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Registered Agents, Inc.
Registered Agents for C6-Zero Iowa, LLC
315 E. 5th Street, Suite 202
Waterloo, Iowa 50703

Timothy Dore, General Counsel
C6-Zero Iowa LLC
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RE: C6-Zero Iowa, LLC, Marengo, Iowa
CAA Section 112(r)(1) General Duty Clause and EPCRA Reporting Requirements

Dear C6-Zero Iowa, LLC:

This letter follows EPA's investigation into the events relating to the catastrophic fire and explosion that occurred on December 8 and 9, 2022 (Incident) at the C6-Zero Iowa LLC (C6-Zero) facility located at 810 East South Street in Marengo, Iowa (Facility). The purpose of this letter is to summarize EPA's numerous findings of serious noncompliance resulting from the investigation and inform C6-Zero of its obligations regarding the Facility and company operations.

Background

C6-Zero is a company founded by Mr. Howard Brand III, and is one of several entities, located in several states, created by Mr. Brand purportedly to recycle asphalt shingles. These operations repeatedly raised significant public and regulatory concerns in the communities where they were located.

C6-Zero began operations at the Marengo Facility on August 1, 2022, only four months before the Incident. The Incident resulted in an evacuation order that affected C6-Zero's employees and the citizens of Marengo, and injured C6-Zero's employees, with at least one employee severely injured and hospitalized. The Incident also resulted in the release of approximately 448,105 pounds of a flammable substance identified by C6-Zero as Diesel Fuel Blending Stock, which contained five hazardous substances.

Due to the severity of the fire and lack of information provided by C6-Zero to local authorities about the extremely hazardous chemicals at the Facility, the Incident required an extensive and costly response. Fifteen fire departments and two hazmat teams extinguished the fire after eighteen hours. Unaware of the amount of oil present, fire fighters used large quantities of water to fight the fire. This resulted in a large flood retention pond near the Iowa River becoming contaminated with per- and polyfluoroalkyl substances (PFAS), posing a threat to drinking water sources down river, including sources that serve the population of Iowa City. PFAS can cause cancer and other health issues, and there is no safe level of PFAS in drinking water. In addition, the use of excess water resulted in significant damage to responders' bunker gear from the splashing of flammable chemicals onto equipment.

The Iowa Department of Natural Resources (Iowa DNR) led response and initial clean-up efforts. However, lack of cooperation from C6-Zero resulted in Iowa DNR referring remaining clean-up actions to EPA, including excavation and disposal of waste generated after the Incident. EPA issued an Order to C6-Zero for the required response actions and determined that clean-up was complete in July 2024. The total clean-up costs incurred by Iowa DNR and EPA for the Incident are over \$1 million. The Iowa fire departments also sustained approximately \$640,000 in damages to firefighting equipment.

Findings of Noncompliance

To investigate the Incident, EPA required the submission of information from C6-Zero on December 20, 2022, and March 9, 2023, regarding the company's compliance with several environmental laws. On April 10, 2023, EPA issued a Notice of Violation to C6-Zero for alleged violations of the Emergency Planning and Community Right-To-Know Act (EPCRA). EPA also conducted an inspection of the Facility on April 27, 2023, to evaluate C6-Zero's compliance with Section 112(r)(1) of the Clean Air Act (CAA), commonly known as the General Duty Clause.

Based on review of the information gathered, EPA finds that C6-Zero failed to comply with the following requirements:

- Failure to design and maintain a safe facility taking such steps as are necessary to prevent releases, in violation of Section 112(r)(1) of the CAA. There are many instances where C6-Zero's actions or inaction created unsafe conditions at the Facility, including:
 - C6-Zero did not develop and implement a hot work program for operations involving burning, welding, or similar operations that can start fires or explosions. Hot work programs are intended to ensure that individuals are aware of the hazards associated with activities involving heat sources and that control measures are implemented to help mitigate those hazards. Absence of a hot work program increases the risk of fires and explosions. These programs are a standard industry practice identified by the U.S. Chemical Safety and Hazard Investigation Board.¹

¹ See [Seven Key Lessons to Prevent Worker Deaths During Hot Work In and Around Tanks](#).

- C6-Zero did not follow the National Electric Code when wiring the Facility for operations. EPA inspectors documented a significant amount of electrical equipment, including panel boards, circuit breakers, electric motors, knockout boxes, and fixed and portable lighting fixtures, that were not designed to code and were unsafe to be located in areas with flammable chemicals, as well as multiple instances of exposed wiring. Unsuitable electrical equipment and exposed wires can be an ignition source in areas where fires or explosion hazards exist, and ignitable chemicals increase the risk of fire. Ensuring the safe installation of electrical wiring and equipment consistent with the National Electric Code is an industry standard identified by the National Fire Protection Association (NFPA).
- C6-Zero did not have adequate standard operating procedures for the Facility. C6-Zero's standard operating procedures did not cover all operating areas nor all procedure elements for equipment such as clear instructions, operation phases including normal startup, normal shutdown, temporary operations and maintenance, safe operating limits, consequences of deviations from procedures, emergency actions, and safety and health considerations. In fact, prior to the Incident, C6-Zero instructed a contractor to repair a blocked conveyor belt in between two trommels while the machinery was in operation. It is possible that this attempted repair of energized equipment served as the ignition source for the explosion and fire. Maintenance operating procedures should emphasize the importance of safe work practices, like "Lockout/Tagout" procedures to prevent performing work on energized equipment, as there is a well-known risk for injury when working on this type of equipment. Standard operating procedures reduce accidents, promote safety, and minimize the consequences of releases, and are an industry standard identified by the Center for Chemical Process Safety.
- C6-Zero did not properly post hazard warning signs. In particular, C6-Zero did not place NFPA diamonds on chemical storage tanks and entrances to the Facility. NFPA diamonds describe the relative toxicity, flammability, instability, and specific hazards of a chemical, and allow employees and first responders to quickly identify and assess high level hazards of a chemical. Missing hazard labels and signs increase the chance of inadvertent exposure to flammable releases and could frustrate efforts to react quickly and properly to a subsequent fire. Placement of NFPA diamonds on chemical storage tanks and facility entrances is an industry standard identified by the NFPA.
- Failure to minimize the consequences of the Incident by not planning for emergencies, in violation of Section 112(r)(1) of the CAA. C6-Zero did not coordinate and engage in emergency planning with local responders. In addition, C6-Zero's emergency action plan (EAP) for the Facility did not identify evacuation routes or delegate a person to receive information on individuals' evacuation and injury status. This absence of coordination and planning impacted response efforts and exacerbated the consequences of the Incident. Lack of emergency planning and coordination create a risk of harm to employees and emergency responders who may be unaware of response protocol and hazards of a facility. This may lead to longer fires and

larger releases of chemicals, as well as increased risks to employees, emergency responders, and the community. Coordinating with local response authorities and development and implementation of an EAP and are industry standards identified by the NFPA.

- Failure to identify hazards which may result from releases using appropriate hazard assessment techniques, in violation of Section 112(r)(1) of the CAA. C6-Zero did not identify all hazards at the Facility, failing to consider any of the site-specific hazards including those related to equipment, facility siting, natural hazards, or response capabilities of local emergency services. In addition, C6-Zero failed to adequately address the hazards that were identified in the hazard review and did not implement all recommendations generated in the hazard review, including following the National Electric Code. Failing to identify and adequately address all hazards of a process limits a company's ability to protect workers, public health, and the environment and to plan for emergencies such as the Incident. Performing a complete hazard assessment and addressing all hazards of a process involving ignitable chemicals are industry standards identified by the NFPA.
- Failure to submit Safety Data Sheets or a list of hazardous chemicals to the Local Emergency Planning Committee (LEPC), State Emergency Response Commission (SERC), and fire department with jurisdiction, in violation of Section 311 of EPCRA and 40 C.F.R. Part 370, Subpart C. Providing information about the chemicals on site is critical to enable local response authorities to prepare and respond appropriately to accidental releases, such as the Incident.
- Failure to submit a follow-up emergency notice to the community emergency coordinator for the LEPC and to the SERC after the Incident, in violation of Section 304(c) of EPCRA and 40 C.F.R. § 355.40(b). Providing local response officials all required information, as soon as possible, is necessary so they can take appropriate precautions during cleanup and provides important information about the release to the community, including anyone who may have been exposed to hazardous chemicals during the incident. Based on available information, C6-Zero has not yet submitted a follow-up emergency notice to the appropriate authorities.

Actions Against C6-Zero for the Incident

On December 20, 2023, EPA issued a Notice of Potential Violation and Opportunity to Confer to C6-Zero for the EPCRA findings discussed above. The Notice provided the company the opportunity to negotiate a resolution of the alleged EPCRA violations and share any information that EPA should consider with respect to the alleged violations. In response, C6-Zero's representative stated that the company planned to dissolve after the EPA clean-up was complete and that it did not have an ability to pay any penalty. C6-Zero provided some information in an attempt to substantiate its inability to pay claim, but did not submit federal income tax returns or respond to EPA's request for updated financial information.

EPA is aware of several other actions taken against C6-Zero that involve consequential fines and penalties. The company paid \$1.4 million to Iowa DNR to cover cleanup costs related to the

PFAS-contaminated retention pond and damaged firefighting equipment. C6-Zero also paid the Iowa Department of Inspections, Appeals and Licensing a fine and interest of \$105,965 after C6-Zero failed to pay the penalty for worker safety violations to Iowa OSHA by the determined date. C6-Zero paid Heartland Co-op for \$134,000 worth of diesel fuel after Heartland filed a lawsuit for the failure to pay. C6-Zero currently faces lawsuits filed by former employees and investors for damages and injuries sustained as a result of the Incident.

Obligations of C6-Zero

Although response actions are complete, the Facility sustained significant damage from the Incident and the alleged CAA violations described above have not been addressed. In addition, it is EPA's understanding that C6-Zero has equipment and chemicals stored at the Marengo Facility and plans to move these materials to an undisclosed location. C6-Zero continues to store chemicals at the Facility without identifying and addressing hazards and coordinating with and providing information to local responders.

Although C6-Zero informed EPA that it plans to dissolve the company, Mr. Brand's history of creating similar companies in different states and other available information indicate the contrary. As examples, C6-Zero listed a company office located in Idaho as the generator for the transport logs in the final report to EPA under the clean-up Order, and, according to publicly available information, C6-Zero continues to participate in local charity activities in Idaho.

Given the above, EPA has serious compliance concerns about C6-Zero or any related entity restarting operations at the Facility or any other location. Be advised that:

- For the chemicals currently stored at the Facility, comply with all applicable General Duty Clause requirements, including coordinating with and providing information to first responders regarding emergency action plans, performing a hazard assessment, and ensuring that the extremely hazardous chemicals are stored consistent with relevant industry standards, e.g., placement of NFPA diamonds on storage tanks, and complete annual EPCRA chemical inventory reporting requirements. C6-Zero must notify EPA at R7-Enforcement-Compliance-Assurance@epa.gov after these actions have been completed and provide documentation to confirm completion.
- Prior to restarting any operations at the Facility, C6-Zero or any related entity must notify EPA at R7-Enforcement-Compliance-Assurance@epa.gov and address all EPCRA and CAA 112(r)(1) General Duty Clause findings of noncompliance described above. This includes rewiring the building to be compliant with the National Electric Code before electricity is reconnected and completing and addressing any findings from a new hazard assessment that meets the standards in NFPA 30. Confirmation that all findings of noncompliance have been corrected must be provided to EPA prior to restarting operations.
- If C6-Zero or any related entity begins operating again in the United States or Territories of the United States, EPA must be notified at R7-Enforcement-Compliance-Assurance@epa.gov. Any

new operations must be in compliance with all applicable environmental laws. This includes providing information about hazardous chemicals to appropriate authorities, planning for emergencies, and understanding and addressing hazards at the facility posed by use of hazardous chemicals.

C6-Zero violated many legal requirements essential for the safe handling of the large quantities of extremely hazardous chemicals used at the Facility. The tragic chemical fire and explosion at the Facility in December 2022 endangered lives and harmed the environment. There are serious civil and criminal actions that may be taken for the failure to comply with the environmental laws described in this letter. We appreciate your attention to this important matter.

Sincerely,

David Cozad
Director
Enforcement and Compliance Assurance Division

cc: Jason Marcel, *Jason.Marcel@dnr.iowa.gov*