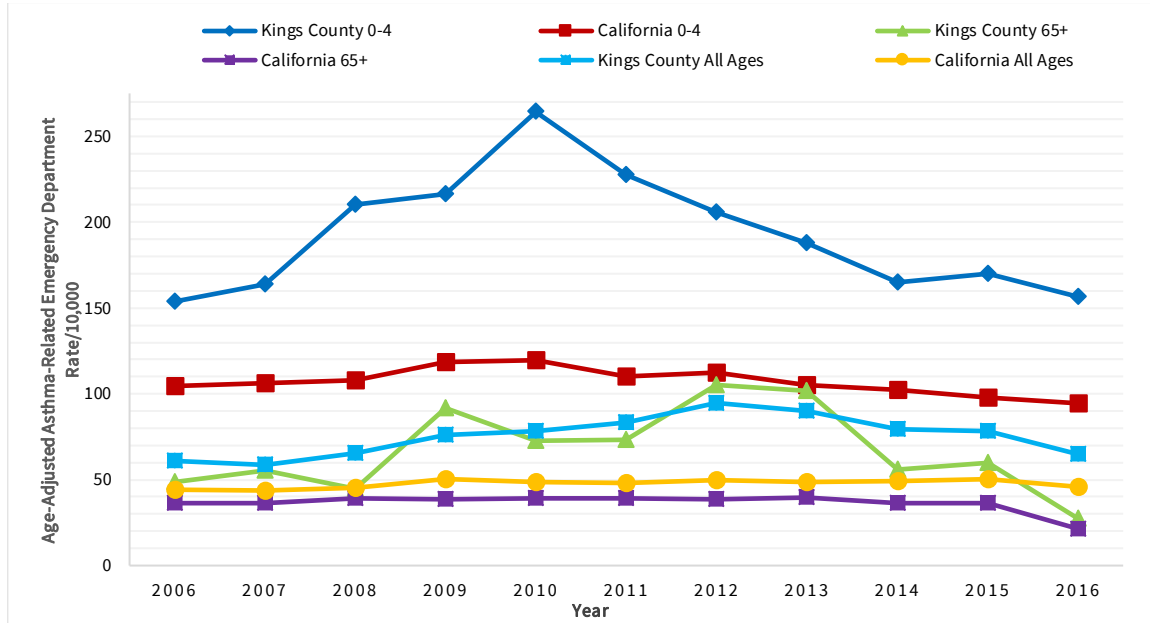


FIGURE 19 Age-Adjusted Hospitalization Rates Due to Asthma in Kings County and California from 2006-2016.

TABLE 20 Age-Adjusted Emergency Department Visit Rates Due to Asthma in Kings County and California from 2006-2016.

Year	Emergency Department Visits per 10,000 People					
	Kings County			California		
	0-4	65+	All Ages	0-4	65+	All Ages
2006	153.8	48.7	61.0	104.4	36.2	44.0
2007	163.8	55.2	58.6	106.4	36.2	43.7
2008	210.5	44.7	65.4	107.8	39.2	45.4
2009	216.4	91.8	75.9	118.3	38.4	50.4
2010	264.2	72.7	78.5	119.6	39.0	48.6
2011	227.5	73.2	83.5	110.0	39.2	48.0
2012	205.8	105.2	94.7	112.4	38.5	49.7
2013	187.9	101.9	90.1	104.9	39.6	48.9
2014	164.8	56.0	79.2	102.5	36.1	49.3
2015	170.1	59.8	78.4	98.1	36.3	50.3
2016	156.8	27.4	64.8	94.5	21.4	45.6





**FIGURE 20** Age-Adjusted Emergency Department Visit Rates Due to Asthma in Kings County and California from 2006-2016.

CalEnviroScreen relies on asthma emergency department data as the best available way of describing differences in asthma across the state at the census tract scale [CalEPA2018]. CalEnviroScreen identifies that emergency department visits for asthma for the census tract that includes Kettleman City are higher than 73 percent of all census tracts in California (for available data from 2011-2013) [CalEPA 2019].

### 3.4.5 Access to Healthcare

Limited access to health care can inhibit a community’s ability to prevent, withstand, or recover from environmental impacts [U.S. EPA 2016]. Kettleman City is located in a Health Professional Shortage Area (HPSA), which is defined by the federal Health Resources and Services Administration (HRSA) to mean there are health care provider shortages which may be geographic, population, or facility-based [HRSA 2018a].<sup>24</sup> Specifically, Kettleman City is in a High Needs Geographic HPSA for primary care and mental health. Kettleman City is also considered to be a Medically Underserved Area/Population, which is defined by HRSA to mean it is a geographic area and/or population with a lack of access to primary care services [HRSA 2018b].<sup>25</sup>

According to the U.S Census Bureau 2013-2017 ACS, approximately 90 percent of Kings County residents and 87 percent of Kettleman City residents have health insurance [U.S. Census Bureau 2019].

<sup>24</sup> More information can be found at: [www.bhw.hrsa.gov/shortage-designation/hpsas](http://www.bhw.hrsa.gov/shortage-designation/hpsas).

<sup>25</sup> More information can be found at: [www.bhw.hrsa.gov/shortage-designation/muap](http://www.bhw.hrsa.gov/shortage-designation/muap).



## 4 Facility Information

### 4.1 Facility Location and Description

KHF is a commercial hazardous waste treatment, storage, and disposal facility located in Kings County, California, southwest of the I-5 and SR-41 intersection, approximately 3.5 miles southwest of Kettleman City, and 6.5 miles southeast of Avenal (see Figures 2 and 3 in Section 3.1). The Facility owns and occupies approximately 1,600 acres of property, of which 695.5 acres are permitted by Kings County for the management of federal and state-listed hazardous wastes<sup>26</sup> and municipal solid and designated wastes. Of the 695.5 acres, 555 acres are within the fenced operational area (see Figure 1 in Section 2.1).

The Facility is located on the southwestern edge of the Kettleman Hills, an area that has been used for natural gas and oil exploration and extraction and grazing. The Facility is surrounded by general agriculture and grazing lands for several miles in all directions, with some oil and gas exploration operations. The closest non-agricultural areas and the nearest group of permanent residents are located in Kettleman City (see Section 3.1).

### 4.2 Facility History

KHF has been used to dispose of hazardous waste since 1975. CWM purchased and began operating the Facility in 1979. At that time, Kings County and California authorized it to manage and dispose of hazardous waste on 211 acres. It was subsequently permitted in 1993 and 2003 by DTSC to manage and dispose of RCRA and state-only hazardous waste.

CWM received its initial permit from U.S. EPA in 1981 to dispose of nonliquid PCB waste in Landfill B-14. It then received permits to dispose of nonliquid PCB waste in Landfill B-16 in 1983, Landfill B-19 in 1988, and Landfill B-18 (Phase I and Phase II) in 1992. Landfills B-14, B-16, and B-19 are now closed and no longer accept PCB wastes.<sup>27</sup> The only remaining active landfill permitted by U.S. EPA to accept PCB waste is Landfill B-18 Phase I and Phase II. KHF continues to operate under the permits issued in 1988 (amended in 1990 to include the storage of PCB waste at the PCB F/SU) and 1992. Although these permits expired in 1997 and 1998, respectively, they have been extended because CWM has submitted timely TSCA permit applications.<sup>28</sup>

Over time, CWM has submitted a number of application updates as well as additional information that U.S. EPA has requested. U.S. EPA received the most recent revised application on October 2, 2018. U.S. EPA has reviewed the 2018 permit application, which covers both storage units and the landfills, to determine whether to issue or deny a TSCA permit to CWM. A timeline of these selected KHF permitting actions can be found in Table 15.

<sup>26</sup> The Facility accepts most types of hazardous waste, including PCBs, but does not accept forbidden explosives, compressed gas cylinders (excluding aerosol cans), most radioactive waste, and biological agents or infectious wastes.

<sup>27</sup> A closed landfill is capped with an engineered cover that limits water infiltration. The cap is inspected and regularly maintained. Leachate from the landfill and groundwater under the landfill are also regularly monitored.

<sup>28</sup> The Administrative Procedures Act provides for permits to be administratively extended if the permittee submits a timely permit renewal application.



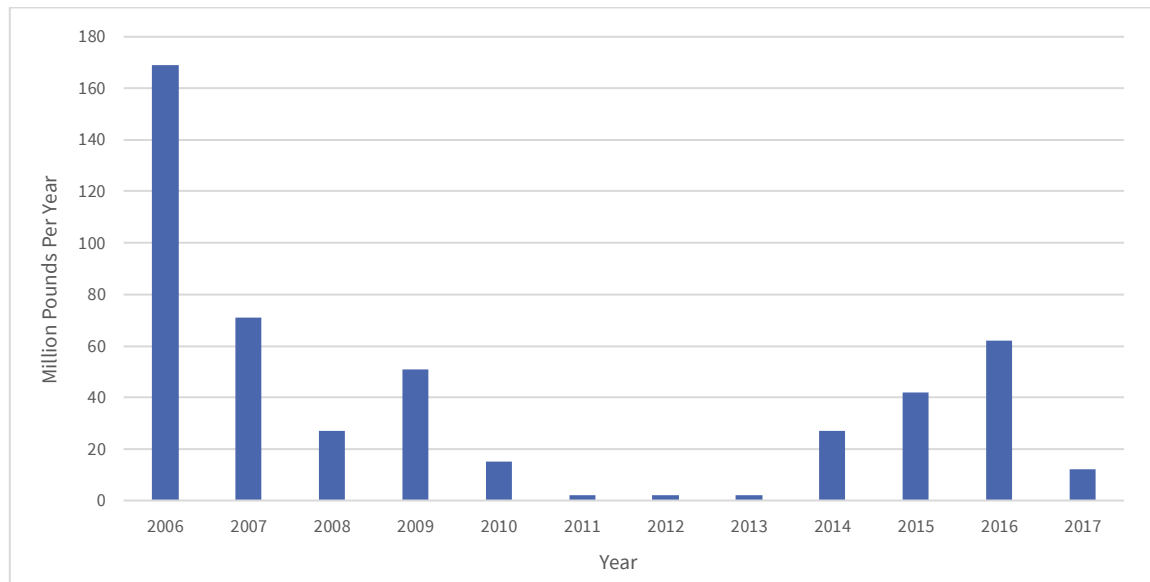
**TABLE 21** Timeline of Selected KHF Permitting Actions.

Year	Event
<b>1960-1975</b>	McKay Trucking Company uses site for the disposal of municipal sewage.
<b>1975</b>	Kings County issues a Conditional Use Permit to the McKay Trucking Company for disposal of oilfield wastes on 60 acres.
<b>1977</b>	Kings County revises the Conditional Use Permit to the McKay Trucking Company to include evaporation ponds and land disposal of industrial wastes.
<b>1978</b>	The California Department of Health Services issues a Hazardous Waste Permit to the McKay Trucking Company allowing it to accept more types of hazardous waste; McKay Trucking changes its name to Environmental Disposal Services, Inc. Also, RWQCB issues a waste discharge requirements order reclassifying the site as a Class I disposal site.
<b>1979</b>	Kings County issues a Conditional Use Permit to Environmental Disposal Services, Inc. to operate a Class I (Hazardous Waste) treatment and disposal facility on 211 acres; CWM purchases KHF from Environmental Disposal Services, Inc.
<b>1980</b>	CWM submits a Part A RCRA Application and obtains interim status under RCRA.
<b>1981</b>	U.S. EPA issues a TSCA permit allowing disposal of nonliquid PCB waste in Landfill B-14.
<b>1982</b>	The California Department of Health Services issues a Hazardous Waste Permit to CWM allowing it to operate KHF as a Class I disposal site (modified 1983).
<b>1983</b>	U.S. EPA issues a TSCA permit allowing disposal of nonliquid PCB waste in Landfill B-16.
<b>1985</b>	Kings County issues a Conditional Use Permit to include Landfills B-17, B-18 (Phase I and Phase II), and B-19 allowing hazardous waste operations on 499 acres.
<b>1987</b>	RWQCB issues waste discharge requirements.
<b>1988</b>	The California Department of Health Services and U.S. EPA issue a RCRA hazardous waste permit to CWM (permits were revised in 1989 and 1991); U.S. EPA issues TSCA permit allowing disposal of nonliquid PCB waste in Landfills B-16 and B-19.
<b>1990</b>	U.S. EPA issues modification to the 1988 TSCA permit to include the PCB storage facility and prohibit disposal of PCB waste in Landfill B-14.
<b>1992</b>	U.S. EPA issues TSCA permit allowing disposal of nonliquid PCB waste in Landfill B-18 Phase I and Phase II. Disposal in Phase II is allowed only after approval of the construction quality assurance document for Phase II (approved in 1993).
<b>1993</b>	DTSC (the successor organization for the California Department of Health Services for hazardous waste permitting) renews 1988 RCRA permit.
<b>1997</b>	CWM applies to U.S. EPA to renew its TSCA permits for Landfill B-18 Phase I and Phase II and PCB storage unit. (A timely application administratively extends the existing permit conditions.) Kings County modifies Conditional Use Permit to include municipal solid waste operations at Landfill B-19.
<b>2003</b>	DTSC issues a ten-year hazardous waste RCRA permit renewal for KHF; CWM requests U.S. EPA to grant a TSCA Coordinated Approval.
<b>2007</b>	U.S. EPA proposes a TSCA Coordinated Approval covering Landfill B-18 Phase I and Phase II and PCB storage unit. (A Coordinated Approval recognizes the state RCRA permit as the primary TSCA approval document.) U.S. EPA holds a public meeting and hearing on proposed Coordinated Approval.
<b>2008</b>	CWM submits a RCRA permit modification request to DTSC to expand the Landfill B-18 for RCRA waste; U.S. EPA requests CWM carry out the PCB Congeners Study (see Section 6.1.1).
<b>2009</b>	CWM submits an application to U.S. EPA to expand Landfill B-18 for PCB waste; Kings County modifies Conditional Use Permit to include Landfills B-18 Phase III and B-20 allowing hazardous waste operations on 696 acres.
<b>2011</b>	U.S. EPA informs CWM that U.S. EPA would not be doing a Coordinated Approval with DTSC.
<b>2013</b>	CWM submits RCRA permit renewal application.
<b>2014</b>	DTSC approves RCRA permit modification allowing construction and operation of Landfill B-18 Phase III; RWQCB issues revised waste discharge requirements order to include approval of Landfill B-18 Phase III.
<b>2017-2018</b>	CWM submits revised permit renewal applications to U.S. EPA and DTSC for TSCA and RCRA, respectively.



#### 4.2.1 KHF PCB Operations

Most PCB waste received at KHF is soil, concrete, and other types of debris from cleanup sites contaminated with PCBs. Other types of PCB waste received are building debris with PCB-containing material such as caulk and paint, electrical equipment such as transformers and capacitors which contain PCB liquids, fluorescent light ballasts, and liquids containing PCBs (e.g., liquids generated during the decontamination of PCB items) [CWM 2007, 2008a, 2009a, 2010-2011, 2012a, 2013-2017, 2018a]. The annual amount of PCB waste received at KHF has varied greatly. See Figure 20 for the amount of PCB waste received at KHF from 2006-2017 [CWM 2007, 2008a, 2009a, 2010-2011, 2012a, 2013-2017, 2018a].



**FIGURE 21** PCB Waste Received at the Facility from 2006-2017.

Prior to any PCB waste being shipped, KHF works with the generator to make sure that the waste can be managed at the Facility under its permits. All PCB waste received at KHF is accompanied by a hazardous waste manifest. Once received at KHF, the waste is visually inspected to ensure the manifest information is correct. Differences between the waste and the manifest are resolved prior to its acceptance for storage or disposal. If the differences cannot be resolved, the waste is rejected and sent back to the generator. More information on KHF's procedures for accepting PCB and hazardous waste is provided in the Facility's Waste Analysis Plan.<sup>29</sup>

Once accepted, electrical equipment and small containers are sent to the PCB F/SU for storage draining and/or flushing. The PCB F/SU is a 35-foot by 65-foot enclosed building with a similarly-sized outside containment area. Both areas have a continuous sealed concrete floor and curb with no openings where liquids can escape.

<sup>29</sup> This Waste Analysis Plan can be found in Chapter 12 of the *Hazardous Waste Facility Permit Renewal Application, Operation Plan*, CWM KHF Revision 3, March 16, 2018.





The proposed permit will allow temporary storage in the outside containment area and bulking (combining into larger storage containers), repackaging, and solidification of incidental liquid operations at the PCB F/SU in addition to the currently-permitted draining and flushing operations and storage in the enclosed building. The proposed permit limits the amount as well as the length of time that PCB waste can be stored there to one year from removal from service for the enclosed building and 30 days from removal from service for the outside containment area.

Most liquid PCB waste, including any PCB liquids removed from electrical equipment, is sent to a U.S. EPA-approved TSCA incinerator for final disposal.<sup>30</sup> Currently, KHF sends its liquid PCB waste to an incinerator in Texas. Drained and, if required, flushed electrical equipment and containers are sent to the Landfill B-18 for disposal.

PCB waste that does not contain liquids is sent to Landfill B-18 for disposal. Landfill B-18 is the only unit where PCB waste disposal occurs at KHF. Landfill B-18 is 67 acres in area and has a maximum total capacity of 15.6 million cubic yards. It was constructed in three phases. Currently, only Phase I and Phase II, with a total area of 53 acres and a capacity of 10.7 million cubic yards, are approved by U.S. EPA for disposal of nonliquid PCB waste.<sup>31</sup> The proposed permit allows disposal of most types of nonliquid PCB waste in Phase III. Landfill B-18 is constructed with primary and secondary liner systems, primary, secondary, and vadose zone leachate collection and removal systems, stormwater collection and holding facilities, and a groundwater monitoring system.

KHF's recordkeeping system tracks all PCB waste at the Facility. In addition, KHF is required to record the physical location on a three-dimensional grid of all PCB waste disposed of in Landfill B-18. It must also regularly inspect all aspects of the Facility and provide an annual report to U.S. EPA on its PCB waste storage and disposal activities.

#### 4.2.2 Potential Mechanisms for PCB Releases from KHF

For the Facility, potential mechanisms for PCB releases are air emissions or contamination of water. Air dispersion of PCBs can occur from volatilization (evaporation) of PCB liquids from open containers, from spills and leaks, and from the surface of the landfill. It can also occur if PCB-containing soils become airborne during storage, treatment or disposal operations or during high winds. Water contamination can occur if stormwater contacts PCB waste and is not properly managed onsite and if leaks from the PCB landfills impact groundwater.

Leaks from the PCB F/SU (even without stormwater) can occur if the containment area is not maintained properly and the Facility has a spill of PCB oils that leach down. U.S. EPA's

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<sup>30</sup> For all liquid PCB waste, Condition IV.C.3. of the proposed permit requires disposal by methods allowed by the federal PCB regulations.

<sup>31</sup> As discussed in Section 2.2.1, certain types of PCB waste may be disposed of in a RCRA-only approved landfill. Currently CWM is allowed to dispose of certain PCB wastes, mainly PCB remediation waste from sites with U.S. EPA-approved PCB cleanup plans, in Landfill B-18 Phase III under the PCB regulations and its state RCRA permit.



proposed permit addresses this potential route of exposure by proposed condition V.H.4. that requires maintenance of the containment areas without cracks, gaps or other openings.

#### 4.2.3 Monitoring Requirements

KHF has ambient air and groundwater environmental monitoring programs that can detect releases of PCBs from the Facility. These programs were designed in conjunction with DTSC and RWQCB to provide the information needed to protect human health and the environment. In addition to these environmental monitoring programs, KHF has a comprehensive facility inspection program that requires daily, weekly, and monthly checks of all aspects of the Facility's operations, a stormwater management plan and infrastructure, and quarterly tests of surfaces in the PCB F/SU for PCB contamination.

##### Ambient Air Monitoring Program

The Facility's Ambient Air Monitoring Program (AAMP) measures PCBs, volatile organic compounds (VOCs), carbonyls, pesticides, metals, and PM<sub>10</sub> in order to evaluate the risk to human health from Facility emissions. The program includes four monitoring stations<sup>32</sup> near the Facility property line: one upwind, two southeast of Landfill B-18, and one between the Facility and Kettleman City. Ambient air samples are collected for a 24-hour period every 12-days at all four stations for PCBs, VOCs, carbonyls, pesticides, metals, and PM<sub>10</sub>.<sup>33</sup> Since October 2016, month-long PCB/pesticide samples are collected once per quarter at all four monitoring locations. See the Site-Specific Ambient Air Monitoring Plan for more information [Wenck 2016a].

Regular reports on environmental monitoring results allows U.S. EPA to evaluate whether the Facility's permit continues to ensure that the operations of the Facility do not pose an unreasonable risk of injury to health and the environment or if revisions are necessary to prevent any unreasonable risk. CWM submits air monitoring reports quarterly and uses the data to complete an annual screening level risk assessment, which is submitted to DTSC in March each year. U.S. EPA and other state and local agencies are copied on the submittals. The air monitoring reports are also available to the public on the DTSC's EnviroStor website under "Site/Facility Docs" at [www.envirostor.dtsc.ca.gov/public/hwmp\\_profile\\_report.asp?global\\_id=CAT000646117&starttab](http://www.envirostor.dtsc.ca.gov/public/hwmp_profile_report.asp?global_id=CAT000646117&starttab).

##### Groundwater Monitoring

KHF has a current network of 41 groundwater wells monitoring both open and closed landfills and evaporative ponds. The TSCA (PCB) groundwater monitoring network is a subset of this larger groundwater monitoring system and has 23 wells monitoring the four TSCA landfills

<sup>32</sup> The AAMP regularly collected air measurements at three monitoring locations since 2006. The 2014 RCRA permit modification required installation of a fourth permanent station, which began operating in 2016. The additional location was located to assess releases of VOCs, semi-VOCs (including PCBs), metals and particulates that are emitted when the predominant wind direction is toward Kettleman City.

<sup>33</sup> From mid-April 2008 until early January 2011, PCB monitoring under the Facility's AAMP was discontinued with DTSC's approval because no PCBs above the detection limit had been identified in the 18 months of sampling prior to 2008 [Wenck 2010, p. 2-6.]. However, during this period air monitoring for PCBs was conducted throughout 2009 as part of the PCB Congeners Study [Wenck 2010, p. 3-5] and again between mid-June and September 2010 for the Kettleman City Air Quality Assessment [CARB 2010].



units. Under its current RCRA permit, KHF is required to tests all wells quarterly. Under the current RWQCB order, wells are required to be tested semiannually. Quarterly/semiannual testing is limited to the Detection Monitoring Parameters listed in MRP R5-2014-0003 Table 2 with testing for a more extensive list of constituents, including PCBs, every five years [RWQCB 2014]. Because PCBs have been rarely been detected in groundwater at the Facility, U.S. EPA proposes that groundwater wells for the operating landfill, Landfill B-18, be tested annually for PCBs and wells in the closed landfills be tested every 5 years for PCBs.

CWM submits quarterly groundwater monitoring reports to DTSC and semi-annual reports to RWQCB. U.S. EPA also receives these reports. The reports provide details on analytic results, trends, the groundwater flow rates and status of the corrective action areas. The groundwater monitoring reports are available to the public on the Water Board’s GeoTracker website under “Site Maps/Documents” at [geotracker.waterboards.ca.gov/profile\\_report?global\\_id=SLT5FZ064603](http://geotracker.waterboards.ca.gov/profile_report?global_id=SLT5FZ064603).

### **Facility Inspection Program**

CWM employees inspect KHF in regularly scheduled intervals (daily, weekly and monthly) in order to identify and prevent issues that could cause a release of hazardous waste or PCBs to the environment and/or threaten health and safety. These inspections cover all aspects of the Facility, including site security, environmental monitoring systems, surface water management, safety and emergency equipment, leachate systems, and all waste management units on site. These inspections are documented on inspection forms.<sup>34</sup> Completed inspection forms must be kept as part of the Facility’s operating record. These inspections will continue under the proposed permit. See RCRA Operation Plan, Chapter 31 “Inspection Program Plan.”

### **Leachate Collection, Removal, and Monitoring Requirements**

Leachate<sup>35</sup> is collected, removed, and monitored to protect a landfill’s liners, provide early detection of possible leaks from a landfill, and to protect groundwater under the landfill. The proposed permit requires the Facility to provide, maintain, and operate leachate collection and removal systems at the landfills. These requirements include regularly monitoring the liquid level in each leachate collection sump. It also requires the removal of leachate from each sump, as needed, to prevent liquid levels from exceeding a specified head or trigger level.

The proposed permit also requires annually testing leachate for PCBs, immediate reporting to U.S. EPA if any PCBs are detected, and submittal of an annual report on the results of the leachate testing.

### **Stormwater Management**

The Facility has a stormwater infrastructure capable of handling stormwater from “probable maximum precipitation” event of 10.3 inches in a 24-hour period. All stormwater run-on to each landfill is caught prior to contact with the waste and directed by surface drainage

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<sup>34</sup> These inspections forms are included in the Renewal Application and will be incorporated into any final permit (proposed permit, Appendix B-1.8). Any changes to these inspection forms must be pre-approved by U.S. EPA before they can be used by CWM (proposed permit Table 3).

<sup>35</sup> Leachate is any liquid that has percolated through or drained from a hazardous waste landfill.



channels to stormwater discharge basins on the Facility. Stormwater that collects in the landfill and contacts waste is collected and stored until disposal. A sample from the first collection of stormwater that contacted waste in Landfill B-18 after each storm event will be analyzed for PCBs. If PCBs are detected in a sample taken from the accumulated precipitation, CWM must notify U.S. EPA within 24 hours of reviewing the analytical report [CWM 2018d].

KHF maintains and implements a Stormwater Pollution Prevention Plan [Golder 2016]. U.S. EPA proposes to require compliance with this in its proposed permit and to incorporate this Plan into the permit.

#### Quarterly PCB Sampling Plan

Under the proposed permit, CWM must conduct random wipe sampling of the PCB F/SU each quarter. Once per year, it must use a third party to conduct the sampling. If PCB contamination is discovered, CWM must notify U.S. EPA and decontaminate the PCB F/SU. CWM is already conducting this wipe sampling.

#### 4.2.4 Other CWM Facilities

CWM's parent company, Waste Management, owns 15 non-hazardous waste management facilities and 22 transfer stations in U.S. EPA Region 9 (Arizona, California, and Nevada) [Waste Management 2018b]. KHF is the only PCB disposal facility that CWM owns in Region 9. CWM owns four hazardous waste landfill facilities outside Region 9, three of which have TSCA permits for disposal of PCB waste.

### 4.3 Facility Compliance History

U.S. EPA reviews a facility's compliance history as part of its permit decision-making process as to whether to grant a permit under TSCA. It does so for several reasons. First, under 40 C.F.R. § 761.65(d)(2)(vii), the environmental compliance history of the applicant, its principals, and its key employees may provide a sufficient basis for denial of a permit if the history of environmental civil violations or criminal convictions establishes, in U.S. EPA's judgement, the applicant's unwillingness or inability to comply with the regulations. Second, remedies to non-compliance, such as changes to operational procedures, may need to be incorporated into a permit. Finally, information developed through compliance monitoring, and the inspection reports they generate, increases familiarity with a facility, allowing for a better and more comprehensive permit.

KHF is inspected by U.S. EPA and a number of state and local agencies including DTSC, RWQCB, SJVAPCD, and Kings County. This Draft EJ Analysis focuses on U.S. EPA and DTSC's inspections and enforcement actions taken from 1992 to the present because these actions are most relevant to the proposed TSCA permit (Table 16).<sup>36</sup>

U.S. EPA found a number of violations of the PCB regulations during inspections at the Facility. CWM also self-disclosed some violations. U.S. EPA describes several of these violations in Section 4.3.1 as well as

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<sup>36</sup> U.S. EPA also reviewed the last five years of inspection reports by other agencies that inspect the Facility. Copies of these reports can be found in CWM's response to U.S. EPA's Notice of Deficiency [CWM 2018c].



RCRA violations that DTSC and U.S. EPA found Section 4.3.2. Each of these violations have been remedied and, in some cases, proposed permit conditions have been added to prevent reoccurrences.

U.S. EPA also reviewed the violations at the Facility that have resulted in the assessment of penalties during the past ten years. The Facility had penalties assessed for eleven violations during this period: two from DTSC, three from U.S. EPA, and six from the SJVAPCD.<sup>37</sup> U.S. EPA and DTSC enforcement actions are discussed in Sections 4.3.1 and 4.3.2.

Most of the inspections did not result in a finding of violations or other issues of concern. Based on U.S. EPA's review, U.S. EPA does not find that the compliance history of the Facility suggests a pattern or practice of noncompliance that demonstrates CWM's unwillingness or inability to comply with the regulations.

#### 4.3.1 TSCA Violations

In February 2004, CWM disclosed that it had failed to perform required monthly monitoring of lysimeters at one of four PCB disposal landfills from June 1996 to November 2003 [CWM 2004]. A consent agreement between U.S. EPA and CWM for these violations included a \$10,000 penalty and \$37,500 to purchase emergency response equipment for the Kings County Environmental Health Services Department [U.S. EPA 2005]. To ensure the Facility continues to monitor for leachate from operating and closed PCB landfills, the proposed permit includes weekly inspection of the leachate removal systems in Landfill B-18 and monthly inspections in closed Landfills B-14, B-16, and B-19. See proposed permit conditions VI.E.3.d. and e. and VII.B.3.b in Table 22 in Section 7 or the Statement of Basis.

In August 2005, U.S. EPA's National Enforcement Investigations Center (NEIC) conducted a TSCA investigation of the Facility (Phase 1 of its multi-media investigation) and found several areas of non-compliance, including improperly calibrating laboratory instruments analyzing PCBs [U.S. EPA 2006]. U.S. EPA issued a Notice of Noncompliance (NON), which required documentation of appropriate laboratory procedures [U.S. EPA 2007a; U.S. EPA 2007b]. CWM provided the required information [CWM 2008b]. Accordingly, U.S. EPA found that CWM had remedied the issues of noncompliance and did not assess a penalty [U.S. EPA 2010a].

In February and June 2010, U.S. EPA inspectors documented violations of the permit and TSCA PCB regulations, including:

- Failure to indicate removal from service date on PCB containers. PCB regulations require disposal of PCB waste within one year of its removal from service and the labeling of PCB items including containers with this date.
- Failure to properly complete manifests by not including removal from service dates or weights on some manifests.
- Continued use of a PCB-contaminated building. PCB regulations prohibit the continued use of items and structures that are contaminated with PCBs unless they are first appropriately decontaminated.

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<sup>37</sup> Most of the air violations are related to operations of the Facility's flare. This flare controls gases from the municipal solid waste landfills and is not part of the Facility's hazardous or PCB waste operations. See Renewal Application, Table 6.



- Improper disposal of PCBs. High-levels of PCBs were found in the building and in the soil around the PCB F/SU that were the result of leaks and spills, both of which are considered disposal. [U.S. EPA 2010b, U.S. EPA 2010c].

To settle these violations, CWM was required to clean up the contamination around the PCB F/SU and to pay a penalty of over \$300,000 [U.S. EPA 2010d, U.S. EPA 2010e]. DTSC also took enforcement action against CWM for PCB releases around the PCB F/SU and required the Facility to take corrective action [DTSC 2011]. The final corrective action remedy included construction of the outside containment area at the PCB F/SU with a sealed concrete floor and curb to prevent releases to soil around the PCB F/SU [ADE 2011].

In May 2012, CWM self-reported that it failed to test leachate from Landfill B-18 prior to its disposal, as required by conditions in its 1992 permit [CWM 2012b]. Subsequent testing of the remaining leachate, however, did not detect the presence of PCBs. CWM paid a penalty of \$9,750 [U.S. EPA 2012].

U.S. EPA most recently inspected KHF in 2017 and found no violations [U.S. EPA 2017].

#### 4.3.2 RCRA Violations

In December 2005, NEIC conducted a follow-up RCRA/TSCA investigation (Phase 2 of its multi-media investigation). The focus of this investigation was on CWM's testing and sampling methodologies and protocols. In its report of the 2005 investigation, NEIC documented problems with CWM's hazardous waste sampling, laboratory, and testing protocols that indicated that CWM may have improperly disposed of hazardous wastes that did not meet RCRA treatment standards [U.S. EPA 2007a].

In February 2010, U.S. EPA and DTSC jointly conducted an inspection of KHF and U.S. EPA found the following violations [U.S. EPA 2011a]:

- Failure to determine whether waste meets the hazardous waste Land Disposal Treatment Standards prior to land disposal. Specifically, the Facility generated leachate from its hazardous waste landfill and surface impoundments and did not thoroughly evaluate whether the waste met treatment standards before land disposal.
- Impermissible land disposal of prohibited hazardous waste. The Facility reported instances where it excavated hazardous waste that was land disposed without proper treatment. In addition, U.S. EPA review of laboratory analysis found instances where the Facility disposed of hazardous waste that did not fully meet treatment standards.
- Failure to comply with the Hazardous Waste Permit – non-compliance with U.S. EPA Method Lab Methods (Test Method 6010B). Both the Facility's RCRA permit and California and federal RCRA regulations require that the Facility comply with a particular laboratory method for analysis of hazardous waste. During review of laboratory records, U.S. EPA found that the Facility did not follow specific laboratory quality control requirements.



- Failure to comply with container requirements for several universal waste fluorescent lamps stored in the drum storage unit.

In August 2011, U.S. EPA and CWM reached a \$1 million settlement for the 2010 violations [U.S. EPA 2011b]. The settlement required CWM to pay a \$400,000 penalty and spend an estimated \$600,000 to make physical and operational improvements at the Facility. The compliance activities included:

- Continued use of an outside laboratory for post-treatment metals analysis for a minimum of two years until an independent audit demonstrates that the Facility can produce reliable results.
- Replacement of lab equipment.
- Installation of new laboratory software.
- Annual characterization of landfill leachate.
- Covering and elimination of stormwater from entering the leachate tanks.
- Modification of cyanide treatment procedures.
- Sampling of liquids and sludge from onsite surface impoundment P-16.

In March 2013, DTSC penalized CWM over \$290,000 for failure to report 72 hazardous waste spills at the Facility over a four-year period (from June 2008 to 2012) [DTSC 2013]. The penalty also addressed violations identified during DTSC's April 2012 inspection. DTSC reviewed these spills, including the size, location, offsite consequences, clean-up response, and causes of these spills. Of the 72 spills, the largest spill was estimated at five to eight gallons and 13 spills were less than a pint. The largest number of spills involved non-RCRA hazardous waste between a quart and a gallon. Most of these spills (60 out of 72) occurred at the sampling platforms and untarping racks, where the Facility samples incoming loads for analysis [DTSC 2012].

DTSC required CWM to construct a containment system at the sampling platforms and untarping racks to isolate any spills of hazardous waste from contact with the ground [DTSC 2003]. Construction of the containment system was completed in 2016 [Golder 2017].



**TABLE 22** KHF RCRA/TSCA Inspections from 1992 to Present.

Date	Type of Inspection	Agency	Findings
05/07/1992	Financial Record Review	DTSC	No violations.
05/12/1992	Compliance Evaluation Inspection	DTSC	RCRA violations: \$65,000 penalty. Return to compliance 06/25/1992.
05/14/1992	Compliance Evaluation Inspection	U.S. EPA	No violations.
08/15/1992	Operations and Maintenance Inspection	DTSC	No violations.
09/18/1992	Follow-up Inspection (to 05/12/1992 Inspection)	DTSC	RCRA violations: \$65,000 penalty. Return to compliance 08/08/1993.
11/03/1992	Compliance Evaluation Inspection	DTSC	RCRA violations: one 55-gallon container and 2 bags of PCB waste not labeled. Two containers of incompatible waste stored next to each other. Penalty of \$1,100. Return to compliance 01/21/1993.
11/12/1992	Financial Record Review	DTSC	No violations.
03/27/1993	Operation and Maintenance Inspection	DTSC	No violations.
04/23/1993	Compliance Evaluation Inspection	U.S. EPA	RCRA violations: related to land disposal restrictions and container management. Return to compliance 12/14/1993.
11/01/1993	Compliance Evaluation Inspection	DTSC	No violations.
12/08/1993	TCA PCB Inspection	U.S. EPA	No violations.
04/05/1994	Compliance Evaluation Inspection	U.S. EPA	RCRA violations: related to land disposal restrictions and container management. Return to compliance 10/05/1994.
11/07/1994	Compliance Evaluation Inspection	DTSC	No violations.
05/03/1995	Compliance Evaluation Inspection	U.S. EPA	RCRA violations. Return to compliance 10/13/1995.
05/15/1995	Operation and Maintenance Inspection	DTSC	No violations.
08/31/1995	TSCA PCB Inspection	DTSC (as grantee to U.S. EPA)	No violations.
11/07/1995	Compliance Evaluation Inspection	DTSC	RCRA violations. Return to compliance 11/17/1995.
04/15/1996	Operation and Maintenance Inspection	DTSC	RCRA violations: related to groundwater monitoring. Return to compliance 07/19/1996.
10/18/1996	Financial Record Review	DTSC	No violations.
11/19/1996	Compliance Evaluation Inspection	DTSC	No violations.
02/12/1997	Compliance Evaluation Inspection	DTSC	No violations.
03/31/1997	Compliance Evaluation Inspection	DTSC	No violations.
04/01/1997	Compliance Evaluation Inspection	DTSC	No violations.
04/08/1997	TSCA PCB Inspection	DTSC (as grantee to U.S. EPA)	No violations.
05/12/1997	Compliance Evaluation Inspection	DTSC	No violations.
06/23/1997	Compliance Evaluation Inspection	DTSC	No violations.
10/03/1997	Compliance Evaluation Inspection	DTSC	No violations.
10/22/1997	Compliance Evaluation Inspection	DTSC	No violations.
11/19/1997	Compliance Evaluation Inspection	DTSC	No violations.
12/03/1997	Compliance Evaluation Inspection	DTSC	No violations.
02/23/1998	Compliance Evaluation Inspection	DTSC	No violations.
04/13/1998	Compliance Evaluation Inspection	DTSC	No violations.
05/12/1998	Compliance Evaluation Inspection	DTSC	No violations.
06/18/1998	Compliance Evaluation Inspection	DTSC	No violations.
07/21/1998	Compliance Evaluation Inspection	DTSC	No violations.
08/27/1998	Compliance Evaluation Inspection	DTSC	No violations.





Date	Type of Inspection	Agency	Findings
10/06/1998	Compliance Evaluation Inspection	DTSC	RCRA violation: emergency shower not operational. Return to compliance 10/09/1998.
10/14/1998	TSCA PCB Inspection	U.S. EPA	No violations.
11/24/1998	Compliance Evaluation Inspection	DTSC	No violations.
12/30/1998	Compliance Evaluation Inspection	DTSC	No violations.
02/02/1999	Compliance Evaluation Inspection	DTSC	No violations.
03/10/1999	Follow-up Inspection	DTSC	No violations.
04/30/1999	Follow-up Inspection	DTSC	No violations.
05/21/1999	Follow-up Inspection	DTSC	No violations.
06/16/1999	Compliance Evaluation Inspection	DTSC	No violations.
09/08/1999	Compliance Evaluation Inspection	U.S. EPA	No violations.
09/28/1999	Follow-up Inspection	DTSC	No violations.
11/18-19/1999 & 12/01-02/1999	Financial Records Review	DTSC	RCRA violation: CWM reduced the face amount of their closure insurance without written approval from DTSC. \$5,000 penalty. Return to compliance 03/21/2000.
04/06/2000	Financial Record Review	U.S. EPA	No violations.
10/30/2000 – 11/03/2000	Compliance Evaluation Inspection	DTSC	RCRA violation: biennial report data error from 1996-2000 and broken eyewash unit in the lab. Return to compliance 11/03/2000.
05/02/2001	Groundwater Operation and	DTSC	No violations.
09/17/2001	Compliance Evaluation Inspection	DTSC	No violations.
10/25/2001	TSCA PCB Inspection	U.S. EPA	No violations.
02/26/2002	Groundwater Operation and	DTSC	No violations.
09/16/2002	Compliance Evaluation Inspection	DTSC	No violations.
11/19/2002	Closure/Post Closure Inspection	U.S. EPA	No violations.
06/10/2003	Groundwater Monitoring Evaluation	DTSC	RCRA violation: related to sampling procedures - written informal enforcement action. Return to compliance 06/20/2003.
01/21/2004	Compliance Evaluation Inspection	DTSC	No violations.
02/13/2004	Facility Self Disclosure	CWM	TSCA violations (see description in narrative).
03/15/2004	Compliance Evaluation Inspection	DTSC	No violations.
04/14/2004	TSCA PCB Inspection	U.S. EPA	No violations.
06/15/2004	Groundwater Operation and Maintenance Inspection	DTSC	No violations.
09/30/2004	Financial Records Review	DTSC	No violations.
10/15/2004	Compliance Evaluation Inspection	U.S. EPA	No violations (RCRA inspection only).
11/09/2004	Compliance Evaluation Inspection	DTSC	No violations.
03/23/2005	Compliance Evaluation Inspection	DTSC	No violations.
08/22-23/2005	Multimedia - TSCA/RCRA (Phase 1)	U.S. EPA (NEIC)	TSCA violations (see description in narrative).
12/05-16/2005	Multimedia - TSCA/RCRA (Phase 2)	U.S. EPA (NEIC)	RCRA violations (see description in narrative).
01/11/2006	Compliance Evaluation Inspection	DTSC	No violations.
09/22/2006	Financial Records Review	U.S. EPA	No violations.
11/06-16/2006	Compliance Evaluation Inspection	DTSC	No violations.
03/01/2007	Financial Records Review	DTSC	No violations.
11/15/2007	Compliance Evaluation Inspection	DTSC	No violations.
10/02/2008	Compliance Evaluation Inspection	DTSC	No violations.
10/29/2008	Compliance Evaluation Inspection	DTSC	No violations.



Date	Type of Inspection	Agency	Findings
03/13/2009	Financial Records Review	DTSC	No violations.
09/15/2009	Compliance Evaluation Inspection	DTSC	No violations.
10/06/2009	Financial Records Review	DTSC	No violations.
02/07-12/2010	Compliance Evaluation Inspection & TSCA PCB Inspection	DTSC/ U.S. EPA	RCRA and TSCA violations (see description in narrative).
06/02/2010	TSCA PCB Inspection	U.S. EPA	TSCA violations (see description in narrative).
11/12/2010	Air Monitoring of Evaporation Ponds	U.S. EPA	No violations.
02/22/2012	Operation and Maintenance Inspection	DTSC	No violations.
04/09-10/2012 & 04/12-13/2012	Compliance Evaluation Inspection	DTSC/ U.S. EPA	RCRA violation: failure to properly treat hazardous waste prior to disposal and failure to resolve a significant manifest discrepancy within 15 days of discovery. Minor, failure to sign and check the certification on CWM-KHF's Waste Treatment and Disposal Form. Return to compliance 03/22/2013.
05/09/2012	Facility Self Disclosure	CWM	TSCA violations (see description in narrative).
06/12/2012	Financial Records Review	DTSC	No violations.
11/29/2012	TSCA PCB Inspection	U.S. EPA	No violations.
04/23-24/2013	Compliance Evaluation Inspection	DTSC	No violations.
05/20/2013	Financial Records Review	DTSC	No violations.
02/14/2014	Facility Self Disclosure	CWM	RCRA violations: one load of hazardous waste was disposed of in Landfill B-18 that exceeded the Universal Treatment Standard for selenium. Return to compliance 03/29/2014.
02/19/2014	Focused Compliance Inspection (Groundwater)	DTSC	No violations.
03/18/2014	Compliance Evaluation Inspection	DTSC	No violations.
08/11/2014	Financial Records Review	DTSC	No violations.
09/24/2014	Focused Compliance Inspection	DTSC	No violations.
12/10/2014	Focused Compliance Inspection	DTSC	No violations.
03/17-18/2015	Compliance Evaluation Inspection	DTSC	RCRA violations: failure to enter most appropriate hazardous waste code for manifest in two manifests and the appropriate unit volume in one manifest. Return to compliance 03/18/2015.
04/28/2015	Financial Records Review	DTSC	No violations.
09/30/2015	Focused Compliance Inspection	DTSC	No violations.
10/02/2015	Facility Self-Disclosure		RCRA violations. Return to compliance 10/02/2015.
12/29/2015	Focused Compliance Inspection	DTSC	No violations.
02/09/2016	Compliance Evaluation Inspection	DTSC	RCRA violation: failure to enter a California waste code on a manifest. Return to compliance 02/09/2016.
02/29/2016	Financial Records Review	DTSC	No violations.
09/14/2016	Focused Compliance Inspection	DTSC	No violations.
10/13/2016	Non-Financial Record Review	DTSC	RCRA violations: failure to conduct and analyze the monitoring parameters listed in the Operation Plan of its RCRA Permit. DTSC concluded the groundwater data required were not received for many evaluation monitoring program wells for the 2014 calendar year. Additionally, wells within the Class I monitoring program were not monitored quarterly. Return to compliance 10/13/2016.
02/01/2017	Compliance Evaluation Inspection	DTSC	RCRA violation: failure to label one hazardous waste container per RCRA regulations. Return to compliance 02/01/2017.



Date	Type of Inspection	Agency	Findings
03/15/2017	Financial Records Review	DTSC	No violations.
05/02-03/2017	Focused Compliance Inspection (Groundwater)	DTSC	No violations.
08/17/2017	Compliance Evaluation Inspection	DTSC	No violations.
09/28/2017	TSCA PCB Inspection	U.S. EPA	No violations.
03/27-28/2018	Compliance Evaluation Inspection	DTSC	RCRA violations: mistake on manifest paperwork, failure to close a single 55-gallon drum containing used oil filters, cracking in perimeter flooring of the drum storage unit with no mention of cracking in the weekly KHF reports. Return to compliance 04/26/2018.
04/10/2018	Financial Records Review	DTSC	No violations.
06/28/2018	Focused Compliance Inspection	DTSC	No violations.
09/11/2018	Focused Compliance Inspection	DTSC	No violations.
02/07/2019	Focused Compliance Inspection	DTSC	No violations.
04/16/2019	Compliance Evaluation Inspection	DTSC	Minor violations. Return to compliance 04/16/2019.
05/21/2019	Financial Records Review	DTSC	No violations.



## 5 Public Participation and Outreach Activities

The permit decision-making process provides U.S. EPA with a unique opportunity to be involved with the community and hear about its issues, including those issues that are not related to the Facility’s TSCA permit. The U.S. EPA and DTSC permit decision-making processes have provided the Kettleman City community with a way to raise concerns, highlight important issues, and gain broader attention and understanding from other state and local government agencies.

Since 2007, U.S. EPA has worked for open communication and meaningful involvement with the Kettleman City community and encouraged involvement by other federal and non-federal government agencies. Continued public outreach for this proposed permit decision is a priority for U.S. EPA. During the public comment period, U.S. EPA is offering an opportunity for the community to learn about and formally comment on the proposed permit decision, Statement of Basis, and supporting analyses and documents, including this Draft EJ Analysis (Section 5.2). Public comments on all aspects of the proposed permit and its supporting determinations and analyses are welcome.

### 5.1 Outreach Activities for the Proposed Permit Action

U.S. EPA recognizes its responsibility to engage with and consider the concerns of the Kettleman City community in its process to determine whether to permit the Facility, including the need to be transparent in its decision-making. Since receiving the 2017 TSCA permit renewal application,<sup>38</sup> U.S. EPA has taken actions to provide citizens access to information on its permit decision-making process (information on prior outreach activities can be found in Section 5.4). U.S. EPA’s permit decision-making process for CWM’s permit application is shown in Figure 21. This process gives the public opportunities to learn about and formally comment on the proposed permit decision, Statement of Basis, and supporting analyses and documents (such as this Draft EJ Analysis).

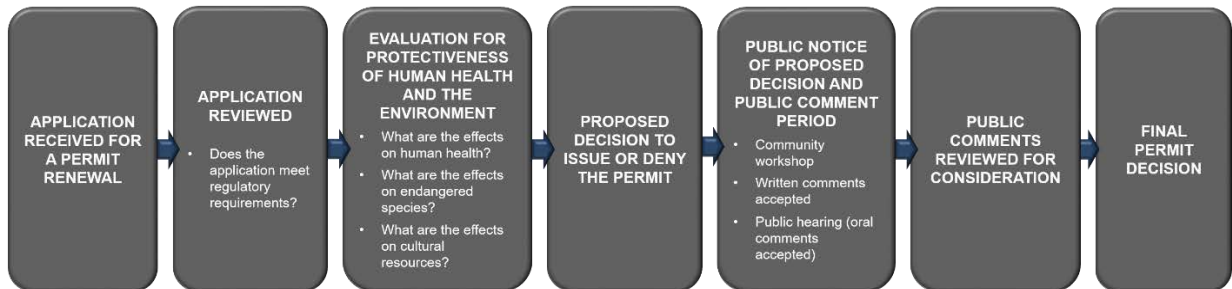


FIGURE 22 U.S. EPA’s Permit Decision-Making Process.

U.S. EPA has been involved in the following outreach activities since 2017:

<sup>38</sup> U.S. EPA has received three revised TSCA permit renewal applications from CWM since 2017. The first was received on July 15, 2017. U.S. EPA reviewed this application and issued a Notice of Deficiency on December 21, 2017. CWM submitted revised TSCA permit renewal application on April 20, 2018. CWM submitted another revised application on October 2, 2018, which included minor revisions to the April 2018 submittal.



- 1) U.S. EPA had a booth at the Kettleman Public Safety Fair on October 19, 2017 to provide information to the community about CWM’s TSCA permit application. Six U.S. EPA employees attended, two of which were fluent Spanish speakers. U.S. EPA and DTSC jointly notified members of the public about their attendance at the event through a “Save-the-Date” mailer sent both in English and Spanish [DTSC and U.S. EPA 2017a].
- 2) U.S. EPA and DTSC held a public meeting on November 16, 2017 at the Kettleman City Elementary School. During this meeting, members of the public were informed about the RCRA and TSCA permit decision-making processes and specific information relating to the Facility (see Figure 21 for the TSCA permit decision-making process). The meeting was conducted in Spanish with real-time translation into English. All presentations were in English and Spanish on side-by-side dual screens. U.S. EPA and DTSC notified members of the public about the meeting through mailers sent both in English and Spanish [DTSC and U.S. EPA 2017b, 2017c].
- 3) U.S. EPA attended CWM’s annual Facility meeting on April 26, 2018 at the Kettleman City Elementary School.
- 4) U.S. EPA had a booth at the Kettleman Public Safety Fair on October 11, 2018 to provide information to the community about CWM’s TSCA permit application. Five U.S. EPA employees attended, one of which was a fluent Spanish speaker.
- 5) U.S. EPA had four conference calls with Greenaction for Health and Environmental Justice (Greenaction), *El Pueblo Para el Aire y Agua Limpio*, and the California Rural Legal Assistance on March 25, 2018, May 30, 2018, May 8, 2019, and May 22, 2019 to discuss the permit decision-making process and this Draft EJ Analysis.
- 6) U.S. EPA attended CWM’s annual KHF meeting on April 23, 2019 at the Kettleman City Elementary School.
- 7) U.S. EPA posted information related to KHF on its public website, at [www.epa.gov/ca/kettleman-hills](http://www.epa.gov/ca/kettleman-hills). The website contains information about the Facility, a discussion explaining the permit decision-making process for the Facility, the public participation process for this permitting action, public meeting announcements, and personnel at U.S. EPA Region 9 for interested parties to contact. The website has important documents, which include the revised permit application,<sup>39</sup> proposed permit, Statement of Basis, and other supporting analyses and documents (such as this Draft EJ Analysis).
- 8) U.S. EPA has provided and will provide Spanish translation for community members. U.S. EPA has provided mailers and fact sheets in both English and Spanish, which also included a separate phone number for the Spanish language contact at U.S. EPA. U.S. EPA has provided and will provide translation services for public meetings. Information in Spanish can be found on the U.S. EPA website listed above. Documents that provide the public information on what the proposed permit contains, and certain parts of the Statement of Basis were translated into Spanish. A Spanish translation of this Draft EJ Analysis is available for community members. U.S. EPA will accept written comments in Spanish and will provide responses to the comments in Spanish as well.

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<sup>39</sup> The July 15, 2017 TSCA permit application and the April 20, 2018 revised TSCA permit application were posted on the website until U.S. EPA proposed its draft permit decision.



## 5.2 Public Meeting and Public Hearing

U.S. EPA wants to hear from the public and will hold a public meeting and question and answer session to provide interested parties with additional information and an opportunity for informal discussion of the proposed permit, Statement of Basis, and this Draft EJ Analysis. Immediately following the public meeting, U.S. EPA will hold a public hearing to provide the public the opportunity to submit written or spoken comments and relevant data pertaining to the proposed permit. The public meeting will be held from 5:30 to 7:00 p.m. and the public hearing will start at 7:30 p.m. on October 10, 2019 at the Kettleman City Elementary School.

Prior to 2017, the community voiced concerns about not having public events or meetings translated into Spanish or not allowing enough time for translation. As part of the current proposed permit decision-making process, U.S. EPA is providing translation services and ensuring sufficient time to be allocated for translation of comments.

## 5.3 Public Comment Period

### 5.3.1 How to Submit Comments

U.S. EPA will consider all written and spoken comments submitted during the public comment period, including those provided at the public hearing, before taking final action on the proposed permit decision.<sup>40</sup> Any interested person may submit written comments regarding the proposed permit, Statement of Basis, and other supporting documents. All written comments must be submitted, postmarked or emailed on or before November 1, 2019. Written comments can be submitted on [www.regulations.gov](http://www.regulations.gov) [docket number U.S. EPA-R09-RCRA-2019-0088], or mailed or emailed to:

Frances Wicher, Kettleman Hills Project Manager  
Permits Office, Land, Chemical, and Redevelopment Division (LND-4-2)  
U.S. Environmental Protection Agency, Region 9  
75 Hawthorne Street  
San Francisco, CA 94105  
Phone Number: (415) 972-3957  
Email: [r9Landsubmit@epa.gov](mailto:r9Landsubmit@epa.gov) or [wicher.frances@epa.gov](mailto:wicher.frances@epa.gov)

All comments that are received by email or through [www.regulations.gov](http://www.regulations.gov) will be included in the administrative record for the proposed permit without change and will be available to the public, including any personal information provided with the comments. If a commenter sends email directly to U.S. EPA, the sender's email address will be automatically captured and included as part of the public comment. Comments submitted to the U.S. EPA through the U.S. mail or any other non-electronic delivery method will also be included in the administrative record without change and will be available to the public, including any personal information provided, unless the comment includes Confidential Business Information (CBI) or other information the disclosure of which is restricted by law. Information that is considered to be CBI or otherwise protected should be clearly identified as such and should be submitted only through U.S. mail or a non-electronic delivery method; such information should not be

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<sup>40</sup> Any comment made in Spanish will be responded to in Spanish.



submitted through [www.regulations.gov](http://www.regulations.gov) or email. For the full U.S. EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

The proposed permit, Statement of Basis (including this Draft EJ Analysis), and revised TSCA permit application can be found by visiting [www.regulations.gov](http://www.regulations.gov) [docket number U.S. EPA-R09-RCRA-2019-0088], U.S. EPA’s Kettleman Hills project website at [www.epa.gov/ca/kettleman-hills](http://www.epa.gov/ca/kettleman-hills), or the following address:

**Kettleman City Library**  
104 Becky Pease Street  
Kettleman City, CA 93239

### 5.3.2 U.S. EPA Response to Comments

U.S. EPA will review, summarize, and provide written responses to all substantive comments received during the public comment period and at the public hearing prior to making a final decision on CWM’s application to renew and modify its TSCA permit for the Facility. U.S. EPA will send notice of the final decision to each person who provides contact information (email and/or mailing address) and who: 1) submits comments during the public comment period, including spoken comments provided at the public hearing, or 2) requests notice of the final permit decision. U.S. EPA will also post the final decision, U.S. EPA’s response to comments, a copy of the public hearing transcript, and other relevant documents on U.S. EPA’s Kettleman Hills website.

## 5.4 Outreach Activities Prior to 2017

This Draft EJ Analysis was prepared as part of the Statement of Basis for the 2019 proposed permit decision that is based on the renewal application submitted on October 2, 2018; however, U.S. EPA has been involved in many public participation activities related to prior permit applications. Table 17 lists the community outreach activities that occurred between 2007 and 2012.

On February 20, 2007, U.S. EPA proposed a TSCA PCB Coordinated Approval<sup>41</sup> covering Landfill B-18 Phase I and Phase II and the PCB F/SU. As part of this proposal, U.S. EPA prepared a Draft Refined Environmental Justice Assessment in conjunction with its proposed Coordinated Approval. On March 27, 2007, U.S. EPA held a public meeting and public hearing on the proposed Coordinated Approval and Draft Refined Environmental Justice Assessment and received over 300 public comments.

In 2008, U.S. EPA concluded that sampling and a risk assessment for PCB congeners was warranted, based in part on the community’s concerns and comments. On December 2, 2008, U.S. EPA requested that CWM carry out a PCB congeners study that is discussed in Section 6.1.1. U.S. EPA worked with community members and environmental activists to plan meetings and select presentation topics. U.S. EPA held several public meetings to discuss the TSCA permit decision-making process and the “Dioxin-Like PCB Congeners Study Report” (PCB Congeners Study) and provided the community with multiple opportunities to provide input into the study design. U.S. EPA hosted public workshops to discuss the preliminary results of the Study on December 16, 2009 and March 27, 2010 (see Section

<sup>41</sup> A Coordinated Approval recognizes the state RCRA permit as the primary TSCA permit document.



6.1.2). The final PCB Congeners Study and a Spanish-language summary were submitted to U.S. EPA on November 5, 2010.

In June 2009, CWM submitted an application to U.S. EPA to expand Landfill B-18 for PCB waste. In September 2011, U.S. EPA informed CWM that U.S. EPA believed that a standard TSCA permit is preferable to a Coordinated Approval that relied on the RCRA permit and that any future proposed action would supersede the February 2007 proposed decision.

On December 1, 2009, U.S. EPA removed the Draft Refined Environmental Justice Assessment from its website because certain information and conclusions in the assessment were out of date and should not be cited. U.S. EPA subsequently referred to more current environmental assessment efforts at the CalEPA website describing the efforts being undertaken for the “Investigation of Birth Defects in Kettleman City” (see Sections 3.4.2 and 6.6.2) and “Kettleman City Community Exposure Assessment” reports (see Sections 6.2.3, 6.3.4, and 6.5.1).

Between 2010 and 2012, the Technical Assistance Services for Communities (TASC) Program, funded by U.S. EPA to provide educational and technical assistance from non-U.S. EPA experts, wrote a series of memos to the community related to CalEPA and CDPH’s “Investigation of Birth Defects and Community Exposures in Kettleman City, CA” report. Dr. Daniel Wharton wrote these memos to help Kettleman City residents better understand the issues and to be well informed while participating in the permit decision-making process.

After 2012, U.S. EPA decided that it would act on a permit application after DTSC made a final decision on the CWM permit expansion (see Section 2.2.2). Effective May 2014, DTSC approved the CWM permit expansion to allow construction and operation of Landfill B-18 Phase III. U.S. EPA received CWM’s next permit renewal application on July 15, 2017.

**TABLE 23** Public Participation Activities for Prior TSCA and RCRA Permit Applications from 2007-2012.

Date	Public Participation Activity	Sponsor	Participants
03/12/2007	Kettleman City public meeting about the draft TSCA permit and Draft Environmental Justice Assessment.	U.S. EPA	Community residents, environmental organizations
03/27/2007	Kettleman City public meeting and public hearing on the draft proposed TSCA permit and Draft Refined Environmental Justice Assessment.	U.S. EPA	Community residents, environmental organizations
07/12/2007	Kettleman City public meeting and public hearing on the RCRA permit modification.	DTSC	Community residents, environmental organizations
11/2008	Outreach conference calls to explain U.S. EPA’s draft TSCA permit decision-making process and U.S. EPA’s intent to require additional monitoring by CWM prior to making a re-proposed decision.	U.S. EPA	Environmental organizations
02/04/2009	Public meeting about the TSCA permit decision-making process and additional PCB sampling.	U.S. EPA	Community residents, environmental organizations
06/11/2009	Public meeting to hear community concerns on the CWM KHF Landfill B-18 expansion.	DTSC	Community residents, environmental organizations
07/28/2009	Interagency phone call to discuss birth defects issues.	U.S. EPA	DTSC, CalEPA, CDPH, Kings





Date	Public Participation Activity	Sponsor	Participants
			County
08/12/2009	Kettleman City public listening session to hear community's concerns regarding birth defects.	Green-action	U.S. EPA, state and local agencies, community residents, environmental organizations
09/28/2009	Interagency phone call to discuss birth defects issues.	U.S. EPA	DTSC, CalEPA, CDPH, Kings County
12/16/2009	Kettleman City public workshop to present the preliminary results of the PCB Congeners Study and receive community input.	U.S. EPA	Community residents, environmental organizations, state and local agencies
02/09/2010	Briefing on CDPH's proposed birth defects investigation in Kettleman City.	CDPH	Community residents, environmental organizations, U.S. EPA, state and local agencies
03/27/2010	Kettleman City public workshop to present the preliminary results of the PCB Congeners Study and receive community input.	U.S. EPA, DTSC	Community residents, environmental organizations
04/06/2010	Memo to Kettleman City residents on observations and suggestions regarding CalEPA's proposed exposure assessment for Kettleman City.	TASC	Community residents
04/14/2010	Memo to Kettleman City residents on considerations of the reported health status of residents and suggestions for next activities.	TASC	Community residents
06/16/2010	Memo to Kettleman City residents summarizing the 04/06/2010 memorandum.	TASC	Community residents
06/16/2010	Memo to Kettleman City residents summarizing the 04/14/2010 memorandum.	TASC	Community residents
10/04/2010	Memo to Kettleman City residents on "what can be done to help Kettleman City residents now."	TASC	Community residents
10/04/2010	Memo to Kettleman City residents summarizing the 10/04/2010 memorandum.	TASC	Community residents
12/01/2010	Memo to Kettleman City residents on comments and recommendations in response to CalEPA and CDPH's "Investigation of Birth Defects and Community Exposures in Kettleman City, CA" Public Review Draft.	TASC	Community residents
12/27/2010	Memo to Kettleman City residents summarizing the 12/01/2010 memorandum.	TASC	Community residents
11/17/2011	Public workshop and meeting on Landfill B-18, drinking water, enforcement, permit decision-making process, monitoring, and the pesticide study.	U.S. EPA, DTSC	Community residents, environmental organizations, state and local agencies
11/20/2011	Memo to Kettleman City residents on comments and recommendations in response to CalEPA and CDPH's "Investigation of Birth Defects and Community Exposures in Kettleman City, CA" Draft (Part 2).	TASC	Community residents
08/20/2012	<b>Memo to Kettleman City residents on incidence patterns of birth defects and cancer in Kettleman City and California's Central Valley, including CDPH's response to community concerns.</b>	TASC	Community residents



## 5.5 Community Concerns

Through community outreach and public participation activities listed in Sections 5.1 and 5.4, U.S. EPA heard an array of concerns both related and unrelated to the proposed permit decision (Table 18). Prior to U.S. EPA proposing this permit decision, U.S. EPA and state and local agencies have taken multiple actions to address Kettleman City’s community concerns. U.S. EPA has taken part in several public events, held public meetings to inform the community about the permit decision-making process, and mailed important information in both English and Spanish to community members (see Sections 5.1 and 5.4). Multiple studies have been completed to address the community’s concerns about potential environmental and health impacts, including the PCB Congeners Study (see Section 6.1.1) and the “Investigation of Birth Defects and Community Exposures in Kettleman City, CA” report (see Sections 6.2.3, 6.3.4, 6.5.1, and 6.6.2). U.S. EPA also played a role in addressing concerns outside the scope of the permit, testing for and educating the public about pesticides (see Sections 6.5.2 and 6.5.3) and providing grant funding for a diesel emission reduction program (see Section 6.2.4). CWM has also undertaken and will continue to undertake outreach to engage with the local community (see Section 6.4).

**TABLE 24** Concerns Voiced by the Kettleman City Community from 2007-2019.

Community Concern	Section*
Benzene concentrations in drinking water in 1993-1995 and the length of time to address.	3.2.3, 6.2.3
Arsenic concentrations in drinking water.	3.2.3, 6.3.5, 6.3.6
Birth defects and a questioned linkage to KHF and other environmental exposures.	3.4.2, 6.2.3, 6.6.2
The high number of cancer deaths in Kettleman City.	3.4.3
The high number of cases of childhood asthma in Kettleman City.	3.4.4
Residents lack of access to health care.	3.4.5
Need for air monitoring in the community.	4.2.3, 6.4.1
The Facility’s compliance history.	4.3
Spanish translations of written material are needed at public meetings.	5.1, 6.4.2
Wording of public notice for the permit does not encourage public participation.	5.1, 5.2
Mailings to the community need to be bilingual and easily understandable.	5.1, 5.2
Ability to influence U.S. EPA and DTSC and affect permit decisions.	5.1, 5.2, 5.3, 5.4
Community repositories are not available during convenient hours.	5.2
PCBs may volatilize from unclosed units.	6.1.1, 6.1.3, 6.2.1, 6.2.2, 6.2.3, 6.4.1
PCBs could migrate from KHF as air emissions and impact Kettleman City.	6.1.1, 6.1.3, 6.2.1, 6.2.2, 6.2.3, 6.4.1
Wind-blown PCB particles from KHF operations could be deposited off-site and taken up into the food chain.	6.1.1, 6.1.2, 6.1.3, 6.2.1, 6.2.3, 6.4.1
Air monitoring for PCBs was suspended in 2008.	6.1.3, 6.4.1
Weather event could carry chemicals from KHF’s stabilization ponds and expose the community.	6.2.1, 6.2.2, 6.4.1
Diesel exhaust from trucks going to and from the Facility	6.2.4, 6.2.5, 6.2.6
Air toxics from the facility will affect surface water supplies.	6.1.3, 6.2.1, 6.2.3, 6.4.1
Facility actions may impact groundwater and surface water supplies.	6.1.3, 6.2.1, 6.3.1, 6.3.2, 6.3.4, 6.4.1



Community Concern	Section*
Access to the Facility's monitoring data.	6.4.1, 6.4.3
What would happen at the facility during a natural disaster, such as an earthquake.	6.4.2
Potential for truck accidents, how they would be handled, and their potential impacts on the local community.	6.4.2
Community is not receiving time for public participation at CWM's annual KHF meeting.	6.4.2
Community does not have access to KHF's disaster plan, including terrorist attacks.	6.4.2
No clear direction on whom to call with odor problems and other concerns.	6.4.3
Residents concerned about pesticide exposure.	6.5.1, 6.5.2, 6.5.3
Residents do not know who to contact for complaints about crop duster spray.	6.5.3
Residents have requested biological monitoring studies of its community members.	6.6.3
Lack of testing of birth mothers during the State's evaluation of birth defects.	CalEPA and CDPH's "Investigation of Birth Defects and Community Exposures in Kettleman City, CA" Report
Closure plans for KHF are not adequate, and the Facility will not be properly maintained after the landfills are full and the on-site staff has left.	Statement of Basis
* Numbers are sections of this Draft EJ Analysis.	

## 6 Community Concerns and Actions Taken

The community's involvement in the U.S. EPA and DTSC permit decision-making processes has highlighted health and environmental community concerns that are consistent with the information presented in Section 3 of this document. By raising these important issues, the community has been a critical force in helping to improve Kettleman City. Federal, state, and local government and environmental organizations have bolstered the efforts of the community by taking actions to address concerns related to KHF operations and other non-TSCA related activities since 2007.

### 6.1 PCB Contamination

The community raised concerns that wind-blown PCB particles from KHF operations could either be deposited off-site and taken up into the food chain (through ingestion of crops or consumption of beef or milk from nearby grazing cattle) or could migrate from KHF as air emissions and impact Kettleman City. See Table 18 in Section 5.5.

#### 6.1.1 PCB Congeners Study

In December 2008, U.S. EPA requested that CWM complete a PCB congeners<sup>42</sup> study in response to community concerns and possible off-site impacts that PCB disposal operations at KHF may present to human health or the environment (see Section 4.2.2) [U.S. EPA 2008b]. U.S. EPA requested CWM to collect soil, vegetation, and air samples at the Facility perimeter and assess risk to human health and the environment from PCB operations at the Facility. These studies

<sup>42</sup> A PCB congener is any single, unique well-defined chemical compound in the PCB category.



are collectively referred to as the “PCB Congeners Study.” This study is the first scientific study of this magnitude conducted at a TSCA-regulated PCB storage and disposal facility.

Because of the magnitude, U.S. EPA worked closely with CWM to: 1) design the study, 2) review and approve all sampling plans to ensure that U.S. EPA’s standards and protocols were met, 3) oversee sample collection, 4) collect soil split samples, 5) review all of CWM’s data against U.S. EPA quality assurance/quality control standards, and 6) review and approve the risk analysis report [CWM 2009b-c, U.S. EPA 2009a-d]. U.S. EPA also worked closely with the community, including providing multiple opportunities for study design input (see Table 17) and hosting two public meetings to discuss the study results. (see Section 6.1.2).

A total of 720 soil samples and 720 vegetation samples, representative of the entire Facility perimeter, were collected. Air samples were collected continuously over a 12-month period to characterize then-present-day conditions at the Facility perimeter. Monitoring included upwind and downwind stations. Samples that CWM collected were analyzed by Test America Laboratories, an independent State-certified laboratory, located in West Sacramento, CA.

U.S. EPA directed CWM to use the soil, vegetation, and air PCB congener data in a U.S. EPA-approved multi-pathway risk model to assess potential risk to human health and the environment. To address community concerns, U.S. EPA directed CWM to evaluate several different exposure scenarios including a hypothetical resident living at the fence line (perimeter) of the Facility and a hypothetical subsistence resident rancher living at the fence line (perimeter) of the Facility [U.S. EPA 2011]. A subsistence resident rancher would consume home-grown beef, food crops, and dairy products over 30 continuous years.

U.S. EPA reviewed the PCB Congeners Study and found no evidence suggesting that PCBs from operations at KHF migrate off-site at concentrations that would adversely impact the health of nearby residents or the environment. Based on the results of the PCB Congeners Study, U.S. EPA concluded:

- 1) Concentrations of the most toxic PCB congeners in soil samples collected at the perimeter of the Facility are significantly below U.S. EPA’s health-based clean-up levels.
- 2) Risk of health impacts from PCB congener concentrations measured in soils, vegetation, and air near the perimeter of the Facility are in the same range as risk of health impacts in other rural areas without known PCB activities or sources.
- 3) Concentrations of PCB congeners measured in soils, vegetation, and air at the Facility perimeter as well as those collected at the Landfill B-18 drainage swale do not adversely affect ecological species.
- 4) There is no evidence suggesting that PCBs are migrating off-site at concentrations that would adversely affect the health of local community residents or the environment.



### 6.1.2 Meetings to Present and Explain Preliminary PCB Congener Study Results

Prior to the completion of the PCB Congeners Study in November 2010, U.S. EPA held two meetings on December 19, 2009 and March 27, 2010 to present the preliminary results of the study, answer questions, and listen to community concerns.

### 6.1.3 Review of PCB Monitoring Data

U.S. EPA reviewed available air quality monitoring data<sup>43</sup> collected at the Facility’s monitoring stations (see Section 4.2.3 for locations) since the conclusion of the PCB Congeners Study (see Section 6.1.1). U.S. EPA also reviewed groundwater monitoring data<sup>44</sup> collected after completion of the “Kettleman City Community Exposure Assessment” report (see Section 6.2.3). U.S. EPA reviewed this data to determine if PCB releases from the Facility have been detected since these studies concluded.

From the start of routine air monitoring at the Facility in October 2006 until 2016, air samples for PCB analysis were collected once every 12 days for 24-hours each.<sup>45</sup> In 2016, month-long sampling for PCBs was added [DTSC 2016, Wenck 2016e]. U.S. EPA reviewed air monitoring reports submitted by the Facility between 2011 and 2018 to determine if PCBs have been detected at the Facility’s air monitors.<sup>46</sup> No PCBs have been detected above the applicable detection limits [Wenck 2011b-d, Wenck 2012a-d, Wenck 2013a-d, Wenck 2014a-d, Wenck 2015a-d, Wenck 2016b-e, Wenck 2017a-d, Wenck 2018a-d].

Groundwater monitoring data has been collected at KHF for over 30 years. Currently, groundwater samples are tested for PCBs once every five years as part of the constituents of concern testing. The last constituents of concern testing was conducted in the fourth quarter of 2016 (October through December 2016) [AMEC 2017]. Previous constituents of concern

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<sup>43</sup> The air quality and groundwater monitoring programs at the Facility have been on-going for many years under the Facility’s state RCRA permit and waste discharge order (see Section 4.2.3) [DTSC 2003; RWQCB 2014].

<sup>44</sup> The Facility’s previous TSCA permits also required groundwater monitoring [U.S. EPA 1992].

<sup>45</sup> From mid-April 2008 until early January 2011, PCB monitoring under the Facility’s AAMP was discontinued with DTSC’s approval because no PCBs above the detection limit had been identified in the 18 months of sampling prior to 2008 [Wenck 2010, p. 2-6.]. However, during this period, air monitoring for PCBs was conducted throughout 2009 as part of the PCB Congener Study [Wenck 2010, p. 3-5] and again between mid-June and September 2010 for the “Kettleman City Environment Assessment” report [CARB 2010].

<sup>46</sup> Air monitoring data prior to 2009 were reviewed as part of the PCB Congener Study. No PCBs were identified above the detection limit [Wenck 2010, p. 2-6].



testing was performed in the first quarter of 2012 [AMEC 2012]. PCBs were not detected in either of these groundwater samples.<sup>47,48</sup>

#### 6.1.4 Other California State and Local Agency Actions

The California Air Resources Board (CARB) conducted an assessment of Kettleman City’s air quality to evaluate potential risks to human health in the Facility area. This study is discussed in Section 6.2.3.

DTSC has included requirements for air monitoring, dust mitigation, etc. in the RCRA permit. DTSC and RWQCB designed the groundwater monitoring system. A more detailed discussion of the required air and ground water monitoring is discussed in Section 4.2.3.

## 6.2 Air Quality

The community has voiced multiple concerns about air quality. See Table 18 in Section 5.5.

### 6.2.1 Ambient Air Monitoring Program

See Section 4.2.3 for information about the Facility’s air monitoring.

### 6.2.2 U.S. EPA Air Emissions Inspection of Facility Ponds

U.S. EPA Office of Enforcement and Compliance Assurance’s Air Enforcement Division and Region 9 conducted an unannounced inspection at KHF on November 12, 2010 to assess whether KHF emits significant concentrations of VOCs (which can contribute to ozone formation). The air monitoring data collected during the inspection indicated that the three hazardous waste ponds (and associated leachate tanks) and the drum storage unit<sup>49</sup> were not significant sources of VOCs at the time of inspection. Furthermore, inspection of ponds did not show significant emissions of organic gases. U.S. EPA also reviewed the reported concentrations in CWM’s Quarterly AAMP Program Data Report for April through June 2010.

<sup>47</sup> PCBs have been detected twice in groundwater at the Facility [CWM 1999/CWM 2018i]:

1. A sample collected from corrective action monitoring (CAM) well A02 on May 21, 1985 detected PCBs at concentrations of 0.0015 ppm. CAM well A02 monitors releases from closed ponds P-12 and P-12A. No subsequent quarterly samples have detected any PCBs.
2. A sample collected from CAM well A05 on March 20, 1995 detected PCBs at a concentration of 0.002 ppm. CAM well A02 monitors releases from pond P-9. No subsequent quarterly samples have detected any PCBs.

In 1995 and 2004, PCBs were detected in samples collected from sounding well B14MW2 [CWM 2018i]. Sounding well B14MW2 was one of four shallow (42-102 feet below ground level) sounding wells installed in 1981 on the perimeter of Landfill B-14 to monitor for and collect fluids that could potentially migrate out of the landfill [Geomatrix 2006].

The Landfill B-14 sounding wells were checked regularly for fluids. In 1995, surface water from heavy rains entered the B14MW2 well. Testing of the water in the well detected PCBs at a concentration of 0.002 ppm in February 1995 and 0.0007 ppm in March 1995 [CWM 2018i]. In 2004, all residual water was removed from the well and tested. PCBs were detected at a concentration of 0.0027 ppm [CWM 2018i]. No liquids were ever found in the other three sounding wells surrounding Landfill B-14 [Geomatrix 2006]. All four Landfill B-14 sounding wells were decommissioned in 2009 with U.S. EPA’s Approval [U.S. EPA 2008a]. Potential releases to groundwater from Landfill B-14 are currently monitored by well K-50 [AMEC 2014].

<sup>48</sup> No PCBs have ever been detected in groundwater detection wells monitoring the four landfills approved for disposal of PCBs at KHF.

<sup>49</sup> The drum storage unit is not used to store PCB waste and the ponds are not used to dispose of PCB waste.



After reviewing the quarterly report and collecting survey data, U.S. EPA concluded that KHF did not appear to be a significant source of the measured air pollutants at the time of inspection.

### 6.2.3 Kettleman City Community Exposure Assessment

In response to community concerns, former Governor Arnold Schwarzenegger directed CalEPA to assess possible environmental contaminants in the air, groundwater, and soil to determine whether those contaminants may have contributed to the increase in birth defects in Kettleman City [CalEPA and CDPH 2010]. The report “Kettleman City Community Exposure Assessment” was undertaken by CalEPA and OEHHA, with technical assistance provided by CDPH and U.S. EPA. CalEPA developed a comprehensive list of chemicals known to cause birth defects and other development effects. Through public meetings and comments, the comprehensive list contained 182 compounds for chemical analysis of air, groundwater, or soil. Results from the assessment were used by CalEPA and CDPH to make determinations in the “Investigation of Birth Defects and Community Exposures in Kettleman City, CA” report. The assessment’s comprehensive testing of air did not find any exposure to hazardous chemicals likely to be associated with birth defects [CalEPA and CDPH 2010].

#### Kettleman City Air Quality Assessment

As part of the “Kettleman City Community Exposure Assessment” report, CARB conducted the “Kettleman City Air Quality Assessment” in 2010 to evaluate potential risks to human health in the Facility area [CARB 2010]. To perform this risk assessment, CARB selected three residential locations: the Kettleman City Elementary School, one location upwind of KHF, and one location downwind of KHF. To address air quality concerns, samples of air were analyzed for toxic compounds (specifically VOCs, metals, PCBs, dioxin and furan congeners) and criteria air pollutants (sulfur dioxide, PM<sub>2.5</sub>, and nitrogen dioxide).

Ambient air concentrations of toluene, carbon disulfide, benzene, ethylbenzene, lead, nickel, arsenic, cadmium, manganese, and hexavalent chromium were below health screening levels [CARB 2010]. Ambient air concentrations of sulfur dioxide, PM<sub>2.5</sub>, and nitrogen dioxide were below state and federal air quality standards [CARB 2010].

PCB, dioxin, and furan congeners monitoring results for the three monitoring sites were compared with historical data from CARB’s California Ambient Dioxin Air Monitoring Program (CADAMP) monitoring network.<sup>50</sup> The assessment found that all Kettleman sites had combined PCB, dioxin and furan congeners values lower than the other CADAMP monitoring sites for the same time of year as the sampling period (June-August) [CARB 2010]. CARB found no significant health concerns with the Kettleman City levels for PCB, dioxin and furan congeners.

CARB assessed diesel particulate matter in Kettleman City by using air dispersion modeling of emissions from trucks and other local diesel sources. Facility diesel particulate matter emissions were not included in the assessment because a ridge and three miles separate the Facility from Kettleman City and the predominant wind direction carries KHF emissions away from Kettleman

<sup>50</sup> More information about CADAMP can be found at: [www.arb.ca.gov/aaqm/qmosopas/dioxins/dioxins.htm](http://www.arb.ca.gov/aaqm/qmosopas/dioxins/dioxins.htm).



City [CARB 2010]. CARB’s modeling found that the majority of air emissions come from highway (I-5 and SR-41) and agricultural emissions [CARB 2010].

CARB also assessed the public’s exposure to benzene in the air near two drinking water wells in Kettleman City by collecting grab samples downwind of two municipal water well treatment units (located at the southeast and southwest corner of Kettleman City) Ambient air concentrations of benzene exceeded the air cancer risk screening level; however, these measured concentrations were below the CalEPA reference exposure level for non-cancer health effects of 60  $\mu\text{g}/\text{m}^3$  (Table 19).

**TABLE 25** Kettleman City Air Quality Assessment Benzene Air Concentrations at Well Treatment Units.

Sample Date	SE Unit	SW Unit	Average $\mu\text{g}/\text{m}^3$	
			School (Tisch Sampler)	School (Xontech Sampler)
July 14	0.39	4.9	-	-
August 11	0.48	0.11	-	-
August 25	0.35	26	-	-
June-August (range)	-	-	0.36 – 0.94	0.21 – 0.49
Limit of Detection	0.23	0.23	0.16	0.16
Air Cancer Risk	0.034	0.034	0.034	0.034

Because the southwest unit grab samples were much higher on two of the three days, CARB used air modeling to further evaluate the public’s potential exposure to benzene downwind of the unit [CARB 2010]. CARB found that the exposure of potential concern is limited to approximately 50 meters of the benzene treatment unit, and estimated air concentrations beyond this distance were similar to Kettleman Elementary School and the cities of Fresno and Bakersfield [CARB 2010].

CARB recommended further evaluation, and SJVAPCD determined that permits and emission controls were required to reduce benzene emissions from both drinking water wells. SJVAPCD worked with KCCSD on design changes to reduce benzene emissions from the treatment units. SJVAPCD issued permits for the operation of the treatment units with controls to reduce benzene emissions in 2017.

#### 6.2.4 Grant Funding to Reduce Diesel Emissions

In 2011, U.S. EPA awarded Greenaction a \$25,000 grant to reduce diesel emissions in San Joaquin Valley communities by conducting outreach to educate the community, trucking companies, and drivers on the impact of diesel emissions, and encourage equipment changes that would lead to emissions reduction.

Greenaction successfully identified local diesel idling “hot spots” where illegal idling took place. They then educated 230 truckers, more than 20 businesses, two schools and one daycare center about anti-idling laws and government grant programs that are available to help pay for diesel vehicle retrofits. Over 2,000 Kettleman City and Avenal residents were educated through bilingual fact sheets, house and community meetings and trainings, and door-to-door education. From project beginning to end, Greenaction saw a ninety percent reduction in truck





idling and encouraged nine businesses that use diesel vehicles to sign “Good Neighbor Agreements,” an effort to educate employees about unhealthy emissions and the law’s restrictions on idling.

#### 6.2.5 2014 RCRA Permit Modification Heavy-Duty Diesel Truck Condition

As part of the 2014 RCRA permit modification (see Section 2.2.2), DTSC added provisions to reduce the diesel emissions from trucks transporting hazardous waste to the Facility. Under this provision, CWM must prohibit entry to any truck that does not meet CARB’s 2010 engine emission standards as of January 1, 2018.

#### 6.2.6 Diesel Emissions Reduction Program

California has identified diesel particulate matter as a toxic air contaminant based on its potential to cause cancer, premature death, and other health problems. Diesel engines also contribute to the state’s PM<sub>2.5</sub> air quality problems. To address diesel particulate matter, California has adopted a wide-ranging set of controls and other programs to reduce diesel engine emissions including controls on new and in-use trucks, construction equipment, agricultural equipment, stationary engines (e.g., irrigation pumps) and diesel fuels. More information on California’s diesel control programs is on CARB’s website at [www.arb.ca.gov/diesel/diesel.htm](http://www.arb.ca.gov/diesel/diesel.htm).

### 6.3 Water Quality

During public meetings from 2007-2010 and previous TSCA permit renewal public comment periods, the community raised concerns that facility actions may impact groundwater and surface water supplies. The community also voiced concerns about naturally-occurring arsenic in the drinking water supply (see Section 3.2.3). See Table 18 in Section 5.5.

#### 6.3.1 Groundwater Isolation

Studies have indicated that groundwater beneath KHF is not connected to the groundwater beneath Kettleman City [CalEPA and CDPH 2010; RWQCB 2014]. Consequently, groundwater below KHF is hydraulically isolated from Kettleman City’s drinking water source and groundwater is not considered to be a possible exposure pathway for contaminants to reach nearby residents. In 1989, RWQCB determined that groundwater beneath the Facility had no municipal or domestic beneficial use [RWQCB 2014, p. 5].

#### 6.3.2 Groundwater Monitoring

See Section 4.2.3 for information about the Facility’s groundwater monitoring.

#### 6.3.3 Stormwater Monitoring

See Section 4.2.3 for information about the Facility’s stormwater monitoring.



#### 6.3.4 Kettleman City Community Exposure Assessment

As part of the “Kettleman City Exposure Assessment” report, DTSC collected water samples from 11 homes, Kettleman City’s three wells (see Section 3.2.3), the California Aqueduct, and an agricultural drainage canal. Samples were analyzed for metals, VOCs, and total coliform bacteria and E. coli bacteria. [CalEPA and CDPH 2010]. Three of the residential water samples and all well and canal samples were also analyzed for PCBs. Nearly all 11 water samples collected from home faucets had elevated levels of arsenic that exceeded the federal Maximum Contaminant Level<sup>51</sup> (standard). Both the aqueduct and drainage canal had arsenic present, though below the federal standard. Benzene was found in the two municipal wells at levels exceeding the federal standard; however, the benzene treatment system appeared to work properly because benzene was not detected in the home samples (see Section 3.2.3). No benzene was found in the water from the aqueduct and drainage canal. No PCBs were detected in any samples.

#### 6.3.5 New Drinking Water Source

In response to the elevated arsenic contaminant levels, CDPH provided the KCCSD with \$225,676 on June 30, 2010 to evaluate alternatives for a cost-effective long-term solution to reduce arsenic in drinking water [Water Board 2016]. It was determined that the most cost-effective solution was to construct a new surface water treatment plant and to use surface water from the California Aqueduct [Water Board 2016].

Construction will consist of two phases: The first phase will construct a surface water treatment plant, which was underway as of September 17, 2017, with an expected completion date of October 15, 2019 [T. Wathen, personal communication, February 13, 2019, C. Fischer, personal communication, August 20, 2019]. The second phase consists of building a commercial tank facility consisting of two 250,000-gallon welded steel water tanks near the commercial area at the interchange of I-5 and SR-41. As of February 2019, the design and construction of the second phase was not yet underway [C. Fischer, personal communication, February 26, 2019].

KCCSD submitted an application for a new drinking water source in Fall 2011. The total approved cost of construction came to \$9.4 million from the State Revolving Fund Principal Forgiveness (\$3 million), Proposition 84 grant (\$4.5 million), and U.S. Department of Agriculture Rural Development (\$1.9 million) [State Water Board 2016]. In addition, Kings County helped secure water rights to deliver surface water from the California Aqueduct to the community for at least 20 years.

The Reef-Sunset Unified School District applied for Water Board \$395,000 of Prop 84 funds in June 2018 to install separate water pipelines to tie the Kettleman City Elementary School into the Kettleman City water system that will receive water from the new surface water treatment plant [E. Brasfield, personal communication, April 12, 2019].

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<sup>51</sup> A Maximum Contaminant Level is the maximum permissible level of a contaminant in water which is delivered to any user of a public water system.



All residents are updated on the status of the surface water treatment plant through a quarterly public notification. There were no scheduled meetings between the Water Board and the residents in 2018, and there are none scheduled for 2019 [C. Fischer, personal communication, February 26, 2019]. The engineering firm for the surface water treatment plant had a booth at the Kettleman Public Safety Fair on October 11, 2018 and disseminated information about upcoming milestones, including completing the new system and putting it online.

### 6.3.6 Interim Drinking Water Source

#### Kettleman City Community Services District Public Water System

KCCSD received multiple funds from the Water Board to fund the interim solution of distribution of bottled drinking water to residents due to arsenic contamination. On February 8, 2013, KCCSD received \$50,000 in funding under the CDPH Drinking Water Program's (DWP) Prop 84 Emergency Funding to provide bottled water to the residents [K. Hanagan, personal communication, August 23, 2018]. On July 1, 2014, the administration of the DWP was transferred from the CDPH to the Water Board.

On September 30, 2014, KCCSD received \$333,033 in Cleanup and Abatement Account (CAA) (SB103) funding to replace the Prop 84 funding and continue to provide bottled water to KCCSD's customers for a period of up to 33 months or until a long-term solution is in place. The CAA SB103 funding provided the District with bottled water until June 30, 2017. On June 17, 2016, the Water Board approved an additional \$101,569 in CAA funding (AB91) to continue the bottled water distribution until March 31, 2018. On July 3, 2018, the Water Board approved an additional \$186,110 in CAA funding to continue the bottled water distribution from April 1, 2018 to March 31, 2019 [K. Hanagan, personal communication, August 23, 2018]. On February 15, 2019 the Water Board approved an additional \$31,755 in CAA funding to continue the bottled water distribution for four months from April to July 2019 [M. Magtoto, personal communication, March 21, 2019]. Due to delays, the Water Board approved additional CAA funding on July 16 and August 15, 2019, for a combined total of \$79,240. These funds will to continue the bottled water distribution until March 31, 2020 or until the plant starts delivering clean water, whichever comes first [M. Magtoto, personal communication, August 20, 2019].

#### Kettleman Elementary School PWS

Between 2012 and 2013, the Reef-Sunset Unified School District received \$121,000 of Prop 84 funding from the state to install six point-of-use water filtering systems for drinking water fountains and certain kitchen faucets at the Kettleman Elementary School to remove the arsenic from the drinking water [E. Brasfield, personal communication, April 12, 2019]. The filters were installed on April 17, 2014 and labeled with signage for students and school personnel. To ensure the filtering systems are meeting the state's drinking water standards, each system is tested for arsenic twice a year on a rotating basis. They are also tested within 72 hours for total coliform and arsenic when filters are replaced.



## 6.4 Communication, Community Awareness, and Emergency Response

The community expressed concerns related to KHF’s communication, community awareness, and emergency response. See Table 18 in Section 5.5.

### 6.4.1 Air and Water Quality Monitoring Reports

The Kings County Local Assessment Committee and CWM agreed that the independent consultants hired by CWM to prepare air quality and water quality monitoring and compliance reports will prepare an annual summary of the reports in layperson’s terms, in Spanish and English [Wenck 2019, Wood 2019]. The consultants will deliver copies of the summary to all post office box-holders in Kettleman City, with a copy to the Kings County Community Development Agency, on or before March 31<sup>st</sup> of each year.

### 6.4.2 Annual Community Education Meeting

As a condition of the 2014 RCRA permit modification, the Facility is required to provide annual community education each April in Kettleman City. The meeting provides information about KHF’s contingency plan and assists the community in preparing a disaster plan for the residents. Public agencies responsible for emergency planning and response are invited to provide information to local residents, such as the potential for accidents, how they would be handled, and their potential impacts on the local community. CWM notifies members of the public about the annual meeting through mailers, sent both in English and Spanish [Waste Management 2019].

### 6.4.3 CWM Reports

Federal and state law as well as KHF’s RCRA permit, water permit (see Table 1), and current TSCA permit require CWM to prepare and submit reports routinely and when certain incidents occur (e.g., spills). Some of these reports are listed in Tables 20 and 21. These tables are for informational and summary purposes only and do not include all required reports. The tables also do not include any reports that U.S. EPA is proposing to require under the proposed TSCA permit.<sup>52</sup>

Copies of many past routine reports submitted to U.S. EPA may be found in the administrative record for the proposed permit. U.S. EPA’s Kettleman Hills Project Manager may be contacted for information on how to obtain other reports (see Section 5.2.1 for contact information). Please note that some reports may only be obtained by filing a Freedom of Information Act request or may not be available because of a confidential business information claim or other reasons.

Many of the routine reports submitted to DTSC are available on the Department’s Envirostor website at [www.envirostor.dtsc.ca.gov/public/hwmp\\_profile\\_report.asp?global\\_id=CAT000646117&starttab=](http://www.envirostor.dtsc.ca.gov/public/hwmp_profile_report.asp?global_id=CAT000646117&starttab=). Many of the routine reports submitted to RWQCB are available on the

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<sup>52</sup> These tables also do not include reporting requirements imposed by other Facility permits or other applicable federal or state laws. For example, the Facility must comply with the reporting requirements for the Toxics Release Inventory (TRI) Program pursuant to Section 313 of the Emergency Planning and Community Right-to-Know Act. More information on the TRI program, including how to retrieve reported information by location or facility, can be found at [www.epa.gov/toxics-release-inventory-tri-program](http://www.epa.gov/toxics-release-inventory-tri-program).



Water Board’s Geotracker website at [geotracker.waterboards.ca.gov/profile\\_report?global\\_id=SLT5FZ064603](http://geotracker.waterboards.ca.gov/profile_report?global_id=SLT5FZ064603). U.S. EPA does not guarantee that a report will be available at these sites and recommends contacting the appropriate state agency for further information on the availability of a report. Note that some information may be obtainable only through a public records request or may not be available for public release.

6.4.4 **KHF Community Contact**

Kettleman City residents can contact KHF’s Community Relations Manager, Cecilio Barrera, at (559) 309-7688 or [cbarrera@wm.com](mailto:cbarrera@wm.com).

**TABLE 26** KHF PCB and Hazardous Waste-Related Routine Reporting Requirements.

Report Name	Required By	Frequency	Content
<b>Waste Reports and Landfill Capacity</b>			
PCB Annual Report	U.S. EPA	Annually	Amount of PCB waste by category received, stored, transferred, disposed, and remaining at KHF.
TSCA Monthly Report	U.S. EPA	Monthly	PCB waste received at KHF resulting from spills, leaks, or other uncontrolled discharges of PCBs; unusual events at KHF.
Survey of Active HW Landfills	DTSC	Annually	Data and summary from annual aerial or land survey of active landfills.
Annual Report	DTSC	Annually	Waste received, methods of transfer, treatment, storage and disposal of each hazardous waste, most recent closure and post-closure costs; environmental monitoring data; and other information required by 22 CCR 66264.75 (see <a href="http://www.dtsc.ca.gov/HazardousWaste/AnnualReports/AFR.cfm">www.dtsc.ca.gov/HazardousWaste/AnnualReports/AFR.cfm</a> ).
Biennial Report (odd years)	U.S. EPA/DTSC	Biennial	Information on types, amounts, and disposal of waste received and generated (see <a href="http://www.dtsc.ca.gov/HazardousWaste/AnnualReports/BiennialReports.cfm#purpose">www.dtsc.ca.gov/HazardousWaste/AnnualReports/BiennialReports.cfm#purpose</a> ).
Incoming Waste	RWQCB	Monthly	Type and quantity of hazardous waste and designated waste accepted for disposal to the Class I waste management units.
<b>Groundwater, Soil Gas, Stormwater, and Leachate Collection and Removal Systems Monitoring</b>			
Groundwater Monitoring Report	RWQCB/ DTSC	Semi-annually/ Quarterly	Groundwater monitoring results, quality assurance/quality control requirements, other information as required
Annual Monitoring Summary Report	RWQCB	Annually	Summary of monitoring results; monitoring data in graphical format; discussion of compliance record and corrective actions taken; map of area and elevation of fill; evaluation of LCRS
Constituents of Concern Monitoring	RWQCB	Every Five Years	Results of constituents of concern monitoring (information included in groundwater monitoring report)
LCRS Constituents of Concern Testing	RWQCB	Annually	Results of analysis of liquids removed from the LCRS.
LCRS Fluid Levels	RWQCB	Monthly	Tabular and graphical summaries of daily leachate levels for LCRS sumps at waste management units.
LCRS Integrity Report	RWQCB	Annually	Results of testing for proper operation of LCRS and comparison of results with earlier tests under comparable conditions.
Annual Community Meeting	DTSC	Annually	Public meeting held by CWM to summarize the environmental monitoring results from the previous year



Report Name	Required By	Frequency	Content
<b>Air Monitoring</b>			
AAMP Report	DTSC	Quarterly	Data collected during ambient air sampling; summary of met data and analytical results (chemicals-of-concern and detected/estimated non-chemicals-of-concern); description of waste received during monitoring
Health Risk Assessment Update	DTSC	Annually	Health risk assessment updated based on collected air monitoring data.
Annual Community Meeting	DTSC	Annually	Public meeting held by CWM to summarize the environmental monitoring results from the previous year
<b>Closure and Post Closure</b>			
Post-Closure Inspection	RWQCB	Annually	Inspection of the closed WMUs indicating compliance with Closure and Post-Closure Specifications G.7. and G.9. contained in the WDRs
Post-Closure Inspection and Maintenance Report	DTSC	Annually	Description of post-closure inspection results and maintenance activities during the previous year.

**TABLE 27** KHF PCB and Hazardous Waste-Related Incident Reporting Requirements.

Report Name	Required By	Frequency	Content
<b>Emergencies, Spills, and Other Releases</b>			
Release of Hazardous Waste	DTSC	When required	Verbal report on discovery of a release, threat of release, or identification of a potential threat to human health or the environment. Written summary of identification of the released material, the amount released, and other specified info.
Follow-up to Emergency Incident	DTSC	When required	Written report detailing incident, response, and assessment of hazard to human health and environment, etc.
Spill report – PCB Quantities Over 1 lb in a 24-hour period	U.S. EPA	When required	Verbal report to the National Emergency Response Center.
Release/Change in Site Condition	RWQCB	When required	Written report of any evidence of a release, or change in site conditions (e.g., flooding, equipment failure, slope failure) which impair the integrity of waste or leachate containment facilities or of precipitation and drainage control structures.
Seepage from the Disposal Area	RWQCB	When required	Written report including a map with location(s) of seepage; estimate of the flow rate; nature of the discharge; and corrective measures.
<b>Detection of PCBs in Environmental Media</b>			
PCBs Detected in Leachate, Stormwater, or Groundwater	U.S. EPA	When required	Report within seven days of discovery.
<b>Manifests</b>			
Manifest Discrepancy	U.S. EPA (PCBs) and DTSC (HW)	When required	Description of the manifest discrepancy and efforts to reconcile it, and a copy of the <b>manifest</b> or shipping paper at issue.



Report Name	Required By	Frequency	Content
<b>Unmanifested Waste</b>	U.S. EPA (PCBs) and DTSC (HW)	When required	Required for any unmanifested PCB/hazardous waste accepted at the Facility for which the generator cannot be contacted. Report requires information on waste, source, and disposition.
<b>Non-Compliance and Other</b>			
<b>Notification of Noncompliance which may Endanger Health or the Environment</b>	DTSC	When required	Within 24-hours: date, time, and type of incident, name and quantity of material involved, extent of injuries, if any; assessment of hazard to human health and environment, etc. Within five days: written report with a description of the noncompliance and its cause; the period of noncompliance including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
<b>Notification of Noncompliance</b>	RWQCB	When required	Nature, time and cause of noncompliance, measures taken to prevent recurrences, and timetable for corrective actions
<b>Damage from Storm or Seismic Event</b>	RWQCB	When required	Any damage and subsequent repairs necessary after a storm/seismic event.
<b>Non-Compliant Truck Refusal of Entry</b>	DTSC	When required	Notice of refused to a heavy-duty diesel truck not in compliance with engine model year requirements

**6.5 Pesticides**

Kettleman City residents have raised concerns about pesticide exposure. See Table 18 in Section 5.5. In addition, U.S. EPA staff observed new orchards planted to the north, east, and west of Kettleman City in 2010 with very little buffer between orchards and residences.

**6.5.1 Kettleman City Community Exposure Assessment**

As part of the report “Investigation of Birth Defects and Community Exposures in Kettleman City, CA,” CDPR evaluated airborne pesticides in and around Kettleman City between 2006-2010 for their potential to have caused birth defects [CDPR 2010].

**Evaluation of Pesticides in Air**

CDPR modeling indicated that methyl isothiocyanate exceeded a screening level for developmental effects on one day between 2006 and 2009 [CDPR 2010]. CDPR also found that chlorpyrifos and diazinon exceeded screening levels for neurotoxicity on several days.

Overall, CDPR concluded that the risk of developmental effects from pesticides between 2006-2010 was very low. The study also stated that though the risk of other health effects from pesticides is uncertain, Kettleman City is likely lower risk than in other agricultural communities because historical air monitoring in other agricultural communities showed higher concentrations than detected in Kettleman City [CDPR 2010].



### 6.5.2 Indoor Pesticide Sampling

U.S. EPA staff observations and previous community concerns about pesticide exposure prompted U.S. EPA to collect a small number of samples from floors inside Kettleman City residences and one public building. At a February 2, 2011 public meeting, U.S. EPA shared its proposed Kettleman City indoor pesticide sampling process [U.S. EPA 2011d]. Samples were collected in March and July 2011 to determine whether pesticides primarily used in agriculture were present indoors [U.S. EPA 2011c]. Samples were analyzed for chlorpyrifos, diazinon, endosulfan, iprodione, phosmet, and propargite. The results indicated the presence of low levels of a few pesticides in some of the homes. Chlorpyrifos was detected most often (79 percent of homes sampled in March; 91 percent of homes sampled in July). Detection rates for the other pesticides in the study ranged from zero to 45 percent. Although levels of pesticides detected were below levels of concern, U.S. EPA encouraged residents to take steps to minimize pesticide exposure (see Section 6.5.3).

### 6.5.3 Pesticide Grant Funding/Safety Training

In response to the indoor pesticide sampling (see Section 6.5.2), U.S. EPA Region 9 granted \$47,195 to Visión y Compromiso to implement an educational/outreach initiative in Kettleman City from November 4, 2010 to November 25, 2011 to provide women of childbearing age with information on how to protect themselves from home and/or occupational pesticide exposures. The outcome of the project increased women’s knowledge about potential health effects from pesticide exposure and how to protect themselves and their unborn children from these exposures [Visión y Compromiso 2011].

Residents also voiced concerns that they have been sprayed by crop dusters and they did not know whom to call for complaints. In response to these concerns, U.S. EPA Region 9 provided promotores<sup>53</sup> information on how to report incidents/complaints at the training. The promotores took the information and disseminated it in the community.

There are currently three methods to report an incident/complaint:

- 1) Kings County Agriculture Department / Measurement Standards  
680 N. Campus Drive, Suite B, Hanford, California 93230  
Hours of Operation: M - F (8am - 5pm)  
Email: [agstaff@co.kings.ca.us](mailto:agstaff@co.kings.ca.us)  
Phone: (559) 852-2830
- 2) CDPR automated hotline: 1-877-378-5463
- 3) CalEPA complaint form:  
[www.CalEPAcomplaints.secure.force.com/complaints/Complaint](http://www.CalEPAcomplaints.secure.force.com/complaints/Complaint)

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<sup>53</sup> Promotores are highly skilled community health members/leaders that advocate for individuals and community transformation. More information can be found at [www.visionycompromiso.org/wordpress/about-us/the-promotor-model/](http://www.visionycompromiso.org/wordpress/about-us/the-promotor-model/).





## 6.6 Other

The community also had other concerns as identified in Table 18 in Section 5.5.

### 6.6.1 Facility Compliance

The community expressed concerns related to KHF's compliance history. See Section 4.3 for compliance history.

### 6.6.2 Birth Defects Investigation

Kettleman City residents raised concerns in 2009 about an observed increase in birth defects and questioned a linkage of birth defects to KHF and other environmental exposures. In response to these concerns, in January 2010 former Governor Arnold Schwarzenegger directed CDPH to investigate an apparent increase of infants born with birth defects after 2006 in Kettleman City [CalEPA and CDPH 2010]. The objectives of the investigation were to evaluate the presence of known or suspected genetic, medical, or pregnancy-related risk factors and the potential for environmental contaminants that may be associated with an increased risk of birth defects. The completed report, "Investigation of Birth Defects and Community Exposures in Kettleman City, CA," was published in November 2010. Part 1.A of this report, "Investigation of Birth Defects in Kettleman City," specifically addressed birth defects.

CDPH conducted in-depth interviews with mothers of children who were born with birth defects and also reviewed their medical records. CDPH concluded that the number of infants born with birth defects to Kettleman City residents from 2007 through March 31, 2010 was higher than expected based on the historical pattern. Eleven children whose mothers lived in Kettleman City for part (or all) of their pregnancies were born during this time period with birth defects. Maternal medical, family, and pregnancy risk factors were unlikely to explain the higher than expected number of birth defects between 2007 and 2010. The mothers interviewed did not use alcohol, drugs, or tobacco, so these risk factors were not found to be a cause of these birth defects.

CDPH did not find a specific cause or environmental exposure among the mothers that would explain the increase in the number of children born in Kettleman City with birth defects and the observed birth defects did not represent a unique pattern nor were they all of the same type – characteristics that would be expected with a common underlying cause.

### 6.6.3 Biomonitoring

#### Biomonitoring for PCBs

Kettleman City residents have requested PCB biological monitoring (or biomonitoring) studies for members of the community. Biomonitoring involves the collection and analysis of human body samples for evidence of chemical exposure or for evidence of the adverse health impacts resulting from chemical exposures. Biomonitoring for PCBs can involve both invasive and non-invasive methods through the collection and analysis of urine, plasma, blood or fat tissues.



To date, no biomonitoring has been conducted on Kettleman City residents because U.S. EPA has determined that biomonitoring has considerable limitations:

### 1. PCBs are Ubiquitous

PCBs are ubiquitous in the terrestrial environment.<sup>54</sup> Most, if not all, people living in the U.S. have measurable amounts of PCBs in their bodies. PCBs can remain in the environment for long durations of time cycling between air, water and soil. Humans can be exposed to PCBs from several major sources, including:

- PCB contaminated foods, particularly meat, fish, and poultry (dominant source for most Americans) (Centers for Disease Control (CDC) 2014).
- PCB impacted building materials (inhalation & incidental ingestion exposure routes).
- PCB releases from contaminated terrestrial media (soils, water and air).

Therefore, even if U.S. EPA conducts PCB biomonitoring of Kettleman City residents, the biomonitoring will not determine the source of PCB exposure because of the abundance and persistence of PCBs in the environment. Consequently, biomonitoring Kettleman City residents will not provide meaningful information regarding the potential PCB exposure threat from the Facility.

### 2. Biomonitoring Variability, Uncertainty, and Lack of Reliability

Biomonitoring studies have a wide-degree of variability and uncertainty, regardless of any individual's PCB exposure potential. U.S. EPA and other public health organizations have not established reliable relationships between the total amount of PCBs retained by a human's body and the likelihood or magnitude of adverse health impacts in humans. In contrast, U.S. EPA relies on measuring the concentration of PCB intake from contaminated media (air, water or soils) or sources (food) to determine the likelihood of developing adverse health impacts due to PCB exposure.

#### Biomonitoring for Birth Defects

Appendix 2 of CalEPA and CDPH's report, "Investigation of Birth Defects and Community Exposures in Kettleman City, CA," explains why biomonitoring was considered but not conducted for the investigation.

#### 6.6.4 Traffic

Kettleman City residents raised concerns about diesel exhaust from trucks going to and from the Facility. See Sections 6.2.2, 6.2.4, 6.2.5, and 6.2.6 for information about actions taken.

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<sup>54</sup> There are over 200 different types of individual PCBs, which have a range of toxicity.



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## 7 Conclusion

U.S. EPA prepared this Draft EJ Analysis to document the environmental justice considerations incorporated into the proposed permit decision. This analysis concentrates on Kettleman City due to its location and proximity with respect to the Facility and history of community concerns about impacts related to the Facility. U.S. EPA recognizes that Kettleman City has multiple environmental burdens, as well as the presence of social and other health factors that likely increase community vulnerability to the impacts of pollution (see Section 3).

The regulatory framework of TSCA makes it difficult for U.S. EPA to address public health challenges and environmental stressors which are outside the scope of the PCB action. Nevertheless, U.S. EPA's involvement in pursuing a regulatory action under TSCA has allowed U.S. EPA to invite a number of complementary state and local public health and regulatory agencies to the table – with the combined objective of addressing a subset of the multi-media environmental and public health challenges unique to Kettleman City. U.S. EPA has worked with these agencies to share information, coordinate studies, and provide public participation opportunities to ensure consideration of community concerns and the mitigation of localized environmental and public health impacts.

For the proposed permit decision, U.S. EPA considered publicly available data, tools, studies, and concerns expressed by the community to focus on potential health and environmental impacts that are within U.S. EPA's legal authority to address during the permit decision-making process. Multiple objective, site-specific and multidisciplinary scientific investigations have been completed since 2007, giving U.S. EPA information to better understand any exposure threat or potential health risks posed by Facility operations. Previous and more recent outreach activities have also helped U.S. EPA engage with Kettleman City to identify and address community concerns both inside and outside the scope of the PCB action. U.S. EPA's findings, based on the information detailed in the body of this report, can be summarized as follows:

- 1) U.S. EPA acknowledges that the majority of Kettleman City residents are minority and low-income. It also shows that Kettleman City has an above average number of residents whose primary language is Spanish and above average number of adults that did not graduate high school. Kettleman City faces several environmental burdens including poor air quality and drinking water that exceeds the state drinking water quality standards for arsenic. In past years, the community suffered an increased occurrence of birth defects. Mortality rates in Kings County are higher than the state-wide rates and children and older adults in Kings County are more impacted by asthma than the state average.
- 2) U.S. EPA reviewed air monitoring between 2011 and 2018. PCBs have not been detected above the applicable detection limits (see Section 4.2.3).
- 3) Groundwater monitoring has been conducted at the Facility for over 30 years. PCBs have rarely been detected (see Section 6.1.3).
- 4) The PCB Congeners Study found no evidence suggesting that PCB congeners from operations at the Facility are migrating off-site at concentrations that would adversely affect the health of local community residents or the environment (see Section 6.1.1).



- 5) CWM has been responsive to RCRA and TSCA compliance issues. While KHF has violated applicable requirements in the past, the corrective actions that the Facility implemented to address these violations include physical and operational improvements to reduce the potential for future violations and to prevent and contain future releases (see Section 4.3).
- 6) The proposed permit conditions listed in Table 22 will prevent or reduce releases, quickly discover and correct situations that could lead to releases or minimize releases that may happen and continue Facility-specific air and groundwater monitoring for PCBs.

U.S. EPA’s analysis is that the proposed TSCA permit, if finalized, will ensure that PCB operations at KHF will not pose an unreasonable risk of injury to health and the environment. The proposed permit includes engineering and operational controls that prevent or reduce the likelihood of PCB releases from the facility. It also includes facility PCB monitoring requirements for air and water that will provide additional information to protect the community. The proposed permit decision is supported by a number of multidisciplinary public health investigations conducted or required by local, state and federal agencies. Collectively, these studies have shown no increased human health risk to the community from PCB operations at this facility. U.S. EPA is inviting comments on the proposed permit decision, Draft EJ Analysis, and other documents as mentioned in Section 5.3.

**TABLE 28** Examples of Proposed Permit Conditions to Limit the Potential for PCB Releases.

Proposed Permit Condition	Description
IV.F.5, VI.D.8	Dust management practices
IV.G.1	Immediate notification of any PCB spills
IV.G.1., IV.G.2	Swift cleanup of spills
IV.O.11	Monthly report of unusual occurrences at the Facility
V.C.1	Limiting amount of PCB waste that can be stored at the PCB F/SU in the enclosed building and in the outside containment area to 25 percent of available containment volume
V.C.1, Renewal Application, Attachment 7	Sizing of outside containment area to take into account a maximum rain event
V.D.5	Keeping containers closed when waste is not being transferred in or out
V.E.1	PCB waste handling and storage operations to occur within containment areas
V.F.7	Maintaining a carbon filter on PCB Storage Tank vent
V.H.1	Regular inspections of containers and tanks for leaks
VI.B.1.i, VI.B.1.r	Solidification of liquids prior to landfilling
VI.D.7	Daily landfill cover
VI.F.1	Implementation of a pollution prevention program for stormwater
VI.F.1, VI.F.2, VI.F.3	Collection of stormwater that contacts waste (collected stormwater is treated as hazardous waste)
VI.F.1, VI.F.2, VII.B.3.e	Design of landfill to prevent run on and runoff
VI.C.2	No disposal of PCB liquids in Landfill B-18
VI.E.5.b, VI.F.4, VIII.B.6	Early notification of any detection of PCBs in groundwater, leachate, or stormwater
VI.E, VII.B.3.b	Leachate collection and removal systems



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<b>Proposed Permit Condition</b>	<b>Description</b>
<b>VI.H.4</b>	Maintaining containment areas at the PCB F/SU to prevent any openings that would allow liquids to flow from the curbed areas
<b>VI.H.4</b>	Maintaining the enclosed building's roof and walls to prevent rain water from reaching PCB waste stored inside
<b>VII.B.3.d</b>	Inspection and maintenance of covers on closed landfills
<b>VIII.A.3</b>	Quarterly ambient air quality monitoring report
<b>VIII.B.7</b>	Annual groundwater monitoring reports
<b>Renewal Application, Section 5.1</b>	Lined landfills



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**APPENDIX H –  
NATIONAL HISTORIC PRESERVATION ACT DETERMINATION**



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION IX**  
75 Hawthorne Street  
San Francisco, CA 94105

September 17, 2018

Mr. Tristan Tozer  
California Office of Historic Preservation  
1725 23<sup>rd</sup> Street, Suite 100  
Sacramento, CA 95816

Dear Mr. Tozer:

The U.S. Environmental Protection Agency (EPA) is considering an application from Chemical Waste Management, Inc. (CWM) to renew and modify its Approval (Permit) under the Toxic Substances Control Act (TSCA) to store, manage, and dispose of wastes containing polychlorinated biphenyls (PCBs) at its Kettleman Hills Facility (KHF), located at 35251 Old Skyline Road, Kettleman City, CA 93239 (T22S & T23S, R18E, S33, S34, & S3). EPA has not yet acted on this application for renewal of the Permit. As part of our decision-making process, EPA has determined that the issuance of such a Permit renewal is an “Undertaking” subject to the review process set forth in Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, (54 U.S.C. §100101 *et seq.*) and its implementing regulations at 36 C.F.R. Part 800.

This letter is to inform the California Office of Historical Preservation (OHP) about the requested Permit’s Undertaking and initiate consultation under 36 C.F.R. Part 800. The Undertaking includes: 1) Continue to store and process PCB waste at the PCB Flushing/Storage Unit; 2) Continue to dispose of non-liquid PCB waste in Landfill B-18 Phases I and II; and 3) Dispose of non-liquid PCB waste in the Phase III expansion of Landfill B-18.

The 1,600-acre property includes a 555-acre operations area used for the disposal of federal and state-only hazardous waste. Within this operations area, the Undertaking’s area of potential effect (APE) is defined as the 81 acres where PCBs will be disposed of in Landfill B-18 and the 4200-square foot (0.1 acre) PCB Flushing/Storage Unit building where PCBs will be stored and managed prior to disposal, for a total APE of 81.1 acres (Attachment 1).

EPA previously consulted with OHP in 2011 for a prior consideration of a CWM TSCA Permit renewal that consisted of a similar APE and Undertaking as mentioned above (OHP# EPA091223A). EPA did not move forward with the 2011 Permit renewal; however, an OHP letter dated October 28, 2011, concurred with EPA’s finding of No Effect to Historic Properties. The 2011 Undertaking included the 14-acre expansion of Landfill B-18 (Phase III), which was later permitted and constructed through the California Department of Toxic Substances Control’s 2014 Resource Conservation and Recovery Act permit modification (#EPA120509A). As a result of this completed expansion, no ground disturbing activities will occur as part of the 2018 Undertaking.



Past field surveys and a literature review of the APE were completed by TRC in 2002 and 2003, which included the Phase III expansion of Landfill B-18 (TRC 2004 - Confidential Survey Report). The surveys identified one non-significant isolated occurrence within the Facility boundary with no archaeological materials nearby, and no previously unrecorded cultural resources. No shovel test probes were conducted. Based on this information and the fact that no ground disturbing activities will occur, EPA determines that the 2018 Undertaking will have No Effect to Historic Properties.

The updated Native American Heritage Commission (NAHC) *Sacred Lands File* record search completed for the APE on October 16, 2017, yielded no results. As requested by NAHC, the Tule River Indian Tribe, Wuksache Indian Tribe/Eshom Valley Band, Santa Rosa Indian Community of the Santa Rosa Rancheria, Kings River Choinumni Farm Tribe, and the Table Mountain Rancheria of California are being consulted concurrently regarding this 2018 Undertaking.

EPA is requesting that OHP concur with our finding of No Effect to Historic Properties for this Undertaking. Thank you in advance for your timely attention to our request. If you have any questions or comments, please contact Sarah Bielski at (415) 972-3961 or by email at [bielski.sarah@epa.gov](mailto:bielski.sarah@epa.gov).

Sincerely,



Barbara Gross, Manager  
Permits Section  
Land Division

cc:  
Ryan Batty, DTSC





State of California • Natural Resources Agency

Edmund G. Brown Jr., Governor

**OFFICE OF HISTORIC PRESERVATION**  
DEPARTMENT OF PARKS AND RECREATION  
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100  
Telephone: (916) 445-7000 FAX: (916) 445-7053  
calshpo@parks.ca.gov www.ohp.parks.ca.gov

Julianne Polanco, State Historic Preservation Officer

October 8, 2018

SHPO Reference #: EPA\_2018\_0927\_001

Barbara Gross  
Manager, Permits Section, Land Division  
US EPA, Region IX  
75 Hawthorne Street  
San Francisco, CA 94105

RE: Toxic Substances Control Act Permit Renewal, Kettleman Hills Facility, 35251 Old Skyline Road, Kettleman City, Kings County, California

Dear Ms. Gross:

The United States Environmental Protection Agency, Region IX (EPA) is consulting with the State Historic Preservation Officer (SHPO) in an effort to comply with Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470f), as amended, and its implementing regulation at 36 CFR Part 800. The EPA is requesting concurrence with a finding of no historic properties affected.

The EPA is considering an application from Chemical Waste Management, Inc. to renew and modify its Approval (Permit) under the Toxic Substances Control Act. The Permit will allow for the continued storage and processing of PCB waste at the PCB Flushing/Storage Unit, continued disposal of non-liquid PCB waste in Landfill B-18 Phases I and II and in the Phase II expansion of Landfill B-18. No ground disturbance is required to renew the permit.

Having reviewed your submittal, SHPO concurs that the undertaking will not affect historic properties. Please be reminded that the event of change in the scale or scope of the project, EPA may have additional responsibilities under 36 CFR Part 800.

Thank you for considering historic resources during project planning. If you have any questions or comments, please contact Tristan Tozer of my staff at (916) 445-7027 or email at [tristan.tozer@parks.ca.gov](mailto:tristan.tozer@parks.ca.gov).

Sincerely,

A handwritten signature in blue ink, appearing to be "Julianne Polanco".

Julianne Polanco  
State Historic Preservation Officer



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## National Historic Preservation Act Determination Index of Documents

1. “Primary Archaeological Reconnaissance and Paleontological Overview of a Parcel in the Kettleman Hills, Kings County, California.” Archaeological Consulting. September 4, 1984.
2. “Supplemental Cultural Resources Survey, Proposed Expansion, Kettleman Hills Facility – Chemical Waste Management, Inc., Kings County, California.” TRC Companies, Inc. May 2004 (confidential – file not included).
3. “Order #EP079000258: CWM Kettleman Hills Facility Project.” Adele Baldwin, California Historical Resources Information System to Max Weintraub, U.S. EPA Region 9. November 23, 2007.
4. “Sacred Lands file & Native American Contacts List Request: Kettleman Hills – Chemical Waste Management B-18 Expansion.” Fax, Edwin Poalinelli, U.S. EPA to Native American Heritage Commission. August 26, 2008.
5. “Compliance with Section 106 of the National Historic Preservation Act for the Renewal and Modification of Toxic substance Control Act (“TSCA” Polychlorinated Biphenyls (“PCBs”) B-18 Permit – Kettleman Hills Facility.” Letter, Cheryl Nelson, U.S. EPA Region 9 to Tristan Tozer, State Historian, Office of Historic Preservation. December 21, 2009.
6. “Modification of TSCA PCB B-18 Permit – Kettleman Hills Facility.” Email, Edwin Poalinelli, U.S. EPA Region 9 to Tristan Tozer, State Historian, Office of Historic Preservation. January 11, 2010.
7. “Request for a Sacred Lands File Search and Native American Contacts List for a Proposed Kettleman Hills Chemical Waste Management – B-18 Expansion Project, under a TSCA Permit to Store and Dispose of Waste Containing PCBs” located in western Kings County, California 2.6 miles west of Interstate 5 where it intersects with State Route 41.” Letter, Dave Singleton, Native American Heritage Commission to Edwin Poalinelli, U.S. EPA Region 9. March 4, 2010.
8. “Request for Information on Culturally Significant Areas; Compliance with Section 106 of the National Historic Preservation Act for the Renewal and Modification of Toxic Substance Control Act (“TSCA”) Polychlorinated Biphenyls (“PCBs”) B-18 Permit - Kettleman Hills Facility.” Letter, Cheryl Nelson, U.S. EPA Region 9 to John Davis, Chairman, Kings River Choinumni Tribe. March 10, 2010.
9. “Request for Information on Culturally Significant Areas; Compliance with Section 106 of the National Historic Preservation Act for the Renewal and Modification of Toxic Substance Control Act (“TSCA”) Polychlorinated Biphenyls (“PCBs”) B-18 Permit - Kettleman Hills Facility.” Letter, Cheryl Nelson, U.S. EPA Region 9 to Director – Cultural Department, San Rosa Rancheria. March 10, 2010.



10. “Request for Information on Culturally Significant Areas; Compliance with Section 106 of the National Historic Preservation Act for the Renewal and Modification of Toxic Substance Control Act (“TSCA”) Polychlorinated Biphenyls (“PCBs”) B-18 Permit - Kettleman Hills Facility.” Letter, Cheryl Nelson, U.S. EPA Region 9 to Bob Pennell, Table Mountain Rancheria. March 10, 2010.
11. “Request for Information on Culturally Significant Areas; Compliance with Section 106 of the National Historic Preservation Act for the Renewal and Modification of Toxic Substance Control Act (“TSCA”) Polychlorinated Biphenyls (“PCBs”) B-18 Permit - Kettleman Hills Facility.” Letter, Cheryl Nelson, U.S. EPA Region 9 to Chairperson, Tule River Indian Tribe. March 10, 2010.
12. “Request for Information on Culturally Significant Areas; Compliance with Section 106 of the National Historic Preservation Act for the Renewal and Modification of Toxic Substance Control Act (“TSCA”) Polychlorinated Biphenyls (“PCBs”) B-18 Permit - Kettleman Hills Facility.” Letter, Cheryl Nelson, U.S. EPA Region 9 to Kenneth Woodrow, Esohm Valley Band of Indians/Wuksache Tribe. March 10, 2010.
13. “Memo to Admin Record.” Email, Edwin Poalinelli, U.S. EPA to Edwin Poalinelli. March 18, 2010.
14. “Re: Kettleman Hills Facility.” Letter, Bob Pennell, Table Mountain Rancheria to Chip Poalinelli, U.S. EPA Region 9. April 7, 2010.
15. “Re: Compliance with Section 106 of the National Historic Preservation Act for Potential Renewal and Modification of Toxic Substance Control Act (“TSCA”) Polychlorinated Biphenyls (“PCBs”) B-18 Permit- Chemical Waste Management Kettleman Hills Facility- Response to Additional Information Request.” Letter, Caleb Shaffer, U.S. EPA Region 9 to Tristan Tozer, State Historian, Office of Historic Preservation. September 20, 2011.
16. “Re: Landfill B-18 Permit Renewal and Expansion of Chemical Waste Management Kettleman Hills Facility, Kettleman Hills, California.” Letter, Milford Wayne Donaldson, State Historic Preservation Officer to Caleb Shaffer, U.S. EPA Region 9. October 28, 2011.
17. “Sacred Lands File and Native American Contacts List Request for Kettleman Hills Facility.” Letter, Sarah Bielski, U.S. EPA Region 9 to Native American Heritage Commission, September 28, 2017.
18. “Chemical Waste Management Kettleman Hills Facility Permit and Expansion, Kings County.” Letter, Sharaya Souza, Native American Heritage Commission. October 17, 2017. With enclosure: Native American Contacts. Native American Heritage Commission. October 16, 2017.
19. Letter, Barbara Gross, U.S. EPA to Stan Alec, Chairman, Kings River Choinumni Tribe. July 25, 2018.





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20. Letter, Barbara Gross, U.S. EPA to Ruben Barrios, Chairman, Santa Rosa Indian Community of the Santa Rosa Rancheria. July 25, 2018.
  21. Letter, Barbara Gross, U.S. EPA to Neil Peyron, Chairman, Tule River Indian Tribe. July 25, 2018.
  22. Letter, Barbara Gross, U.S. EPA to Leanne Walker-Grant, Chairwoman, Table Mountain Rancheria of California. July 25, 2018.
  23. Letter, Barbara Gross, U.S. EPA to Kenneth Woodrow, Chairman, Wuksache Indian Tribe/Eshom Valley Band. July 25, 2018.
  24. Letter, Barbara Gross, U.S. EPA to Tristan Tozer, California Office of Historic Preservation. July 25, 2018.
  25. Letter, Barbara Gross, U.S. EPA to Tristan Tozer, California Office of Historic Preservation. September 17, 2018.
  26. “Toxic Substances Control Act Permit Renewal, Kettleman Hills Facility, 35251 Old Skyline Road, Kettleman City, Kings County, California.” Letter, Julianne Polanco, State Historic Preservation Officer, California Office of Historic Preservation to Barbara Gross, U.S. EPA Region 9. October 8, 2018.



**APPENDIX I –  
ENDANGERED SPECIES ACT DETERMINATION**



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

October 11, 2018

Ms. Jennifer Norris  
Field Supervisor  
Sacramento Fish & Wildlife Office  
2800 Cottage Way  
Room W-2605  
Sacramento, California 95825

**Re: Kettleman Hills PCB Approval Review – FWS Biological Opinion 81420-2012-F-0044**

Dear Ms. Norris:

I am writing on behalf of the U.S. Environmental Protection Agency (“USEPA”) to request your concurrence that the federal action of a proposed USEPA approval for the Kettleman Hills Facility (“KHF” or “Facility”) is addressed by the existing Fish & Wildlife (“FWS”) biological opinion (“BO”) numbered 81420-2012-F-0044.

USEPA is currently reviewing an application that would allow the KHF to accept waste containing polychlorinated biphenyls (“PCBs”) in a new section of its hazardous waste landfill. Specifically, an approval would allow the KHF to dispose of non-liquid PCB waste in Landfill Unit B-18 Phase III, which is a section of the landfill permitted and constructed under the Resource Conservation and Recovery Act (“RCRA”). All three sections of Landfill Unit B-18, Phases I-III, are already constructed and accepting RCRA hazardous waste. Phase I and II are also approved to accept Toxic Substances Control Act (“TSCA”) non-liquid PCB waste. The approval would also authorize KHF to use the existing PCB Flushing/Storage Unit for PCB waste storage and treatment.

In a letter dated September 20, 2011, USEPA requested formal consultation on an application for the renewal and modification of an approval for KHF, which included the expansion and modification of Unit B-18 to dispose of non-liquid PCB waste in Phase III. FWS responded with a final BO dated August 15, 2012, which was amended on September 5, 2012 and July 23 and 30, 2014.

The description of the proposed action in the BO included:

- addition of 81 contiguous acres (to be enclosed by exclusionary fencing) to KHF's existing 474-acre permitted operational area, resulting in 555 operational acres;
- vertical and lateral expansion of the existing and expanded B-18 landfill unit (i.e., the construction of Phase III);
- operation and closure of the existing and expanded B-18 landfill unit;
- transport of PCB-containing material within the 555 operational acres; and
- operation of ancillary buildings within the 555 operational acres.

Expansion of the operational area and construction of Phase III occurred in 2014-2015 after the California Department of Toxic Substances Control issued a permit modification under RCRA. Waste disposal in Phase III also began in 2015. USEPA's proposed approval would allow disposal of PCB waste in the B-18 landfill including Phase III, eventual closure of the B-18 landfill unit, transport of PCB-containing material within the operational area and PCB waste operations at one ancillary building within the operations area. No other construction activities are included in the proposed approval.

The BO proposed avoidance, minimization, and conservation measures for listed species for on-going operation



of the facility and eventual closure of the B-18 landfill. All of these measures have been incorporated as conditions of the proposed USEPA approval.

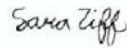
The BO provides four conditions for reinitiation of formal consultation. As provided in 50 C.F.R. § 402.16, reinitiation of formal consultation is required where discretionary federal agency involvement or control over the action has been maintained (or is authorized by law) and if:

- (1) the amount or extent of incidental take is exceeded;
- (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or an extent not considered in the BO;
- (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the BO; or
- (4) a new species is listed or critical habitat designated that may be affected by the action.

None of these four conditions has been met, and therefore reinitiation of formal consultation is not needed. On September 27, 2018, I obtained a list of threatened and endangered species and designated critical habitat for the area of the proposed approval. I have reviewed that list and determined that no new species have been listed nor critical habitat designated that may be affected by the proposed approval.

USEPA understands that the scope of the proposed approval has been addressed by the 2012 BO. Please provide concurrence the FWS agrees with this understanding, or clarification as needed. USEPA appreciates your assistance with this project. If you have any questions, please contact me at (415) 972-3536 or ziff.sara@epa.gov.

Sincerely,



Sara Ziff, P.E.  
Environmental engineer, Land Division

cc (electronic): Justin Sloan, FWS





In Reply Refer to:  
08ESMF00-2012-  
F-0044

## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Sacramento Fish and Wildlife Office  
2800 Cottage Way, Suite W-2605  
Sacramento, California 95825-1846



DEC 07 2018

Sara Ziff  
Environmental Engineer, Land Division  
U.S. Environmental Protection Agency, Region 9  
75 Hawthorne Street  
San Francisco, California 94105

Subject: Kettleman Hills PCB Approval Review

Dear Ms. Ziff:

This letter is in response to the U.S. Environmental Protection Agency's (EPA) request for concurrence that potential impacts associated with EPA's future approvals at the Kettleman Hills Facility have already been addressed in a biological opinion previously issued by the U.S. Fish and Wildlife Service (Service). Based on your letter, the EPA's proposed approval would allow disposal of polychlorinated biphenyl (PCB) waste in the B-18 landfill including Phase III, eventual closure of the B-18 landfill unit, transport of PCB-containing material within the operational area and PCB waste operations at one ancillary building within the operations area. All of the proposed activities would occur within the Kettleman Hills Facility.

The Service issued a biological opinion to EPA on August 15, 2012, that addressed Chemical Waste Management's application to EPA for the renewal and modification of a permit under the Toxic Substances Control Act, which included the expansion and modification of the Kettleman Hills Facility's Cell B-18 landfill to manage, store, and dispose of PCB waste. The project description in the biological opinion included all of the activities described in your letter. Therefore, the Service concurs with your determination that the potential impacts associated with EPA's proposed approval at the Kettleman Hills Facility, as described in your letter, were addressed in the Service's 2012 biological opinion.

If you have questions regarding this letter, please contact Justin Sloan ([justin\\_sloan@fws.gov](mailto:justin_sloan@fws.gov)) or at the letterhead address or at (559) 221-1828.

Sincerely,

Patricia Cole  
Chief, San Joaquin Valley Division



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## U.S. EPA Endangered Species Act Determination

### Index of Documents

1. “Request for Formal Consultation Under Section 7 of the Endangered Species Act on TSCA Permit Application for Chemical Waste Management Kettleman Hills Facility.” Letter, Caleb Shaffer, U.S. EPA to Thomas Leeman, U.S. Fish and Wildlife Service. September 20, 2011. With enclosures: “CWM Kettleman Hills Facility, B-18 Landfill Expansion Project, Section 7 Biological Assessment.” Berryman Ecological. July 2011.
2. “Request for Formal Consultation and Receipt of Initiation Package for the Toxic Substances Control Act Permit Application for Chemical Waste Management’s Kettleman Hills Facility Landfill expansion.” Letter, Daniel Russell, U.S. Fish and Wildlife Service to Caleb Shaffer, U.S. EPA Region 9. December 7, 2011.
3. “Re: Summary of Surface Water Controls for Landfill B-18.” Letter, Robert Henry, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. December 14, 2011.
4. “Chemical Waste Management, Inc. – Kettleman Hills Facility Section 7 Biological Assessment – January 2012 Revision.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. January 24, 2012. With Attachment: “CWM Kettleman Hills Facility, B-18 Landfill Expansion Project, Section 7 Biological Assessment.” Berryman Ecological. July 2009. Rev: January 2012.
5. “Re: Initiation of Formal Consultation – Kettleman Hills PCB Facility Expansion.” Email, Kevin Aceituno, U.S. FWS to Edwin Poalinelli, U.S. EPA Region 9. January 26, 2012.
6. “Re: FW: RE: Questions.” Email, Kevin Aceituno, U.S. FWS to Edwin Poalinelli, U.S. EPA Region 9. January 31, 2012.
7. “Re: Biological Opinion Revision.” Email, Edwin Poalinelli, U.S. EPA to Kevin Aceituno, U.S. Fish and Wildlife Service. February 3, 2012.
8. “Follow-up Re: Kettleman Hills PCB Facility Expansion Consultation.” Email, John Beach, U.S. EPA, to Kevin Aceituno, U.S. Fish and Wildlife Service. February 9, 2012.
9. “Re: Follow-up Re: Kettleman Hills PCB Facility Expansion Consultation.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to John Beach, U.S. EPA Region 9. February 9, 2012. With Attachment: “General Rare Plant Survey Guidelines.” Ellen A. Cypher, California State University, Stanislaus, Revised July 2002.
10. “Chemical Waste Management, Inc. – Kettleman Hills Facility Section 7 Biological Assessment – February 2012 Revision.” Letter, Paul Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. February 21, 2012. With enclosure: “Section 7 Draft Biological Assessment B-18/B-20 Hazardous Waste Disposal Project, CWM Kettleman Hills Facility, Berryman Ecological. February 2012



11. “Re: Follow-up Re: Kettleman Hills PCB Facility Expansion Consultation.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to John Beach, U.S. EPA Region 9. February 13, 2012.
12. “Re: Follow-up Re: Kettleman Hills PCB Facility Expansion Consultation.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to Edwin Poalinelli, U.S. EPA Region 9. February 17, 2012.
13. “Chemical Waste Management, Inc. – Kettleman Hills Facility Section 7 Biological Assessment – February 2012 Revision.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. February 21, 2012. With Attachment: “CWM Kettleman Hills Facility, B-18 Landfill Expansion Project, Section 7 Biological Assessment.” Berryman Ecological. July 2009. Rev: February 2012
14. “Chemical Waste Management, Inc. – Kettleman Hills Facility Section 7 Biological Assessment – March 2012 Revision.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. March 6, 2012. With Attachment: “CWM Kettleman Hills Facility, B-18 Landfill Expansion Project, Section 7 Biological Assessment.” Berryman Ecological. July 2009. Rev: March 2012
15. “Kettleman Hills Facility B-18 Landfill Expansion Project Section 7 Biological Assessment (Revision dated March 2012).” Letter, Caleb Shaffer, U.S. EPA to Thomas Leeman, U.S. FWS. March 9, 2012. With Attachment: “CWM Kettleman Hills Facility, B-18 Landfill Expansion Project, Section 7 Biological Assessment.” Berryman Ecological. July 2009. Rev: March 2012.
16. “Re: Chemical Waste Management, Inc. – Kettleman Hills Facility Section 7 Biological Assessment – March 2012 Revision 2.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9. March 13, 2012. With Attachment: “CWM Kettleman Hills Facility, B-18 Landfill Expansion Project, Section 7 Biological Assessment.” Berryman Ecological. July 2011. Rev: March 2012.
17. “Kettleman Hills Facility Landfill Expansion Project Section 7 Biological Assessment (Revision dated March 2012.” Letter, Caleb Shaffer, U.S. EPA to Thomas Leeman, U.S. Fish and Wildlife Service. March 13, 2012. With attachment: “CWM Kettleman Hills Facility, B-18 Landfill Expansion Project, Section 7 Biological Assessment.” Berryman Ecological. July 2011. Rev: March 2012.
18. “Rare Plant Survey Results for the Proposed Chemical Waste Management, Inc. B-18 Landfill Expansion, Kings County, California.” McCormick Biological, Inc. April 2012.
19. “Draft Biological Opinion for Toxic Substances Control Act Permit Application for Chemical Waste Management’s Kettleman Hills Facility (modification and expansion of PCB disposal Cell B-18), Kings County, California.” Letter, Susan K. Moore, U.S. Fish and Wildlife Service to Caleb Shaffer, U.S. EPA Region 9. June 29, 2012.



20. “Draft Biological Opinion for Toxic Substances Control Act Permit Application for Chemical Waste Management’s Kettleman Hills Facility (modification and expansion of PCB disposal Cell B-18), Kings County, California.” Letter, Susan K. Moore, U.S. Fish and Wildlife Service to Caleb Shaffer, U.S. EPA Region 9. August 15, 2012. With attachment: “U.S. Fish And Wildlife Service Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance.” [U.S. Fish and Wildlife Service] Sacramento Office. January 2011
21. “Request for Formal Consultation Under Section 7 of the Endangered Species Act on TSCA Permit Application for Chemical Waste Management Kettleman Hills Facility. (Biological Opinion Revision Request).” Letter, Edwin Poalinelli, U.S. EPA to Thomas Leeman, U.S. Fish and Wildlife Service. August 30, 2012.
22. “Amendment to the Biological Opinion for Toxic Substances Control Act Permit Application for Chemical Waste Management’s Kettleman Hills Facility (modification and expansion of PCB disposal Cell B-18), Kings County, California.” Letter, Thomas Leeman, U.S. Fish and Wildlife Service to Chip Poalinelli, U.S. EPA Region 9. September 5, 2012.
23. “First Amendment to Kreyenhagen Hills Conservation Bank Agreement for Sale of Conservation Credits (Service File No. 81420-2012-F-0044 and 81420-2012-F-004402). Wildlife Inc. March 27, 2013.
24. Re: Chemical Waste Management, Inc. – Kettleman Hills Facility.” Email, Bob Henry, Chemical Waste Management, Inc. to Edwin Poalinelli, U.S. EPA Region 9.. June 5, 2014. With Attachment: “Possible Re-Alignment – Maintain 81 Acres – Draft.”
25. “Endangered Species Survey – B18III Fence.” Email, Paul Turek, Chemical Waste Management, Inc. to John Moody, U.S. EPA, June 16, 2014. With attachments: 1) “Chemical Waste Management, Inc. – Kettleman Hills Facility TSCA Permit Renewal. Biological Opinion – B18III Preconstruction Survey –Fence.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to John Moody, U.S. EPA, June 16, 2014; and 2) Letter, Michael Bumgardner, Bumgardner Biological Consulting to Paul Turek, Chemical Waste Management, Inc. June 15, 2014.
26. “FW: KHF B-18 Landfill Expansion Security Fence SJKF Potential Den Clearance Monitoring.” Email, Paul E. Turek, Chemical Waste Management, Inc. to John Moody, U.S. EPA Region 9. June 25, 2014.
27. “USFWS Biological Opinion for Toxic Substances Control Act Permit Application for Chemical Waste Management's Kettleman Hill Facility (modification and expansion of PCB disposal Cell B-18), Kings County, California, dated August 15, 2012 as amended September 5, 2012 (2012 BO).” Letter, Barbara Gross, U.S. EPA to Steven Hubbert, CA Department of Fish and Wildlife. June 27, 2014. With Attachment: Letter, Michael Bumgardner, Bumgardner Biological Consulting to Paul Turek, Chemical Waste Management, Inc. June 15, 2014.





28. “USFWS Biological Opinion for Toxic Substances Control Act Permit Application for Chemical Waste Management's Kettleman Hill Facility (modification and expansion of PCB disposal Cell B-18), Kings County, California, dated August 15, 2012 as amended September 5, 2012 (2012 BO).” Letter, Barbara Gross, U.S. EPA to Kevin Aceituno, U.S. Fish and Wildlife Service. June 27, 2014. With Attachment: Letter, Michael Bumgardner, Bumgardner Biological Consulting to Paul Turek, Chemical Waste Management, Inc. June 15, 2014.
29. “Re: CWM (Kettleman) Letter Report Submittal under 2012 BO.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to John Moody, U.S. EPA Region 9. June 30, 2014.
30. “Re: CWM Kettleman’s response to our Para 4 (SJKF) dens) question.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to John Moody, U.S. EPA Region 9. June 30, 2014.
31. “USFWS Biological Opinion for Toxic Substances Control Act Permit Application for Chemical Waste Management's Kettleman Hill Facility (modification and expansion of PCB disposal Cell B-18), Kings County, California, dated August 15, 2012 as amended September 5, 2012 (2012 BO).” Letter, Barbara Gross, U.S. EPA to Robert G. Henry. July 3, 2014. With Attachments: 1) “Re: CWM (Kettleman) Letter Report Submittal under 2012 BO.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to John Moody, U.S. EPA Region 9. June 30, 2014; and 2) “Re: CWM Kettleman’s response to our Para 4 (SJKF) dens) question.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to John Moody, U.S. EPA Region 9. June 30, 2014.
32. “Chemical Waste Management, Inc. – Kettleman Hills Facility TSCA Permit Renewal. Biological Opinion – B18III Preconstruction Survey – Fence, Response to EPA-IX Letter Dated July 3, 2014.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to Barbara Gross, U.S. EPA, July 7, 2014. With attachment: Letter, Michael Bumgardner, Bumgardner Biological Consulting to Paul Turek, Chemical Waste Management, Inc. July 7, 2014.
33. “Response from Chemical Waste Management regarding 2012 Biological Opinion.” Email, Barbara Gross, U.S. EPA to Kevin Aceituno, U.S. Fish and Wildlife Service. July 9, 2014. With Attachments: Letter, Michael Bumgardner, Bumgardner Biological Consulting to Paul Turek, Chemical Waste Management, Inc. July 7, 2014.
34. “Re: Response from Chemical Waste Management regarding 2012 Biological Opinion.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to John Moody, U.S. EPA Region 9. July 9, 2014.
35. “Re: Response from Chemical Waste Management regarding 2012 Biological Opinion.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to Barbara Gross, U.S. EPA Region 9. July 10, 2014.



36. “Kettleman Hills Fence Re-alignment: Modification of Biological Opinion # 81420-2012-F-0044-2.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to Bob Henry, Chemical Waste Management, Inc. July 14, 2014.
37. “CWM’s Kettleman Hills Fence Realignment: Modification of Biological Opinion # 81420-2012-F-0044-2.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to John Moody, U.S. EPA Region 9. July 23, 2014.
38. “Modification of Kettleman Hills Facility Biological Opinion (81420-2012-F-0044-2).” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to John Moody, U.S. EPA Region 9. July 23, 2014.
39. “Re: FYI-USFWS to EPA FW: CWM’s Kettleman Hills Fence Realignment: Modification of Biological Opinion # 81420-2012-F-0044-2.” Email, Paul Turek, Chemical Waste Management, Inc. to John Moody, U.S. EPA Region 9. July 29, 2014.
40. “Re: CWM’s Kettleman Hills Fence Realignment: Modification of Biological Opinion # 81420-2012-F-0044-2.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to John Moody, U.S. EPA Region 9. July 30, 2014.
41. “Re: KHF Fence Survey- Take 2.” Email, Paul Turek, Chemical Waste Management, Inc. to John Moody, U.S. EPA Region 9. August 11, 2014. With Attachments: 1) “Chemical Waste Management, Inc. – Kettleman Hills Facility TSCA Permit Renewal. Biological Opinion – B18III Preconstruction Survey – Fence” Letter, Paul E. Turek, Chemical Waste Management, Inc. to John Moody, U.S. EPA, August 11, 2014; 2) Letter, Michael Bumgardner, Bumgardner Biological Consulting to Paul Turek, Chemical Waste Management, Inc. August 10, 2014; and 3) “New Perimeter Map, Kettleman Hills, California.” Golder Associates. No date.
42. “Re: KHF Fence Survey – Take 2.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to John Moody, U.S. EPA Region 9. August 18, 2014.
43. “Waste Management Letter to US EPA, dated August 11, 2014; USFWS Biological Opinion for Toxic Substances Control Act Permit Application for Chemical Waste Management's Kettleman Hill Facility (modification and expansion of PCB disposal Cell B-18), Kings County, California, dated August 15, 2012, as amended (2012BO).” Letter, John R. Moody, U.S. EPA to Paul E. Turek, Chemical Waste Management, Inc. August 21, 2014.
44. “KHF B-18 Stockpile Survey.” Email, Paul Turek, Chemical Waste Management, Inc. to John Moody, U.S. EPA Region 9. September 9, 2014. With Attachment: “Chemical Waste Management, Inc. – Kettleman Hills Facility TSCA Permit Renewal. Biological Opinion – B18III Preconstruction Survey – B-18 Stockpile.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to John Moody, U.S. EPA, September 9, 2014;with attachment: Letter, Michael Bumgardner, Bumgardner Biological Consulting to Paul Turek, Chemical Waste Management, Inc. September 8, 2014.



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45. “Re: Kettleman Pre-construction Survey, B-18 Soil Stockpile.” Email, John Moody, U.S. EPA to Paul Turek, Chemical Waste Management, Inc. September 23, 2014.
  46. “Re: Kettleman Pre-construction Survey, B-18 Soil Stockpile.” Email, Kevin Aceituno, U.S. Fish and Wildlife Service to John Moody, U.S. EPA Region 9. September 23, 2014.
  47. “KHF 81 Acre Survey.” Email, Paul Turek, Chemical Waste Management, Inc. to John Moody, U.S. EPA Region 9. October 13, 2014. With Attachment: “Chemical Waste Management, Inc. – Kettleman Hills Facility TSCA Permit Renewal. Biological Opinion – B18III Preconstruction Survey – 81 Acres.” Letter, Paul E. Turek, Chemical Waste Management, Inc. to John Moody, U.S. EPA, October 13, 2014. With attachment: Letter, Michael Bumgardner, Bumgardner Biological Consulting to Paul Turek, Chemical Waste Management, Inc. October 10, 2014.
  48. “EPA Response to CWM Letter Report, 10/10/14.” Email, John Moody, U.S. EPA to Paul Turek, Chemical Waste Management, Inc. October 27, 2014.
  49. “Waste Management Letter to US EPA, dated October 13, 2014; USFWS Biological Opinion for Toxic Substances Control Act Permit Application for Chemical Waste Management's Kettleman Hill Facility (modification and expansion of PCB disposal Cell B-18), Kings County, California, dated August 15, 2012, as amended (2012BO).” Letter, John R. Moody, U.S. EPA to Paul E. Turek, Chemical Waste Management, Inc. October 30, 2014.
  50. “Kettleman Hills PCB Approval Review – FWS Biological Opinion 81420-2012-F-0044” Letter, Sara Ziff, U.S. EPA, to Jennifer Norris, U.S. Fish and Wildlife Service to . October 11, 2018.
  51. “Kettleman Hills PCB Approval Review.” Letter, Patricia Cole, U.S. Fish and Wildlife Service to Sara Ziff, U.S. EPA Region 9. December 7, 2018.
  52. “Kettleman Hills PCB Permit Application Review – EPA Endangered Species Act Determination.” Memorandum, Sara Ziff, U.S. EPA to Frances Wicher, U.S. EPA Region 9. April 30, 2019.
  53. “Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.” Letter. Fish and Wildlife Service. April 30, 2019.
  54. “Kettleman Hills PCB Approval Review, EPA Endangered Species Act Determination.” Memorandum, Sara Ziff, U.S. EPA Region 9 to Frances Wicher, U.S. EPA Region 9. June 16, 2020. With Attachment: “Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.” Letter. Fish and Wildlife Service. June 16, 2020.



**APPENDIX J –  
CLEAN AIR ACT CONFORMITY APPLICABILITY ANALYSIS**

This Appendix documents the U.S. EPA analysis that no Clean Air Act general conformity determination is required for its TSCA Approval for the storage, treatment for disposal, and disposal of PCB waste at Chemical Waste Management, Inc.’s Kettleman Hills Facility.

### A. GENERAL CONFORMITY UNDER THE CLEAN AIR ACT

Section 176(c) of the Clean Air Act (CAA) [42 U.S.C. § 7506(b)] requires all federal agencies ensure their actions conform to states’ plans to attain and maintain the National Ambient Air Quality Standards (NAAQS). Conformity to a state’s air quality plan means that a federal activity will not cause new violations of the NAAQS, increase the frequency or severity of NAAQS violations, or delay timely attainment of the NAAQS or any interim milestone toward attainment. The conformity process ensures that emissions of air pollutants from planned federal activities would not affect the state’s ability to attain and maintain the NAAQS.

A general conformity determination is based on emissions from the federal action. Federal agencies must evaluate and address both direct and indirect emissions that are likely to occur from an action. More information on general conformity requirements can be found at <https://epa.gov/general-conformity>.

#### 1. GENERAL CONFORMITY RULES APPLICABLE TO THIS FEDERAL ACTION

U.S. EPA has adopted regulations at 40 C.F.R. Part 93, Subpart B to implement the CAA’s general conformity requirements. The requirements of Part 93, Subpart B apply in areas where U.S. EPA has not approved a state (or tribal) General Conformity rule. See 40 C.F.R. § 93.151. Where U.S. EPA has approved a state conformity rule, a conformity evaluation is governed by the approved state criteria and procedures. The federal conformity regulations apply only for the portions, if any, of the Part 93 requirements not contained in the state’s approved conformity rules.

The Kettleman Hills Facility is located in the jurisdictional boundaries of the San Joaquin Valley Air Pollution Control District (“SJVAPCD”). U.S. EPA approved the SJVAPCD’s general conformity rule, Rule 9110 (adopted October 20, 1994), on April 23, 1999 (64 FR 19916). Rule 9110 incorporates U.S. EPA’s 1993 general conformity regulations in 40 C.F.R. Part 51, Subpart W.<sup>1</sup> We have, therefore, followed Rule 9110 for the purposes of this conformity analysis except for the PM<sub>2.5</sub> analysis for which we used the provisions of 40 C.F.R. Part 93. Rule 9110

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<sup>1</sup> These regulations as promulgated in 1993 no longer exist. As required by CAA section 176(c)(4)(C), U.S. EPA promulgated general conformity regulations at 40 C.F.R. part 51, subpart W (58 FR 63214 (November 30, 1993)). These regulations required States to adopt and submit rules for general conformity and established the required contents of those rules. In the same rulemaking action, we also promulgated a federal general conformity regulation at 40 C.F.R. part 93, subpart B. In August 2005, Congress passed legislation which eliminated the requirement for States to adopt and submit general conformity rules. In response, we revised our regulations to make State general conformity rules optional by removing all of subpart W except for § 51.851. Section 51.851 lists requirements for State general conformity regulations for those States that choose to develop and submit such rules. See 75 FR 17272, 17256 (April 5, 2010).



does not contain requirements for the PM<sub>2.5</sub> NAAQS.<sup>2</sup> We note, however, that the requirements of Rule 9110 and Part 93 are otherwise almost identical.

## B. GENERAL CONFORMITY APPLICABILITY ANALYSIS

The first step in the general conformity process is to determine if there is a federal action that requires a general conformity determination under Rule 9110 and 40 C.F.R. Part 93, Subpart B. This is the “applicability analysis” as defined in 40 C.F.R. § 93.152<sup>3</sup> and contemplated by Rule 9011 § 51.853 and 40 C.F.R. § 93.153.

General conformity applies to a “federal action” which is defined in Rule 9110 § 51.852 and 40 C.F.R. § 93.152 as any activity (except for certain transportation plans, programs, and projects) that is engaged in, supported in any way, provided financial assistance, licensed, permitted, or approved by a federal agency, department or instrumentality. The definition of “federal action” also states that where the federal action is a permit, license, or other approval for some aspect of a non-federal undertaking, the relevant activity is the part, portion, or phase of the non-federal undertaking that requires the federal permit, license, or approval.

In the TSCA Approval for the Kettleman Hills Facility, U.S. EPA is approving or requiring the following activities:

- storage and treatment for disposal of TSCA-regulated PCB Waste at the PCB Flushing/Storage Unit;
- disposal of certain TSCA-regulated PCB Waste in Landfill Unit B-18;
- eventual closure and implementation of post-closure care of Landfill Unit B-18;
- eventual closure of the PCB Flushing/Storage Unit (“PCB F/SU”);
- continuation of post-closure care of Landfill Units B-14, B-16, and B-19; and
- various supporting activities (groundwater, leachate, and ambient air quality monitoring; inspections, recordkeeping and reporting, training, etc.)

The activities listed in the last four bullets above (closure, post-closure care, and supporting activities) would take place whether or not U.S. EPA issued the Approval because they are existing requirements of the Facility’s State RCRA permit. Because the activities do not need federal approval, they are not part of the federal action for the purposes of this general conformity applicability analysis and any emission generated by these activities are not included in calculating emissions from the federal action. Therefore, the “federal action” for the this general conformity

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<sup>2</sup> The first PM<sub>2.5</sub> NAAQS was promulgated in 1997 (62 FR 38652 (July 18, 1997)), three years after the adoption of Rule 9011.

<sup>3</sup> This definition is not included in Rule 9110. It was added to Part 93 in 2010 to describe the process of determining if a conformity determination must be conducted for a federal action.



applicability analysis is the approval of storage and treatment for disposal of TSCA-regulated PCB waste at the PCB F/SU and disposal of certain TSCA-regulated PCB Waste in Landfill Unit B-18.

The general conformity applicability analysis addresses three questions in regards to the federal action:

- Does the federal action take place in an area that is designated nonattainment or maintenance for a NAAQS?
  - If no, the action is not subject to a general conformity determination under Rule 9110 § 51.853(b) or 40 C.F.R. § 93.153(b).
- Is the federal action (or portion thereof) a specific type of federal action exempt from general conformity under Rule 9110 § 51.853(a), (c)(2)-(4), (d), or (e) or 40 C.F.R. § 93.153(a), (c)(2)-(4), (d), or (e) or presumed to conform under Rule 9110 § 51.853(f) or § 93.153(f)?
  - If yes, the action is not subject to a general conformity determination.
- Do the potential direct and indirect emissions attributable to the federal action exceed the applicable de minimis levels?
  - If no, the action is not subject to a general conformity determination under Rule 9110 § 51.853(c)(1) or § 93.153(c)(1). However, under Rule 9011, if the emissions represent 10 percent or more of a nonattainment or maintenance area's total emissions of that pollutant then a general conformity determination is required under Rule 9011 § 51.853(i).<sup>4</sup>

We apply each of these questions to our federal action for the Kettleman Hills Facility.

**1. DOES THE FEDERAL ACTION TAKE PLACE IN A NONATTAINMENT OR MAINTENANCE AREA?**

Yes. The Kettleman Hills Facility is located in Kings County which is part of the San Joaquin Air Basin. The San Joaquin Valley Air Basin is currently designated as nonattainment and classified as extreme for all ozone NAAQS, designated nonattainment and classified as serious for all fine particulate matter (PM<sub>2.5</sub>) NAAQS and designated as a maintenance area for coarse particulate matter (PM<sub>10</sub>) NAAQS [40 C.F.R. § 81.305].

**2. IS THE FEDERAL ACTION OR PORTION OF THE ACTION EXEMPT FROM GENERAL CONFORMITY?**

The General Conformity applicability requirements in Rule 9110 § 51.853 and 40 C.F.R. § 93.153 lists several types of projects that are exempted from the requirement for a general conformity determination. The most germane exemption for this general conformity determination is in

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<sup>4</sup> There is no equivalent to this Rule 9110 § 51.853(i) requirement in the part 93 regulation; therefore, this requirement does not apply for PM<sub>2.5</sub> and its unique precursors (i.e., SO<sub>x</sub>).



40 C.F.R. § 93.153(c)(ii)/Rule 9011 § 51.853(c)(2)(ii) which addresses continuing and recurring activities such as permit renewals where activities conducted will be similar in scope and operation to activities currently being conducted. The action for the Kettleman Hills Facility includes approval of both continuing and new activities, therefore, some portions of the Approval can be exempted from this general conformity applicability. However, we have chosen to include emissions from both continuing and new activities in this applicability analysis to be conservative in our estimate of potential emissions.

### **3. DO THE POTENTIAL EMISSIONS FROM THE FEDERAL ACTION EXCEED THE APPLICABLE DE MINIMIS THRESHOLDS?**

A conformity determination is not required for a federal action if the total of direct and indirect emissions of a relevant pollutant or precursor pollutant is less than the de minimis levels in Rule 9110 § 51.853(c)(1) and § 93.153(c)(1). Under general conformity, the attainment designations and classifications of the area in which the federal action takes place establish which pollutants and precursor must be analyzed and the de minimis emission levels for each pollutant. We have listed these pollutants and levels for the San Joaquin Valley in Table J-1.

Rule 9110 subjects any otherwise exempt federal actions whose emissions are 10 percent or great of the nonattainment or maintenance area's total emissions to a general conformity determination. We have listed these pollutants and levels for the San Joaquin Valley in Table J-2.<sup>5</sup>

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<sup>5</sup> U.S. EPA removed this requirement from the federal conformity regulations because its thresholds in most cases were greatly in excess of the de minimis thresholds and therefore unlikely to ever trigger by itself a conformity determination. See 75 FR 17254, 17264.





**TABLE J-1**  
**POLLUTANTS AND SIGNIFICANCE LEVELS BY NAAQS FOR THE SAN JOAQUIN VALLEY**

NAAQS	Pollutant to Be Analyzed	Significance Level
Ozone – extreme area	VOC and NO <sub>x</sub>	10 tons per year
PM <sub>2.5</sub> – serious area	Direct PM <sub>2.5</sub> ; SO <sub>x</sub> , NO <sub>x</sub> , VOC, and Ammonia	70 tons per year
PM <sub>10</sub> – maintenance area	Direct PM <sub>10</sub>	100 tons per year

Source: Ozone and PM<sub>10</sub>: Rule 9110, § 51.853(b)(1) & (2); PM<sub>2.5</sub>: 40 C.F.R. § 93.153(b)(1)

**TABLE J-2**  
**TEN PERCENT OF REGIONAL EMISSIONS LEVELS**

		NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	NH <sub>3</sub>	
1	Total regional emissions ( <i>tons per day</i> )	214	298	N/A	265	--	460	Table 1. Note 1
2	10% of regional emissions ( <i>tons per day</i> )	21.4	29.8	N/A	26.5	--	4.60	Line 1 *0.10
3	10% of regional emissions ( <i>tons per year</i> )	7,811	10,877	N/A	9,673	--	1,679	Line 2*365

<sup>1</sup> Values retrieved from CARB’s CEPAM data base (<https://www.arb.ca.gov/app/emsv/fcemssumcat/fcemssumcat2016.php>) on April 11, 2019 and represent average annual day emissions for the San Joaquin Valley air basin for the year 2019 [U.S. EPA 2019]. To derive annual emissions, multiply average annual day figure by 365.

To analyze if the Kettleman Hills Facility’s TSCA Approval is exempt from a general conformity determination, we have calculated the total direct and indirect emissions that could be emitted as a consequence of a final approval.

“Total direct and indirect emissions” is defined as:<sup>6</sup>

[T]he sum of direct and indirect emissions increases and decreases caused by the federal action; i.e., the “net” emissions considering all direct and indirect emissions. The portion of emissions which are exempt or presumed to conform under section 51.853, paragraphs (c), (d), (e), and (f) [§ 93.153(c), (d), (e), or (f)] are not included in the “total of direct and indirect emissions.” The “total of direct and indirect

<sup>6</sup> Definitions can be found at 40 C.F.R. § 93.152 and Rule 9110 § 51.852.



emissions” includes emissions of criteria pollutants and emissions of precursors of criteria pollutants.

Direct emissions are caused or initiated by the federal action itself and occur at the same time and place as the action, such as the emissions from the construction or operation of a facility. Indirect emissions are also caused or initiated by the federal action but are removed from the action in either time or space. For indirect emissions, the emissions must be of the type that “the agency can practically control” and for which “the agency has continuing program responsibility.” A continuing program responsibility means that the agency has an oversight role over the activities generating the emissions or has the ability to limit the emissions. For example, an agency would have the ability to limit the emissions by specifying requirements or by conditioning a permit. In addition, indirect emissions that are already accounted for in a transportation conformity determination need not be included in a general conformity determination.

“Caused by,” as used in the both the definitions for direct and indirect emissions, means emissions that would not otherwise occur in the absence of the federal action. Under Ruel 9110 and the general conformity regulations, both direct and indirect emissions have to be reasonably foreseeable, meaning that the emissions can be estimated based on acceptable techniques using reasonable assumptions about the type and quantity of equipment used.

Only the net change in emissions between the previous allowed operations and the new allowed operations need to be including in determining total direct and indirect emissions. The Kettleman Hills Facility currently operates under TSCA approvals that allow storage and some types of treatment of PCB waste at the PCB Flushing/Storage Unit and disposal of PCB waste in Landfill B-18 Phases I and II. However, to be conservative in our potential emission estimates, we have not distinguished between existing and new operations and have used the historical rate at which PCB waste is accepted at the Kettleman Hills Facility.

Emissions from truck traffic and employee commute traffic to and from the Facility are not included in this general conformity applicability analysis. These emissions are included in the transportation conformity analysis for Kings County regional transportation plan and most recent transportation improvement program prepared by the Kings County Association of Governments [KCAG 2019] This plan and program have been found to conform to the applicable SIP pursuant to 40 C.F.R. Part 93, Subpart A [KCAG 2018].

***a. EMISSIONS FROM PCB FLUSHING/STORAGE UNIT OPERATIONS***

The Approval limits the amount of PCB waste that may be stored at the PCB Flushing/Storage Unit at any one time, but does not limit the rate at which PCB waste may be brought to or from the unit or the rate at which operations occur at the Unit. To identify potential emissions, U.S. EPA reviewed historical operations at the Unit as indicated in the PCB Annual Reports filed by the Facility to identify the types of PCB waste likely to be stored at the PCB F/SU and the maximum rate at which each type of waste is received and stored at the unit. These values are given in Table J-3. We then used the maximum rate to calculate potential emissions. Potential sources of



emissions at PCB F/SU are on-site truck traffic to and from the PCB F/SU and use of utility equipment (e.g., forklifts) there. Evaporative emissions from operations at the unit are likely to be negligible given the very low vapor pressure of PCBs and the Approval requirements to prevent evaporative emissions (e.g., closed containers, carbon filter on tank).

For these calculations, we assumed that each article, item, or container is delivered to the PCB F/SU on a heavy-duty diesel truck by itself (that is, one truck trip per article, item or container) for a total of 122 trips per year and that the each truck travels round trip on the Facility's dirt roads for a total of 1.5 miles (from the entry racks to the PCB F/SU and return). These calculations are conservative (that is, higher than will likely occur) given it is very unlikely that a PCB item such as a container, which is most commonly a 55-gallon drum, would arrive at or leave the PCB F/SU on a truck by itself. They are also conservative because some of these operations are already allowed by the existing Approvals. Emission factors for truck emissions and unpaved road emissions are taken from Tables B-6 and B-7 in Shaw 2008.

Emissions-generating equipment used at the PCB F/SU are a 2015 model year diesel fork lift which is used on average less than 1 hour per day [CWM 2019a; CWM 2019b]. The annual emission rate for this piece of equipment was calculated using California Air Resource Board's 2017 Off-road diesel emission factors spreadsheet found at <https://ww3.arb.ca.gov/msei/ordiesel.htm>.

Based on this information and the assumptions discussed above, we estimated annual emissions from the PCB operations at the PCB F/SU. See Table J-4.

**TABLE J-3**  
**PCB ITEMS STORED AT THE PCB FLUSHING/STORAGE UNIT – KETTLEMAN HILLS FACILITY**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Max
<b>Voltage Capacitor</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>Transformer</b>	8	1	1	0	0	0	0	0	0	0	0	8
<b>Container</b>	108	94	35	59	56	25	45	21	110	41	31	110
<b>Article</b>	0	0	0	4	0	1	0	0	0	0	0	4
<b>Total</b>	116	95	36	63	56	26	45	21	110	41	31	122

Source: CMW 2008-2018a



**TABLE J-4**  
**ESTIMATED EMISSIONS FROM PCB OPERATIONS AT PCB FLUSHING/STORAGE UNIT – KETTLEMAN HILLS FACILITY**

Landfill B-18 Operations	Units	NO <sub>x</sub>	VOC <sup>1</sup>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO	Source/Comments
1 traffic - diesel truck	tons/yr	0.0038	0.0003	0.0000	0.0002	0.0002	0.0012	Table J-4a
2 traffic – road travel fugitive dust	tons/yr	—	—	—	0.0183	0.0038	—	Table J-4a
3 PCB F/SU operations (forklift) <sup>2</sup>	tons/yr	0.0131	0.0006	—	0.0002	0.0002	—	U.S. EPA 2019
4 total PCB F/SU operations emissions	tons/yr	0.0169	0.0009	—	0.0187	0.00622	—	sum of rows 1 to 3

<sup>1</sup> For the purposes of this analysis, ROC (reactive organic gases) and THC (total hydrocarbons) will be considered the same as VOC.

2. Emission calculations assume a 4-year old 2015 model year, 59-hp diesel-powered fork lifts used 1 hour per operational day for a total of 260 hours per year [CWM 2019a and 2019c].



***b. EMISSIONS FROM THE PCB OPERATIONS AT THE LANDFILL B-18***

The final Approval increases the total disposal capacity in Landfill B-18 but does not limit the daily, monthly, or annual rate at which PCB waste may be disposed. Disposal rates for Landfill B-18 are limited by conditions of the Kettleman Hills Facility's air permit at 7,200 cubic yards of waste per day [SJVAPCD Permit to Operate C-283-11-8, condition 18]. In addition, daily cover is limited to 1,800 cubic yards per day and total exposed area for waste disposal is limited to 0.64 acres at any one time [SJVAPCD Permit to Operate C-283-11-8, conditions 19 and 26].

For the purposes of this general conformity applicability determination, we calculated potential emissions from operations of Landfill B-18 attributable to the Approval to be proportional to the percentage of total waste disposed on in Landfill B-18 that is PCB waste. Based on available information, TSCA-regulated PCB waste accounts for 5 percent of the total annual waste disposed of in Landfill B-18 [CWM 2018b]. Using this figure, we can contribute 5 percent of annual operational emissions from Landfill B-18.

To estimate emissions from Landfill B-18, we used emission factors and certain assumptions from "Air Quality Technical Analysis, Kettleman Hills Facility B-18/B-20 Landfill Disposal Project," Shaw Environmental, Inc., November 2007 [Shaw 2008] in Appendix F to the "Draft Subsequent Environmental Impact Report," CH2MHill, March 2008. Specifically, we used the Analysis' emission factors for diesel emissions for heavy duty diesel trucks delivering waste to the Landfill and emission factors for fugitive dust from on-site travel on paved and unpaved roads by these trucks to and from the Landfill (see Tables I-5a and I-5b below). We also used information on trip length and truck weight and load information from the Analysis. We, however, used a higher number of truck trips than assumed in the Analysis. Using the maximum allowed waste disposal rate of 7,200 cubic yards (equivalent to 8000 tons) from the Kettleman Hills Facility's air permit, we calculated the maximum number of truck trips for all types of waste disposal to Landfill B-18 at 400 per day (20 tons per truck trip).

Based on this information and the assumptions discussed above, we estimated annual emissions from the PCB operations at Landfill B-18. See Table J-5.



**TABLE J-5**  
**ESTIMATED EMISSIONS FROM PCB OPERATIONS AT LANDFILL B-18 – KETTLEMAN HILLS FACILITY**

Landfill B-18 Operations	Units	NO <sub>x</sub>	VOC <sup>1</sup>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO	Source/Comments
<b>1</b> waste placement- diesel equipment <sup>2</sup>	lbs/day	149.32	13.79	0.15	8.54	8.54	70.78	table B1 <sup>3</sup> (emissions lbs/day)
<b>2</b> waste placement - landfill surface fugitive dust	lbs/day	—	—	—	1.19	0.595	—	table B2 <sup>3</sup> (controlled emissions lbs/day)
<b>3</b> waste placement – earthmoving fugitive dust	lbs/day	—	—	—	45.94	21.7	—	table B2 <sup>3</sup> (controlled emissions lbs/day)
<b>4</b> traffic - diesel truck	lbs/day	39.12	3.09	0.04	1.87	1.68	11.98	Table J-5a – row 4
<b>5</b> traffic – road travel fugitive dust	lbs/day	—	—	—	104.04	21.85	—	Table J-5b – row 8
<b>6</b> total Landfill B-18 operations emissions	lbs/day	188.44	16.88	0.19	161.58	54.37	82.76	sum of rows 1 to 5
<b>7</b> Total Landfill B-18 operations annual emissions – all waste	tons/year	24.50	2.19	0.02	21.01	7.07	10.8	calculated as row 6 x 260 days per year (5 days/week, 52 weeks/year)/2000 lbs/ton
<b>8</b> Landfill B-18 operations annual emissions – PCB Waste	tons/year	1.22	0.11	0.00	1.05	0.35	0.5	calculated as row 7 x 5%

<sup>1</sup> For the purposes of this analysis, ROC (reactive organic gases) will be considered the same as VOC.

<sup>2</sup> For the purposes of this analysis, PM<sub>2.5</sub> emissions from diesel equipment used to place waste will be considered equivalent to PM<sub>10</sub> emissions from this diesel equipment.

<sup>3</sup> Shaw 2007.



**TABLE J-5A**  
**ESTIMATED DIESEL EMISSIONS FROM TRUCK TRAFFIC TO LANDFILL B-18 – KETTLEMAN HILLS FACILITY**

	<b>Landfill Operations</b>	<b>Units</b>	<b>NO<sub>x</sub></b>	<b>VOC<sup>1</sup></b>	<b>SO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>CO</b>	<b>Source/Comments</b>
<b>1</b>	heavy duty diesel trucks - diesel emissions	lbs/mile	0.0418	0.0033	0.00004	0.002	0.0018	0.0128	table B5 <sup>2</sup>
<b>2</b>	number of miles per trip	miles	2.34	2.34	2.34	2.34	2.34	2.34	table B5 <sup>2</sup>
<b>3</b>	number of trips	Trips/day	400	400	400	400	400	400	8000 tons per day max/20 tons per truck (table B6) <sup>2</sup>
<b>4</b>	traffic - diesel emissions	lbs/day	39.12	3.09	0.04	1.87	1.68	11.98	calculated as row 1 x row 2 x row 3

<sup>1</sup> For the purposes of this analysis, ROC (reactive organic gases) will be considered the same as VOC.

<sup>2</sup> Shaw 2007.



**TABLE J-5B**  
**ESTIMATED FUGITIVE DUST EMISSIONS FROM TRUCK TRAFFIC TO LANDFILL B-18 – KETTLEMAN HILLS FACILITY**

	Units	NO <sub>x</sub>	VOC <sup>1</sup>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO	Source/Comments
<b>1</b> heavy duty diesel trucks - fugitive dust paved road emission factor	lbs/mile	—	—	—	0.065	0.0136 5	—	table B6 <sup>2</sup> paved road emission factor, 90% control factor, PM <sub>2.5</sub> fraction of PM <sub>10</sub> is 21%
<b>2</b> heavy duty diesel trucks - fugitive dust unpaved road emission factor	lbs/mile	—	—	—	0.2	0.042	—	table B6 <sup>20</sup> unpaved road emission factor, 90% control factor, PM <sub>2.5</sub> fraction of PM <sub>10</sub> is 21%
<b>3</b> number of miles per trip - paved road	Miles	—	—	—	1.54	1.54	—	table B5 <sup>2</sup>
<b>4</b> number of miles per trip - unpaved road	Miles	—	—	—	0.8	0.8	—	table B5 <sup>2</sup>
<b>5</b> number of trips	trips/ day	—	—	—	400	400	—	8000 tons per day max/20 tons per truck (table B6) <sup>2</sup>
<b>6</b> traffic - paved road emissions	lbs/day	—	—	—	40.04	8.41	—	calculated as row 1 x row 3 x row 5
<b>7</b> traffic - unpaved road emissions	lbs/day	—	—	—	64	13.44	—	calculated as row 2 x row 4 x row 5
<b>8</b> total road fugitive dust emissions	lbs/day	—	—	—	104.04	21.85	—	calculated as sum of rows 6 and 7

<sup>1</sup> For the purposes of this analysis, ROC (reactive organic gases) will be considered the same as VOC.

<sup>2</sup> Shaw 2007





**c. CONCLUSION**

To analyze if the Kettleman Hills Facility’s TSCA Approval is exempt from a general conformity determination, we conservatively estimated the emissions that could be emitted as a consequence of a final approval. As shown in Table J-6, total estimated emissions are well below the applicable de minimis emissions thresholds. In addition, Rule 9110 subjects any otherwise exempt federal project whose emissions are 10 percent or greater of the nonattainment or maintenance area’s total emissions to a general conformity determination. Total emissions from the Approval are also well below 10 percent of the San Joaquin Valley air basin’s total emission inventories. Based on our emission calculations, U.S. EPA’s TSCA Approval for Chemical Waste Management, Inc.’s Kettleman Hills Facility is exempt from a conformity determination under CAA section 176(c), Rule 9110, and 90 C.F.R. Part 93, Subpart B.

**TABLE J-6**  
**ESTIMATED EMISSIONS FROM PCB OPERATIONS COMPARED TO APPLICABLE DE MINIMIS LEVELS – KETTLEMAN HILLS FACILITY**

		NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO	
		<i>tons per year</i>						
<b>1</b>	PCB F/SU operations	0.017	0.007	—	0.019	0.006	—	Table J-4, row
<b>2</b>	Landfill B-18 PCB waste operations	1.22	0.11	0.00	1.05	0.35	0.5	Table J-5, row 8
<b>3</b>	Total PCB operations	1.237	0.117	0.00	1.069	0.356	0.5	Sum of lines 1 and 2
<b>4</b>	De minimis level	10	10	70	100	70	100	Table J-2A, using lowest de minimis value
<b>5</b>	Above de minimis level?	No	No	No	No	No	No	Line 3 divided by line 4
<b>7</b>	10% of regional emissions	7,811	10,877	N/A	9,673	N/A	1,679	Table J-2, row 3
<b>9</b>	Above 10% of regional emissions?	No	No	N/A	No	N/A	No	
<b>10</b>	Subject to general conformity determination?	No	No	No	No	No	No	



**Referenced Documents for Appendix J:**

- CWM 2008 “Chemical Waste Management, Inc. Kettleman Hills Facility CAT 000 646 117 Revised 2007 PCB Annual Report.” Letter, Tracy Reddick, CWM to Regional Administrator, U.S. EPA Region 9. August 4, 2008.
- CWM 2009 “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 117 2008 PCB Annual Report.” Letter, Tracy Reddick, CWM to Regional Administrator, U.S. EPA Region 9. July 15, 2009.
- CWM 2010 “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 117 2009 PCB Annual Report.” Letter, Tracy Reddick, CWM to Regional Administrator, U.S. EPA Region 9. July 8, 2010.
- CWM 2011 “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 117 2010 PCB Annual Report.” Letter, Tracy Reddick, CWM to Regional Administrator, U.S. EPA Region 9. July 13, 2011.
- CWM 2012 “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 117 2011 PCB Annual Report.” Letter, Tracy Reddick, CWM to Regional Administrator, U.S. EPA Region 9. July 6, 2012.
- CWM 2013 “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 117 2012 PCB Annual Report.” Letter, Tracy Reddick, CWM to Regional Administrator, U.S. EPA Region 9. July 8, 2013.
- CWM 2014 “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 117 2013 PCB Annual Report.” Letter, Tracy Reddick, CWM to Regional Administrator, U.S. EPA Region 9. July 9, 2014.
- CWM 2015 “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 117 2014 PCB Annual Report.” Letter, Tracy Reddick, CWM to Regional Administrator, U.S. EPA Region 9. July 8, 2015.
- CWM 2016 “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 117 2015 PCB Annual Report.” Letter, Tracy Reddick, CWM to Regional Administrator, U.S. EPA Region 9. July 20, 2016.
- CWM 2017 “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 117 2016 PCB Annual Report.” Letter, Tracy Reddick, CWM to Regional Administrator, U.S. EPA Region 9. July 5, 2017.
- CWM 2018a “Chemical Waste Management, Inc., (CWMI)-Kettleman Hills Facility (KHF) CAT 000 646 117 2017 PCB Annual Report.” Letter, Tracy Reddick, CWM to Regional Administrator, U.S. EPA Region 9. July 9, 2018.
- CWM 2018b “Business Confidential - Percentage TSCA Disposal to Total Disposal 2002-2017.” Chemical Waste Management, Inc. October 2, 2019.



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CWM 2019a	“CWM-KHF Information Request.” Email, Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. July 15, 2019.
CWM 2019b	“Re: CWM-KHF Information Request.” Email, Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. July 18, 2019.
KCCOG 2018	“In the Matter of Adopting the 2018 Regional Transportation Plan/Sustainable transportation Plan/Sustainable Communities Strategy, 2019 Federal Transportation Improvement Program, and Corresponding Air Quality Conformity Analysis. Resolution No. 18-12. Kings County Association of Governments Transportation Policy Committee. August 22, 2018.
KCCOG 2019	“Re: truck and commute traffic to and from Kettleman Hills Waste Disposal Facility.” Email, Christopher Xiong, Kings County Association of Governments to Frances Wicher, U.S. EPA, Region IX. January 28, 2019.
SJVAPCD 1994	“Rule 9110 General Conformity.” San Joaquin Valley Air Pollution Control District. October 20, 1994.
SJVAPCD 2016	“Permit to Operate C-283--0-3.” San Joaquin Valley Air Pollution Control District. Expiration Date: August 31, 2022.
Shaw 2007	“Air Quality Technical Analysis, Kettleman Hills Facility B-18/B-20 Landfill Disposal Project,” Shaw Environmental, Inc., November 2007 [Appendix F to the “Draft Subsequent Environmental Impact Report,” CH2MHill, March 2008].
U.S. EPA 2019a	“San Joaquin Valley Air Basin, Annual Average Day Emissions 2019.” U.S. EPA Region 9. April 11, 2019. Data obtained from CARB CEPAM.
U.S. EPA 2019b	“U.S. EPA calculation of emissions from diesel-powered fork lift used at the PCB F/SU at KHF” U.S. EPA Region 8, July 19, 2019.
U.S. EPA 2019c	“July 3, 2019 Call with Chemical Waste Management, Inc. Kettleman Hills Facility.” Memorandum, Frances Wicher, U.S. EPA to File (CAT 000 646 117 Chemical Waste Management, Inc. TSCA Approval). July 24, 2019.



**APPENDIX K –  
RESPONSE TO COMMENTS DOCUMENT**

# RESPONSE TO COMMENTS DOCUMENT

## Final Approval

### Toxic Substances Control Act Polychlorinated Biphenyls (PCB) Commercial Storage Facility and Chemical Waste Landfill

#### Chemical Waste Management, Inc. Kettleman Hills Facility

Kings County, California

U.S. EPA ID: CAT 000 646 117



July 29, 2020

Land, Chemicals & Redevelopment Division  
U.S. Environmental Protection Agency Region 9  
San Francisco, California



For more information on this Response to Comments Document, please contact

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U.S. Environmental Protection Agency Region 9  
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**RESPONSE TO COMMENTS DOCUMENT****APPROVAL  
TOXIC SUBSTANCES CONTROL ACT  
PCB COMMERCIAL STORAGE FACILITY AND CHEMICAL WASTE LANDFILL  
CHEMICAL WASTE MANAGEMENT, INC. — KETTLEMAN HILLS FACILITY  
KINGS COUNTY, CALIFORNIA  
U.S. EPA ID: CAT 000 646 117****TABLE OF CONTENTS**

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**ACRONYMS, ABBREVIATIONS, AND FREQUENTLY CITED DOCUMENTS**

AAMP	Ambient Air Monitoring Program
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CBDMP	California Birth Defects Monitoring Program
CDPH	California Department of Public Health
C.F.R.	Code of Federal Regulations
COC	Constituents of concern
CWM	Chemical Waste Management, Inc.
DTSC	California Department of Toxic Substances Control
KHF	Kettleman Hills Facility
LCRS	Leachate collection and removal systems
PM <sub>2.5</sub>	Particulate matter less than 2.5 microns in diameter
PM <sub>10</sub>	Particulate matter less than 10 microns in diameter
PCB or PCBs	Polychlorinated biphenyls
PCB F/SU	PCB Flushing and Storage Unit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
RWQCB	Central Valley Regional Water Quality Control Board
SB	Statement of Basis
TSCA	Federal Toxic Substances Control Act
U.S. EPA	United States Environmental Protection Agency

*Draft EJ Analysis:* “Environmental Justice Analysis – Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County, California, U.S. EPA ID: CAT 000 646 117.” Land, Chemicals, and Revitalization Division, U.S. EPA Region 9. August 19, 2019 [U.S. EPA 2019d].

*Approval:* “Approval, Toxic Substances Control Act PCB Commercial Storage Facility and Chemical Waste Landfill, Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County, California.” U.S. EPA Region 9. [July 29, 2020].

*PCB Regulations:* U.S. EPA’s regulations at 40 C.F.R. Part 761 that implement the PCB program under TSCA.





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*Proposed Approval:* “Proposed Approval, Toxic Substances Control Act PCB Commercial Storage Facility and Chemical Waste Landfill, Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County, California.” U.S. EPA Region 9. August 27, 2019 [U.S. EPA 2019b].

*Renewal Application:* “TSCA Permit Renewal Application, Chemical Waste Management, Kettleman Hills Facility.” Chemical Waste Management, Inc. Revisions 4: November 22, 2019 [CWM 2019d].

*Statement of Basis:* “Statement of Basis – Approval Toxic Substance Control Act Polychlorinated Biphenyls (PCBs) Commercial Storage Facility and Chemical Waste Landfill, Chemical Waste Management, Inc. Kettleman Hills Facility, Kings County, California, U.S. EPA ID: CAT 000 646 117.” Land, Chemicals & Redevelopment Division, U.S. EPA Region 9. July 29, 2020.



## I. INTRODUCTION

On August 27, 2019, U.S. EPA proposed to issue an approval<sup>1</sup> to Chemical Waste Management, Inc. (“CWM”) for the storage, treatment for disposal, and disposal of polychlorinated biphenyls (“PCB”) waste at CWM’s Kettleman Hills Facility (“KHF”), located in Kings County, California. To support the proposed Approval, we prepared a Statement of Basis [U.S.EPA 2019c] and a draft Environmental Justice Analysis. We encouraged the public to comment on all aspects of the proposed Approval and its supporting determinations and analyses. Public comments were accepted through Friday, November 22, 2019. We also held a public meeting on the proposed Approval on October 10, 2019 and a public hearing on November 14, 2019, both in Kettleman City. We invited written and spoken comments at both the meeting and hearing.

In response to the proposed Approval, we received 14 written comment letters, emails, or cards. Nine individuals provided spoken comments during the public hearing on November 14, 2019. Section II lists these comment letters/emails/cards and speakers. The written comments and the public hearing transcript are included in the administrative record for the Approval and are posted on Regulations.gov [docket number EPA-R09-RCRA-2019-0088]. U.S. EPA thanks everyone who provided comments on the proposed Approval, spoke at the public hearing, and/or attended the public meeting and hearing.

In this document, U.S. EPA has provided written responses to all comments received. The comments received have been divided into six categories: 1) general comments in support of or in opposition to the proposed Approval; 2) comments on specific proposed Approval conditions; 3) comments on the KHF’s compliance record; 4) comments on the KHF’s environmental impacts and risks; 5) comments on the draft Environmental Justice Analysis; and 6) other comments.

U.S. EPA has summarized each comment received before providing a response. The source of comment is identified in the brackets that follow the summarized comment. We have included copies of the comment letters, emails and cards and the transcripts with the individual comments numbered at the end of this Response to Comments document.

Copies of the Approval, the Statement of Basis and its appendices, the Environmental Justice Analysis with its updates and revisions document, the application submitted by Chemical Waste Management, Inc., and other key documents can be found on U.S. EPA’s Kettleman Hills project website at <https://www.epa.gov/kettleman>; on [www.regulations.gov](http://www.regulations.gov) [docket number EPA-R09-RCRA-2019-0088]; and from the Kettleman Hills Project Manager listed below. A hard copy of the Approval, this Statement of Basis (including the Environmental Justice Analysis), and the application can be found at:

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<sup>1</sup> Under the TSCA PCB regulations, U.S. EPA issues an “approval” for PCB operations. A TSCA approval, however, is functional equivalent to a “permit” as that term is used in many other regulatory programs. In this document, we use both terms – “approval” and “permit” – interchangeably.



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104 Becky Pease Street  
Kettleman City, CA 93239  
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Note: Availability of final permit documents at the public repository may be delayed due to COVID-10 related restrictions.

Additional information about the Approval and Statement of Basis can be obtained from:

Frances Wicher, Kettleman Hills Project Manager  
Permits Office, Land, Chemicals & Redevelopment Division (LND-4-2)  
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Información en español sobre la Aprobación y la Declaración de Bases se puede obtener por medio de:

Soledad Calvino  
U.S. Environmental Protection Agency Region 9  
Office: 415-972-3512  
Email: [calvino.maria@epa.gov](mailto:calvino.maria@epa.gov)

## II. LIST OF COMMENTS RECEIVED

1. “Comment Card for U.S. EPA Proposed PCB Permit for the Kettleman Hills Facility.” Anonymous. September 18, 2019. [Anon1]
2. “Comment Card for U.S. EPA Proposed PCB Permit for the Kettleman Hills Facility.” Anonymous. September 18, 2019. [Anon2]
3. “Comment Card for U.S. EPA’s Proposed PCB Permit for the Kettleman Hills Facility (Received at October 10, 2019 Public Meeting).” Anonymous. October 10, 2019. [Anon3]
4. Letter, Silvia Maldonado, Chairperson, Kettleman City Community Service District to Frances Wicher, U.S. EPA Region 9. October 15, 2019. [KCCSD]
5. Letter, Shauna Haines to Permits Office, U.S. EPA Region 9. October 20, 2019. [Haines]



6. Letter, Kathy Labriola to Permits Office, U.S. EPA Region 9. October 21, 2019. [Labriola]
7. “Re: Kettleman City PCB Permit.” Email, Maricela Mares-Alatorre of behalf of El Pueblo Para el Aire y Agua Limpia de Kettleman City to Michael B Stoker, et al., U.S. EPA Region 9. November 12, 2019. [El Pueblo Email]
8. Letter, Teresa Paris to Permits Office, U.S. EPA Region 9. November 20, 2019. [Paris]
9. Letter, Mark Wieder to Permits Office, U.S. EPA Region 9. No date. [Wieder]
10. Public comment received on Regulations.gov on November 22, 2019. [Anon4]
11. “Comments on Kettleman Hills Proposed PCB Permit Application Approval.” Letter, Mariah C. Thompson, California Rural Legal Assistance, Inc. to Frances Wicher, U.S. EPA Region 9. November 22, 2019. [CRLA]
12. “Comments Regarding PCB Permit for Kettleman Hills Facility.” Email, James Dowdall to Frances Wicher, U.S. EPA Region 9. November 22, 2019. [Dowdall]
13. “Comments of Greenaction for Health and Environmental Justice and El Pueblo Para el Aire y Agua Limpia/People for Clean Air and Water in Opposition to Draft PCB Permit Renewal for the Chemical Waste Management Kettleman Hills Facility.” Letter, Maricela Mares Alatorre, El Pueblo and Miguel Alatorre and Bradley Angel, Greenaction to Frances Wicher, U.S. EPA Region 9. November 22, 2019. [El Pueblo]
14. “Chemical Waste Management, Inc. – Kettleman Hills Facility Comments – Proposed Commercial Storage Facility and Chemical Waste Landfill Facility: Chemical Waste Management, Inc., U.S. EPA ID Number: CAT 000646 117.” Letter, Reyna Verdin, Chemical Waste Management, Inc. to Frances Wicher, U.S. EPA Region 9. November 22, 2019. [CWM]
15. Bradley Angel, Greenaction for Health and Environmental Justice. Oral Comments. “In the Matter Of: Receiving Public Comments EPA’s Proposed Permit for Kettleman Hills Facility. EPA Region 9 Public Hearing, November 14, 2019, Original Transcript.” Court Scribes, Inc. [Angel]
16. Miguel Alatorre, Greenaction for Health and Environmental Justice. Oral Comments. “In the Matter Of: Receiving Public Comments EPA’s Proposed Permit for Kettleman Hills Facility. EPA Region 9 Public Hearing, November 14, 2019, Original Transcript.” Court Scribes, Inc. [MAlatorre]
17. Maricela Mares Alatorre, People for Clean Air and Water of Kettleman City. Oral Comments. “In the Matter Of: Receiving Public Comments EPA’s Proposed Permit for Kettleman Hills Facility. EPA Region 9 Public Hearing, November 14, 2019, Original Transcript.” Court Scribes, Inc. [MMAlatorre]



18. Reyna Verdin, Chemical Waste Management, Inc. Kettleman Hills Facility. Oral Comments. “In the Matter Of: Receiving Public Comments EPA’s Proposed Permit for Kettleman Hills Facility. EPA Region 9 Public Hearing, November 14, 2019, Original Transcript.” Court Scribes, Inc. [Verdin]
19. Robert Henry, Chemical Waste Management, Inc. Kettleman Hills Facility. Oral Comments. “In the Matter Of: Receiving Public Comments EPA’s Proposed Permit for Kettleman Hills Facility. EPA Region 9 Public Hearing, November 14, 2019, Original Transcript.” Court Scribes, Inc. [Henry]
20. Jose Carrillo, Kettleman City resident. Oral Comments. “In the Matter Of: Receiving Public Comments EPA’s Proposed Permit for Kettleman Hills Facility. EPA Region 9 Public Hearing, November 14, 2019, Original Transcript.” Court Scribes, Inc. [Carrillo]
21. Roberto Rodriguez. Oral Comments. “In the Matter Of: Receiving Public Comments EPA’s Proposed Permit for Kettleman Hills Facility. EPA Region 9 Public Hearing, November 14, 2019, Original Transcript.” Court Scribes, Inc. [Rodriguez]
22. Jane Williams, Executive Director, California Communities Against Toxics. Oral Comments. “In the Matter Of: Receiving Public Comments EPA’s Proposed Permit for Kettleman Hills Facility. EPA Region 9 Public Hearing, November 14, 2019, Original Transcript.” Court Scribes, Inc. [Williams]
23. Donna Tamayo, Kettleman City resident and Chemical Waste Management employee. Oral Comments. “In the Matter Of: Receiving Public Comments EPA’s Proposed Permit for Kettleman Hills Facility. EPA Region 9 Public Hearing, November 14, 2019, Original Transcript.” Court Scribes, Inc. [Tamayo]



### III. RESPONSE TO COMMENTS

#### A. General Comments on the Proposed Decision

1. *Comment:* Several commenters stated general opposition to the proposed PCB permit for the Kettleman Hills Facility. [Anon1 #1, Anon2 #1, Anon3 #1, Haines #1 and #6, Labriola #1, Paris #1, Wieder #1; El Pueblo #1a; Rodriguez #1]

*Response:* U.S. EPA thanks the commenters for their comments on the proposed permit.

We based our decision to issue a permit to Chemical Waste Management, Inc. (“CWM”) to operate the Kettleman Hills Facility (“KHF” or “Facility”) for the disposal, treatment for disposal, and storage of PCB waste on determinations required by the PCB regulations at 40 C.F.R. § 761.65(d)(2) and § 761.75(c). See Approval, Appendix A.

First among these determinations is that operations of the Facility, under the terms and conditions of the permit, do not pose an unreasonable risk of injury to health or the environment from PCBs. See Statement of Basis, **section V**. The next determination is that the Facility, under the terms and conditions of the permit, complies with all applicable requirements for PCB waste landfills and PCB waste storage facilities including meeting applicable design and operational requirements, personnel qualifications, and provision of closure and post-closure plans, cost estimates, and financial assurance. See Statement of Basis, **sections III.C. and D**. We also determined that the compliance history at the Facility does not evidence a pattern of noncompliance that demonstrates, in U.S. EPA’s judgement, CWM’s unwillingness or inability to achieve and maintain compliance with the regulations applicable to it and its operations at the Kettleman Hills Facility. See Statement of Basis, **section IV**. Each of our findings is based on facts documented in the administrative record for the permit.

We also prepared a draft Environmental Justice (EJ) Analysis to ensure that environmental justice concerns – including Kettleman City’s existing economic, social, and environmental burdens and vulnerabilities – were considered in drafting the permit and in seeking the affected community’s involvement in reaching a final permit decision.

We requested and encouraged public comments on all aspects of our proposed permit and its supporting documentation and analyses in order to gather any additional information or concerns that the members of the public believed that we should consider before making a final decision to approve or not approve the permit application. We have fully considered all comments received and have summarized and responded to the comments in this document. We thank each person who submitted comments or spoke at the public hearing.



- 
2. *Comment:* The Kettleman City Community Services District (KCCSD) urged U.S. EPA to grant approval for CWM to store, treat for disposal, and dispose of PCB waste at the Kettleman Hills Facility. KCCSD noted that tax revenue from the Facility supports operations and maintenance costs of the new water treatment plant as well as road improvements in Kettleman City. [KCCSD #1; Henry #1]

*Response:* U.S. EPA thanks KCCSD for its comments on the proposed permit and thanks Mr. Henry for taking the time to attend and speak at the public hearing. Whether or not the Kettleman Hills Facility provides economic benefits to the community is not a consideration in U.S. EPA’s decision on the Facility’s permit. See response to comment [A-1](#).

3. *Comment:* A commenter supported issuing the proposed Approval to the Kettleman Hills Facility because the Facility has demonstrated compliance with the applicable regulations and compliance with the National Historic Preservation Act and Section 7 of the Endangered Species Act and because U.S. EPA has found no unreasonable threat of injury to health or the environment. [Anon4 #1]

*Response:* U.S. EPA thanks the commenter for their comments on the proposed Approval. See response to comment [A-1](#).

4. *Comment:* A resident of Kettleman City stated that the Kettleman Hills Facility was not a “top ten” concern for him. [Carillo #1]

*Response:* U.S. EPA thanks the commenter for taking the time to attend and speak at the public hearing. See response to comment [A-1](#). The commenter listed his top four concerns as: 1) drinking water quality, 2) streets, 3) sidewalks and signs, and 4) pesticides being sprayed close to the community. These issues are not affected by PCB operations at the Kettleman Hills Facility and therefore beyond the scope of U.S. EPA’s authority to address as part of the permit for KHF. However, we have discussed drinking water quality and pesticides issues in section 6 the draft EJ Analysis because they have been raised by members of the community previously.

5. *Comment:* One commenter stated that allowing the Kettleman Hills Facility to continue to operate is not good for the Kettleman City community and that U.S. EPA should be aware of what is happening in the community and should not allow it to continue. The commenter also stated that having the Facility in the community is not profiting the community. [Rodriguez #1]

*Response:* U.S. EPA thanks the commenter for taking the time to attend and speak at the public hearing. The commenter provided no specific information on why continued operation of the Facility is not good for the Kettleman City community or on community happenings of which we should be aware.



We evaluated potential health impacts of continued PCB waste operation at the Kettleman Hills Facility under the proposed Approval terms and conditions before deciding to issue the Approval and found no evidence that PCB waste operations at the Facility are adversely affecting public health or the environment in areas surrounding the Facility including Kettleman City. See Statement of Basis, [section V](#). We also prepared a Draft EJ Analysis which describes the socio-economic, environmental, and health conditions in Kettleman City. See draft EJ Analysis, [section 3](#). This EJ Analysis also includes a discussion of the many issues, both related and unrelated to the Facility, that have been raised by the community over the past ten years. See draft EJ Analysis, [section 6](#).

Whether or not the Kettleman Hills Facility provides economic benefits to the community is not a consideration in U.S. EPA’s decision-making process on the Facility’s permit.

6. *Comment:* One commenter who works for Chemical Waste Management and lives in Kettleman City stated that she would not work for a company that would negatively affect a community or live in an area that would be negatively affected. [Tamayo #1]

*Response:* U.S. EPA thanks the commenter for taking the time to attend and speak at the public hearing. See also response to comment [A-1](#).

7. *Comment:* One commenter at the public hearing stated that U.S. EPA had already decided to issue the permit. [Angel #2]

*Response:* U.S. EPA thanks the commenter for taking the time to attend and speak at the public hearing. U.S. EPA did not make a final decision to issue a permit to CWM prior to receiving and evaluating public comment on the proposal. In August 2019, we proposed to issue CWM a permit to dispose, treat for disposal, and store PCB waste at the Kettleman Hills Facility. We also provided a statement of basis explaining the reasons we determined that the proposal was consistent with applicable regulations, protective of health and the environment, and not barred by CWM’s compliance history. We encouraged public comments on all aspects of our proposal and its supporting documentation and analyses in order to gather any additional information or concerns that members of the public thought we should consider before making a final decision. We have fully considered all comments received and summarized and responded to them in this document. None of the comments raised issues or facts that suggested that we needed to substantially revise our proposed Approval. See also response to comment [A-1](#).

8. *Comment:* One commenter stated that they submitted comments to ensure that the U.S. EPA complied with its legal obligations during the review process of the Kettleman Hills PCB application. [CRLA #1a]

*Response:* U.S. EPA thanks the commenter for their comments on the proposed permit.





U.S. EPA has met its legal obligations during the decision process on the Kettleman Hills Facility's application to renew and modify its TSCA approvals. We have made the required regulatory determinations for granting approval to operate the chemical waste landfill and commercial storage facility at the Kettleman Hills Facility. See Approval, Appendix A. We have included all terms and conditions required by the PCB regulations and needed to ensure that the covered PCB waste operations at the Kettleman Hills Facility do not pose an unreasonable risk of injury to health or the environment. See Statement of Basis, **sections III and V**. We have also made the determinations required by other applicable statutes such as the Endangered Species Act. See Statement of Basis, **section VII**.

We have also met our policy commitments that apply to issuing a PCB approval. We provided for public review and comment on our proposed action including an 85-day public comment period and a public meeting and public hearings, both held in the local community.<sup>2</sup> See Statement of Basis, **section I.B**. We fully considered and responded in writing to all comments received before making a final decision to issue the Approval.

We have also worked to meet our environmental justice responsibilities under Executive Order 12898 by providing fair treatment and meaningful involvement of all people regardless of race, color, national origin or income in our decision making process on application. See response to comment **E-1**.

## **B. Comments on the Proposed Approval Conditions**

1. *Comment:* Chemical Waste Management, Inc. asked for clarification on whether U.S. EPA granted the waiver requested in Section 13.2.4 of the CWM's TSCA Permit Renewal Application. [CWM #1, CWM #23]

*Response:* U.S. EPA thanks the commenter for their comments on the proposed permit. We did not grant this waiver because the existing fencing at KHF complies with the requirement in 40 C.F.R. § 761.75(b)(9).

In Section 13.2.4 of the 2018 Renewal Application, CWM requested a waiver of the requirement in 40 C.F.R. § 761.75(b)(9). This section requires that a six-foot woven mesh (e.g., chain-link) fence be placed around the chemical waste landfill to prevent unauthorized persons and animals from entering. CWM requested that U.S. EPA approve its current fencing as meeting this requirement and to not require separate fencing around the PCB Flushing/Storage Unit and Landfill B-18. Currently, the entire Kettleman Hills Facility's operations area (shown on **Figure 2** of the Statement of Basis) is surrounded by an approximately 6-foot high chain-link fence.

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<sup>2</sup> The comment period on the proposed permit began on August 29, 2019 and ended on November 22, 2019. The PCB regulations do not require a public review and comment process prior to issuing a storage or disposal approval. U.S. EPA, however, is committed to providing the public the opportunity to comment on these types of approvals. See 60 Fed. Reg. 28108 (May 30, 1995) and U.S. EPA 1995.



As discussed in the Statement of Basis (**section III.C.2.d.**), U.S. EPA determined that a waiver of this requirement is unnecessary because we do not interpret 40 C.F.R. § 761.75(b)(9) to require each TSCA unit at a site to be individually fenced if the site as a whole has a six-foot woven mesh fence that prevents unauthorized persons and animals from reaching the TSCA units. The existing chain-link fencing that encloses the operational area at the Kettleman Hills Facility complies with 40 C.F.R. § 761.75(b)(9) and therefore no waiver is necessary.

2. *Comment:* CWM submitted a revised TSCA application (dated November 22, 2019) with its comments and recommended several changes to the proposed Approval to reflect the revised application. These changes include:
- reduction in the maximum storage capacity of the PCB Flushing/Storage Unit [CWM #2, CWM #17, CWM #45],
  - revised date of the TSCA Application of November 22, 2019 [CWM #3, CWM #43, CWM #46, CWM #47],
  - updated *Spill Prevention Control and Countermeasure Plan* (“SPCC Plan”) (revision: November 2019). [CWM #5, CWM #16, CWM #48],
  - updated *Stormwater Pollution Prevention Plan* (revision: June 2019) [CWM #28, CWM #29, CWM #49]; and
  - updated *Closure and Post-Closure Plan* (July 31, 2019) [CWM #41].

*Response:* U.S. EPA has made the recommended changes. See below and Statement of Basis, **section III.D.2.a.(2)** for a discussion of the PCB F/SU’s maximum storage capacity reduction; Statement of Basis, **section III.B.** for a discussion of the revised Application; Statement of Basis, **section III.D.2.a.(3)** for a discussion of the revisions to the SPCC Plan; Statement of Basis, **section III.F.4.** for a discussion of the revisions to *Stormwater Pollution Prevention Plan*; and Statement of Basis, **sections III.D.2.a.(4)**, and **III.D.2.b.** for a discussion of the updated *Closure and Post-Closure Plan*.

CWM reduced the maximum PCB waste storage capacity in the enclosed building and exterior containment area at the PCB F/SU in response to comments from DTSC on the Facility’s RCRA Part B application [CWM 2019c, p. 7 and CWM 2019b, Response to Specific Comment No. 61] and has revised the TSCA Renewal Application to reflect the reduced maximum storage capacities.

We have incorporated the reduced maximum capacities into the Approval (see Approval Condition V.C.1.) because they 1) meet the minimum containment requirements for PCB waste storage units in 40 C.F.R. § 761.65(b)(1)(ii) (see CWM 2019d, Attachments 6 and 7), 2) are the same as the maximum storage capacity given for the PCB F/SU in the Facility’s incorporated *Closure and Post-Closure Plan* (see Golder 2019, Appendix E, Table A-3), and



3) by reducing the maximum amount of PCB waste that may be stored at the PCB F/SU, lessen any risk from PCB waste storage operations over the risk considered in the Approval.

CWM made very minor updates to its SPCC Plan and Stormwater Pollution Prevention Plan. See Statement of Basis, **Appendix D-4** for a list of these updates. None of these updates adversely affect our determination that PCB waste operations at the Kettleman Hills Facility, under the terms and conditions of the Approval, do not pose an unreasonable risk of injury to health or the environment. We incorporated these updated plans into the Approval. See Approval, Appendix B.

CWM made several changes to the closure and post-closure plans and closure and post-closure care cost estimates. A list of the changes to the plans and cost estimates can be found in **Appendix D-4**. Most of these changes come in response to comments made by DTSC in its review of CWM's application to renew the KHF's RCRA permit. See, for example, CWM 2019b, Response to Specific Comment No. 69; Response to ESPO Comment No 1; Response to ESPO Comment No. 3.

We have reviewed these changes and has determined that none affect compliance of the plans and cost estimates with applicable provisions of the PCB Regulations (see Statement of Basis, **Appendix D-2**), that they are consistent with other revisions to the TSCA Renewal Application and with our proposed Approval, and that none of these updates adversely affect our determination that PCB waste operations, under the terms and conditions of the Approval, do not pose an unreasonable risk of injury to health or the environment. We have incorporated excerpts of the July 2019 "Closure and Post-Closure Plan, Kettleman Hills Facility, Kings County, California." See Approval, Appendix B-3.

3. *Comment:* A commenter expressed concern that the proposed Approval would allow the Kettleman Hills to store PCB waste within 30 days of its disposal at an offsite facility, suggested several issues that U.S. EPA should consider before allowing this off-site storage and recommended additional groundwater monitoring for the off-site location. [Anon4 #2]

*Response:* U.S. EPA did not propose and is not approving any off-site storage of PCB waste. We are authorizing storage of specific types of PCB items for up to 30 days from their removal from service date in the outside containment area at the PCB Flushing/Storage Unit as allowed by 40 C.F.R. § 761.65(c)(1). The PCB F/SU is located within the operations area at the Kettleman Hills Facility (see Figure 2) and not off-site.



4. *Comment:* CWM requested to be allowed to use SW-846 Method 8082 as an alternative to SW-846 Method 8082A to analyze for PCBs. CWM requested this because the California Environmental Laboratory Accreditation Program (“CA ELAP”) only certifies California laboratories to utilize SW-846 Method 8082 and CWM uses CA ELAP-certified laboratories for required PCB analyses. [CWM #4; CWM #26; CWM #27; CWM #30; CWM #34]

*Response:* U.S. EPA has revised Approval Conditions IV.C.10. (default testing method); VI.E.4. (leachate testing); VI.E.5.a. (leachate testing); VI.F.4. (stormwater testing); and VIII.B.2. (groundwater testing) to allow the use of SW-846 Method 8082 in addition to SW-846 Method 8082A.

Method 8082 is specifically cited in PCB regulations as the method to analyze for PCBs. See 40 C.F.R. § 761.60(g) – testing procedures for disposal of PCB waste; § 761.61(a)(5)(B)(vi) – (chemical analysis method for testing of bulk remediation waste for disposal); § 761.253(a) – chemical analysis of extracts from wipe samples; § 761.272 – chemical analysis of liquid PCB remediation waste; and § 761.358 – chemical analysis of composite samples. Method 8082A is an updated version of the Method 8082. Either method is acceptable for determining PCB concentrations in leachate, stormwater, groundwater, oils, soils, and/or wipe samples.

5. *Comment:* CWM requested clarification on the required actions for proposed Approval Condition IV.G.8. and suggested edits to the proposed condition. CWM stated that it will annually review the contingency plan and its emergency response procedures, update them as needed, and distribute any changes to the local sheriff, hospital, and other local agencies. It will also annually update information on stored materials at the Facility as part of the Annual Business Plan Update submitted via the California Environmental Reporting System. [CWM #6]

*Response:* U.S. EPA has revised the text of Approval Condition IV.G.8. to replace “police” with “sheriff” because the Kettleman Hills Facility is within the jurisdiction of the Kings County Sheriff Department and there is no local police department. We have also added a requirement that CWM notify U.S. EPA once it completes the annual review and update of the Contingency Plan and provides, as needed, the updated plan to the local agencies. CWM may make this notification as part of the monthly report required by Approval Conditions IV.O.11.

We have not added a reference to the Hazardous Material Business Plan because this is primarily a California-required document for which U.S. EPA has no oversight. CWM may use any method that it chooses to update and document information on stored materials at the Facility, including use of the annual update to its Hazardous Material Business Plan, to meet the requirement of this Approval condition.



6. *Comment:* CWM requested that the requirement for “at least monthly inspections to assure their proper operations” for the listed systems and equipment be removed from proposed Approval Condition IV.I.1. (General Inspection Requirements) because not all these systems are inspected monthly under the Facility’s inspection program. [CWM #7]

*Response:* U.S. EPA has revised Approval Condition IV.I.1. to remove the requirement for “at least monthly” inspections. Proposed Approval Condition IV.I.1. required the inspection at least once per month to assure their proper operations of all communications and alarm systems, fire protection equipment, spill control equipment, decontamination equipment and groundwater monitoring wells following the procedures and schedule contained in the Operation Plan, Chapter 31 “Inspection Program Plan”. Because Chapter 31 already specifies inspection frequencies, the phrase “at least monthly” is redundant. In this specific case, all of the equipment/systems listed are inspected monthly with the exception of groundwater wells which are inspected during groundwater sampling. Operation Plan, Chapter 31 is being incorporated into the Approval, so its inspection frequencies will become requirements under the Approval. See Approval, Appendix B.1.8.

U.S. EPA retained the phrase “to assure their proper operations” in Approval Condition IV.I.1. because this defines the purpose of the inspections rather than their timing.

7. *Comment:* CWM requested revisions to proposed Approval Conditions IV.I.2. (General Inspection Requirements) and VI.I.2.g. (Post-Closure Care for Landfill B-18) to specify which Facility fence is subject to the Condition’s monthly inspection requirement. [CWM #8; CWM #31]

*Response:* U.S. EPA has made the requested revisions and added “chain-link” to describe the fencing that is subject to the inspection requirement. The Kettleman Hills Facility is enclosed by two fences: a barbed-wire fence surrounding the 1,600-acre property and a chain-link fence surrounding the 555-acre operations area. We intended the fence-inspection requirement to only cover the fencing surrounding the operations area.

8. *Comment:* CWM requested revisions to the deadline for adjusting the post-closure cost estimate for inflation from “March 1 of each year” to “within 60 days prior to the anniversary date of the establishment of the financial instruments used to demonstrate financial responsibility for post-closure” in proposed Approval Condition IV.L.2. (Post-Closure Estimate). CWM requested to maintain the same schedule for both annual inflation adjustment for closure and post-closure costs. [CWM #9]

*Response:* U.S. EPA has made the requested change. This change establishes the same deadline for the annual inflation adjustment for both closure (see Approval Condition IV.K.2) and post-closure care (see Approval Condition IV.L.2.) cost estimates.



9. *Comment:* CWM stated that it understands proposed Approval Conditions IV.M.4. and IV.M.6. (Financial Assurance for Closure and Post-Closure), which requires CWM to obtain U.S. EPA approval prior to changing its U.S. EPA-approved financial assurance mechanism(s), applies only if CWM changes the type of mechanism and does not merely makes a change like an annual inflation adjustment. [CWM #10, CWM #11]

*Response:* CWM is correct that Condition IV.M.4. does not apply for the annual inflation adjustment; however, it does apply for changes that do not entail a change to the type of financial assurance mechanism used. 40 C.F.R. § 761.65(g) requires financial assurance mechanisms contain specific language and meet specific requirements. Revisions to the financial assurance mechanism that may affect compliance with these requirements would require U.S. EPA approval.

10. *Comment:* CWM requested that the requirement for backup of electronic records in proposed Approval Condition IV.O.5. (Recordkeeping and Reporting) be changed from daily to weekly because trained staff may not be available on non-operating days. [CWM #12]

*Response:* U.S. EPA has revised Approval Condition IV.O.5. to require at least weekly backup of electronic records. U.S. EPA's policies and regulations do not establish a specific schedule for the backup of electronic records.

11. *Comment:* CWM requested changes to proposed Approval Condition IV.O.8.g. (Recordkeeping and Reporting) to require retention of chromatographs, calculations and raw data only for on-site laboratory results because such results are not included in analytical reports provided to CWM by off-site laboratories. CWM notes that it will send samples required by the Approval to offsite, third-party laboratories for analysis. [CWM #13]

*Response:* U.S. EPA has revised Approval Condition IV.O.8.g. to require retention of chromatographs, calculations and raw data only for tests run at the Kettleman Hills Facility's on-site laboratory.

12. *Comment:* CWM requested clarification that the requirement to report any occurrences not normal to the operation of the Facility in proposed Approval Condition IV.O.11. applies to the TSCA-approved Waste Management Units, i.e., PCB Flushing/Storage Unit, Landfill B-18, closed landfill (Landfill B-14, B-16, and B-19 Phases IB, II, and III), or any occurrences that impact those PCB operations and not to the Class II/III Subtitle D Landfills. [CWM #14]

*Response:* The proposed Approval Condition IV.O.11. required the monthly report describe any occurrences that are “not normal to the operation of the Facility as allowed by this Approval.” The Approval covers operations at the PCB F/SU and Landfills B-14, B-16, B-18, and B-19 (Phases IB, II, and III) as well as PCB Waste pre-acceptance and acceptance procedures, groundwater and air monitoring, stormwater control, road and fence maintenance, security, contingency plans, recordkeeping, etc. Any “not normal” occurrence that affects any



of these operations or others covered in the Approval should be included in the monthly report. Events that are limited to the Class II/III Subtitle D Landfills or RCRA-only permitted units do not need to be included in the monthly report unless they involved PCB items or PCB waste or otherwise affect PCB waste operations or units at the Facility.

13. *Comment:* CWM recommended revisions to the proposed Approval Condition V.A. (Unit Description) to reflect the installation of an expansion joint in the outside containment area. [CWM #15]

*Response:* During a recent routine inspection of the outside containment area at the PCB F/SU, CWM identified hairline cracks in the area's epoxy coating and placed the unit out of service until the hairline epoxy cracks are repaired. CWM determined that the hairline cracks are a result of the lateral expansion and contraction of the concrete and would like to construct expansion joints to control the cracking [CWM 2019f]. DTSC is currently reviewing CWM's plans for construction of these expansion joints.

U.S. EPA's proposed approval of the outside containment area for the treatment and temporary storage of PCB wastes did not anticipate installation of expansion joints. Proposed Approval Condition V.A. stated that "the outside containment area has a reinforced concrete floor with a continuous 1.5 foot-high curb and has no drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to flow from the curbed area." The proposed Approval also required CWM to maintain the concrete curbs and floors in outside containment area so as to prevent any cracks, gaps or other openings that would allow liquids to flow from the curbed areas. See proposed Approval Condition V.H.4. Our determination that operations of that storage of PCB waste at the unit was based in part on there being no openings in containment areas where PCBs could be released. (See Draft EJ Analysis, **section 4.2.2**).

We find that the changes to the proposed Approval needed to incorporate the addition of expansion joints in the outside containment area should be subject to public notice. Therefore, we are not changing the Approval as recommended by CWM. CWM may apply for a permit modification to install these expansion joints. The application should include a description of how these joints will be sealed and maintained to prevent releases of PCBs from the containment area.

14. *Comment:* CWM requested revisions to proposed Approval Condition V.C.3. to change the available containment capacity of the enclosed building from 16,845 gallons to 17,813 gallons and the available secondary capacity of the outside containment area from 20,127 gallons to 14,845 gallons. [CWM #18]

*Response:* CWM reduced the maximum PCB waste storage capacity in the enclosed building and exterior containment area at the PCB F/SU in response to comments from DTSC on the Facility's RCRA Part B application [CWM 2019c, p. 7 and CWM 2019b, Response to Specific Comment No. 61] and has revised the TSCA Renewal Application to reflect the reduced



maximum storage capacities. It also revised the total secondary containment capacity in the exterior containment area to account for drainage from the upper pad. See Statement of Basis, section III.D.2.a.(2) and CWM 2019b Response to Specific Comment Number 61. The available containment capacities, which are calculated as the difference between total containment capacity and the maximum storage capacity, were also necessarily changed to reflect these revisions.

U.S. EPA has incorporated the reduced maximum storage capacities into the Approval (see Approval Condition V.C.1.) and the related changes to the available containment capacities because they 1) meet the minimum containment requirements for PCB waste storage units in 40 C.F.R. § 761.65(b)(1)(ii) (see CWM 2019d, Attachments 6 and 7), 2) are the same as the maximum storage capacity given for the PCB F/SU in the Facility's incorporated *Closure and Post-Closure Plan* (see Golder 2019, Appendix E, Table A-3), and 3) by reducing the maximum amount of PCB waste that may be stored at the PCB F/SU, lessen any risk from PCB waste storage operations over the risk considered in the proposed Approval.

15. *Comment:* CWM requested clarification that proposed Approval Condition V.C.5. allows the PCB items described within the condition to be stored adjacent to the building, longer than 30 days from the date of removal from service, provided the storage space conditions and inspections are met, and the storage of these items does not exceed 1 year from the date of their removal from service. [CWM #19]

*Response:* Approval Condition V.C.5. implements the provisions of 40 C.F.R. § 761.65(c)(2). Section 761.65(c)(2) allows non-leaking and structurally undamaged PCB Large High Voltage Capacitors and PCB-Contaminated Electrical Equipment that have not been drained of free-flowing dielectric fluid to be stored on pallets next to a storage unit that meets the design standards requirements of in § 761.65(b)(1). Storage under this section is allowed only when the storage unit has immediately available unfilled storage space equal to 10 percent of the volume of capacitors and equipment stored outside the unit. This section does not limit the time period for storage of an allowed PCB item to 30 days from its date of removal from services; however, § 761.65(a)(1) requires a PCB item be disposed of within 1 year of its removal from service date, a requirement that functionally limits storage of an allowed PCB item to less than 1 year. No changes were made to the Approval in response to this comment.





16. *Comment:* CWM requested revisions to Proposed Condition V.E.3. to allow bin-top solidification operations at the PCB F/SU to occur on plastic sheeting in an area adjacent to the Unit. CWM requests this revision because in order to perform bin-top solidification, a wheel-loader needs to be able to access a clean soil spoil pile and be able to access the length of the transport vehicle; therefore, bulk containers (bin, roll-off, or end-dump trailers) will be placed on plastic sheeting to prevent spills to unlined areas. [CWM #20]

*Response:* U.S. EPA’s proposed approval of container-top solidification at the PCB F/SU is based on the description in CWM’s application that all solidification would take place within the curbed containment area at the Unit. See proposed Approval Condition V.E.3. and TSCA Operation Plan [CWM 2019e], p.4. Although it included this requested change to the proposed Approval, CWM did not revise its TSCA Renewal Application which was submitted with its comments to state that container-top solidification may take place next to but not within the containment area consistent with its request in this comment.

We find that the changes to the proposed Approval needed to allow treatment of PCB wastes outside the containment areas at the PCB F/SU should be subject to public notice. Therefore, we are not changing the Approval as recommended by CWM. CWM may apply for an Approval modification to implement this change.

17. *Comment:* CWM requested revisions to proposed Approval Condition V.G.1. to include provisions that allow the quarterly sampling of the PCB F/SU to be rescheduled if necessary. [CWM #21]

*Response:* To provide CWM some flexibility in scheduling the quarterly sampling event, U.S. EPA has revised Approval Condition V.G.1. to allow rescheduling of the quarterly sampling event but is requiring the rescheduled sampling event to occur no later than mid-way through the quarter (that is, within 6 weeks of the beginning of the quarter). Rescheduling beyond that date will require U.S. EPA approval.

18. *Comment:* CWM requested revisions to proposed Approval Condition V.G.3. to clarify which sampling results need to be included in the post clean-up report and the deadline for submitting the post-clean up report. [CWM #22]

*Response:* Approval Condition V.G.3. requires CWM to provide a written report documenting any required cleanup and post-clean up sampling needed at the PCB F/SU within 30 days of receiving the sampling results. As proposed, the condition was not clear on which sampling results triggered the 30-day reporting deadline. We intended that the written report be sent within 30 days of receiving the post-cleanup sampling results and have clarified the requirement in the Approval Condition V.G.3.



19. *Comment:* CWM requested revisions to proposed Approval Condition VI.B.3. to adjust the date for performing and submitting the annual remaining landfill capacity survey to correspond to the dates set by DTSC in order for CWM to combine the submittals or alternatively to allow a minimum of 45 days from the survey to the submittal of the survey results. [CWM #24]

*Response:* Proposed Approval Condition VI.B.3. required CWM to conduct a survey to determine the remaining capacity in Landfill B-18 by March 31<sup>st</sup> of each year and to submit the survey results not later than 30 days after the survey was completed. DTSC also requires an annual survey of remaining capacity in Landfill B-18 but requires submittal of the results by March 1 of each year. U.S. EPA agrees that combining its and DTSC’s submittals is efficient and has revised the date of the survey submittal to March 1<sup>st</sup> and removed the deadline for conducting the survey.

20. *Comment:* CWM requested proposed Approval Condition VI.E.3.f. be clarified to apply only to sumps in the secondary or vadose leachate collection systems because sumps within the primary leachate collection system do not have assigned Action Leakage Rates and therefore the requirement to calculate the flow rate to compare to the Action Leakage rate should only apply to sumps within the secondary or vadose collection systems. CWM also requested that condition be revised to substitute “recorded” for “weekly”. [CWM #25]

*Response:* Proposed Approval Condition VI.E.3.f. required CWM to determine the leakage rate for each Landfill B-18 leachate collection sump for comparison to the Action Leakage Rate by converting the weekly flow rate from the monitoring data obtained under Condition VI.E.3.e. to an average daily flow rate for each sump. Proposed Condition IV.E.3.e. required at least weekly recording of the amount of liquid pumped from each leachate collection sump.

Landfill B-18 has three leachate collection systems: primary, secondary, and vadose zone. Each of these systems have associated sumps. Proposed Condition VI.E.3.e. required recording of liquid recovery rates for each type of sumps. However, only secondary and vadose collection systems have action leakage rates; therefore, this requirement to convert and compare the monitoring data to ALR should be limited to secondary and vadose systems. We have revised Approval Condition VI.E.3.e. to apply only to the secondary and vadose systems.

Proposed Condition VI.E.3.e. required “at least weekly” recording of amount of liquid pumped from each sump. Because recordings could be more frequently than weekly, we have replaced “weekly” with “recorded” in Approval Condition VI.E.3.f.

21. *Comment:* CWM requested revisions to proposed Approval Condition VIII.A.1. to identify the version of the *Site Specific Ambient Air Monitoring Plan* (“AAMP”) to be complied with as the one “approved by DTSC” rather than the January 2016 version. [CWM #32]

*Response:* U.S. EPA has revised Approval Condition VIII.A.1. to identify the version of the AAMP to be complied with as the one “approved by DTSC on May 11, 2016.” U.S. EPA is



incorporating a specific revision of the AAMP into the Approval. Any future changes to this AAMP, even if those changes are approved by DTSC, will require U.S. EPA’s approval if they modify provisions related to PCB monitoring.

22. *Comment:* CWM requested deletion of proposed Approval Condition VIII.A.2. because the current DTSC-approved version of the *Site-Specific Ambient Air Monitoring Plan* already includes the Downwind Monitoring Station 3 (DMS-3). [CWM #33]

*Response:* U.S. EPA agrees with this revision and has deleted the requirement in proposed Approval Condition VIII.A.2. to update the air monitoring plan. We note DTSC’s May 11, 2016 approval of the location of Downwind Monitoring Stations 3 and revisions to the January 2016 AAMP regarding the quarterly month-long PCB sampling requirement [DTSC 2016]. We have incorporated the *Site-Specific Ambient Air Monitoring Plan* (January 2016) as approved by DTSC on May 11, 2016 into the Approval. See Approval, Appendix B-7.

23. *Comment:* CWM requested that proposed Approval Condition VIII.B.2. be modified to allow groundwater sampling during the first half of the year when this sampling schedule is required by the currently approved Site-Specific Groundwater Monitoring Plan. [CWM #35]

*Response:* Proposed Approval Condition VIII.B.2. requires annual groundwater sampling occurring in the second half of the year. Under KHF’s *Site-Specific Groundwater Monitoring Plan* (April 2014) as approved by the Regional Water Quality Control Board, groundwater testing for constituents of concern (“COC”), including PCBs, is required every 4.5 years. The 4.5-year schedule is set to alternate sampling between spring (first half of the year) and fall (second half of the year). We have revised proposed Approval Condition VIII.B.2. to allow groundwater sampling for PCBs to occur during the first half of the year concurrently with the COC testing. This approach will reduce sampling costs without reducing sampling frequency for PCBs.

24. *Comment:* CWM commented that Table 3 does not include permit modification classifications for modifications necessary to update plan revisions or permit revisions that do not affect management of PCB waste such as a request by CWM to modify the TSCA permit to incorporate a DTSC-approved modification to the Hazardous Waste Facility Permit that does not affect PCB operations or a TSCA-approved waste management unit. CWM argues that a Class 2 or 3 permit modification would not be warranted for such a request as it would be done by CWM to keep the permit up to date within the TSCA application. CWM proposed several suggested changes to Table 3. [CWM #36]

*Response:* U.S. EPA has revised Table 3 (Approval Modification Classifications) to list as a Class 1 modification updates to incorporated plans or documents to include State-approved modifications provided the modification does not affect PCB Waste operations and is not otherwise addressed in this Table 3. We note that we did not incorporate the Facility’s entire



Part B RCRA application and supporting plans into the Approval; rather we limited incorporation to those sections and plans that address PCB waste disposal, treatment and storage, address mechanisms of potential releases (e.g., stormwater management, security), monitoring for PCB releases (e.g., air and groundwater monitoring), or are required by the PCB regulations (e.g., fencing and road maintenance).

We also note that under the Approval Condition IX.A.2.f.(1), CWM may, for modifications not explicitly listed in Table 3, request a determination by U.S. EPA that the modification should be reviewed and approved as a Class 1 or Class 2.

25. *Comment:* CWM requested additional language be added to Table 3 to address changes to the Spill Prevention, Control and Countermeasure Plan that do not need certification by a professional engineer. [CWM #37]

*Response:* U.S. EPA has revised Table 3 in the Approval to further clarify the modification class for various changes to the Facility’s SPCC plan.

We note that under the Approval Condition IX.A.2.f.(1), CWM may, for modifications not explicitly listed in Table 3, request a determination by U.S. EPA that the modification should be reviewed and approved as a Class 1 or Class 2.

26. *Comment:* CWM requested that the Table 3 listings of “incorporation of annual adjustment to closure costs under Condition IV.K.3.” and “incorporation of annual adjustment to post-closure costs under Condition IV.L.3.” as Class 1 approval modifications be removed because annual adjustments are mandated and should not require a permit modification or prior approval from U.S. EPA. [CWM #38 and CWM #39]

*Response:* U.S. EPA has made the proposed changes. The annual inflation adjustment is not considered a permit modification and should not have been included in the list of changes that require a permit modification. See also, response to comment **B-9**.

27. *Comment:* CWM requested changes to the definition of “Day” to add “Periods of time are calculated by excluding the first day and including the last, unless the last day of the period is a Saturday, Sunday or legal holiday, in which case the end of the period shall be the next day that is not Saturday, Sunday or other legal holiday.” [CWM #42]

*Response:* U.S. EPA has made the requested change to the definition of “day” for most time periods contemplated under the Approval (see for example, Approval Condition IV.B.7.). Certain time periods in the permit are fixed by the PCB regulations and cannot be extended because they end on a weekend or legal holiday. These regulatory-fixed time periods are related to the disposal or storage of PCB waste in Approval Condition IV.C.4. (requiring disposal of PCB Waste within 1 year of its removal from service date) and Conditions IV.C.1.



and IV.C.4. (limiting temporary storage of PCB Waste to 30 days of its removal from service date).

The requested changes provide more clarity to how deadlines will be determined under the Approval and thereby improve compliance with and the enforceability of the Approval.

28. *Comment:* CWM requested the addition of the phrase “(Authorized for TSCA PCB Waste)” to section G. Chemical Waste Landfills on Table 3. [CWM #40]

*Response:* U.S. EPA has not made the requested modification. This section includes the addition of new chemical waste landfills which would not be authorized for TSCA PCB waste disposal unless U.S. EPA revised the Approval to incorporate that landfill. We note that “Chemical Waste Landfill” is a defined term in the PCB regulations (see 40 C.F.R. § 761.3 “Chemical Waste Landfill”). This definition limits the term to the landfills used to dispose of PCBs and PCB items.

29. *Comment:* CWM noted an error in the regulatory cite for Commercial Storage Approvals on the cover sheet for Appendix A of the proposed Approval.[CWM #44]

*Response:* The cover sheet for Appendix A in the proposed Approval cited 40 C.F.R. § 761.65(c)(2); the correct cite is 40 C.F.R. § 761.65(d)(2). U.S. EPA has made this correction.

### **C. Comments on the Kettleman City Facility’s Compliance Record**

1. *Comment:* One commenter wrote that the entire process is extremely flawed because violations are not being judged properly and that CWM’s history of noncompliance is too severe to allow continued disposal of waste. [Anon3 #1]

*Response:* The commenter does not provide examples of noncompliance that have not been judged properly or how CWM’s history of noncompliance is “too severe” to issue an approval. As part of its evaluation of the CWM’s Renewal Application, U.S. EPA fully reviewed CWM’s compliance record since the Agency last issued a TSCA approval to the Facility in 1992. See Statement of Basis, **section IV** and Draft EJ Analysis, **section 4.3**. We acknowledge that CWM has been cited for violations multiple times for a variety of issues. Each of these violations has been remedied and, in some cases, operational or physical changes have been made at the Facility and conditions have been added to the Approval to prevent reoccurrences. Based on our review, we determined that the CWM’s compliance history at the Kettleman Hills Facility does not suggest a pattern or practice of noncompliance that demonstrates the CWM’s unwillingness or inability to comply with its permit or the applicable regulations.



2. *Comment:* One commenter stated that the monitoring, reporting, and mitigation measures included in the proposed Approval are insufficient to protect human health and safety because they allow CWM to perform the activities. The commenter stated that because CWM “repeatedly” demonstrated noncompliance with permitting requirements related to monitoring, sampling, analysis, and reporting that allowing CWM to self-monitor, test, and report undermines the monitoring and mitigation measures and renders them inadequate to address the human health and safety risks. [CRLA #12]

*Response:* U.S. EPA has determined that monitoring, reporting, and mitigation measures required to be performed by CWM in the Approval are protective of human health and safety. As documented in the Statement of Basis (**section IV**) and draft EJ Analysis (**section 4.3**), CWM has in the past been cited for failure to comply with specific permit requirements; however, CWM has remedied these instances of noncompliance and taken the necessary corrective actions. It has also demonstrated a willingness to modify its operations and/or facilities to respond to noncompliance. See, for example, modifications to the PCB F/SU discussed in the response to comment **C-5**. In some instances, we have added conditions to the Approval to prevent re-occurrence. See, for example, quarterly testing of the PCB F/SU in Approval Section V.G. to timely identify and remediate any future contamination of the Unit.

As part of its evaluation of the Renewal Application, U.S. EPA reviewed the Facility’s compliance record since the Agency last issued a TSCA approval to the Facility in 1992. See Statement of Basis, **section IV** and draft EJ Analysis, **section 4.3**. Based on this review, we determined that the compliance history at the Kettleman Hills Facility (including all instances related to monitoring, reporting, and mitigation of spills) does not suggest a pattern or practice of noncompliance that demonstrates the CWM’s unwillingness or inability to comply with its permit or the applicable regulations.

Failure to comply with any permit term or regulatory requirements, including monitoring requirements, may subject the permittee to enforcement and significant fines as well as potential revocation of permit. See Approval Conditions IV.A.7 and IX.C.1.a.

3. *Comment:* Several commenters stated that Chemical Waste Management, Inc. has a demonstrated history of noncompliance and that there is no evidence that it will not continue this pattern of permit and reporting noncompliance; therefore, U.S. EPA should deny the PCB permit application, citing 40 C.F.R. §761.65(d)(2)(vii). [CRLA #13, El Pueblo #14a, MMAlatorre #10]

*Response:* As part of its evaluation of the Renewal Application, U.S. EPA reviewed the Facility’s compliance record since the Agency last issued a TSCA approval to the Facility in 1992. See Statement of Basis, **section IV** and draft EJ Analysis, **section 4.3**. We acknowledge that CWM has been cited for violations multiple times for a variety of issues. Each of these violations has been remedied and, in some cases, operational or physical changes have been made at the Facility and conditions have been added to the Approval to prevent reoccurrences.



Based on our review, we determined that the compliance history of the Kettleman Hills Facility does not suggest a pattern or practice of noncompliance that demonstrates the CWM's unwillingness or inability to comply with its Approval or the regulations.

4. *Comment:* Two commenters stated that the Facility's record of improper storage and management of hazardous waste, including PCBs, increases the risk of exposure for Kettleman City residents. [CRLA #8, El Pueblo #9]

*Response:* U.S. EPA agrees that improper storage and management of hazardous waste, including PCB waste, is a potential route of exposure to Kettleman City residents if PCBs are released outside the boundaries of the Facility. We have included air, groundwater, and surface water monitoring requirements in the Approval in part to identify potential PCB releases to air and water from noncompliance. However, none of the cited examples of noncompliance described in the Statement of Basis or draft EJ Analysis included actual PCB releases outside the boundary of the Facility. We also fully considered the Facility's compliance history in making its determination that the Facility's operations under terms and conditions of the Approval would not pose an unreasonable risk of injury to health or the environment.

5. *Comment:* Several commenters stated that the compliance record proves that CWM cannot safely or properly manage the disposal and storage of PCBs, citing a list of violations and one commenter specifically identifying U.S. EPA's fining CWM over \$300,000 for PCB violations in 2010. [El Pueblo #14b; MAlatorre #1; MMAlatorre #10]

*Response:* U.S. EPA disagrees that the compliance record proves that CWM cannot safely or properly manage the disposal and storage of PCB waste. We acknowledge that CWM has been cited for violations multiple times for a variety of issues. Each of these violations has been remedied and, in some cases, operational or physical changes have been made at the Facility and conditions have been added to the Approval to prevent reoccurrences. Based on its review, U.S. EPA determined that CWM's compliance history at the Kettleman Hills Facility does not suggest a pattern or practice of noncompliance that demonstrates the CWM's unwillingness or inability to comply with the regulations.

In 2010, US EPA inspectors documented violations of then-existing Approvals and PCB regulations [U.S. EPA 2010a; U.S. EPA 2010b], including:

- Failure to indicate removal from service date on one PCB container: 40 C.F.R. § 761.65(c)(8) requires labeling of each PCB item with its removal from service for disposal date.
  - CWM corrected this violation while U.S. inspectors were still on-site [U.S. EPA 2010a]. The Approval requires that all PCB items be labeled with their removal from service date, see Approval Condition IV.C.5.



- Failure to properly complete manifests by not including removal from service dates or weights in kilograms on nine manifests as required by 40 C.F.R. § 761.207(a).
  - CWM instructed its employees of the proper manifest requirements during the week of the inspection and revised its Standard Division Practices for Off-Site Shipping of PCBs to address both issues [CWM 2010a]. The Approval includes compliance with the manifest requirements in the PCB regulations. See Approval Section IV.P.
- Continued use of a PCB-contaminated building: 40 C.F.R. § 761.30(u)(1) prohibits the continued use of items and structures that are contaminated with PCBs unless they are first appropriately decontaminated.
  - During its February 2010 inspection, U.S. EPA collected two wipe samples from the floor below the PCB tank in the PCB F/SU building which showed PCB concentrations in excess of 10 micrograms per 100 square centimeters ( $\mu\text{g}/100\text{ cm}^2$ ), the maximum allowed level without decontamination for continued use under the PCB regulations [U.S. EPA 2010a]. In response to these sampling results, CWM sandblasted, cleaned and resealed, the floor in PCB S/FU, recoated the PCB tank, and took other steps to improve PCB waste storage operations. [CWM 2010a. U.S. EPA 2010b]. CWM completed these actions by May 2010.

During its June 2010 inspection, U.S. EPA took additional wipe samples with two showing concentrations above  $10\ \mu\text{g}/100\text{ cm}^2$ . One sample was from below the PCB tank and the other from the concrete outside of the PCB S/FU [U.S. EPA 2010b]. CWM recleaned and retested the one area and removed the contaminated concrete in the other area [CWM 2010d]. Subsequent testing, including testing by U.S. EPA in 2012 showed no contamination above  $10\ \mu\text{g}/100\text{ cm}^2$  [CWM 2010d, U.S. EPA 2013].

In response to these violations, CWM has instituted a quarterly testing program of the PCB F/SU to timely identify and remediate any future contamination. See Approval, Section V.G.

- Improper disposal of PCBs: High levels of PCBs were found in the building and in the soil around the PCB F/SU that were the result of leaks and spills, both of which are considered disposal under 40 C.F.R. § 761.50(a)(4).
  - During its February 2010 inspection, U.S. EPA collected two soil samples in the area adjacent to the PCB F/SU which showed PCB concentrations in excess of 1 part per million [U.S. EPA 2010a]. In response to these sampling results, CWM excavated soils from where U.S. EPA detected PCB contamination and undertook further testing of the soils to determine if PCB contamination had





migrated beyond the areas identified [U.S. EPA 2010b]. Where testing found PCB levels greater than 1 ppm, CWM excavated and disposed, retested, and excavated further as needed. CWM completed these actions by May 2010. [CWM 2010a. U.S. EPA 2010b].

During its June 2010 inspection, U.S. EPA took additional soil samples with three showing concentrations above 1 ppm. In order to return to compliance, we required CWM to further characterize the extent of the contamination outside the PCB F/SU and develop a plan to remediate the remaining PCBs. [U.S. EPA 2010b]. CWM submitted its clean-up plan under 40 C.F.R. § 761.61(a) on August 25, 2010 [CWM 2010c], we approved the plan on September 23, 2010 [U.S. EPA 2010d], and CWM submitted the cleanup completion report on December 16, 2010 [CWM 2010e, AMEC 2010]. DTSC also required corrective action for the PCB soil contamination which resulted in the construction of the outside containment area to prevent any future spill from contaminating the ground around the Unit [DTSC 2010].

As documented above, CWM took remedial actions to address all PCB contamination identified in 2010 and has instituted physical and operational changes to reduce or eliminate future reoccurrences. It also paid a penalty of \$302,100 for these violations. These actions demonstrate CWM's willingness and ability to comply with its permits and the applicable PCB regulations.

6. *Comment:* Several commenters stated that CWM repeatedly violated permit requirements and that U.S. EPA's "summary dismissal of these consistent and serious violations is inadequate and unreasonable and is contrary to the list of violations included in the comment." The commenters list as examples of these violations: failing to monitor for PCB contamination for seven years, contaminating soil with a large amount of PCB, using contaminated buildings without decontaminating them, using impermissible laboratory testing standards, and withholding information related to hazardous waste spills. The commenters stated that this mismanagement has occurred across decades and demonstrates an unwillingness and inability of CWM to comply with its permits and safety measures that are essential to protect public health. [CRLA #14; El Pueblo #15; MAIatorre #1]

*Response:* We disagree that we summarily dismissed CWM's record of violations. U.S. EPA carefully reviewed and fully considered CWM's compliance record since the Agency last issued a TSCA approval to the Facility in 1992. See Statement of Basis, **section IV** and draft EJ Analysis, **section 4.3**.

We also disagree with the commenters' statement that the compliance record demonstrates CWM's unwillingness and inability to comply with its permits and safety measures. We acknowledge that CWM has been cited for violations multiple times for a variety of issues. As discussed below, each of the violations listed in the comment has been remedied and, in some



cases, operational or physical changes have been made at the Facility and conditions have been added to the Approval to prevent reoccurrences. Based on its review, we determined that the compliance history of the Kettleman Hills Facility does not suggest a pattern or practice of noncompliance that demonstrates the CWM's unwillingness or inability to comply with the regulations.

In 2004, CWM self-disclosed that it had not monitored the lysimeters underneath Landfill B-16 between June 1996 and November 2003. The resulting consent agreement between U.S. EPA and CWM for these violations included a \$10,000 penalty and \$37,500 to purchase emergency response equipment for the Kings County Environmental Health Services [U.S. EPA 2005].

U.S. EPA approved Landfill B-16 for the disposal of PCB waste in 1983. It accepted PCB waste from 1983 to 1987 and closed in 2004. Landfill B-16 has a leachate collection and removal system (LCRS) which serves as its primary leachate monitoring system. The lysimeters are a secondary monitoring system intended to monitor soil-pore moisture in the unsaturated (vadose) zone underneath the landfill and are not required by the PCB regulations.<sup>3</sup> CWM has continuously monitored Landfill B-16's LCRS as required by its previous TSCA approvals. The Approval requires CWM to monitor the LCRS monthly (see Approval Condition VII.B.3.b.); however, the Approval does not require monitoring of the lysimeters.<sup>4</sup>

Please see response to comment **C-5** for discussion of the violations associated with the soil contamination and continued use of a contaminated building.

During 2005, U.S. EPA's National Enforcement Investigations Center ("NEIC") conducted a TSCA investigation of the Kettleman Hills Facility. During that investigation it determined that CWM had failed to properly prepare its on-site laboratory testing equipment and leachate samples<sup>5</sup> for PCB analysis [U.S. EPA 2007a]. Specifically, U.S. EPA found that CWM failed to meet the acceptance criteria for its Aroclor calibration curves, to establish acceptable detection limits for PCBs, to develop adequate acceptance criteria for surrogate recoveries, and to evaluate daily check standards as required. To remedy this noncompliance, we required

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<sup>3</sup> 40 C.F.R. § 761.75(b)(7) requires chemical waste landfills to have a leachate collection and monitoring system installed and specifies that the system be one of three specific designs. Landfill B-16 initially had two leachate systems: the primary leachate collection system and the secondary lysimeter system. The primary system, which remains operational and is included in the Approval, meets the § 761.75(b)(7)(ii) design requirements for compound leachate collection systems.

<sup>4</sup> Neither the Facility's RCRA permit nor its RWQCB's waste discharge order require monitoring of the Landfill B-16 lysimeters. Lysimeters are not a feasible means of monitoring leachate releases from landfills at the Kettleman Hills Facility. See RWQCB 2014 (condition 38): "[CWM] has demonstrated that the collection of soil-pore liquid samples with lysimeters or similar suction-based technology as a component of an unsaturated zone monitoring program is not feasible under ambient conditions at the site."

<sup>5</sup> NEIC also reviewed the Facility's testing of groundwater sampling which the Facility sent to an off-site laboratory for analysis. NEIC found no compliance issues [U.S. EPA 2006, p. 9].



CWM to provide evidence that it had corrected its laboratory procedures [U.S. EPA 2007c]. We also provide CWM with three PCB leachate samples to test CWM's proficiency in sampling and analyzing for PCBs in leachate at its on-site laboratory [U.S. EPA 2007d]. In 2010, we determined that CWM had fully corrected the noncompliance including adequate analysis of the test samples. No penalties were assessed [U.S. EPA 2010a]. Currently, all KHF leachate and groundwater samples are sent to off-site, California-certified laboratories for PCB testing.

In March 2013, DTSC penalized CWM over \$290,000 for failure to report 72 hazardous waste spills at the Kettleman Hills Facility over a four-year period from June 2008 to 2012<sup>6</sup> [DTSC 2013]. In its response to comments on the proposed 2014 RCRA Part B permit modification, DTSC discussed these spills and concluded that they did not represent a threat to human health or the environment:

DTSC reviewed the circumstances surrounding the 72 small spills that the facility failed to report. The evaluation included the size, location, offsite consequences, cleanup response, and causes of these spills. Of the 72 spills, the largest spill was estimated at approximately 5–8 gallons, 4 other spills were more than a gallon, 54 spills were between a gallon and a pint, and 13 spills were less than a pint. Almost all were solid hazardous wastes. The largest number of spills involved non-RCRA hazardous waste between a quart and a gallon.

Most of these spills (60 out of 72) occurred at the sample rack, where the facility samples incoming loads for analysis. During the time frame of these spills (August 2008–May 2012), the facility received over 54,000 manifested shipments of hazardous waste. The sample rack now has secondary containment, providing additional environmental protection for future spills.

In evaluating the types of materials and quantities spilled and air and water monitoring records for the facility, DTSC found no indication of offsite consequences. In all cases, these spills were cleaned up immediately after occurrence, and the spills were documented in facility operating records. *In sum, DTSC found no evidence to suggest that any of the 72 spills posed any threat to human health or the environment.*

The general cause of these 72 spills appears to be human error by facility staff as samples of waste were removed from the loads for laboratory analysis. The facility representatives have stated that they believed the spills were too small in volume to report. DTSC has clarified this spill notification requirement and will continue to require that all spills outside of secondary containment be reported, regardless of size. Even though the failure to report spills was a repeat violation cited in the 2010 inspection, and the subject of a prior administrative enforcement action, DTSC

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<sup>6</sup> This penalty also addressed other violations identified during the DTSC's April 2012 inspection.



found there was no intent to hide the spills, as the facility recorded the spills and cleanup response associated with the spill itself. The March 2013 enforcement settlement included clarification and agreement on reporting requirements, and language reflecting this is being incorporated into the facility [RCRA] permit as well.

See DTSC 2014, p. 24 (emphasis added).

U.S. EPA has included notification requirements for spills involving PCBs that require implementation of the Facility's Contingency Plan in its Approval. See Approval Condition IV.G.3. We have also included a requirement that the Facility report monthly on any occurrences that are not normal to the operation of the Facility involving PCB Items or Waste—such as spills or leak that occurred during the previous month. See Approval IV.O.11. Finally, we have also required that that all spills of PCBs be cleaned up according to the 40 C.F.R. Part 761 Subpart G—PCB Spill Cleanup Policy. See Approval Condition IV.G.1.

7. *Comment:* A commenter wrote that U.S. EPA has an obligation to enforce CWM's approved permit, has failed to comply with this duty, and is allowing ongoing PCB operations despite CWM's repeated violations. The commenter stated that U.S. EPA must remedy this alleged failure by not only denying the PCB approval in accordance with 40 C.F.R. § 761.65(d)(2)(ii) but also revoking the existing permit for non-compliance. [CRLA #15].

*Response:* U.S. EPA agrees that it has a duty to enforce KHF's TSCA Approvals. The commenter cites to numerous U.S. EPA actions to enforce KHF's current PCB permits as its evidence of U.S. EPA's failure to enforce these permits. These enforcement actions, as well as the list of inspections and enforcement action taken by U.S. EPA and its partner State agencies such as DTSC and the RWQCB, are clear evidence that we take our duty to assure CWM's compliance with its permits seriously.

CWM has corrected all noncompliance issues cited in U.S. EPA's enforcement actions. We have not found that CWM is currently failing to comply with its existing TSCA permits and the commenter provides no evidence of current noncompliance. We, therefore, have no basis to revoke CWM's existing TSCA permits for noncompliance. Previous noncompliance may constitute grounds for denying a permit only if, in the judgement of the appropriate U.S. EPA official,<sup>7</sup> the applicant's compliance history suggests a pattern or practice of noncompliance that demonstrates the applicant's unwillingness or inability to comply with the regulations. For the reasons discussed in the Statement of Basis and in response to the preceding comments, U.S. EPA has determined, in its judgment, that CWM's compliance history does not suggest either its unwillingness or inability to comply with its permits and the applicable regulations.

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<sup>7</sup> In this case, the appropriate U.S. EPA official is the official with the authority to sign KHF's TSCA approval is the Director of the Land, Chemicals & Redevelopment in U.S. EPA Region 9. See Approval Signing Statement, p. iv.



8. *Comment:* One commenter wrote that U.S. EPA “hid” the Facility’s compliance history, which the commenter stated is “the part that really interests most people” on page 39 of draft EJ Analysis. [El Pueblo #34]

*Response:* U.S. EPA disagrees that it “hid” the Facility’s compliance history. This history is discussed in **section 4.3**, entitled “Facility Compliance History”, of the draft EJ Analysis as shown in the document’s table of contents and is discussed in the document’s executive summary. The Facility’s compliance history was also detailed in the Statement of Basis (see **section IV**). The order of presentation of material in the draft EJ Analysis was based on the logical progression from information on the community most likely to be affected by the permitted Facility to information on the permitted Facility, its operations, and its history including its compliance history.

We included a detailed compliance history in the draft EJ Analysis because we had learned from past interactions with the community that information on the Facility’s compliance and enforcement history were important to the community. See EJ Analysis, **table 16**. We translated the full draft EJ Analysis into Spanish and posted both language versions on our website and in the regulations.gov docket. Inclusion of the Facility’s compliance and enforcement history in the draft EJ Analysis was one of our efforts to make this information more widely accessible.

9. *Comment:* One commenter stated that U.S. EPA does not care about compliance with permits. [Angel #3]

*Response:* U.S. EPA’s inspection and enforcement history as well as the comprehensive TSCA Approval we have drafted for the Kettleman Hills Facility demonstrate our concern about compliance and our commitment to assuring CMW’s compliance with its permits.

We have demonstrated our concern about compliance at the Facility through numerous inspections and through enforcement actions when noncompliance was found or disclosed. See Statement of Basis, **section IV** and EJ Analysis, **section 4.3**. We have also carefully evaluated and weighed the CWM’s compliance history as part of our decision process on its application to renew and modify the TSCA approvals. This evaluation found that while CWM has violated applicable requirements in the past, each of these instances of noncompliance has been remedied, fines paid when assessed, and modifications of Facility operations done to prevent future noncompliance. In our judgement, these violations and the subsequent actions by CWM do not evidence a pattern of noncompliance or unwillingness or inability to comply with applicable requirements.

We have demonstrated our commitment to compliance at the Facility by the many provisions that we incorporated to the Approval to improve its enforceability compared to the permits issued in 1988 (as amended) and 1992. We crafted each permit term and condition to make compliance and enforcement practicable. For example, the Approval sets an explicit numerical



maximum storage capacity for the PCB Flushing/Storage Unit (including specific and separate maximum storage capacities for the enclosed building and the outside containment area). See Approval Condition V.C.1. We have added numerous recordkeeping and reporting requirements to provide better oversight of the Facility’s operations. We had added emergency management (contingency) requirements that establish the Facility’s enforceable responsibilities in case of a spill or other release. See Approval Sections IV.G. and O. and Statement of Basis, Appendix F. We have added specific monitoring requirements including air monitoring and quarterly testing of the PCB Flushing/Storage Unit for PCB contamination. See Approval Sections VIII.A. and IV.G. Finally, we have added explicit modifications procedures to ensure that changes at the Facility are reviewed and reflected in its permit. See Approval Section IX.A.

10. *Comment:* One commenter, noting the U.S. EPA imposed a penalty of \$302,000 in 2010, asked how U.S. EPA can issue a permit to CWM after assessing such a penalty. The commenter also noted the violation for failure to monitor Landfill B-16’s lysimeters for seven years and stated that this happened because U.S. EPA does whatever CWM wants it to do. [Angel #6]

*Response:* See response to comment C-5. for more information on the 2010 violations. As discussed in that response to comment, CWM took the necessary steps to correct all violations found in 2010.

See response to comment C-6 for more information on the violation related to failure to monitor the Landfill B-16’s lysimeters. CWM self-disclosed this failure and immediately began monitoring the lysimeters, again showing a willingness and ability to comply with its TSCA Approvals. U.S. EPA fined CWM \$10,000 for its failure to monitor the lysimeter and required it to donate \$37,500 to Kings County. Both actions demonstrate that we did not approve of CWM’s failure to monitor.

U.S. EPA may deny an approval for the storage of PCB waste if, in its judgment, it finds that the applicant’s previous compliance history suggests a pattern or practice of noncompliance that demonstrates the applicant’s unwillingness or inability to comply with the regulations. CWM’s actions after discovery of these violations are, in our judgment an example of its willingness and ability to comply with the PCB regulations and its TSCA Approvals.

11. *Comment:* One commenter asked how CWM can be trusted to stop violating its permit and that it “seems impossible to issue a permit to someone that keeps breaking the law over and over.” The commenter specifically noted the improper calibrations of PCB analysis equipment found in 2005, failure to complete manifests, and the 2010 violations related to the PCB F/SU. [MALatorre #1]

*Response:* U.S. EPA thanks the commenter for taking the time to attend and speak at the public hearing. CWM promptly corrected all cited violations and has not repeated them. Physical and operational changes have been made at the Facility to prevent future noncompliance and these



changes have been incorporated into the Approval. See response to comment **C-6**. for discussion of the improper calibration of PCB analysis equipment and response to comment **C-5**. for a discussion of the 2010 violations related to manifests and the PCB F/SU.

12. *Comment:* One speaker stated that U.S. EPA put out false information by stating that CWM complies when the Agency’s records show that they do not. The comment also stated that U.S. EPA has stated that violations related to PCBs were unacceptable and that U.S. EPA should not issue permits to CWM who is a “chronic violator.” [Angel #12]

*Response:* U.S. EPA listed and discussed a number of historical violations by CWM of permit requirements and applicable regulations. See Statement of Basis, **section IV** and draft EJ Analysis, **section 4.3**. CWM has corrected all these violations, and we have made no determination of current noncompliance with the existing TSCA permits. The commenter did not provide any information of current noncompliance.

Previous noncompliance is grounds for denying a permit if U.S. EPA, in its judgment, find that the applicant’s compliance history suggests a pattern or practice of noncompliance that demonstrates the applicant’s unwillingness or inability to comply with the regulations. As discussed in the Statement of Basis (**section IV**) and in responses to the preceding comments, we have determined that CWM’s compliance history does not suggest that it is either unwilling or unable to comply with its permits and the applicable regulations.

13. *Comment:* One speaker stated that U.S. EPA’s documents show “a pattern and practice of chronic serious violations that demonstrate a double standard between a rich corporation that dumps on a Spanish-speaking, predominantly farm-worker, community, and the people of color and Spanish-speakers of this community who get the raw deal.” [Angel #9]

*Response:* U.S. EPA listed and discussed a number of historical violations by CWM of its permit requirements and applicable regulations. See Statement of Basis, **section IV** and draft EJ Analysis, **section 4.3**. CWM has corrected all noncompliance issues cited in our enforcement actions and paid significant penalties as a result of these violations. However, as discussed in the Statement of Basis (**section IV**) and draft EJ Analysis (**section 4.3**) and in response to previous comments, CWM’s compliance history does not suggest either a pattern or practice of noncompliance that demonstrates in U.S. EPA judgement CWM’s unwillingness or inability to comply with its permits and the applicable regulations.

The list of inspections and enforcement action taken by U.S. EPA and its partner State agencies such as DTSC and the RWQCB for the Kettleman Hills Facility are evidence that we take CWM’s compliance with its permits seriously.



#### **D. Comments on the Environmental Impacts and Risk Assessment**

1. *Comment:* One commenter stated that the proposed permit was based on the “incorrect and flawed premise that the large scale” disposal of PCBs at the Kettleman Hills Facility would pose no threat to public health or the environment. [El Pueblo #1b]

*Response:* U.S. EPA did not propose and is not finalizing the TSCA Approval for the Kettleman Hills Facility based on a “no threat” or “no risk” risk standard. The PCB regulations establish, for both commercial storage units and chemical waste landfills, a risk standard of “does not pose an unreasonable risk of injury to health or the environment.” See 40 C.F.R. § 761.65(d)(2)(vi) and § 761.75(c)(3). This “no unreasonable risk” standard is the basis for our decision to approve CWM’s application for the Kettleman Hills Facility. See Statement of Basis, **section V.A.3.**

As documented in the Statement of Basis (**section V**), we have determined that operations of the Kettleman Hills Facility, under the terms and conditions of the Approval, will not pose an unreasonable risk of injury to health or the environment from PCBs. This determination is based on the engineering and operational controls and monitoring requirements included in the Approval, on many years of monitoring data, and on an assessment of the overarching weight of the scientific evidence regarding the relationship between Facility PCB releases and the likelihood and magnitude of adverse health impacts in the surrounding communities. See Statement of Basis, **section V**.

We have analyzed a number of objectives, site and media-specific, multidisciplinary scientific investigations which collectively assessed the exposure-threat and quantitative health-risk posed by PCB releases from the Kettleman Hills Facility. See Statement of Basis, **section V.B.** Based on this comprehensive review of existing studies and data, we did not identify PCB concentrations above levels of concern in air, water, vegetation or soils in areas proximate to the Kettleman Hills Facility. In addition, we were not able to derive unacceptable health risk-estimates to either residents or on-site workers from Kettleman Hills Facility PCB releases. Finally, the available data shows that the concentration of PCBs found in environmental media proximate to the Facility are consistent with the concentration of PCBs found in other areas of California’s Central Valley [Wenck 2010, p. 4-11]. These PCB concentrations are also consistent with the concentrations of PCBs found by a separate U.S. EPA investigation in undisturbed wilderness locations in the United States [U.S. EPA 2007b, Wenck 2010, p. 4-11].

U.S. EPA is unaware of any new studies, information, or data that contradict the many studies and substantial amounts of monitoring data that show PCBs are not being released from the Kettleman Hills Facility at levels that present an unacceptable health risk to Kettleman City residents.





2. *Comment:* One commenter stated that the Kettleman Hills Facility needs to be mitigated not expanded. [Haines #6]

*Response:* There is no evidence that PCBs have been released from the Kettleman Hills Facility at levels that would adversely affect public health or the environment. See Statement of Basis, **section V** and response to comment **D-1**. To prevent future releases from the Facility, we have included in the Approval both operational and contingency requirements to prevent, reduce, and/or mitigate any future spills and other releases. See response to comment **D-3**. The commenter did not suggest any specific mitigation measures. Because our action is limited to PCB waste operations at the Facility, our determination is necessarily limited to the impacts from these PCB waste operations. Impacts from other hazardous and non-hazardous waste operations at the Facility are addressed by State and local agencies in their permits.

3. *Comment:* One commenter stated that they did not trust CWM to mitigate potential PCB releases or to protect the local community and the environment. [Anon2 #2]

*Response:* The commenter does not identify specific reasons for their lack of trust. U.S. EPA agrees that trust alone is not sufficient and that is why it has written a comprehensive enforceable Approval that addresses all aspects of PCB waste operations at the Kettleman Hills Facility. We have determined that this Approval is protective of public health or the environment. It includes both operational and contingency requirements to prevent, reduce, and mitigate any future spills and other releases. These requirements include leachate collection and removal; stormwater infrastructure and management; storage facility design standards; limitations on the type and amount of waste that may be stored and disposed; container management; dust mitigation; security measures; comprehensive inspection procedures; spill prevention plans; and a contingency plan. See Statement of Basis, sections III.C. D. and F. The Approval also requires the Facility to monitor air, leachate, and groundwater for releases. See Statement of Basis, **section III.F**. Each of these requirements are obligations on CWM and any violations could subject it to enforcement and significant fines as well as potential revocation of the Approval. See Approval Conditions IV.A.7 and IX.C.1.a.

Prior to proposing the draft Approval, U.S. EPA reviewed the Facility's compliance history. See Statement of Basis, **section IV**. We acknowledge that CWM has been cited for violations multiple times for a variety of issues. Each of these violations has been remedied and, in some cases, operational or physical changes have been made at the Facility and conditions have been added to the Approval to prevent reoccurrences. Based on our review, we determined that the compliance history of the Kettleman Hills Facility does not suggest a pattern or practice of noncompliance that demonstrates CWM's unwillingness or inability to comply with the applicable regulations.



Finally, based on years of monitoring data as well as numerous studies, there is no evidence of releases from the Facility that pose an unreasonable risk of injury to the local community or the environment. See Statement of Basis, **section V**. See also response to comment **D-1**.

4. *Comment:* A commenter noted that the geology, hydrogeology, and location of the Kettleman Hills Facility makes it “one of the best places to dispose of any hazardous waste on the planet.” The commenter provides several examples of why the Facility’s location reduces or prevents adverse impacts to human health. [Dowdall #1]

*Response:* U.S. EPA thanks the commenter for his comments on the proposed permit. We agree that the siting of the Kettleman Hills Facility, including its distance to the nearest residential area (3.5 miles to Kettleman City) and the isolation of the groundwater under the Facility, contributes to reducing or preventing adverse impacts to human health from the Facility’s operations.

Studies have indicated that groundwater beneath the Facility is not connected to the groundwater beneath Kettleman City [CalEPA 2010, RWQCB 2014]. Consequently, groundwater below KHF is hydraulically isolated from Kettleman City’s drinking water source and groundwater is not considered to be a possible exposure pathway for contaminants to reach nearby residents.

As discussed by the California Air Resources Board in its appendix to the Kettleman City Community Exposure Assessment [CARB 2010, p. 20], the Facility’s distance and direction from the nearest residences in Kettleman City greatly reduces the potential of any of its emissions reaching the community:

[Ambient air] concentrations measured downwind of the Facility do not typically reach Kettleman City, due the prevailing winds usually being from the north or northwest. When the wind does come from the southwest, which has the potential to carry Facility emissions toward Kettleman City, the dilution factor between the Facility and Kettleman City has been estimated by air dispersion computer models to dilute (reduce) Facility air concentrations by a factor of at least 10 due to atmospheric dispersion.

5. *Comment:* Two commenters wrote that increasing overall PCB waste storage capacity and operations at Kettleman Hills will result in disproportionate adverse health effects and risks for Kettleman City residents. [CRLA #5; El Pueblo #6]

*Response:* The Approval does not increase the storage capacity for PCB waste at the PCB F/SU over the capacities allowed under the previous Approvals and the PCB regulations. The Approval does increase the disposal capacity for PCB waste by allowing PCB waste disposal in the already-operating Phase III of Landfill B-18.



U.S. EPA has determined that the storage, treatment for disposal, and disposal of PCB waste at the Kettleman Hills Facility, under the terms and conditions of the Approval, will not pose an unreasonable risk of injury to health or the environment. See Statement of Basis, **section V.F.** Given this determination, the operations allowed under the Approval will not result in disproportionate adverse health effects and risks for Kettleman City residents. See response to comment **D-1.**

6. *Comment:* One speaker asked that U.S. EPA do something for the community other than doing the same thing again when U.S. EPA knows it is dangerous. [MMAIatorre #12]

*Response:* U.S. EPA thanks the commenter for taking the time to attend and speak at the public hearing. Prior to making our decision to issue the Approval, we carefully reviewed the existing information about the Facility including studies done to evaluate the Facility’s risk to human health or the environment, historical monitoring data, and the Facility’s compliance history. We also developed comprehensive permit terms and conditions to address potential sources of risk from the Facility. Based on this work, we have determined that the Facility’s PCB operations, under the terms of the Approval, do not pose a danger to the community. See response to comment **D-1.**

7. *Comment:* Two commenters stated that anxiety about potential exposure to PCB resulting from accidental releases or fires at the Facility, and the stigma associated with living near a hazardous waste facility, create chronic stress that leaves residents more vulnerable to other health risks. [CRLA #6; El Pueblo #7]

*Response:* The commenters do not include any data or studies that support their statement that anxiety about potential exposure and the stigma associated with living near a hazardous waste facility creates chronic stress that leaves residents more vulnerable to other health risks.

A 2017 community canvass conducted by the Public Health Institute for Kings County Department of Public Health did not find the Kettleman Hills Facility to be a significant concern for the community. The canvass found that the top environmental concerns of the community were water quality, air quality and pesticides [PHI 2017, p. 32].

U.S. EPA has determined that under the Approval, PCB operations at the Kettleman Hills Facility will not pose an unreasonable risk to health or the environment. The Approval includes both operational and contingency requirements to prevent, reduce, and mitigate spills and other releases including accidental releases and fires. See Statement of Basis, **section III.F.** In addition, the Facility is 3.5 miles from Kettleman City. The great majority of hazardous waste trucks do not pass through Kettleman City on their way to the Facility [CH2MHill 2012]. See also responses to comments **D-8, D-9, and D-13.**

As a condition of the 2014 RCRA permit modification, the Facility is required to provide annual community education in Kettleman City. The meeting provides information about



KHF’s contingency plan and assists the community in preparing a disaster plan for the residents. Public agencies responsible for emergency planning and response are invited to provide information to local residents, such as the potential for accidents, how they would be handled, and their potential impacts on the local community. CWM notifies members of the public about the annual meeting through mailers, sent both in English and Spanish [Waste Management 2019].<sup>8</sup>

8. *Comment:* One commenter first notes the statement on page 25 of the draft EJ Analysis that PCB releases through air emissions from improper storage are possible and then states that U.S. EPA “pretends there is no risk as EPA tries to justify the unjustifiable issuance of a new PCB permit.” [El Pueblo #39]

*Response:* In **section 4.2.2.** of the draft EJ Analysis, U.S. EPA discusses potential mechanisms for PCB releases from PCB waste storage operations at the Kettleman Hills Facility:

“For the Kettleman Hills Facility, potential mechanisms for PCB releases are air emissions or contamination of water. Air dispersion of PCBs can occur from volatilization (evaporation) of PCB liquids from open containers, from spills and leaks, and from the surface of the landfill. It can also occur if PCB-containing soils become airborne during storage, treatment or disposal operations or during high winds.”

See also, Statement of Basis, **section V.A.2.**

We identified *potential* mechanisms for PCB releases in order to identify permit conditions necessary to prevent unreasonable risk. The identification of a release mechanism, such as air emissions of PCB liquids from open containers and from spills and leaks, does not mean that such releases will occur.

To prevent or mitigate potential releases from storage at the Kettleman Hills Facility, we have included permit terms for container management (Approval Section V.D.); spill prevention and cleanup (Approval Section IV.G. and Approval Condition V.E.4.); regular inspections (Approval Sections IV.I. and V.H.), quarterly testing of the PCB F/SU Unit (Approval Section V.G.), and vapor control for the PCB tank (Approval Condition V.G.7.).

We did not propose and are not finalizing the TSCA Approval for the Kettleman Hills Facility based on a “no risk” standard. The PCB regulations establish, for both commercial storage units and chemical waste landfills, a risk standard of “does not pose an unreasonable risk of injury to health or the environment.” See 40 C.F.R. § 761.65(d)(2)(vi) and § 761.75(c)(3). We have determined that PCB waste storage operations at the Kettleman Hills Facility as allowed

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<sup>8</sup> Due to community public health restrictions limiting public meetings, CWM has postponed its 2020 annual meeting. The Facility will provide notice to the community as soon as it is able to schedule the meeting.



and limited by the Approval do not pose an unreasonable risk of injury to health or the environment. See Statement of Basis, **section V.F**. See also, response to comment **D-1**.

9. *Comment:* One speaker wanted U.S. EPA to concede that it is possible for a PCB release to come from the Facility because U.S. EPA required a contingency plan. [MMAlatorre #9]

*Response:* As required by the PCB regulations at 40 C.F.R. § 761.65(c)(7)(ii), the Approval incorporates the Facility’s Contingency Plan and requires CWM to update and revise the Contingency Plan as needed. See Approval Appendix B-1.11 and Section IV.G.

Contingency plans are prepared to ensure that procedures and equipment are in place to rapidly respond to situations that may result in releases and to minimize or eliminate such releases. The requirement for contingency plans does not mean that releases are likely at levels that would adversely affect the surrounding area. There is no evidence that PCBs are being released or have been released from the Kettleman Hills Facility at levels that would adversely affect public health or the environment. See Statement of Basis, **section V**.

10. *Comment:* Several commenters stated that Kettleman City is impacted by multiple sources of pollution including the Kettleman Hills Facility, pesticides, drinking water contaminated with benzene and arsenic, truck traffic on Highway 41 and Interstate 5, toxic contamination from old oilfield operations, sewage sludge shipped from Los Angeles to nearby farms, and former PG&E site. [Haines #3, Labriola #3, Paris #3, Wieder #3]

*Response:* In its Environmental Justice Analysis, U.S. EPA discussed the impacts on the Kettleman City community from pesticides (EJ Analysis, **section 3.2.4**), drinking water quality (EJ Analysis, **section 3.2.3**), truck traffic (EJ Analysis, **section 3.2.2**), and poor air quality (EJ Analysis, **section 3.2.1**). We did not identify toxic contamination from old oilfields, the Westlake Farms Composting Facility (which compost sewage sludge), or the former PG&E site as environmental burdens on Kettleman City. Based on available information none of these latter three are likely to significantly contribute to Kettleman City’s environmental burden:

- The 2010 Kettleman City Community Exposure Assessment stated that there was no indication that petroleum operations, including former natural gas wells in the vicinity of the Kettleman City, affected the town given the lack of findings from the testing of soil, soil-gas, and water samples [CalEPA 2010, p. Cal/EPA-64].
- The Westlake Farm Composting Facility is located more than 4 miles downwind (southeast) of Kettleman City. The commenters did not provide, and U.S. EPA was not able to find, any evidence that that the Westlake Facility has a significant adverse impact on the residents of Kettleman City. See, in general, CH2MHill 2008.<sup>9</sup>

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<sup>9</sup> The draft subsequent Environmental Impact Report for the Landfill B-18 expansion states that Westlake Farms, together with several other projects in the area, would have a significant cumulative impact on air quality and traffic



- The former PG&E site, which U.S. EPA understands to be PG&E’s natural gas pipeline compressor station located 8 miles north of Kettleman City, was thought to have contaminated the groundwater under it with chromium. No connection with Kettleman City’s ground water has been demonstrated and no chromium concentrations above the maximum contaminant level<sup>10</sup> have been detected in Kettleman City’s groundwater. See **CA Drinking Water Watch**.

11. *Comment:* Two commenters stated that U.S. EPA’s approval of CWM’s permit application would increase the already high levels of air pollution and heavy truck traffic next to and near the residential areas of the Kettleman City community, continuing and increasing the disproportionate adverse environmental and health impacts on the residents of Kettleman City, in violation of the U.S. EPA’s environmental justice obligations. [El Pueblo #2a; MMAlatorre #1]

*Response:* U.S. EPA acknowledges that Kettleman City’s air quality exceeds the national ambient air quality standards for ozone and PM<sub>2.5</sub> and that the census tract that includes Kettleman City has PM<sub>2.5</sub> values higher than 95 percent of all census tracts in California and ozone values higher than 85 percent of all census tracts in California. See draft EJ Analysis, **section 3.2.1**. U.S. EPA, however, does not expect that the Approval will significantly increase air pollution or heavy truck traffic next to or near the residential areas of Kettleman City and causing/contributing to disproportionate adverse environmental and health impacts for the residents of Kettleman City for a number of reasons:

- The Approval does not increase the overall waste disposal capacity of Landfill B-18 or the daily rate at which the Facility may dispose of allowed wastes<sup>11</sup> in Landfill B-18. The capacity is set by the Facility’s 2014 RCRA permit modification issued by DTSC [DTSC 2003, p.27]. The disposal rate is set by the Facility’s Title V Operating Permit issued by the San Joaquin Valley Air Pollution Control District. See Permit Unit Requirements for C-282-11-8, Condition 18 found in the Renewal Application, Attachment C. The primary effect of the approval is to shift the location of PCB waste disposal from Phases I and II to Phase III of Landfill B-18.
- The Approval does not increase the storage capacity for PCB waste at the PCB F/SU over the capacities allowed under the previous TSCA Approvals and the PCB regulations.

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on I-5 and Highway 41 [CH2Hill 2008, Table 3.1-2, p. 3.1-14]. However, both air quality and traffic are acknowledged environmental burdens on Kettleman City.

<sup>10</sup> The maximum contaminant level (“MCL”) is the highest level of a contaminant that is allowed in drinking water.

<sup>11</sup> Landfill B-18 is permitted by DTSC to accept most types of solid RCRA and non-RCRA hazardous wastes and by Kings County Department of Public Health to accept nonhazardous, nonputrescible industrial solid waste.



- PCB waste has historically accounted for only 5% of the waste disposed of in Landfill B-18 [CWM 2018a]. Given this low baseline, even large increases in PCB waste disposal are unlikely to result in significant increases in truck traffic in or around Kettleman City or a significant increase in emissions from on-site operations.
- U.S. EPA evaluated whether the potential emissions associated with PCB waste disposal, storage, and treatment as allowed under the proposed permit would adversely affect the San Joaquin Valley’s progress toward attainment and attainment of the health-based national ambient air quality standards (NAAQS). Kettleman City is located in the San Joaquin Valley whose air quality exceeds both the ozone and fine particulate (PM<sub>2.5</sub>) NAAQS. See EJ Analysis, **section 3.2.1**. We determined that the potential emissions related to the approved PCB operations were less than significant and would not adversely affect the area’s progress toward meeting, attainment of, or maintenance of the NAAQS. See Statement of Basis, **section VII.F**. and **Appendix J**.
- As part of the 2010 Kettleman City Community Exposure Assessment, the California Air Resources Board modeled emissions from trucks and other diesel sources to estimate local exposure to diesel exhaust in Kettleman City. The calculated exposure level was well below the applicable Reference Exposure Level but above the Air Cancer Risk<sup>12</sup> level for diesel particulate [CalEPA 2010, Cal/EPA pp. 41-42]. As noted in the Assessment, the latter is common throughout California [CalEPA 2010, Cal/EPA pp. 41-42]. Between 2010 and 2020, total emissions in Kings County of NO<sub>x</sub> and PM<sub>2.5</sub> from heavy duty diesel trucks have decreased by 61% and 87%, respectively, despite increases in truck travel. These decreases further reduce public exposure to diesel truck emissions in and around Kettleman City [CARB 2020].
- The CalEnviroScreen’s diesel particulate emissions percentile for the census tract that includes Kettleman City is 7% [CalEPA 2019].<sup>13</sup> This score means that 93% of all other census tracts in California have higher diesel emissions and indicates that Kettleman City is not disproportionately impacted by diesel emissions from truck traffic in comparison to other census tracts in California.

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<sup>12</sup> A “Reference Exposure Level” (REL) identifies the airborne concentration of a contaminant that is not anticipated to present a significant risk of adverse non-cancer health effects. An “Air Cancer Risk” (ACR) identifies the level of a cancer-causing air contaminant that pose no significant risk from lifetime exposure to the contaminant. Both values are developed by the California Office of Environmental Health Hazard Assessment (OEHHA). See CalEPA 2010, pp. Cal/EPA-31-32.

<sup>13</sup> The stretch of Interstate 5 closest to Kettleman City is in a different census tract (Census Tract 603100170) than Kettleman City. Census tract 603100170 has a diesel particulate emissions percentile ranking of 4% [CalEPA 2019]. It is also the census tract that includes the Kettleman Hills Facility. The commercial area at the intersection of I-5 and Highway 41 is located in the same census tract as Kettleman City.



12. *Comment:* One commenter wrote that the draft EJ Analysis failed to acknowledge that the proposed permit will only exacerbate this Kettleman City’s unhealthy air quality by increasing the amount of truck traffic thus causing an unacceptable risk to an already vulnerable population. [El Pueblo #30]

*Response:* U.S. EPA does not expect that the Approval will significantly increase the amount of truck traffic in or around Kettleman City and will not make air quality worse and cause an unacceptable risk to the Kettleman City community. See response to comment **D-11**.

13. *Comment:* Two commenters stated that Kettleman City residents will be exposed to increased actual and potential health risks resulting from the transport of PCB wastes to Kettleman Hills because transport routes run near and through their community and that the PCB storage capacity increase may lead to an increase in daily truck trips, and will result in more truck traffic over time as trucks deliver PCB waste for a longer time than they would have if the Facility had a lower PCB storage capacity. The commenters concluded that this transport of PCB waste will increase residents’ overall risk of exposure to PCBs as well as truck traffic emissions. [CRLA #7; El Pueblo #8]

*Response:* See the response to comment **D-11**. for our responses to comments about truck traffic and their emissions.

The Approval does not increase the storage capacity for PCB waste over the capacities allowed under the previous Approvals and the PCB regulations. The Approval does increase the disposal capacity for PCB waste by allowing PCB waste disposal in the already-operating Phase III of Landfill B-18.

The approval of Phase III of Landfill B-18 for PCB waste disposal increases the number of years that the Kettleman Hills Facility will have the capacity to accept PCB waste for disposal. However, our determination that PCB operations at the Facility will not pose an unreasonable risk of injury to health or the environment considered the entire operational (that is, active waste disposal) period of Landfill B-18 as well as its closure and post-closure care periods.

We were unable to find any information on releases of PCB waste in or close to Kettleman City from trucks traveling to or from the Facility.<sup>14</sup>

Regulation of the means and routes of transportation of PCB waste to the Facility is outside the scope of our TSCA approval. With the exception of notification and manifest requirements in 40 C.F.R. Part 761, Subpart K, U.S. EPA does not regulate transportation of PCB waste within the United States. Regulating the safe transportation of hazardous materials is the responsibility of the U.S. Department of Transportation. Transporters of PCB waste to the Kettleman Hills Facility must comply with all applicable U.S. DOT regulations.

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<sup>14</sup> On April 10, 2020, U.S. EPA reviewed the **HazMat Spill Release Reporting Database** maintained by the California Office of Emergency Services for hazardous material spills in Kettleman City and Kings County.





14. *Comment:* One commenter noted the Caltrans data on page 10 (pdf page 20) of the draft EJ Analysis which showed a large increase in traffic from 2014-2017 “with most of that being truck traffic” and the statement that most of traffic stays at the I-5/Highway 41 junction rather than going north on Highway 41 through Kettleman City. The commenter stated that the pollution generated at the junction from this increased traffic impacts the residential area of Kettleman City. [El Pueblo #31; MMAlatorre #2]

*Response:* The cited traffic data included in the draft EJ Analysis shows all-traffic average annual daily traffic (AADT) counts on Highway 41 (**Figure 9**) in the commercial area of Kettleman City. The all-traffic AADT counts include passenger cars, trucks, and other types of on-road motor vehicles. The percentage of this AADT that is trucks is not available for this location but is likely to be similar to the percentage on I-5 which is 20-25 percent (draft EJ Analysis, **Figure 7**). Based on California Department of Transportation traffic counts, the great majority of this traffic does not travel north on Highway 41 toward the residential area of Kettleman City.<sup>15</sup>

U.S. EPA included information on the general traffic and truck traffic in the vicinity of Kettleman City in the draft EJ Analysis because of its potential environmental impact on the town’s residents and the concerns expressed by the residents about truck traffic. We do not have any specific information on whether emissions from motor vehicles in the commercial area impact the residential area which is more than a mile north of the commercial area. We do have the California Air Resources Board’s estimates of Kettleman City residents’ exposure to diesel exhaust which was modeled as part of the 2010 Kettleman City Community Exposure Assessment. The estimated exposure level was well below the applicable Reference Exposure Level but above the Air Cancer Risk<sup>16</sup> level for diesel particulate. [CalEPA 2010, Cal/EPA pp. 41-42] As noted in the Assessment, the latter is common throughout California [CalEPA 2010, Cal/EPA pp. 41-42]. Between 2010 and 2020, total emissions in Kings County of NO<sub>x</sub> and PM<sub>2.5</sub> from heavy duty diesel trucks have decreased by 61% and 87%, respectively, despite increases in truck travel [CARB 2020]. These decreases further reduce public exposure to diesel truck emissions in and around Kettleman City.

Both U.S. EPA and the California Air Resources Board have extensive regulatory programs to reduce the health and environmental impacts from on-road motor vehicle emissions, including

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<sup>15</sup> This can be seen from Figure 9 of the draft EJ Analysis by comparing traffic figures at the southern datapoint which is on Highway 41 south of Bernard Drive and the northern datapoint which is on Highway 41 north of Bernard Drive. AADT is much lower at northern datapoint than the southern datapoint. This difference indicates that most traffic leaves Highway 41 prior to the northern datapoint. Figure 9 also shows that traffic at the northern datapoint has only slightly increased since 2002.

<sup>16</sup> A “Reference Exposure Level” (REL) identifies the airborne concentration of a contaminant that is not anticipated to present a significant risk of adverse non-cancer health effects. An “Air Cancer Risk” (ACR) identifies the level of a cancer-causing air contaminant that pose no significant risk from lifetime exposure to the contaminant. Both values are developed by the California Office of Environmental Health Hazard Assessment (OEHHA). See CalEPA 2010, pp. Cal/EPA-31-32.



emissions from heavy duty-diesel trucks. See [U.S. EPA’s Regulations to Reduce Mobile Source Pollution webpage](#) and [CARB’s On-Road Mobile Source Programs webpage](#).

15. *Comment:* One commenter wrote that exposure to the combination of environmental hazards and pollutants experienced by Kettleman City has a cumulative effect that harms the health of Kettleman City residents and makes them “highly” vulnerable and at risk to pollution. [El Pueblo #11a]

*Response:* In the EJ Analysis, U.S. EPA recognized that Kettleman City has multiple environmental burdens, as well as social and health issues that may make the community more vulnerable to the impacts of pollution [EJ Analysis, [p. i](#)]. Prior to proposing the TSCA Approval for the Kettleman Hills Facility, we analyzed a number of objective, site and media-specific, multidisciplinary scientific investigations which collectively assessed the exposure-threat and quantitative health-risk posed by PCB releases from the Kettleman Hills Facility. We did not identify PCB concentrations above levels of concern in air, water, vegetation or soils in areas proximate to the Kettleman Hills Facility. In addition, we were not able to derive unacceptable health risk-estimates to residents from Kettleman Hills Facility PCB releases. From this assessment, we determined that the Facility’s PCB operations did not pose an unreasonable risk to health or the environment including to the residents and environment of Kettleman City. See Statement of Basis, [section V.F](#).

16. *Comment:* Several commenters noted that California’s CalEnviroScreen 3.0 ranks Kettleman City as one of the communities in the state most at risk from pollution due to environmental, health and other socio-economic indicators. [Haines #4, Labriola #4, Paris #4, Wieder #4].

*Response:* U.S. EPA acknowledges that the pre-existing social, economic, environmental, and health conditions in Kettleman City may make the community more vulnerable and susceptible to harm from additional pollution. See EJ Analysis, [p. i](#).

CalEnviroScreen is the California Environmental Protection Agency’s online screening tool that “identifies California communities by census tract that are disproportionately burdened by, and vulnerable to, multiple sources of pollution.”<sup>17</sup> The tool uses environmental, health, and socioeconomic information to produce a numerical score for each census tract in the state. This numerical score is used to rank the State’s census tracts on a percentile basis from 100% to 1%. The higher the score the higher the environmental burden. The census tract in which Kettleman City is located has a score of 85-90%. [CalEPA 2019].

We noted Kettleman City’s CalEnviroScreen ranking in the draft EJ Analysis for specific environmental, economic and social factors affecting the Kettleman City community. See EJ Analysis, [section 3.2.1](#). (PM<sub>2.5</sub> and ozone levels), [section 3.2.2](#) (diesel particulate and traffic

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<sup>17</sup> More information is available at CalEnviroScreen can be found [here](#).



levels); **section 3.2.4** (pesticide application rates); **section 3.3.3** (poverty level); **section 3.3.5** (education level); and **section 3.4.4** (emergency department visits for asthma rates).

17. *Comment:* One commenter stated that Kettleman City would rank even higher in vulnerability if the “giant” hazardous waste landfill was not excluded by the State for the CalEnviroScreen analysis. [El Pueblo #11b]

*Response:* CalEnviroScreen is a product of the California Environmental Protection Agency who is responsible for determining how sources are weighted in calculating rankings.

The Kettleman Hills Facility is located in the different census tract than Kettleman City. The census track in which the Kettleman Hills Facility is located has an overall percentile score in the 75-80% range with a pollution burden percentile of 47% and a population characteristics percentile of 88% [CalEPA 2019]. The census tract in which Kettleman City is located has an overall percentile score of 85-90% with a pollution burden percentile of 81% and a population characteristics percentile of 85% [CalEPA 2019].

CalEnviroScreen’s methodology does take into account the effects on communities that are located near a hazardous waste site even if the site is not in the same census track. Several indicators, including hazardous and solid waste sites, toxic releases, and impaired water bodies base their scoring partly on proximity to these environmental hazards. See **CalEnviroScreen FAQs** and CalEPA 2017.

U.S. EPA did not use Kettleman City’s overall CalEnviroScreen ranking in the draft EJ Analysis although it did note its rankings for specific environmental, economic and social factors affecting the Kettleman City community. See EJ Analysis, **section 3.2.1**. (PM<sub>2.5</sub> and ozone levels), **section 3.2.2** (diesel particulate and traffic levels); **section 3.2.4** (pesticide application rates); **section 3.3.3** (poverty level); **section 3.3.5** (education level); and **section 3.4.4** (emergency department visits for asthma rates).

18. *Comment:* One speaker stated that although U.S. EPA acknowledges that Kettleman City is one of the most vulnerable communities in California, it does not care about the health of the community. [Angel #4]

*Response:* In the EJ Analysis, U.S. EPA recognized that Kettleman City has multiple environmental burdens, as well as social and health issues that may make the community more vulnerable to the impacts of pollution [EJ Analysis, **p. i**]. However, we have determined that PCB operations at the Kettleman Hills Facility, as allowed by the Approval, will not pose an unreasonable risk of injury to health or the environment and therefore will not add to Kettleman City’s environmental and health burdens.

In preparing the Approval, we took care to ensure that it included engineering and operational controls that prevent or reduce the likelihood of PCB releases from the Facility and appropriate monitoring, recordkeeping and reporting requirements to oversee compliance. The Approval



decision is supported by a number of multidisciplinary public health investigations conducted or required by local, state and federal agencies, including the PCB Congeners Study, which we requested the Facility to perform in part due to comments and concerns we heard from the community. Collectively, these studies have shown no unreasonable risk to the community from PCB operations at the Facility. See Statement of Basis, [section V](#).

We prepared a draft Environmental Justice Analysis as part of our decision process for the Kettleman Hills Facility permit. In that draft EJ Analysis, we reviewed the health status of Kettleman City residents ([section 3.4](#)) as well as the environmental burdens the community faces ([section 3.2](#)) and its socio-economic conditions ([section 3.3](#)) that can make it more vulnerable to those burdens. We recognized that Kettleman City has multiple environmental burdens, as well as the presence of social and other health factors that may increase community's vulnerability to the impacts of pollution (Executive Summary).

The draft EJ Analysis identified the most pressing environmental issues faced by the Kettleman City to be drinking water that contains excessive levels of arsenic and air quality that exceeds the national ambient air quality standards for ozone and fine particulate (PM<sub>2.5</sub>). The Approval will not exacerbate either issue (see EJ Analysis, [section 6.3.1](#). and Statement of Basis, [section VII.F.](#)). In 2020, the surface water treatment plant, constructed with State and Federal funds, began providing clean drinking water the residents of Kettleman City. U.S. EPA continues to work closely with the San Joaquin Valley Air Pollution Control District and California Air Resources Board to improve air quality in the Valley.

19. *Comment:* One speaker said that it is incorrect that PCBs do not affect the health of the people in Kettleman City, noting that the ERA reports from Kings County and multiple other sources mention that they actually do affect the health of residents in Kettleman City. The speaker said that U.S. EPA should take this into consideration and deny the permit because the residents of Kettleman City do not want more PCBs to affect their health. [MAlatorre #2]

*Response:* The speaker did not identify the reports he was referring to. As discussed in the response to comment on biomonitoring (response to comment [D-26](#)), PCBs are ubiquitous in the environment. Most, if not all, people living in the U.S. have measurable amounts of PCB in their bodies with the most common source of exposure being the consumption of PCB-contaminated foods, particularly meat, fish, and poultry [ATSDR 2014].

U.S. EPA is issuing the Approval for the storage, treatment and disposal of PCB waste at the Kettleman Hills Facility based in part on its finding that operations of the Facility, under the terms and conditions of the Approval, will not pose an unreasonable risk of injury to health or the environment from PCBs. This finding is based on the engineering and operational controls and monitoring requirements included in the Approval and on an assessment of the overarching weight of the scientific evidence regarding the relationship between Kettleman Hills Facility PCB releases and the likelihood and magnitude of adverse health impacts in the surrounding communities, such as Kettleman City. See also, response to comment [D-1](#).



20. *Comment:* One commenter, who is a resident of Kettleman City and an employee at the Kettleman Hills Facility, stated that dust is an issue because of family health issues and she is concerned about pesticides used on the nearby orchards. [Tamayo #2]

*Response:* U.S. EPA thanks the commenter for taking the time to attend and speak at the public hearing. Given the information provided in the comment, the commenter is concerned about fugitive dust generated on areas adjacent to Kettleman City rather than dust generated at the Facility. Pesticide use and off-site fugitive dust generation are outside the scope of U.S. EPA’s Approval action. Complaints on excess dust can be made to the San Joaquin Valley Air Pollution Control District at 1-800-870-1037. Complaints on pesticide usage can be reported at:

- 4) Kings County Agriculture Department / Measurement Standards  
680 N. Campus Drive, Suite B, Hanford, California 93230  
**Hours of Operation:** M - F (8am - 5pm)  
**Email:** [agstaff@co.kings.ca.us](mailto:agstaff@co.kings.ca.us)  
**Phone:** (559) 852-2830
- 5) CDPH automated hotline: 1-877-378-5463
- 6) CalEPA complaint form:  
[www.CalEPAComplaints.secure.force.com/complaints/Complaint](http://www.CalEPAComplaints.secure.force.com/complaints/Complaint)

21. *Comment:* One commenter wrote that U.S. EPA improperly relied on “flawed and biased studies” noting concerns with the 2011 PCB Congeners Study and the CDPH/CalEPA 2010 Investigation of Birth Defects and Community Exposures in Kettleman City. [El Pueblo #16a]

*Response:* U.S. EPA’s primary concern in determining whether to approve CWM’s application was whether PCB operations at the Kettleman Hills Facility, under the terms and conditions of a final approval, would cause an unreasonable risk of injury to health or the environment. The 2011 PCB Congeners Study [Wenck 2010] and 2010 Investigation of Birth Defects and Kettleman City Community Exposure Assessment [CalEPA 2010] were two of several scientific investigations that we analyzed to assess the exposure-threat and quantitative health-risk posed by PCB releases from the Kettleman Hills Facility. Any individual scientific study or environmental investigation may suffer from data gaps, study-design limitations and confounding factors that collectively serve to undermine the findings or conclusions that can be drawn from that study. Because of these vulnerabilities, we relied on the findings and conclusions drawn from multiple studies, including the PCB Congeners Study and the Community Exposure Assessment, in making our determination that of no unreasonable risk. See Statement of Basis, **section VII.F.**

The commenter listed a number of what they considered were flaws with the PCB Congeners Study and the 2010 Investigation of Birth Defects and Kettleman City Community Exposure



Assessment. We have addressed each of these potential flaws individually in the following responses.

22. *Comment:* In support of their comment that U.S. EPA improperly relied on the PCB Congeners Study one commenter wrote that the Study had numerous flaws, including the significant reliance on self-testing by CWM. [El Pueblo #16b]

*Response:* The commenter provided no support for their comment that the sampling performed by CWM during the PCB Congeners Study is unreliable.

U.S. EPA rigorously oversaw all aspects of CWM’s work on the PCB Congeners Study, from the scope of work, sampling approach and methodology, field data collection and analysis, risk analysis, and report writing. We worked to ensure that the Study and its risk conclusions were based on sound science and meet all of our data quality objectives. We also thoroughly reviewed the field and sampling procedures to ensure that no data gaps or other technical flaws existed. We reviewed several pre-drafts of the final report and provided many comments to CWM. We are satisfied that the conclusions of the Study are sound. The administrative record for this permitting decision includes numerous documents detailing our oversight of the Study. See Statement of Basis, [Appendix C](#), documents listed in section IX.A.

Based on our oversight of its development, we consider the PCB Congeners Study to provide solid evidence that PCBs are not migrating from the Kettleman Hills Facility at levels that adversely affect health or the environment. We, therefore, properly included the Study’s results in our determination that PCB waste operations at the Kettleman Hills Facility do not pose an unreasonable risk of injury to health or the environment. See also, response to comment [D-21](#).

The commenter did not identify any other flaws with the PCB Congeners Study.

23. *Comment:* In support of their comment that U.S. EPA improperly relied on the CDPH/CalEPA Investigation and Assessment, one commenter wrote that the State agencies did not look hard enough to find a common cause of the birth defects during its 2010 investigation of birth defects in Kettleman City and instead focused on proving that activities related to the Kettleman Hills Landfill could not have been the cause. [El Pueblo #17a]

*Response:* The Kettleman City Community Exposure Assessment was conducted by the California Environmental Protection Agency (CalEPA) to assess potential environmental contamination in the air, groundwater and soils in Kettleman City that could cause birth defects and other potential health risks to the community [CalEPA 2010, p. Cal/EPA-1]. The Assessment was concurrent with and in support of the California Department of Public Health investigation into an increase in the number of birth defects in Kettleman City during 2007-2010.<sup>18</sup> Over 150 chemicals were evaluated as part of the Assessment included PCBs and a

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<sup>18</sup> The final report for this investigation “Investigation of Birth Defects and Community Exposures in Kettleman City, CA” was issued jointly by the California Department of Public Health and CalEPA in December 2010 and consists



broad range of industrial, agricultural, and commercial chemicals (volatile and semi-volatile organic compounds), metals, and pesticides [CalEPA 2010, p. Cal/EPA-9]. Many of these chemicals were evaluated at the request of the community [CalEPA 2010, p. Cal/EPA-11]. The Assessment also evaluated many potential sources of environmental contamination beyond the Kettleman Hills Facility including former and current commercial operations, water wells, petroleum operations, illegal dumps, age and construction of homes, indoor air quality, traffic-related diesel exhaust, and the California aqueduct and irrigation canals [CalEPA 2010, p. Cal/EPA-11]. Finally, it specifically investigated pesticide usage in the areas surrounding Kettleman City [CalEPA 2010, p. Cal/EPA-11].

Despite extensive testing of the soil, soil gas, air, drinking water and surface water in Kettleman City as well as computer modeling to assess historic pesticide exposure levels and diesel particulate levels, CalEPA was unable to identify any environmental cause for the occurrence of birth defects in Kettleman City. CalEPA's overall investigation found levels of environmental pollutants in the air, water and soil of Kettleman City comparable to those found in other San Joaquin Valley communities. Based on these findings, CalEPA concluded that there was nothing unique about environmental conditions in Kettleman City that poses special health risks to residents [CalEPA 2010, p. Cal/EPA-63]. As CalEPA noted, failure to identify a specific environmental cause did not mean there was no environmental cause [CalEPA 2010, Executive Summary, p. 4].

See also response to comment **D-21**.

24. *Comment:* In support of their comment that U.S. EPA improperly relied on the CDPH/CalEPA Investigation and Assessment, commenters stated the State initially refused to investigate the high number of birth defects and infant deaths in Kettleman City. [El Pueblo #17b; Angel #10]

*Response:* California did investigate the birth defects and infant deaths that occurred in Kettleman City between 2007 and March 2010. In July 2009, California initiated a review of the number of birth defects in Kettleman City from 1987 to 2008, using data from a statewide birth defects registry. This review was requested by Kings County in response to concerns raised by the Kettleman City community. This review found that the number of children born in 2008 with birth defects was higher than might be expected, based on the birth rate and historical pattern [CalEPA 2010, p. CDPH-2]. In January 2010, Governor Schwarzenegger directed the California Environmental Protection Agency (CalEPA) and the California Department of Public Health to conduct a more extensive investigation of the reported birth defects and the Kettleman City environment. The objectives of the investigation were to evaluate the presence of known or suspected genetic, medical, or pregnancy-related risk factors

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of an executive summary and two parts. Part 1 contains the “Investigation of Birth Defects in Kettleman City” and “An Evaluation of the Pattern of Cancer Occurrences in the Vicinity of Kettleman City” both by CDPH. Part 2 is the “Kettleman City Community Exposure Assessment” by CalEPA. The final report without its appendices is listed in the reference section under CalEPA 2010. The appendices, when referenced, are listed separately.

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and the potential for environmental contaminants that may be associated with an increased risk of birth defects [CalEPA 2010, p. CDPH-2]. This investigation resulted the report, “Investigation of Birth Defects and Community Exposures in Kettleman City, CA,” (December 2010) [CalEPA 2010].

25. *Comment:* In support of their comment that U.S. EPA improperly relied on the CDPH/CalEPA Investigation and Assessment, one commenter stated that the first information provided by the State in February 2010 implied that the lifestyle of the mothers of the infants born with birth defects may have caused those birth defects rather than the pollution. The commenters also stated that this showed bias on the part of the State. The commenter did note that the State did ultimately rule out unhealthy behavior by the mothers but stated that “one answer that State [did] not want to admit: the mothers all share[d]...pollution in their environment.” [El Pueblo #17c; Angel #10]

*Response:* In responding to a similar comment made on the draft report “Investigation of Birth Defects,” California stated that it regretted that the educational information in the February 2010 Birth Defects in Kettleman City fact sheet was regarded as misleading by the commenter. The State also stated that the information was meant to provide background on what is known scientifically about causes of birth defects, and was not intended to describe the Kettleman City mothers specifically, which was the purpose of the follow up interviews [CalEPA 2011, p. 16].

As noted by the commenter, the State did rule out unhealthy behavior by the mothers. In its investigatory conclusions, it specifically noted:

- Maternal medical, family, and pregnancy risk factors are unlikely to explain the increased numbers of birth defects seen from 2007 - 2010. Generally, the mothers received adequate health care, practiced appropriate health behaviors during pregnancy, appeared free of significant health conditions that would create a risk for birth defects, and experienced few significant risk factors.
- None of the mothers interviewed used alcohol, drugs, or tobacco; therefore, these potential risk factors were not found to be a cause of these birth defects.

[CalEPA 2010, p. CDPH-35]

The State did look at environmental exposures shared by the mothers. It found that the mothers shared multiple environmental exposures, including air pollution, arsenic-contaminated drinking water, and pesticides, but concluded that none of these exposures likely caused the birth defects:

- No specific environmental exposure was identified as a likely cause of the increase in birth defects. A review of a variety of environmental exposures did not identify any that would be likely to have caused the birth defects under investigation.





- Environmental concerns expressed by mothers reflect exposures relevant to Kettleman City residents. The mothers articulated consistent concerns about water and air quality in Kettleman City. Any exposures to mothers living in Kettleman City would apply to other residents as well.

[CalEPA 2010, p. CDPH-35].

26. *Comment:* In support of their comment that U.S. EPA improperly relied on the CDPH/CalEPA Investigation and Assessment, one commenter stated that California ignored and refused requests from community and environmental justice groups to conduct biomonitoring of the mothers and other residents. One speaker also noted the lack of biomonitoring of Kettleman City residents. [El Pueblo #19, MMAIatorre #7]

*Response:* California addressed the community’s request for biomonitoring in its responses to public comments on the draft 2010 investigation report. We direct the commenter to that response. See Appendix 2 of CalEPA and CDPH’s report, “Investigation of Birth Defects and Community Exposures in Kettleman City, CA.” December 2010.

U.S. EPA also addressed biomonitoring in the EJ Analysis (**section 6.6.3**) and concluded that it would not be an effective tool to assess the risk to the community from PCB operations at the Kettleman Hills Facility:

Kettleman City residents have requested PCB biological monitoring (or biomonitoring) studies for members of the community. Biomonitoring involves the collection and analysis of human body samples for evidence of chemical exposure or for evidence of the adverse health impacts resulting from chemical exposures. Biomonitoring for PCBs can involve both invasive and non-invasive methods through the collection and analysis of urine, plasma, blood or fat tissues.

To date, no biomonitoring has been conducted on Kettleman City residents because U.S. EPA has determined that biomonitoring has considerable limitations:

### **1. PCBs are Ubiquitous**

PCBs are ubiquitous in the terrestrial environment. Most, if not all, people living in the U.S. have measurable amounts of PCBs in their bodies. PCBs can remain in the environment for long durations of time cycling between air, water and soil. Humans can be exposed to PCBs from several major sources, including:

- PCB contaminated foods, particularly meat, fish, and poultry (dominant source for most Americans) [ATSDR 2014].



- PCB impacted building materials (inhalation & incidental ingestion exposure routes).
- PCB releases from contaminated terrestrial media (soils, water and air).

Therefore, even if U.S. EPA conducts PCB biomonitoring of Kettleman City residents, the biomonitoring will not determine the source of PCB exposure because of the abundance and persistence of PCBs in the environment. Consequently, biomonitoring Kettleman City residents will not provide meaningful information regarding the potential PCB exposure threat from the Facility.

## 2. Biomonitoring Variability, Uncertainty, and Lack of Reliability

Biomonitoring studies have a wide-degree of variability and uncertainty, regardless of any individual's PCB exposure potential. U.S. EPA and other public health organizations have not established reliable relationships between the total amount of PCBs retained by a human's body and the likelihood or magnitude of adverse health impacts in humans. In contrast, U.S. EPA relies on measuring the concentration of PCB intake from contaminated media (air, water or soils) or sources (food) to determine the likelihood of developing adverse health impacts due to PCB exposure.

See also response to comment **D-21**.

27. *Comment:* In support of their comment that U.S. EPA improperly relied on the CDPH/CalEPA Investigation and Assessment, one commenter wrote that California refused to conduct a community health survey during its birth defects investigation to determine the extent of the birth defect and health problems in Kettleman City even though it was a Greenaction's door-to-door community health survey that first discovered the birth defect and infant mortality problem. [El Pueblo #20]

*Response:* The commenter did not explain why they believe that the absence of a State-conducted health survey of Kettleman City made the results of the Community Exposure Assessment inappropriate for the purposes of U.S. EPA's evaluation of whether PCB operations at the Kettleman Hills Facility under the Approval pose an unreasonable risk of injury to health or the environment.

The Community Exposure Assessment was conducted by CalEPA to evaluate potential environmental contamination in the air, water and soils in Kettleman City that could cause birth defects and other health risks to the community [CalEPA 2010, p. Cal/EPA-1]. We reviewed the Assessment to see if PCBs were found at levels that could adversely affect human health. See Statement of Basis, **section V.B.2**. PCBs were not detected in any of the soil or



water samples [CalEPA 2010, pp. Cal/EPA-51 and 56].<sup>19</sup> Ambient air levels of PCBs were consistent with levels found in other areas of the State [CalEPA 2010, p. Cal/EPA-39].

See also response to comment **D-21**.

28. *Comment:* In support of their comment that U.S. EPA improperly relied on the CDPH/CalEPA Investigation and Assessment, two commenters stated that California State agencies failed to consider or evaluate the cumulative impacts of the many different pollution sources in and near Kettleman City as a possible cause of the birth defects. One commenter gave as an example that the State did not consider how the pesticides might combine with PCBs, hazardous wastes, diesel, contaminated drinking water and poor air quality to affect people's health. One commenter stated that U.S. EPA should consider the possible synergistic effect between PCBs that may be released from the Kettleman Hills Facility and pesticides used around Kettleman City before approving additional disposal at the Facility. [El Pueblo #21; MMAIatorre #3]

*Response:* As discussed in response to comment **D-1**, there is no evidence that PCBs have been or are being released from the Facility at levels that would adversely impact the Kettleman City community whether considered in isolation or in combination with other environmental factors. See Statement of Basis, **section V**.

CDPH's Birth Defects Investigation evaluated the presence of known or suspected genetic, medical, or pregnancy-related risk factors and the potential for environmental contaminants in Kettleman City that may be associated with an increased risk of birth defects [CalEPA 2010, p. 2]. CDPH did not find a specific cause or environmental exposure among the mothers that would explain the increase in the number of children born in Kettleman City with birth defects and the observed birth defects did not represent a unique pattern nor were they all of the same type – characteristics that would be expected with a common underlying cause [CalEPA 2010, p. 2].

CalEPA's Community Exposure Assessment evaluated potential environmental contamination in the air, water and soils in Kettleman City that could cause birth defects and other health risks to the community [CalEPA 2010, p. 3]. The Assessment did not identify any exposures to hazardous chemicals likely to be associated with birth defects. It did find levels of environmental pollutants in the air, water and soil of Kettleman City comparable to those found in other San Joaquin Valley communities and concluded that that there was nothing unique about environmental conditions in Kettleman City [CalEPA 2010, pp. 3-4].

The ability to understand the health impacts from the combined exposure to many, multimedia contaminants remains a scientific and technical challenge of immense proportion. In fact, no individual study is capable of examining the health impacts from exposure to hundreds of

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<sup>19</sup> Even if PCBs had been found in samples collected in Kettleman City, it would not have been conclusive evidence of releases from the Kettleman Hills Facility. PCBs are ubiquitous in the environment and have even been found in undisturbed wilderness locations in the United States [U.S. EPA 2007b].



contaminants in many different media (air, water, soils, vegetation, biota, etc). Further, neither U.S. EPA nor CalEPA has developed quantitative methods to reliably assess the hazard and chronic health risk from complex, multimedia and multi-contaminant exposures within a regulatory framework.

As a result, this decision to issue a permit to the Kettleman Hills Facility relied upon the weight of the overarching scientific evidence from the combined studies undertaken by State and Federal health and regulatory agencies. For example, the PCB Congeners Study monitored for evidence of PCB contamination at part per trillion levels in air, water, soils and vegetation only. Results from this study were evaluated in combination with the results of the various State health and environmental studies. Those studies collectively monitored for evidence of a large number of other contaminants in both similar and different media – including dust. Finally, we incorporated U.S. EPA’s long-standing Science Policy framework<sup>20</sup> with respect to quantitatively assessing the impacts from combined chemical exposures on human health by incorporating the concept of additivity into all PCB health risk-estimates.

Synergistic effects are one possible type of impact from the combined exposure to toxic or hazardous agents. The combined impacts from exposure to toxic or hazardous agents are known to occur in four fundamental ways: synergistic, additive, antagonistic, and potentiated.

*Additive health impacts* occur when the combined toxic response or effect of more than one compound is equal to the sum of the effect of each compound given alone (Ex.:  $2 + 3 = 5$ ).

*Antagonistic health impacts* occur when the combined toxic response or effect of more than one compound interferes with each other’s actions, or one compound interferes with the action of the other compound (Ex.:  $2 + 3 = 4$ ).

*Potentiated health impacts* occur when one compound does not have a significant toxic impact on a particular organ or system but when added to another compound makes the latter much more toxic (Ex.:  $0 + 3 = 10$ ).

*Synergistic health impacts* occur when the combined impact of more than one compound is much greater than the sum of the effect of each compound alone (Ex.:  $2 + 3 = 20$ ).

The effect most commonly observed in toxicology when two compounds are given together is an additive effect. The effect least commonly observed is a synergistic effect.

PCBs are well known to increase the activity of the hepatic (liver), enzymatic P450 microsomal oxidation system. This enzymatic system sometimes facilitates the increased excretion of toxic agents by making them more water-soluble, and other times initiates the production of more-toxic byproducts within the body. [ASTDR 2000]

See also response to comment **D-21**.

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<sup>20</sup> See “Concept of Additivity” in U.S. EPA’s Risk Assessment Guidance For Superfund (RAGs) Parts A-F. (<https://www.epa.gov/risk/risk-assessment-guidance-superfund-rags-part>)



29. *Comment:* In support of their comment that U.S. EPA improperly relied on the CDPH/CalEPA Investigation and Assessment, one commenter stated that the State investigation could not recreate conditions that existed before and during outbreak of birth defect cases because retrospective analysis of the conditions leading up to the outbreak of the birth defects cannot be done if adequate data from that time period does not exist or is not trustworthy. [El Pueblo #22]

*Response:* U.S. EPA used the Community Exposure Assessment as one of several studies in its evaluation of whether PCBs had and were migrating from the Facility at levels that could pose unreasonable risk of injury to health or the environment.

PCBs are persistent in the environment; therefore, if significant levels of PCBs had been released from the Facility during 2006, when PCB receipts were at their peak, then elevated levels would have likely remained in the soil and water in 2010. PCBs were not detected in any soil or water sample taken in Kettleman City during the Assessment [CalEPA 2010, pp. Cal/EPA-55 – 56].

Extensive soil and vegetation sampling took place during the PCB Congeners Study. These samples were taken in early Spring 2009<sup>21</sup> at locations within the outer boundaries of the Kettleman Hills Facility [Wenck 2010, pp. 3-6 and 3-12]. Again, if significant levels of PCB had been released from the Facility during 2006, when PCB receipts were at their peak, then elevated levels would have likely remained in the soil and vegetation close to the Facility in 2009. The Study found that soil concentrations of the most toxic PCB congeners were significantly below U.S. EPA’s health-based clean-up levels. See Statement of Basis, **section V.B.1.** The Study also found that these concentrations were similar to those measured elsewhere in the country, including in rural soils located away from industrial land uses and even in remote wilderness areas [Wenck 2010, p. 4-11].

See also response to comment **D-21.**

30. *Comment:* In support of their comment that U.S. EPA improperly relied on the CDPH/CalEPA Investigation and Assessment, several commenters stated that the State’s monitoring and testing during the Kettleman City Community Exposure Assessment took place when the KHF Facility was accepting almost no waste and emitting a fraction of the emissions that it would have at full operations; therefore, the Assessment cannot be used to claim that the KHF could not be the cause of the birth defects which occurred after a period of “vastly” increased PCB waste disposal and “large-scale” hazardous waste disposal. [El Pueblo #23a and #36; MMAlatorre #6; Angel #11]

*Response:* Please see response to comment **D-29.**

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<sup>21</sup> Samples of vegetation were also taken in early August 2009 [Wenck 2010, p. 3-12].



CalEPA acknowledged this same commenter’s concern that the Assessment was conducted during a time of decreased activity at the Facility [CalEPA 2010, p. Cal/EPA-42]. To address this concern, CARB analyzed the upwind and downwind monitoring data from the Facility between 2007 and 2009<sup>22</sup> and also compared its 2010 air sampling results with the Facility’s sampling results for the same period. CARB concluded that there does not appear to be a substantial difference in levels from 2007, when KHF was operating much as it has for many years, and 2010 [CalEPA 2010, p. Cal/EPA-42 and CARB 2010, p. 21].

See also response to comment **D-21**.

31. *Comment:* In support of their comment that U.S. EPA improperly relied on the CDPH/CalEPA Investigation and Assessment, one commenter wrote that the State failed to consider that shipments and disposal of PCBs at Kettleman Hills Facility went up by approximately 40% in 2007 when compared to 2005 citing documents provide by U.S. EPA. [El Pueblo #23b]

*Response:* The Community Environmental Assessment was designed to investigate environmental conditions in Kettleman City that may have been associated with the birth defects. The air, soil and soil gas sampling performed for the Assessment was designed to detect PCBs present in the community that originated either from the Kettleman Hills Facility or other sources. The Assessment did not investigate the Facility’s operations; therefore, rates of PCB waste disposal at the Facility were not discussed. See CalEPA 2011, p. 7.

We note that there is no evidence that increased PCB waste receipts in 2007 resulted in PCB releases at levels that would adversely affect health or the environment. The Kettleman Hills Facility’s ambient air monitoring program sampled for PCBs throughout 2007. If significant levels of PCBs had been released from the Facility during 2007, then they would have likely been detected in an air monitoring sample. No PCBs were detected in any air monitoring sample during 2007 [Wenck 2010, p. 2-6].

PCBs are persistent in the environment; therefore, if significant levels of PCBs had been released from the Facility during 2007 then elevated levels would have likely remained in the soil and water in 2010. PCBs were not detected in any soil or water sample taken in Kettleman City during the Assessment [CalEPA 2010, pp. Cal/EPA-55 – 56].

Extensive soil and vegetation sampling took place during the PCB Congeners Study. These samples were taken in early Spring 2009 at locations within the outer boundaries of the Kettleman Hills Facility [Wenck 2010, pp. 3-6 and 3-12]. Again, if significant levels of PCB had been released from the Facility during 2007 then elevated levels would have likely remained in the soil and vegetation close to the Facility in 2009. The Study found that soil concentrations of the most toxic PCB congeners were significantly below U.S. EPA’s health-based clean-up levels. See Statement of Basis, **section V.B.1**. The Study also found that these concentrations were similar to those measured elsewhere in the country, including in rural soils

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<sup>22</sup> Monitoring under the Facility’s Site Specific Ambient Air Monitoring Plan did not begin until the 4<sup>th</sup> quarter of 2006.



located away from industrial land uses and even in remote wilderness areas [Wenck 2010, p. 4-11].

U.S. EPA used the Community Exposure Assessment as one of several studies in its evaluation of whether PCBs were migrating from the Facility at levels that could pose unreasonable risk of injury to health or the environment.

32. *Comment:* In support of their comment that U.S. EPA improperly relied on the CDPH/CalEPA Investigation and Assessment, one commenter stated that CWM may have been aware of the days that the California Air Resources Board was monitoring next to the Kettleman Hills Facility, noting that the State acknowledged that “...six 24-hour sampling periods coincided with the Facility’s 24 hour sampling periods...” The commenter asked if CWM knew when the Facility was being monitored and stated that it appeared so. [El Pueblo #25]

*Response:* The commenter did not explain why CWM’s knowing when it was being monitored makes the results of the Community Exposure Assessment flawed and biased for the purposes of U.S. EPA’s evaluation of whether PCB operations at the Kettleman Hills Facility under the Approval pose an unreasonable risk of injury to health or the environment.

As part of the Assessment, CARB located monitors at the Facility’s upwind and downwind station 2 monitoring sites [CalEPA 2010, p. Cal/EPA-24], presumably with CWM’s knowledge and permission. CARB collected 24-hour samples for metals and VOCs twice weekly from mid-June through August 25 [CalEPA 2010, p. Cal/EPA-24]. CWM, following the requirements of its approved Ambient Air Monitoring Program, collected 24-hour samples every 12 days.<sup>23</sup> CARB also collected three 28-day long samples for PCBs between mid-June and September 6 [CalEPA, p. Cal/EPA-24].

CARB compared its 2010 monitoring results with KHF’s monitoring data for the 2007-2009 (when CARB was not monitoring at the Facility) and found that there did not appear to be a substantial difference in levels between 2007 and 2010 [CalEPA 2010, p. Cal/EPA-42 and CARB 2010, p. 21].

See also response to comment **D-21**.

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<sup>23</sup> CARB runs a statewide toxics monitoring program to measure ambient concentrations of more than 60 substances with the collection of 24-hour samples every 12 days. See **CARB’s Annual Toxic Substances database**. CWM is required by its RCRA part B permit (Part III, Section 4.A.1(c)) to sample for a 24-hour period every 12 days on days coinciding with CARB’s sampling schedule.



33. *Comment:* In support of their comment that U.S. EPA improperly relied on the CDPH/CalEPA Investigation and Assessment, one commenter stated that the State failed to consider CWM’s compliance history including monitoring violations but relied in part on CWM’s self-monitoring data for the Kettleman City Community Exposure Assessment. [El Pueblo #26]

*Response:* All the groundwater, drinking water, surface water, soil, and soil gas sampling performed for the Kettleman City Community Exposure Assessment was done by California state agencies and analyzed by certified private laboratories or U.S. EPA’s Richmond laboratory [CalEPA 2010, p. Cal/EPA-28]. Air monitoring in Kettleman City was done by the California Air Resources Board (“CARB”) with analysis done by the CARB or the U.S. EPA laboratory [CalEPA 2010, p. Cal/EPA-22]. CARB also performed air monitoring at the Kettleman Hills Facility.

As part of the Assessment, CARB compared its 2010 monitoring results upwind and downwind of the Facility with KHF’s monitoring data for the same period. As discussed in the Assessment (p. Cal/EPA-42):

In a few cases, the [C]ARB and KHF data showed comparable results. In some cases, [C]ARB found measurable air levels of a contaminant and KHF did not. In other cases, KHF found higher air concentrations than ARB. It is not surprising that some differences were found because two different laboratories were involved in analyzing samples which had relatively low air concentrations. Because there was no consistent bias in the Facility’s data, these differences do not put into question the validity of the monitoring data collected by the Facility from 2007 to 2009.

KHF has no history of noncompliance related to its air monitoring program. See response to comment **C-6** for more information on other monitoring violations.

See also response to comment **D-21**.

34. *Comment:* One commenter stated that in the twenty years (1987-2006) prior to the spike of birth defects, no birth defect reported in fifteen of the years and only one in five of the years, for an average of 0.25 birth defects per year. The commenter then stated that “the outbreak of birth defects beginning in late 2007 was far above the normal rates, and was not statistically “insignificant” as the government falsely claims.” [El Pueblo #18; MMAlatorre #5]

*Response:* The birth of a child, whether healthy or with a birth defect, is a significant event in the life of their family and community.

The number of children born with birth defects in Kettleman City from 2007 to March 2010 was more than what would be expected for the number of births in Kettleman City based on the historical pattern [CalEPA 2010, p. CDPH-35]. To update these figures for the draft EJ Analysis, the California Birth Defects Monitoring Program (“CBDMP”) provided U.S. EPA





with updated birth defects data<sup>24</sup> and analysis for Kings County and the five-county area of Fresno, Kern, Kings, Madera, and Tulare Counties. According to CBDMP’s analysis, the overall rate of these specific birth defects in the five-county area has remained relatively stable over the span of twenty-nine years (1988-2016). Kings County birth defect rates have also remained stable with the exception of the increase seen in years 2008-2009 [CBDMP 2019]. CBDMP stated the 2008-2009 increase was not statistically significant when compared to years 2006-2007 and 2010-2011 in Kings County [CBDMP 2019]. According to CBDMP, birth defect rates in Kings County have since returned to rates seen before 2008-2009 [CBDMP 2019].

The term “significant” in the comparison of biennial birth defect rates in CBDMP’s analysis is used in its statistical meaning as applied to all births in Kings County and not just births in Kettleman City. The use of the term in its statistical meaning was not intended to deny the importance of each instance when a child is born with a birth defect.

35. *Comment:* One commenter noted the discussion in draft EJ Analysis about the infant mortality consistently decreasing in the period 2010-2019 and stated that the timing of this decrease is very suspect because PCB waste disposal at the Kettleman Hills Facility also decreased significantly during this time. [El Pueblo #35a]

*Response:* The draft EJ Analysis describes California’s statewide infant mortality rate as decreasing consistently. See draft EJ Analysis, “**Birth Defects**”. There is no discussion of trends in Kings County’s infant mortality numbers or rates. As shown in **Table 7** of the draft EJ Analysis, the number of infant deaths in Kings County varies up and down during the period 2006 to 2017.

PCB waste receipts at the Kettleman Hills peaked during 2006 when large amounts of PCB-contaminated soil and sediment were removed from the Hunter’s Point clean-up site in San Francisco. PCB waste receipts returned to more typical levels the following year. With the exception of the period 2011-2013 when the landfill had limited capacity to accept any type of waste, PCB waste receipts have neither declined nor increased but varied year to year with no discernable trend. See Figure 1 in response to comment **F-1**.

The 2010 Kettleman City Community Exposure Assessment did not find PCBs in either soil or water and only typical levels in air in Kettleman City [CalEPA 2010, pp. Cal/EPA-51, 56, and 39]. While this study took place several years after peak PCB waste receipts at the Kettleman Hills Facility, PCBs persist in the environment over time. If PCBs had migrated from the Facility to Kettleman City in significant quantities, then soil samples in the community would have been elevated. They were not. Soil sampling as part of the PCB Congeners Study

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<sup>24</sup> CBMP data collection staff review medical records at hospitals, genetic offices and certain laboratories and collect data on all live births and pregnancy losses with eligible birth defects [B. Warmerdam, personal communication, August 23, 2019].



took place a year earlier (March-April 2009) and much closer to Facility. Again, no elevated levels of PCBs were found [Wenck 2010, p. xvi].

36. *Comment:* One commenter stated that the draft EJ Analysis stated that the number of infant deaths was too small to count significantly and expressed their belief that the loss of a child is not insignificant. [El Pueblo #35b]

*Response:* We agree with the commenter that the loss of a child is a significant event and we send our sympathies to the mothers and families of the three infants who died in Kettleman City.

The draft EJ Analysis did not state that the number of infant deaths was too small to count significantly. The draft EJ Analysis stated that while U.S. EPA reviewed the information available on infant mortality in Kings County, it “could not assess the infant death rate because the number of deaths was too few to generate a reliable infant death rate according to CDPH.”

37. *Comment:* One commenter asked if studies have been done to determine the possibility of a synergistic effect between exposure to poor air quality and exposure to high levels of pesticide use. The commenter stated that because the Facility has a Contingency Plan, there is a possibility of PCB releases from the Facility and therefore there should be a concern about the effects of PCB exposure along with the pesticide exposure. [El Pueblo #32]

*Response:* There is no evidence that PCBs have been released from the Facility at levels that would adversely impact the Kettleman City community. See Statement of Basis, **section V**. Contingency plans are prepared to ensure that procedures and equipment are in place to rapidly respond to situations that may result in releases and to minimize or eliminate such releases. The presence of a contingency plan does not imply that releases are likely at levels that would adversely affect the surrounding area. See response to comment **D-1**.

The ability to understand the health impacts from the combined exposure to many, multimedia contaminants remains a scientific and technical challenge of immense proportion. In fact, no individual study is capable of examining the health impacts from exposure to hundreds of contaminants in many different media (air, water, soils, vegetation, biota, etc). Further, neither U.S. EPA nor CalEPA has developed quantitative methods to reliably assess the hazard and chronic health risk from complex, multimedia and multi-contaminant exposures within a regulatory framework.

As a result, this decision to issue a permit to the Kettleman Hills Facility relied upon the weight of the overarching scientific evidence from the combined studies undertaken by State and Federal health and regulatory agencies. For example, the PCB Congeners Study monitored for evidence of PCB contamination at part per trillion levels in air, water, soils and vegetation only. Results from this study were evaluated in combination with the results of the various State health and environmental studies. Those studies collectively monitored for evidence of a



large number of other contaminants in both similar and different media – including dust. Finally, we incorporated U.S. EPA’s long-standing Science Policy framework<sup>25</sup> with respect to quantitatively assessing the impacts from combined chemical exposures on human health by incorporating the concept of additivity into all PCB health risk-estimates.

See also, response to comment **D-28**.

38. *Comment:* One commenter noted the toxicity of PCBs and included a number of excerpts from U.S. EPA documents about the health effects associated with PCB exposures. [El Pueblo #27]

*Response:* As U.S. EPA discussed in the Statement of Basis (**section V.A.1.**), PCBs have been demonstrated to cause a variety of adverse health impacts. They have been shown to increase the likelihood (risk) of developing cancer in animals as well as several systemic, non-cancer health effects. Those include adverse impacts on the immune, reproductive, nervous and endocrine systems [ATSDR 2000]. Additional information on the health effects of PCBs can be found on **U.S. EPA’s PCBs webpage**. There is no evidence that PCBs have been released from the Facility at levels that would adversely impact the Kettleman City community.

39. *Comment:* One commenter noted that the U.S. EPA’s poster at the public hearing which described the health effects of PCBs did not include the information that PCBs are a reproductive toxin and that this information is important in a community that has suffered reproductive health problems and death after CWM was allowed to greatly increase the amount of PCB waste receipts and discontinue PCB monitoring. [Angel #5]

*Response:* The particular poster the commenter noted contained very general information on PCBs including what are PCBs, when they were used, what they were used for, and how they affect human health. Reproductive health effects were not explicitly listed on the poster. U.S. EPA did have factsheets available to the public at the public hearing in both English and Spanish that provided more detail on the health effects of PCBs including reproductive health effects from exposure to PCBs. See Appendix B of the Statement of Basis for the proposed Approval.

There is no evidence of PCB releases from the Facility at levels that would adversely affect public health. The 2010 Kettleman City Community Exposure Assessment found that emissions coming from the Facility did not affect the measured level of contaminants in Kettleman City and that there no substantial difference in air-monitoring data from 2007, when KHF was operating much as it has for many years, and 2010, when the Assessment was done. See CalEPA 2010, p. Cal/EPA-64.

The Facility did not suspend its PCB monitoring during a period of greatly increased PCB waste receipts. Air monitoring for PCBs was suspended, with DTSC’s approval, in May 2008

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<sup>25</sup> See “Concept of Additivity” in U.S. EPA’s Risk Assessment Guidance For Superfund (RAGs) Parts A-F. (**<https://www.epa.gov/risk/risk-assessment-guidance-superfund-rags-part>**)



and resumed in the January 2011. During this period, PCB waste receipts were at average or below average levels. See response to comment **F-1**.

40. *Comment:* One speaker discussed the Kettleman Hills Facility’s ambient air monitoring program for PCBs and stated that many studies have been performed to evaluate potential impact of air emissions from the Facility on ambient air quality and that these investigations support the conclusion that KHF’s PCB operations are not adversely impacting air quality for the residents of Kettleman City. The speaker also stated that the Facility works to prevent any migration of PCB from the site and that KHF “has an ongoing commitment for the safe disposal of PCB materials in the manner that is protective of human health or the environment.” [Verdin #1]

*Response:* U.S. EPA thanks the commenter for taking the time to attend and speak at the public hearing.

As part of our decision process to issue a TSCA approval to KHF, we reviewed a number of studies that evaluated PCB releases, including air emissions, from the Facility. These studies provided no evidence that PCBs were being released from the Facility at levels that would adversely affect public health. See Statement of Basis, **section V**.

The Approval requires CWM to continue to operate its air monitoring program. See Approval Condition VIII.A.1. The Approval also includes other monitoring, operational, recordkeeping and reporting requirements that collectively ensure that operations at the Facility will not pose an unreasonable risk to health or the environment.

#### **E. Comments on the Environmental Justice Analysis**

1. *Comment:* Two commenters stated that the U.S. EPA is subject to federal legal requirements related to environmental justice and that these requirements, which originate from Title VI of the Civil Rights Act, and Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” are designed to address historical patterns where low-income communities and communities of color have been disproportionately burdened with the social, economic, environmental, and health costs of industry while being largely excluded from its benefits.

The commenters also stated that U.S. EPA defines environmental justice as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies.” (Citing U.S. EPA’s “Guidance on Considering Environmental Justice During the Development of Regulatory Actions (“EPA Guidance”)”). The commenters also note that environmental justice responsibilities apply to agency policies, programs, and activities and require U.S. EPA “[t]o the greatest extent practicable and permitted by law, identify...and address...disproportionately high and adverse human health or environmental



effects” of its activities on minority and low-income populations. (EPA Guidance p. 7) [CRLA #2; El Pueblo #3]

*Response:* U.S. EPA agrees that it has the responsibility to consider environmental justice in its decision whether to issue a TSCA approval to the Kettleman Hills Facility. We have met this responsibility.

As correctly noted by the commenters, we define environmental justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies [U.S. EPA 2016a, p. 1].

We define fair treatment to mean that no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental and commercial operations or programs and policies [U.S. EPA 2016a, p. 67].

We have provided fair treatment in our decision to issue a TSCA approval to the Kettleman Hills Facility. We have used our regulatory authority to include in the Approval all requirements necessary to ensure that PCB operations at the Facility will not pose an unreasonable risk of injury to health or the environment. These Approval requirements mean that the Kettleman City community will not bear a disproportionate burden of environmental harms and risks from PCB operations at the Facility. See Statement of Basis, **section V**. See also response to comment **D-1**.

We define meaningful involvement to mean that: (1) potentially affected populations have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health; (2) the public’s contribution can influence the regulatory Agency’s decision; (3) the concerns of all participants involved will be considered in the decision process; and (4) the permit-writers and decision-makers seek out and facilitate the involvement of those potentially affected [U.S. EPA 2016, p. 67].

We have provided meaningful involvement during the decision process on whether to issue a TSCA approval to the Kettleman Hills Facility:

- We provided multiple means and opportunities to comment on the proposed approval. See EJ Analysis, **sections 5.1** and **5.4** and “**Updates and Revisions**.”
- We took actions and included permit conditions in response to public concerns. See EJ Analysis, **Table 22** and response to comment **E-5**.
- We considered each comment received during the public comment period without regard to the person or group giving the comment before making the final decision to issue the Approval. We responded to each comment in writing in this document. The



majority of these comments came from the Kettleman City community or groups or individuals that support or advocate for the community.

- We have engaged the community in multiple ways and provide both formal and informal opportunities for the community to express concerns and give comments. See EJ Analysis, **sections 5.1** and **5.4** and “**Updates and Revisions.**”

See also response to comment **E-3**.

The commenters also correctly noted that under the E.O., U.S. EPA’s charge is to address environmental justice “[t]o the greatest extent practicable and permitted by law” [E.O. 12898, section 1–101].

In the TSCA Approval for the Kettleman Hills Facility, we are implementing provisions of our PCB regulations at 40 C.F.R. Part 761, specifically approvals for commercial storage units in § 761.65(d) and for chemical waste landfills in § 761.75. These regulatory sections establish the conditions that must be in and, more importantly here, the conditions that U.S. EPA can add to an approval. Both sections provide “omnibus” authority—authority that allows us to add additional conditions needed to ensure that the operations of the Facility do not pose an unreasonable risk of injury to health or the environment. See 40 C.F.R. § 761.65(d)(4)(iv) and § 761.75(c)(3)(ii). However, imposed omnibus conditions must be designed to address risks associated with the operations allowed under the approval. They do not give us authority to impose requirements to address environmental burdens not related to a facility’s operations.

Title VI of the Civil Rights Act does not apply to our decision to issue this TSCA approval. Title VI prohibits recipients of federal financial assistance, such as states or grantees, from discriminating based on race, color, or national origin. 42 U.S.C. § 2000d; 40 C.F.R. § 7.30. A recipient is defined as:

“any State or its political subdivision, any instrumentality of a State or its political subdivision, any public or private agency, institution, organization, or other entity, or any person to which Federal financial assistance is extended directly or through another recipient, including any successor, assignee, or transferee of a recipient, but excluding the ultimate beneficiary of the assistance.” 40 C.F.R. § 7.25.<sup>26</sup>

Therefore, Title VI does not apply to U.S. EPA’s own programs or activities and does not apply to the decision to issue an approval under TSCA and the PCB regulations to the Kettleman

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<sup>26</sup> In addition, it has long been recognized by the courts that activities “wholly owned by, operated by or for the, United States, cannot be fairly described as receiving Federal ‘assistance.’” U.S. Dep’t of Transportation v. Paralyzed Veterans of Am., 477 U.S. 597, 612 (1986) (holding that because the air traffic control system is “owned and operated” by the United States, it is not “federal financial assistance and is a federally conducted program.”) See also, as stated by then-Deputy Attorney General Nicholas deB. Katzenbach to Hon. Emanuel Celler, Chairman, Committee on the Judiciary, House of Representatives (December 2, 1963): Activities . . . wholly owned by, and operated by or for, the United States, cannot fairly be described as receiving Federal ‘assistance.’ 110 Cong. Rec. 13380 (June 10, 1964).



Hills Facility. Additional information on how Title VI of the Civil Rights Act relates to EPA’s work may be found at: <https://www.epa.gov/ogc/external-civil-rights-compliance-office-title-vi>.

2. *Comment:* Several commenters stated that Kettleman City and its residents have suffered from decades of environmental, social and economic injustice and racial discrimination at the hands of county, state and Federal government agencies and officials and “dirty” industries. [Haines #2, Labriola #2, Paris #2, Wieder #2]

*Response:* U.S. EPA recognizes that the residents of Kettleman City are impacted by multiple environmental burdens, as well as the presence of social and other health factors, that may increase community vulnerability to the impacts of pollution. See EJ Analysis, **p. i**. As part of our decision process on the Kettleman Hills Facility’s TSCA approval, we prepared a draft EJ Analysis which documents many of these environmental, social, economic, and health factors. See EJ Analysis, **section 3**.

Throughout the multi-year decision process on the Kettleman Hills Facility’s TSCA approval, we have worked diligently to address environmental justice issues in Kettleman City. The regulatory framework of TSCA, however, makes it difficult for us to address public health challenges and environmental stressors which are outside the scope of the approval. See response to comment **E-1**. Nevertheless, our long involvement has allowed us to invite a number of state and local public health and regulatory agencies to the table – with the combined objective of addressing the environmental and public health challenges unique to Kettleman City. We have worked with these agencies to share information, coordinate studies, and provide public participation opportunities to ensure consideration of community concerns and the mitigation of localized environmental and public health impacts.

Prior to making the final permit decision, we considered publicly available data, tools, studies, and concerns expressed by the community to focus on those health and environmental impacts that are within our legal authority to address in a TSCA approval. We have also worked to keep the community informed during the decision process and provided opportunities for input. In the end, we have determined that the Approval contains the necessary terms and conditions to prevent the Kettleman Hills Facility’s PCB operations from adding to the existing environmental and health burdens experienced by the Kettleman City community.



3. *Comment:* Two commenters stated that U.S. EPA’s approval of a permit for PCB storage, treatment, and disposal of PCB waste in the Kettleman Hills Facility will increase the amount of PCB hazardous waste material being stored and disposed of in or near Kettleman City and will continue the “long legacy” of disproportionate adverse environmental and health impacts on Kettleman City residents, in violation of the U.S. EPA’s environmental justice obligations. [CRLA #1b; El Pueblo #2b]

*Response:* The Approval does not increase the storage capacity for PCB waste at the Kettleman Hills Facility over the capacities allowed under the previous Approvals and the PCB regulations. The Approval does increase the disposal capacity for PCB waste by allowing PCB waste disposal in the already-operating Phase III of Landfill B-18.

U.S. EPA has determined that PCB waste operations at the Kettleman Hills Facility, as allowed under the terms and conditions of the Approval, will not pose an unreasonable risk of injury to health or the environment from PCBs. See Statement of Basis, **section V.F.** Based on this determination, the operations allowed under the Approval will not result in disproportionate adverse health effects and risks for Kettleman City residents. See also, response to comment **D-1.**

We have complied with our environmental justice responsibilities in the decision process on the Kettleman Hills Facility’s TSCA approval. See response to comment **E-1.** We define environmental justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. The goal of environmental justice will be achieved when everyone has the same degree of protection from environmental and health hazards and equal access to the decision process to have a healthy environment in which to live, learn, and work. See **U.S. EPA’s Environmental Justice webpage.**

We have determined that under the terms and conditions of the Approval, PCB operations at the Kettleman Hills Facility will not pose unreasonable risk to health or the environment. This risk standard is the same degree of protection that U.S. EPA applies to all TSCA PCB waste storage and disposal facilities regardless of their location. See, for example, U.S. EPA 2012, U.S. EPA 2017b, and U.S. EPA 2019a.

Throughout our decision process, we have provided information to and encouraged members of the Kettleman City community to ask questions and express their concerns about the Kettleman Hills Facility and on all aspects of the proposed Approval (See EJ Analysis, **section 5.1.**) We provided an extended public comment period and held a public meeting and public hearing in Kettleman City on the proposed Approval and its supporting determinations and analyses (See Statement of Basis, **section II.**) Understanding that most residents of Kettleman City have limited or no English-language ability, we have translated information into Spanish and have had Spanish-speaking representatives available when meeting in the community. We also provided simultaneous Spanish-language translation at our public meetings and hearing.





Finally, we considered each comment received during the public comment period without regard to the person or group giving the comment before making a final decision to issue the Approval. We responded to each comment in writing. The majority of these comments came from the Kettleman City community or groups that support or advocate for the community.

4. *Comment:* Two commenters noted that U.S. EPA recognized in the draft EJ Analysis that most residents in Kettleman City are minority and low income and face cumulative and ongoing environmental burdens at a higher rate than most residents in California (draft EJ Analysis **sections 3.2-3.4.5**) and that Kettleman City residents are protected by state and federal environmental justice and civil rights laws. [CRLA #3; El Pueblo #4]

*Response:* U.S. EPA acknowledges in the EJ Analysis that there are pre-existing social, economic, environmental, and health conditions in Kettleman City and that for many of these conditions the residents of Kettleman City and the surrounding census tract rank among the most impacted in California. See EJ Analysis, **p. i** and **section 3**.

U.S. EPA agrees that Kettleman City residents are protected by applicable state and federal civil rights laws. Environmental justice is a critical component of our work protecting human health and the environment. Our environmental justice policies are derived from Executive Order (“E.O.”) 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” (59 F.R. 7629, Feb. 16, 1994) that directs federal agencies to “[t]o the greatest extent practicable and permitted by law, ...make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its policies...”. As noted in the E.O., the order does not “create any right, ..., substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or any person” or “any right to judicial review involving the compliance or noncompliance” (E.O. 12898, section 6-609).

5. *Comment:* Two commenters stated that State and Federal agencies have repeatedly issued permits for operations and expansion for the Kettleman Hills Facility even though Kettleman City residents have complained of the adverse health effects and conditions created because of the Facility and that the proposed expansion as with past expansions would occur without the consent and support from the residents of Kettleman City. [CRLA #4; El Pueblo #5]

*Response:* U.S. EPA is issuing the Approval for the storage, treatment and disposal of PCB waste at the Kettleman Hills Facility based in part on its determination that PCB waste operations of the Kettleman Hills Facility, under the terms and conditions of the Approval, will not pose an unreasonable risk of injury to health or the environment. This determination is based on the engineering and operational controls and monitoring requirements included in the Approval, on many years of monitoring data, and on weight of the scientific evidence showing that PCBs have not been released from the Facility at levels that would cause adverse health



effects in the surrounding community, including Kettleman City. See response to comment **D-1**.

As part of our draft EJ Analysis, we compiled a list of concerns regarding the Kettleman Hills Facility that have been expressed by the Kettleman City community over the years. We also described the actions taken by U.S. EPA, State and local agencies to respond to these concerns. See draft EJ Analysis, **section 6**. Examples of these actions are:

*PCB Congeners Study* – In response to community concerns about possible off-site impacts from PCB disposal operations at KHF, U.S. EPA requested that CWM undertake the PCB Congeners Study. The Study included sampling of soil, vegetation and air at the Facility perimeter and assessing the risk to human health or the environment from PCB operations at the Facility. The Study found no evidence that PCBs were migrating off-site at concentrations that would adversely affect the health of nearby residents. During the Study, we worked closely with the Kettleman City community, providing multiple opportunities for study design input and hosting two public meetings to discuss the Study’s results.

*Kettleman City Community Exposure Assessment* – In response to community concerns about the high number of birth defects in the Kettleman City community, CalEPA assessed possible environmental contaminants in the air, groundwater, and soil in Kettleman City to determine if any contaminants may have caused or contributed to these birth defects. Through public meetings and comments from the community, a comprehensive list of 182 compounds for chemical analysis of air, groundwater, or soil was developed. The Assessment’s comprehensive testing did not find any exposure to hazardous chemicals likely to be associated with the birth defects.

*Clean truck requirements* – Recognizing that emissions from trucks are one of the multiple environmental pollution burdens experienced by the Kettleman City community, DTSC worked with CWM to add permit conditions to the Facility’s RCRA permit to prohibit older, dirtier trucks from making deliveries of hazardous waste to the Facility.

*Additional air monitoring station* – The Kettleman City community has expressed concerns that air emissions from the Facility could impact Kettleman City. As part of the 2014 modifications to the RCRA permit, DTSC required CWM to install an air monitoring station between the Facility and Kettleman City. This additional station, which went into operation 2016, monitors for PCBs, pesticides, volatile organic compounds, metals and particulates that are emitted when the predominant wind direction is from the Facility toward Kettleman City.

*New drinking water source* – One of the concerns most often expressed by Kettleman City residents is drinking water quality. Kettleman City’s historical



source of drinking water was groundwater which has naturally-occurring arsenic levels above the State drinking water standard. As part of the Kings County’s special use permit allowing expansion of Landfill B-18, the Kings County Local Assessment Committee and CWM reached agreement that CWM would pay the existing water debt of the Kettleman City Community Services District (the drinking water provider), a total of \$552,300. Payment of this debt assisted KCCSD to obtaining additional funding to build a new surface water treatment plant. The new plant began delivering drinking water that meets all State drinking water standards to the residents of Kettleman City in March 2020 [C. Fischer, personal communication, May 26, 2020].

See EJ Analysis, **section 6** for information on other actions taken by various governmental agencies to listen to and address the Kettleman City community’s concern about local environmental and health issues and the Kettleman Hills Facility.

U.S. EPA has worked throughout its decision process to keep the Kettleman City community informed of its actions and to seek the community’s input. See EJ Analysis, **section 5** and “**Updates and Revisions**”. We have carefully considered and responded to each comment submitted by the community on our proposed approval. None of these comments provide information that challenges the regulatory determinations that underlie our Approval.

6. *Comment:* Two commenters stated that the U.S. EPA is required to address the disproportionate impacts from the increased storage capacity and operations at the Kettleman Hills Facility to the greatest extent permissible by law and must exercise its authority under 40 C.F.R. § 761.65(d) to deny the proposed TSCA Approval in order to comply with its environmental justice obligations. [CRLA #9; El Pueblo #10]

*Response:* U.S. EPA agrees that our EJ responsibilities require us to address any disproportionate impacts of the Approval to the greatest extent practicable and permitted by law. We disagree that the Approval will result in any unaddressed disproportionate impacts on the Kettleman City community.

Prior to making the decision to renew and modify the Kettleman Hills Facility’s TSCA permit for the Kettleman Hills Facility, we carefully reviewed all existing information on likely environmental impacts to the Kettleman City community from the Facility’s PCB waste operations. See Statement of Basis, **section V.B.** We also reviewed potential mechanisms for PCB releases from the Facility and the Facility’s compliance history.<sup>27</sup>

Based on these reviews, we have exercised our omnibus authority in 40 C.F.R. § 761.65(d)(4)(iv) and 40 C.F.R. § 761.75(c)(3)(ii) to include approval conditions as needed

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<sup>27</sup> The commenters stated that increased truck traffic due to the Approval, stress from living near a hazardous waste facility, and the Facility’s compliance record also represent adverse disproportionate impacts to the community. We have addressed these potential impacts in the responses to comments **D-11**, **D-7**, and **C-4**, respectively.



to ensure that PCB storage and disposal operations at the Facility do not pose an unreasonable risk of injury to health or the environment. For example, the PCB regulations for chemical waste landfills (40 C.F.R. § 761.75) do not include a requirement for either a closure or post-closure care plan. Using our omnibus authority, we have required CWM to maintain a closure plan for Landfill B-18 (Approval Condition VI.H.1.) and a post-closure plan for all four chemical waste landfills at the Facility (Landfills B-14, B-16, B-18, and B-19) (Approval Conditions VI.I.1. and VII.B.2). A complete list of the omnibus conditions included in the Approval can be found in Appendix E of the Statement of Basis.

7. *Comment:* Two commenters stated that U.S. EPA’s environmental justice and civil rights obligations require it to investigate and assess all possible alternatives for PCB removal and disposal to determine if there is an option that will cause less risk to Kettleman City residents than additional PCB storage, handling, and disposal at the Kettleman Hills Facility. The commenters also stated that by failing to analyze alternatives, U.S. EPA is not complying with its EJ responsibilities to address disproportionately high and adverse human health effects “to the greatest extent practicable and permissible by law”; therefore, the proposed PCB approval should be denied. [CRLA #10; El Pueblo #12]

*Response:* U.S. EPA disagrees that its environmental justice and civil rights responsibilities for this Approval require it to investigate and assess all possible PCB waste disposal and storage alternatives to those allowed under the Approval.

The PCB regulations allow disposal of certain types of PCB waste in a chemical waste landfill and storage of PCB waste at a commercial storage unit that have been approved by U.S. EPA under 40 C.F.R. § 761.75 and 40 C.F.R. § 761.65(d), respectively. We are approving Landfill B-18 under § 761.75 for PCB waste disposal and the PCB F/SU for PCB waste storage under § 761.65(d) because they meet all applicable regulatory requirements for chemical waste landfills and commercial storage units including the requirement that their operations do not pose an unreasonable risk of injury to health or the environment. See Appendix A of the Approval.

As discussed in the response to comment **E-1**, our environmental justice responsibilities do not provide us with any additional legal authorities beyond those provided in the applicable environmental statutes and regulations. As discussed in the response to comment **F-6**, we do not have the authority under TSCA and the current PCB regulations to deny an approval for a chemical waste landfill or storage unit on the sole basis that safer disposal or storage alternatives exist.

As discussed in the response to comment **D-1**, the operations allowed under the Approval do not pose an unreasonable risk of injury to health or the environment and thus do not result in any disproportionate adverse health effects and risks for Kettleman City residents. No additional analysis of disposal or storage alternatives is required because we have already



complied with our EJ responsibilities to identify and address disproportionately high and adverse human health effects with appropriate permit conditions.

8. *Comment:* A commenter noted that the U.S. EPA’s draft EJ Analysis correctly recognized that Kettleman City has multiple environmental burdens, as well as social and health issues that make the community more vulnerable to the impacts of pollution. The commenter contended that U.S. EPA “whitewash[ed] and minimize[d] the serious and ongoing environmental injustices and environmental racism committed by government agencies and [CWM] against the people of color and non/limited English speaking residents of Kettleman City.” [El Pueblo #28]

*Response:* U.S. EPA undertook a thorough evaluation of the environmental, social, and health conditions that continue to affect the Kettleman City community. It reviewed the history of permitting in the community (EJ Analysis, [section 4.2](#)) and collected community concerns as expressed in numerous public meetings held about the Kettleman Hills Facility over the years and described how these concerns had or had not been addressed by the relevant public agency (EJ Analysis, [section 6](#)).

The commenter did not clearly identify examples of the continuing environmental injustices and environmental racism or how U.S. EPA had minimized them. The commenter did include a number of comments related to environmental, health, and language issues in their letter. We have responded to those comments separately. See response to comments [C-8](#), [D-8](#), [D-12](#), [D-14](#), [D-27](#), [D-31](#), [D-32](#), [D-33](#), [E-10](#), [E-11](#), [E-12](#), [E-13](#), [F-1](#), and [F-2](#).

9. *Comment:* One commenter stated that U.S. EPA “did not do its homework” for the draft EJ Analysis document giving as an example, the statement on p. 7, that there is only one church in Kettleman City when there are three churches in Kettleman City, all located on Milham Avenue. [El Pueblo #29]

*Response:* U.S. EPA thanks the commenter for the updated information and has corrected the statement in the EJ Analysis.

10. *Comment:* One commenter stated that it is a large burden on Kettleman City residents to expect them to read and analyze the documents that U.S. EPA provided to support its permitting decisions if they expected to participate in the public process. The commenter also stated people “get frustrated or overwhelmed and don’t bother with the documents” and that this is interpreted as apathy by regulating agencies. The commenter stated that the documents are written in a technical language that most people do not use in their daily life and that this is a burden for people to read through these documents, even when written in their native language. The commenter gave as an example that most people do not recognize that the Spanish word for landfill, “vertdero,” because they are more familiar with the colloquial term “dompe” which cannot be used in a formal document because it is slang. [El Pueblo #33; MMAlatorre #4]



*Response:* U.S. EPA does not require or expect community members to read through each available document prior to participating in the public process. We agree that participation takes time and effort and we appreciate and thank those who do participate. We also welcome any suggestions that the commenter has on how better to provide accessible information to the community.

We took several actions to make it easier for community members to understand the proposed permit and to make comments. We provided a short factsheet, in both English and Spanish, describing the proposed permit and its potential health and environmental effects. The factsheet also included information on how to get additional information and how to comment. We mailed both the English and Spanish factsheets to each residential post office box in Kettleman City. This mailing also included a postcard to submit comments. We also provided a summary of the Statement of Basis in both English and Spanish. We placed materials including the proposed permit and application at the Kettleman City library and created a webpage ([www.epa.gov/kettleman](http://www.epa.gov/kettleman)) in both English and Spanish with information on the Facility and the proposed permit including links to the factsheets and summaries. We provided phone numbers for English and Spanish-speaking contacts for more information.

We also held a public meeting with a short presentation (repeated twice) and question and answer sessions. The meeting had simultaneous Spanish interpretation. We provided copies of both the English and Spanish factsheet and summary at the meeting. We also accepted comments at the meeting.<sup>28</sup>

The commenter is correct that we generally do not use slang terms in our regulatory documents. “Landfill” is the term used in the regulations governing PCB waste disposal at the Kettleman Hills Facility and therefore the term we used in our documents, including the Spanish translations of our documents.

11. *Comment:* A commenter noted the statement on page 19 of the draft EJ Analysis that “[f]rom 2006-2008, there were no asthma hospitalizations in Kettleman City, which was lower than the rates estimated for Kings County and California, which were 8.9 and 9.1 visits per 10,000 residents, respectively.” The commenter questioned whether it is possible that there were no asthma hospitalizations in Kettleman City during that time because there is no hospital in Kettleman City. [El Pueblo #37; MMAlatorre #8]

*Response:* The commenter is correct that there is no hospital in Kettleman City. The intent of this statement was to address hospitalizations among Kettleman City residents in comparison to hospitalizations of Kings County and California residents. U.S. EPA has added a note to the EJ Analysis correcting this statement to read: “From 2006-2008, there were no asthmas hospitalizations of Kettleman City residents, which was lower than the rates estimated for

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<sup>28</sup> This is a summary of our outreach efforts in 2019. For a list of earlier efforts, please see EJ Analysis, section 5.1 and 5.4.



Kings County and California residents, which were 8.9 and 9.1 visits per 10,000 residents, respectively” .

12. *Comment:* Two commenters stated that the Facility’s permits were approved by county, state and federal agencies (one commenter cited page 22 (pdf page 32) in the draft EJ Analysis) using “well-documented racially discriminatory processes” or “racist” rules. [El Pueblo #38; Angel #8]

*Response:* The cited statement in the draft EJ Analysis (**section 4.2**) describes the status of the PCB permits issued by U.S. EPA and not the status of any other state or local permits held by the Kettleman Hills Facility. The commenters did not provide any support for their statement that we approved previous permits in a “well-documented racially discriminatory processes” or by using “racist” rules. U.S. EPA complied with the then-current regulations when it issued its previous TSCA permits for the Facility and therefore does not consider that they were issued in a racially-discriminatory manner.

13. *Comment:* A commenter stated that the environmental justice community of Kettleman City has been through enough and U.S. EPA should “stop dumping on them”. [Anon2 #3]

*Response:* U.S. EPA acknowledges the Kettleman City community is or has been subject to many environmental burdens including air quality that exceeds the national health-based standards for ozone and particulate matter and, historically, drinking water that exceeded the MCL for arsenic. See EJ Analysis, **section 3.2**.

Prior to making the decision to renew and modify the Kettleman Hills Facility’s TSCA permit for the Kettleman Hills Facility, we carefully review all existing information on potential impacts on the community from the Facility’s PCB operations. We included the necessary conditions and terms in the Approval to ensure that those operations did not pose an unreasonable risk of injury to health or the environment. See response to comment **D-1**.

14. *Comment:* One commenter stated that poor communities of color always have to deal with the effects of “everyone’s toxic waste disposal.” [El Pueblo Email #4]

*Response:* U.S. EPA recognizes that the low-income and minority populations frequently bear a disproportionate burden of environmental harms and risks. In making our decision to issue a TSCA approval to the Kettleman Hills Facility, we took specific care to ensure that the Facility’s PCB operations would not result in a disproportionate environmental burden on the Kettleman City community. See response to comment **D-1**.



15. *Comment:* One commenter stated that it was their understanding that the Kettleman City Community Service District’s Water Treatment Plant began delivering potable water to the residents of Kettleman City on November 18, 2019. [CWM #50]

*Response:* U.S. EPA thanks the commenter for the information and has included information on the current status of the surface water treatment plant in the “**Updates and Revisions**” section of the EJ Analysis. See also response to comment **F.3**.

#### **F. Miscellaneous Comments**

1. *Comment:* Several commenters questioned why the Facility had been allowed to discontinue air monitoring during a period when it was receiving unusually large amounts of PCB waste if the purposes of the air monitors is to ensure that harmful substances such as PCBs are not leaving the Facility and potentially harming human health. [El Pueblo #24 and #41, Angel #5]

*Response:* The development of the current air monitoring program at the Kettleman Hills Facility was a condition of the Facility’s 2003 RCRA permit [DTSC 2003, Part III, Section 4.A.1)]. The Facility’s ambient air monitoring plan, *Site Specific Ambient Air Monitoring Plan* (“AAMP”) was approved by DTSC in March 2006 and actual air monitoring began on October 2, 2006 [Wenck 2016, p. 1-1]. With DTSC’s approval, CWM suspended monitoring for PCBs and pesticides from mid-April 2008 until early January 2011.<sup>29</sup> DTSC approved the suspension because neither PCBs nor pesticides were detected during the 18 months of sampling prior to the suspension [Wenck 2016, p. 1-2.]. Air monitoring for all other constituents of concern under the AAMP continued. During the period when the Facility’s PCB air monitoring was suspended, air monitoring for PCBs was conducted throughout 2009 as part of the PCB Congeners Study [Wenck 2010, p. 3-5] and again between mid-June and September 2010 for the Kettleman City Community Exposure Assessment [CARB 2010, p. 4].

The approximately three years during which PCB air monitoring was suspended were not years during which the Facility received “unusually large amounts of PCB.” We included a chart similar to the one below in the draft EJ Analysis (**Figure 20**).<sup>30</sup> This chart shows annual PCB waste receipts at the Facility from 2005 to 2018. Compared to other years in this time frame, PCB waste receipts during the years when PCB air monitoring under the AAMP was suspended (2008, 2009, and 2010) were at average or below average levels.

None of the PCB air monitoring, either before the suspension in 2008, during the PCB Congeners Study or Kettleman City Community Exposure Assessment, or since the

<sup>29</sup> U.S. EPA’s approval was not necessary here because KHF’s then-applicable TSCA approvals did not required air monitoring for PCBs.

<sup>30</sup> This chart includes PCB waste receipts in 2005 and 2018. These years were not included the charts in the Statement of Basis for the proposal and the draft EJ Analysis.

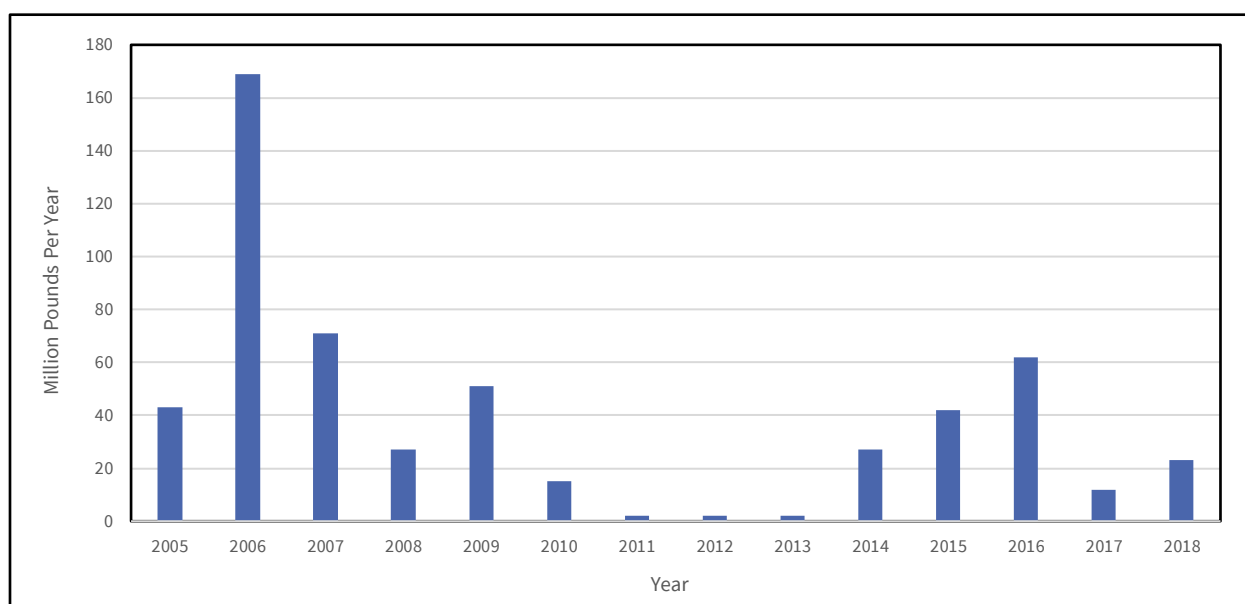




resumption of monitoring in 2011 have detected PCBs in the air at levels that are a threat to human health or the environment. See Statement of Basis, **section V.C.**

Air monitoring for PCBs in compliance with the Facility's AAMP is a requirement of the Approval. See Approval Condition VIII.A.1. Any decreases in the number of air monitoring stations or the frequency or duration of monitoring or reduction or elimination of any monitoring parameters will require CWM to apply for and obtain U.S. EPA approval. Such changes are considered a Class 3 permit modification requiring public notice and comments. See Approval, Table 3.

***PCB WASTE RECEIVED AT THE KETTLEMAN HILLS FACILITY  
FROM 2005-2018***



Source: CWM 2006, 2007, 2008, 2009, 2010b, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018a, 2019a

2. *Comment:* A commenter stated that the Kettleman Hills Facility operates four air monitoring stations but noted that only one of them is located between the Facility and Kettleman City. [El Pueblo #40]

*Response:* The commenter is correct. The current air monitoring program has four monitoring sites: two to the southeast of Landfill B-18, one to the northwest of the Facility's operations area, and one located between the Landfill B-18 and Kettleman City [Wenck 2016, Figure 3]. The two monitors to the southeast are located in areas that will capture emissions from the Landfill B-18 and other Facility operations when winds are blowing in the predominant direction, which is from the northwest to the southeast [Wenck 2016, p. 3-2]. The fourth



monitor was added in 2016 to capture emissions when winds are blowing from the Facility toward Kettleman City, which occurs approximately 5% of the time [CARB 2010, p. 18].

Monitoring points are selected to identify contaminants that may migrate from the Facility and therefore should be located where such migration is most likely to occur. For the potential air emission from Kettleman Hills Facility, this is downwind of the Facility’s operations area which, based on the predominant wind pattern, is southeast of the Facility.

3. *Comment:* Several commenters stated that drinking water in Kettleman City has been contaminated with naturally-occurring arsenic as well as benzene from old oilfield operations for decades and that the new water treatment plant that would bring water from the nearby California Aqueduct has been stalled. [Haines #5, Labriola #5, Paris #5, Wieder #5]

*Response:* The Kettleman City surface water treatment plant began operations in November 2019 and is currently supplying treated surface water meeting all State drinking water standards to the residents of Kettleman City [C. Fischer, personal communication, May 26, 2020].

Prior to November 2019, Kettleman City’s drinking water came from two municipal wells and a third well that serves the Kettleman City Elementary School. Water from the two municipal wells contains arsenic and benzene levels that have exceeded the maximum contaminant levels (“MCL”). Each municipal well had an aeration treatment system that reduced benzene levels to below the MCL; however, this treatment could not remove the arsenic [CalEPA 2010, Cal/EPA-18].

The Regional Water Quality Control Board investigated the benzene found in the groundwater at the municipal wells but was unable to definitively identify the source and stated that it appears most likely to be naturally occurring [RWQCB 2010, p. 12].

4. *Comment:* Several commenters noted that CWM is operating on expired permits and stated that U.S. EPA should not approve the additional PCB disposal when the Facility’s permit has expired and has been expired for several years. [El Pueblo Email #2; El Pueblo #38; Angel #7]

*Response:* Although the Facility’s permits contained expiration dates in 1997 (Landfill B-18) and 1998 (Storage), these permits did not expire because CWM submitted timely and sufficient applications to renew each. Under section 558(c) of Administrative Procedures Act when a permittee makes a “timely and sufficient application for a renewal or a new [permit] in accordance with agency rules, a [permit] with reference to an activity of a continuing nature does not expire until the application has been finally determined by the agency.”

As documented in the Statement of Basis (**section III.B.**), CWM submitted timely and sufficient applications for renewal of both permits<sup>31</sup> and responded to each request made by

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<sup>31</sup> See also, letter, Felicia Marcus, U.S. EPA Region 9, to Luke Cole, Center on Race, Poverty & the Environment. April 8, 1998 [U.S. EPA 1998].



U.S. EPA for information needed to process the applications; therefore, the 1990 and 1992 permits have been administratively continued and do not expire until U.S. EPA takes final action on CWM's application. EPA's final action is to approve CWM's application to renew and modify its PCB permits.

5. *Comment:* One speaker noted that there were few alternatives to landfilling of PCB waste when the original TSCA permits were issued to CWM. She stated that since then the Program on Assembled Chemical Weapons Assessment was established to develop new technologies to destroy chemical warfare chemicals and that some of the technologies are applicable to the destruction of PCBs. She also stated that these technologies are effective at destroying PCBs, used all over the world, and are not expensive. The speaker did not identify any specific technology but encouraged their assessment and use in place of landfilling because PCBs are persistent and landfilling them means that we are “gifting” future generations with a “giant mess to clean up.” [Williams #1] Another commenter stated that toxics that are buried still have toxic release and that landfilling is a “temporary and risky solution.” [El Pueblo Email #3; MMAlatorre #11]

*Response:* U.S. EPA thanks the speaker for taking the time to attend and speak at the public hearing and the commenter for their comment.

We agree with the commenter that there were few commercially available alternatives to landfilling when U.S. EPA first issued regulations covering the disposal of PCB waste in 1978<sup>32</sup> and when we issued the first approval of a TSCA landfill (for Landfill B-14) at the Kettleman Hills Facility in 1981. This remains true today. Although U.S. EPA supports the development and implementation of alternatives to landfilling for the disposal of PCBs, there are currently few, if any, commercially-available alternatives to landfilling for the types of PCB waste that are most commonly disposed of in Landfill B-18.<sup>33</sup>

The Program on Assembled Chemical Weapons Assessment was established in 1996 under U.S. Public Law 104-208 to facilitate and accelerate the destruction of chemical weapons stockpiles in the United States by investigating non-incineration, alternative technologies. A history of the program and information on its current status can be found at <https://www.peoacwa.army.mil/about-peo-acwa/history-of-peo-acwa/>. In 2000, U.S. EPA evaluated the potential applicability of assembled chemical weapon assessment technologies

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<sup>32</sup> The only alternative to landfilling of non-liquid PCB waste explicitly identified in the first PCB disposal regulation was incineration. See 43 Fed. Reg. 7150 (June 6, 1978).

<sup>33</sup> Almost all of the PCB waste received at the Kettleman Hills Facility for disposal in the landfill is non-liquid bulk remediation waste or bulk product waste, that is, PCB-containing soils and building debris from cleanup sites [CWM 2006, 2007, 2008b, 2009b, 2010, 2011, 2012b, 2013, 2014, 2015, 2016, 2017a, 2018d, 2019b]. The types of PCB waste that are allowed to be disposed of in Landfill-18 are listed in Approval Condition VI.B.1.



to treat hazardous waste streams and contaminated media.<sup>34</sup> While several of these technologies seemed promising, only a few have been approved by U.S. EPA under TSCA for the disposal of PCBs (see <https://www.epa.gov/pcbs/multi-regional-polychlorinated-biphenyls-pcbs-disposal-approvals-0>).

We are approving the use of Landfill B-18 for the disposal of specific types of non-liquid PCB waste. We have determined that the permanent disposal of PCB waste in Landfill B-18 does not pose an unreasonable risk of injury to health or the environment. Landfill B-18 is an engineered landfill constructed with primary and secondary liner systems; primary; secondary, and vadose zone leachate detection, collection, and removal systems; run-on and runoff precipitation collection and holding facilities; and a groundwater monitoring system [Approval Condition VI.A.]. Since initial waste placement in 1994, PCBs have been detected in leachate only three times and never in the groundwater from wells monitoring the unit [Statement of Basis, Footnote 7]. Air monitoring of operations at the landfill occurs at four close-by monitoring sites, two in the predominant downwind direction from the unit, one north of the operations area, and one between the unit and Kettleman City. PCBs have never been found above detection levels in the Facility’s AAMP air monitoring samples [Wenck 2016, Figure 3; Statement of Basis, [section V.C.](#)].

The Approval requires maintenance of a closure plan that will require the construction of an engineered cap designed to prevent rain and burrowing animals from reaching the waste. See Approval Condition VI.H.1. The Approval also requires maintenance of a post-closure care plan to assure long-term monitoring and maintenance of the cap as well leachate management and groundwater monitoring of Landfill B-18 and the already-closed TSCA landfills, Landfills B-14, B-16, and B-19. See Approval Conditions VI.I and VII.B. On closure, the Facility will also be subject to a land use covenant which will restrict future development of the site. See Golder 2019, p. 48. In addition, CWM has provided and is required to maintain financial assurance sufficient to fund both closure and post-closure care. See Approval Condition IV.M. Collectively, these provide protections both now and into the future for PCB waste disposed in Landfill B-18.

Finally, we note land disposal of PCB waste at the Kettleman Hills Facility was first approved by U.S. EPA in 1981 and has continued since then. In 2009, samples of soil at the perimeter of the Facility’s operational area were analyzed for PCB congeners using methods with very low detection limits [Wenck 2016, p *xvi*]. After almost 30 years of PCB waste landfilling operations, these samples had detected PCB congeners levels that were similar to those measured elsewhere in the country, including in rural soils located away from industrial land uses and remote wilderness areas [Wenck 2016, p. 4-11]. These results indicated that PCBs

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<sup>34</sup> See “Potential Applicability Of Assembled Chemical Weapons Assessment Technologies to RCRA Waste Streams and Contaminated Media.” EPA 542-R-00-004. Office of Solid Waste and Emergency Response, U.S. EPA. August 2000.



are not migrating from the landfills at levels that would adversely affect the health of local community residents or the environment [Statement of Basis, **section V.B.1.**].

6. *Comment:* Several commenters wrote that the EJ Analysis and Statement of Basis must discuss all potential methods of PCB disposal and demonstrate that the Agency has “sought to identify or develop safer alternatives” to continued PCB disposal and management at Kettleman Hills Facility. The commenters also wrote that if a safer alternative disposal method to landfilling exists then U.S. EPA must deny the permit and instead utilize that process to ensure that the residents of Kettleman City, and the surrounding environment, do not face an increased risk of harm. Two commenters also stated that incineration is not an alternative that will be more protective of the community and is not supported by the community. [El Pueblo Email #1, #2 & #5; CRLA #11a; El Pueblo #13a]

*Response:* U.S. EPA disagrees that it is required to discuss potentially safer alternatives to landfilling in its decision to issue a permit to CWM to operate a chemical waste landfill at the Kettleman Hills Facility. We also disagree with the commenters that if a “safer” alternative disposal method exists then we are required to deny the permit and use that method in lieu of landfilling.

The PCB regulations allow disposal of certain types of PCB waste in a chemical waste landfill under 40 C.F.R. § 761.75. U.S. EPA promulgated the PCB regulations to protect against unreasonable risks from PCBs by providing cost-effective and environmentally protective disposal options that will reduce exposure to PCBs by encouraging their removal from the environment, thereby reducing the potential risk to human health and the environment from PCBs. See for example, 63 Fed. Reg. 35383 (June 29, 1998). This action applies those PCB regulations. CWM submitted an application to operate Landfill B-18 as a TSCA chemical waste landfill for the disposal of PCB wastes. Under the PCB regulations, our action in response to this application is limited to either approving it or disapproving it.<sup>35</sup>

Under 40 C.F.R. § 761.75(c)(3)(i), we may approve a chemical waste landfill for the disposal of PCB wastes if it meets the requirements of § 761.75(b). This section sets application content requirements and technical and operational standards for an approvable chemical waste landfill. Nothing in § 761.75(b) requires U.S. EPA to consider alternatives to landfilling of PCB wastes nor to implement any that are determined to be “safer”.<sup>36</sup>

Section 761.75(c) lays out the steps needed to obtain an approval for operations of a chemical waste landfill. This section requires submittal of an application (initial report) containing

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<sup>35</sup> As part of its process of reviewing an application, U.S. EPA may request the applicant revise the application and/or submit additional information as needed to determine if the chemical waste landfill should be approved. See 40 C.F.R. § 761.75(c)(2). We sent several such requests to CWM during our review of its application. See, for example, U.S. EPA 2016b and U.S. EPA 2017b.

<sup>36</sup> In this context, “safer” means that the alternative would pose a lower risk of injury to health and the environment of the community most likely to be impacted by the implementation of the alternative disposal method.



certain information about the chemical waste landfill (§ 761.75(c)(1)) and the applicant to provide any other information needed by U.S. EPA to determine whether the landfill should be approved (§ 761.75(c)(2)(ii)). It also requires that the approval be in writing and contain all requirements applicable to the landfill (§ 761.75(c)(6)). Nothing in § 761.75(c) requires U.S. EPA to consider alternatives to landfilling before approving a chemical waste landfill, to require the use of an alternative to landfilling if it is determined to be safer, or to deny an approval solely on the basis of there being a safer alternative method.

The PCB regulations at § 761.75(c)(3)(ii) do give U.S. EPA omnibus authority to include any additional conditions and terms necessary in an approval for a chemical waste landfill to ensure the landfill's operations do not pose an unreasonable risk to health or the environment. However, our omnibus authority is limited to imposing conditions on the *operations of the chemical waste landfill* and does not reach to requiring either the assessment or implementation of alternatives to landfilling.<sup>37</sup>

U.S. EPA has fully complied with all requirements in the PCB regulations related to the issuance of an approval to operate a chemical waste landfill. We have carefully evaluated CWM's application to operate Landfill B-18 as a chemical waste landfill against the standards and requirements of § 761.75(b) and have determined that it complies with them.<sup>38</sup> See Statement of Basis, **section III.C.** and **Appendices D-1** and **D-3**. We received no comments opposing this determination. We have met all requirements in §761.75(c) for the issuance of an approval for a chemical waste landfill. We have also included a number of omnibus Approval conditions such as limits on the capacity of the landfill (Approval condition VI.B.2.), ambient air monitoring requirements (Approval condition VIII.A.), closure requirements (Approval condition VI.H.), and long-term post-closure care (Approval condition VI.I.)<sup>39</sup> to ensure that operations of the landfill will not pose an unreasonable risk of injury to health or the environment. See **section V** of the Statement of Basis.

Our Approval is founded on the determination that operations of Landfill B-18, under the terms and conditions of the Approval, will not pose an unreasonable risk of injury to health or the environment. This risk standard is articulated by section 6(e) of TSCA and utilized throughout the PCB regulations for approval of PCB waste management activities. See for example,

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<sup>37</sup> We note the specific language of 40 C.F.R. §761.75(c)(3)(ii): "...[U.S. EPA] may include in an approval any other requirements or provisions that [it] finds are necessary to ensure that *operation of the chemical waste landfill* does not present an unreasonable risk of injury to health or the environment from PCBs." (emphasis added). See also, § 761.75(a): "A chemical waste landfill used for the disposal of [PCB wastes] shall be approved by [U.S. EPA] pursuant to paragraph (c) of this section. The landfill shall meet all of the requirements specified in paragraph (b) of this section.... In addition, the *landfill* shall meet any other requirements that may be prescribed pursuant to paragraph (c)(3) of this section." (emphasis added).

<sup>38</sup> U.S. EPA has waived four operational requirements to either allow alternative but equally protective methods for meeting the regulatory requirement or to allow disposal of some ignitable waste consistent with RCRA requirements. See Statement of Basis, section III.C.2. U.S. EPA received no comments opposing these waivers.

<sup>39</sup> A complete list of all § 761.75(c)(3) omnibus provisions can be find in Appendix E of the Statement of Basis.



40 C.F.R. § 761.60(e), § 761.70(d)(4)(ii), and § 761.79(h)(5). Our determination for the Kettleman Hills Facility is based on the engineering and operational controls and monitoring requirements included in the Approval, on many years of monitoring data, and on the weight of the scientific evidence showing that PCBs have not been released from the Facility at levels that would cause adverse health effects in the surrounding community, including Kettleman City. This determination also demonstrates that we have met our EJ responsibility to address disproportionately high and adverse human health effects to the greatest extent practicable and permitted by law. See responses to comment **D-1 and E-7**.

The commenters state that our general environmental justice and civil rights responsibilities require us to evaluate alternatives. They provide no specific basis or any other legal basis for a requirement that we must evaluate or require safer alternatives to landfilling in acting on a chemical waste landfill application. As discussed in response to comment **E-7** and above, neither our EJ and civil rights responsibilities nor the PCB regulations require us to investigate all possible PCB waste disposal alternatives or require the use of any that prove to be safer.

Almost all the PCB waste received at the Kettleman Hills Facility for disposal in Landfill B-18 is PCB-containing soils, sediment, concrete and building debris from cleanup sites. U.S. EPA supports the development and implementation of methods for PCB remediation at these sites that do not involve the disposal of PCB wastes in landfills. We regularly update our website to provide information on current and new methods for the remediation of PCBs. See, for example, <https://www.epa.gov/remedytech/remediation-technologies-cleaning-contaminated-sites>; see also <https://clu-in.org/remediation/>. However, no individual method is applicable across all or even the majority of cleanup sites because each site has unique characteristics that determine which remediations methods can be used. The disposal of PCB wastes in engineered and monitored landfills such as Kettleman Hills Facility's Landfill B-18 remains a safe method of disposing of PCB waste.

CWM is not applying to US EPA to site a PCB incinerator; therefore, it is outside the scope of this action for us to investigate the risk to the community of operating an incinerator at the Facility. Incineration is one of the approved PCB disposal methods for most types of PCB wastes. See, for example, 40 C.F.R. § 761.60(a) and (b). A person seeking to own or operate an incinerator used for incinerating PCBs must submit an application and obtain an approval from U.S. EPA pursuant to the requirements of 40 C.F.R. § 761.70. We note that for any application to site an incinerator pursuant to the requirements of 40 C.F.R. § 761.70, U.S. EPA's decision process includes opportunities for meaningful involvement by the community and the general public.



7. *Comment:* Several commenters stated that the analysis of whether to issue the PCB permit to the Kettleman Hills Facility should include a discussion of supercritical water oxidation, which the commenters said has been shown to be beneficial in the disposal of PCBs with less risk to human health and the environment than traditional PCB burial. [El Pueblo Email #1; CRLA #11b; El Pueblo #13b; MMAlatorre #11]

*Response:* U.S. EPA disagrees that it is required to discuss supercritical water oxidation (SCWO) as a potentially safer alternative to landfilling in its decision to issue a permit to CWM to operate a chemical waste landfill at the Kettleman Hills Facility. However, in response to the commenters' interest in this technology, we have included a short overview of SCWO.

As discussed in response to comment **F-6**, the PCB regulations allow disposal of certain types of PCB waste in a chemical waste landfill under 40 C.F.R. § 761.75. U.S. EPA promulgated the PCB regulations to protect against unreasonable risks from PCBs by providing cost-effective and environmentally protective disposal options that will reduce exposure to PCBs by encouraging their removal from the environment, thereby reducing the potential risk to human health and the environment from PCBs. See for example, 63 Fed. Reg. 35383 (June 29, 1998).

U.S. EPA has evaluated the risk associated with disposal of PCB waste in Landfill B-18 and determined that its operation, under the terms and conditions of the Approval, will not pose an unreasonable risk of injury to health or the environment from PCBs now or in the future. This determination is based on the engineering and operational controls and monitoring requirements included in the Approval, on many years of monitoring data, and on an assessment of the overarching weight of the scientific evidence regarding the relationship between Facility PCB releases and the likelihood and magnitude of adverse health impacts in the surrounding communities. See Statement of Basis, **section V**.

To ensure long-term disposal of PCB wastes in Landfill B-18 will not pose an unreasonable risk in the future, we have included conditions in the Approval that require maintenance of a closure plan that requires the construction of an engineered cap designed to prevent rain and burrowing animals from reaching the waste. See Approval Condition VI.H.1. The Approval also requires maintenance of a post-closure care plan to assure long-term monitoring and maintenance of the cap as well leachate management and groundwater monitoring of Landfill B-18. See Approval Condition VI.I. On closure, the Facility will also be subject to a land use covenant which will restrict future development of the site. See Golder 2019, p. 48. Finally, CWM has provided and is required to maintain financial assurance sufficient to fund both closure and post-closure care.

SCWO is a process that treats wastes in an enclosed system using an oxidant (such as oxygen or hydrogen peroxide) in water at temperatures and pressures above the critical point of water (above 705° F and 3200 psi) [UNEP 2019, p. 48]. PCBs have very low solubility in water at normal temperatures and pressures but become highly soluble in supercritical water. This high





solubility allows for rapid destruction through oxidation with potentially none of the hazardous byproducts (e.g., dioxins) associated with incineration [Zhang 2017]. Waste feeds into a SCWO reactor must be either a liquid or a slurry (a water/solid mixture) with a maximum particle size of 0.2 millimeters<sup>40</sup> [UNEP 2019, p. 48; U.S. EPA 2010c, p. E-3]. Destruction efficiencies for a wide range of persistent organic pollutants such as PCBs in SCWO units are usually greater than 99.99% [UNEP 2019, p. 47].

U.S. EPA has considered SCWO as an emerging treatment technology for hazardous waste since 1992 [U.S. EPA 1992]. A number of commercial SCWO units have been constructed, but most are no longer operational due to a number of technical issues [Marrone 2013; Zhang 2017]. Currently, there are three commercial-scale SCWO facilities operating world-wide, one each in Japan, Korea and France [UNEP 2019, p. 48]. A SCWO unit has been constructed at the Blue Grass Army Depot in Kentucky for the destruction of chemical weapons [DOD 2019]. It is not clear if the unit is currently operating. Although the technology has been used for several decades, U.S. EPA has not granted any approvals under PCB regulations to treat PCB waste in a SCWO unit.

Destruction efficiencies of PCBs in a SCWO unit can be very high; however, destruction efficiencies are not the same as risks to health or the environment from operations of a SCWO unit. Insufficient information exists for U.S. EPA to estimate the potential risk of SCWO treatment of the type of PCB waste landfilled at KHF. The available literature on SCWO units does not address operational risks beyond general statements on the care needed to operate any high-temperature/high-pressure process. Any determination of risk from the operation of SCWO unit would need to account not only for operations of the SCWO unit itself but also for any pre- and post-treatment of the waste.

8. *Comment:* One commenter wrote that the Agency has continued to allow CWM to dispose of PCB waste on “expired permits” and with outdated methods that put the Kettleman City Community at risk and that it was “irresponsible and reprehensible” to continue to allow Kettleman City’s environmental burden to increase when there is a potential alternative to landfilling at the Kettleman Hills Facility. [El Pueblo Email #2].

*Response:* The Kettleman Hills Facility continues to operate under its existing TSCA approvals that have been administratively extended pursuant to section 558(c) of Administrative Procedures Act. See response to comment **F-4**.

U.S. EPA supports the development and implementation of alternatives to landfilling for the disposal of PCBs. See response to comments **F-5** and **F-6**. For the types of PCB waste that are

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<sup>40</sup> As noted before, almost all the PCB waste landfilled at the Kettleman Hills Facility is nonliquid bulk remediation waste or bulk product waste, that is PCB-contaminated soil, sediment, concrete, and building debris or building products containing PCBs [CWM 2006, 2007, 2008b, 2009b, 2010, 2011, 2012b, 2013, 2014, 2015, 2016, 2017a, 2018d, 2019a]. In order to process this type of waste in a SCWO unit, the PCBs would need to be extracted from the waste or the waste would need to be ground or crushed and then mixed with water [U.S. EPA 2010c, p. E-3].



most commonly disposed of in Landfill B-18, landfilling in engineered and monitored landfills remains a safe technology.

There is no evidence that the Kettleman Hills Facility’s PCB operations pose an unreasonable risk to the Kettleman City community. We have determined that the operations under the terms and conditions of the Approval will not add to the existing environmental and health burdens experienced by the Kettleman City community. See also response to comment **D-1**.

9. *Comment:* One commenter objected to the 3-minute limit on speakers at the public hearing. [Angel #1]

*Response:* U.S. EPA limited each speaker’s comments to three minutes in order to allow everyone an equal opportunity to speak. We stated that if time allowed after the first round of speakers, anyone who wished to could make additional comments to do so. See Court Scribes 2019, p. 9. The commenter was able to speak for 6 minutes in total.

10. *Comment:* One commenter asked for a 60-day extension of the public comment period because it had recently come to their attention that super critical water oxidation is a safe and effective alternative to burying PCB waste with cost similar to landfilling. They requested the extension to investigate this new method of disposal so they could make informed comments. The commenter also stated that U.S. EPA should investigate alternative methods of PCB disposal instead of continuing to permit the “outdated and dangerous” method of landfilling. [El Pueblo Email #1 and #5, MMAlatorre #11]

*Response:* Please see the response to comment **F-6** for a discussion of the need to investigate alternative methods of PCB disposal and the response to comment **F-7** for a discussion of super critical water oxidation as an alternative to landfilling at the Kettleman Hills Facility.

U.S. EPA has investigated and assessed the potential risk from the operations of the chemical waste landfill and PCB waste storage facility at the Kettleman Hills Facility and has determined that these operations, under the terms and conditions of the Approval, will not pose an unreasonable risk of injury to health or the environment from PCBs. See Statement of Basis, **section V**.

We declined the speaker’s request for a 60-day extension of the public comment period on November 19, 2019. See U.S. EPA 2019e. We had already provided a comment period of 85 days which we consider was sufficient for the proposed Approval and was consistent with the comment periods of other similar permits issued by U.S. EPA Region 9.



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**V. COMMENT RESPONSE INDEX**

<b>COMMENTS</b>	<b>COMMENT NUMBER</b>	<b>COMMENT IDENTIFIER</b>	<b>RESPONSE TO COMMENT</b>
Maricela Mares Alatorre, El Pueblo Para el Aire y Agua Limpia de Kettleman City. November 12, 2019 email.	1	El Pueblo Email #1	<b><u>F-6, F-7 &amp; F-10</u></b>
	2	El Pueblo Email #2	<b><u>F-4, F-6 &amp; F-8</u></b>
	3	El Pueblo Email #3	<b><u>F-5</u></b>
	4	El Pueblo Email #4	<b><u>E-14</u></b>
	4	El Pueblo Email #5	<b><u>F-6 &amp; F-10</u></b>
Maricela Mares Alatorre, People for Clean Air and Water of Kettleman City (El Pueblo). November 14, 2019 transcript.	1	MMAlatorre #1	<b><u>D-11</u></b>
	2	MMAlatorre #2	<b><u>D-14</u></b>
	3	MMAlatorre #3	<b><u>D-28</u></b>
	4	MMAlatorre #4	<b><u>E-10</u></b>
	5	MMAlatorre #5	<b><u>D-34</u></b>
	6	MMAlatorre #6	<b><u>D-30</u></b>
	7	MMAlatorre #7	<b><u>D-26</u></b>
	8	MMAlatorre #8	<b><u>E-11</u></b>
	9	MMAlatorre #9	<b><u>D-9</u></b>
	10	MMAlatorre #10	<b><u>C-3 &amp; C-5</u></b>
	11	MMAlatorre #11	<b><u>F-5, F-7 &amp; F-10</u></b>
	12	MMAlatorre #12	<b><u>D-6.</u></b>
Maricela Mares Alatorre, El Pueblo and Miguel Alatorre and Bradley Angel, Greenaction. November 22, 2019 letter.	1a	El Pueblo #1a	<b><u>A-1</u></b>
	1b	El Pueblo #1b	<b><u>D-1</u></b>
	2a	El Pueblo #2a	<b><u>D-11</u></b>
	2b	El Pueblo #2b	<b><u>E-3</u></b>
	3	El Pueblo #3	<b><u>E-1</u></b>
	4	El Pueblo #4	<b><u>E-4</u></b>
	5	El Pueblo #5	<b><u>E-5</u></b>
6	El Pueblo #6	<b><u>D-5</u></b>	



COMMENTER	COMMENT NUMBER	COMMENT IDENTIFIER	RESPONSE TO COMMENT
	7	El Pueblo #7	<b><u>D-7</u></b>
	8	El Pueblo #8	<b><u>D-13</u></b>
	9	El Pueblo #9	<b><u>C-4</u></b>
	10	El Pueblo #10	<b><u>E-6</u></b>
	11a	El Pueblo #11a	<b><u>D-15</u></b>
	11b	El Pueblo #11b	<b><u>D-17</u></b>
	12	El Pueblo #12	<b><u>E-7</u></b>
	13a	El Pueblo #13a	<b><u>F-6</u></b>
	13b	El Pueblo #13b	<b><u>F-7</u></b>
	14a	El Pueblo #14a	<b><u>C-3</u></b>
	14b	El Pueblo #14b	<b><u>C-5</u></b>
	15	El Pueblo #15	<b><u>C-6</u></b>
	16a	El Pueblo #16a	<b><u>D-21</u></b>
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	17a	El Pueblo #17a	<b><u>D-23</u></b>
	17b	El Pueblo #17b	<b><u>D-24</u></b>
	17c	El Pueblo #17c	<b><u>D-25</u></b>
	18	El Pueblo #18	<b><u>D-34</u></b>
	19	El Pueblo #19	<b><u>D-26</u></b>
	20	El Pueblo #20	<b><u>D-27</u></b>
	21	El Pueblo #21	<b><u>D-28</u></b>
	22	El Pueblo #22	<b><u>D-29</u></b>
	23a	El Pueblo #23a	<b><u>D-30</u></b>
	23b	El Pueblo #23b	<b><u>D-31</u></b>
	24	El Pueblo #24	<b><u>F-1</u></b>
	25	El Pueblo #25	<b><u>D-32</u></b>
	26	El Pueblo #26	<b><u>D-33</u></b>



COMMENTS	COMMENT NUMBER	COMMENT IDENTIFIER	RESPONSE TO COMMENT
	27	El Pueblo #27	<b><u>D-38</u></b>
	28	El Pueblo #28	<b><u>E-8</u></b>
	29	El Pueblo #29	<b><u>E-9</u></b>
	20	El Pueblo #30	<b><u>D-12</u></b>
	31	El Pueblo #31	<b><u>D-14</u></b>
	32	El Pueblo #32	<b><u>D-37</u></b>
	33	El Pueblo #33	<b><u>E-10</u></b>
	34	El Pueblo #34	<b><u>C-8</u></b>
	35a	El Pueblo #35a	<b><u>D-35</u></b>
	35b	El Pueblo #35b	<b><u>D-36</u></b>
	36	El Pueblo #36	<b><u>D-30</u></b>
	37	El Pueblo #37	<b><u>E-11</u></b>
	38	El Pueblo #38	<b><u>F-4 &amp; E-12</u></b>
	39	El Pueblo #39	<b><u>D-8</u></b>
	40	El Pueblo #40	<b><u>F-2</u></b>
	41	El Pueblo #41	<b><u>F-1</u></b>
Miguel Alatorre, Greenaction for Health and Environmental Justice. November 14, 2019 transcript.	1	MAlatorre #1	<b><u>C-5, C-6 &amp; C-11</u></b>
	2	MAlatorre #2	<b><u>D-19</u></b>
Bradley Angel, Greenaction for Health and Environmental Justice. November 14, 2019 transcript.	1	Angel #1	<b><u>F-9</u></b>
	2	Angel #2	<b><u>A-7</u></b>
	3	Angel #3	<b><u>C-9</u></b>
	4	Angel #4	<b><u>D-18</u></b>
	5	Angel #5	<b><u>D-39 &amp; F-1</u></b>
	6	Angel #6	<b><u>C-10</u></b>
	7	Angel #7	<b><u>F-4</u></b>
	8	Angel #8	<b><u>E-12</u></b>
	9	Angel #9	<b><u>C-13</u></b>



COMMENTS	COMMENT NUMBER	COMMENT IDENTIFIER	RESPONSE TO COMMENT
	10	Angel #10	<u><b>D-24 &amp; D-25</b></u>
	11	Angel #11	<u><b>D-30</b></u>
	12	Angel #12	<u><b>C-12</b></u>
Anonymous 1. September 18, 2019 comment card.	1	Anon1 #1	<u><b>A-1</b></u>
Anonymous 2. September 18, 2019 comment card.	1	Anon2 #1	<u><b>A-1</b></u>
	2	Anon2 #2	<u><b>D-3</b></u>
	3	Anon2 #3	<u><b>E-13</b></u>
Anonymous 3. October 10, 2019 comment card.	1	Anon3 #1	<u><b>A-1 &amp; C-1</b></u>
Anonymous 4. Comment received November 22, 2019	1	Anon4 #1	<u><b>A-3</b></u>
	2	Anon4 #2	<u><b>B-3</b></u>
Jose Carillo. November 14, 2019 transcript.	1	Carillo #1	<u><b>A-4</b></u>
James Dowdall. November 22, 2019 email.	1	Dowdall #1	<u><b>D-4</b></u>
Shauna Haines. October 20, 2019 letter.	1	Haines #1	<u><b>A-1</b></u>
	2	Haines #2	<u><b>E-2</b></u>
	3	Haines #3	<u><b>D-10</b></u>
	4	Haines #4	<u><b>D-16</b></u>
	5	Haines #5	<u><b>F-3</b></u>
	6	Haines #6	<u><b>A-1 &amp; D-2</b></u>
Robert Henry, Chemical Waste Management, Inc. November 14, 2019 transcript.	1	Henry #1	<u><b>A-2</b></u>



COMMENTS	COMMENT NUMBER	COMMENT IDENTIFIER	RESPONSE TO COMMENT
Silvia Maldonado, Chairperson, Kettleman City Community Service District. October 15, 2019 letter.	1	KCCSD 1	<u>A-2</u>
Kathy Labriola. October 21, 2019 letter.	1	Labriola #1	<u>A-1</u>
	2	Labriola #2	<u>E-2</u>
	3	Labriola #3	<u>D-10</u>
	4	Labriola #4	<u>D-16</u>
	5	Labriola #5	<u>F-3</u>
Teresa Paris. November 20, 2019 letter.	1	Paris #1	<u>A-1</u>
	2	Paris #2	<u>E-2</u>
	3	Paris #3	<u>D-10</u>
	4	Paris #4	<u>D-16</u>
	5	Paris #5	<u>F-3</u>
Roberto Rodriguez. November 14, 2019 transcript.	1	Rodriguez #1	<u>A-1</u>
	1	Rodriguez #1	<u>A-5</u>
Donna Tamayo. November 14, 2019 transcript.	1	Tamayo #1	<u>A-6</u>
	2	Tamayo #2	<u>D-20</u>
Mariah C. Thompson, California Rural Legal Assistance, Inc. November 22, 2019 letter.	1a	CRLA #1a	<u>A-8</u>
	1b	CRLA #1b	<u>E-3</u>
	2	CRLA #2	<u>E-1</u>
	3	CRLA #3	<u>E-4</u>
	4	CRLA #4	<u>E-5</u>
	5	CRLA #5	<u>D-5</u>
	6	CRLA #6	<u>D-7</u>
	7	CRLA #7	<u>D-13</u>
	8	CRLA #8	<u>C-4</u>
9	CRLA #9	<u>E-6</u>	



COMMENTER	COMMENT NUMBER	COMMENT IDENTIFIER	RESPONSE TO COMMENT
	10	CRLA #10	<u><b>E-7</b></u>
	11a	CRLA #11a	<u><b>F-6</b></u>
	11b	CRLA #11b	<u><b>F-7</b></u>
	12	CRLA #12	<u><b>C-2</b></u>
	13	CRLA #13	<u><b>C-3</b></u>
	14	CRLA #14	<u><b>C-6</b></u>
	15	CRLA #15	<u><b>C-7</b></u>
Reyna Verdin, Chemical Waste Management, Inc. November 22, 2019 letter.	1	CWM #1	<u><b>B-1</b></u>
	2	CWM #2	<u><b>B-2</b></u>
	3	CWM #3	<u><b>B-2</b></u>
	4	CWM #4	<u><b>B-4</b></u>
	5	CWM #5	<u><b>B-2</b></u>
	6	CWM #6	<u><b>B-5</b></u>
	7	CWM #7	<u><b>B-6</b></u>
	8	CWM #8	<u><b>B-7</b></u>
	9	CWM #9	<u><b>B-8</b></u>
	10	CWM #10	<u><b>B-9</b></u>
	11	CWM #11	<u><b>B-9</b></u>
	12	CWM #12	<u><b>B-10</b></u>
	13	CWM #13	<u><b>B-11</b></u>
	14	CWM #14	<u><b>B-12</b></u>
	15	CWM #15	<u><b>B-13</b></u>
	16	CWM #16	<u><b>B-2</b></u>
	17	CWM #17	<u><b>B-2</b></u>
	18	CWM #18	<u><b>B-14</b></u>
	19	CWM #19	<u><b>B-15</b></u>
	20	CWM #20	<u><b>B-16</b></u>





COMMENTER	COMMENT NUMBER	COMMENT IDENTIFIER	RESPONSE TO COMMENT
	21	CWM #21	<u><b>B-17</b></u>
	22	CWM #22	<u><b>B-18</b></u>
	23	CWM #23	<u><b>B-1</b></u>
	24	CWM #24	<u><b>B-19</b></u>
	25	CWM #25	<u><b>B-20</b></u>
	26	CWM #26	<u><b>B-4</b></u>
	27	CWM #27	<u><b>B-4</b></u>
	28	CWM #28	<u><b>B-2</b></u>
	29	CWM #29	<u><b>B-2</b></u>
	20	CWM #30	<u><b>B-4</b></u>
	31	CWM #31	<u><b>B-7</b></u>
	32	CWM #32	<u><b>B-21</b></u>
	33	CWM #33	<u><b>B-22</b></u>
	34	CWM #34	<u><b>B-4</b></u>
	35	CWM #35	<u><b>B-23</b></u>
	36	CWM #36	<u><b>B-24</b></u>
	37	CWM #37	<u><b>B-25</b></u>
	38	CWM #38	<u><b>B-26</b></u>
	39	CWM #39	<u><b>B-26</b></u>
	40	CWM #40	<u><b>B-28</b></u>
	41	CWM #41	<u><b>B-2</b></u>
	42	CWM #42	<u><b>B-27</b></u>
	43	CWM #43	<u><b>B-2</b></u>
	44	CWM #44	<u><b>B-29</b></u>
	45	CWM #45	<u><b>B-2</b></u>
	46	CWM #46	<u><b>B-2</b></u>
	47	CWM #47	<u><b>B-2</b></u>



COMMENTER	COMMENT NUMBER	COMMENT IDENTIFIER	RESPONSE TO COMMENT
	48	CWM #48	<u><b>B-2</b></u>
	49	CWM #49	<u><b>B-2</b></u>
	50	CWM #50	<u><b>E-15</b></u>
Reyna Verdin, Chemical Waste Management, Inc. November 22, 2019 Transcript.	1	Verdin #1	<u><b>D-40</b></u>
Mark Wieder. Undated letter.	1	Wieder #1	<u><b>A-1</b></u>
	2	Wieder #2	<u><b>E-2</b></u>
	3	Wieder #3	<u><b>D-10</b></u>
	4	Wieder #4	<u><b>D-16</b></u>
	5	Wieder #5	<u><b>F-3</b></u>
Jane Williams, Executive Director, California Communities Against Toxics. November 14, 2019 transcript.	1	Williams #1	<u><b>F-5</b></u>



**APPENDIX L –  
CHANGES TO THE PROPOSED APPROVAL**

**CHANGES TO THE PROPOSED APPROVAL**  
**TOXIC SUBSTANCES CONTROL ACT PCB COMMERCIAL STORAGE FACILITY AND CHEMICAL WASTE LANDFILL**  
**CHEMICAL WASTE MANAGEMENT, INC. KETTLEMAN HILLS FACILITY**  
**KINGS COUNTY, CALIFORNIA U.S. EPA ID: CAT 000 646 117**

*Note: Minor grammatical revisions are not included in this table.*

SECTION	SUMMARY OF REVISION	REASON FOR CHANGE
Signature Statement, various sections, Appendix A	Removal of the terms or phrases such as “proposed”, “proposes”, “proposal”, and “if finalized” and addition of terms such as “final” and “issued”.	Final approval issued.
Signature Statement, various sections, and Appendices A and B	Changed version number and date of Renewal Application from version 3, dated October 1, 2018 to version 4, dated November 22, 2019.	CWM submitted a revised Renewal Application on November 22, 2019. See Appendix K, Response to Comment <b>B-2</b> .
Signature Statement, 2 <sup>nd</sup> Paragraph	Addition of the text: “comments submitted in response to August 27, 2019 proposed Approval” to the list of documents on which the terms and conditions of the Approval are based.	U.S. EPA revised certain Approval conditions in response to comments received on the proposed Approval.
Signature Statement, page ii, Table; Appendix A, p. 1.	Reduction in capacity of the PCB Flushing/Storage Unit from 24,000 to 19,100 gallons (enclosed building) and 20,015 to 17,320 gallons (outside containment area)	CWM reduced the requested maximum storage capacities for the PCB Flushing/Storage unit. See Renewal Application, section 4.2. See Appendix K, Response to Comment <b>B-2</b> .
Signature Statement, various sections, Appendix A	Revision to phrase “an unreasonable risk of injury to health and the environment” to “an unreasonable risk of injury to health <u>or</u> the environment”.	Phrase changed to be the same as the language in the applicable regulatory requirement. See 40 C.F.R. § 761.65(d)(2)(vi) and § 761.75(c)(3)(ii).
Signature Statement, page ii, 2 <sup>nd</sup> bullet	Reduction in capacity of the PCB Flushing/Storage Unit from 44,015 to 36,420 gallons.	CWM reduced the requested maximum storage capacities for the PCB Flushing/Storage unit. See Renewal Application, section 4.2. See Appendix K, Response to Comment <b>B-2</b> .



SECTION	SUMMARY OF REVISION	REASON FOR CHANGE
Signature Statement, page iii, 3 <sup>rd</sup> bullet	Removal of the clause “contingent upon its submission of one or more of the financial assurance mechanisms listed at 40 C.F.R. § 761.65(g) prior to U.S. EPA’s issuance of a final approval, that Chemical Waste Management, Inc. has provided a demonstration of financial responsibility”	CWM submitted the required demonstration of financial responsibility. See Statement of Basis, <b><u>section III.D.2.a(5)</u></b> .
Signature Statement, page iii, 2 <sup>nd</sup> paragraph	Revisions to text to note KHF’s 1990 and 1992 TSCA Approvals and to state that the 2020 Approval supersedes all previous TSCA Approvals.	Issued final Approval.
Signature Statement, page iv, carry over paragraph	Changed title and date of Redelegation of Authority	U.S. EPA Region 9 updated its Redelegation of Authority for signature on TSCA storage and disposal approvals.
Record of Approval Modification	Addition of a table to track Approval modifications	Added to document future Approval modifications.
I.	Addition of information on the August 27, 2019 proposed Approval, public comment period and the public hearing.	Updated information.
II.C. and V.A.	Deletion of “10,082-gallon” from the description of the PCB liquid storage tank.	Removed potential conflict. Capacity of the tank is limited to 5,900 gallons under Approval Condition V.C.1.
III.C.	Addition of the effective date and expiration date of the Approval.	Issued final Approval.
IV.B.7.	Revisions to the number of days after which failure to provide requested information or records shall be deemed a violation from 5 working days to 7 days.	Revised to clarify requirement. The proposed Approval did not define “working days.” Seven days, which are considered calendar days, is equivalent to 5 working days.
IV.C.10.; VI.E.4.; VI.E.5.a.; VI.F.4.; VIII.B.2.	Addition of SW-846 Method 8082 as an allowed method for the analysis of PCBs	Revised to allow use of California-certified laboratories for the testing of PCB wastes. See Appendix K, Response to comment <b><u>B-4</u></b> .
IV.F.1.; V.B.3.; V.C.4.d.	Revision to date of the Kettleman Hills Facility’s Spill Prevention Control and Countermeasure Plan to November 2019.	Revised to ensure Approval references the Facility’s most current Spill Prevention Control and Countermeasure Plan submitted on November 22, 2019. See Appendix K, Response to comment <b><u>B-2</u></b> .



SECTION	SUMMARY OF REVISION	REASON FOR CHANGE
IV.G.8.	Changed “police” with “sheriff”.	Revised for accuracy. The Kings County Sheriff Department has jurisdiction in the area where the Kettleman Hill Facility is located. See Appendix K, Response to comment <b>B-5</b> .
IV.G.8.	Addition of requirement to notify U.S. EPA of updates to the contingency plan and to provide updates to the local agencies. Added provision allowing the use of the monthly TSCA report for this notification.	Revised to ensure appropriate local agencies and U.S. EPA are timely informed of changes to the contingency plan.
IV.G.9.	Addition of deadline for updating emergency contacts or phone numbers when they change	Clarified requirement.
IV.G.10.	Clarification that CWM shall provide the required safety equipment at the Kettleman Hills Facility.	Clarified requirement.
IV.G.15.	Addition of notification requirement	Revised to ensure U.S. EPA is timely informed of required changes to the contingency plan.
IV.I.1.	Removed the requirement that the inspections listed in this condition be conducted monthly.	Removed conflict between Approval condition and incorporated document. Majority of inspections are still required to be conducted at least monthly. See Response to Comment <b>B-6</b> .
IV.I.2. and VI.I.2.g.	Addition of “chain-link” to identify which the perimeter fence is subject to inspection and maintenance under this condition.	Clarified requirement. See Appendix K, Response to Comment <b>B-7</b> .
IV.L.2.	Revised due date for the annual inflation adjustment to the post-closure cost estimate	Provide consistency between similar Federal and State requirements and with the due date for the adjustment to the closure cost estimate in Approval Condition IV.K.2. See Appendix K, Response to Comment <b>B-8</b> .
IV.M.4.	Addition of requirement that U.S. EPA approval of changes to the financial assurance mechanism must be in writing and statement that the annual inflation adjustment does not require prior U.S. EPA approval.	Clarify requirement. Annual inflation adjustments of closure and post-closure cost estimates and financial assurance are requirements of the Approval and therefore do not need to be treated as modifications. See Appendix K, Response to Comment <b>B-9</b> .



SECTION	SUMMARY OF REVISION	REASON FOR CHANGE
IV.O.5.	Revised schedule for backup to weekly and clarified which records are subject to the backup requirement	Provide consistency with CWM’s current practices for electronic file backup. See Appendix K, Response to Comment <b><u>B-10</u></b> .
IV.O.8.g.	Clarification of that CWM must maintain certain analytical data include chromatographs, calculations, and other raw data only for on-site sample analyses.	Revised to reflect normal third-party laboratory reporting procedures. See Appendix K, Response to Comment <b><u>B-11</u></b> .
IV.O.11.	Clarification of the type of occurrences that are not normal to the operations of the Facility that need to be included in the monthly TSCA report.	Clarify requirement. See Appendix K, Response to Comment <b><u>B-12</u></b> .
V.C.1.	Revisions to Table to reduce maximum storage capacities: PCB F/SU – Enclosed Building – on floor or racks from 16,500 to 13,200 gallons PCB F/SU – Enclosed Building – PCB Storage Tank from 7,500 to 5,900 gallon and adding “equivalent to a maximum waste level of 7 feet”. PCB F/SU – Enclosed Building Total from 24,000 to 19,100 gallons PCB F/SU – Outside Containment Area from 20,015 to 17,320 gallons	CWM reduced the requested maximum storage capacities for the PCB Flushing/Storage unit. See Renewal Application, section 4.2. See Appendix K, Response to comment <b><u>B-2</u></b> .
V.B.3.	Revision to available containment capacity in the enclosed building from 16,845 to 17,813 gallons and the available secondary capacity of the outside containment area from 20,127 gallons to 14,845 gallons.	CWM reduced the requested maximum storage capacities for the PCB Flushing/Storage unit. See Renewal Application, section 4.2. See Appendix K, Response to comment <b><u>B-14</u></b> .
V.E.7. & 8.	Revision to text from “out of service date” to “removal from service date”	Revised to be consistent with terminology in the PCB regulations. See, for example, 40 C.F.R. § 761.65(a)(1)
V.F.2.	Inclusion of maximum allowable waste level in PCB Storage Tank.	Revised per Renewal Application, see section 10.2.1.



SECTION	SUMMARY OF REVISION	REASON FOR CHANGE
V.G.1.	Revision to allow limited rescheduling of quarterly sampling.	Revised to allow flexibility in scheduling to reflect operational needs. See Appendix K, Response to comment <b><u>B-17</u></b> .
V.G.3.	Addition of text to clarify reporting requirements.	Clarify requirement. See Appendix K, Response to Comment <b><u>B-18</u></b> .
VI.B.3.	Revision to text to require annual landfill survey to be submitted by March 1 of each year.	Revised text to align requirements with similar State requirement. See Appendix K, Response to Comment <b><u>B-19</u></b> .
VI.E.3.f.	Revision to clarify which leachate collection systems must have flow rates calculated for comparison against the action leakage rate.	Clarify and correct requirement. See Appendix K, Response to Comment <b><u>B-20</u></b> .
VI.F.1.	Revision to date of the Kettleman Hills Facility's Stormwater Pollution Prevention Plan to June 2019.	Revised to ensure Approval references the Facility's most current Stormwater Pollution Prevention Plan submitted on November 22, 2019. See Appendix K, Response to comment <b><u>B-2</u></b> .
VIII.A.1.	Additional of date of DTSC's approval of Site-Specific Ambient Air Monitoring Plan (January). DTSC's approval incorporated fourth monitoring station and improvements to the PCB monitoring requirement.	Revised to correctly identify the version of the AAMP incorporated into the Approval. See Appendix K, Response to comment <b><u>B-21</u></b> .
VIII.A.2.	Proposed condition VIII.A.2. is deleted and the following conditions renumbered.	Removed as unnecessary because DTSC's approval incorporated the listed changes to the AAMP. See Appendix K, Response to comment <b><u>B-22</u></b> .
VIII.B.2.	Revisions to allow testing of groundwater for PCBs in the first half of the year when constituents of concern testing occurs in the first half of the year.	Provided consistency with other applicable regulatory requirements. See Appendix K, Response to comment <b><u>B-23</u></b> .
Table 3, A.8.	Addition to identify updates to incorporated plans or document to include State-approved modifications are Class 1 modifications when they do not affect PCB waste operations	Addressed gap in the list of identified modifications. See Appendix K, Response to comment <b><u>B-24</u></b> .
Table 3, B.9.e. & f.	Additions to identify the type of modifications that changes to the SPCC plan require.	Addressed gap in the list of identified modifications. See Appendix K, Response to comment <b><u>B-25</u></b> .





SECTION	SUMMARY OF REVISION	REASON FOR CHANGE
Table 3, D.4.	Deleted.	Removed because routine inflations adjustments to closure costs do not require an approval modification. See Appendix K, Response to comment <b>B-26</b> .
Table 3, E.6.	Addition to identify incorporation of certain plans into the Post-Closure Plan are class 1 modifications.	Addressed gap in the list of identified modifications.
X.E.	Revisions to the definition of “Day”	Clarify requirement. See Appendix K, Response to comment <b>B-27</b> .
Appendix A, p. 1, Item 2.	Reduction in capacity of the PCB Flushing/Storage Unit from 44,015 to 36,420 gallons.	CWM reduced the requested maximum storage capacities for the PCB Flushing/Storage unit. See Renewal Application, section 4.2. See Appendix K, Response to comment <b>B-2</b> .
Appendix A, p. 2, Item 5.	Revised to note submittal of financial assurance document by CWM.	CWM submitted the required demonstration of financial responsibility. See Statement of Basis, <b>section III.D.2.a(5)</b>
Appendix B, Volume 1	Incorporation of portions of the updated Hazardous Waste Facility Operation Plan, dated July 31, 2019	Submittal of an updated Hazardous Waste Facility Operation Plan. See <b>Appendix D-4</b> for a list of changes.
Appendix B, Volume 1	1. Removal of the “Operation Plan, Chemical Waste Management, Inc. Kettleman Hills Facility, Effective June 17, 2003.” Chapter 6 “Security Procedures and Equipment” from the incorporated document.	Document is no longer needed because the July 31, 2019 Hazardous Waste Operation Plan contains these security requirements.
Appendix B, Volume 2	Incorporation of portions of the updated Closure and Post-Closure Care Plan, dated July 31, 2019	Submittal of an updated Closure and Post-Closure Care Plan. See <b>Appendix D-4</b> for a list of changes.
Appendix B, Volume 3	Incorporation of portions of the revised TSCA Renewal Application, dated November 22, 2019	Submittal of an updated Renewal Application. See <b>Appendix D-4</b> for a list of changes.
Appendix B, Volume 3	Incorporation of portions of the revised TSCA Operation Plan, dated November 22, 2019	Submittal of an updated TSCA Operation Plan. See <b>Appendix D-4</b> for a list of changes.



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SECTION	SUMMARY OF REVISION	REASON FOR CHANGE
Appendix B, Volume 4	Incorporation of Spill Prevention Control and Countermeasure Plan, dated November, 2019	Submittal of an updated SPCC Plan. See <b><u>Appendix D-4</u></b> for a list of changes.
Appendix B, Volume 4	Incorporation of DTSC’s May 11, 2016 approval letter for the Site-Specific Ambient Air Monitoring Plan, dated January 2016.	Documented approved revisions to the AAMP.
Appendix B, Volume 6	Incorporation of Storm Water Pollution Prevention Plan, revised June, 2019	Submittal of an updated Storm Water Pollution Prevention Plan. See <b><u>Appendix D-4</u></b> for a list of changes.

