



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

JUL 29 2015

Mr. Angelo Mitlo  
Max Torque Industrial  
10,000 Manchester Street  
Suite H  
Houston, Texas 77012

Dear Mr. Mitlo:

Attached is my response to your February 28, 2014 follow-up request to us for additional information on aircraft crashes. Your follow up request was in response to our January 6, 2014 letter to you in which we provided answers to your questions on how the hazardous waste regulations under the Resource Conservation and Recovery Act (RCRA) apply to wastes associated with a variety of aircraft crash scenarios.

Many of your follow-up questions revolve around the issue of whether Max Torque is a generator of a hazardous waste at the crash site or subsequently at a storage facility where crash remains may be taken for subsequent investigations by the National Transportation Safety Board (NTSB). A generator is defined in the RCRA regulations as "any person by site whose act or process produces hazardous waste identified or listed in part 261 of this chapter, or whose act first causes a hazardous waste to become subject to regulation." To a great extent, the answer to your follow-up questions involves what contractual roles and responsibilities you have been assigned or have agreed to with the airline owner/operator, insurance company or other entity responsible for removing and managing crash remains. As part of our response, I refer you to a letter EPA prepared in March 1996 responding to a company that entered into contractual arrangements with another company to perform certain functions and responsibilities for the other entity. (See letter at end of attachment.) That response discusses EPA's co-generator policy which I believe may be very applicable to your circumstances. Therefore, many of my responses to your follow-up questions are structured around EPA's co-generator policy, where applicable.

In addition, it is important to remember that a state's hazardous waste regulations may be more stringent and/or broader in scope than the federal program. You should, therefore, consult applicable state regulations. Finally, a number of situations you describe may also involve Clean Air Act, Clean Water Act and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulations. This letter does not address the applicability of those laws or regulations.

If you should have any further questions, please contact Jim O'Leary at (703)308-8827 or [oleary.jim@epa.gov](mailto:oleary.jim@epa.gov).

Sincerely yours,

A handwritten signature in black ink, appearing to read "Betsy Devlin". The signature is fluid and cursive, with a large initial "B" and "D".

Betsy Devlin, Director  
Materials Recovery and Waste Management Division

## Attachment

**Question 1.** As a company responding to an aircraft crash for disposal of the aircraft, will we (or any of our subcontractors) require an EPA generator number?

**Response:** The answer to this question is predicated on where and when disposal of the aircraft will occur, and what the contractual arrangements are that you may have with the aircraft owner/operator, or with removal and cleanup authorities at the crash site. I refer you to our response to Question 1 of our January 6, 2014 letter to you where we discuss the role of NTSB in crash proceedings.

“According to NTSB guidance the NTSB safety officer will, in conjunction with the local incident commander, identify crash site hazards and arrange for removal or mitigation of hazards by emergency responders before an investigation team is allowed access to the site. This includes defueling the plane, removing batteries and any hazardous materials known to be cargo, and mitigating hazards posed by chemical oxygen generators, among others. A determination as to whether those materials are hazardous waste will need to be made when these materials are removed for disposal. The federal, state and local emergency responders at the site (and any contractors assisting them) should be familiar with this part of the process and should also have the requisite licenses and RCRA Identification (ID) numbers to remove any hazardous waste for subsequent disposition.”

Therefore, should Max Torque enter into a contractual arrangement with another entity, such as an airline owner or operator, or even an emergency response organization, for the disposal of any materials at the crash, such as crash or soil debris, etc., and if a determination is made that those materials are hazardous wastes, then Max Torque would need to obtain a RCRA ID from the authorized state or EPA regional office (if the state is not authorized) where the crash occurred prior to shipping any hazardous waste from the crash site to a RCRA permitted treatment, storage and disposal facility (TSDF). Both Max Torque and the other contractual entity involved in the crash would be co-generators of hazardous waste, and the responsibility for the proper disposition of those materials would be resolved with what was agreed to in the contract.

Assuming other aircraft remains or debris from the crash site are shipped to the storage facility as part of the NTSB investigation, then that material would not be considered a waste at that time and there would be no RCRA requirements for the debris when it is shipped. This is because (as we explained in our January 6, 2014 letter) this material is generally not a waste while NTSB conducts its investigation. The Department of Transportation (DOT) would have regulatory authority over the transportation of these items. If Max Torque were to be assigned the contractual responsibility to transport those crash site materials to the storage facility for subsequent investigation by NTSB, then Max Torque would need to comply with any applicable DOT regulations as well as state and local requirements, when transporting the aircraft remains.

If Max Torque is responsible for the disposal of any materials at the storage facility once the NTSB completes its investigation, and after all legal proceedings have been resolved with insurance companies, etc., then Max Torque would need to go through the process of making a hazardous waste determination for any part of the aircraft remains that will be subsequently recycled or discarded off-site, and if determined to be a hazardous waste, determine the most appropriate treatment or performance technologies that will enable any hazardous waste generated to meet land disposal restriction requirements at 40 CFR part 268 before the material is placed in a landfill. Similarly, Max Torque would be responsible for obtaining a generator RCRA ID prior to shipping the hazardous waste off-site to a RCRA permitted TSD facility if it did not already have one for that storage facility. If Max Torque were to use the same storage facility for any subsequent crash investigation(s), then it could use the same RCRA ID.

As stated in our January 6, 2014 letter to you:

“Until the NTSB completes its investigation and report, and all legal proceedings are complete, the NTSB has jurisdiction over the storage site. Because a waste determination has not been made for the materials at the storage site, no waste is generated. Only when NTSB and all legal proceedings are complete can the waste determination process be initiated by the insurance underwriter, or its salvage company, since the storage facility is now the point of generation. If a hazardous waste is determined to have been generated, then a RCRA ID would be required by the insurance underwriter or its salvage company (such as Max Torque) since they are now a hazardous waste generator, unless the quantity generated in a calendar month (less than 100 kilograms or 220 pounds, or a total of 1 kilogram of acute hazardous waste or more) is so small that a RCRA ID is not required. Under RCRA, neither a hazardous waste transporter nor RCRA permitted handling facility may accept any hazardous wastes without the generator having a RCRA ID.”

**Question 2.** Following on the issue raised in number 1, do we become a “generator” in any capacity in the fact scenario raised?

**Response:** Yes, if Max Torque, as a co-generator or agent for the aircraft owner/operator, takes on the responsibilities of managing the disposal of any solid wastes that may be hazardous wastes either at the crash site or at the storage facility where NTSB conducts its subsequent investigation.

**Question 3.** [EPA’s response to Question 2 in our January 6, 2014 letter] states that if the remains are shipped to the storage facility as part of the NTSB investigation, the material would not be considered waste. If there is a wreck or accident during shipping, would this be considered a “release”?

**Response:** When shipping any remains to the storage facility, Max Torque or the transporter would need to comply with all applicable DOT regulations for the transportation of hazardous materials. If hazardous materials are released during transportation, then yes this would be considered a release; however, I would refer you to the DOT regulations regarding any

definitions of release, including what is required in the event of a release. Other statutes/regulations may apply as well. For instance, should an accident occur during transportation, the transporter would need to determine if any hazardous substances released into the environment exceeded any of the reportable quantity (RQ) thresholds identified in Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and report the release immediately to the National Response Center at 800-424-8802. Please refer to the following website for additional information on RQs and release notification requirements: [http://www2.epa.gov/sites/production/files/2013-08/documents/release\\_notification\\_qa.pdf](http://www2.epa.gov/sites/production/files/2013-08/documents/release_notification_qa.pdf). Also note other environmental authorities, such as the Clean Water Act (CWA), may apply depending upon the nature and extent of the incident.

**Question 4.** Assuming we respond to a crash site and we de-contaminate the wreckage of fuels, biohazards, etc. with a water solution, would we require an EPA/RCRA license, permit or qualification of any kind? If so what are they?

**Response:** We recommend you check with your authorized state or EPA Region to determine if an EPA/RCRA permit or special qualification of any kind is required. Certain types of treatment are allowed if conducted by a generator in tanks and containers. De-contamination of wreckage, etc. with a water solution may be allowed depending on how it is conducted.

**Question 5.** Assuming we profiled or tested the contaminated water solution and it contains excessive tph (total petroleum hydrocarbons) and chromium amounts, whose generator number should be associated with the manifest when being disposed at the Transport Storage and Disposal Facility?

**Response:** Assuming the contaminated water is a RCRA hazardous waste, the answer to your question depends on who is responsible for the removal of the material. If you enter into a contractual arrangement with the aircraft owner, operator or insurance company to act as an agent on their behalf to remove the materials, we would expect Max Torque to obtain a RCRA ID and use it in manifesting/shipping any hazardous wastes to a RCRA TSDF.

**Question 6:** If we wanted to become a storage yard for catastrophic loss event aircraft which would supply the NTSB with investigation space and store aircraft during the litigation process, would we need to apply for any EPA/RCRA licenses, permits, etc.? These aircraft are subject to possible environmental releases of Hexavalent Chrome, TPH, BTEX, Tritium, etc. If so what licenses/permits would we need to apply for?

**Response:** This question is not easy to answer. As we stated in our January 6, 2014 response, only when the NTSB has completed its investigation and all legal proceedings have been completed, can the process begin in determining whether any materials being discarded are hazardous wastes. In the meantime, while NTSB's investigation is occurring, should there be any hazardous releases at the storage facility of hexavalent chrome, etc. then the entity responsible at the storage facility for managing crash materials would be responsible for managing any hazardous releases, including determining if these materials were hazardous wastes. Once a determination was made that a hazardous waste was generated, then the responsible entity would

be required to estimate the quantity of **all** hazardous waste generated during the calendar month to determine its regulatory category and hence what hazardous waste generator regulations to comply with.

If 1,000 kilograms (or 2,200 pounds) or more of hazardous waste was generated in the calendar month, then the responsible entity would have up to 90 days to accumulate the waste prior to sending it off-site to a RCRA permitted TSDF without having to obtain a RCRA storage permit (e.g. the entity would be a large quantity generator (LQG)) provided it meets certain conditions for exemption. If more than 100 kilograms but less than 1,000 kilograms of hazardous waste was generated in the calendar month, then the responsible entity would have up to 180 days to accumulate the waste prior before sending it off-site to a RCRA permitted TSDF without having to obtain a RCRA storage permit (e.g., the entity would be a small quantity generator)) provided it meets certain conditions for exemption. Finally, if up to 100 kilograms of hazardous waste was generated during a calendar month, then the responsible party could continue to accumulate up to 1,000 kilograms at any one time before having to comply with the more stringent requirements of either a small or large quantity generator. There also are requirements for generators generating acute hazardous wastes. We recommend you visit our website at <http://www.epa.gov/epawaste/hazard/downloads/tool2012.pdf> to better understand the requirements of each hazardous waste generator category.

Therefore, based on our understanding of the facts, unless the responsible entity at the storage yard exceeded the time and accumulation quantities for a particular generator category or did not comply with all specified management conditions associated with that generator category, only a RCRA ID would be required. But we recommend you contact the state where the storage facility would be located to confirm response.

Obtaining a RCRA storage or treatment permit is a time consuming and expensive process. I would recommend you contact your state authorities to determine if they are authorized to operate the RCRA program in lieu of EPA's RCRA program and to ensure whether a RCRA permit was needed for the unique situation described here. Again, State regulations can be more stringent or broader in scope than the federal program and obtaining approval by the state is critical to anything you intend to do.

**Question 7.** We assume that as a storage yard for catastrophic loss event aircraft that does not process or scrap any of the aircraft, all aircraft scrap will be shipped away for further processing. In that scenario, will we be subject to EPA regulation? If so, what documentation, monitoring, sampling, employee screenings, and other regulatory requirements will we have to meet?

**Response:** Scrap metal legitimately recycled is exempt from RCRA regulations. There is no need to obtain a RCRA ID but we would recommend you maintain business records supporting where the scrap metals went for recycling. As for materials being discarded, you will need a RCRA ID before you can transport any hazardous waste off-site to a RCRA permitted TSDF. Again, state regulations may be more stringent than the federal program. Therefore, we strongly recommend you should consult with your state, to ensure you will be in compliance with their regulations.

**Question 8.** When an aircraft encounters a loss event (accident) who is the generator, the airline (operator) or the owner of the aircraft? It is possible in this scenario that the owner and the operator are two different parties.

**Response:** The determination of who is the generator is site specific and fact specific. Either the operator, or the owner, or both could be the generator. As EPA has previously stated in discussing co-generators, where more than one party is defined as generator, all are responsible, but EPA is satisfied if only one party performs the duties on behalf of all parties. (See 45 FR 72026, October 30, 1980).

**Question 9.** If a small personal aircraft ("Small Aircraft") crashes, most likely will not be subject to an NTSB investigation and if it is a total loss and its fuselage is coated with Hexavalent Chrome and has ballistic parachutes, fuel, magnetos, etc. is it considered solid/hazardous waste?

**Response:** Most likely unless the fuselage and other materials can be classified as scrap metal which is exempt from RCRA when legitimately recycled. Otherwise, a hazardous waste determination will have to be made of all materials destined for disposal with subsequent actions based on that determination.

**Question 10.** Should we handle Smaller Aircraft for disposal purposes in the same manner as the larger jetliners?

**Response:** Yes. Based on our understanding of the situation, the process would be the same but NTSB would not be involved (but most likely insurance companies and possibly other parties would be involved). Whether at the crash site, or if removed to a storage facility for subsequent evaluation, only when all legal issues had been resolved would the process start with Max Torque again making solid and hazardous waste determinations and subsequent waste management decisions.

**Question 11.** What qualifications, licenses, permits, etc. do we and/or contractors assisting first responders on airline/aircraft crashes require according to the EPA/RCRA (HAZWOPER 40, EPA ID, RCRA PERMIT)?

**Response:** The answer really depends upon what role(s) you play at the crash site and at the storage yard where NTSB may conduct its subsequent investigation. If hazardous wastes are involved, a RCRA ID will be required. You will need to check with OSHA regarding any training they require. Depending upon what generator category you become once the waste determination process starts, you also may need to comply with RCRA personnel training requirements and emergency response requirements that are required for hazardous waste generators.

**Question 12.** Assuming we are environmental consultants, what qualifications should we require our contractors to have (HAZWOPER40, Chemists, Hygienists, etc.) to meet EPA regulatory requirements for the scenarios presented herein?

**Response:** Most likely all of the above, but also individuals who are experts in aircraft components and the chemical composition of the material to help make accurate solid and hazardous waste determinations.

**Question 13.** Our understanding is that if an aircraft including its fuselage is determined to be RCRA hazardous waste due to detection of hexavalent chromium, tritium, oxygen generators, fuels, hydraulic fluids, etc. and is being stored in a storage yard, but is also under NTSB investigation, it is not considered hazardous waste. Assuming that, should we take precautions to prevent an environmental release?

**Response:** As we stated in response to Question 6 above, “while NTSB’s investigation is occurring, should there be any hazardous releases at the storage facility of hexavalent chrome, etc. then the entity responsible at the storage facility for managing crash materials would be responsible for managing any hazardous releases, including determining if these materials were hazardous wastes.”

**Question 14.** If an aircraft’s fuselage is determined to be RCRA hazardous waste due to detection of hexavalent chromium, tritium, oxygen generators, fuels, hydraulic fluids, etc. and is not under NTSB investigation and otherwise has no intended purpose by any party, owner, bank, court, litigation, family members, assuming this material will be discarded, what precautions should we take to prevent an environmental release?

**Response:** You should take any and all necessary precautions to prevent environmental releases, regardless of the status of the material under RCRA.

**Question 15.** If an environmental release of hazardous materials and/or waste from an aircraft occurs during either aircraft storage and/or discarding who is liable for the release and what are the liabilities for same according to EPA regulations?

**Response:** Determining who may be liable for environmental releases from storage or disposal depends on the specific facts, as well as which particular law or set of laws are applicable (e.g., RCRA, CERCLA, CWA, etc.). Generally, the owner/operator of the facility would be potentially liable. There is not enough information to make a more specific legal analysis.

**Question 16.** If a “Small Aircraft” crashes and the pilot flying the plane is the owner, and the owner dies in the crash, who becomes the generator? Next of kin, cleanup contractors, insurance carrier? (this is a scenario that occurs quite frequently)

**Response:** 40 CFR 260.10 defines a generator as, “any person, by site, whose act or process produces hazardous waste identified or listed in part 261 of this chapter or whose act first causes a hazardous waste to become subject to regulation.” Based on previous questions you raised, only after the crash investigation was completed would the decision be made to dispose of the plane and to make a subsequent hazardous waste determination. At that point, the generator under RCRA regulations would depend on who is making the decision to dispose of the plane.

PPC 9451.1996(01)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

March 12, 1996

Mr. Steven T. Warshaw  
President  
Olin Microelectronic Materials Division  
Olin Corporation  
501 Merritt 7, P.O. Box 4500  
Norwalk, Connecticut 06856-4500

Dear Mr. Warshaw:

Thank you for your letter of February 21, 1996 regarding states that Olin is proposing to enter into contractual arrangements with certain of its customers who use Olin's specialty chemicals to fabricate computer chips, integrated circuits, and other electrical devices. These contractual relationships would be entered into as a part of Olin's Product Stewardship Program.

Your letter explains that under the contracts, Olin would retain legal ownership of the specialty chemicals supplied to customers; would maintain a physical presence at the customer's site; and would remove, accumulate, and manage any chemicals that exit the customer's process units. Specifically, your letter asserts that Olin would retain ownership of any hazardous wastes that result from the use of its chemicals, and that Olin would assume responsibility for the proper management of these wastes under Subtitle C of the Resource Conservation and Recovery Act (RCRA).

According to your letter, Olin's purpose in writing to EPA is to obtain confirmation that Olin would be considered a generator of the hazardous wastes which result from the joint activities of Olin and its customers, such that Olin's compliance with the hazardous waste generator requirements (codified in Part 262 of 40 CFR) would also fulfill its customers' obligations under these regulations. Olin also seeks confirmation that EPA would, in the event a joint liability results from these relationships,

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look first to Olin for performance of the generator obligations.

I am pleased to provide you with the requested confirmation. First, it is correct that under the facts related in your letter, Olin would clearly be a generator of any hazardous wastes which exit from the process units of your customers. Also under these facts, EPA would look first to Olin for compliance with the generator requirements set forth in Part 262 of 40 CFR. This would be the case regardless of whether Olin or Olin's customer actually operates the process unit. This follows from EPA's "co-generator policy," which was first announced in the October 30, 1980, Federal Register notice which you cite in your letter, and discussed in numerous regulations and interpretive letters since that date.

In the case where Olin operates the process unit, the status of Olin as generator of the waste is straightforward. In this instance, Olin would be the owner of the materials being processed, the operator of the process unit, and the person removing the waste from the process unit. All of these roles are acts which contribute to the production of a hazardous waste, within the meaning of the generator definition at 40 CFR 260.10. Under this scenario, Olin would appear to be the more significant contributor to the generation of the hazardous waste. The customer would still be a jointly liable co-generator, though, because it owns the process unit and the product being fabricated with Olin's chemicals. As explained in the co-generator notice of October 30, 1980, EPA would typically look first to the operator of the process unit (Olin) to fulfill the generator duties. Thus, Olin's compliance with the generator requirements would discharge Olin's and its customers' obligations under the regulations.

In the second scenario, the facts are altered to the extent that your customer, rather than Olin personnel, would operate the process unit generating the waste. Olin and the customer would again be co-generators, since each is performing acts which produces a hazardous waste. The customer is a generator because it owns the product being fabricated, and because it owns and is operating the process unit. Olin remains a co-generator because of its ownership of the chemical raw materials, and because it would be the person removing the waste from the process unit and subjecting it to RCRA regulation. See 45 FR 72024 at 72026.

Under this second scenario, Olin's contribution to the generation of the waste is not as predominant as in the above first scenario. Further, under the policy discussed above whereby EPA generally looks first to the operator of the process unit for compliance, the customer might appear to be the generator with primary responsibility.

However, as stated in the co-generation notice, this presumption would not apply in the case where there is a mutual agreement among the parties for one of the co-generators to perform the generator duties on behalf of all. EPA encourages such an arrangement, and the contracts between Olin and its customers would clearly fall within this policy. As EPA explained in the October 1980, notice, EPA will look first to the generator designated by a mutual agreement among co-generators. The agreement overrides the policy that looks first to the operator of the process unit, except in those cases where a responsible party is not clearly designated, or where EPA does not know about the agreement. See 45 FR 72024 to 72027. I trust that Olin will retain copies of its contracts to display to RCRA inspectors, and that the contracts will be sufficiently specific in designating Olin as the responsible generator.

I should emphasize, however, that the co-generator policy is a Federal policy, and that since its announcement by EPA in 1980, the RCRA program has been delegated (with few exceptions) to our authorized state programs. So, you should contact the state hazardous waste agency in each state where you propose to implement this arrangement to verify that the state also follows the same or a similar policy with respect to co-generators. Under RCRA, states may generally choose to operate hazardous waste programs that are more stringent than EPA's requirements.

Thank you for bringing Olin's Product Stewardship Program to our attention. I laud you for promoting this excellent example of corporate responsibility, and I wish your company every success in carrying it out.

Sincerely yours,

Michael Shapiro, Director  
Office of Solid Waste