



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

100 N. Senate Avenue • Indianapolis, IN 46204  
(800) 451-6027 • (317) 232-8603 • [www.idem.IN.gov](http://www.idem.IN.gov)

**Eric J. Holcomb**  
*Governor*

**Bruno L. Pigott**  
*Commissioner*

May 5, 2020

Heather L. Baldi  
Environmental Protection Manager  
Department of the Navy  
Naval Surface Weapons Center  
300 Highway 361  
Crane, Indiana 46204-2251  
[heather.l.baldi1@navy.mil](mailto:heather.l.baldi1@navy.mil)

Re: Comprehensive Performance Test  
(CPT) Extension Response Letter  
Crane Division, NSWC  
Plant ID 101-00005  
Crane, Martin County

Dear Ms. Baldi:

On March 25, 2020, the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ), received a request for an extension of Comprehensive Performance Test (CPT) from Crane Naval Surface Weapons Center (NSWC) located at 300 Highway 361 in Crane, Indiana. The CPT was required to be completed by April 4, 2020, for APE 1236 Hazardous Waste Combustor pursuant to TVOP No. 101-41214-00005 Condition E.2.2 and 40 CFR Subpart EEE - National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors

According to Crane Division, NSWC, the compliance testing cannot be completed by the designated deadline due to baghouse failure on March 17, 2020, and COVID-19 restrictions preventing the Army APE 1236 experts to travel for the investigation and corrective action in order for testing to be completed by April 4, 2020.

40 CFR Subpart EEE - National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors § 63.1207 (d)(3) indicates the following, "You must complete performance testing within 60 days after the date of commencement (2/4/2020), unless the Administrator determines that a time extension is warranted based on your documentation in writing of factors beyond your control that prevent you from meeting the 60-day deadline (4/4/2020)."

At this time, IDEM has determined that a time extension is warranted. Testing must be adequately performed by October 4, 2020. In the meantime, APE 1236 cannot be used to combust hazardous waste. Additionally, the findings and corrective actions of the investigation of the failure(s) must be reported to IDEM no later than 45 days

before the commencement date, and must include rationale explaining the series of tests that are necessary to complete the CPT testing prior to their commencement.

Please direct any questions to David Zier, Compliance Inspector, at (317) 233-1136 or by email at [dzier@idem.IN.gov](mailto:dzier@idem.IN.gov).

Sincerely,



Phil Perry, Chief  
Compliance and Enforcement Branch  
Office of Air Quality

cc: David A. Zier, Compliance and Enforcement Branch, Office of Air Quality  
Dave Cline, Compliance and Enforcement Branch, Office of Air Quality  
Jerrod Fisher, Compliance and Enforcement Branch, Office of Air Quality  
Steve Friend, Compliance and Enforcement Branch, Office of Air Quality  
Quentin Gilbert, CRANE NSWC - [quentin.c.gilbert1@navy.mil](mailto:quentin.c.gilbert1@navy.mil)



DEPARTMENT OF THE NAVY

NAVAL SURFACE WARFARE CENTER  
CRANE DIVISION  
300 HIGHWAY 361  
CRANE INDIANA 47522-5001

IN REPLY REFER TO:

5090

Ser 1023/044

MAR 25 2020

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue, MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

Dear Sir or Madam:

Naval Surface Warfare Center, Crane Division is submitting this letter to request an extension of the 60 day requirement to complete a Comprehensive Performance Test (CPT) in accordance with 40 CFR 63.1207(d)(3).

Crane Army Ammunition Activity (CAAA) commenced a CPT of the Ammunition Peculiar Equipment (APE) 1236 hazardous waste combustor on February 4, 2020. CAAA suspended operation of the APE 1236 February 5, 2020 following a malfunction of the baghouse. Test series 1 was completed prior to suspension.

CAAA personnel conducted an inspection of the baghouse and replaced failed candles prior to resuming the CPT on March 16, 2020. Test series 2 was completed during this day of testing. CAAA suspended the CPT March 17, 2020 due to a subsequent malfunction of the baghouse identified at the start of test series 3. Further evaluation of the baghouse and corrective actions are necessary prior to resuming the CPT.

CAAA completed a successful baghouse leak test prior to the date of commencement and prior to resuming the CPT March 16, 2020. The leak tests indicated the baghouse was functioning properly prior to beginning the tests. The APE 1236 was not operated the period between the initial malfunction and when testing resumed March 16, 2020.

Per 40 CFR 63.1207(d)(3), testing must be completed within 60 days of commencement unless the Administrator determines a time extension is warranted based on documentation of factors beyond a source's control that prevent meeting the 60-day deadline. CAAA will be unable to complete the CPT within 60 days of commencement, by April 4, 2020. Due to the military's COVID-19 travel restrictions, the Army's APE 1236 system

5090  
Ser 1023/044  
MAR 25 2020

designers located at Tooele Army Depot in Utah are currently unable to travel to NSWC Crane until at least May 11, 2020 to begin a thorough inspection of the baghouse and identify any necessary repairs. NSWC Crane is requesting an extension of 180 days from the date the CPT was suspended, until September 13, 2020, to allow time for personnel to conduct an inspection on the system and complete repairs prior to concluding the CPT.

If you require further information, my point of contact is Quentin Gilbert, telephone 812-854-4785, email [quentin.c.gilbert1@navy.mil](mailto:quentin.c.gilbert1@navy.mil).

Sincerely,



HEATHER L. BALADI  
Environmental Protection Mgr  
By direction of the  
Commanding Officer

Copy to:  
1023 (Q. Gilbert)  
CAAA (S. Dant)

**EMAILS**

**JANUARY  
2020 EMAIL**

**david\_zier@yahoo.com**

---

**From:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) <quentin.c.gilbert1@navy.mil>  
**Sent:** Tuesday, January 14, 2020 2:05 PM  
**To:** Zier, David  
**Subject:** Munition Substitute for Crane's APE 1236 CPT

Good Afternoon David,

An Engineering Technician with the APE 1236 recently raised safety concerns with treating 20mm rounds in the combustor for the second test series of the CPT. He expressed the retort is nearing its end of life and he believes there is a potential the rounds could pierce the retort wall. Based on these concerns, the Army would like to use a 7.62mm round which will meet the emissions needs for the series, potentially with usage of the same amount of spiking material.

It is believed usage of the smaller round can be identified and addressed as a deviation from the CPT plan in the final report. Can you please let me know if this would be an acceptable means of addressing the change and/or if you would like additional information?

Please let me know if you have any questions or would like to discuss.

Thank you,

Quentin Gilbert

NSWC Crane Air Compliance Manager

Code 1023, Bldg. 3260

300 Highway 361

Crane, IN 47522-5001

Ph: 812.854.4785

DSN: 482-4785

Fax: 812.854.4177

Email: quentin.c.gilbert1@navy.mil



**david\_zier@yahoo.com**

---

**From:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) <quentin.c.gilbert1@navy.mil>  
**Sent:** Tuesday, January 14, 2020 2:35 PM  
**To:** Zier, David  
**Cc:** FRIEND, STEVE  
**Subject:** RE: Munition Substitute for Crane's APE 1236 CPT

Thank you David. I brought this up with Steve yesterday as well as the fact the test will need to be moved up one week to commence February 3. He recommended I submit a revised protocol to reflect the date change. I intend to submit the revised protocol, revised notices, and 14-day notification following a Thursday meeting between Army and consultant personnel.

Thank you both for your guidance on these issues.  
Hope you have a good afternoon,  
Quentin

---

**From:** Zier, David <DZier@idem.IN.gov>  
**Sent:** Tuesday, January 14, 2020 2:18 PM  
**To:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) <quentin.c.gilbert1@navy.mil>  
**Cc:** FRIEND, STEVE <SFRIEND@idem.IN.gov>  
**Subject:** [Non-DoD Source] RE: Munition Substitute for Crane's APE 1236 CPT

Gilbert,

Steve friend was contacted by someone else a few days ago about this, and what was communicated then was as long as the amount of the same spiking material is the same, the shell size was not important.

He also mentioned sending an email showing the changes in the protocol in lieu of a deviation report, but since the plan is approved, mentioning the shell size change in the report is fine, with an explanation of how it does not impact the testing or results.

Steve is out today, but I am copying him on this email.

*Thanks!*

*David A. Zier*  
*Environmental Engineer*  
*Compliance Manager*  
*Office of Air Quality*  
*Indiana Department of Environmental Management*  
ph: (317) 233-1136 email: [dzier@idem.IN.gov](mailto:dzier@idem.IN.gov)  
website: [www.idem.IN.gov](http://www.idem.IN.gov)

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It is believed usage of the smaller round can be identified and addressed as a deviation from the CPT plan in the final report. Can you please let me know if this would be an acceptable means of addressing the change and/or if you would like additional information?

Please let me know if you have any questions or would like to discuss.

Thank you,

Quentin Gilbert

NSWC Crane Air Compliance Manager

Code 1023, Bldg. 3260

300 Highway 361

Crane, IN 47522-5001

Ph: 812.854.4785

DSN: 482-4785

Fax: 812.854.4177

Email: [quentin.c.gilbert1@navy.mil](mailto:quentin.c.gilbert1@navy.mil)



**david\_zier@yahoo.com**

---

**From:** Zier, David <DZier@idem.IN.gov>  
**Sent:** Wednesday, April 29, 2020 10:54 AM  
**To:** david\_zier@yahoo.com  
**Subject:** FW: Munition Substitute for Crane's APE 1236 CPT

*Thanks!*

*David A. Zier*  
*Environmental Engineer*  
*Compliance Manager*  
Office of Air Quality  
Indiana Department of Environmental Management  
ph: (317) 233-1136 email: [dzier@idem.IN.gov](mailto:dzier@idem.IN.gov)  
website: [www.idem.IN.gov](http://www.idem.IN.gov)

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*David A. Zier*  
*Environmental Engineer*  
*Compliance Manager*  
Office of Air Quality  
Indiana Department of Environmental Management  
ph: (317) 233-1136 email: [dzier@idem.IN.gov](mailto:dzier@idem.IN.gov)  
website: [www.idem.IN.gov](http://www.idem.IN.gov)

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Please let me know if you have any questions or would like to discuss.

Thank you,

Quentin Gilbert

NSWC Crane Air Compliance Manager

Code 1023, Bldg. 3260

300 Highway 361

Crane, IN 47522-5001

Ph: 812.854.4785

DSN: 482-4785

Fax: 812.854.4177

Email: [quentin.c.gilbert1@navy.mil](mailto:quentin.c.gilbert1@navy.mil)

**david\_zier@yahoo.com**

---

**From:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) <quentin.c.gilbert1@navy.mil>  
**Sent:** Wednesday, January 15, 2020 10:37 AM  
**To:** Zier, David  
**Subject:** RE: Munition Substitute for Crane's APE 1236 CPT

Thank you David. I will be glad to send the revised pages from the CPT plan relevant to series 2 along with the other revised documents.

Hope you have a good day,  
Quentin Gilbert  
NSWC Crane Air Compliance Manager  
Code 1023, Bldg. 3260  
300 Highway 361  
Crane, IN 47522-5001  
Ph: 812.854.4785  
DSN: 482-4785  
Fax: 812.854.4177  
Email: quentin.c.gilbert1@navy.mil

-----Original Message-----

From: Zier, David <DZier@idem.IN.gov>  
Sent: Wednesday, January 15, 2020 10:29 AM  
To: Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA)  
<quentin.c.gilbert1@navy.mil>  
Subject: [Non-DoD Source] RE: Munition Substitute for Crane's APE 1236 CPT

Yesterday you indicated you were intending to submit the revised protocol, revised notices, and 14-day notification following a Thursday meeting between Army and consultant personnel.

Why don't you send this, but just provide the pages of the protocol that are revised (not the entire protocol) with the notices and 14 day notification.

Thanks!

David A. Zier  
Environmental Engineer  
Compliance Manager  
Office of Air Quality  
Indiana Department of Environmental Management  
ph: (317) 233-1136 email: dzier@idem.IN.gov  
website: www.idem.IN.noclick\_gov

-----Original Message-----

From: Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA)  
[mailto:quentin.c.gilbert1@navy.mil]  
Sent: Wednesday, January 15, 2020 10:01 AM  
To: Zier, David <DZier@idem.IN.gov>  
Subject: RE: Munition Substitute for Crane's APE 1236 CPT

\*\*\*\* This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. \*\*\*\*

---



david\_zier@yahoo.com

---

**From:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) <quentin.c.gilbert1@navy.mil>  
**Sent:** Wednesday, January 15, 2020 11:05 AM  
**To:** Zier, David  
**Cc:** FRIEND, STEVE  
**Subject:** RE: Munition Substitute for Crane's APE 1236 CPT  
**Attachments:** Crane CPT Plan Feed Details.pdf

More 7.62mm rounds will be fed per hour to reach the level of pollutants as they are smaller rounds. The "native" chlorine from these rounds will push emissions to near the proposed MACT feed limit (0.80 lb/hr proposed) without adding additional chlorine originally planned to come from spiking with potassium chlorate (relevant pages from the plan are attached).

The amount of lead and chromium spiking material will remain unchanged. I apologize, I failed to mention Cr powder as a spiking material in my prior email. HCl/Cl<sub>2</sub>, SVM, and LVM are being tested in Series 2.

I hope that helps. Please let me know if you need any additional information.

Quentin Gilbert  
NSWC Crane Air Compliance Manager  
Code 1023, Bldg. 3260  
300 Highway 361  
Crane, IN 47522-5001  
Ph: 812.854.4785  
DSN: 482-4785  
Fax: 812.854.4177  
Email: quentin.c.gilbert1@navy.mil

-----Original Message-----

**From:** Zier, David <DZier@idem.IN.gov>  
**Sent:** Wednesday, January 15, 2020 10:41 AM  
**To:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) <quentin.c.gilbert1@navy.mil>  
**Cc:** FRIEND, STEVE <SFRIEND@idem.IN.gov>  
**Subject:** [Non-DoD Source] RE: Munition Substitute for Crane's APE 1236 CPT

Just for clarification, I assume that you are using the same amount, just spiking with smaller shells.

Can you clarify?

Thanks!

David A. Zier

Environmental Engineer  
Compliance Manager  
Office of Air Quality  
Indiana Department of Environmental Management  
ph: (317) 233-1136 email: dzier@idem.IN.gov  
website: www.idem.IN.noclick\_gov

-----Original Message-----

From: Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA)  
[mailto:quentin.c.gilbert1@navy.mil]  
Sent: Wednesday, January 15, 2020 10:37 AM  
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Quentin Gilbert  
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Ph: 812.854.4785  
DSN: 482-4785  
Fax: 812.854.4177  
Email: quentin.c.gilbert1@navy.mil

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Sent: Wednesday, January 15, 2020 10:29 AM  
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Thanks!

David A. Zier  
Environmental Engineer  
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website: [www.idem.IN.noclick\\_noclick\\_gov](http://www.idem.IN.noclick_noclick_gov)

-----Original Message-----

From: Gilbert, Quentin C CIV USN NSWCD CRANE IN (USA)  
[mailto:[quentin.c.gilbert1@navy.mil](mailto:quentin.c.gilbert1@navy.mil)]  
Sent: Wednesday, January 15, 2020 10:01 AM  
To: Zier, David <[DZier@idem.IN.gov](mailto:DZier@idem.IN.gov)>  
Subject: RE: Munition Substitute for Crane's APE 1236 CPT

\*\*\*\* This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. \*\*\*\*

---

david\_zier@yahoo.com

---

**From:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) <quentin.c.gilbert1@navy.mil>  
**Sent:** Thursday, January 16, 2020 3:30 PM  
**To:** FRIEND, STEVE; Zier, David  
**Subject:** FW: NSWC Crane CPT and RATA 14-Day Date Notification and Revised Protocol and Test Plan Pages  
**Attachments:** Revised CPT Protocol.pdf; APE 1236 Comprehensive Performance Test Plan (Series 2 Revision).pdf; Revised APE 1236 RATA Protocol.pdf

Thank you both again for your time and guidance on the CPT.

Steve – as noted in the revised protocols, Air Control Techniques is the group Coterie subcontracted for the CPT. On the day of the test, please feel free to contact me when you are 10 minutes or so from Crane and I can meet you at the gate to escort you onto base. If you can't reach me at my desk, please call my cell - 812-381-0148.

Thanks again, and if either of you have any questions or need anything, please let me know.

Hope you have a good evening,  
Quentin Gilbert  
NSWC Crane Air Compliance Manager  
Code 1023, Bldg. 3260  
300 Highway 361  
Crane, IN 47522-5001  
Ph: 812.854.4785  
DSN: 482-4785  
Fax: 812.854.4177  
Email: quentin.c.gilbert1@navy.mil

---

**From:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA)  
**Sent:** Thursday, January 16, 2020 3:18 PM  
**To:** 'Test\_Protocol@idem.IN.gov' <Test\_Protocol@idem.IN.gov>  
**Cc:** 'Zier, David' <DZier@idem.IN.gov>; FRIEND, STEVE <SFRIEND@idem.IN.gov>  
**Subject:** NSWC Crane CPT and RATA 14-Day Date Notification and Revised Protocol and Test Plan Pages

Good Afternoon,

NSWC Crane will commence the APE 1236 Hazardous Waste Combustor Comprehensive Performance Test (CPT) and CEMS RATA February 3, 2020. **\*Please accept this email as the 14-day notification of the CPT and RATA.\*** As Crane initially scheduled testing to begin February 10, 2020, please find revised protocols attached noting the new start date. The protocols also identify the stack test group being subcontracted by Coterie Environmental. Coterie was previously noted in the protocol. NSWC Crane will place a second notice in the newspaper, revise the cover page of the CPT Plan located at the Bedford library, and mail revised letters to individuals on the mailing list to provide notice of the date change.

Additionally attached to this email are pages from the CPT Plan containing revised data resulting from replacement of the 20mm rounds with 7.62mm rounds for Series 2 of the test. The larger 20mm rounds were removed from the test plan as Army personnel determined the munitions posed a safety risk. The revised pages are being submitted with the protocols per Mr. David Zier guidance.

Please feel free to contact me with any questions or to discuss.

Thank you,

Quentin Gilbert

NSWC Crane Air Compliance Manager

Code 1023, Bldg. 3260

300 Highway 361

Crane, IN 47522-5001

Ph: 812.854.4785

DSN: 482-4785

Fax: 812.854.4177

Email: [quentin.c.gilbert1@navy.mil](mailto:quentin.c.gilbert1@navy.mil)





# COMPLIANCE TEST PROTOCOL

State Form 55003 (5-12)

Indiana Department of Environmental Management

Office of Air Quality, Compliance Data Section

**INSTRUCTIONS:** Please complete this form and mail it back to: 100 N Senate Avenue, Mail Code 61-53, IGCN 1003, Indianapolis, IN 46204-2251; or fax it to: (317) 233-6865; or e-mail it to: Test\_Protocol@idem.IN.gov.

<b>Date Prepared:</b> 12/12/2019		<b>Proposed Test Date:</b> 2/3/2020		<b>Plant Address:</b> 300 Highway 361 Crane, IN 47522		<b>Plant Location:</b> Crane, IN																					
<b>1. SOURCE INFO: ID/Permit No.:</b> T101-32904-00005				<b>5. Check Applicable Program:</b>		<b>AGENCY USE ONLY:</b>																					
Company: NSW Crane				Title V: <input checked="" type="checkbox"/>		FESOP: <input type="checkbox"/>																					
Mail Address: 300 Highway 361				SSOA: <input type="checkbox"/>		MSOP: <input type="checkbox"/>																					
City, State, ZIP: Crane IN 4752				Other: <input type="checkbox"/>		Inspector:																					
Company Contact: Quentin Gilbert Telephone: 812-854-4785						Reviewer:																					
<b>2. TEST COMPANY INFORMATION</b>						Date Received:																					
Name: Air Control Techniques, P.C.						Approval Date:																					
Address: 301 E Durham Rd						Comments:																					
City, State, ZIP: Cary NC 27513																											
Contact: John Richards Telephone: 919-460-7811																											
<b>3. PROCESS INFORMATION</b> (Submit a separate form for each unit to test.)				<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>6. SAMPLE SITE LOCATION</b></p> <p>Distance A <u>13.94 feet</u></p> <p>Distance B <u>7.7 feet</u></p> </div> <div style="width: 50%;"> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>No. of sample points for Method 5:</td> <td style="text-align: center;">24</td> </tr> <tr> <td>Diameter at sample site (inches):</td> <td style="text-align: center;">19 3/8</td> </tr> <tr> <td>Stack Height (feet):</td> <td style="text-align: center;">9.75</td> </tr> <tr> <td>Approximate Stack gas flow (ACFM):</td> <td style="text-align: center;">3685</td> </tr> <tr> <td>Approximate Stack gas temp (deg. F):</td> <td style="text-align: center;">575</td> </tr> <tr> <td>Approximate Stack gas moisture (%):</td> <td style="text-align: center;">10</td> </tr> <tr> <td>Does sample port location meet 40 CFR 60, Appx. A, Method 1, Sec. 1.2 Requirements:</td> <td style="text-align: center;"><input checked="" type="radio"/> Yes / <input type="radio"/> No</td> </tr> <tr> <td colspan="2">If No, explain:</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td colspan="2"> </td> </tr> </table> </div> </div>				No. of sample points for Method 5:	24	Diameter at sample site (inches):	19 3/8	Stack Height (feet):	9.75	Approximate Stack gas flow (ACFM):	3685	Approximate Stack gas temp (deg. F):	575	Approximate Stack gas moisture (%):	10	Does sample port location meet 40 CFR 60, Appx. A, Method 1, Sec. 1.2 Requirements:	<input checked="" type="radio"/> Yes / <input type="radio"/> No	If No, explain:					
No. of sample points for Method 5:	24																										
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Approximate Stack gas flow (ACFM):	3685																										
Approximate Stack gas temp (deg. F):	575																										
Approximate Stack gas moisture (%):	10																										
Does sample port location meet 40 CFR 60, Appx. A, Method 1, Sec. 1.2 Requirements:	<input checked="" type="radio"/> Yes / <input type="radio"/> No																										
If No, explain:																											
Unit to Test: Ammunition Peculiar Equipment (APE) 1236																											
Maximum Rated Capacity: 240 lb PEP /hr; 5.0 MMBtu/hr heat input																											
Proposed Operating Speed: Operating rate varies by feed item																											
<b>3a. Describe method used to determine operating level:</b>																											
Operating level is based on PEP content of feed item																											
Pollution Control Equipment: afterburner, cyclone, baghouse																											
<b>3b. Process Description:</b> Thermal destruction of various munition items																											
Fuel Type: natural gas																											
<b>4. TEST INFORMATION</b>		<b>No. Runs</b>		<b>Time</b>																							
Method 1-4		9																									
Method 5		3		1 hrs																							
Method 6																											
Method 7																											
Method 9																											
Method 201/201A																											
Method 202																											
Other:		3/3/3		3/1/1 hr																							
<b>4a. Describe any deviations from standard test method:</b>				<p><b>7. REASON FOR TEST</b></p> <p>Operating Permit: <input checked="" type="radio"/> Yes / <input type="radio"/> No</p> <p>Construction Permit: <input type="radio"/> Yes / <input checked="" type="radio"/> No</p> <p>If yes, Unit Start Up Date:</p> <p>State Agreed Order: Please include No.</p> <p>Title V: Yes</p> <p>Compliance with 40 CFR <u>63</u> Subpart <u>EEE</u>: <input checked="" type="radio"/> Yes / <input type="radio"/> No</p> <p>Other (EPA, CD, State, 114):</p>																							
Other test methods: SW-846 Method 0023A/RM 29/RM26A, see No. Runs and Time above																											
				<p><b>326 IAC 3-6-2(a) requires this completed form to be submitted 35 days prior to the proposed test date to the above address. 326 IAC 2-1.1-7(6)(B) requires any applicable test fee to be submitted with the protocol. (FEE NOT APPLICABLE IF PROGRAM IS FESOP, TITLE V OR VE TESTING ONLY.)</b></p>																							



# RELATIVE ACCURACY TEST AUDIT NOTIFICATION PROTOCOL

State Form 55059 (7-12)

Indiana Department of Environmental Management  
Office of Air Quality, Compliance Data Section

INSTRUCTIONS: Please complete this form and mail it back to: 100 N Senate Avenue, Mail Code 61-53, IGCN 1003, Indianapolis, IN 46204-2251; or fax it to: (317) 233-6865; or e-mail it to: Test\_Protocol@idem.IN.gov.

Date Prepared: 12/12/2019		Proposed Test Date: 2/3/2020		Plant Address: 300 Highway 361 Crane, IN 47522		Plant Location: Crane, IN	
<b>1. SOURCE INFO: ID/Permit No.:</b> T101-32904-00005				<b>6. Check Applicable:</b>		<b>AGENCY USE ONLY:</b>	
Company: NSWCrane				Annual RATA: <input checked="" type="radio"/> Part 75: <input type="checkbox"/>		Date Received:	
Mail Address: 300 Highway 361				Semi-Annual: <input type="radio"/> Part 60: <input type="checkbox"/>		Inspector:	
City, State, ZIP: Crane IN 47522		Other: <input type="checkbox"/>		Reviewer:		Approval Date:	
Company Contact: Quentin Gilbert		Telephone: (812) 854-4784		Certification: <input checked="" type="checkbox"/> Recertification: <input type="checkbox"/>		Comments:	
<b>2. TEST COMPANY INFORMATION:</b>							
Name: Air Control Techniques, P.C.							
Address: 301 E Durham Rd							
City, State, ZIP: Cary NC 27513							
Contact: John Richards		Telephone: (919) 460-7814					
<b>3. PROCESS INFORMATION: (Submit a separate form for each unit to test.)</b>							
Unit to Test: Ammunition Peculiar Equipment (APE) 1236							
Maximum Rated Capacity: 240 lb PEP /hr; 5.0 MMBtu/hr heat input							
Proposed Operating Speed: Operating rate varies by feed item							
Describe method used to determine operating level:							
Operating level is based on PEP content of feed item							
Pollution Control Equipment: afterburner, cyclone, baghouse							
Fuel Type: natural gas							
<b>4. Load Level</b>		<b>Test Method</b>		<b>No. Runs</b>		<b>Time</b>	
LOW		2					
		3					
		4					
		Other _____					
MID		2					
		3					
		4					
		6					
		7					
Other _____							
HIGH		2					
		3					
		4					
		6					
		7					
Other <u>3A 10</u>		15		24.0 min			
<b>7. SAMPLE SITE LOCATION</b>							
				Does sample port location meet 40 CFR 60, Appx. A, Method 1, Sec. 1.2 Requirements: <input checked="" type="radio"/> Yes / <input type="radio"/> No			
				If No, explain:			
				Approximate Stack gas flow (ACFM):			
				Approximate Stack gas temp (deg. F):			
				Approximate Stack gas moisture (%):			
				Number of points for Method 2:			
				Number of points for Method 4:			
				Number of points for Method 6:			
				Number of points for Method 7:			
				Anticipated date of Flow RATAs:			
				Anticipated date of Normal Load Gaseous RATA:			
Distance A <u>167.3"</u> Distance B <u>92.4"</u>							
				<b>Please attach explanation if performing a Single Load RATA only.</b>			
				326 IAC 3-6-2(a) requires this completed form to be submitted 35 days prior to the proposed test date to the above address. 326 IAC 2-1.1-7(6)(B) requires any applicable test fee to be submitted with the protocol. (FEE NOT APPLICABLE IF PROGRAM IS FESOP, TITLE V OR VE TESTING ONLY.)			
5. Describe any deviations from standard test methods:							



### **3.6.2 Vendor Purchased Waste Feeds**

It is necessary to enhance certain constituent feed rates in order to attain the maximum pollutant feed rate. This will be accomplished by adding known quantities of chemical compounds purchased from vendors to the item feeds.

- (1) Potassium Chlorate ( $\text{KClO}_3$ )
- (2) Lead Diacetate Trihydrate ( $\text{Pb}(\text{C}_2\text{H}_3\text{O}_2)_2 \cdot 3\text{H}_2\text{O}$ ) Powder
- (3) Chromium (Cr) Powder

### **3.6.3 Explosive Item Waste Feeds**

Where an explosive item is used as a feed item, the constituent feed rate will be determined by the item specification found in the MIDAS and the total weight recorded by the feed system.

- (4) M1 Propellant
- (5) CTG 7.62MM TR M622
- (6) Primer Percussion M28A2

## **3.7 Proposed Test Matrix**

The overall test matrix for the CPT is presented in Table 3-1. A total of three test series, with each series consisting of three valid sampling runs, has been selected to demonstrate compliance with the Final HWC MACT emissions standards.



**Table 3-1. Summary of Proposed Waste Feed Items**

Test Series	Emission Standard	Feed Item	Item Feed Rate	Target Pollutant	Pollutant Feed Rate
1	PCDD/PCDF	M1 Propellant	240 lb/hr	PEP	240 lb PEP/hr 0.10 lb Cl/hr
	CO HC	KClO <sub>3</sub>	0.33 lb/hr		
2	SVM	CTG 7.62MM TR M622	8460/hr	SVM	2.17 lb SVM/hr
	LVM			LVM	0.98 lb LVM/hr
	HCl/Cl <sub>2</sub>	Pb(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>2</sub> · 3H <sub>2</sub> O	3.77 lb/hr	HCl/Cl <sub>2</sub>	0.76 lb Cl/hr
	CO	Cr Powder	0.99 lb/hr		12.28 lb PM/hr
3	PM PCDD/PCDF	Primer Percussion M28A2	2160/hr	PM	57.94 lb PM/hr 0.15 lb Cl/hr
	CO	KClO <sub>3</sub>	0.33 lb/hr		

### 3.7.1 Hazardous Waste Residence Time

40 CFR §63.1206(b)(11) requires that the hazardous waste residence time be calculated and documented in the CPT Plan and the operating log. For the APE 1236M2, the residence time in the detonation chamber is dependent upon the rotational speed, length, and flight spacing in the detonation chamber. At a rotational speed of 1.0 revolutions per minute (rpm), it takes a feed item approximately 8 minutes to process through the chamber. Because the distance between the flights and the length of the furnace do not vary, the residence time will vary proportionally based upon this relationship. Therefore, at a rotational speed of 0.5 rpm, the residence time would be 16 minutes. At the maximum rotational speed of approximately 3.0 rpm, the residence time would be 2.7 minutes. Rotational speeds during normal operation vary between 1.0 and 3.0 rpm, which equates to a residence time range of 8 to 2.7 minutes.

#### (1) System Conditioning

The U.S. Army has determined that 15 minutes of steady waste feed at test conditions will provide adequate system conditioning prior to initiating testing. Therefore, during the CPT, testing will begin 15 minutes after target conditions have been achieved and steady

**Table 3-2. Detailed Feed Rate Summary**

Test Series	Feed Item	Charge Carrier	Charge Composition	Frequency
1	M1 Propellant	Waxed Paper Cup	1.0 lb	15 sec
	KClO <sub>3</sub>	Paper Envelope	2.5 g	60 sec
2	CTG 7.62MM TR M622	None	47 cartridges	20 sec
	Pb(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>2</sub> · 3H <sub>2</sub> O	Paper Envelope	9.5 g	20 sec
	Cr Powder	Paper Envelope	2.5 g	20 sec
3	Primer Percussion M28A2	None	12 primers	20 sec
	KClO <sub>3</sub>	Paper Envelope	2.5 g	60 sec

### 3.7.3 Total CPT Feed Items Required

The estimated total quantity of each feed item to be processed during the CPT is shown in Table 3-3. The total quantity represents the items needed for the total sampling time, a 15-minute furnace stabilization period prior to each run, a 15-minute allowance for port changeovers at the midpoint of each run, and adequate contingency.

**Table 3-3. Feed Item Requirements**

Test Series	Feed Item	Feed Rate	Potential Feed Hours	Amount Required
1	M1 Propellant	240 lb/hr	16	3840 lb
	KClO <sub>3</sub>	0.33 lb/hr		6.0 lb
2	CTG 7.62MM TR M622	8460/hr	8	70,000 cartridges
	Pb(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>2</sub> · 3H <sub>2</sub> O	3.77 lb/hr		32 lb
	Cr Powder	0.99 lb/hr		8.0 lb
3	Primer Percussion M28A2	2160/hr	16	36,000 primers
	KClO <sub>3</sub>	0.33 lb/hr		6.0 lb

**4. TEST SCHEME**

**4.1 Sampling Summary**

A single test series will be conducted for each of the three test feeds shown in Table 4-1. Each series will consist of three valid sampling runs. Runs that are out of isokinetics or which do not pass the posttest leak check will be considered invalid and will be repeated (sampling data will still be reported). Operational problems may also be a basis for rejection of a sampling run. Such rejections will be considered on a case by case basis. During each run, one integrated gas bag will be taken to determine concentrations of CO<sub>2</sub>, O<sub>2</sub> and nitrogen (N<sub>2</sub>) in the combustion gas; moisture will be continuously collected in each sampling train to determine the moisture content of the stack gas; and stack gas velocity and temperature will be monitored. The CO will be monitored and corrected to 7% O<sub>2</sub> on a continuous basis by the CEMS. A summary of the sampling to be conducted during the CPT is provided in Table 4-1.

**Table 4-1. APE 1236M2 DF CPT Sampling Summary**

Series	Feed	Sampling Duration	Sampling Method	Pollutant
1	M1 Propellant KClO <sub>3</sub>	3 hours	0023A	PCDD/PCDF
			RM2	Temperature
			RM2	Stack Gas Volumetric Flow Rate
			RM3	Combustion Gases (CO <sub>2</sub> , O <sub>2</sub> , N <sub>2</sub> )
			RM4	Moisture
			CEM	O <sub>2</sub> , CO
2	CTG 7.62MM TR M622 Pb(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>2</sub> · 3H <sub>2</sub> O Cr Powder	1 hour	RM9	LVM, SVM
			RM26A	HCl/Cl <sub>2</sub>
			RM2	Temperature
			RM2	Stack Gas Volumetric Flow Rate
			RM3	Combustion Gases (CO <sub>2</sub> , O <sub>2</sub> , N <sub>2</sub> )
			RM4	Moisture
			CEM	O <sub>2</sub> , CO
3	Primer Percussion M28A2 KClO <sub>3</sub>	3 hours	RM5	PM
			0023A	PCDD/PCDF
			RM2	Temperature
			RM2	Stack Gas Volumetric Flow Rate
			RM3	Combustion Gases (CO <sub>2</sub> , O <sub>2</sub> , N <sub>2</sub> )
			RM4	Moisture
			CEM	O <sub>2</sub> , CO



**Table D-2. CTG 7.62MM TR M622**

Item: CTG 7.62MM TR M622 NSN: 1305009264017 Item Feed Rate: 8460/hr	
Compound (CAS Number)	Feed Rate (lb/hr)
NITROCELLULOSE (9004-70-0)	46.12392
NITROGLYCERIN (55-63-0)	5.27904
STRONTIUM NITRATE (10042-76-9)	4.32306
DIBUTYLPHTHALATE (84-74-2)	2.9187
MAGNESIUM POWDER (7439-95-4)	2.37726
STRONTIUM PEROXIDE (1314-18-7)	2.01348
POLYVINYL CHLORIDE (9002-86-2)	1.33668
DIPHENYLAMINE (122-39-4)	0.62604
SODIUM SULFATE (7757-82-6)	0.27918
LEAD STYPHNATE (15245-44-0)	0.27072
BARIUM NITRATE (10022-31-8)	0.22842
CALCIUM RESINATE (9007-13-0)	0.21996
GRAPHITE (7782-42-5)	0.21996
CALCIUM CARBONATE (471-34-1)	0.13536
ANTIMONY SULFIDE (1345-04-6)	0.10998
ALUMINUM POWDER (7429-90-5)	0.05076
PETN (78-11-5)	0.03384
TETRACENE (31330-63-9)	0.02538

Appendix E

Waste Feed Summary

Table E-1. Waste Feed Summary

Series	Feed Item	Feed Rate	Runs	Hours/ Run	Total		PEP	PM	SVM	LVM	CI	
Series 1 (PCDD/PCDF)	M1 Propellant	240 lb/hr	4	4	3,840	lb	240.00	2.54	0.00	0.00	0.00	
	KClO <sub>3</sub>	0.33 lb/hr			6.0	lb	0.00	0.20	0.00	0.00	0.10	
							Total:	240.00	2.64	0.00	0.00	0.10
Series 2 (SVM, LVM, HCl/ Cl <sub>2</sub> )	CTG 7.62MM TR M622	8,460 item/hr	4	2	67,680	items	66.59	8.50	0.12	0.00	0.76	
	Pb(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>2</sub> · 3H <sub>2</sub> O	3.77 lb/hr			32	lb	0.00	2.19	2.05	0.00	0.00	
	Cr Powder	0.99 lb/hr			8.0	lb	0.00	1.59	0.00	0.98	0.00	
							Total:	66.59	12.28	2.17	0.98	0.76
Series 3 (PM, PCDD/PCDF)	M28A2 Primer PERC	2,160 item/hr	4	4	36,000	items	92.88	57.74	0.05	0.00	0.05	
	KClO <sub>3</sub>	0.33 lb/hr			6.0	lb	0.00	0.20	0.00	0.00	0.10	
							Total:	92.88	57.94	0.05	0.00	0.15



# FEBRUARY 2020 EMAIL

**david\_zier@yahoo.com**

---

**From:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) <quentin.c.gilbert1@navy.mil>  
**Sent:** Friday, February 21, 2020 2:33 PM  
**To:** FISHER, JARROD; Zier, David  
**Subject:** Update on Crane CPT  
**Attachments:** Test Series 3 Munition Substitution Details.pdf

Good Afternoon,

Crane Army intends to resume the CPT Monday, March 16. The test will conclude within 60 days of commencement barring any setback.

Due to problems experienced with the feed system plugging during the first day of Test Series 1, concern was raised with feeding the large M28A2 percussion primers scheduled during Series 3. In order to avoid both operational and safety issues, the Army would like to treat M96 incendiary rounds as a substitute for the primers during this series. The substitution will not affect the amount of spiking material being fed. The waste feed summary can be found attached. I can again include revised pages from the CPT reflecting this change with the 14-day notification of resuming the test.

Please feel free to contact me with any questions and/or concerns.

Hope you have a good weekend,

Quentin Gilbert

NSWC Crane Air Compliance Manager

Code 1023, Bldg. 3260

300 Highway 361  
Crane, IN 47522-5001

Ph: 812.854.4785

DSN: 482-4785

Fax: 812.854.4177

Email: quentin.c.gilbert1@navy.mil

**david\_zier@yahoo.com**

---

**Subject:** FW: Update on Crane CPT

-----Original Message-----

From: Zier, David

Sent: Monday, February 24, 2020 9:47 AM

To: Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) <quentin.c.gilbert1@navy.mil>; FISHER, JARROD <JFISHER@idem.IN.gov>

Cc: FRIEND, STEVE <SFRIEND@idem.IN.gov>; Myer, Brooke <BMyer@idem.IN.gov>

Subject: RE: Update on Crane CPT

Gilbert,

In my earlier response, I had not realized Jerrod was on sight and not Steve. I just learned that bit of information.

From what Jerrod shared with me, it sounds like the feed issue was due to the size of the cup that was being used, and that a reduced size was needed for the proper feed of the spiking materials. This should not impact the actual materials used for the test.

The window for testing has started and your proposed testing dates to continue are within the window.

Since the testing has started, you may want to modify your protocols internally, but at this point, you will need to send it with the results as a deviation to the protocol since it occurred as testing had already commenced.

Thanks!

David A. Zier  
Environmental Engineer  
Compliance Manager  
Office of Air Quality  
Indiana Department of Environmental Management  
ph: (317) 233-1136 email: dzier@idem.IN.gov  
website: www.idem.IN.gov

-----Original Message-----

From: Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) [mailto:quentin.c.gilbert1@navy.mil]

Sent: Friday, February 21, 2020 2:33 PM

To: FISHER, JARROD <JFISHER@idem.IN.gov>; Zier, David <DZier@idem.IN.gov>

Subject: Update on Crane CPT

\*\*\*\* This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. \*\*\*\*

**david\_zier@yahoo.com**

---

**From:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) <quentin.c.gilbert1@navy.mil>  
**Sent:** Monday, February 24, 2020 11:04 AM  
**To:** Zier, David; FISHER, JARROD  
**Cc:** FRIEND, STEVE; Myer, Brooke  
**Subject:** RE: Update on Crane CPT

Good Morning,

Thank you for following up. That is correct, cups of propellant became lodged at the retort feed which blocked the entrance and caused subsequent cups of propellant to spill from the conveyor. The following day the operators used the vibrating table at the feed end and monitored the operation closely to complete Series 1.

The length of the percussion primers raised concern of another potential jam at the feed and therefore it was determined a replacement munition should be run for series 3. I will have the change in munitions for series 3 noted as a deviation in the report.

Please let me know if you need anything or have any questions.

Hope you all have a good week,

Quentin Gilbert

NSWC Crane Air Compliance Manager

Code 1023, Bldg. 3260

300 Highway 361

Crane, IN 47522-5001

Ph: 812.854.4785

DSN: 482-4785

Fax: 812.854.4177

Email: quentin.c.gilbert1@navy.mil

-----Original Message-----

From: Zier, David <DZier@idem.IN.gov>

Sent: Monday, February 24, 2020 9:47 AM

To: Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA)

<quentin.c.gilbert1@navy.mil>; FISHER, JARROD <JFISHER@idem.IN.gov>

Cc: FRIEND, STEVE <SFRIEND@idem.IN.gov>; Myer, Brooke <BMyer@idem.IN.gov>

Subject: [Non-DoD Source] RE: Update on Crane CPT

Gilbert,

In my earlier response, I had not realized Jerrod was on sight and not Steve. I just learned that bit of information.

From what Jerrod shared with me, it sounds like the feed issue was due to the size of the cup that was being used, and that a reduced size was needed



for the proper feed of the spiking materials. This should not impact the actual materials used for the test.

The window for testing has started and your proposed testing dates to continue are within the window.

Since the testing has started, you may want to modify your protocols internally, but at this point, you will need to send it with the results as a deviation to the protocol since it occurred as testing had already commenced.

Thanks!

David A. Zier  
Environmental Engineer  
Compliance Manager  
Office of Air Quality  
Indiana Department of Environmental Management  
ph: (317) 233-1136 email: [dzier@idem.IN.gov](mailto:dzier@idem.IN.gov)  
website: [www.idem.IN.noclick.gov](http://www.idem.IN.noclick.gov)

-----Original Message-----

From: Gilbert, Quentin C CIV USN NSWCD CRANE IN (USA)  
[mailto:[quentin.c.gilbert1@navy.mil](mailto:quentin.c.gilbert1@navy.mil)]  
Sent: Friday, February 21, 2020 2:33 PM  
To: FISHER, JARROD <[JFISHER@idem.IN.gov](mailto:JFISHER@idem.IN.gov)>; Zier, David <[DZier@idem.IN.gov](mailto:DZier@idem.IN.gov)>  
Subject: Update on Crane CPT

\*\*\*\* This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. \*\*\*\*

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Series	Feed Item	Feed Rate	Runs	Hours/Run	Total	PEP	PM	SVM	LVM	CI
Series 1 (PCDD/PCDF)	M1 Propellant	240 lb/hr	4	4	3,840 lb	240	2.54	0	0	0
	KClO <sub>3</sub>	0.331 lb/hr			6 lb	0	0.20	0	0	0.10
	<b>Total:</b>					<b>240</b>	<b>2.64</b>	<b>0</b>	<b>0</b>	<b>0.10</b>
Series 2 (SVM, LVM,HCl/ Cl <sub>2</sub> )	CTG 7.62mm M62	8460 item/hr	4	2	67,680 items	66.59	8.50	0.12	0.00	0.76
	Pb(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>2</sub> · 3H <sub>2</sub> O	3.77 lb/hr			31 lb	0	2.19	2.05	0	0
	Cr Powder	0.99 lb/hr			8 lb	0	1.59	0	0.98	0
	KClO <sub>3</sub>	0 lb/hr			0 lb	0	0	0	0	0
	<b>Total:</b>					<b>66.59</b>	<b>12.28</b>	<b>2.17</b>	<b>0.98</b>	<b>0.76</b>
Series 3 (PM,PCDD/PCDF)	<b>M96 Projos</b>	2,160 item/hr	4	4	35,000 items	51.27	58.42	0	0	0
	KClO <sub>3</sub>	0.33 lb/hr			6 lb	0	0.2	0	0	0.10
	<b>Total:</b>					<b>51.27</b>	<b>58.62</b>	<b>0</b>	<b>0</b>	<b>0.10</b>

**OLD TARGETS PER CPTP WITH M28A2 instead of M96 PROJOS**

Series	Feed Item	Feed Rate	Runs	Hours/Run	Total	PEP	PM	SVM	LVM	CI
Series 3 (PM,PCDD/PCDF)	M28A2 Primer PERC	2,160 item/hr	4	4	36,000 items	92.88	57.74	0.05	0	0.05
	KClO <sub>3</sub>	0.33 lb/hr			6 lb	0	0.2	0	0	0.1
	<b>Total:</b>					<b>92.88</b>	<b>57.94</b>	<b>0.05</b>	<b>0</b>	<b>0.15</b>



**david\_zier@yahoo.com**

---

**From:** Zier, David <DZier@idem.IN.gov>  
**Sent:** Monday, April 27, 2020 5:46 PM  
**To:** david\_zier@yahoo.com  
**Subject:** FW: Question on Testing a New BLDS on Crane's APE 1236 HWC

*Thanks!*

*David A. Zier*  
*Environmental Engineer*  
*Compliance Manager*  
Office of Air Quality  
Indiana Department of Environmental Management  
ph: (317) 233-1136 email: [dzier@idem.IN.gov](mailto:dzier@idem.IN.gov)  
website: [www.idem.IN.gov](http://www.idem.IN.gov)

---

**From:** FISHER, JARROD  
**Sent:** Friday, February 28, 2020 9:06 AM  
**To:** Zier, David <DZier@idem.IN.gov>  
**Subject:** FW: Question on Testing a New BLDS on Crane's APE 1236 HWC

I am going to tell Quentin that I see no issues with this proposal, but wanted to check with you first.

---

**From:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) [<mailto:quentin.c.gilbert1@navy.mil>]  
**Sent:** Friday, February 28, 2020 8:22 AM  
**To:** FISHER, JARROD <[JFISHER@idem.IN.gov](mailto:JFISHER@idem.IN.gov)>  
**Subject:** Question on Testing a New BLDS on Crane's APE 1236 HWC

Good Morning Jarrod,

The Army intends to evaluate a new bag leak detection system on the APE 1236 with set up tentatively scheduled for March 10 while the APE is idle. The existing BLDS will remain in operation throughout the trial which is expect to last a month. A new port will need to be placed on the baghouse exit duct for the trial BLDS probe. The probe will placed in a location so as not to interfere with the existing BLDS probe.

I do not expect installation of the port and probe to affect the CPT, but cautiously would like your input before advising the Army to proceed. The CPT is scheduled to resume March 16; I submitted a 14-day notification to the test protocol email this morning. Can you please advise if you have any concern with the demo BLDS probe being installed at this time?

Thank you,  
Quentin Gilbert  
NSWC Crane Air Compliance Manager  
Code 1023, Bldg. 3260

300 Highway 361  
Crane, IN 47522-5001  
Ph: 812.854.4785  
DSN: 482-4785  
Fax: 812.854.4177  
Email: [quentin.c.gilbert1@navy.mil](mailto:quentin.c.gilbert1@navy.mil)

**david\_zier@yahoo.com**

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**From:** Zier, David <DZier@idem.IN.gov>  
**Sent:** Monday, April 27, 2020 5:46 PM  
**To:** david\_zier@yahoo.com  
**Subject:** FW: Question on Testing a New BLDS on Crane's APE 1236 HWC

Thanks!

David A. Zier  
Environmental Engineer  
Compliance Manager  
Office of Air Quality  
Indiana Department of Environmental Management  
ph: (317) 233-1136 email: dzier@idem.IN.gov  
website: www.idem.IN.gov

-----Original Message-----

**From:** FISHER, JARROD  
**Sent:** Friday, February 28, 2020 10:33 AM  
**To:** Zier, David <DZier@idem.IN.gov>  
**Subject:** FW: Question on Testing a New BLDS on Crane's APE 1236 HWC

FYI

-----Original Message-----

**From:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) [mailto:quentin.c.gilbert1@navy.mil]  
**Sent:** Friday, February 28, 2020 10:08 AM  
**To:** FISHER, JARROD <JFISHER@idem.IN.gov>  
**Subject:** RE: Question on Testing a New BLDS on Crane's APE 1236 HWC

Thank you Jarrod. I've not heard discussion of using one for redundancy, though definitely worth consideration if the new BLDS is purchased. I will bring up the question with CAAA management. You are correct, the trial BLDS will not be tied to the AWFCO.

Hope you have a great weekend,  
Quentin

-----Original Message-----

**From:** FISHER, JARROD <JFISHER@idem.IN.gov>  
**Sent:** Friday, February 28, 2020 9:37 AM  
**To:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) <quentin.c.gilbert1@navy.mil>  
**Subject:** [Non-DoD Source] RE: Question on Testing a New BLDS on Crane's APE 1236 HWC

Quentin,

We have no issue with this proposal. Just out of curiosity, is the long term idea with the new equipment to have a redundant system running along a primary system? Or are you thinking of replacing the original BLDS?

And I'm assuming for the upcoming CPT that this new system will not be connected to the APE as far as waste feed cutoff goes.

Thanks,

Jarrold

-----Original Message-----

From: Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) [mailto:quentin.c.gilbert1@navy.mil]

Sent: Friday, February 28, 2020 8:22 AM

To: FISHER, JARROD <JFISHER@idem.IN.gov>

Subject: Question on Testing a New BLDS on Crane's APE 1236 HWC

\*\*\*\* This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. \*\*\*\*

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**MARCH  
2020 EMAIL**

**david\_zier@yahoo.com**

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**From:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) <quentin.c.gilbert1@navy.mil>  
**Sent:** Friday, March 27, 2020 11:50 AM  
**To:** Zier, David  
**Subject:** RE: NSWC Crane CPT Update  
**Attachments:** APE 1236 CPT Extension Request to IDEM (Ser 044).pdf

Hello David,

Please find below a response to the questions regarding Crane's CPT

Is there any speculation as to what happened to cause the emissions?

- Army personnel speculated blast over-pressure waves from the demolition range could have damaged baghouse candles at some point between the leak test conducted January 7 and the initial malfunction. The demolition range began operating during winter months for the first time this year with test blasts completed the prior year to determine how residents outside Crane's property would be affected. Atmospheric conditions, such as low humidity, during winter months can increase the effects of the blast waves at distance.
- I questioned the Engineering Tech if they were aware of the cause of the recent malfunction. He stated they were not aware of an obvious cause at the time. I will request the Army provide any updates on the matter.

Was the baghouse inspected for any damage?

- Personnel performed a visual inspection after each malfunction. Completion of a thorough inspection was included in the internal actions to be conducted prior to resuming the test following the initial malfunction. I will request the Army provide details of the components inspected.
- The Army has indicated they intend to have their specialists present to conduct the inspection and any repairs following the recent malfunction prior to resuming the CPT. The inspection is incomplete at this time.

I will work with the Army Monday (they work 10-hour shifts Mon – Thurs, off Fridays) to provide additional details for the questions above and provide any additional information you need. April 4 is the 60 day expiration from the date of the first successful run on February 4 (jamming at the retort feed prevented completion of a test run on the attempted start date, Feb. 3). A CPT extension request letter was mailed Wednesday. I have additionally included a PDF of the letter as an attachment to this email. I will be glad to prepare an additional letter if needed, just let me know.

Thank you for your work on this matter. Please let me know of anything else you need and/or if you have additional questions.

I hope you have a good weekend,

Quentin Gilbert

NSWC Crane Air Compliance Manager

Code 1023, Bldg. 3260

300 Highway 361

Crane, IN 47522-5001

Ph: 812.854.4785

DSN: 482-4785

Fax: 812.854.4177

Email: quentin.c.gilbert1@navy.mil

website: [www.idem.IN.gov](http://www.idem.IN.gov)

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**From:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) [<mailto:quentin.c.gilbert1@navy.mil>]  
**Sent:** Wednesday, March 25, 2020 2:40 PM  
**To:** Zier, David <[DZier@idem.IN.gov](mailto:DZier@idem.IN.gov)>  
**Cc:** FISHER, JARROD <[JFISHER@idem.IN.gov](mailto:JFISHER@idem.IN.gov)>  
**Subject:** NSWC Crane CPT Update

Hello David,

As discussed, Crane Army again had to cease feeding the APE 1236 hazardous waste combustor during the CPT last Tuesday, March 17, after observing emissions from the baghouse stack as they began test series 3. Series 2 was completed the day prior. The series 2 samples will be analyzed though there is concern the malfunction could have begun prior to starting series 3. The Army has requested an extension of 180 days from the date the CPT was suspended to allow time for their APE specialists to visit after travel restrictions are scheduled to be lifted in May. The attached extension request letter mailed today

Please let me know of any additional information you would like regarding this matter or if you would like to discuss.

Hope you have a good afternoon,  
Quentin Gilbert  
NSWC Crane Air Compliance Manager  
Code 1023, Bldg. 3260  
300 Highway 361  
Crane, IN 47522-5001  
Ph: 812.854.4785  
DSN: 482-4785  
Fax: 812.854.4177  
Email: [quentin.c.gilbert1@navy.mil](mailto:quentin.c.gilbert1@navy.mil)

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**From:** Zier, David <DZier@idem.IN.gov>  
**Sent:** Friday, March 27, 2020 10:16 AM  
**To:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) <quentin.c.gilbert1@navy.mil>  
**Subject:** [Non-DoD Source] RE: NSWC Crane CPT Update

Quentin,

I am talking with Steve and Jerod on Monday morning. I will probably have additional questions then as well.

We will most likely want a formal letter with signature. I know that will be a little more difficult, but the letter can also reference the email that was provided as well if there is a timing issue.

What is the date for day 60?

After we talk on Monday, I will know what additional information we will need.

Thanks.

*Thanks!*

*David A. Zier*  
*Environmental Engineer*  
*Compliance Manager*  
*Office of Air Quality*  
*Indiana Department of Environmental Management*  
ph: (317) 233-1136 email: [dzier@idem.IN.gov](mailto:dzier@idem.IN.gov)  
website: [www.idem.IN.gov](http://www.idem.IN.gov)

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**From:** Zier, David  
**Sent:** Friday, March 27, 2020 8:35 AM  
**To:** Gilbert, Quentin C CIV USN NSWC CD CRANE IN (USA) <quentin.c.gilbert1@navy.mil>  
**Subject:** RE: NSWC Crane CPT Update

Also,

Was the baghouse inspected for any damage?

*Thanks!*

*David A. Zier*  
*Environmental Engineer*  
*Compliance Manager*  
*Office of Air Quality*  
*Indiana Department of Environmental Management*  
ph: (317) 233-1136 email: [dzier@idem.IN.gov](mailto:dzier@idem.IN.gov)