OFFICE OF RESOURCE CONSERVATION AND RECOVERY

WASHINGTON, D.C. 20460

September 9, 2024

MEMORANDUM

SUBJECT: Implementing Environmental Justice in PCB Cleanup, Treatment, Storage, and Disposal Approvals

FROM: Carolyn Hoskinson, Director

TO: Land, Chemicals, and Redevelopment Division Directors, Regions 1-10

PURPOSE

The purpose of this memorandum is to communicate the U.S. Environmental Protection Agency's (EPA's) approach for addressing environmental justice (EJ) considerations in the polychlorinated biphenyls (PCB) cleanup, treatment, storage, and/or disposal approval process ("PCB approval(s)").

This memorandum also transmits EPA's "Implementing Environmental Justice in PCB Approvals" guidance document, which outlines a multi-step approach on how to conduct and interpret an EJ analysis. This document includes best practices and tools to engage communities in areas with potential EJ concerns and address these concerns at PCB treatment, storage, and disposal facilities and cleanup sites through the PCB approval process. The document does not prescribe a single specific approach or methodology for addressing EJ in PCB approvals. Rather, it provides practices and recommendations to be considered and implemented on a case-by-case basis.[1]

BACKGROUND

Environmental Justice

EPA has a long history of working to advance EJ federal policy as guided by Executive Order (E.O.) 12898, "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations" (1994), which focused on the environmental and human health effects of federal actions on minority and low-income populations, with the goal of achieving environmental protection for all communities. In 2023, E.O. 14096 was issued, which builds upon and supplements the scope of E.O. 12898. In September 2022, EPA's Office of Land and Emergency Management (OLEM) released its EJ Action Plan,

[1] This document does not substitute for the statute or regulations, nor is it a regulation itself. Thus, it cannot impose legally binding requirements and may not apply to a particular situation based upon the circumstances. Any decisions regarding a particular situation will be made based on the statute and the regulations, and EPA decision makers retain the discretion to adopt approaches on a site-specific basis that differ from these recommendations where appropriate.

"Building Up Environmental Justice in EPA's Land Protection and Cleanup Programs" which includes projects, tools and practices that will occur across all parts of OLEM. [2]

The Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) gives EPA broad authority to gather information about, evaluate risks of, and regulate any part of the life cycle of chemical substances and mixtures to protect human health and the environment from unreasonable risks of injury. When Congress enacted TSCA in 1976, it set out its findings, policy, and intent in TSCA section 2. This section expresses a broad concern over potential risks to human health and the environment, and a desire to vest in EPA "adequate authority" to regulate chemical substances and mixtures that present an "unreasonable risk of injury to health or the environment." In addition, TSCA section 2(c) clearly states that Congress intended EPA to "consider the environmental, economic, and social impact of any action" taken under TSCA. This explicit statement of intent could provide the opportunity for EPA to consider and apply EJ and cumulative impact considerations, as appropriate, to actions under TSCA.

IMPLEMENTATION

EPA intends to consider EJ throughout the PCB cleanup, treatment, storage, and disposal approval process, including issuance of initial approval, modifications, and renewals. At a minimum, EPA expects that initial EJ assessments (i.e., using EJScreen) will be conducted for treatment, storage, and disposal approvals; and as needed for cleanup approvals. EPA Regions and Headquarters can use EPA's "Implementing Environmental Justice in PCB Approvals" guidance document as a resource for choosing to employ certain site-specific community engagement activities. EPA recognizes that available resources and the nature of the activities covered in each approval may dictate the type and scope of public involvement. Regions and Headquarters should also include the general approval conditions for EJ and climate adaptation, at minimum, and any additional conditions in PCB approvals needed to ensure that authorized PCB operations will be protective of human health and the environment in the face of those considerations.

CONCLUSION

Throughout the PCB approval process, including issuance of initial approvals, approval renewals, and approval modifications, EPA intends to consider EJ and can employ approaches discussed in EPA's "Implementing Environmental Justice in PCB Approvals" guidance document, as appropriate and tailored to the site-specific circumstances of each approval. EPA is committed to incorporating EJ considerations to ensure that PCB approvals are protective of human health and the environment in all communities.

If you have questions about this memorandum or the attached guidance document or would like assistance with evaluating EJ considerations and practices as they relate to PCB approvals, please contact Nadja Solis-Marcano (solismarcano.nadja@epa.gov) and/or Lilybeth Colón (colon.lilybeth@epa.gov), in the Office of Resource Conservation and Recovery.

Attachment

cc: Regional Counsels, Regions 1-10

[2] OLEM's EJ Action Plan is available at: https://www.epa.gov/system/files/documents/2022-09/OLEM-EJ-Action-Plan_9.2022_FINAL-508.pdf

Attachment 1

Implementing Environmental Justice in PCB Approvals

Table of Contents

Implementing Environmental Justice in PCB Approvals

1. About this Document

The purpose of this document is to provide guidance to EPA approval writers and project managers on how to consider environmental justice (EJ) in the polychlorinated biphenyls (PCB) approval process to help prevent or mitigate any potential adverse and disproportionate effects of an approved action on a disadvantaged community.

This guidance was developed by a workgroup comprised of PCB experts from multiple EPA Regions and Headquarters, including the Office of General Counsel, and reviewed by EPA's Office of Environmental Justice and External Civil Rights. The guidance presents an introduction to the EJ concepts and the executive orders that established its federal policy. It also includes sections for understanding relevant legal authorities and summarizes existing tools that can be applied for community outreach and engagement. The guidance also discusses a multi-step approach on how to conduct and interpret EJ screenings and analysis, apply tools to meaningfully engage potentially affected communities, and address identified concerns through improved approval conditions or voluntary practices by owners or operators of PCB treatment, storage, and disposal facilities (TSDFs) and cleanup sites, as appropriate. This guidance also contains appendices with general boilerplate approval conditions, case studies and examples where EJ considerations have been implemented in the PCB approval process, and checklists for the implementation of the recommended multi-step approach.

EPA Regional and Headquarter PCB approval writers and project managers can use this document as a resource for choosing to employ certain site-specific community engagement activities when processing PCB treatment, storage, and disposal approvals; and as needed for cleanup approvals. Because not all recommended practices would necessarily apply to specific types of approvals or approval scenarios, use of this guidance should be tailored to the type of approval and the characteristics and needs of the communities in areas with potential EJ concerns. EPA recognizes that available resources and the nature of the activities covered in each approval may dictate the type and scope of public involvement.

This document provides information and tools related to and focused on section 6(e) of the Toxic Substances Control Act (TSCA) and its implementing regulations at 40 CFR part 761 for use solely by EPA staff as an informal reference. This document does not itself have legal effect and is not a substitute for those provisions and any legally binding requirements that they may impose, and it does not expressly or implicitly create, expand, or limit any legal rights, obligations, responsibilities, expectations, or benefits to any person. To the extent there is any inconsistency between this document and the statute or regulations, the regulations take precedence. EPA retains discretion to use or deviate from this document at any time, as appropriate.

2. Introduction – Establishing a Framework for Addressing Environmental Justice

This section provides an overview of the EJ concept, and related Presidential Executive Orders, which form the basis for the implementation of EJ considerations in the PCB approval process. It also contains a "How to use this document" subsection.

2.1. Environmental Justice

Environmental Justice or "EJ" means the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other federal activities that affect human health and the environment so that people:

- are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and
- have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices.[3]

Advancing EJ and equity and protecting civil rights are fundamental principles guiding how EPA carries out its mission to protect human health and the environment for all people. EPA's goal is to provide an environment where all people enjoy the same degree of protection from environmental and health hazards and equal access to the decision-making process to maintain a healthy environment in which to live, learn, and work. Appendix I provides definitions of EJ

[3] For more EJ information go to the *Learn About Environmental Justice webpage*, available at https://www.epa.gov/environmentaljustice/learn-about-environmental-justice. Refer to Appendix I for key EJ concepts and terms.

key concepts and terms, while Appendix II contains a series of tools and guidance resources for the implementation of EJ considerations.

2.2. Executive Orders

Four Executive Orders (E.O.) establish federal policy on EJ and equity:

E.O. 12898 *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (issued in 1994) lays the foundation of EPA's EJ policy. It directs each listed federal agency, including EPA, to the greatest extent practicable and permitted by law, to "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 programs, policies, and activities on minority populations and low-income populations." The Presidential memorandum accompanying E.O. 12898 notes that existing environmental and civil rights statutes provide many opportunities to ensure that all communities and persons live in a safe and healthful environment.

E.O. 14008 *Tackling the Climate Crisis at Home and Abroad* (issued in 2021) affirms the importance of EJ and states that agencies should address "the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts." E.O. 14008 also establishes a federal policy "to secure environmental justice and spur economic opportunity for disadvantaged communities that have been historically marginalized and overburdened by pollution and underinvestment in housing, transportation, water and wastewater infrastructure, and health care.''

E.O. 13985 *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government* (issued in 2021) establishes a whole-of-government equity agenda to address entrenched disparities in laws and policies and to promote equal opportunity for underserved communities that have been denied fair, just, and impartial treatment.

E.O. 14096 *Revitalizing Our Nation's Commitment to Environmental Justice for All* (issued in 2023) reinforces previous Executive Orders and advances EJ for all by requiring each federal agency to identify, analyze, and address: disproportionate and adverse human health and environmental effects (including risks) and hazards of federal activities, historical inequities, systemic barriers, or actions related to any federal regulation, policy,

or practice that impair the ability of communities with EJ concerns[4] to achieve or maintain a healthy and sustainable environment, and barriers related to federal activities that impair the ability of communities with EJ concerns to receive equitable access to human health or environmental benefits. E.O. 14096 also requires all federal agencies to evaluate relevant legal authorities and, as available and appropriate, take steps to address disproportionate and adverse human health and environmental effects and hazards unrelated to federal activities, and consider adopting or requiring measures to avoid, minimize, or mitigate disproportionate and adverse human health and environmental effects and hazards of federal activities on communities with EJ concerns and also address any contribution of such federal activities to adverse effects (including cumulative impacts of environmental and other burdens) already experienced by such communities. E.O. 14096 expressly includes climate change impacts and cumulative impacts of environmental and other burdens on communities with EJ concerns in the range of relevant adverse human health and environmental effects and hazards covered by the executive order.

3. Legal Authorities

This section presents an overview of the Toxic Substances Control Act and its statutory authority for addressing EJ concerns in the PCB Cleanup and Disposal Program.

3.1. Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) gives EPA broad authority to gather information about, evaluate risks of, and regulate any part of the life cycle of chemical substances and mixtures to protect human health and the environment from unreasonable risks of injury. When Congress enacted TSCA in 1976, it set out its findings, policy, and intent in TSCA section 2. This section expresses a broad concern over potential risks to human health and the environment, and a desire to vest in EPA "adequate authority" to regulate chemical substances and mixtures that present an "unreasonable risk of injury to health or the environment." In addition, TSCA section 2(c) clearly states that Congress intended EPA to "consider the environmental, economic, and social impact of any action" taken under TSCA. This explicit statement of intent provides the opportunity for EPA to consider and apply EJ and cumulative impact considerations, as appropriate, to actions under TSCA.

Congress also singled out PCBs for special treatment in TSCA section 6(e). This section generally prohibits the manufacture, processing, distribution in commerce, and use (other than totally enclosed use) of PCBs, except where authorized or exempted by EPA by rule, and directs EPA to

[4] "Communities with environmental justice concerns" refers to communities overburdened by pollution as identified pursuant to E.O. 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All*, 88 FR 25251 (Apr. 21, 2023), https://www.govinfo.gov/content/pkg/FR-2023-04-26/pdf/2023-08955.pdf.

regulate the disposal of PCBs. EPA has promulgated implementing regulations at 40 CFR part 761, which, among other things, establish requirements for the cleanup, treatment, storage, and disposal of PCBs. Under TSCA section 6(e) and 40 CFR part 761, EPA makes decisions using the concept of "unreasonable risk." Appendix III lists relevant regulatory provisions under the 40 CFR part 761 PCB approval regulations that require EPA to make a "no unreasonable risk" finding. In evaluating whether a risk is unreasonable, EPA considers the probability that a regulatory action will harm health or the environment, and the costs and benefits to society that are likely to result from the action.[5] These considerations may include the interests of communities with EJ concerns, including cumulative impacts, as appropriate.

In 2016, Congress significantly amended TSCA with The Frank R. Lautenberg Chemical Safety Act for the 21st Century. These amendments added new requirements when EPA carries out certain provisions of TSCA, including section 6(e). Under TSCA sections 26(h), (i), and (k), EPA must consider reasonably available information and make decisions consistent with the best available science that are based on the weight of the scientific evidence, which affords the Agency broad discretion to implement these requirements in a manner that advances EJ. These authorities are also relevant to the Agency's consideration of cumulative impacts where such consideration is appropriate. For example, where appropriate, EPA may determine that information from sources such as EJScreen, the Climate and Economic Justice Screening Tool, or other sources of information that are relevant to EJ and cumulative impacts analyses is reasonably available.[6] EPA must consider the information from those sources where relevant and appropriate, consistent with the best available science and weight of the scientific evidence standards, which could improve EJ and cumulative impacts analyses.[7]

3.2. TSCA Legal Authorities for Addressing EJ

Pursuant to TSCA section 6(e), EPA has promulgated regulations in 40 CFR part 761, subpart D to prescribe methods for the cleanup, treatment, storage, and disposal of PCBs. When

[5] Disposal of Polychlorinated Biphenyls (PCBs) ("PCB Mega-Rule"), 63 Fed. Reg. 35384, 35385 (June 29, 1998).
[6] The Climate and Economic Justice Screening Tool (CEJST) was created by the Council on Environmental Quality to show information about the burdens that communities experience. CEJST has an interactive map and uses datasets that are indicators of burdens in eight categories: climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development. The tool shows these burdens in census tracts. Census tracts are small units of geography. Census tract boundaries for statistical areas are determined by the U.S. Census Bureau once every ten years. The tool utilizes the census tract boundaries from 2010. CEJST is available at: https://screeningtool.geoplatform.gov/en/.
[7] EPA should consider all relevant risks, costs, and benefits in making its PCB approval decisions. When in 2016 Congress amended the TSCA "no unreasonable risk" standard to be a risk-only standard, directing EPA not to consider costs or other non-risk factors and to consider unreasonable risk to "potentially exposed or susceptible subpopulations" identified by EPA, it did not amend the standard in section 6(e) for PCBs. Therefore, the "no unreasonable risk" standard for PCBs remains a cost-benefit standard as it was under the old law. For more information about the 2016 TSCA amendments, visit: https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/frank-r-lautenberg-chemical-safety-21st-century-act.

reviewing applications for approval of these methods, or when reviewing notifications for certain self-implementing methods, EPA determines whether the method presents an unreasonable risk of injury to health or the environment and may impose conditions to protect against such risk.[8] For example:

- EPA reviews applications for approval of PCB storage and disposal facilities, such as commercial storage facilities, incinerators, chemical waste landfills, and alternate methods of PCB destruction.[9] When issuing such an approval, EPA may include conditions that it finds necessary to ensure that operation of the PCB storage or disposal facility does not present an unreasonable risk of injury to health or the environment.[10]
- EPA also reviews applications for risk-based sampling, cleanup, disposal, and storage methods for PCB remediation waste, similarly applying the "no unreasonable risk" standard when issuing such approvals.[11]
- Additionally, EPA may respond to self-implementing cleanup and disposal notifications for PCB remediation waste by requiring cleanup of all or portions of a site to more stringent levels than specified in the self-implementing regulations, based on proximity of the site to areas such as residential dwellings, hospitals, schools, nursing homes, playgrounds, parks, day care centers, endangered species habitats, estuaries, wetlands, national parks, national wildlife refuges, commercial fisheries, and sport fisheries.[12]

Neither TSCA section 6(e) nor 40 CFR part 761 define "unreasonable risk" or specify criteria for making a no unreasonable risk finding. Instead, EPA has explained in guidance that when evaluating whether a risk is unreasonable, the Agency "considers the probability that a regulatory action will harm health or the environment, and the costs and benefits to society that are likely to result from the action."[13] In doing so, EPA may consider EJ in determining whether a cleanup, treatment, storage, or disposal method presents an unreasonable risk and whether to impose conditions that protect against such risk, as potential disproportionate impacts to vulnerable and underserved communities may be more likely at contaminated sites.

When appropriate, approval writers and project managers should include general conditions in TSCA PCB approvals as part of EPA's determination of no unreasonable risk of injury to health or the environment, which may require EPA to impose additional approval conditions as necessary to support that determination (e.g., 40 CFR 761.65(d)(2)(vi) and (d)(4)(iv), which

[8] Go to Appendix III for a list of relevant regulatory provisions under the 40 CFR part 761 PCB approval regulations that require EPA to make a "no unreasonable risk" finding.
[9] Refer to 40 CFR 761.65(d) for storage facilities, 40 CFR 761.70 for incinerators, 40 CFR 761.75 for chemical waste landfills, and 40 CFR 761.60(e) for alternate methods of destruction.
[10] For example, 40 CFR 761.65(d)(4)(iv), 761.70(d)(4)(ii), 761.75(c)(3)(ii), and 761.60(e).
[11] Refer to 40 CFR 761.61(c) and 761.62(c).
[12] Refer to 40 CFR 761.61(a)(4)(vi).
[13] Disposal of Polychlorinated Biphenyls (PCBs) (PCB Mega-Rule), 63 Fed. Reg. 35384, 35385 (June 29, 1998).

provide relevant regulatory authorities for approval of commercial storage of PCB waste). Appendix VI provides a template for such provisions. These conditions are intended to help implement EJ considerations, which may include whether risks or impacts have disproportionate effects on communities with EJ concerns, including those related to climate change and cumulative impacts of environmental and other burdens (e.g., Section 2 and 3, E.O. 14096). They are also intended to help implement climate adaptation considerations, including ensuring that engineering and other controls at PCB sites are resilient to adverse climate impacts.

4. Recommended Practices for the Implementation of EJ Considerations in the PCB Cleanup, Treatment, Storage, and Disposal Approvals

In screening for and considering EJ concerns the approval writer or project manager, with input from the owner or operator, should record the responses to key or overarching questions such as:

- Does the community have specific characteristics that should be considered when planning for public participation?
- Is there the potential that the affected population already experiences disproportionate impacts?
- How likely are the potential impacts of the approval under consideration to cause or contribute to disproportionate impacts?

> *Once an approval action is determined to affect communities already experiencing disproportionate effects, or have the potential to disproportionally affect human health and the environment in communities with EJ concerns, the approval writer or project manager should engage in early discussion(s) with surrounding communities to identify additional information that can facilitate understanding of the potential effects and provide opportunities for meaningful participation and fair treatment throughout the PCB approval process.*

This section discusses a variety of practices, overarching considerations, and tools that are relevant to the PCB approval process, such as RCRA public participation tools, and recommendations for considering different factors. The practices, tools, and resources presented in this section do not consist of a comprehensive list and are in no way meant to serve as the only options. Additionally, Appendix IV illustrates a case study on how EJ was considered in the renewal of a PCB commercial storage approval, and Appendix V illustrates how EJ was considered in a PCB cleanup approval.

4.1. Public Participation and Use of Existing Tools

Although not required by TSCA section 6(e) or 40 CFR part 761, EPA provides an opportunity for public participation in the PCB approval process for fixed-site commercial storage and disposal facilities and may also do so for other types of PCB approvals.[14]Going beyond the statutory requirements when called for is good government practice. This section includes some recommended practices for public participation, as well as existing tools to facilitate it.

PUBLIC PARTICIPATION GOALS

Public participation can play an integral role in decision-making for PCB approvals. EPA uses the term public participation for the activities where permitting agencies and permittees encourage public input and feedback, have a conversation with the public, provide access to decision-makers, incorporate public viewpoints and preferences, and demonstrate that decision-makers have considered those viewpoints and preferences. The goal of public participation in the PCB approval process is to provide an opportunity for early and meaningful community participation, particularly in areas where vulnerable and underserved communities live, to ensure that the people most affected by the approval have input into the decisions that will impact their communities.

Each level of government brings unique legal authorities, expertise, technical tools, and other resources that are needed to prevent and mitigate localized impacts from pollution sources. Working together with the state and local government or other federal agencies, can enhance public participation, improve citizens' access to information, and foster greater public involvement.[15]

PCB approval writers and project managers should begin public participation as soon as possible in the PCB approval process. Moreover, especially in cases where the cleanup, treatment, storage, or disposal action could result in significant health, environmental and quality of life impacts, public participation should go beyond simply posting public notices.

It is important that public participation actions be conducted consistent with the federal civil rights law, which requires that no person shall be excluded on the basis of race, color, national origin, or other prohibited grounds from participation in any program or activity funded by EPA.[16] This includes ensuring that public participation processes specifically address the needs

[14] Response to TSCA section 21 Petition for Regulations Requiring Public Notice and Comment Prior to the Issuance of Certain PCB Commercial Storage or Disposal Approvals, 60 Fed. Reg. 28108 (May 30, 1995).

[15] Efforts to resolve and prevent EJ problems by reducing exposures to pollution and enhancing public involvement are most effective when federal, state, and local governments coordinate their actions and make them mutually reinforcing.

[16] For more information on civil rights, consult Title VI of the Civil Rights Act of 1964, 42 United States Code §§ 2000d to 2000d-7 (Title VI); Section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794; Title IX of the Education Amendments of 1972, as amended, 20 U.S.C. §§ 1681 et seq.; Age Discrimination Act of 1975, 42 U.S.C. §§ 6101 et seq.; 40 C.F.R. Parts 5 and 7.

of persons with limited English proficiency, persons with disabilities, and persons of different ages, and are accessible to persons without access to digital communication, and other members of the community who may have limited access to information. Examples of public participation processes that address specific community needs include holding meetings at times and in locations that allow for meaningful involvement by all community members and providing translation or other accessibility services for individuals with limited English proficiency and individuals with disabilities.[17]

EPA identifies as best practice that the approving authority and owner/operator have in place a public involvement plan, yet EPA recognizes that staff size, available resources, and the nature of the activities covered in each approval may dictate the type and scope of a written public involvement plan.

Additionally, there are many existing tools for designing and enhancing public participation or community involvement activities that approval writers and project managers can adapt to engage the community during the PCB approval process. Below we provide an overview of the tools developed for the RCRA and Superfund programs that may be helpful for the PCB approval process.

RCRA Public Participation Tools

The RCRA Public Participation Toolkit is an online resource with a broad range of actions that can be used to design and promote public participation between the permitting agency, regulated community, and the public. The various tools featured in the toolkit fit a wide set of situations such as formal regulatory processes, community-based discussion, and events held by the owner or operator. Below are some of the tools that may be helpful for the implementation of meaningful public participation actions and EJ considerations in the PCB approval process.[18] *(Click on the different tool names to access detailed information and recommendations for each tool.)*

1. Fact Sheets – The fact sheet or statement of basis is a brief document written in plain English (or in other languages, as needed; refer to Translations tools below) to help

[17] For more information on when and how to conduct community engagement, consult question #15 of the *Environmental Justice and Civil Rights in Permitting Frequently Asked Questions* document available at: www.epa.gov/system/files/documents/2022-08/EJ%20and%20CR%20in%20PERMITTING%20FAQs%20508%20compliant.pdf.

[18] For more information about the RCRA public participation toolkit and additional resources, visit: https://www.epa.gov/hwpermitting/rcra-public-participation-tools-and-resources. While these resources provide information that may be helpful for implementing public participation and considering EJ in the PCB approval process, their discussion of RCRA public participation requirements generally are not applicable to PCB approvals issued under TSCA.

residents understand highly technical laws, concepts, and information. The purpose of fact sheets is to provide site-related information to affected communities.

2. Communication Strategy – Communication strategies help with planning of site-related communication with the public, interested groups, and colleagues. A communication strategy is the "why, what, who, when, where, and how" of relaying information. When events or issues are complex or potentially sensitive, a communication strategy helps with organizing information and identifying the concerns that may arise from such issues.
3. Social Media – EPA uses the term "social media" to refer to web-based and mobile technologies that go beyond simply providing information – also allowing collaboration, interaction, and sharing. Examples of social media include blogs, wikis, photo and video sharing, podcasts, social networking, social news, web conferencing, and webcasting. Such tools allow EPA to reach out to people who may not engage the government in more formal, traditional ways.
4. Translations – Translations provide written or oral information in other language(s) to a community with a significant number of community members who are not proficient in English. Translations can be provided for text (online and print), as well as oral communications through an interpreter.
5. Public Meetings – The public meeting provides a forum where interested persons can ask questions and discuss issues outside of the formality of a public hearing. Public meetings are flexible tools that are open to the general public, and are intended to share information and discuss issues, not to make decisions. In contrast to a public hearing (see below), a public meeting is intended to provide two-way discussion and is not always recorded for the public record. Public meetings can be held in-person or virtually.
6. Public Hearings – Public hearings provide an opportunity for the public to provide formal comments and oral testimony on proposed agency actions. Occasionally the agency will present introductory information at the public hearing prior to receiving comments. All testimony received becomes part of the public record. Public hearings can be held in-person or virtually.
7. Public Notices – Public notices are advertisements published in local newspapers (whether online or in print), broadcast on local radio, or sent as mailings to solicit community participation and announce public comment periods for permitting agency decisions and major project milestones.[19]

[19] Refer also to the memorandum "Appropriate methods for making information and documents regarding 40 CFR § 761 approvals available to the public" for additional guidance regarding public notices. www.epa.gov/sites/default/files/2020-01/documents/pcb_public_notice_internet_policy_doa_2007.pdf

8. Response to Comments – The response to comments document briefly describes and responds to all significant comments on the draft approval that were received during the public comment period or during any hearing. It also identifies provisions in the draft approval or modification that were changed, including the rationale for the change.

Similar tools and resources exist for the Superfund program. The Superfund Community Involvement Toolkit provides practical easy-to-use aid for designing and enhancing community involvement activities. Some tools that may be helpful for the PCB Cleanup and Disposal Program are community profiles and technical assistance needs assessment.[20, 21] Superfund public engagement assistance for non-Superfund actions, such as PCB approvals, can be requested, but will depend upon staff and resource availability.[22]

Refer to Section 7.6 for resources that may be utilized to facilitate public participation activities.

4.2. Mitigation Practices

EJ principles and practices call for consideration of mitigation measures to reduce disproportionate environmental and public health harms and risks. Whether mitigation measures will effectively address adverse and disproportionate impacts depends on the unique circumstances of each approval, the community in which the pollution source is or will be located, as well as other factors.

Some proactive mitigation measures that an approval writer or project manager can explore include the following:

Approval Conditions

- Inclusion of enforceable work practices, operating plans, and/or industry best practices for minimizing emissions and/or discharges, for example:
  - Additional pollution controls or plans (e.g., a fugitive dust emission plan).
  - Enhancements to compliance assurance provisions, including additional or periodic monitoring, recordkeeping, or reporting requirements.
- Inclusion of site-specific approval conditions, as necessary, to protect human health and the environment.

[20] A comprehensive list of tools from the Superfund Community Involvement tool kit is available at: https://www.epa.gov/superfund/superfund-community-involvement-tools-and-resources.
[21] More information about Superfund Community Involvement is available at: https://www.epa.gov/superfund/superfund-community-involvement.
[22] Regional community involvement contacts can be found at: https://www.epa.gov/superfund/epa-regional-superfund-community-involvement-contacts.

- Inclusion of general approval conditions to help implement EJ considerations. Appendix VI provides a template for general TSCA PCB approval conditions to help implement EJ and climate adaptation considerations.

When it is determined that a PCB cleanup, treatment, storage, or disposal method or activity presents an unreasonable risk of injury to health or the environment, the approval writer or project manager would need to impose conditions necessary to protect against such risk in order to be able to issue the approval.

Voluntary Practices or Other Potential Commitments

- Third-party monitoring of community complaints.
- Support for public transparency of monitoring information, including community-driven monitoring.
- Other enforceable agreements (e.g., community benefit agreements).

Section 4.6 describes additional voluntary practices and recommendations that can be implemented by owners or operators.

4.3. Financial Assurance

The goal of financial assurance (FA) is to ensure that facilities have the financial resources to pay for their environmental liabilities, such as the costs of closure, post-closure, third party liability, and/or corrective action.[23] FA helps to ensure that the cost of cleanups is borne by facility owners or operators, rather than the taxpayer. In the PCB Cleanup and Disposal Program, FA is required for closure at PCB commercial storage facilities under 40 CFR 761.65(g). Third party liability financial assurance is not required by TSCA but may be added based on a *no unreasonable risk* determination. FA for cleanup sites and other commercial facilities is not required by the PCB regulations but may be applied on a case-by-case basis, also based on a *no unreasonable risk* determination. A specific use of FA for a cleanup site may be cleanup sites where there is remediation waste left that might be treated similarly to a landfill regulated under the RCRA landfill regulations.[24] These RCRA landfill regulations require FA for post-closure to ensure proper maintenance of the closed facility or unit. TSCA-PCB approval writers may similarly determine that it is appropriate to apply FA requirements at certain TSCA-PCB cleanup sites where they anticipate the need for ongoing maintenance for a closed site. An

[23] More information on Financial Assurance and resources is available at: https://www.epa.gov/hwpermitting/financial-assurance-requirements-hazardous-waste-treatment-storage-and-disposal.

[24] Refer to 40 CFR parts 264/265 subpart H.

alternative solution for cleanup approvals might be to add more stringent conditions and strict remedies that would negate the need for ongoing care and FA.

While FA is a critical tool for protecting communities, the requirement that closure, post-closure, or cleanup FA be based on a cost estimate restricts its potential use as an EJ tool. Therefore, an effort to apply or increase FA at a site due to EJ considerations at a facility should be linked to protective activities which are priced out in a cost estimate. In scenarios where FA is applied, the cost for maintaining an FA instrument versus the amount of FA required at a facility should be considered. In some instances where the FA amount is relatively small, the cost to maintain the FA instrument can surpass the required amount of FA. Further, the mechanism for accessing financial assurance should be considered. FA is typically accessed to reimburse the cost of completed work consistent with the approved closure plan or the cleanup approval (e.g., groundwater monitoring, operation, and maintenance plans). Therefore, FA would not generally be available for upfront costs, or unplanned programs.

Financial assurance for third-party liability may be the most appropriate type of FA to be used in the EJ context. Third-party liability is specifically intended to provide compensation to third parties in the case of bodily injury or property damage to the third parties caused by sudden or nonsudden accidental occurrences arising from operations of a facility. Regulations describing the use of sudden or nonsudden third party liability financial assurance prescribe per occurrence and annual limits of liability for the owner or operator. This type of FA could provide a safeguard that populations located near a facility who experience such injury or damage can access compensation up to those limits.

4.4. Compliance and Incident History

The compliance and enforcement history of a facility or site is an important factor to be considered in PCB approval decisions. Approval writers and project managers should evaluate an applicant's compliance and enforcement history, assess the relevance of such history to the activity for which an approval is being sought, consider the nature and severity of past violations, and ultimately determine if the record shows a pattern or practice of noncompliance which warrants either the inclusion of additional approval conditions to help ensure compliance or the revocation or denial of the approval. Approval writers and project managers should also consider recommending denial of an approval application when the compliance and enforcement history evidences a pattern or practice of noncompliance that demonstrates the applicant's unwillingness or inability to achieve and maintain compliance with the terms and conditions of the approval, including but not limited to:

- indifference to or obvious disregard for legal requirements;
- an unwillingness or inability to devote the resources necessary to comply; or

- instances of noncompliance that have led to unreasonable risk to human health and the environment.

EPA provides public access to its regulatory compliance and enforcement data through the Enforcement and Compliance History Online (ECHO) website at https://echo.epa.gov. The website integrates data from major EPA information systems for public use. It provides customizable and downloadable information about environmental inspections, violations, and enforcement actions for EPA-regulated facilities related to the Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act, and Safe Drinking Water Act. ECHO can be used to:

- Search for facilities
- Investigate pollution sources
- Search for EPA enforcement cases
- Examine and create enforcement-related maps

ECHO can be used to identify all regulated facilities in each area, together with information on their permits and compliance monitoring and enforcement history.[25]

4.5. Risk Communication

Risk communication is communication intended to provide a general or specific audience with the information they need to make informed, independent judgments about risks to their health, safety, and the environment. Risk communication should be meaningful, understandable, and actionable. Risk communication works best when it is a two-way process where the Agency listens to, learns from, and meets the needs of specific audiences. In practice, this is not always possible in the short term or in all situations, but improving our understanding of the needs of our audiences and responding to those needs should remain an ongoing EPA goal.

As the EPA works to fulfill its mission, EPA staff practice risk communication every day. EPA developed a process framework called SALT to guide risk communication. The SALT Framework is based on a process of Strategy, Action, and Learning and is supported by Tools that together provide a research-based approach and best practices for communicating our work to the American people. This framework includes an overview of key risk communication principles, outlines some of the science and research behind those principles, and provides clear, practical guidance for implementing a consistent approach to communicating risk across all EPA activities and programs.[26]

[25] Data in ECHO are typically refreshed on a weekly schedule from EPA source databases. For more information about the data in ECHO, visit: https://echo.epa.gov/resources/echo-data/about-the-data.
[26] For more information on the SALT framework, visit: https://www.epa.gov/risk-communication/salt-framework#:~:text=The%20SALT%20Framework%3A%20Includes%20an%20overview%20of%20key,communicating%20risk%20across%20all%20EPA%20activities%20and%20programs.

Approval writers and project managers should leverage opportunities for implementing the principles of the SALT framework as part of the PCB approval process.

4.6. Recommendations for Owners or Operators

All parties to the PCB approval action have a role in providing for meaningful public participation and minimizing disproportionate impacts from PCB cleanup, treatment, storage, and disposal activities to surrounding communities. Each group – regulators, public interest organizations, community members and regulated facilities – can take steps to increase participation and improve communication. This section provides recommended practices that facility owners and operators could adopt in doing their part to increase meaningful community engagement and implementation of EJ considerations. These practices could be presented by approval writers and project managers to owners and operator to consider their implementation on a voluntary basis. These practices can also be documented or requested in the PCB approval.

- Obtain EJ Data from Screening Tools – Early in the approval process, owners and operators can consider data from screening tools, such as EJScreen, and information on community boundaries, demographics, EJ indices, location of environmentally sensitive areas, among others.
- Proactively Engage with Communities – Proactive and early community engagement informs the EJ analysis and PCB activities covered by the approval decision. To ensure meaningful and proactive community engagement, owners and operators should consider developing a public involvement plan that identifies actions for conducting early community engagement as well as community leaders/contacts. Owners and operators could consider designating a community relations liaison to continually listen to community questions and concerns and help maintain an open and accessible channel of communication with the community.
- Identify Potential Impacts – Owners and operators should also identify and consider potential impacts of the PCB activities covered by the approval under consideration (e.g., air emissions, noise, odor, heavy traffic) that may cause or contribute to disproportionate impacts, as well as the actions they could take to help mitigate those impacts.
- Establish a Community Monitoring Committee – Owners and operators could help establish a citizen monitoring committee to provide community oversight and encourage positive communication between facility and community (e.g., quarterly meetings conducted on-site with facility personnel, consulting with an environmental advocate). Owners and operators could also provide for third-party review of facility activities and ambient sampling. This committee could serve a vital role in monitoring

cleanup activities, providing feedback, and serving as a bridge between the community and the cleanup process.

- Consider Alternative Transportation Routes – Pollution from heavy vehicles associated with PCB facilities or sites can be an obstacle to advancing EJ, as many communities living near areas with dense traffic can experience disproportionate exposures to the associated pollution. Because heavy trucks associated with PCB activity can contribute to disproportionate impacts to certain communities, approval writers and project managers should consider asking owners and operators to use transportation routes that minimize disruptions and avoid potential impacts on communities with EJ concerns. EPA can use EJScreen to identify and provide alternative routes for transportation of waste for the consideration of owners and operators. Additionally, approval writers and project managers should consider asking owners and operators to implement best practices for heavy duty vehicles and/or equipment such as minimizing idling, adjusting schedules to reduce traffic or use of equipment at times of increased exposure (e.g., when students are arriving at or being released from school), and incorporating technologies that save fuel and reduce emissions. [27, 28]
- Join the Local Emergency Planning Committee – Owners and operators can collaborate with the Local Emergency Planning Committee (LEPC) to enhance emergency preparedness and response capabilities. Share information about PCB cleanup activities, emergency protocols, and evacuation plans to ensure the safety of both the facility personnel and surrounding communities.

Appendix VII presents additional practices and strategies to help build trust, promote equity, and foster a healthier and more inclusive relationship between facilities/sites and communities in areas with potential EJ concerns.

5. Implementing EJ Considerations in PCB Approvals

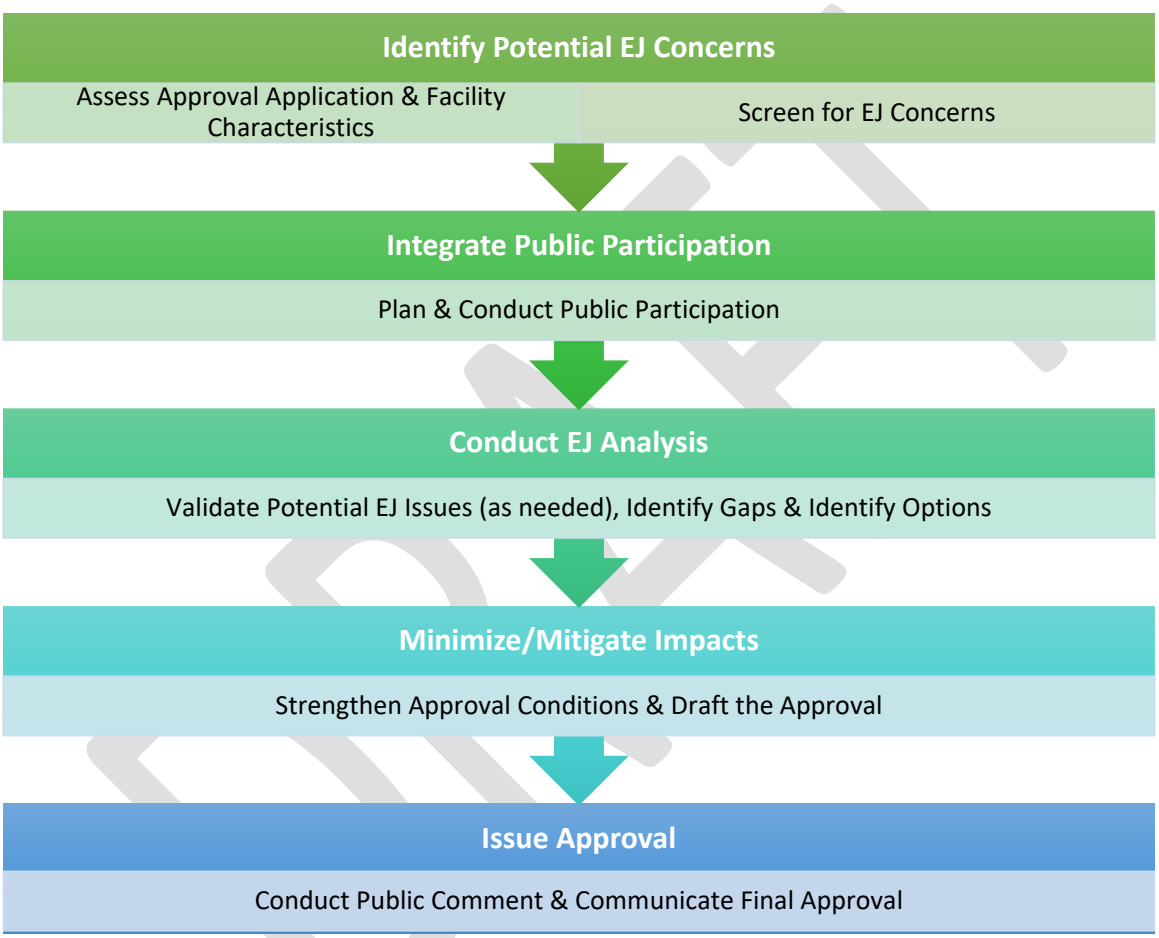
This section provides approval writers and project managers with a multi-step approach for the implementation of EJ considerations, where appropriate, in the process of issuing or modifying PCB approvals for commercial storage and disposal facilities, as well as approvals for PCB cleanup sites. Refer to Image 1 below for a summary of the process for implementing EJ considerations in PCB approvals. The steps described in this section furthers the PCB Cleanup and Disposal Program's commitment to early and meaningful community involvement, open access to information, and the important role of public participation in addressing EJ concerns.

[27] For more information on ways to reduce emissions from equipment go to: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1009QEO.pdf.

[28] For information on verified technologies that reduce diesel emissions go to: https://www.epa.gov/verified-diesel-tech.
For information regarding the Diesel Emissions Reduction Act Program, go to: https://www.epa.gov/dera.

Appendix VIII includes checklists that summarize the following recommended processes. EPA recognizes that available resources and the nature of the activities covered in each approval may dictate the type and scope of public involvement.

Image 1: Multi-step approach for the implementation of EJ considerations in the PCB approval process



5.1. Steps for Implementing EJ Considerations in the Process of Issuing PCB Approvals for Treatment Storage, and Disposal Facilities

1. **Assess approval application and get familiarized with the facility characteristics and its surroundings.**
    a. Review the approval application and current PCB approval (as applicable) and get familiarized with the facility characteristics such as the type of ongoing PCB activity, current approval conditions, and new requests/modifications (as applicable).

b. Gather and assess available information on environmental issues and existing conditions at the facility and surrounding area(s) (e.g., inspection records, databases such as EJScreen and PCB data in RCRAInfo, and initial conversations with the facility owner or operator).
c. Review applicant compliance record and incident history. Refer to Section 4.4 of this document.
d. Identify potential sources of PCB releases and/or other associated activities, as applicable (e.g., heavy duty vehicle emissions), and potential pathways of exposure to workers and adjacent communities via air, water, and land (e.g., due to spills, accidents).

2. **Use EJScreen as initial assessment of potential EJ concerns.**
   a. Screen for geographic and demographic parameters and environmental indicators using EJScreen or other available screening tools.
   b. Identify if there are communities with any historical or ongoing disproportionate and adverse human health or environmental burdens, including risks, following the EJScreen metrics discussed in Section 6 of this document.
3. **Integrate public participation.**[29]
   a. Conduct a pre-meeting among the owner/operator and EPA to provide an opportunity for dialogue.
   b. Integrate public participation by planning and executing an appropriate level of engagement (e.g., identify audience and tailor activities to that audience). Steps 1 and 2 inform Step 3 by identifying the information that can be provided to the community and how the communication can be tailored based on the community's characteristics. Refer to Appendix IV of this guidance for a case study example for a commercial storage approval.
      Public participation/involvement plans should include:
      i. Public participation objectives and the tools to achieve them (e.g., public notice, factsheets). Utilize the tools and resources provided in Section 4 of this document, according to the specific needs of the affected community(ies).
      ii. Identification of audiences, including specific communities/neighborhoods, local environmental groups, community leaders, faith-based organizations, etc.
      iii. Timing of public participation activities, with an emphasis on engaging early in the approval process.
   c. Conduct any early engagement with the local community, as needed.

[29] The type, number, and level of involvement activities to be implemented in this step should be proportional to the community's needs and characteristics.

d. Consider reaching out to state and local authorities, as appropriate, for assistance and potential collaboration.
e. Make information publicly available throughout the entire approval process.
    i. Receive and address community feedback, ensuring community perspectives are actively considered in the decision-making process.

4. **Conduct comprehensive environmental justice analysis.**[30]
    a. Validate potential EJ issues with reasonably available information.[31]
    b. When the assessment, screening, and/or early engagement suggest a potential for disproportionate impacts, review other reasonably available data and enhance engagement with the community and owner/operator.
    c. Information relevant to the identification and validation of disproportionate impacts includes:
        i. Identifying the presence of cleanup sites, TSCA-approved commercial facilities, or other facilities permitted under another EPA statute in the area, including whether these facilities are significant sources of pollution and contribute to community risk.[32]
        ii. Environmental data, such as pollutant measurements (e.g., ambient concentrations, total loadings in waterbody), presence of other significant emissions sources (e.g., woodstoves, ports, freight facilities, highways), and facilities handling hazardous materials.
        iii. Health data, such as mortality rates, asthma, incidence of infant mortality, and incidence of low birth weight.
        iv. Demographic indicators, such as income, employment, and educational variables, and/or other data that may indicate increased vulnerability or susceptibility.
    d. Identify information gaps. If information gaps or uncertainties are identified (e.g., seemingly outdated data or higher uncertainty associated with small geographic area), the approval writer may ask the state and/or the owner/operator to provide additional information (e.g., historical knowledge of the site, state information).
    e. Analyze all the information and contemplate additional considerations as discussed in Section 7 of this document.
    f. Identify options for addressing recognized EJ concerns.

5. **Draft the PCB commercial storage or disposal approval.**

[30] If the previous steps did not identify any EJ concerns, the approval writer or project manager may proceed to Step 5.
[31] Refer to TSCA section 26(k) (U.S.C. 2625(k)), https://www.govinfo.gov/link/uscode/15/2625
[32] An area with an above average number of sources, especially if those sources are large or close to people in the area, may indicate a potential for disproportionate impacts.

a. Include general approval conditions in Appendix VI to help implement EJ and climate adaptation considerations.
b. Identify facility-specific approval conditions that could be added or improved/enhanced to increase protection of human health and the environment (e.g., stricter operating conditions, increased monitoring frequency to minimize potential PCB releases).
c. Propose voluntary actions the owner/operator could undertake to enhance protection of human health and the environment, and upon agreement, reflect those in the approval (voluntary actions can be added to the approval as an appendix). For management practices that owner or operators can adopt on a voluntary basis, refer to Section 4.6 of this document.
d. Conduct the public comment period.
    i. Distribute information to the potentially affected parties.
e. Communicate community concerns or identified risks beyond the scope of the approval to the local government or federal agency that has jurisdiction over the areas of concern (e.g., if the community raises housing concerns, those could be communicated to the Federal Housing Administration).

6. **Issue the PCB approval and make it available to the public.**
    a. Consider public comments in Step 5 and revise the conditions in the final PCB approval accordingly.
    b. At the very minimum, the approval should be posted on EPA's PCB website.[33]
    c. The owner/operator can determine how to make the information available (e.g., publish online, distribute in community areas).

5.2. Steps for Implementing EJ Considerations in the Process of Issuing PCB Cleanup Approvals

1. **Assess approval application and get familiarized with the facility/site characteristics and its surroundings.**
    a. Review the cleanup approval application and/or the proposed cleanup plan from the responsible party (RP) under Section 761.61(a) or (c).
    b. Gather and assess available information about the nature and the extent of the PCB contamination, and the proposed cleanup activities (e.g., site assessments, and process approvals based on site specific requests), and environmental issues and conditions in the surrounding area(s) (e.g., inspection records, databases such as EJScreen and PCB data in RCRAInfo, initial conversations with the site owner or operator).

[33] EPA Headquarters can assist with posting of the PCB Approvals on EPA's PCBs website: https://www.epa.gov/pcbs.

c. Review applicant compliance record and incident history. Refer to Section 4.4 of this document.
d. Identify potential sources of PCB releases and/or other associated cleanup activities, as applicable (e.g., heavy duty vehicle emissions), and potential pathways of exposure to workers and adjacent communities via air, water, and land (e.g., due to PCB removal, spills, accidents).

2. **Use EJScreen as initial assessment of potential EJ concerns.**
   a. Screen for geographic and demographic parameters and environmental indicators using EJScreen or other available screening tools.
   b. Identify if there are communities with any historical or ongoing disproportionate and adverse human health or environmental burdens, including risks, following the EJScreen metrics discussed in Section 6 of this document.
3. **Integrate public participation.**[34]
   a. Conduct a pre-meeting among the owner or operator and EPA to provide an opportunity for dialogue.
   b. Integrate public participation by planning and executing an appropriate level of engagement (e.g., identify audience and tailor activities to that audience). Steps 1 and 2 inform Step 3 by identifying the information that can be provided to the community and how the communication can be tailored based on the community's characteristics. Refer to Appendix V of this guidance for a case-study of a PCB cleanup approval.

      Public participation/involvement plans should include:

      i. Public participation objectives and the tools to achieve them (e.g., public notice, factsheets). Utilize the tools and resources provided in Section 4 of this document, according to the specific needs of the affected community(ies).
      ii. Identification of audiences, including specific communities/neighborhoods, local environmental groups, community leaders, faith-based organizations, etc.
      iii. Timing of public participation activities, with an emphasis on engaging early in the approval process.
   c. Conduct any early engagement with the local community, as needed.
   d. Consider reaching out to state and local authorities, as appropriate, for assistance and potential collaboration.
   e. Make information publicly available throughout the entire approval process.

[34] The type, number, and level of involvement activities to be implemented in this step should be proportional to the community's needs and characteristics.

i. Receive and address community feedback ensuring community perspectives are actively considered in the decision-making process.

4. **Conduct comprehensive environmental justice analysis.** [35]
    a. Validate potential EJ issues with reasonably available information.[36]
    b. When the assessment, screening, and/or early engagement suggest a potential for disproportionate impacts, review other reasonably available data and enhance engagement with the community and owner/operator.
    c. Information relevant to the identification and validation of disproportionate impacts includes:
        i. Identifying the presence of other cleanup sites, TSCA-approved commercial facilities, or other facilities permitted under another EPA statute in the area, including whether these facilities are significant sources of pollution and contribute to community risk.[37]
        ii. Environmental data, such as pollutant measurements (e.g., ambient concentrations, total loadings in waterbody), presence of other significant emissions sources (e.g., woodstoves, ports, freight facilities, highways), and facilities handling hazardous materials.
        iii. Health data, such as mortality rates, asthma, incidence of infant mortality, and incidence of low birth weight.
        iv. Demographic indicators, such as income, employment, and educational variables, and/or other data that may indicate increased vulnerability or susceptibility.
    d. Identify information gaps. If information gaps or uncertainties are identified (e.g., seemingly outdated data or higher uncertainty associated with small geographic area), the approval writer or project manager may ask the state and/or the owner/operator to provide additional information (e.g., historical knowledge of the site, state information).
    e. Analyze all the information and contemplate additional considerations as discussed in Section 7 of this document.
    f. Identify options for addressing recognized EJ concerns.
5. **Draft the PCB cleanup approval.**
    a. Include general approval conditions in Appendix VI to help implement EJ and climate adaptation considerations.

[35] If the previous steps did not identify any EJ concerns, the approval writer or project manager may proceed to Step 5.
[36] Refer to TSCA section 26(k) (U.S.C. 2625(k)), https://www.govinfo.gov/link/uscode/15/2625
[37] An area with an above average number of sources, especially if those sources are large or close to people in the area, may indicate a potential for disproportionate impacts.

b. Identify site-specific conditions in the approval that could be added or improved/enhanced to increase protection of human health and the environment (consideration of subsistence fishing or hunting, or other cultural practices that may affect exposure, or contributions of other contaminants to overall exposure, in determining cleanup levels or plans).
    i. *PCBs to be removed* – If the proposed cleanup includes removal of PCB contaminated material, work with the RP to develop approval conditions to mitigate potential migration or releases during the cleanup (e.g., dust suppression and air monitoring during excavation).
    ii. *PCBs to be left in place* – If the proposed cleanup includes PCBs remaining in place, work with the RP to develop approval conditions for long-term care of the site to mitigate potential exposure or migration of PCBs after the cleanup (e.g. engineering controls, land use restrictions, engineered barrier inspection and maintenance plans, and annual monitoring).
c. Propose voluntary actions the owner/operator could undertake to enhance protection of human health and the environment and upon agreement, reflect those in the approval (voluntary actions can be added to the approval as an appendix). For management practices that owner or operators can adopt on a voluntary basis, refer to Section 4.6 of this document.
d. Consider Greener Cleanups best management practices.
    i. To evaluate cleanup actions comprehensively to ensure protection of human health and the environment, and to reduce the environmental footprint of cleanup activities to the maximum extent possible, consider the best management practices available at: www.epa.gov/system/files/documents/2023-01/pcb-greener-cleanups-factsheet.pdf.
e. Conduct the public comment period.
    i. Distribute information to the potentially affected parties.
f. Communicate community concerns or identified risks beyond the scope of the approval to the local government or federal agency that has jurisdiction over the areas of concern (e.g., if the community raises housing concerns, those could be communicated to the Federal Housing Administration).

6. **Issue the PCB Cleanup approval and make it available to the public.**
    a. Consider public comments in Step 5 and revise the conditions in the final PCB approval accordingly.
    b. At the very minimum, the approval should be posted on EPA's PCB website.[38]

[38] EPA Headquarters can assist with posting of the PCB Approvals on EPA's PCBs website: https://www.epa.gov/pcbs.

c. The owner/operator can determine how to make the information available (e.g., publish online, distribute in community areas).

5.3. Implementing EJ Considerations in the Process of Issuing PCB Approval Modifications

The implementation of EJ considerations on approval modifications will vary depending on the type of change or modification, and the existence of previous EJ analyses. If the original approval already contains EJ considerations, and will undergo a major modification, *we recommend that the approval writer or project manager verify the validity of the results and update provisions, as necessary*. A "major modification" means any change or upgrade to equipment that is not functionally equivalent to the components it replaces, thereby changing the capacity, design, or operation of the process, or any other changes significantly affecting, or having the potential to significantly affect, overall PCB destruction efficiency, performance, or health or environmental impact of the activity to be approved. If the original approval does not already contain EJ considerations, and will undergo a major modification, an EJ screening and full analysis should be performed as need, following Section 5.1 for commercial approvals, or Section 5.2 for cleanup approvals. In cases of minor modifications (e.g., changes in ownership) a separate EJ screening and analysis may not be necessary and can wait for the next PCB approval renewal period.

6. Using EJScreen as an Initial Assessment of Potential EJ Concerns

Identifying vulnerable communities that may be disproportionately impacted by adverse health and environmental effects (including risks) is the first step towards incorporating EJ considerations into the PCB approval process. EJScreen is an EPA EJ mapping and screening tool that provides a nationally consistent dataset and approach that combines environmental and demographic indicators into maps and reports. An initial screening for EJ concerns can help indicate whether the community may be particularly vulnerable to any adverse effects of the proposed approval and/or is already disproportionately bearing public health or environmental burdens, and thus, whether there are EJ concerns that could indicate that an approval decision has the potential to cause or contribute to significant public health or environmental impacts.

This section generally describes how EJScreen works and how it can be used to identify communities with potential EJ concerns through the assessment of environmental and demographic indicators. It also offers some guidance for interpreting screening results and how they can be supplemented with additional information.

6.1. How Does EJScreen Work

EJScreen utilizes indexes to summarize how environmental indicators and demographic factors come together in the same location. Every indicator in EJScreen is reported as a percentile.[39] By using percentiles, EJScreen allows the user to compare a community to the rest of the state or nation, for a given indicator.

Environmental and Demographic Indicators

Examples of environmental indicators available in EJScreen include air toxics respiratory hazard, superfund proximity, and hazardous waste proximity. Examples of demographic indicators include low income, unemployment, low life expectancy, and less than high school education. For additional and detailed information regarding the interpretation of EJScreen results visit: https://www.epa.gov/ejscreen/understanding-ejscreen-results.

EJ and Supplemental Indexes in EJScreen

In addition to the environmental and demographic indicators, EJScreen also utilizes two sets of indexes to reflect environmental indicators combined with demographic information. The demographic indicators are combined in two different ways to create EJ and supplemental indexes. The EJ indexes highlight block groups with the highest intersection of a given environmental indicator and the Demographic Index, which is based on the average of *two* demographic indicators, low-income and people of color.[40] Supplemental EJ indexes use different demographic information to highlight block groups with the highest intersection of a given environmental indicator and the supplemental demographic index, which is the average of *five* demographic factors (i.e., percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy).[41] The supplemental indexes provide flexibility in the ways the data can be considered within EJScreen. They also increase EJScreen's functionality and may be more relevant for use in certain situations, such as awarding grants. For a comprehensive and up to date list of the EJ

[39] Every indicator in EJScreen is reported as a percentile. A percentile is a relative term that ranks data on a scale from 0 – 100. It indicates the percentage of scores that fall below a particular value. For example, an 80th percentile nationwide indicates that a particular value is higher than 80 percent of US population.

[40] To calculate a specific *EJ index*, EJScreen uses a formula to combine a single environmental factor with the demographic index (which averages low income and people of color populations). EJScreen calculates the EJ index by multiplying together two items: EJ Index = (Environmental Indicator Percentile for Block Group) X (Demographic Index for Block Group), where *Demographic Index* = (% people of color + % low-income) / 2)).

[41] To calculate a single supplemental index, EJScreen uses a formula to combine a single environmental factor with the supplemental demographic index. EJScreen calculates the supplemental index by multiplying together two items: Supplemental Index = (The Environmental Indicator Percentile for Block Group) X (Supplemental Demographic Index for Block Group), where Supplemental Demographic Index for Block Group = (% low-income + % unemployed + % less than high school education + % limited English speaking + low life expectancy) / 5). For block groups where low life expectancy data is missing, the formula will average the other four factors.

and Supplemental Indexes in EJScreen, visit: https://www.epa.gov/ejscreen/ej-and-supplemental-indexes-ejscreen.

Other Data

Other data available in EJScreen provide information on health disparities (e.g., asthma prevalence among adults aged 18 or older), climate change (e.g., flood risk, sea level rise), and critical service gaps (e.g., food deserts, broadband gaps). Additionally, EJScreen includes "place" layers (e.g., schools, hazardous waste treatment, storage, and disposal facilities, Superfund sites), threshold maps (i.e., a compilation of the various EJ indexes or the various supplemental indexes on a single map), and boundaries (e.g., counties, zip codes, urbanized areas).[42] EPA annually updates EJScreen with the newest datasets available and improvements to the interface.[43] For comprehensive and up to date EJScreen Map Descriptions, visit: https://www.epa.gov/ejscreen/ejscreen-map-descriptions.

> We recommend that approval writers or project managers use EJScreen to identify locations adjacent EPA-regulated facilities such as schools, hospitals, places of worship, parks, public housing, Tribal lands, prisons, and colonias, as applicable.

Analysis Area and Reports

EJScreen supports two approaches for determining the analysis area: standard geographies (block groups, census tracts, cities) and buffers.[44] The user can select the analysis area depending on the perimeter of the facility or site and the communities and features (e.g., water body) around it.

EJScreen provides a report that describes a selected location. This report shows all EJ and Supplemental Indexes, and all the environmental and demographic indicators. The report can be generated for single (or multiple) standard geographies, or a buffer area.

When using a geographic point, the user can apply a buffer around that point. The buffer ring aggregates portions of the intersecting block groups, weighted by population, to create a representative set of data for the entire ring area, in a way that accounts for the variation and

[42] For descriptions of the data included in the mapping layers available through EJScreen go to: https://www.epa.gov/ejscreen/ejscreen-map-descriptions.
[43] For more information on the updates to EJScreen over time, visit the EJScreen Change Log at: https://www.epa.gov/ejscreen/ejscreen-change-log.
[44] A "block group" is an area defined by the Census Bureau that usually has in the range of 600 - 3,000 people living in it. A "buffer" area is an area on the map that includes everyone who lives within a certain distance (up to 10 miles) of a point, line, or polygon.

dispersion of the population in the block groups within it. [45] Non-circular, user-defined shapes (e.g., line or polygons) can also be defined to represent buffers of any shape.

For each indicator, the result is a population-weighted average, which equals the block group indicator values averaged over all residents who are estimated to be inside the buffer area.[46] *We recommend that users select the shape that better suits the facility, site, or community, and consider the reports available in EJScreen.*

Learn to use EJScreen. For help getting started using EJScreen, download the User Guide for EJScreen (pdf). A series of short tutorial videos on the basic EJScreen functionality is available on the EJScreen Videos page. Information regarding regular trainings and "office hours" to help users understand the tool can be found on the EJScreen Office Hours and Training page. For more information about the use of EJScreen visit: https://www.epa.gov/ejscreen/learn-use-ejscreen.

6.2. Using and Interpreting Screening Results

Screening tools, such as EJScreen, may have substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas, such as Census block groups. Also, in many cases, data on the full range of environmental impacts and demographic factors in any given location will not be available directly through this EJScreen, and its initial results should be supplemented with additional information and local knowledge. However, there are many benefits in using EJScreen to obtain a sense of the characteristics of the community and the activities or stressors surrounding any given facility or site.

Using EJScreen to identify characteristics of the community surrounding any given facility or site can make early discussions more meaningful and productive and add predictability and efficiency to the PCB approval process. EJScreen results help indicate whether the approval decision has the potential to cause or contribute to significant public health or environmental impacts because the community may be particularly vulnerable to any adverse effects of the proposed action and/or the community is already disproportionately bearing public health or environmental burdens (e.g., because of other activities impacting the community). They provide important information as to whether there are residents of the affected community who could be disproportionately subjected to adverse health, environmental, and/or quality of life impacts. Screening results also provide valuable information for the development of plans

[45] As long as users draw buffers much larger than a local block group, this method should represent the average person inside the buffer reasonably well.

[46] A "block group" is weighted based on the fraction of the current American Community Survey block group population that is considered in the buffer. That fraction is estimated as the Census block population divided by the Census block group population.

to meaningfully involve the potentially affected community. For example, demographic information gathered during the screening process can help inform action to ensure meaningful access for persons with limited English proficiency, persons with disabilities, persons of different ages, and persons who are low-income who may lack access to the internet or communication equipment (e.g., computers, cellphones).

6.3. When to Conduct Further Analysis or Outreach

EPA has found it helpful to establish filter values or a suggested starting point for the purpose of identifying geographic areas that may warrant further consideration, analysis, or outreach. EJScreen indexes and supplemental indexes simplify the use of benchmarks or filters for initial screening by highlighting indexes at the 80th, 90th, and 95th percentiles in terms of the potential for disproportionate impacts relative to state, regional, and national averages. The use of an initial filter promotes consistency and provides a pragmatic first step for EPA programs and regions when interpreting screening results.

EPA has identified the 80th percentile filter as the initial starting point. *An area with any number of the Supplemental EJ Indexes at or above the 80th percentile nationally should be considered as a potential candidate for further review.* Further review may include considering other factors and other sources of information such as health-based information, local knowledge, proximity and exposure to environmental hazards, susceptible populations, unique exposure pathways, and other federal, regional, state, and local data. This filter is simply a starting point, and PCB approval writers or project managers should perform additional analysis before making any decisions about potential EJ concerns.[47]

For the PCB program, we recommend using the Supplemental EJ Indexes (i.e., environmental indicators combined with the five-factor supplemental demographic index) to determine when further actions are necessary. Specifically, we recommend conducting further analysis and review for any area where one or more **Supplemental EJ Indexes are at or above the 80th percentile nationally.**

[47] The 80th percentile filter in EJScreen is not intended to designate an area as an "EJ community." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. Nor does the use of the 80th percentile filter suggest that all the environmental indicators are equal in terms of their impact on human health and the environment. Instead, the 80th percentile filter encourages programs to consider environmental indicators outside of their areas of concentration. EPA may revise this approach in the future based on experience. This 80th percentile filter is for internal EPA use and is not intended to apply to states or other organizations.

7. Additional Considerations

There are additional or overarching considerations that approval writers or project managers should contemplate when addressing potential EJ concerns. This section generally describes those considerations.

7.1. Remedies Requiring Ongoing Maintenance

Whenever there is a cleanup remedy or a PCB-waste-in-place scenario that involves ongoing monitoring or maintenance of engineering controls, there are uncertainties that need to be considered. Discontinued long-term monitoring or discontinued maintenance of engineering controls increases the level of uncertainty associated with the presence of PCBs at the site and indicate a higher potential for unreasonable risk to human health and the environment. For instance, there are often uncertainties in whether controls will continue to function as planned and whether future activities will lead to unplanned exposures to human and environmental receptors.

Even if there is no current evidence of actual releases from the facility, significant factors can change over time. For example, groundwater flow can change direction due to the sequencing of dry and wet years. Exposure pathways that have been eliminated by means of an engineered control may be reopened (e.g., if animals burrow through a landfill cap). Therefore, one overarching consideration in making a no unreasonable risk determination in the PCB approval process is how long-term monitoring and engineering controls will be maintained as needed and how they may remain protective of communities nearby amidst changing environmental conditions. This includes integrating climate adaptation and consideration of climate impacts (e.g., increased frequency and intensity of extreme weather events, changing wind patterns, temperature fluctuations, increased precipitation, sea level rise, storm surges, inland and coastal flooding, bank and shoreline erosion, changes in groundwater levels and direction, drought, increased risk of wildfires, and permafrost thaw), as appropriate.[48]

Additionally, the ability to carry out long-term stewardship when waste is left in place should be considered as well as whether long-term management requirements negatively impact the potential for future development of the property.

7.2. Cleanups and Future Use of Property

Reasonably anticipated future use of PCB sites, community interest, and EJ concerns are important considerations in determining the appropriate extent of any remediation. EPA considers reasonably anticipated future land use in the cleanup process in several ways, such as working with local governments, reuse entities, local or surrounding communities and others.

[48] Implementing Climate Resilience in PCB Approvals memorandum: https://www.epa.gov/system/files/documents/2023-12/implementing_climate_resilience_in_pcb_approvals.pdf.

Whenever practicable, EPA also seeks to avoid response actions that might hinder or prevent site reuse consistent with the Agency's assumptions regarding reasonably anticipated future land use.

To ensure realistic assumptions, it is key to actively engage with surrounding communities as early as possible to identify and discuss reasonably anticipated future land uses, discuss site-specific exposure inputs (e.g., the community population and possible exposure pathways) that are critical to cleanup decisions, and select the appropriate remedy. EPA believes early community involvement, with a particular focus on the community's desired future uses of the site, should result in a more democratic decision-making process; greater community support for remedies selected as a result of this process; and more expedited, cost effective cleanups. Interaction with surrounding communities, which includes all groups affected by the site, should serve to increase the certainty in the assumptions made regarding future land use and the confidence that expectations about anticipated future land use are, in fact, reasonable.

Additionally, *Greener Cleanups Best Management Practices: PCB Cleanups* factsheet establishes policy for EPA and its partners to evaluate PCB cleanup actions comprehensively to ensure protection of human health and the environment, and to reduce the environmental footprint of cleanup activities to the maximum extent possible.[49] This fact sheet contains best management practices used at PCB cleanup sites, which also help address EJ concerns such as access to clean air and water. For example, if a cleanup site is in a non-attainment area for air pollution, best management practices that reduce air pollutants during cleanup can be prioritized.

7.3. Fugitive Dust Controls

PCB cleanup activities can generate fugitive dust that could contain PCBs. To protect human health and the environment, effective fugitive dust prevention, monitoring, and controls can be necessary. Therefore, project managers should consider including site-specific dust controls in PCB cleanup approvals, including dust control measures, air monitoring protocols, and health-based air monitoring action levels, as appropriate for the specific cleanup approval.[50]

7.4. Tribes and Indigenous Peoples

In July 2014, EPA promulgated its Policy on Environmental Justice for Working with Federally Recognized Tribes and Indigenous Peoples to clarify and integrate 17 EJ Principles that when implemented help improve the fair and effective implementation of federal environmental laws and provides protection from disproportionate impacts and significant risks to human health and the environment. This policy affirms EPA's commitment to provide federally recognized

[49] To access the full document, visit: www.epa.gov/system/files/documents/2023-01/pcb-greener-cleanups-factsheet.pdf.

[50] For some ideas on existing best management practices for the control of fugitive dust, see the Office of Air's Fugitive Dust Control Measures and Best Practices guide at: www.epa.gov/system/files/documents/2022-02/fugitive-dust-control-best-practices.pdf.

Tribes and Indigenous Peoples fair treatment and meaningful involvement in EPA decisions that might affect their health or environment.[51]

The 17 EJ principles are divided into four parts:

- (1-7) Promoting EJ Principles in EPA Direct Implementation of Programs, Policies, and Activities
- (8-10) Promoting EJ Principles in Tribal Environmental Protection Programs
- (11-14) Promoting EJ Principles in EPA's Engagement with Indigenous Peoples; and
- (15-17) Promoting EJ Principles in Intergovernmental Coordination and Collaboration.

Some of the principles that should be considered in the context of PCB approvals, include:

- EPA seeks to be responsive to the EJ concerns of federally recognized Tribes, Indigenous Peoples throughout the United States, and others living in Indian country.
- EPA strives to understand cultural and communication differences of federally recognized Tribes and Indigenous Peoples to establish common understandings of, and opportunities to address, EJ issues.
- EPA encourages, as appropriate and to the extent practicable and permitted by law, the integration of Traditional Ecological Knowledge into the Agency's environmental science and policy decision-making processes to address EJ concerns and facilitate program implementation.[52]

7.5. Cumulative Impacts

Individuals, communities, and Tribes can be exposed to numerous stressors from a wide array of sources through multiple pathways. These stressors can aggregate and accumulate over time, affecting health and well-being. In communities with EJ concerns and other underserved populations, the combined exposures to these stressors (i.e., cumulative impacts) often increase their vulnerability to new or ongoing environmental hazards, which can cause, or exacerbate disproportionate environmental and public health harms, including risks. [53]

[51] For more information regarding EJ for Tribes and Indigenous Peoples go to: https://www.epa.gov/environmentaljustice/environmental-justice-tribes-and-indigenous-peoples.

[52] In 2017, EPA's Office of Land and Emergency Management issued a memorandum to provide direction to improve the decision-making process as it relates to site assessment, characterization, and cleanup activities (PDF) (6 pp, 225K), to ensure OLEM is considering Traditional Ecological Knowledge when tribes willingly provide this information to the EPA.

[53] "Underserved communities" refers to populations "sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life" as defined in E.O. 13985. E.O. 13985, *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government*, 86 Fed. Reg. 7009, 7009 (Jan. 25, 2021), is available at: https://www.federalregister.gov/documents/2021/01/25/2021-01753/advancing-racial-equity-and-support-for-underserved-communities-through-the-federal-government.

Therefore, addressing cumulative impacts is an important tool for protecting public health in those communities and populations.[54]

EPA's Office of Research and Development has developed the following definition for "cumulative impacts":

> Cumulative Impacts are defined as the totality of exposures to combinations of chemical and nonchemical stressors and their effects on health, well-being, and quality of life outcomes. Cumulative impacts include contemporary exposures to multiple stressors as well as exposures throughout a person's lifetime. They are influenced by the distribution of stressors and encompass both direct and indirect effects to people through impacts on resources and the environment. Cumulative impacts can be considered in the context of individuals, geographically defined communities, or definable population groups. Cumulative impacts characterize the potential state of vulnerability or resilience of a community.[55]

7.6. Interagency Resources

There are various existing and emerging EPA resources that can aid approval writers and project managers with their community involvement activities. To support implementation of EJ considerations in the PCB approval process, it is recommended that the regional Environmental Justice, Community Health, and Environmental Review Division and the Office of Public Affairs be contacted when implementing public participation activities such as public notice and comment services, depending on availability of resources.

Environmental Justice, Community Health, and Environmental Review Division

The Environmental Justice, Community Health, and Environmental Review Division manages the Region's Environmental Justice, Children's Health, Environmental Education, and National Environmental Policy Act programs. Approval writers and project managers may reach out to their regional Environmental Justice, Community Health, and Environmental Review Division for region-specific guidance and/or resources that may be available.

Office of Public Affairs and Office of Environmental Justice and External Civil Rights

Public affairs offices or divisions at each Region generally develop, implement, and coordinate communications for the region and plans and oversees community relations, public outreach, international relations, and intergovernmental activities. In addition, the Office of Public Affairs

[54] The *EPA Legal Tools to Advance Environmental Justice: Cumulative Impacts Addendum* (Jan. 2023) is available at: https://www.epa.gov/ogc/epa-legal-tools-advance-environmental-justice.

[55] Refer to the *Cumulative Impacts Research: Recommendations for EPA's Office of Research and Development* (Sept. 2022) document for more information, available at: https://www.epa.gov/healthresearch/cumulative-impacts-research.

(OPA) in headquarters is the primary office for all EPA issues concerning short-term and long-term strategic communications. The OPA supports the Agency multilingual outreach and communications efforts, in coordination with the Office of Environmental Justice and External Civil Rights (OEJECR). The OPA also manages EPA's web content (including social media) and serves as the agencywide point of contact for all communications intended for the public. It is recommended that approval writer and project managers contact their regional public affair office or division for assistance in their engagement with the communities. Regions may also reach out to OPA through their regional counterparts, as needed. For more information about the OPA, visit: https://www.epa.gov/aboutepa/about-office-public-affairs-opa. It is recommended that OEJECR be contacted as needed through the regional Environmental Justice, Community Health, and Environmental Review Division for requests for translation and interpretation services.[56] For assisting people with limited English proficiency, OEJECR has issued guidance on complying with E.O. 13166, *Guidance to Environmental Protection Agency Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons*. [57]

[56] For more information about EPA's LEP program, visit: https://www.epa.gov/external-civil-rights/assisting-people-limited-english-proficiency, or email the National External LEP and Disability Access Program Coordinator at LanguageInterpretationTranslationRequest@epa.gov.

[57] E.O. 13166 Improving Access to Services for Persons with Limited English Proficiency. https://www.epa.gov/system/files/documents/2023-12/executive-order-13166-improving-access-to-services-for-persons-with-limited-english-proficiency.pdf

Appendix I. Environmental Justice Key Concepts and Terms

Communities with EJ concerns refers to communities overburdened by pollution as identified pursuant to E.O. 12898. E.O. 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, 59 Fed. Reg. 7629, 7629 (Feb. 16, 1994). See also E.O. 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All*, 88 Fed. Reg. 25251 (Apr. 21, 2023).

Disproportionate impacts refer to differences in impacts or risks that are extensive enough that they may merit Agency action and should include cumulative impacts where appropriate.

EJScreen is a publicly available EJ mapping and screening tool that provides EPA with a nationally consistent dataset and approach for combining environmental and demographic indicators. EJScreen users choose a geographic area; the tool then provides demographic and environmental information for that area.

Environmental Justice means the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other federal activities that affect human health and the environment so that people:

- are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and
- have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices.

Equity is the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment.

Fair treatment means no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies, or lack equitable access to human health or environmental benefits.

Meaningful engagement means:

- providing timely opportunities for members of the public to share information or concerns and participate in decision-making processes;
- fully considering public input provided as part of decision-making processes;
- seeking out and encouraging the involvement of persons and communities potentially affected by federal activities by:

    - ensuring that agencies offer or provide information on a federal activity in a manner that provides meaningful access to individuals with limited English proficiency and is accessible to individuals with disabilities;
    - providing notice of and engaging in outreach to communities or groups of people who are potentially affected and who are not regular participants in federal decision-making; and
    - addressing, to the extent practicable and appropriate, other barriers to participation that individuals may face; and
- providing technical assistance, tools, and resources to assist in facilitating meaningful and informed public participation, whenever practicable and appropriate.

Underserved communities refers to populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.

Appendix II. Environmental Justice Tools and Guidance Resources

EPA has many tools to help permitting programs engage in EJ analysis, implementation, and public outreach. The following additional resources and references may be helpful:

- EJScreen User Guide: https://ejscreen.epa.gov/mapper/help/ejscreen_help.pdf.
- EJScreen Technical Documentation: www.epa.gov/system/files/documents/2024-07/ejscreen-tech-doc-version-2-3.pdf.
- EJScreen Office Hours & Training: https://www.epa.gov/ejscreen/ejscreen-office-hours-training.
- Environmental Justice in the Permitting Process: https://www.epa.gov/sites/default/files/2015-02/documents/permit-recom-report-0700.pdf.
- Enhancing Environmental Justice in EPA Permitting Programs: https://www.epa.gov/sites/default/files/2015-02/documents/ej-in-permitting-report-2011.pdf.
- Recommendations Regarding EPA Activities to Promote Environmental Justice in the Permit Application Process: https://www.epa.gov/sites/default/files/2015-02/documents/2013-ej-in-permitting.pdf.
- EJ Action Plan – Building Up Environmental Justice in EPA's Land Protection and Cleanup Programs: www.epa.gov/system/files/documents/2022-09/OLEM-EJ-Action-Plan_9.2022_FINAL-508.pdf.
- EPA Legal Tools to Advance Environmental Justice and Cumulative Impacts Addendum: https://www.epa.gov/ogc/epa-legal-tools-advance-environmental-justice.
- Environmental Justice and Civil Rights in Permitting Frequently Asked Questions: www.epa.gov/system/files/documents/2022-08/EJ%20and%20CR%20in%20PERMITTING%20FAQs%20508%20compliant.pdf.
- Besides EJScreen, there are additional state, federal, and EPA-developed resources for screening and analyzing different areas for environmental justice concerns. A comprehensive list of these other mapping tools can be found at: https://www.epa.gov/ejscreen/additional-resources-and-tools-related-ejscreen#other-maps.
- EPA's Office of Environmental Justice and External Civil Rights: https://www.epa.gov/aboutepa/about-office-environmental-justice-and-external-civil-rights.
- Greener Cleanups Best Management Practices - PCB Cleanups: http://www.epa.gov/system/files/documents/2023-01/pcb-greener-cleanups-factsheet.pdf.

- EJ in Air Permitting – Principles for Addressing Environmental Justice Concerns in Air Permitting: https://www.epa.gov/caa-permitting/ej-air-permitting-principles-addressing-environmental-justice-concerns-air.
- To learn more about EPA's efforts towards Environmental Justice, visit: https://www.epa.gov/environmentaljustice.
- The SALT Framework - A Process Framework to Guide Risk Communication: https://www.epa.gov/risk-communication/salt-framework.

Appendix III. Relevant Regulatory Provisions Under 40 CFR Part 761 that Require EPA to Make a "No Unreasonable Risk" Finding

Citation	Requirement
No Unreasonable Risk Determinations PCB Approvals	
ALTERNATIVE TECHNOLOGY §§ 761.60(e) and 761.60(j)(3)	(e) …Requests for approval of alternate methods that will be operated in only one Region must be submitted to the appropriate EPA Regional Administrator. The applicant must show that his or her method of destroying PCBs will not present an unreasonable risk of injury to health or the environment. On the basis of such information and any available information, EPA may, in its discretion, approve the use of the alternate method if it finds that the alternate disposal method provides PCB destruction equivalent to disposal in a § 761.70 incinerator or a § 761.71 high efficiency boiler and will not present an unreasonable risk of injury to health or the environment. Any approval must be stated in writing and may include such conditions and provisions as EPA deems appropriate. The person to whom such waiver is issued must comply with all limitations contained in such determination. No person may use the alternate method of destroying PCBs or PCB items prior to obtaining permission from the appropriate EPA official. (j)(3) The EPA Regional Administrator for the Region in which an R&D for PCB disposal activity is conducted may determine, at any time, that an R&D PCB disposal approval is required under paragraphs (e) and (i)(2) of this section or § 761.70(d) to ensure that any R&D for PCB disposal activity does not present an unreasonable risk of injury to health or the environment.
RISK-BASED CLEANUP §§ 761.61(c)(1) and 761.61(c)(2)	(c)(1) …Each application must include information described in the notification required by paragraph (a)(3) of this section. EPA may request other information that it believes necessary to evaluate the application. No person may conduct cleanup activities under this paragraph prior to obtaining written approval by EPA. (c)(2) EPA will issue a written decision on each application for a risk-based method for PCB remediation wastes. EPA will approve such an application if it finds that the method will not pose an unreasonable risk of injury to health or the

	environment.
RISK-BASED DISPOSAL OR STORAGE OF PCB BULK PRODUCT WASTE §§ 761.62(c)(1) and 761.62(c)(2)	(c)(1) …Each application must contain information indicating that, based on technical, environmental, or waste-specific characteristics or considerations, the proposed sampling, disposal, or storage methods or locations will not pose an unreasonable risk or injury to health or the environment. EPA may request other information that it believes necessary to evaluate the application. No person may conduct sampling, disposal, or storage activities under this paragraph prior to obtaining written approval by EPA. (c)(2) EPA will issue a written decision on each application for a risk-based sampling, disposal, or storage method for PCB bulk product wastes. EPA will approve such an application if it finds that the method will not pose an unreasonable risk of injury to health or the environment.
STORAGE AT AN APPROVED FACILITY § 761.65(a)(4)	(a)(4) Increased time for storage may be granted as a condition of any TSCA PCB storage or disposal approval, by the EPA Regional Administrator for the Region in which the PCBs or PCB Items are to be stored or disposed of, or by the appropriate official at EPA Headquarters, if EPA determines that there is a demonstrated need or justification for additional time, that the owner or operator of the facility is pursuing relevant treatment or disposal options, and that no unreasonable risk of injury to health or the environment will result from the increased storage time. In making this determination, EPA will consider such factors as absence of any approved treatment technology and insufficient time to complete the treatment or destruction process. EPA may require as a condition of the approval that the owner or operator submit periodic progress reports.
APPROVAL OF COMMERCIAL STORERS OF PCB WASTE §§ 761.65(d)(2)(vi) and 761.65(d)(4)(iv)	(d)(2) The Regional Administrator for the region in which the storage facility is located (or the appropriate official at EPA Headquarters, if the commercial storage area is ancillary to a disposal facility for which an official at EPA Headquarters has approval authority) shall grant written, final approval to engage in the commercial storage of PCB waste upon a determination that the criteria in paragraph (d)(2)(i) through (d)(2)(vii) of this section have been met by the applicant: …(vi) The operation of the storage facility will not pose an unreasonable risk of injury to health or the environment. (d)(4) The written approval issued by EPA shall include, but

	not be limited to, the following: …(iv) Such other conditions as deemed necessary by EPA to ensure that the operations of the PCB storage facility will not pose an unreasonable risk of injury to health or the environment.
COMMERCIAL STORAGE CLOSURE PLANS §§ 761.65(e)(1), 761.65(e)(1)(i), 761.65(e)(1)(v), and 761.65(e)(2)	(e)(1) A commercial storer of PCB waste shall have a written closure plan that identifies the steps that the owner or operator of the facility shall take to close the PCB waste storage facility in a manner that eliminates the potential for post-closure releases of PCBs which may present an unreasonable risk to human health or the environment. An acceptable closure plan must include, at a minimum, all of the following: (e)(1)(i) A description of how the PCB storage areas of the facility will be closed in a manner that eliminates the potential for post-closure releases of PCBs into the environment. (e)(1)(v) A detailed description of other activities necessary during the closure period to ensure that any post-closure releases of PCBs will not present unreasonable risks to human health or the environment. This includes activities such as ground-water monitoring, run-on and run-off control, and facility security. (e)(2) A written closure plan determined to be acceptable by EPA under this section shall become a condition of any approval granted under paragraph (d) of this section.
INCINERATION §§ 761.70(d)(3) and 761.70(d)(4)(ii)	(d)(3) In addition to the information contained in the report and plan described in paragraphs (d)(1) and (2) of this section, EPA may require the owner or operator to submit any other information that the EPA finds to be reasonably necessary to determine whether an incinerator shall be approved. (d)(4)(ii) In addition to the requirements in paragraphs (a) and/or (b) of this section, EPA may include in an approval any other requirements that EPA finds are necessary to ensure that operation of the incinerator does not present an unreasonable risk of injury to health or the environment from PCBs.
HIGH EFFICIENCY BOILERS § 761.71(b)(3)	(b)(3) On the basis of information in paragraph (b)(2) of this section and any other available information, the Regional Administrator may, at his/her discretion, find that the alternate disposal method will not present an unreasonable

	risk of injury to health or the environment and approve use of the boiler.
CHEMICAL WASTE LANDFILLS §§ 761.75(c)(2) and 761.75(c)(3)	(c)(2) In addition to the information contained in the report described in paragraph (c)(1) of this section, the Regional Administrator may require the owner or operator to submit any other information that the Regional Administrator finds to be reasonably necessary to determine whether a chemical waste landfill should be approved. Such other information shall be restricted to the types of information required in paragraphs (c)(1)(i) through (ix) of this section. (c)(3) In addition to the requirements of paragraph (b) of this section, the Regional Administrator may include in an approval any other requirements or provisions that the Regional Administrator finds are necessary to ensure that operation of the chemical waste landfill does not present an unreasonable risk of injury to health or the environment from PCBs.
Self-implementing PCB Cleanups	
SELF-IMPLEMENTING CLEANUP §§ 761.61(a)(3)(i)(D) and 761.61(a)(3)(ii)	(a)(3)(i) At least 30 days prior to the date that the cleanup of a site begins, the person in charge of the cleanup or the owner of the property where the PCB remediation waste is located shall notify, in writing, the EPA Regional Administrator, the Director of the State or Tribal environmental protection agency, and the Director of the county or local environmental protection agency where the cleanup will be conducted. The notice shall include: …(D) A cleanup plan for the site, including schedule, disposal technology, and approach. This plan should contain options and contingencies to be used if unanticipated higher concentrations or wider distributions of PCB remediation waste are found or other obstacles force changes in the cleanup approach. (a)(3)(ii) Within 30 calendar days of receiving the notification, the EPA Regional Administrator will respond in writing approving of the self-implementing cleanup, disapproving of the self-implementing cleanup, or requiring additional information….

Appendix IV. Kettleman Hills PCB Chemical Waste Landfill and Commercial Storage Approval Case Study

Facility Background

The Kettleman Hills Facility (KHF) is a commercial hazardous waste and chemical waste treatment, storage and disposal facility located southwest of Kettleman City in Kings County, California. KHF accepts PCB waste and most other types of hazardous waste for disposal as well as non-hazardous solid waste.

Disposal operations at KHF started in 1960 when the property was used for land application of sewage sludge. In 1975, Kings County issued a land use permit to the McKay Trucking Company to dispose of oilfield wastes.[58, 59] KHF became a hazardous waste disposal site in 1978 after McKay Trucking, renamed Environmental Disposal Services Inc., expanded the facility's size and operations. Chemical Waste Management Incorporated (CWM) acquired the site in 1979 and subsequently obtained permits from the state of California to treat, store, and dispose of hazardous waste and from EPA to treat, store, and dispose of PCB waste. Over time, KHF has disposed of PCB waste in four landfills: B-14, B-16, B-18, and B-19. As of 2024, landfills B-14, B-16, and B-19 were closed leaving only Landfill-18 active and approved by EPA to accept PCB waste.

[58] McKay Trucking Company started disposing sewage sludge in 1960.

[59] The 1975 permit was issued by the County and is a land-use permit (not a RCRA permit). CWM applied for a RCRA permit and gained interim status in 1980. Their first official TSCA Approval was granted on 1981, and their first RCRA permit in 1988.

KHF also operates under a RCRA permit issued by the California Department of Toxic Substances Control (DTSC) in 2003. DTSC modified the RCRA permit in 2014 to allow for the expansion of the permitted hazardous waste Landfill B-18, which is currently accepting hazardous and PCB waste. As of 2024, DTSC had issued a draft permit decision for public comment to renew the RCRA permit for the facility. More information on the RCRA permit and renewal application is available on DTSC's Kettleman Hills website.

In addition to EPA and DTSC permits, KHF is also regulated by the California Department of Resources Recycling and Recovery, Central Valley Regional Water Quality Control Board, Kings County, and San Joaquin Valley Air Pollution Control District. The facility also operates a separate municipal waste landfill on the property.

Environmental Justice Analysis and Community Engagement

In August 2019, EPA proposed to issue a renewed approval to CWM-KHF to store, treat for disposal and dispose of PCB waste with the intent to ensure EJ concerns and community involvement were considered in the process.

EPA conducted a broad-based EJ Analysis that identified and documented the pre-existing social, economic, environmental and health conditions that may make a community more vulnerable to harm from additional pollution. Information was drawn from a variety of sources including the local community. At the time this EJ Analysis was conducted, the EJScreen results were not representative of the community due to limitations in its underlying data. The expanded EJ analysis results showed that the majority of Kettleman City residents are minority and low-income.[60] It also showed that Kettleman City has an above average number of residents whose primary language is Spanish and above average number of adults that did not graduate high school. In addition, the community has poor regional air quality, high rates of asthma, and limited access to health care. The EJ Analysis also evaluated the proposed PCB operations at the facility and the requirements to monitor, reduce or prevent releases. To encourage community participation, EPA issued the draft approval documents in both English and Spanish.

EPA encouraged the public to comment on the proposed approval, draft EJ Analysis, and other supporting determinations and analyses. The Agency held a public meeting with a question-and-answer session on the proposed approval on October 2019. EPA also held a public hearing in November 2019 in which several individuals from the public spoke. Spanish translation was provided at the meeting and hearing. A transcript of the public hearing is included in the final permit's administrative record.

[60] According to the EJ Analysis for the Kettleman Hills Facility Proposed TSCA Permit with Updates and Revisions Document (July 2020), "Minority Population" refers to individuals who list their racial status as a race other than white, and "Low-Income Population" refers to the population where the income is two times below the poverty threshold. See www.epa.gov/sites/default/files/2020-07/documents/cat000646117-khf-ej-analysis-2020-07-29.pdf.

In 2024, DTSC released their EJ analysis using the California EJ analysis tool, CalEnviroScreen, as part of the RCRA permit renewal process (not PCB related). [61] EPA provided support to the State agency in their analysis of the community vulnerability through review of the report and by attending the associated public workshops.

With respect to public engagement, DTSC included a condition of the 2014 RCRA permit modification that requires the facility to provide annual community education each April in Kettleman City. This annual meeting provides information about KHF's contingency plan. Public agencies responsible for emergency planning and response are invited to provide information to 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. Also, CWM provide all the meeting materials in Spanish and English and provides real-time translation of the presentation.

For the full report, *Environmental Justice Analysis for the Kettleman Hills Facility,* visit: https://www.epa.gov/ca/chemical-waste-management-inc-kettleman-hills-facility-tsca-pcb-permit-and-supporting-documents.

Approval Issuance

EPA issued an Approval to Chemical Waste Management Inc. for the treatment, storage, and disposal of PCB waste at the Kettleman Hills Facility in July 2020. EPA has determined that the facility's PCB operations as allowed by the approval will not pose an unreasonable risk of injury to health or the environment. The Approval allows the facility to dispose of PCB waste in the hazardous waste landfill, Landfill B-18. The Approval also allows the facility to store and treat PCB waste at its PCB Storage/Flushing Unit which is a small building located north of the landfill. The Approval requires the facility to monitor groundwater, leachate, and ambient air for PCB releases as well as to conduct regular inspections of the PCB units.

Additional Information

Additional information regarding the Kettleman Hills Facility and/or Approval can be found below:

- Chemical Waste Management Inc. Kettleman Hills Facility (available in English and Spanish): https://www.epa.gov/ca/chemical-waste-management-inc-kettleman-hills-facility.
- Chemical Waste Management Inc. Kettleman Hills Facility TSCA Approval (Issued July 2020):

[61] Chemical Waste Management – Kettleman Hills Hazardous Waste Landfill Permit Application Evaluation of Kettleman City's Vulnerability using CalEnviroScreen Data (April 2024).

    - https://www.epa.gov/sites/default/files/2020-07/documents/cat000646117-khf-tsca-approval-2020-07-29.pdf.
    - https://www.regulations.gov/docket/EPA-R09-RCRA-2019-0088
- Chemical Waste Management Inc. Kettleman Hills Facility TSCA PCB Approval and Supporting Documents: https://www.epa.gov/ca/chemical-waste-management-inc-kettleman-hills-facility-tsca-pcb-permit-and-supporting-documents.

Appendix V. Big Springs Fish Hatchery Lower Raceway Case Study for Cleanup Approvals

Facility Background

In October 2003, the Montana Fish Wildlife and Parks (MFWP) informed EPA Region 8 that PCBs, as high as 21.9 ppm, had been found in wild brown trout downstream Big Springs Creek near the Trout Fish Hatchery Lower Raceways, in Lewistown, Montana. The MFWP believed that the creek became contaminated with PCB-containing paint that was used on the concrete raceways from late 1950s through 1960s as paint chips peeled during regular maintenance. Analyses of the PCB paint showed Aroclor 1254 at concentrations up to 86,500 ppm. PCB-contaminated paints were also found on the staff housing and other structures. Region 8 advised that the MFWP immediately halt the lower raceway operations to eliminate any additional contamination to the creek. Lewistown citizens raised many concerns about their exposures to PCBs in fish and about contamination of Big Springs Creek with PCBs. The citizens filed a lawsuit against the MFWP.

Because there were no standard approaches for EJ screening tools in 2004, EPA Region 8 did not conduct EJ screening. However, EPA Region 8 conducted extensive public involvement throughout the cleanup at the Trout Fish Hatcheries, starting in 2004 and ending in 2017.

Community Engagement in the Approval Process

Building materials containing PCB paints and contaminated soils nearby were dismantled and removed for disposal. Region 8 issued the following two cleanup Approvals under 40 CFR 761.61(c) and 761.62(c) to the MFWP: (1) *PCB Paint Removal, Encapsulation and Monitoring for Big Springs Fish Hatchery Lower Raceways, Lewistown, Montana,* issued on January 19, 2005,

and (2) *the Approval for Big Springs Streambed Dredging for Removal of PCB Contaminated Sediment in the Creek,* issued on October 14, 2009.

For the first Approval, public meetings with the MFWP and the community were carried out to update on PCB assessment data and to hear and consider the public's opinion on the development of a PCB remediation plan. One citizen had concerns about suspected PCBs buried at the hatchery property in the past, so, in response, an onsite meeting was scheduled by the MFWP and PCB program to walk through and investigate areas of concerns. A 30-day public comment period was held, after which, the approval was issued. The raceways were decommissioned about three years later because the encapsulation layers began to peel off from the raceways.

For the second Approval, Region 8 and the MFWP worked together to approve the Site Characterization Sampling and Analytical Plan for the Big Springs Fish Hatchery. The public was presented with the human health and eco-risk assessments and a geomorphic study to support the 2009 Big Springs Creek Feasibility Study. A 30-day public comment period was held with no received comments, followed by approval issuance.

To address the PCB exposure concerns from the community, the Agency for Toxic Substances and Disease Registry (ATSDR) in 2004 conducted PCB exposure investigations for the individuals (a MFWP staff and family) living in a home with PCB-containing paint and for the people living near, recreating on, or eating fish from the Big Spring Creeks. Two Exposure Investigation Reports were completed by the ATSDR in July 2007 and May 2008, respectively. The ATSDR did not find evidence of unusually elevated PCBs in the blood levels of either the household members or the volunteer participants.

Site Closure

On March 2017 Region 8 officially closed out the Big Springs Creek PCB cleanup site. The decision was based on the PCB Program review of the Post Dredging and Monitoring Reports including macro-invertebrates and fish monitoring data; and the support from all the attendees during a public meeting in February 2017. For more information about this approval, contact the Region 8 PCB representative.[62]

[62] For contact information regarding Region 8 PCB Program, visit: https://www.epa.gov/pcbs/epa-region-8-polychlorinated-biphenyls-pcbs.

Appendix VI. General TSCA PCB Approval Conditions to Implement Environmental Justice and Climate Adaptation Considerations.

This appendix contains general conditions that should be included in all TSCA PCB approvals as part of EPA's determination of no unreasonable risk of injury to health or the environment, which may require EPA to impose additional approval conditions as necessary to support that determination. These conditions are intended to help implement EJ considerations, which may include whether risks or impacts have disproportionate effects on communities with EJ concerns, including those related to climate change and cumulative impacts of environmental and other burdens (e.g., sec. 2 and 3, E.O. 14096). They are also intended to help implement climate adaptation considerations, including ensuring that engineering and other controls at PCB sites are resilient to adverse climate impacts.

1. *Condition to modify, revoke and reissue, or terminate the Approval*. Pursuant to section 6(e) of the Toxic Substances Control Act and the federal PCB regulations at 40 CFR part 761, including [insert citation(s) for approval provision(s)], EPA reserves the right to modify (including by imposing additional conditions), revoke and reissue, or terminate this Approval when any of the following circumstances exist:

(a) EPA has reason to believe [insert approved action(s), e.g., storage, treatment, disposal, or remediation activities] [is/are] not achieving the relevant [insert performance standards, remedy goals, if applicable] or otherwise [is/are] not in compliance with this Approval;
(b) EPA has reason to believe [insert approved action(s), e.g., storage, treatment, disposal or remediation activities] presents or may present an unreasonable risk of injury to health or the environment;
(c) EPA becomes aware of new or previously undisclosed information that may substantively impact its previous finding of no unreasonable risk and require modifications to this Approval; or
(d) EPA issues new regulations or standards that impact conditions of this Approval.

EPA will make efforts, taking into account the nature of the risk, to provide reasonable advance notice to [insert responsible party's/owner's name] and to provide opportunity for [insert responsible party's/owner's name] to comment on any proposed modification, revocation, or termination of the Approval. EPA may require [insert responsible party's/owner's name] to immediately suspend [insert approved action(s), e.g., storage, treatment, disposal, or remediation activities] while the Agency is deciding whether to modify, revoke and reissue, or terminate this Approval.

2. *Condition to require additional information.* When any of the circumstances described above exist, EPA reserves the right to require [insert responsible party's/owner's name] to provide additional information relevant to the Agency's determination whether to modify, revoke and reissue, or terminate this Approval. This may include information to inform EPA's finding that [insert approved action(s), e.g., storage, treatment, disposal or remediation activities] does not present an unreasonable risk of injury to health or the environment, such as information related to the risks or impacts of the [insert short descriptor of approved action(s) such as storage, treatment, disposal, or remediation activities] on surrounding communities and communities with environmental justice concerns, including those related to climate change and cumulative impacts of environmental and other burdens. Additionally, this may include information to inform EPA's finding whether [insert approved action(s), e.g., storage, treatment, disposal, or remediation activities] are resilient to climate change impacts, and whether vulnerability to climate change impacts does not present an unreasonable risk of injury to health or the environment.

3. *Condition to provide additional information.* If [insert responsible party's/owner's name] becomes aware of new or previously undisclosed information that may substantively impact EPA's previous finding that [insert approved action(s), e.g., storage, treatment, disposal, or remediation activities] does not present an unreasonable risk of injury to health or the environment, [insert responsible party's/owner's name] must provide that information to the Agency as soon as possible but no later than [insert timeframe]. This may include information related to the risks or impacts of the [insert short descriptor of approved action(s) such as, storage, treatment, disposal, or remediation activities] on surrounding communities and communities with environmental justice concerns, including risks or impacts related to climate change and cumulative impacts of environmental and other burdens. Additionally, this may include information related to the resilience of the [insert short descriptor of approved action(s) such as, storage, treatment, disposal, or remediation activities] to climate change impacts.

Appendix VII. Building Bridges – Strategies for Strengthening Facility-Community Relationships

These strategies can help facilities/sites build trust, promote equity, and foster a healthier and more inclusive relationships with communities in areas with potential environmental justice concerns. Here are some specific examples:

Green Space Initiatives - Transforming unused areas into community parks, green spaces, or wildlife sanctuaries, which can enhance the environment and provide recreational benefits to local residents.

Job Training Programs - Collaborating with local vocational schools or community colleges to offer job training programs, providing community members with new skills and employment opportunities within the facility.

Community Benefit Agreements - Negotiating legally binding community benefit agreements that outline specific benefits, such as job opportunities, financial contributions, and environmental improvements, which the facility will provide to the community.

Emergency Response Training - Offering emergency response training to community members, equipping them with knowledge and skills to handle hazardous situations and build trust in the facility's safety measures.

On-Site Environmental Education Centers - Establishing on-site education centers that allow school groups and community members to learn about waste management, pollution prevention, and environmental protection through interactive exhibits and workshops.

Eco-friendly Transportation - Implementing eco-friendly transportation options, such as electric shuttles or bike-sharing programs, to reduce traffic and emissions around the facility.

Sustainable Landscaping - Incorporating sustainable landscaping practices, like planting native species and using recycled materials, to improve the facility's aesthetics and reduce environmental impact.

Waste Reduction and Reuse - Developing programs to help communities reduce hazardous or PCB-containing materials, offering resources and guidance for proper disposal and recycling.

Health Screenings - Offering free or subsidized health screenings and check-ups for residents living near the facility, ensuring early detection, and addressing potential health concerns related to environmental exposure.

Artistic Collaboration - Collaborating with local artists to create public art installations or murals that beautify the facility's surroundings while conveying important environmental messages.

Environmental Monitoring Apps/Websites - Creating websites and/or smartphone apps that allow community members to monitor and report environmental conditions in real time, fostering a sense of participation and accountability.

Environmental Scholarship Programs - Providing scholarships to local students pursuing degrees in environmental science or related fields, fostering talent within the community, and contributing to environmental research.

Appendix VIII. Checklists for the Implementation of EJ considerations in PCB Approvals

Checklist for the Implementation of EJ Considerations
in the PCB Approval Process for Commercial Storage and Disposal Facilities
(Complete as applicable)

- ☐ **Step 1. Assess approval application and get familiarized with the facility characteristics and its surroundings.**
  - ☐ Review the approval application and current PCB approval (if applicable) and identify the type of ongoing PCB activity, current approval conditions, and new request/modifications (as applicable).
  - ☐ Gather and assess information on environmental issues and existing conditions at the facility and surrounding area(s).
  - ☐ Review applicant compliance record and incident history.
  - ☐ Identify potential sources of PCB releases and other associated activities and potential pathways of exposure to workers and adjacent communities via air, water, and land.
- ☐ **Step 2. Use EJScreen as initial assessment of potential EJ concerns.**
  - ☐ Run a screening analysis using EJScreen or other available screening tools.
  - ☐ Identify the presence of any community(ies) with any historical or ongoing disproportionate and adverse human health or environmental burdens, including risks.
- ☐ **Step 3. Integrate public participation.**
  - ☐ Conduct a pre-meeting between the owner/operator and EPA to begin dialogue.
  - ☐ Develop a public engagement plan according to the specific needs of the affected community.
  - ☐ Integrate public participation by matching the audience with the appropriate activities and tools (e.g., factsheets, public notice, public meetings) as planned.
  - ☐ Reach out to state and local authorities for assistance and collaboration, as appropriate.
  - ☐ Make information available throughout the entire approval process.
- ☐ **Step 4. Conduct comprehensive Environmental Justice analysis.**
  - ☐ Validate potential EJ issues with reasonably available information.

    <u>If a potential for disproportionate impacts is identified:</u>

- □ Review and validate additional information such as the presence of cleanup sites or other facilities permitted under any EPA statute, pollutant measurements, presence of other significant emission sources, health data, etc.
- □ Enhance engagement with the owner/operator and the community.
- □ Seek updated information that might help fill in any gaps.
- □ Contemplate additional considerations as discussed in this document.
- □ Identify options for addressing recognized EJ concerns.

□ **Step 5. Draft the PCB commercial storage or disposal approval.**

- □ Include the "General TSCA PCB Approval Conditions to Implement Environmental Justice and Climate Adaptation Considerations".
- □ Identify facility-specific approval conditions that could be added or improved/enhanced to increase protection of human health and the environment (e.g., stricter operating conditions to minimize potential PCB releases).
- □ Propose voluntary actions the owner or operator could undertake to enhance protection of human health and the environment and upon agreement, reflect those in the approval.
- □ Conduct public comment period.
- □ Communicate community concerns or identified risks beyond the scope of the approval to the local government or federal agency that has jurisdiction over the areas of concern.

□ **Step 6. Issue the PCB approval and make it available to the public.**

- □ Revise the final Approval conditions in accordance with the public comments feedback.
- □ Publish the approval on EPA's website.
- □ Encourage the facility owner or operator to determine how to make the final approval and any other information available to the public.

Checklist for the Implementation of EJ Considerations
in the PCB Cleanup Approval Process
(Complete as applicable)

- ☐ **Step 1. Assess approval application and get familiarized with the facility characteristics and its surroundings.**
  - ☐ Review the cleanup approval application and/or the proposed cleanup plan from the RP under section 761.61(a) or (c).
  - ☐ Gather and assess information about the nature and extent of the PCB contamination, proposed cleanup activities, and environmental issues/conditions surrounding the area.
  - ☐ Review applicant compliance record and incident history.
  - ☐ Identify potential sources of PCB releases and/or other associated cleanup activities, and potential pathways of exposure via air, water, and land.
- ☐ **Step 2. Use EJScreen as initial assessment of potential EJ concerns.**
  - ☐ Run a screening analysis using EJScreen or other available screening tools.
  - ☐ Identify the presence of any community(ies) with any historical or ongoing disproportionate and adverse human health or environmental burdens, including risks.
- ☐ **Step 3. Integrate public participation.**
  - ☐ Conduct a pre-meeting between the owner/operator and EPA to begin dialogue.
  - ☐ Develop a public engagement plan according to the specific needs of the affected community.
  - ☐ Integrate public participation by matching the audience with the appropriate activities and tools (e.g., factsheets, public notice, public meetings) as planned.
  - ☐ Reach out to state and local authorities for assistance and collaboration, as appropriate.
  - ☐ Make information available throughout the entire approval process.
- ☐ **Step 4. Conduct comprehensive Environmental Justice analysis.**
  - ☐ Validate potential EJ issues with reasonable available information.

    <u>If a potential for disproportionate impacts is identified:</u>
  - ☐ Review and validate additional information such as the presence of other cleanup sites or facilities permitted under any EPA statue, pollutant measurements, presence of other significant emission sources, health data, etc.
  - ☐ Enhance engagement with the owner/operator and the community.
  - ☐ Seek updated information that might help fill in any gaps.

- □ Contemplate additional considerations as discussed in this document.
- □ Identify options for addressing recognized EJ concerns.

☐ **Step 5. Draft the PCB cleanup approval.**

- □ Include the "General TSCA PCB Approval Conditions to Implement Environmental Justice and Climate Adaptation Considerations".
- □ Identify site-specific approval conditions that could be added or improved/enhanced to increase protection of human health and the environment (e.g., stricter operating conditions to minimize potential PCB releases).
- □ If the proposed cleanup including removal of PCB contaminated material, work with the RP to develop approval conditions to mitigate potential migration or releases of PCBs during cleanup.
- □ If the proposed cleanups involves PCBs remaining in place, work with the RP to develop approval conditions for the long term care of the site to mitigate potential exposure or migration of PCBs after the cleanup.
- □ Propose voluntary actions the owner or operator could undertake to enhance protection of human health and the environment and upon agreement, reflect those in the approval.
- □ Consider the Greener Cleanups best management practices.
- □ Conduct public comment period.
- □ Communicate community concerns or identified risks beyond the scope of the approval to the local government or federal agency that has jurisdiction over the areas of concern.

☐ **Step 6. Issue the PCB approval and make it available to the public.**

- □ Revise the final Approval conditions in accordance with the public comments feedback.
- □ Publish the approval on EPA's website.
- □ Encourage the facility owner or operator to determine how to make the final approval and any other information available to the public.