



REGION 5

CHICAGO, IL 60604

June 24, 2024

**ELECTRONIC MAIL
DELIVERY RECEIPT REQUESTED**

Commander Luis G. Martinez
Commanding Officer
U.S. Naval Support Activity – Crane Division
300 U.S. Highway 361
Crane, Indiana 47522-5009
<mailto:luis.g.martinez26.mil@us.navy.mil>

Re: **Notice of Potential Violation and Opportunity to Confer**
Compliance Evaluation Inspection Report and Description of Areas of Concern
Crane Naval Surface Warfare Center
EPA I.D.: IN5170023498
Crane, Indiana

Dear Commander Martinez:

On February 7-9, 2023, the U.S. Environmental Protection Agency conducted an RCRA compliance evaluation inspection of the U.S. Naval Support Activity—Crane Division (“Crane,” “facility,” or “you”) located in Crane, Indiana. The purpose of the inspection was to evaluate Crane’s compliance with certain provisions of RCRA and its implementing regulations related to the generation, treatment, and storage of hazardous waste. We have enclosed a copy of the inspection report for your convenience.

On November 21, 2023, EPA issued a Request for Information under Section 3007 of RCRA (information request). Crane responded to the information request in a written submittal dated February 1, 2024.

Information currently available to EPA suggests that Crane may be in violation of RCRA. By this letter, EPA is extending to you an opportunity to advise the Agency, in person or in writing, of any further information EPA should consider with respect to the areas of concern.

During the inspection, EPA observed several areas of concern, described below. The description of the areas of concern is not a final determination regarding the Facility’s compliance with RCRA. EPA requests that you voluntarily submit a response in writing to us no later than 30 calendar days after receipt of this letter documenting the actions, if any, which you have taken since the inspection to address the areas of concern described below or demonstrating why the areas should not be of concern. After review of your response, EPA will notify you of any further action.

Areas of Concern

When used below, the term “hazardous waste management permit” refers to the Indiana Department of Environmental Management Hazardous Waste Management Permit issued July 10, 2019, and all subsequent approved modifications.

During the inspection, and in reviewing Crane’s information request response, EPA observed the following areas of concern:

1. Maintenance and Operations of the Facility

Under 329 Ind. Admin. Code 3.1-7-1, a large quantity generator must maintain and operate its facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

On July 5 and 6, 2022, wooden crates containing approximately 114,729 pounds of red phosphorous (in 81 mm mortar rounds) that was awaiting processing in the (b) (6) rotary kiln caught fire. The fire was result of storing the mortar rounds outside, under a tarp for about a week when daily high temperatures averaged 96-99 degrees Fahrenheit. Red phosphorus can react with moisture and heat to form phosphine gas, which auto ignites at 100 °F.

The red phosphorous was stored in a way that did not minimize the possibility of a fire, considering the autoignition temperature of red phosphorous. Therefore, Crane violated 329 Ind. Admin. Code 3.1-7-1.

2. Incompatible Waste Storage

Condition III.I.3 of Crane’s hazardous waste management permit requires Crane to separate containers of incompatible wastes as indicated in the Section D, Process Information, Attachment I. 329 Ind. Admin. Code 3.1-9-1(a) and 40 C.F.R. § 264.177(c) requires storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

On the day of the inspection (February 8, 2023), the following incompatible waste were stored in close proximity to each other at the Container Storage Facility (CSF):

- a. Reactive hydrogen peroxide stored next to ignitable wastes (photographs 11 and 12 of inspection report);
- b. Reactive ferricyanide stored next to ignitable waste (photograph 13 of inspection report);

- c. Reactive lithium compounds and zirconium powder stored next to ignitable waste (photograph 14 of inspection report);
- d. Reactive mixing chamber ash stored next to ignitable waste (photographs 15 – 17 of inspection report); and
- e. Nine (9) containers of reactive lithium battery debris were stored next to toxic hazardous waste (photographs 28-35 of the inspection report).

On the following day of the inspection (February 9, 2023), Crane demonstrated to the inspector that the incompatible materials had been moved to segregated storage.

3. Hazardous Waste Accumulation

Under 329 Ind. Admin. Code 3.1-7-1, a large quantity generator may accumulate hazardous waste on-site for 90 days or less without a permit or interim status unless the generator has been granted an extension of the 90-day period. At the time of the inspection (February 8, 2023), according to the operating record, the following containers of hazardous were at the [REDACTED] container storage area since April 20, 2022 (294 days):

- a. One (1) 55-gallon container of caustic filter; and
- b. One (1) 55-gallon container of "HCl filters."

In addition, red phosphorous mortar rounds possessing the characteristics of ignitability and reactivity were removed from storage for processing in the [REDACTED] rotary kiln as of July 5 and 6, 2022, when portions of the materials caught fire. Non-impacted mortar rounds were then transferred back to earthen covered magazines to await off-site disposal. At this point in time, the red phosphorus was solid waste under 40 C.F.R. § 266.202(b) and subject to the LQG storage timelines. Crane did not ship any of this waste off-site until between June 5 and July 31, 2023 (335 to 391 days after the fire), at which point 364,237 pounds of red phosphorous were shipped off-site. A remaining 281,000 lbs remained in storage as of February 1, 2024 (606 days after the fire).

4. Hazardous Waste Container Labeling

Under 329 Ind. Admin. Code 3.1-7-1, a large quantity generator must label or clearly mark each container holding hazardous waste with the words "Hazardous Waste."

At the time of the inspection (February 8, 2023), the following containers were not labeled with the words, "Hazardous Waste."

- a. [REDACTED], Munitions Evaluation and Testing Lab: One (1) plastic container of acidic inductively coupled argon plasma optical emission spectrometer wastewater (photograph 50 of the inspection report). This was remedied at the time of the inspection;
- b. [REDACTED]: Two (2) ammunition waste containers;

- c. [REDACTED], (b) (6) : One (1) gaylord box of filter cake (b) (6) of inspection report); and
- d. [REDACTED] : Two (2) 5-gallon jugs of lab waste.

5. Date When Each Period of Accumulation Begins

Under 329 Ind. Admin. Code 3.1-7-1, a large quantity generator must clearly mark each container holding hazardous waste with the date upon which each period of accumulation begins. At the time of the inspection (February 8, 2023), the following containers in storage at the [REDACTED] container storage area were not marked with accumulation start dates (b) (6) of inspection report):

- a. One (1) gaylord box of filter cake;
- b. One (1) 55-gallon container of caustic filter; and
- c. One (1) 55-gallon container of "HCl filters."

6. Use and Management of Containers

Under 329 Ind. Admin. Code 3.1-7-1, a large quantity generator must always keep a container holding hazardous waste closed during storage, except when it is necessary to add or remove waste. At the time of the inspection (February 8 and 9, 2023), the following containers of hazardous waste were not closed at a time when waste was not being added to or removed from the container:

- a. [REDACTED] : Three (3) satellite accumulation containers for "scrap IR components in mineral oil," "MJU comp," and "scrap IR comp."
- b. [REDACTED] : Two (2) satellite accumulation containers of acidic and basic corrosive waste (photographs 45 and 46 of the inspection report). These were remedied at the time of the inspection;
- c. [REDACTED] [REDACTED] : One (1) drum of explosive hazardous waste to which mineral oil is added;
- d. [REDACTED], [REDACTED] : One (1) container of hexane and acetone. This was remedied after the inspection; and
- e. [REDACTED] : One (1) 55-gallon container of arsenic containing condensation accumulated from the building's attic. This was remedied after the inspection.

7. Condition of Containers

Under 329 Ind. Admin. Code 3.1-7-1, if a container holding hazardous waste is not in good condition the owner or operator must transfer the waste to a container that is in good condition or otherwise manage the waste in compliance with 40 C.F.R. Part 265.

At the time of the inspection (February 8, 2023), the lids for two (2) satellite accumulation containers of scrap IR components in mineral oil and air respirator filters, respectively, at

[REDACTED], were significantly rusted (see photographs in (b) (6) [REDACTED] of the inspection report).

8. Satellite Accumulation Limits

Under 329 Ind. Admin. Code 3.1-7-1, a large quantity generator (LQG) who accumulates non-acutely hazardous waste in excess of 55 gallons at or near the point of generation (i.e., satellite accumulation area) must within three (3) days, with respect to that excess waste, comply with all other LQG permit exemption requirements (i.e., less than 90-day accumulation, weekly inspections, etc.). According to hazardous waste container accumulation logs for [REDACTED] that were reviewed during the inspection (February 9, 2023), the following satellite accumulation containers were not transferred to 90-day storage areas within three (3) days of becoming full:

- a. Mixing Chamber Ash filled on September 4, 2022, and transferred to < 90-day storage on September 8, 2022, four days later;
- b. Dry Ash filled on September 12, 2022, and transferred to < 90-day storage on October 18, 2022, thirty-six days later;
- c. Filter Ash with phosphoric acid filled on September 10, 2022, and transferred to < 90-day storage on October 19, 2022, thirty-nine days later;
- d. Contaminated rags in water filled on September 11, 2022, and transferred to < 90-day storage on October 18, 2022, thirty-seven days later; and
- e. Contaminated rags in water filled on September 17, 2022, and transferred to < 90-day storage on October 18, 2022, thirty-one days later.

9. Inspections of Container Storage Areas

Under 329 Ind. Admin. Code 3.1-7-1, a large quantity generator must conduct weekly inspections of hazardous waste container storage areas. Review of container inspection records on February 9, 2023, indicated weekly inspections of container storage areas were not conducted on the following weeks.

- a. (b) (6) [REDACTED] Week of January 26, 2023;
- b. (b) (6) [REDACTED]: Weeks of March 22, 2021; November 21, 2022; and December 26, 2022; and
- c. (b) (6) [REDACTED]: Weeks of March 22, 2021; April 4, 2022; November 21, 2022; December 26, 2022; and January 9, 2023;

10. Universal Waste

Under 329 Ind. Admin. Code 3.1-16-1 [40 C.F.R. §§ 273.13(d)(1) and 273.33(d)(1)] handlers of universal waste lamps must contain any lamp in containers or packages that are closed.

At the time of the inspection (February 9, 2023), one box of universal waste lamps in (b) (6) [REDACTED] was not closed [REDACTED]).

11. Open Burn and Detonation Weather Documentation

Condition VII.C.3 of Crane's hazardous waste management permit restricts open burning under certain weather conditions and requires that compliance with these condition be documented in the operating record for each event.

In its information request, EPA requested the records used to document compliance with Condition VII.C.3 of Crane's hazardous waste management permit. Review of the records submitted by Crane in its Information Request Response indicates the following non-compliance with restrictions on burning.

- a. May 18, 2021. Started incendiary cage at 12:30 when cloud cover between 88-90%.
- b. May 19, 2021: Started incendiary cage at 10:30 when last notation of cloud cover was 99%. No recorded confirmation of drop to 80% prior to burning.
- c. June 8, 2021: Burn pans started at 9:47 and 10:32 when cloud cover was between 89-100%.
- d. June 9, 2021: Burned pans started at 10:40 when cloud cover was 94%.
- e. June 10, 2021: Cloud cover reached 100% by 12:06. Burning did not cease until 13:00.
- f. April 18, 2023. Burning continued when wind speed dropped below 3 mph.
- g. May 4, 2023. Burning initiated and continued when speed was below 3 mph.

In addition, the records provided by Crane do not record burn times, relative to weather observations, for the period of July 12, 2021, through February 14, 2023.

12. Training

Section II.F of Crane's hazardous waste management permit requires Crane to provide annual training according to the outline in Section H of permit attachments 0 through V. 329 Ind. Admin. Code 3.1-9-1(a) and 40 C.F.R. § 264.16(c) requires facility personnel take part in annual classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of 40 C.F.R. Part 264. Training records reviewed at the time of the inspection (February 9, 2023) indicated that Messrs. Doug Johnson and Matthew Brindle, who have significant hazardous waste management responsibilities for the Navy and the Army, respectively, were not on the list of people who received RCRA refresher training in 2022.

13. Emergency Coordinators Listed in Contingency Plan

Section II.I.3. of Crane's hazardous waste management permit requires that Crane review and immediately amend, if necessary, the facility contingency plan when required by 329 Ind. Admin. Code 3.1-9 and 40 C.F.R. § 264.53. 40 C.F.R. § 264.54(d) requires the contingency plan to be amended when the list of emergency coordinators changes.

The contingency plan reviewed at the time of the inspection (February 9, 2023) listed three emergency coordinators who had retired.

14. Submission of Contingency Plan to Local Authorities

Section II.I.2 of Crane's hazardous waste management permit requires that Crane submit a copy of its contingency plan to local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services. At the time of the inspection (February 9, 2023), there was no documentation that Crane had submitted the most recent contingency plan to local authorities.

In its Information Request, EPA requested the date of the last transmittal of the facility's contingency plan to local emergency service providers including supporting documentation. In its response, Crane stated "[t]here is no documented transmittal of the RCRA Contingency plan."

Actions Requested

By no later than 30 calendar days after receipt of this letter, please provide information documenting the actions, if any, which you have taken since the inspection to address the identified areas of concern, as well as any additional information requested. You do not need to provide documentation regarding areas of concerns 2, 4a, 6b, 6d, and 6e which were addressed during the inspection.

Please send all reports requested by this letter by electronic mail to:

r5lecab@epa.gov

and

brown.todd@epa.gov

The subject line of all email correspondence must include, "IN5170023498." All electronically submitted materials must be in final and searchable format, such as Portable Document Format (PDF) with Optical Character Recognition (OCR) applied. If you are unable to send a response to these email addresses due to email size restrictions or other problems, contact [*inspector name*] to make additional arrangements for transmission of the response.

This letter is not subject to the Paperwork Reduction Act, 44 U.S.C. § 3501 *et seq.*, because it seeks information from specific individuals or entities as part of an administrative investigation. You may assert a claim of business confidentiality under 40 C.F.R. Part 2, Subpart B for any part of the information you submit to EPA in response to this letter. Information subject to a business confidentiality claim is available to the public only to the extent, and by means of the procedures, set forth at 40 C.F.R. Part 2, Subpart B. If you do not assert a business confidentiality claim when you submit the information, EPA may make this information available to the public without further notice.

The EPA contact in this matter is Todd Brown. You may contact him at brown.todd@epa.gov or (312) 886-6091 if you have additional questions. Thank you for your prompt attention to these concerns and your efforts to protect human health and the environment.

Sincerely,

MICHAEL
HARRIS

Digitally signed by
MICHAEL HARRIS
Date: 2024.06.24
09:23:15 -05'00'

Michael D. Harris
Division Director
Enforcement and Compliance Assurance Division

Enclosure

cc: Jennifer Reno, Indiana Department of Environmental Management (IDEM) (jreno@idem.in.gov)
Lori Freeman, IDEM (lfreeman@idem.IN.gov)