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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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

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ACRONYMS, ABBREVIATIONS, AND FREQUENTLY CITED DOCUMENTS

AAMP	Ambient Air Monitoring Program
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Boar
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
$PM_{2.5}$	Particulate matter less than 2.5 microns in diameter
PM_{10}	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.

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[1] 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 [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:

[1] 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.

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

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:

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Permits Office, Land, Chemicals & Redevelopment Division (LND-4-2)
U.S. Environmental Protection Agency Region 9
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San Francisco, CA 94105
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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

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.[2] See

[2] 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.

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.

   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 31st 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 1st 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 occuring 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 (µg/100 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 µg/100 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 µg/100 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; MAlatorre #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 at 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.[3] CWM has continuously monitored Landfill B-16's LCRS as required by its previous TSCA approvals. The Approval requires CWM to monitoring the LCRS monthly (see Approval Condition VII.B.3.b.); however, the Approval does not require monitoring of the lysimeters.[4]

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[5] 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 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[6] [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:

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[3] 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, mets the § 761.75(b)(7)(ii) design requirements for compound leachate collection systems.

[4] 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."

[5] 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].

[6] This penalty also addressed other violations identified during the DTSC's April 2012 inspection.

> 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 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,[7] 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.

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 VI). 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

[7] 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.

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. [MMAlatorre #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].[8]

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 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.

[8] 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.

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.[9]
    - 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[10] have been detected in Kettleman City's groundwater. See CA Drinking Water Watch.

[9] 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 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.

[10] The maximum contaminant level ("MCL") is the highest level of a contaminant that is allowed in drinking water.

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 $PM_{2.5}$ and that the census tract 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. 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[11] 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 a 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.
    - 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 ($PM_{2.5}$) 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.

[11] 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.

- 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[12] 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_x and $PM_{2.5}$ 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 track that includes Kettleman City is 7% [CalEPA 2019].[13] This score means that 93% of all other census tracks 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 tracks in California.

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.

[12] 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.

[13] The stretch of Interstate 5 closest to Kettleman City is in a different census track (Census Track 603100170) than Kettleman City. Census tract 603100170 has a diesel particulate emissions percentile ranking of 4% [CalEPA 2019]. It is also the census track that includes the Kettleman Hills Facility. The commercial area at the intersection of I-5 and Highway 41 is located in the same census track as Kettleman City.

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.[14]

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.

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.[15]

    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

[14] 0n 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.

[15] 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.

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[16] 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_x and $PM_{2.5}$ 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 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] 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.

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."[17] 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. ($PM_{2.5}$ 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).

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. ($PM_{2.5}$ and ozone levels), section 3.2.2 (diesel particulate and traffic levels); section 3.2.4 (pesticide

[17] More information is available at CalEnviroScreen can be found here.

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 ($PM_{2.5}$). 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:

    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
       Phone: (559) 852-2830
    2) CDPR automated hotline: 1-877-378-5463
    3) CalEPA complaint form:
       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 V.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.[18] Over 150 chemicals were evaluated as part of the Assessment included PCBs and a 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.

[18] 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 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.

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 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, MMAlatorre #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].[19] 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; MMAlatorre #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].

[19] 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].

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[20] 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 heath 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.

[20] 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[21] 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.

    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

[21] Samples of vegetation were also taken in early August 2009 [Wenck 2010, p. 3-12].

between 2007 and 2009[22] 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 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.

[22] Monitoring under the Facility's Site Specific Ambient Air Monitoring Plan did not begin until the 4th quarter of 2006.

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.[23] 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.

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):

[23] 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.

> 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[24] 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.

[24] 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].

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, p. 15. 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 qualities, then soil samples in the community would have been elevated. They were not. Soil sampling as part of the PCB Congeners Study 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 (page 14) 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[25] 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.

[25] 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)

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 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.[26]

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 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

[26] 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).

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 track 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.[27]

   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 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.

[27] 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.

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) 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.[28]

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 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

[28] 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.

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.[29] 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

[29] U.S. EPA's approval was not necessary here because KHF's then-applicable TSCA approvals did not required air monitoring for PCBs.

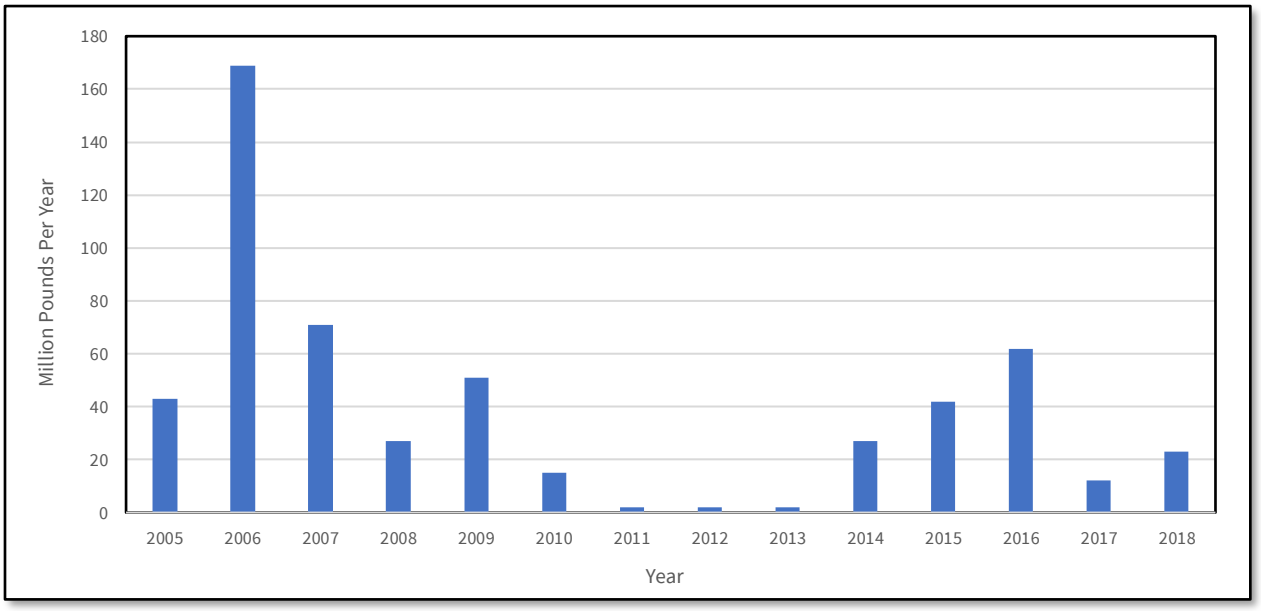
Congeners Study [Wenck 2010, p. 3-5] and again between mid-June and September 2010 for the Kettleman City Community Exposure Assessment [CARB 2010, p. 4].

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).[30] 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 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

[30] 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.

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-occuring 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[31] and responded to each request made by 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[32] 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.[33]

   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

[31] 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].

[32] 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).

[33] 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.

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 to treat hazardous waste streams and contaminated media.[34] 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

[34] 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.[35]

   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".[36]

   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 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

[35] 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.

[36] 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.

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.[37]

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.[38] 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.)[39] 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, 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

[37] 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).

[38] 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.

[39] A complete list of all § 761.75(c)(3) omnibus provisions can be find in Appendix E of the Statement of Basis.

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[40] [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].

[40] 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].

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 reprehensive" 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 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

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