U.S. Environmental Protection Agency Compliance Plan for OMB Memorandum M-24-10 – September 2024

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In response to *OMB Memorandum M-24-10: Advancing Governance, Innovation, and Risk Management for Agency Use of Artificial Intelligence*, the U.S. Environmental Protection Agency (EPA) is establishing organizational structures and methods to evaluate artificial intelligence (AI) projects to meet the requirements of OMB Memo M-24-10. This document serves as EPA's compliance plan required under Section 3(a)(iii) of M-24-10 and Section 104(c) of the AI in Government Act.

1. STRENGTHENING AI GOVERNANCE

General

EPA's Office of Mission Support, which houses EPA's Chief AI Officer and Responsible AI Official, is the lead in updating existing EPA AI principles, guidelines, and policies to ensure consistency with OMB Memo M-24-10. Since the release of M-24-10, OMS leadership has prioritized responsibility for taking advantage of new AI technologies.

Several efforts to improve EPA's AI principles, guidelines, and policies as well as to provide agency-wide AI tools are ongoing. The sections below describe the actions the EPA AI governance groups have taken to move forward with these initiatives. The following sections also further elaborate on efforts of management and workforce across EPA involved with exploring potential uses of AI.

1.0 AI Governance Bodies

In response to EO 14110 and OMB Memo M-24-10, EPA has established two AI governing groups and one user group to promote the safe adoption of AI.

1.1 Executive-Level AI Governance Body

The first group is the Executive-Level AI Governance Board (AI Governance Board), which is required by Section 3(a)(ii) of OMB Memorandum M 24-10. EPA previously named the EPA CIO the EPA Chief AI Officer (CAIO). Shortly after that appointment, EPA formed the AI Governance Board, chaired by the EPA Deputy Administrator and vice-chaired by the CAIO. Subsequently, EPA named the Deputy Director of the OMS Office of Digital Services and Technical Architecture (ODSTA), the EPA Chief AI Officer and vice-chair of the AI Governance Board. The AI Governance Board assumes all responsibilities outlined in OMB Memo M-24-10, including oversight and coordination of the responsible use of AI across the agency.

The AI Governance Board is made up of senior executives from the following EPA offices and component offices of the Office of Mission Support:

- Air and Radiation
- Chemical Safety and Pollution Prevention
- Chief Financial Officer
- Enforcement and Compliance Assurance
- General Counsel
- Land and Emergency Management
- Research and Development
- Water
- Office of Mission Support
    - Digital Services and Technical Architecture
    - Engagement and Program Management
    - Workforce Solutions and Inclusive Excellence
    - Information Management
    - Information Security and Privacy
    - Information Technology Operations
    - Records, Administrative Systems, and eDiscovery

The AI Governance Board also has one EPA regional representative and a representative from EPA's Science Integrity Committee.

The AI Governance Board will oversee EPA's AI activities, finalize and approve AI policies, and approve EPA's AI inventory.

The AI Governance Board anticipates generating the following products:

- AI Governance plan
- AI Strategy

- AI Use Case Inventory

The AI Governance Board also plans to support a continual inventory of use cases and align the AI strategic plan with the EPA Strategic Plan. The board will periodically review and revise all AI plans and strategies.

1.2 DGAC AI Subcommittee

The second group is a subcommittee of EPA's Data Governance Advisory Committee (DGAC), called the AI Subcommittee, which is tasked with assisting the Executive-Level AI Governance Board. Assistance will take the form of processing the AI inventory, gathering AI use cases, drafting policy to govern EPA's AI activities, and drafting the AI Strategy required by Section 4(a) of OMB Memo M-24-10. All these work products will be reviewed by the Executive AI Governance Board and will be subject to the Governance Board's approval. The AI Subcommittee will also work directly with groups and individuals performing potentially safety- or rights-impacting AI activities to ensure that their activities meet OMB Memo's minimum practices for those activities or request waivers. The AI Subcommittee is chaired by EPA's Responsible AI Official (RAIO) and Chief Data Officer (CDO)who also chairs the DGAC. All the EPA Offices on the Executive AI Governance Board are also represented on the AI Subcommittee.

1.3 AI Interested Users Group

The AI Interested Users Group is a group in the EPA Data Science Community of Practice which is a non-governing group with open membership. The goal of the AI Interested Users Group is to help facilitate the transfer of knowledge, ideas, best practices, and news relating to AI to practitioners working directly in EPA operations and science. The AI Interested Users Group strives to advance the use of responsible AI in areas that are ripe for innovation in EPA operations, programmatic activities and scientific endeavors. The AI Interested Users Group is specifically focused on communicating activities across EPA and addressing the agency's need to foster innovation with AI.

1.4 Consulting with Outside Experts

EPA participates in the following efforts to consult with external experts as appropriate and consistent with applicable law:

- Meeting with industry analysts through its relationships with industry and technical research consulting organizations
- Leveraging its wide array of technology focused contractors
- Using its research library subscriptions
- Participating in the GSA Intra-agency AI Community of Practice
- Meeting with other federal and independent agencies on AI-related issues, notably with DOI, DOE, and NASA
- Working with academic institutions on data science projects
- Participating in intra-agency councils with AI specific topics and activities such as: CIOC, CDOC, CAIOC, and RAIOC

1.2 AI Use Case Inventories & Reporting on AI Use Cases Not Subject to Inventory

EPA has been collecting AI use cases in conformance with EO 14110 and the earlier EO 13960. EPA's published AI inventory can be found on our public website: https://www.epa.gov/data/epa-artificial-intelligence-inventory.

EPA annually collects use cases through a data call process in which Information Management Officials (IMOs) and Senior Information Officials (SIOs) in each EPA office and region work with staff to collect known use cases of AI. In addition, AI use cases are collected through EPA's IT acquisition process and through EPA's scientific research tracking system to attempt to identify all areas which may contain known, ongoing, or proposed AI activities.

For prior collections, the CDO and RAIO reviewed the list of collected use cases and identified which fit the requirements for the published AI inventory.

For the 2024 collection onward, the initial list of AI use cases is presented to the AI Subcommittee to identify any use cases that do not need to be reported, for example, scientific use cases that are used for published research and are not an ongoing operational system. The AI Subcommittee will develop and maintain the inventory and ensure that it is delivered to the AI Governance Board for review, submitted to OMB and, where applicable, published on our public facing web site.

EPA will ensure that the inventory is complete by leveraging existing processes and positions within each EPA office and region:

- Leveraging existing officials, specifically the Information Management Officers (IMOs), Senior Information Officers (SIOs) and Data Officers (DOs) (component level CDOs) across the agency to ensure adequate coverage across the programmatic and regional level
- Leveraging existing processing, such as process related to the Federal Information Technology Acquisition Reform Act and application deployment processes, to capture newly proposed AI use cases and verify use cases are captured

The survey we use to collect AI use cases is available throughout the year. EPA expects to capture new AI use cases routinely, not merely once per year. The following are plans to periodically review use cases to identify use cases that meet exclusion criteria:

The AI Subcommittee will be responsible for reviewing AI use case submissions and reviewing prior submissions to ensure use cases meet exclusion criteria as defined by EOs, OMB memoranda and other supporting documentation.

The AI Subcommittee will rely on existing documentation from the use case inventory inputs, which reflect information from OMB use case inventory data collection guidance.

If the documentation does not provide enough information to make a determination on whether the use case may be excluded from the inventory, the Subcommittee will interview the use case point of contact to solicit additional information before making a determination.

2. ADVANCING RESPONSIBLE AI INNOVATION

2.1 Removing Barriers to the Responsible Use of AI

In a 2022 maturity analysis performed by EPA's Office of Mission Support, Office of Digital Services and Technical Architecture (ODSTA), EPA's AI maturity was estimated at a level of AI usage, where AI value is captured in pockets but is not a pervasive force in the agency's operations. The EPA Office of Research and Development, which uses machine learning and advanced statistical techniques extensively was an exception.

The goal for EPA is to mature the use of AI in other areas of its business lines, creating better results while being more efficient in the process. This aligns with EPA's existing continuous improvement program, which looks for processes that can be improved.

One limitation found is that AI practitioners see difficulty planning and integrating complex data architectures. Another limitation is lack of AI skilled federal workers, which is addressed later in this plan.

EPA plans to equip its staff with Generative AI (GenAI) tools before the end of calendar year 2024. EPA will ultimately provide tools designed for a specific purpose embedded in existing software, as well as general purpose AI tools that can assist with day-to-day tasks and queries.

EPA is developing the following to support use of GenAI at EPA:

1. Rules of Behavior – EPA is developing and will issue a GenAI Rules of Behavior document which contains the guidelines for approved and unapproved uses of GenAI technologies.
2. Internal GenAI Tool – EPA is creating a secure chatbot within an approved cloud environment that allows staff to safely use GenAI to make queries without the risk of information being exposed on a public site.
3. AI Intranet Chatbot – EPA is creating a RAG (Retrieval Augmented Generation) Chatbot which will develop answers to staff questions using search engine requests in the background, which is limited to information in documents found within EPA's document repositories.

Through the use case process and feedback provided by agency information officials, OMS will monitor what tools, open-source libraries, or AI resources are needed and will update project plans continually to reflect the latest priorities.

The Rules of Behavior document, mentioned above, was developed to provide internal guidance for the safe and responsible use of GenAI tools by agency personnel. Safeguards may include, but are not limited to, the following items:

- Providing protections built into GenAI tools (such as restrictions on types of prompts)
- Monitoring and review of GenAI use
- Limiting allowed use cases
- Training and best practices specifically designed to reduce risks
- Restricting the type of information that can be used with a GenAI tool

2.2 AI Talent

Consistent with OMB Memo M-24-10 Section 4c(ii) EPA designated the Office of Mission Support, Office of Human Capital Operations as the AI Talent Lead EPA has also begun working on the following items to enhance its workforce's familiarity with AI by planning for the following activities:

1. Training and development of the existing staff in the application of AI tools to enhance the quality, productivity and efficiency of EPA work and business processes
2. Leveraging AI specific competencies to augment recruitment actions across the wide range of disciplines and positions involved in the adoption, application, and integration of AI in our business systems and processes
3. Exploring available extramural resource channels that can be easily accessed and broadly applied to provide hands-on training or focus on specific use cases in the agency

This approach enables the broadest, fastest, and most agile engagement of the rapidly evolving AI landscape. In this context, EPA hiring will focus on just a few key positions to establish an enterprise-wide **AI Digital Services Consulting Team**. This team will lead extramural resources in the development and acquisition of applied AI workforce training alongside our **Chief Learning Officer**. The AI Digital Services Consulting Team will also provide technical consulting services for AI integration for EPA use cases. We anticipate advertising two positions in FY 24 and two additional in FY 25.

Additionally, the agency has mandatory IT training in cybersecurity with optional AI topics. EPA also has procurements with several IT development and support vendors that offer a variety of hands-on AI training with case-based solutions for research and other business areas. EPA staff can also participate in an agency-wide Developer's Guild and a Data Science Community of Practice (CoP). The Guild and CoP provide online training and application demonstrations, and host webinars on various relevant topics including AI.

2.3 AI and Collaboration Sharing

EPA has a large open-source presence, with source code publicly posted on EPA.gov as well as https://github.com/usepa and a registry of open-source code on code.gov. The EPA GitHub site is one of the more popular federal GitHub repositories.

In terms of AI code, the AI Subcommittee, as part of its responsibility for the inventorying process, will help guide EPA developers of AI models towards sharing code, models, and the relevant data when appropriate, consistent with Section 4(d) of OMB Memo M-24-10. EPA already has a robust culture of code sharing so we do not expect difficulty in ensuring any new AI specific code is made available when possible.

2.4 Harmonization of Artificial Intelligence Requirements

The AI Subcommittee will be responsible for ensuring consistency across all agency AI related guidance. This will include developing best practices for EPA staff to use AI while managing risk from AI. All guidance will be reviewed, finalized and issued by the AI Governance Board.

Additionally, the AI Subcommittee will work closely with AI practitioners and users who develop any safety- or rights-impacting AI systems to ensure those individuals are following all relevant EPA governance policies. The goal is to ensure all the relevant minimum risk management practices required by OMB Memo M-24-10 are applied.

The AI Interested Users Group, which consists of AI practitioners or those who would like to become practitioners, is largely focused on sharing best practices, resources, lessoned learned, and news regarding AI innovation. The agency continues to explore and use a wide array of communications to help inform AI practitioners of the latest governance and risk management best practices from across the agency and Government-wide councils and workgroups.

3. MANAGING RISKS FROM THE USE OF ARTIFICIAL INTELLIGENCE

3.1 Determining Which Artificial Intelligence Is Presumed to Be Safety/Rights-Impacting

Through the AI use case inventorying process described above, EPA will collect information that will allow the AI Subcommittee to identify use cases that could potentially be rights- or safety-impacting. The AI Governance Board is ultimately responsible for deciding which use cases meet the definitions of rights- or safety-impacting AI systems, calling on legal, technical, and policy perspectives to understand each use case. We use the assessment questions developed as guidance for the 2022 use case inventory collection. The AI Subcommittee will add additional questions or guidance to identify safety-impacting and rights-impacting AI use cases as necessary.

The AI Subcommittee is responsible for reviewing the AI inventory responses to determine if any use cases meet the definitions of rights-impacting or safety-impacting AI use cases. The group will recommend any actions required to ensure the safety and rights impacting use case(s) comply with the minimum practices outlined in EO 14110. The AI Governance Board will be responsible for ensuring compliance with the recommendations for minimum practices.

3.2 Implementation of Risk Management Practices and Termination of Non-Compliant AI

To date, EPA has not currently created additional criteria, apart from what guidance we received from the executive orders, OMB guidance or other related guidance, for when a use case is presumed to be Safety and Rights impacting. EPA has not developed its own criteria for waiving any of the minimum risk management practices. EPA plans to develop a waiver process with ample time before the December 1 deadline to request any waivers if required.

If a rights-impacting or safety-impacting AI use case is determined to be non-compliant and cannot comply with minimum practices outlined in EO 14110 a recommendation will be made to the AI Governance Board and EPA CAIO to not allow deployment of the use case to the public or to agency staff, with the exception of those developing the use case, until such a time that the use case can achieve compliance.

The AI Subcommittee will request and evaluate plans to bring non-compliant AI use cases into compliance. If the AI Subcommittee does not approve of any plan to achieve compliance a recommendation will be made to the AI Governance Board and EPA CIO to immediately terminate the noncompliant AI use case. A non-compliant AI use case will only be made available to anyone internal or external once it reaches compliance with the minimum practices.

3.3 Minimum Risk Management Practices

EPA has established the AI Subcommittee to mitigate risk regarding the implementation of AI across the agency by utilizing the AI use case review process.

The AI Subcommittee will be responsible for creating and managing the EPA AI use case inventory and reviewing all AI use cases. Additionally, the AI Subcommittee will be responsible for overseeing the waiver process for the minimum risk management practices, with the CAIO having the final sign off on all such waivers. The AI Subcommittee is also responsible for assisting senior management and project management teams in documenting and validating implementation of the minimum risk management practices outlined in Section 5(c) of OMB Memo M-24-10 for their offices. The AI Subcommittee will also guidance to help such teams ensure that they are implementing the minimum risk management practices required for any safety- or rights-impacting AI systems:

- The AI Subcommittee assigns responsibilities for implementation and oversight, depending on the AI project, as appropriate.
- The security processes in place today ensure that that non-authorized systems are not shared publicly, with the AI inventorying and certification of rights- and safety-impacting use case analysis having been made part of that security review and signoff.
- If any safety-or rights-impacting AI system is determined to be out of compliance with the required minimum risk management practices, the AI system will be terminated or taken offline in line with EPA's security policies, with the CAIO having the authority for terminating any non-compliant system.

4. CONCLUSION

EPA is dedicated to ensuring that all AI applications are compliant with EO 14110 and OMB Memo M-24-10, and remains dedicated to collaborating with the White House Office of Science and Technology Policy, the Office of Management and Budget, and the broader government AI community. EPA is also committed to maintaining our compliance plans as directed when M-24-10 is updated or replaced.