ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217)782-3397
JB PRITZKER, GOVERNOR JOHN J. KIM, DIRECTOR

MEMORANDUM

DATE: September 8, 2021

TO: Maureen Wozniak, Kent Mohr,
Eric Jones and Ron Robeen

FROM: Yasmine Keppner-Bauman, Compliance Unit

RE: Proposed Compliance Commitment Agreement from
Koppers Inc
Violation Notice A-2021-00217
I.D. 031300AAJ

Please find attached a proposed Compliance Commitment Agreement (CCA) received from the facility in response to the above-referenced Violation Notice dated July 15, 2021. This facility is requesting a meeting.

September 3, 2021

Via E-mail and Certified U.S. Mail

Koppers Inc.
Carbon Materials and Chemicals
3900 South Laramie Avenue
Cicero, IL 60804-4523
Tel 708 222 3483
Fax 708 656 6079
www.koppers.com

Yasmine Keppner-Bauman
Illinois Environmental Protection Agency
Bureau of Air/Filed Operations Section
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276
Yasmine.Keppner-Bauman@Illinois.gov

Re: Violation Notice A-2021-00217
ID: 031300AAJ

Dear Ms. Keppner-Bauman:

Koppers Inc. ("Koppers") appreciates this opportunity to provide the Illinois Environmental Protection Agency ("IEPA") with its initial response to Violation Notice A-2021-00217, which was received by Koppers on July 21, 2021. It is Koppers' intention to cooperatively participate in the Section 31 enforcement process and, if determined to be necessary, to provide IEPA with a proposed Compliance Commitment Agreement following the meeting with IEPA requested herein. Koppers willingness to participate in the Section 31 enforcement process is not, and should not be, construed as an admission of liability and Koppers expressly reserves its rights and any defenses with respect to the alleged violations.

Initial Response to Alleged Violations

As a threshold matter, Koppers respectfully disagrees with IEPA's assertions that the December 26, 2020 and March 20, 2021 fires resulted in violations of the statutory, regulatory and permit provisions cited by the Violation Notice.

The cited statutory, regulatory and permit provisions are intended to address process emissions from regulated sources and emission units and were never intended to apply to accidental fire events. The emissions from accidental fire events are not process emissions *from* regulated sources or emission units and, consequently, are not violations of the cited provisions. Emissions resulting from an accidental fire *at* an emission unit are not the same as regulated process emissions *from* that emission unit. For example, if someone constructs a house and it burns to the ground due to an accidental fire, emissions from that fire are not process emissions from a regulated source or

the same vein, if Koppers had simply constructed Tube Heater #2 pursuant to construction permit 11100041 but never operated it, and, years later, Tube Heater #2 subsequently burned to the ground due to an accidental fire, would that event result in violations of Sections 9(a) and 9(b) of the Act, or permit condition 2(a)? Koppers respectfully submits that the answer is "no". It is Koppers position, therefore, that the existence of a permitted, operating source does not mean that emissions resulting from an accidental fire at the source are regulated process emissions from the source.

Additionally, with respect to the alleged violations of 35 Ill. Adm. Code 212.123(a) and related permit provisions, the regulations explain how violations of those provisions are determined. *See* 35 Ill. Adm. Code 212.125 ("Violations of Sections 212.122 and 212.123 of this Subpart shall be determined ...."). By the plain language of the regulation, there is no violation of Section 212.123, or related permit provisions, unless determined by the methods set forth in Section 212.125. That did not occur here.

Koppers, below, and preserving the foregoing arguments, responds to each of the alleged violations as set forth in Attachment A to the Violation Notice.

Response to Specific Alleged Violations

1. Sections 9(a) and 9(b) of the Act, 35 Ill. Adm. Code 212.123(a), and condition 2(a) of construction permit 11100041: Koppers, Inc. caused or allowed smoke or other PM from Tube Heater #2 for Tar Distillation System #2, with an opacity greater than 30 percent as the result of a fire on December 26, 2020.

Koppers' Response: Koppers, for the reasons above, disputes this violation.

Copies of Koppers January 22, 2021 deviation report and subsequent March 10, 2021 letter to IEPA regarding the December 26, 2020 fire event are attached hereto as Attachments 1 and 2. As explained in that correspondence, the Stickney facility's Tar Plant Tubeheaters are process heaters where heat exchange occurs between combustion gases and material contained in tubes in the exhaust flow of the combustion gases. Under normal operation, the only emission from the Tar Plant Tubeheaters is the combustion exhaust. The Tubeheaters are capable of firing natural gas or process gas. At the time of the fire, Tubeheater #2 was natural gas-fired only.

A root-cause analysis for the December 26, 2020 fire concluded that the fire started due to a combination of events that included equipment failure and procedural error. During a normal shutdown, material is left circulating and the tubeheater is fired periodically to keep the material warm and flowing. Prior to the incident on Saturday, December 26, 2020, the tubeheater failed to light due to frozen steam piping. A problem occurred with the control valve on unit 1 at approximately the same time. These concurrent equipment failures led directly to the course of events that finally resulted in a tube rupture and fire inside Tubeheater #2.

In the case of an accidental fire, there is not necessarily an act, or actor, that causes, threatens or allows the discharge or emission of contaminants, as required by Section 9(a) of the Act.

The operator informed the Shift Supervisor of the failure of both tubeheaters appropriately and the Shift Supervisor called out electricians to perform troubleshooting and repairs. However, he failed to note the problems in his shift report or turnover during shift relief. As a result, there was no immediate visibility to the day shift staff to ensure proper follow up.

Due to an apparent miscommunication, the electricians only worked on Tubeheater #1, while Tubeheater #2 did not get repaired. Subsequent operators did not further report the problem with Tubeheater #2 because they thought that management was already aware. As a result, the material in the system continued to grow colder over the holiday until it would no longer pump.

With material set up in the piping, startup could not commence until the material was either removed or circulating again. There are safeties in the tubeheater control logic to prevent the tubeheater from starting without adequate circulation. These safeties are in place to prevent overheating of material from causing excess pressure resulting in tube rupture. Due to the hazards associated with bypassing those safeties, procedure requires a supervisor to consult with the plant superintendent so that proper precautions and procedures can be put in place.

When the Area Supervisor began troubleshooting the loss of flow, he found that the material was too cold to pump. Without consulting the superintendent, he bypassed the safeties and began to apply heat. He left the heat running too long and pressure in the tubeheater coil increased until it ruptured and leaked, causing the fire.

The fire resulted in smoke (not process emissions) from the stack exhaust point of Tubeheater #2. This smoke was vented to the atmosphere through Tubeheater #2 stack; however, these were uncontrolled fire emissions from combustion of feedstock and not the normal controlled combustion emissions from fuel combustion. In response, the operators activated the firefighting system that injected steam to the Tubeheater to extinguish the fire. In addition, the operators contacted the fire department immediately and the firefighting crew arrived within 5 minutes. The fire and smoke diminished to completely out over a period of less than 2 hours. The fire department's report was included with Koppers' March 10, 2021 letter. *See* Attachment 2, Fire Department Response Report.

Koppers, as noted in its March 10, 2021 letter, took several corrective actions following December 26, 2020 fire event. Those corrective action included:

- Replacement of the failed components that led to the tubeheaters failing to light;
- Corrective action with the supervisors related to poor communication and failure to follow procedure; and
- Implementation of a new procedure to require repeated notification of shift supervisors of tubeheater trouble at least once per shift and emptying the system if the temperature drops below the prescribed limit. *See* Attachment 2, Stickney Plant Work Instruction, Secure Unit When Tubeheater Will Not Light (Cold Circulation), March 8, 2021.

The Violation Notice requests information regarding emissions of each criteria pollutant from the December 26, 2020 fire event. As explained in Koppers' March 10, 2021 letter, estimating the emissions from the fire (versus controlled combustion of fuel emissions) is challenging and such

an estimate would not result in a realistic emission rate from the event. The permitted emission rates are, as IEPA is aware, established for the facility's fuel combustion exhaust flow and not for an accidental fire event. The information to attempt calculation of emission estimates from the fire does not exist. This information includes the amount and composition of the material combusted, the degree of combustion between partial and complete, the amount of combustion air entering through the dampers at the bottom of the heater, and the temperature of the flame.

With the foregoing caveats and limitations, Koppers has attempted to estimate emissions from the December 26, 2020 fire event. The emissions below are based on AP-42 Chapter 1.3 emission factors for fuel oil and process inputs (sulfur content and raw material combusted). A combustion efficiency penalty was also used to account for incomplete combustion for CO and HAP emissions.

Emissions from Fire Event December 26, 2020		
Amount Combusted	0.6	1000 gallons
Sulfur Content	0.8	%
Efficiency Penalty	50	% for CO and HAPs

Pollutant	Emission Factor (lb/1000 gal)	Emissions (lb)
SO2	157 x %S	0.8
NOx	20	12
CO	5	4.5
PM (total)	3.3	1.98
Benzene	2.14E-04	0.0002
Ethylbenzene	6.36E-05	0.00006
Formaldehyde	3.30E-02	0.03
Naphthalene	1.13E-03	0.0010
Toluene	6.20E-03	0.006
o-Xylene	1.09E-04	0.00010

Notes:
Criteria Pollutant Emission Factors AP42, Table 1.3-1
Hazardous Air Pollutant Emission Factors AP42, Table 1.3-9
Assumption: It is conservatively assumed that all of the tar in the coil drained into the firebox and burned

Finally, Koppers, as noted in its prior correspondence regarding this event, elected to report the event as an exceedance of the 30% opacity limit in Permit No. 11100041, Section 2.a. Koppers, for the reasons above, does not believe this limit was exceeded, but reported the event as indicated out of an abundance of caution.

2. Section 9(b) of the Act and condition 4(c) of construction permit 11100041: Koppers, Inc. failed to operate and maintain Tar Distillation System #2 with Tube Heater #2 in accordance with written procedures to provide good air pollution control practices to minimize emissions.

Koppers' Response: Koppers, for the reasons above, disputes this violation and incorporates herein its response to alleged Violation No. 1.

3. Sections 9(a) and 39.5(6)(a) of the Act, 35 Ill. Adm. Code 212.123(a) and condition 5.2.2(b) of Clean Air Act Permit Program (CAAPP) permit 96030134: Koppers, Inc. caused or allowed smoke or other PM from Tar Distillation System #2, with an opacity greater than 30 percent as the result of a fire on March 20, 2021.

Koppers' Response: Koppers, for the reasons above, disputes this violation.

Koppers notified IEPA of the March 20, 2021 fire by phone and, subsequently, submitted a written report to IEPA on April 16, 2021. A copy of Koppers April 16, 2021 report is attached to this letter as Attachment 3.

As explained in Koppers' prior reporting, on March 20, 2021, there was a fire at the Tar Distillation Column and adjacent scaffolding at approximately 10:20 pm. Upon discovery of the fire, the distillation plant was immediately shut down. Within a few minutes of shutting the process down, the main fire was extinguished. It is Koppers' understanding that the cause of the fire was material which had leaked from the top of Unit 2 distillation column and ignited. Preliminary identification of the leaked material was fuel oil, pyrolysis (CAS No. 69013-21-4), and clarified oils (petroleum), catalytic cracked (CAS No. 64741-624).

Due to damage from the fire it was impossible to determine the exact location of the leak and the ignition source, but a root-cause analysis provided to the Chemical Safety and Hazard Investigation Board details possible contributing causes and corrective actions (this analysis is being provided to you via separate e-mail link, per below). Based on the location of accumulated material and spray pattern on nearby equipment and scaffolding it is most likely that the leak occurred at a flange at the top of the dehydrator section of the distillation unit. A fraction of the leaked material evaporated and the vapors were subsequently ignited by an uncertain ignition source. The most fundamental corrective actions from the incident are focused on minimizing the risk of leaks and eliminating possible ignition sources from the area.

The Violation Notice requests that Koppers estimate emissions from the March 20, 2021 fire event. With the caveats and limitations explained above in response to alleged violation No. 1, Koppers has attempted to estimate emissions from the March 20, 2021, fire event.

Emissions from Fire Event March 20, 2021		
Amount Combusted	3	1000 gallons
Sulfur Content	0.8	%
Efficiency Penalty	50	% for CO and HAPs

Pollutant	Emission Factor (lb/1000 gal)	Emissions (lb)
SO2	157 x %S	3.8
NOx	20	60
CO	5	22.5
PM (total)	3.3	9.9
Benzene	2.14E-04	0.0010
Ethylbenzene	6.36E-05	0.00029
Formaldehyde	3.30E-02	0.15
Naphthalene	1.13E-03	0.0051
Toluene	6.20E-03	0.028
o-Xylene	1.09E-04	0.00049

Notes:
Criteria Pollutant Emission Factors AP42, Table 1.3-1
Hazardous Air Pollutant Emission Factors AP42, Table 1.3-9
Assumption: It is conservatively assumed that all of the tar fed to the unit for an hour leaked out and burned

In addition, necessary safety precautions were taken at the onset of the fire to ensure that the Tar Distillation Column was not pressurized. This was accomplished by continuing to run the vacuum system, shutting down the tube heater, and switching to ventilating the vacuum system through the No. 2 Fume Scrubber. For safety reasons, this was continued from 10:20 PM on March 20, 2021until 8:30 AM on March 21, 2021. The total VOM emissions during this period of 10 hours is estimated at 65.4 lb. There was no combustion of this material, therefore, there are no emissions of other criteria pollutants due to combustion.

4. Section 39.5(6)(a) of the Act and condition 7.4.5(b) of CAAPP permit 96030134: Koppers, Inc. failed to follow good operating practices for the Tar Distillation System #2 and Tube Heater #2 resulting in fires with associated excess opacity on December 26, 2020, and March 20, 2021.

Koppers' Response: Koppers, for the reasons above, disputes this violation and incorporates herein its response to alleged Violation Nos. 1, 2 and 3.

Response to Recommendations

The Violation Notice requests certain inspection, maintenance and repair records be provided in connection with Koppers' response. The requested materials are included with this initial response as Attachment 4. The requested emissions calculations are set forth in the tables above.

In addition to the materials attached to this initial response, Koppers is sending you two separate e-mails with links where you can download: (1) the Chemical Safety and Hazard Investigation Board root-cause analysis materials, which contain photographs and videos of the March 20, 2021 fire event; and (2) post-fire repair records. Please let us know if you do not receive the e-mails or have any difficulty accessing the files via the links provided.

Request for Meeting

Koppers believes it would be useful to meet with representatives of IEPA to discuss the alleged violations, Koppers response to those alleged violations, and the actions IEPA believes are required to address the alleged violations. Following the requested meeting, Koppers will, if necessary, supplement this initial response and submit to IEPA proposed terms for a Compliance Commitment Agreement.

Please contact me at (708) 556-9984, or by e-mail HerringLS@koppers.com, to schedule the requested meeting.

Thank you for considering this initial response to the Violation Notice and request for a meeting. We look forward to meeting with IEPA to address these matters.

Sincerely,

Seth Herring
Plant Manager

Attachments:

Attachment 1 – Koppers' January 22, 2021 Deviation Report
Attachment 2 – Koppers' March 10, 2021 Letter to IEPA w/attachments
Attachment 3 – Koppers' April 16, 2021 Letter to IEPA w/attachments
Attachment 4 – Requested Inspection, Maintenance and Repair Records

ATTACHMENT 1

031300 AAJ
10K

cc: Mohr
8340

KOPPERS
Koppers Inc.
Carbon Materials and Chemicals
3900 South Laramie Avenue
Cicero, IL 60804-4523
Tel 708 222 3483
Fax 708 656 6079
www.koppers.com

January 22, 2021

Illinois Environmental Protection Agency
Bureau of Air
Compliance Section (MC 40)
PO Box 19276
Springfield, IL 62794-9276

RE: Deviation Report
Koppers Inc., Stickney Plant
ID Number: 031300AAJ

To Whom It May Concern:

Koppers Inc. (Koppers) operates a chemical manufacturing plant in Stickney, Illinois under Clean Air Act Permit Program (CAAPP) Permit # 96030134. Condition 5.7 of the CAAPP permit requires Koppers to provide prompt notice to the Illinois Environmental Protection Agency (IEPA) of deviations from CAAPP permit requirements.

The reports are to describe the event, the probable cause of the deviations, any corrective actions or preventive measures taken, and steps to avoid future deviations. The attached Table 1 summarizes a deviation from a requirement of the CAAPP permit.

If there are any questions concerning this report, please contact Ms. Charvi Payghode of Koppers at (708) 566-3103.

Sincerely,

L. Seth Herring
Plant Manager CMC NA

Table 1 – Deviation Summary

Date and Description	On 12/26/2020 there was a fire at the bottom of the #2 tube heater at 10:30am. The Fire Department was called immediately. The quencher was turned on, and Koppers started hosing down the area until the Fire Department arrived. They were able to put out the fire by 11:30am. The PM emissions from this fire likely exceeded the 30% opacity requirement in Permit No. 11100041 condition 2.a.
Cause for Deviation	There was a fire at the #2 tube heater. The root cause is under investigation.
Corrective Action Taken	The quencher was turned on, and Koppers started hosing down the area until the Fire Department arrived. The facility followed the MON SSM Plan to minimize emissions.
Steps Taken to Avoid Future Deviation	The facility is investigating the root cause of the fire and will implement strategies if possible to prevent similar malfunctions from happening in the future.

ATTACHMENT 2

Koppers Carbon Materials & Chemicals
3900 South Laramie
Cicero, Illinois, 60804
Tel 708 656 5900
www.koppers.com

March 10, 2021

Yasmine Keppner-Bauman
Illinois Environmental Protection Agency
Bureau of Air/Filed Operations Section
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62702

Re: Additional Information on Fire at Tubeheater #2
Koppers Inc.
ID: 031300AAJ

Dear Ms. Keppner-Bauman:

Koppers Inc. ("Koppers") thanks the Illinois Environmental Protection Agency ("IEPA") for virtually meeting on February 25, 2021 to discuss the fire that occurred in Tubeheater #2 at Koppers' Stickney facility on December 26, 2020. The fire event was reported to IEPA by letter on January 21,2021. This letter contains additional information regarding the event, as requested by IEPA during the February 25th meeting.

Additional Information Regarding the December 26, 2020 Tube Heater Fire

The Stickney facility's Tar Plant Tubeheaters are process heaters where heat exchange occurs between combustion gases and material contained in tubes in the exhaust flow of the combustion gases. Under normal operation, the only emissions from the Tar Plant Tubeheaters are the combustion exhaust. The Tubeheaters are capable of firing natural gas or process gas. At the time of the fire, Tubeheater #2 was natural gas-fired only.

The root-cause analysis concluded that the fire started due to a combination of events that included equipment failure and procedural error. During a normal shutdown, material is left circulating and the tubeheater is fired periodically to keep the material warm and flowing. Prior to the incident on Saturday, December 26, 2020, the tubeheater failed to light due to frozen steam piping. A problem occurred with the control valve on unit 1 at approximately the same time. These concurrent equipment failures led directly to the course of events that finally resulted in a tube rupture and fire inside Tubeheater #2.

The operator informed the Shift Supervisor of the failure of both tubeheaters appropriately and the Shift Supervisor called out electricians to perform troubleshooting and repairs. However, he failed to note the problems in his shift report or turnover during shift relief. As a result, there was no immediate visibility to the day shift staff to ensure proper follow up.

Due to an apparent miscommunication, the electricians only worked on Tubeheater #1 and Tubeheater #2 did not get repaired. Subsequent operators did not further report the problem with Tubeheater #2 because they thought that management was already aware. As a result, the material in the system continued to grow colder over the holiday until it would no longer pump.

With material set up in the piping, startup could not commence until the material was either removed or circulating again. There are safeties in the tubeheater control logic to prevent the tubeheater from starting without adequate circulation. These safeties are in place to prevent overheating of material from causing excess pressure resulting in tube rupture. Due to the hazards associated with bypassing those safeties, procedure requires a supervisor to consult with the plant superintendent so that proper precautions and procedures can be put in place.

When the Area Supervisor began troubleshooting the loss of flow, he found that the material was too cold to pump. Without consulting the superintendent, he bypassed the safeties and began to apply heat. He left the heat running too long and pressure in the tubeheater coil increased until it ruptured and leaked causing the fire.

The fire resulted in smoke (not process emissions) from the stack exhaust point of Tubeheater #2. This smoke was vented to the atmosphere through Tubeheater #2 stack; however, these were uncontrolled fire emissions from combustion of feedstock and not the normal controlled combustion emissions from fuel combustion. In response, the operators activated the firefighting system that injected steam to the Tubeheater to extinguish the fire. In addition, the operators contacted the fire department immediately and the firefighting crew arrived within 5 minutes. The fire and smoke diminished to completely out over a period of less than 2 hours. A copy of the fire department's report is attached to this letter.

Corrective actions following this incident include:

- Replacement of the failed components that led to the tubeheaters failing to light
- Corrective action with the supervisors related to poor communication and failure to follow procedure, and
- Implementation of a new procedure to require repeated notification of shift supervisors of tubeheater trouble at lest once per shift and emptying the system if the temperature drops below the prescribed limit.

Estimating the emissions from the fire (versus controlled combustion of fuel emissions) is challenging and such an estimate would not result in a realistic emission rate from the event. The permitted emission rates are, as IEPA is aware, established for the facility's fuel combustion

exhaust flow and not for an accidental fire event. The information to attempt calculation of emission estimates from the fire does not exist. This information includes the amount and composition of the material combusted, the degree of combustion between partial and complete, the amount combustion air entering through the dampers at the bottom of the heater, and the temperature of the flame. Koppers elected to report the event as an exceedance of the 30% opacity limit in Permit No. 11100041, Section 2.a.

Thank you for considering this additional information to the report of the fire event at Tube Heater #2. Please contact me, or Charvi Payghode, Environmental Manager (708-222-4688, Payghodeck@koppers.com), if you would like to discuss this information or require any additional information.

Sincerely,

L. Seth Herring
Plant Manager
Carbon Materials and Chemicals

Attachments:

1 – Secure Unit when Tubeheater will not light (Cold Circulation) Procedure

2 – Fire Department Response Report

Attachment 1

Secure Unit when Tubeheater will not light (Cold Circulation) Procedure

Secure Unit When Tubeheater Will Not Light (Cold Circulation)

Purpose:

To provide the method for securing the unit when the tubeheater will not light and material becomes too cold to maintain reliable circulation.

Safety, Health and Environmental Considerations

PPE requirements:

Standard PPE - Class B (ANSI Z89.1) hard hat, Safety glasses w/side shields (ANZI Z87), Metatarsal safety boots (minimum six-inch lace type), Long sleeved shirt/pant (cotton work uniform). Personal H2S monitor (cricket)

Physical Hazards: None
Chemical Hazards: H2S exposure
Environmental Considerations: None
Other requirements: None

Accountability

All production employees are responsible for knowing this procedure.

Relevant Documents

WI-TAR-0023 Tar Distillation Unit Shutdown

Procedure

Any time you cannot light the tubeheater to maintain the temperature of the reboiler loop while circulating follow these steps:

1. Notify Supervisor. This must be done at least once per shift to ensure that the current shift supervisor is aware of the issue.
    a. Shift supervisor is to call out for an electrician or other craftsman to address the problem.
2. If the Bottom of Column temperature drops below 125C inform the supervisor that the situation is becoming critical.
    a. Supervisor is to immediately inform the electrical supervisor and tar superintendent that the tubeheater will not light.
3. If the Bottom of Column temperature drops below 110C the operator is to inform the supervisor and execute a complete shut down as detailed in the Unit Shutdown Work Instruction (WI-TAR-0023)

Revision History

Revision Number	Prepared by	Date	Summary of Changes
0	B. Michalowski	3/8/2021	Initial issue

Attachment 2

Fire Department Response Report

A — FDID ★: CS852 | State ★: IL | Incident Date ★ (MM DD YYYY): 12 26 2020 | Station: 1ST | Incident Number ★: 20-0001175 | Exposure ★: 000 | [ ] Delete [X] Change [ ] No Activity | NFIRS -1 Basic

B Location★

[ ] Check this box to indicate that the address for this incident is provided on the Wildland Fire Module in Section B "Alternative Location Specification". Use only for Wildland fires.

Census Tract: 8207 -

[X] Street address
[ ] Intersection
[ ] In front of
[ ] Rear of
[ ] Adjacent to
[ ] Directions

Number/Milepost: 3900 | Prefix: S | Street or Highway: Laramie | Street Type: AVE | Suffix:

Apt./Suite/Room: | City: Stickney | State: IL | Zip Code: 60402 -

Cross street or directions, as applicable:

C Incident Type ★

Incident Type: 162 Outside equipment fire

D Aid Given or Received★

1 [ ] Mutual aid received
2 [X] Automatic aid recv.
3 [ ] Mutual aid given
4 [ ] Automatic aid given
5 [ ] Other aid given
N [ ] None

Their FDID: | Their State: | Their Incident Number:

E1 Date & Times — Midnight is 0000

Check boxes if dates are the same as Alarm Date.

	Month	Day	Year	Hr Min Sec
Alarm ★ (ALARM always required)	12	26	2020	10:17:00
[X] Arrival ★ (ARRIVAL required, unless canceled or did not arrive)	12	26	2020	10:21:00
[ ] Controlled (CONTROLLED Optional, Except for wildland fires)				
[X] Last Unit Cleared (LAST UNIT CLEARED, required except for wildland fires)	12	26	2020	11:56:00

E2 Shift & Alarms

Local Option

Shift or Platoon: 1 | Alarms: | District: IND

E3 Special Studies

Local Option

Special Study ID: | Special Study Value:

F Actions Taken ★

Primary Action Taken (1): 11 Extinguishment by fire

Additional Action Taken (2):

Additional Action Taken (3):

G1 Resources ★

[X] Check this box and skip this section if an Apparatus or Personnel form is used.

	Apparatus	Personnel
Suppression	0004	0009
EMS		
Other		

[ ] Check box if resource counts include aid received resources.

G2 Estimated Dollar Losses & Values

LOSSES: Required for all fires if known. Optional for non fires.

		None
Property $	000,000	[X]
Contents $	000,000	[X]

PRE-INCIDENT VALUE: Optional

Property $	000,000	[ ]
Contents $	000,000	[ ]

Completed Modules

[X] Fire-2
[ ] Structure-3
[ ] Civil Fire Cas.-4
[ ] Fire Serv. Cas.-5
[ ] EMS-6
[ ] HazMat-7
[ ] Wildland Fire-8
[X] Apparatus-9
[X] Personnel-10
[ ] Arson-11

H1★ Casualties [ ] None

	Deaths	Injuries
Fire Service		
Civilian		

H2 Detector

Required for Confined Fires.

1 [ ] Detector alerted occupants
2 [X] Detector did not alert them
U [ ] Unknown

H3 Hazardous Materials Release

N [X] None
1 [ ] Natural Gas: slow leak, no evacuation or HazMat actions
2 [ ] Propane gas: <21 lb. tank (as in home BBQ grill)
3 [ ] Gasoline: vehicle fuel tank or portable container
4 [ ] Kerosene: fuel burning equipment or portable storage
5 [ ] Diesel fuel/fuel oil: vehicle fuel tank or portable
6 [ ] Household solvents: home/office spill, cleanup only
7 [ ] Motor oil: from engine or portable container
8 [ ] Paint: from paint cans totaling < 55 gallons
0 [ ] Other: Special HazMat actions required or spill > 55gal., Please complete the HazMat form

I Mixed Use Property

NN	[ ] Not Mixed
10	[ ] Assembly use
20	[ ] Education use
33	[ ] Medical use
40	[ ] Residential use
51	[ ] Row of stores
53	[ ] Enclosed mall
58	[ ] Bus. & Residential
59	[ ] Office use
60	[X] Industrial use
63	[ ] Military use
65	[ ] Farm use
00	[ ] Other mixed use

J Property Use★

Structures

131 [ ] Church, place of worship
161 [ ] Restaurant or cafeteria
162 [ ] Bar/Tavern or nightclub
213 [ ] Elementary school or kindergarten
215 [ ] High school or junior high
241 [ ] College, adult education
311 [ ] Care facility for the aged
331 [ ] Hospital
341 [ ] Clinic,clinic type infirmary
342 [ ] Doctor/dentist office
361 [ ] Prison or jail, not juvenile
419 [ ] 1-or 2-family dwelling
429 [ ] Multi-family dwelling
439 [ ] Rooming/boarding house
449 [ ] Commercial hotel or motel
459 [ ] Residential, board and care
464 [ ] Dormitory/barracks
519 [ ] Food and beverage sales
539 [ ] Household goods,sales,repairs
579 [ ] Motor vehicle/boat sales/repair
571 [ ] Gas or service station
599 [ ] Business office
615 [ ] Electric generating plant
629 [ ] Laboratory/science lab
700 [X] Manufacturing plant
819 [ ] Livestock/poultry storage(barn)
882 [ ] Non-residential parking garage
891 [ ] Warehouse

Outside

124 [ ] Playground or park
655 [ ] Crops or orchard
669 [ ] Forest (timberland)
807 [ ] Outdoor storage area
919 [ ] Dump or sanitary landfill
931 [ ] Open land or field
936 [ ] Vacant lot
938 [ ] Graded/care for plot of land
946 [ ] Lake, river, stream
951 [ ] Railroad right of way
960 [ ] Other street
961 [ ] Highway/divided highway
962 [ ] Residential street/driveway
981 [ ] Construction site
984 [ ] Industrial plant yard

Lookup and enter a Property Use code only if you have NOT checked a Property Use box:

Property Use: 700

Manufacturing, processing

NFIRS-1 Revision 03/11/99

K1 Person/Entity Involved (Local Option)

KOPPERS INDUSTRIES (Business name (if applicable)) | 630 - 605 - 4380 (Area Code - Phone Number)

☐ Check This Box if same address as incident location. Then skip the three duplicate address lines.

Mr.,Ms., Mrs.	First Name	MI	Last Name	Suffix
	Tom		Tortoriello	

Number	Prefix	Street or Highway	Street Type	Suffix
3900	S	Laramie	AVE	

Post Office Box | Apt./Suite/Room | City: Stickney

State: IL | Zip Code: 60402

☐ More people involved? Check this box and attach Supplemental Forms (NFIRS-1S) as necessary

K2 Owner (Local Option) ☐ Same as person involved? Then check this box and skip the rest of this section.

Business name (if Applicable) | Area Code - Phone Number

☐ Check this box if same address as incident location. Then skip the three duplicate address lines.

Mr.,Ms., Mrs.	First Name	MI	Last Name	Suffix

Number	Prefix	Street or Highway	Street Type	Suffix

Post Office Box | Apt./Suite/Room | City

State | Zip Code

L Remarks (Local Option)

12/26/2020 13:31:45 Jacob Anderson

Crew called for the report of fire at Koppers Chemicals. Upon arrival crew found a large header of smoke coming from one of the stacks on property. Engine 1203 gave report and assumed Koppers command. Crew made contact with facility staff, who were already flowing a hydrant mounted deluge gun onto fire. Staff stated it was ok to flow water on product. 1203 stretched a 2 1/2 inch preconnect to the south of the stack that was on fire and obtained a positive water supply. Crew noted a heavy fire presence from the bottom of the stack. The stack in question was Tar 2 Tube Heater 2, staff stated the supply of product was shut off along with gas. Chief 1210 arrived on scene and assumed command. FVFD engine 812 was instructed to take position to the west of stack and hit the upper parts of stack with deck gun. Crews were sure to stay out of smoke and uphill/upwind. Koppers provided SDS paperwork on product. SDS ID 00228334. Air quality was noted with zeros across the board. Fire was extinguished and staff stated they would continue with their in house fire mitigation for the time being. Crews cleaned up and were released by command with no further issues.

L Authorization

Officer in charge ID	Signature	Position or rank	Assignment	Month	Day	Year
15309	Anderson, Jacob P	CP		12	26	2020

Check Box if same as Officer in charge.	Member making report ID	Signature	Position or rank	Assignment	Month	Day	Year
☒	15309	Anderson, Jacob P	CP		12	26	2020

FDID *	State *	MM	DD	YYYY	Station	Incident Number *	Exposure *	
CS852	IL	12	26	2020	1ST	20-0001175	000	Complete Narrative

Incident Date *

Narrative:

12/26/2020 13:31:45 Jacob Anderson

Crew called for the report of fire at Koppers Chemicals. Upon arrival crew found a large header of smoke coming from one of the stacks on property. Engine 1203 gave report and assumed Koppers command. Crew made contact with facility staff, who were already flowing a hydrant mounted deluge gun onto fire. Staff stated it was ok to flow water on product. 1203 stretched a 2 1/2 inch preconnect to the south of the stack that was on fire and obtained a positive water supply. Crew noted a heavy fire presence from the bottom of the stack. The stack in question was Tar 2 Tube Heater 2, staff stated the supply of product was shut off along with gas. Chief 1210 arrived on scene and assumed command. FVFD engine 812 was instructed to take position to the west of stack and hit the upper parts of stack with deck gun. Crews were sure to stay out of smoke and uphill/upwind. Koppers provided SDS paperwork on product. SDS ID 00228334. Air quality was noted with zeros across the board. Fire was extinguished and staff stated they would continue with their in house fire mitigation for the time being. Crews cleaned up and were released by command with no further issues.

A

FDID ★	State ★	Incident Date ★ (MM / DD / YYYY)	Station	Incident Number ★	Exposure ★	
CS852	IL	12 / 26 / 2020	1ST	20-0001175	000	☐ Delete ☒ Change ☐ No Activity

NFIRS -2 Fire

B Property Details

B1 [ ] ☒ Not Residential
Estimated Number of residential living units in building of origin whether or not all units became involved

B2 [ ] ☒ Buildings not involved
Number of buildings involved

B3 [ ] ☐ None
Acres burned (outside fires) ☐ Less than one acre

C On-Site Materials or Products ☐ None

Complete if there were any significant amounts of commercial,industrial, energy or agricultural products or materials on the Property, whether or not they became involved

Enter up to three codes. Check one or more boxes for each code entered.

		Usage
611	Industrial	1 ☐ Bulk storage or warehousing 2 ☒ Processing or manufacturing 3 ☐ Packaged goods for sale 4 ☐ Repair or service
		1 ☐ Bulk storage or warehousing 2 ☐ Processing or manufacturing 3 ☐ Packaged goods for sale 4 ☐ Repair or service
		1 ☐ Bulk storage or warehousing 2 ☐ Processing or manufacturing 3 ☐ Packaged goods for sale 4 ☐ Repair or service

On-site material (1) / (2) / (3)

D Ignition

D1 64 Incinerator area
Area of fire origin ★

D2 UU Undetermined
Heat source ★

D3 UU Undetermined
Item first ignited ★ 1 ☐ Check Box if fire spread was confined to object of origin

D4 [ ] [ ]
Type of material first ignited — Required only if item first ignited code is 00 or <70

E1 Cause of Ignition

☐ Check box if this is an exposure report. Skip to section G

1 ☐ Intentional
2 ☒ Unintentional
3 ☐ Failure of equipment or heat source
4 ☐ Act of nature
5 ☐ Cause under investigation
U ☐ Cause undetermined after investigation

E2 Factors Contributing To Ignition ☐ None

20 Mechanical
Factor Contributing To Ignition (1)

[ ] [ ]
Factor Contributing To Ignition (2)

E3 Human Factors Contributing To Ignition

Check all applicable boxes

1 ☐ Asleep ☒ None
2 ☐ Possibly impaired by alcohol or drugs
3 ☐ Unattended person
4 ☐ Possibly mental disabled
5 ☐ Physically Disabled
6 ☐ Multiple persons involved
7 ☐ Age was a factor

Estimated age of person envolved [ ]

1 ☐ Male 2 ☐ Female

F1 Equipment Involved In Ignition

☐ None If Equipment was not involved, Skip to Section G

[ ] [ ]
Equipment involved

Brand [ ]
Model [ ]
Serial # [ ]
Year [ ]

F2 Equipment Power

[ ] [ ]
Equipment Power Source

F3 Equipment Portability

1 ☐ Portable
2 ☐ Stationary

Portable equipment normally can be moved by one person, is designed to be use in multiple locations, and requires no tools to install.

G Fire Suppression Factors

Enter up to three codes. ☒ None

NNN None
Fire suppression factor (1)

[ ] [ ]
Fire suppression factor (2)

[ ] [ ]
Fire suppression factor (3)

H1 Mobile Property Involved

☐ None

1 ☐ Not involved in ignition, but burned
2 ☐ Involved in ignition, but did not burn
3 ☐ Involved in ignition and burned

H2 Mobile Property Type & Make

[ ] [ ]
Mobile property type

[ ] [ ]
Mobile property make

[ ] Year
Moblie property model

[ ] State [ ]
License Plate Number — VIN Number

Local Use

☐ Pre-Fire Plan Available

Some of the information presented in this report may be based upon reports from other Agencies

☐ Arson report attached
☐ Police report attached
☐ Coroner report attached
☐ Other reports attached

NFIRS-2 Revision 01/19/99

A | FDID ★: CS852 | State ★: IL | Incident Date ★ (MM DD YYYY): 12 26 2020 | Station: 1ST | Incident Number ★: 20-0001175 | Exposure ★: 000 | ☐ Delete ☒ Change | NFIRS - 9 Apparatus or Resources

B Apparatus or Resource ★	Date and Times (Check if same as alarm date)	Month	Day	Year	Hour	Min	Sent ☒	Number of People ★	Use (Check ONE box for each apparatus to indicate its main use at the incident.)	Actions Taken
1 ID: 1203 Type: 11	Dispatch ☒	12	26	2020	10:17		☒	4	☒ Suppression ☐ EMS ☐ Other	
	Arrival ☒	12	26	2020	10:21					
	Clear ☒	12	26	2020	11:56					
2 ID: 1208 Type: 60	Dispatch ☒	12	26	2020	10:17		☒	1	☒ Suppression ☐ EMS ☐ Other	
	Arrival ☒	12	26	2020	10:30					
	Clear ☒	12	26	2020	11:56					
3 ID: 1210 Type: 92	Dispatch ☒	12	26	2020	10:17		☒	1	☒ Suppression ☐ EMS ☐ Other	
	Arrival ☒	12	26	2020	10:21					
	Clear ☒	12	26	2020	11:56					
4 ID: STANBY Type: NN	Dispatch ☒	12	26	2020	10:17		☒	3	☒ Suppression ☐ EMS ☐ Other	
	Arrival ☒	12	26	2020	10:21					
	Clear ☒	12	26	2020	11:56					
5 ID: Type:	Dispatch ☐						☐		☐ Suppression ☐ EMS ☐ Other	
	Arrival ☐									
	Clear ☐									
6 ID: Type:	Dispatch ☐						☐		☐ Suppression ☐ EMS ☐ Other	
	Arrival ☐									
	Clear ☐									
7 ID: Type:	Dispatch ☐						☐		☐ Suppression ☐ EMS ☐ Other	
	Arrival ☐									
	Clear ☐									
8 ID: Type:	Dispatch ☐						☐		☐ Suppression ☐ EMS ☐ Other	
	Arrival ☐									
	Clear ☐									
9 ID: Type:	Dispatch ☐						☐		☐ Suppression ☐ EMS ☐ Other	
	Arrival ☐									
	Clear ☐									

Type of Apparatus or Resources

Ground Fire Suppression
- 11 Engine
- 12 Truck or aerial
- 13 Quint
- 14 Tanker & pumper combination
- 16 Brush truck
- 17 ARF (Aircraft Rescue and Firefighting)
- 10 Ground fire suppression, other

Heavy Ground Equipment
- 21 Dozer or plow
- 22 Tractor
- 24 Tanker or tender
- 20 Heavy equipment, other

Aircraft
- 41 Aircraft: fixed wing tanker
- 42 Helitankar
- 43 Helicopter
- 40 Aircraft, other

Marine Equipment
- 51 Fire boat with pump
- 52 Boat, no pump
- 50 Marine apparatus, other

Support Equipment
- 61 Breathing apparatus support
- 62 Light and air unit
- 60 Support apparatus, other

Medical & Rescue
- 71 Rescue unit
- 72 Urban Search & rescue unit
- 73 High angle rescue unit
- 75 BLS unit
- 76 ALS unit
- 70 Medical and rescue unit,other

More Apparatus? Use Additional Sheets

Other
- 91 Mobile command post
- 92 Chief officer car
- 93 HazMat unit
- 94 Type 1 hand crew
- 95 Type 2 hand crew
- 99 Privately owned vehicle
- 00 Other apparatus/resource

- NN None
- UU Undetermined

NFIRS-9 Revision 11/17/98

A

FDID *	State *	Incident Date * (MM / DD / YYYY)	Station	Incident Number *	Exposure *	Delete / Change	NFIRS - 10
CS852	IL	12 / 26 / 2020	1ST	20-0001175	000	[ ] Delete [X] Change	Personnel

B Apparatus or Resource * (Use codes listed below)	Date and Times (Check if same as alarm date)	Month	Day	Year	Hours/mins	Sent [X]	Number of People *	Use (Check ONE box for each apparatus to indicate its main use at the incident.)	Actions Taken (List up to 4 actions for each apparatus and each personnel.)
1 ID 1203 Type 11	Dispatch [X]	12	26	2020	10:17	Sent [X]	4	[X] Suppression [ ] EMS [ ] Other	
	Arrival [X]	12	26	2020	10:21				
	Clear [X]	12	26	2020	11:56				

Personnel ID	Name	Rank or Grade	Attend [X]	Action Taken	Action Taken	Action Taken	Action Taken
15309	Anderson, Jacob	CP	X				
15310	Kozubowksi, Craig	PF	X				
15311	Maldonado, Franklin	PF	X				
15380	Iovino, Dominick	FF	X				

B Apparatus or Resource * (Use codes listed below)	Date and Times (Check if same as alarm date)	Month	Day	Year	Hours/mins	Sent [X]	Number of People *	Use (Check ONE box for each apparatus to indicate its main use at the incident.)	Actions Taken (List up to 4 actions for each apparatus and each personnel.)
2 ID 1208 Type 60	Dispatch [X]	12	26	2020	10:17	Sent [X]	1	[X] Suppression [ ] EMS [ ] Other	
	Arrival [X]	12	26	2020	10:30				
	Clear [X]	12	26	2020	11:56				

Personnel ID	Name	Rank or Grade	Attend [X]	Action Taken	Action Taken	Action Taken	Action Taken
15302	Babinec, John	DC	X				

B Apparatus or Resource * (Use codes listed below)	Date and Times (Check if same as alarm date)	Month	Day	Year	Hours/mins	Sent [X]	Number of People *	Use (Check ONE box for each apparatus to indicate its main use at the incident.)	Actions Taken (List up to 4 actions for each apparatus and each personnel.)
3 ID 1210 Type 92	Dispatch [X]	12	26	2020	10:17	Sent [X]	1	[X] Suppression [ ] EMS [ ] Other	
	Arrival [X]	12	26	2020	10:21				
	Clear [X]	12	26	2020	11:56				

Personnel ID	Name	Rank or Grade	Attend [X]	Action Taken	Action Taken	Action Taken	Action Taken
15314	Boyajian, Jeff	FC	X				

A

FDID *	State *	Incident Date * (MM DD YYYY)	Station	Incident Number *	Exposure *		
CS852	IL	12 26 2020	1ST	20-0001175	000	☐ Delete ☒ Change	NFIRS - 10 Personnel

B Apparatus or Resource * (Use codes listed below)	Date and Times (Check if same as alarm date)	Month	Day	Year	Hours/mins	Sent ☒	Number of People *	Use (Check ONE box for each apparatus to indicate its main use at the incident.)	Actions Taken (List up to 4 actions for each apparatus and each personnel.)
1 ID STANBY Type NN	Dispatch ☒	12	26	2020	10:17	Sent ☒	3	☒ Suppression ☐ EMS ☐ Other	
	Arrival ☒	12	26	2020	10:21				
	Clear ☒	12	26	2020	11:56				

Personnel ID	Name	Rank or Grade	Attend ☒	Action Taken	Action Taken	Action Taken	Action Taken
15335	Rousseau, Josh		X				
15372	Corsini, Mark	FF	X				
15374	Abboud, Nicholas	FF	X				

2 ID Type						Sent ☐		☐ Suppression ☐ EMS ☐ Other	
	Dispatch ☐								
	Arrival ☐								
	Clear ☐								

Personnel ID	Name	Rank or Grade	Attend ☒	Action Taken	Action Taken	Action Taken	Action Taken
			☐				
			☐				
			☐				
			☐				
			☐				
			☐				

3 ID Type						Sent ☐		☐ Suppression ☐ EMS ☐ Other	
	Dispatch ☐								
	Arrival ☐								
	Clear ☐								

Personnel ID	Name	Rank or Grade	Attend ☒	Action Taken	Action Taken	Action Taken	Action Taken
			☐				
			☐				
			☐				
			☐				
			☐				
			☐				

FDID *	State *	MM Incident	DD Date *	YYYY	Station	Incident Number *	Exposure *	Responding Personnel
CS852	IL	12	26	2020	1ST	20-0001175	000	

Staff ID\Staff Name	Unit		Activity	Position	Rank	PayScl	Hrs	HrsPd	Pts
15309 Anderson, Jacob P	1203		FIRECALL Fire call	OF	CP		1.65	1.65	0.00
15310 Kozubowksi, Craig	1203		FIRECALL Fire call	R1	PF		1.65	1.65	0.00
15311 Maldonado, Franklin	1203		FIRECALL Fire call	R2	PF		1.65	1.65	0.00
15380 Iovino, Dominick	1203	X	FIRECALL Fire call	DR	FF		1.65	1.65	0.00
15302 Babinec, John C	1208	X	FIRECALL Fire call	DR	DC		1.65	1.65	0.00
15314 Boyajian, Jeff G	1210	X	FIRECALL Fire call	CM	FC		1.65	1.65	0.00
15335 Rousseau, Josh	STANBY		FIRECALL Fire call	ST			1.65	1.65	0.00
15372 Corsini, Mark	STANBY		FIRECALL Fire call	ST	FF		1.65	1.65	0.00
15374 Abboud, Nicholas	STANBY		FIRECALL Fire call	ST	FF		1.65	1.65	0.00

Total Participants: 9 **Total Personnel Hours:** 14.85

An 'X' next to the unit denotes driver.

CS852	IL	12	26	2020	1ST	20-0001175	000	Responding Units/Personnel
FDID	State	Incidant Date			Station	Incident Number	Exposure	

Unit	Notify Time	Enroute Time	Arrival Time	Cleared Time
1203 Crimson Fire engine	10:17:00	10:18:00	10:21:00	11:56:00

Staff ID\Staff Name		Activity	Rank	Position	Role
15309	Anderson, Jacob P	Fire call	Captain	Officer's se	Captain
15310	Kozubowksi, Craig	Fire call	Probationar	Rear seat #1	
15311	Maldonado, Franklin	Fire call	Probationar	Rear seat #2	
15380	Iovino, Dominick	Fire call	Firefighter	Driver	Driver of th

1208 Apparatus/Staff, Utility car	10:17:00	10:25:00	10:30:00	11:56:00

Staff ID\Staff Name		Activity	Rank	Position	Role
15302	Babinec, John C	Fire call	Deputy Chie	Driver	Deputy Chief

1210 Fire Chief	10:17:00	10:18:00	10:21:00	11:56:00

Staff ID\Staff Name		Activity	Rank	Position	Role
15314	Boyajian, Jeff G	Fire call	Fire Chief	Command	Chief

STANBY Standing by in quarters	10:17:00	10:18:00	10:21:00	11:56:00

Staff ID\Staff Name		Activity	Rank	Position	Role
15335	Rousseau, Josh	Fire call		Station	
15372	Corsini, Mark	Fire call	Firefighter	Station	
15374	Abboud, Nicholas	Fire call	Firefighter	Station	

A

FDID ★	State ★	Incident Date ★ (MM / DD / YYYY)	Station	Incident Number ★	Exposure ★	Delete / Change	NFIRS - 1S Supplemental
CS852	IL	12 / 26 / 2020	1ST	20-0001175	000	☐ Delete ☒ Change	

K1 Person/Entity Involved

Business name if applicable: KOPPERS INDUSTRIES — Phone Number: ___-___-___

☐ Check this box if same address as incident location. Then skip the three duplicate address lines.

Mr.,Ms., Mrs.: ___ First Name: Gregg — MI: ___ Last Name: Bambuhle — Suffix: ___

Number: 3900 — Prefix: S — Street or highway: Laramie — Street Type: AVE — Suffix: ___

Post office box: ___ — Apt./Suite/Room: ___ — City: Stickney

State: IL — Zip Code: 60402-___

K2 Person/Entity Involved

Business name if applicable: ___ — Phone Number: ___-___-___

☐ Check this box if same address as incident location. Then skip the three duplicate address lines.

Mr.,Ms., Mrs.: ___ First Name: ___ — MI: ___ Last Name: ___ — Suffix: ___

Number: ___ — Prefix: ___ — Street or highway: ___ — Street Type: ___ — Suffix: ___

Post office box: ___ — Apt./Suite/Room: ___ — City: ___

State: ___ — Zip Code: ___-___

K3 Person/Entity Involved

Business name if applicable: ___ — Phone Number: ___-___-___

☐ Check this box if same address as incident location. Then skip the three duplicate address lines.

Mr.,Ms., Mrs.: ___ First Name: ___ — MI: ___ Last Name: ___ — Suffix: ___

Number: ___ — Prefix: ___ — Street or highway: ___ — Street Type: ___ — Suffix: ___

Post office box: ___ — Apt./Suite/Room: ___ — City: ___

State: ___ — Zip Code: ___-___

K4 Person/Entity Involved

Business name if applicable: ___ — Phone Number: ___-___-___

☐ Check this box if same address as incident location. Then skip the three duplicate address lines.

Mr.,Ms., Mrs.: ___ First Name: ___ — MI: ___ Last Name: ___ — Suffix: ___

Number: ___ — Prefix: ___ — Street or highway: ___ — Street Type: ___ — Suffix: ___

Post office box: ___ — Apt./Suite/Room: ___ — City: ___

State: ___ — Zip Code: ___-___

K5 Person/Entity Involved

Business name if applicable: ___ — Phone Number: ___-___-___

☐ Check this box if same address as incident location. Then skip the three duplicate address lines.

Mr.,Ms., Mrs.: ___ First Name: ___ — MI: ___ Last Name: ___ — Suffix: ___

Number: ___ — Prefix: ___ — Street or highway: ___ — Street Type: ___ — Suffix: ___

Post office box: ___ — Apt./Suite/Room: ___ — City: ___

State: ___ — Zip Code: ___-___

NFIRS-11 Revision 6/9/98

FDID	State	Incident Date (MM)	Incident Date (DD)	Incident Date (YYYY)	Station	Incident Number	Exposure	NFIRS - Involvement User Fields
CS852	IL	12	26	2020	1ST	20-0001175	000	

Involvement Name:	Involvement Type:	Owner:	Occupant:
Tortoriello, Tom			

Involvement Name:	Involvement Type:	Owner:	Occupant:
Bambuhle, Gregg			

ATTACHMENT 3

KOPPERS
Koppers Carbon Materials & Chemicals
3900 South Laramie
Cicero, Illinois, 60804
Tel 708 656 5900
www.koppers.com

Ms. Yasmine Keppner-Bauman
Illinois Environmental Protection Agency
Bureau of Air
Compliance Section (MC 40)
PO Box 19276
Springfield, IL 62794-9276

RE: Follow-up Communications on Tar Distillation Fire
Koppers Inc., Stickney Plant
ID Number: 031300AAJ

Dear Ms. Keppner-Bauman:

Koppers Inc. (Koppers) operates a chemical manufacturing plant in Stickney, Illinois under Clean Air Act Permit Program (CAAPP) Permit # 96030134. On March 20, 2021, there was a fire at the Tar Distillation Column and adjacent scaffolding at approximately 10:20 pm. In an effort to keep the Illinois Environmental Protection Agency informed on matters that may lead to inquiries from concerned citizens in the area of the plant, Koppers reported the incident to the IEPA via telephone. This letter is sent as a follow-up report regarding that incident.

Upon discovery of the fire, the distillation plant was immediately shut down. Within a few minutes of shutting the process down, the main fire was extinguished. It is Koppers' understanding that the cause of the fire was material which had leaked from the top of Unit 2 distillation column and ignited. Preliminary identification of the leaked material is fuel oil, pyrolysis (CAS No. 69013-21-4), and clarified oils (petroleum), catalytic cracked (CAS No. 64741-624). The root cause is still under further investigation as the equipment is dismantled. Attached to this letter is the fire department response to the incident.

The facility continues to investigate the root cause of the fire and will implement strategies, as appropriate, to prevent similar incidents from happening in the future.

Condition 5.7 of the CAAPP permit requires Koppers to provide prompt notice to the Illinois Environmental Protection Agency of deviations from CAAPP permit requirements. Here, because the incident was a fire on the outside of the distillation column, no stack vented emissions occurred and there was no deviation from permit limits. Due to the relatively short duration of the fire and the time of day in which it occurred, Koppers does not believe that there were significant effects to the surrounding community.

If there are any questions concerning this report, please contact Ms. Charvi Payghode of Koppers at (708) 222-4688.

Sincerely,

L. Seth Herring
Plant Manager CMC NA

Attachment

Stickney Fire Department Report

A FDID: CS852 | State: IL | Incident Date (MM DD YYYY): 03 20 2021 | Station: 1ST | Incident Number: 21-0000243 | Exposure: 000 | ☐ Delete ☐ Change ☐ No Activity | NFIRS -1 Basic

B Location

☐ Check this box to indicate that the address for this incident is provided on the Wildland Fire Module in Section B "Alternative Location Specification". Use only for Wildland fires.

Census Tract: 8207 -

☒ Street address
☐ Intersection
☐ In front of
☐ Rear of
☐ Adjacent to
☐ Directions

Number/Milepost: 3900 | Prefix: S | Street or Highway: Laramie | Street Type: AVE | Suffix:

Apt./Suite/Room: | City: Stickney | State: IL | Zip Code: 60402 -

Cross street or directions, as applicable:

C Incident Type: 111 Building fire

D Aid Given or Received

1 ☐ Mutual aid received
2 ☒ Automatic aid recv.
3 ☐ Mutual aid given
4 ☐ Automatic aid given
5 ☐ Other aid given
N ☐ None

Their FDID: CS201 | Their State:
Their Incident Number:

E1 Date & Times — Midnight is 0000

Check boxes if dates are the same as Alarm Date.

	Month	Day	Year	Hr Min Sec
Alarm ★ (ALARM always required)	03	20	2021	22:31:00
☒ Arrival ★ (ARRIVAL required, unless canceled or did not arrive)	03	20	2021	22:34:00
☐ Controlled (CONTROLLED Optional, Except for wildland fires)				
☐ Last Unit Cleared (LAST UNIT CLEARED, required except for wildland fires)	03	21	2021	01:44:00

E2 Shift & Alarms (Local Option)

Shift or Platoon: 3 | Alarms: | District: IND

E3 Special Studies (Local Option)

Special Study ID: | Special Study Value:

F Actions Taken

Primary Action Taken (1): 11 Extinguishment by fire
Additional Action Taken (2):
Additional Action Taken (3):

G1 Resources

☒ Check this box and skip this section if an Apparatus or Personnel form is used.

	Apparatus	Personnel
Suppression	0003	0006
EMS		
Other		

☐ Check box if resource counts include aid received resources.

G2 Estimated Dollar Losses & Values

LOSSES: Required for all fires if known. Optional for non fires.

		None
Property $	,000,000	☒
Contents $	,000,000	☒

PRE-INCIDENT VALUE: Optional

Property $	,000,000	☐
Contents $	,000,000	☐

Completed Modules

☒ Fire-2
☒ Structure-3
☐ Civil Fire Cas.-4
☐ Fire Serv. Cas.-5
☐ EMS-6
☐ HazMat-7
☐ Wildland Fire-8
☒ Apparatus-9
☒ Personnel-10
☐ Arson-11

H1 Casualties ☐ None

	Deaths	Injuries
Fire Service		
Civilian		

H2 Detector — Required for Confined Fires.

1 ☐ Detector alerted occupants
2 ☒ Detector did not alert them
U ☐ Unknown

H3 Hazardous Materials Release

N ☒ None
1 ☐ Natural Gas: slow leak, no evacuation or HazMat actions
2 ☐ Propane gas: <21 lb. tank (as in home BBQ grill)
3 ☐ Gasoline: vehicle fuel tank or portable container
4 ☐ Kerosene: fuel burning equipment or portable storage
5 ☐ Diesel fuel/fuel oil: vehicle fuel tank or portable
6 ☐ Household solvents: home/office spill, cleanup only
7 ☐ Motor oil: from engine or portable container
8 ☐ Paint: from paint cans totaling < 55 gallons
0 ☐ Other: Special HazMat actions required or spill > 55gal., Please complete the HazMat form

I Mixed Use Property

NN ☐ Not Mixed
10 ☐ Assembly use
20 ☐ Education use
33 ☐ Medical use
40 ☐ Residential use
51 ☐ Row of stores
53 ☐ Enclosed mall
58 ☐ Bus. & Residential
59 ☐ Office use
60 ☒ Industrial use
63 ☐ Military use
65 ☐ Farm use
00 ☐ Other mixed use

J Property Use — Structures

131 ☐ Church, place of worship
161 ☐ Restaurant or cafeteria
162 ☐ Bar/Tavern or nightclub
213 ☐ Elementary school or kindergarten
215 ☐ High school or junior high
241 ☐ College, adult education
311 ☐ Care facility for the aged
331 ☐ Hospital
341 ☐ Clinic,clinic type infirmary
342 ☐ Doctor/dentist office
361 ☐ Prison or jail, not juvenile
419 ☐ 1-or 2-family dwelling
429 ☐ Multi-family dwelling
439 ☐ Rooming/boarding house
449 ☐ Commercial hotel or motel
459 ☐ Residential, board and care
464 ☐ Dormitory/barracks
519 ☐ Food and beverage sales
539 ☐ Household goods,sales,repairs
579 ☐ Motor vehicle/boat sales/repair
571 ☐ Gas or service station
599 ☐ Business office
615 ☐ Electric generating plant
629 ☐ Laboratory/science lab
700 ☒ Manufacturing plant
819 ☐ Livestock/poultry storage(barn)
882 ☐ Non-residential parking garage
891 ☐ Warehouse

Outside

124 ☐ Playground or park
655 ☐ Crops or orchard
669 ☐ Forest (timberland)
807 ☐ Outdoor storage area
919 ☐ Dump or sanitary landfill
931 ☐ Open land or field
936 ☐ Vacant lot
938 ☐ Graded/care for plot of land
946 ☐ Lake, river, stream
951 ☐ Railroad right of way
960 ☐ Other street
961 ☐ Highway/divided highway
962 ☐ Residential street/driveway
981 ☐ Construction site
984 ☐ Industrial plant yard

Lookup and enter a Property Use code only if you have NOT checked a Property Use box:

Property Use: 700 Manufacturing, processing

NFIRS-1 Revision 03/11/99

K1 Person/Entity Involved (Local Option)

KOPPERS INDUSTRIES (Business name (if applicable)) | 630 - 605 - 4380 (Area Code - Phone Number)

☐ Check This Box if same address as incident location. Then skip the three duplicate address lines.

Mr.,Ms., Mrs.: | First Name: Tom | MI: | Last Name: Tortoriello | Suffix:

Number: 3900 | Prefix: S | Street or Highway: Laramie | Street Type: AVE | Suffix:

Post Office Box: | Apt./Suite/Room: | City: Stickney

State: IL | Zip Code: 60402 -

☐ More people involved? Check this box and attach Supplemental Forms (NFIRS-1S) as necessary

K2 Owner (Local Option) ☐ Same as person involved? Then check this box and skip the rest of this section.

Business name (if Applicable): | Area Code: | Phone Number:

☐ Check this box if same address as incident location. Then skip the three duplicate address lines.

Mr.,Ms., Mrs.: | First Name: | MI: | Last Name: | Suffix:

Number: | Prefix: | Street or Highway: | Street Type: | Suffix:

Post Office Box: | Apt./Suite/Room: | City:

State: | Zip Code: -

L Remarks (Local Option)

03/21/2021 11:59:09 Jacob Anderson

Crew called for the report of a fire. Upon arrival crew found a large tar plant facility with a fire contained to the tar distillery building (approximately 100 x 50). Crew noted the fire to be on the third floor A/B corner with extension to the stacks above the building. Koppers staff were on scene attempting to extinguish with hydrant mounted monitors and advised the material was tar and water could be used on it. Engine 1201 took position in the A/B corner to hit the fire with deck gun and made a positive water supply. Central Stickney Truck 906 took position in the B/C corner and raised aerial to hit what was burning on the stacks. McCook engine positioned in C/D corner of building to hit hot spots with deck gun. Crews made good progress and extinguished what was burning. Staff were on scene throughout duration of event. They believed the material was extinguished but still wanted crews to remain on scene for awhile longer. Crews noted some steam pipes were damaged during the fire and koppers would work to isolate these. Scene was turned over to Koppers staff with no further issues.

03/22/2021 16:29:33 Jeffrey Boyajian

Dispatched to location for reported structure fire. Upon going enroute I was given an update by PD on the scene that the fire was confirmed. Upon gathering this information as well as the amount of fire seen upon arrival, I upgraded the response to the full still level. Upon reaching the Tar Distillation building , we had heavy fire noted on the North/East face of the building, as well as extension to the South face and North face of the building which extended up the piping and to the top portions of the structure. Upon doing a 360 degree survey of the building I had Engine 1201 take the front of the structure

L Authorization

Officer in charge ID	Signature	Position or rank	Assignment	Month	Day	Year
15314	Boyajian, Jeff G	FC		03	21	2021

Check Box if same as Officer in charge. Member making report ID	Signature	Position or rank	Assignment	Month	Day	Year
☐ 15309	Anderson, Jacob P	CP		03	21	2021

FDID *	State *	MM	DD	YYYY	Incident Date *	Station	Incident Number *	Exposure *	Complete Narrative
CS852	IL	3	20	2021		1ST	21-0000243	000	

Narrative:

03/21/2021 11:59:09 Jacob Anderson

Crew called for the report of a fire. Upon arrival crew found a large tar plant facility with a fire contained to the tar distillery building (approximately 100 x 50). Crew noted the fire to be on the third floor A/B corner with extension to the stacks above the building. Koppers staff were on scene attempting to extinguish with hydrant mounted monitors and advised the material was tar and water could be used on it. Engine 1201 took position in the A/B corner to hit the fire with deck gun and made a positive water supply. Central Stickney Truck 906 took position in the B/C corner and raised aerial to hit what was burning on the stacks. McCook engine positioned in C/D corner of building to hit hot spots with deck gun. Crews made good progress and extinguished what was burning. Staff were on scene throughout duration of event. They believed the material was extinguished but still wanted crews to remain on scene for awhile longer. Crews noted some steam pipes were damaged during the fire and koppers would work to isolate these. Scene was turned over to Koppers. staff with no further issues.

03/22/2021 16:29:33 Jeffrey Boyajian

Dispatched to location for reported structure fire. Upon going enroute I was given an update by PD on the scene that the fire was confirmed. Upon gathering this information as well as the amount of fire seen upon arrival, I upgraded the response to the full still level. Upon reaching the Tar Distillation building , we had heavy fire noted on the North/East face of the building, as well as extension to the South face and North face of the building which extended up the piping and to the top portions of the structure. Upon doing a 360 degree survey of the building I had Engine 1201 take the front of the structure where they began to establish a water supply and began extinguishment with the deck gun (master stream). I relocated to the front of the plant and established a Command Post and was speaking with Jaime Duarte who was the plant supervisor that night, I established that no one was injured and everyone accounted for, he confirmed. Engine 1201 reported water pressure issues. I then exited my vehicle and noticed that I did not hear the diesel fire pump running and asked why it was not, no-one knew why it was not. I directed Central Stickney's ladder truck to set up on the East side of the structure and McCooks Engine to set up on the West side of the structure, and went to the pump house to see what the issue was with the pump, while preparing companies in staging to prepare for a water supply if the pump was not functional. After arriving in the pump house the "Operational Panel" was signalling the pump was "ON" but obviously was not running. At that time I turned the switch to the manual position and started the pump manually. Once pump was running our water supply issues were no longer an issue. Once the water supply was established , Central Stickney ladder began flowing water for extinguishment to the upper portions of the structure while being fed by Ciceros engine, 1201 continued with extinguishment of the North face of the structure and McCook's engine was set up on the West side and was assisting with extinguishment with their deck gun (master stream). While the water supply issue was being addressed, Jaime and his crew shut down the product being fed into that building remotely. I released all companies that remained in staging. After conferring with Seth Herring and Gregg Bambule from Koppers they agreed with shutting down extinguishment procedures and waiting to see if the fire was extinguished. After a half hour it was determined that the fire was out and what we were seeing was steam. I had all working companies begin to pick up and released them as soon as they were in service. All companies were released and returning to quarters by 1:30 A.M..

Scene was then turned over to Plant Manager Seth Herring and Koppers personnel.

FDID *	State *	MM Incident	DD Date *	YYYY	Station	Incident Number *	Exposure *	Complete Narrative
CS852	IL	3	20	2021	1ST	21-0000243	000	

Narrative:

Command was terminated.

03/23/2021 15:43:32 Jeffrey Boyajian

I received information today regarding times that the incident was reported from our dispatch center (Consolidated Emergency Center of Cook County) .

1st Call was received at 10:24 .29 and caller hung up

Dispatch tried calling back at 10:24.51 and got a recording

2nd Call was received at 10:27.19 and Brandon reported the fire in unit #1

Police Department reported Fire at 10:28.15 via radio to dispatch

A | CS852 (FDID ★) | IL (State ★) | MM 03 / DD 20 / YYYY 2021 (Incident Date ★) | 18T (Station) | 21-0000243 (Incident Number ★) | 000 (Exposure ★) | ☐ Delete ☐ Change ☐ No Activity | NFIRS -2 Fire

B Property Details

B1 ____ ☒ Not Residential
Estimated Number of residential living units in building of origin whether or not all units became involved

B2 ____ ☒ Buildings not involved
Number of buildings involved

B3 ____ ☐ None
Acres burned (outside fires) ☐ Less than one acre

C On-Site Materials or Products ☐ None

Complete if there were any significant amounts of commercial, industrial, energy or agricultural products or materials on the property, whether or not they became involved

Enter up to three codes. Check one or more boxes for each code entered.

	On-site material	Codes
(1)	000 On-site materials,	1 ☐ 2 ☒ 3 ☐ 4 ☐
(2)		1 ☐ 2 ☐ 3 ☐ 4 ☐
(3)		1 ☐ 2 ☐ 3 ☐ 4 ☐

1 Bulk storage or warehousing; 2 Processing or manufacturing; 3 Packaged goods for sale; 4 Repair or service

D Ignition

D1 UU Undetermined — Area of fire origin ★

D2 UU Undetermined — Heat source ★

D3 UU Undetermined — Item first ignited ★ 1 ☐ Check Box if fire spread was confined to object of origin

D4 ____ Type of material first ignited ____ Required only if Item first ignited code is 00 or <70

E1 Cause of Ignition

☐ Check box if this is an exposure report. Skip to section G

1 ☐ Intentional
2 ☐ Unintentional
3 ☐ Failure of equipment or heat source
4 ☐ Act of nature
5 ☒ Cause under investigation
U ☐ Cause undetermined after investigation

E2 Factors Contributing To Ignition

☒ None

UU Undetermined — Factor Contributing To Ignition (1)

____ Factor Contributing To Ignition (2)

E3 Human Factors Contributing To Ignition

Check all applicable boxes

1 ☐ Asleep ☒ None
2 ☐ Possibly impaired by alcohol or drugs
3 ☐ Unattended person
4 ☐ Possibly mental disabled
5 ☐ Physically Disabled
6 ☐ Multiple persons involved
7 ☐ Age was a factor

Estimated age of person involved ____

1 ☐ Male 2 ☐ Female

F1 Equipment Involved In Ignition

☐ None If Equipment was not involved, Skip to Section G

____ Equipment Involved

Brand ____

Model ____

Serial # ____

Year ____

F2 Equipment Power

____ Equipment Power Source

F3 Equipment Portability

1 ☐ Portable
2 ☐ Stationary

Portable equipment normally can be moved by one person, is designed to be use in multiple locations, and requires no tools to install.

G Fire Suppression Factors

Enter up to three codes. ☒ None

	Fire suppression factor	Code
(1)	None	NNN
(2)		
(3)		

H1 Mobile Property Involved

☐ None

1 ☐ Not involved in ignition, but burned
2 ☐ Involved in ignition, but did not burn
3 ☐ Involved in ignition and burned

H2 Mobile Property Type & Make

____ Mobile property type

____ Mobile property make

____ Mobile property model ____ Year

____ License Plate Number ____ State ____ VIN Number

Local Use

☐ Pre-Fire Plan Available

Some of the information presented in this report may be based upon reports from other Agencies

☐ Arson report attached
☐ Police report attached
☐ Coroner report attached
☐ Other reports attached

NFIRS-2 Revision 01/19/99

I1 Structure Type *

If Fire was in enclosed building or a portable/mobile structure complete the rest of this form

1 [X] Enclosed Building
2 [ ] Portable/mobile structure
3 [ ] Open structure
4 [ ] Air supported structure
5 [ ] Tent
6 [ ] Open platform (e.g. piers)
7 [ ] Underground structure (work areas)
8 [ ] Connective structure (e.g. fences)
0 [ ] Other type of structure

I2 Building Status *

1 [ ] Under construction
2 [X] Occupied & operating
3 [ ] Idle, not routinely used
4 [ ] Under major renovation
5 [ ] Vacant and secured
6 [ ] Vacant and unsecured
7 [ ] Being demolished
0 [ ] Other
U [ ] Undetermined

I3 Building Height *

Count the ROOF as part of the highest story

001
Total number of stories at or above grade

Total number of stories below grade

I4 Main Floor Size *

NFIRS-3 Structure Fire

[ ] , 001 , 000
Total square feet

OR

[ ] , [ ] BY [ ] , [ ]
Lenght in feet — Width in feet

J1 Fire Origin *

001
Story of fire origin

[ ] Below Grade

J2 Fire Spread *

1 [ ] Confined to object of origin
2 [ ] Confined to room of origin
3 [ ] Confined to floor of origin
4 [X] Confined to building of origin
5 [ ] Beyond building of origin

J3 Number of Stories Damaged By Flame

Count the ROOF as part of the highest story

[ ] Number of stories w/ minor damage (1 to 24% flame damage)

[ ] Number of stories w/ significant damage (25 to 49% flame damage)

[ ] Number of stories w/ heavy damage (50 to 74% flame damage)

[ ] Number of stories w/ extreme damage (75 to 100% flame damage)

K Material Contributing Most To Flame Spread

[ ] Check if no flame spread OR same as material first ignited OR unable to determine — Skip To Section L

K1 [ ] [ ]
Item contributing most to flame spread

K2 [ ] [ ]
Type of material contributing most of flame spread — Required only if item contributing code is 00 or<70

L1 Presence of Detectors *

(In area of the fire)

N [ ] None Present — Skip to section M
1 [X] Present
U [ ] Undetermined

L2 Detector Type

1 [ ] Smoke
2 [ ] Heat
3 [ ] Combination smoke - heat
4 [ ] Sprinkler, water flow detection
5 [X] More than 1 type present
0 [ ] Other _____
U [ ] Undetermined

L3 Detector Power Supply

1 [ ] Battery only
2 [ ] Hardwire only
3 [ ] Plug in
4 [ ] Hardwire with battery
5 [ ] Plug in with battery
6 [ ] Mechanical
7 [ ] Multple detectors & powar supplies
0 [ ] Other _____
U [X] Undetermined

L4 Detector Operation

1 [ ] Fire too small to activate
2 [ ] Operated (Complete Section L5)
3 [ ] Failed to Operate (Complete Section L6)
U [X] Undetermined

L5 Detector Effectiveness

Required if detector operated

1 [ ] Alerted Occupants, occupants responded
2 [ ] Occupants failed to respond
3 [ ] There were no occupants
4 [ ] Failed to alert occupants
U [ ] Undetermined

L6 Detector Failure Reason

Required if detector failed to operate

1 [ ] Power failure, shutoff or disconnect
2 [ ] Improper installation or placement
3 [ ] Defective
4 [ ] Lack of maintenance, includes cleaning
5 [ ] Battery missing or disconnected
6 [ ] Battery discharged or dead
0 [ ] Other _____
U [ ] Undetermined

M1 Presence of Automatic Extinguishment System *

N [ ] None Present
1 [X] Present — Complete rest of Section M

M2 Type of Automatic Extinguishment System *

Required if fire was within designed range of AES

1 [X] Wet pipe sprinkler
2 [ ] Dry pipe sprinkler
3 [ ] Other sprinkler system
4 [ ] Dry chemical system
5 [ ] Foam system
6 [ ] Halogen type system
7 [ ] Carbon dioxide (CO_2) system
0 [ ] Other special hazard system
U [ ] Undetermined

M3 Automatic Extinguishment System Operation

Required if fire was within designed range

1 [ ] Operated & effective (Go to M4)
2 [ ] Operated & not effective (M4)
3 [ ] Fire too small to activate
4 [ ] Failed to operate (Go to M5)
0 [ ] Other
U [ ] Undetermined

M4 Number of Sprinkler Heads Operating

Required if system operated

[ ]
Number of sprinkler heads operating

M5 Automatic Extinguishment System Failure Reason

Required if system failed

1 [ ] System shut off
2 [ ] Not enough agent discharged
3 [ ] Agent discharged but did not reach fire
4 [ ] Wrong type of system
5 [ ] Fire not in area protected
6 [ ] System components damaged
7 [ ] Lack of maintenance
8 [ ] Manual Intervention
0 [ ] Other _____
U [ ] Undetermined

NFIRS-3 Revision 01/19/99

A

FDID *	State *	MM Incident	DD Date *	YYYY	Station	Incident Number *	Exposure *	Delete / Change	NFIRS - 9 Apparatus or Resources
C8852	IL	3	20	2021	18T	21-0000243	000	☐ / ☐	

B

Apparatus or * Resource	Date and Times (Check if same as alarm date)	Month	Day	Year	Hour	Min	Sent [X]	Number of * People	Use (Check ONE box for each apparatus to indicate its main use at the incident.)	Actions Taken
1 ID 1201 Type 11	Dispatch	[X]	3	20	2021	22:31	[X]	4	[X] Suppression ☐ EMS ☐ Other	
	Arrival	[X]	3	20	2021	22:34				
	Clear	☐	3	21	2021	01:44				
2 ID 1208 Type 60	Dispatch	[X]	3	20	2021	22:31	[X]	1	[X] Suppression ☐ EMS ☐ Other	
	Arrival	[X]	3	20	2021	22:40				
	Clear	☐	3	21	2021	01:44				
3 ID 1210 Type 92	Dispatch	[X]	3	20	2021	22:31	[X]	1	[X] Suppression ☐ EMS ☐ Other	
	Arrival	[X]	3	20	2021	22:34				
	Clear	☐	3	21	2021	01:44				
4 ID Type	Dispatch	☐					☐		☐ Suppression ☐ EMS ☐ Other	
	Arrival	☐								
	Clear	☐								
5 ID Type	Dispatch	☐					☐		☐ Suppression ☐ EMS ☐ Other	
	Arrival	☐								
	Clear	☐								
6 ID Type	Dispatch	☐					☐		☐ Suppression ☐ EMS ☐ Other	
	Arrival	☐								
	Clear	☐								
7 ID Type	Dispatch	☐					☐		☐ Suppression ☐ EMS ☐ Other	
	Arrival	☐								
	Clear	☐								
8 ID Type	Dispatch	☐					☐		☐ Suppression ☐ EMS ☐ Other	
	Arrival	☐								
	Clear	☐								
9 ID Type	Dispatch	☐					☐		☐ Suppression ☐ EMS ☐ Other	
	Arrival	☐								
	Clear	☐								

Type of Apparatus or Resources

Ground Fire Suppression
- 11 Engine
- 12 Truck or aerial
- 13 Quint
- 14 Tanker & pumper combination
- 16 Brush truck
- 17 ARF (Aircraft Rescue and Firefighting)
- 10 Ground fire suppression, other

Heavy Ground Equipment
- 21 Dozer or plow
- 22 Tractor
- 24 Tanker or tender
- 20 Heavy equipment, other

Aircraft
- 41 Aircraft: fixed wing tanker
- 42 Helitanker
- 43 Helicopter
- 40 Aircraft, other

Marine Equipment
- 51 Fire boat with pump
- 52 Boat, no pump
- 50 Marine apparatus, other

Support Equipment
- 61 Breathing apparatus support
- 62 Light and air unit
- 60 Support apparatus, other

Medical & Rescue
- 71 Rescue unit
- 72 Urban Search & rescue unit
- 73 High angle rescue unit
- 75 BLS unit
- 76 ALS unit
- 70 Medical and rescue unit,other

More Apparatus? Use Additional Sheets

Other
- 91 Mobile command post
- 92 Chief officer car
- 93 HazMat unit
- 94 Type 1 hand crew
- 95 Type 2 hand crew
- 99 Privately owned vehicle
- 00 Other apparatus/resource

NN None
UU Undetermined

NFIRS-9 Revision 11/17/98

A

FDID ★	State ★	Incident Date ★ (MM / DD / YYYY)	Station	Incident Number ★	Exposure ★	Delete	Change	NFIRS - 10 Personnel
CS852	IL	3 / 20 / 2021	1ST	21-0000243	000	☐	☐	

B Apparatus or Resource ★ (Use codes listed below) | Date and Times (Check if same as alarm date) | Sent [X] | Number of People ★ | Use (Check ONE box for each apparatus to indicate its main use at the incident.) | Actions Taken (List up to 4 actions for each apparatus and each personnel.)

1 ID 1201 — Type 11

		Month	Day	Year	Hours/mins
Dispatch	[X]	3	20	2021	22:31
Arrival	[X]	3	20	2021	22:34
Clear	[ ]	3	21	2021	01:44

Sent [X] | Number of People: 4 | Use: [X] Suppression [ ] EMS [ ] Other | Actions Taken: [ ] [ ] [ ] [ ]

Personnel ID	Name	Rank or Grade	Attend [X]	Action Taken	Action Taken	Action Taken	Action Taken
15309	Anderson, Jacob	CP	X				
15321	Czech, Douglas	FF	X				
15325	Farias, Miguel	FF	X				
15387	Focht, Garrett	FF	X				

2 ID 1208 — Type 60

		Month	Day	Year	Hours/mins
Dispatch	[X]	3	20	2021	22:31
Arrival	[X]	3	20	2021	22:40
Clear	[ ]	3	21	2021	01:44

Sent [X] | Number of People: 1 | Use: [X] Suppression [ ] EMS [ ] Other | Actions Taken: [ ] [ ] [ ] [ ]

Personnel ID	Name	Rank or Grade	Attend [X]	Action Taken	Action Taken	Action Taken	Action Taken
15302	Babinec, John	DC	X				

3 ID 1210 — Type 92

		Month	Day	Year	Hours/mins
Dispatch	[X]	3	20	2021	22:31
Arrival	[X]	3	20	2021	22:34
Clear	[ ]	3	21	2021	01:44

Sent [X] | Number of People: 1 | Use: [X] Suppression [ ] EMS [ ] Other | Actions Taken: [ ] [ ] [ ] [ ]

Personnel ID	Name	Rank or Grade	Attend [X]	Action Taken	Action Taken	Action Taken	Action Taken
15314	Boyajian, Jeff	FC	X				

CS852	IL	3	20	2021	1ST	21-0000243	000	Responding Units/Personnel
FDID	State	Incident Date			Station	Incident Number	Exposure	

Unit	Notify Time	Enroute Time	Arrival Time	Cleared Time
1201 HME 2007 Pumper	22:31:00	22:31:00	22:34:00	01:44:00

Staff ID\Staff Name		Activity	Rank	Position	Role
15309	Anderson, Jacob P	Fire call	Captain	Officer's se	Captain
15321	Czech, Douglas P	Fire call	Firefighter	Driver	Driver of th
15325	Farias, Miguel	Fire call	Firefighter	Rear seat #1	
15387	Focht, Garrett	Fire call	Firefighter	Rear seat #2	

1208 Apparatus/Staff, Utility car	22:31:00	22:36:00	22:40:00	01:44:00

Staff ID\Staff Name		Activity	Rank	Position	Role
15302	Babinec, John C	Fire call	Deputy Chie	Driver	Deputy Chief

1210 Fire Chief	22:31:00	22:31:00	22:34:00	01:44:00

Staff ID\Staff Name		Activity	Rank	Position	Role
15314	Boyajian, Jeff G	Fire call	Fire Chief	Command	Chief

FDID *	State *	MM Incident	DD Date *	YYYY	Station	Incident Number *	Exposure *	Responding Personnel
C8852	IL	3	20	2021	1ST	21-0000243	000	

Staff ID\Staff Name	Unit		Activity	Position	Rank	PaySol	Hrs	HrsPd	Pts
15309 Anderson, Jacob P	1201		FIRECALL Fire call	OF	CP		3.22	3.22	0.00
15321 Czech, Douglas P	1201	X	FIRECALL Fire call	DR	FF		3.22	3.22	0.00
15325 Farias, Miguel	1201		FIRECALL Fire call	R1	FF		3.22	3.22	0.00
15387 Focht, Garrett	1201		FIRECALL Fire call	R2	FF		3.22	3.22	0.00
15302 Babinec, John C	1208	X	FIRECALL Fire call	DR	DC		3.22	3.22	0.00
15314 Boyajian, Jeff G	1210	X	FIRECALL Fire call	CM	FC		3.22	3.22	0.00

Total Participants: 6

Total Personnel Hours: 19.32

An 'X' next to the unit denotes driver.

ATTACHMENT 4

Hudson Boiler & Tank Company

BOILER REPAIRS --- STACKS --- TANKS
STEEL FABRICATORS AND ERECTORS

3101 SOUTH STATE STREET LOCKPORT, IL 60441
PHONE: (312) 666-4780 FAX (312) 666-5145
www.hudsonboiler.com

July 29, 2020

Koppers, Inc.
3900 S. Laramie Ave.
Cicero, IL 60804

Ref: Jobs #28365 – Repairs to Tar Column V-101 (NB #1039)

Attn: Mr. Dutczak,

Enclosed you will find one (1) copy of the National Board "Form R-1 Report of Repair" for the work we recently performed for the above referenced jobs.

These reports should be retained for future reference. They may be needed from time to time for inspection and insurance purposes.

Thank you for the opportunity to be of service.

Chris Woodill
Hudson Boiler & Tank Co.

cc:
Hudson Boiler and Tank Company - File

THE NATIONAL BOARD OF BOILER AND PRESSURE VESSEL INSPECTORS

NB-65, Rev. 16, (01/28/19)

FORM R-1 REPORT OF REPAIR

in accordance with provisions of the *National Board Inspection Code*

(Authorized Rep. initials)

(Inspectors initials)

N/A
(Form "R" Registration no.)

28365
(P.O. no., job no., etc.)

1. WORK PERFORMED BY: Hudson Boiler and Tank Company
(name of repair organization)
3101 S. State St. Lockport, IL 60441
(address)

2. OWNER: Koppers, Inc.
(name)
3900 S. Laramie Ave. Cicero, IL 60804
(address)

3. LOCATION OF INSTALLATION: Koppers, Inc
(name)
3900 S. Laramie Ave. Cicero, IL 60804
(address)

4. ITEM IDENTIFICATION: Pressure Vessel (boiler, pressure vessel, or piping) NAME OF ORIGINAL MANUFACTURER: Dixie Steel & Supply Co., Inc.

5. IDENTIFYING NOS: 74-413A (mfg. serial no.) | 1039 (National Board no.) | (jurisdiction no.) | V-101 (other) | 1975 (year built)

6. NBIC EDITION/ADDENDA: 2019 (edition) (addenda)

Original Code of Construction for Item: ASME Section VIII, Div 1 (name / section / division) Unk (edition / addenda)

Construction Code Used for Repair Performed: ASME Section VIII, Div 1 (name / section / division) 2019 (edition / addenda)

7. REPAIR TYPE: ☑ welded ☐ graphite pressure equipment ☐ FRP pressure equipment ☐ DOT

8. DESCRIPTION OF WORK: ☑ Form R-4, Report Supplementary Sheet is attached ☐ FFSA Form (NB-403) is attached
(use Form R-4, if necessary))

Removed 16" x 24" section of 1/2" SA-240-316L shell, approx. 50" from inner head seam, and replaced with new 1/2" SA-240-316L patch plate, rolled to 72" ID. Shearwave UT performed as NDE. Welded (2) 5/16" 316L studs on exterior of SA-240-316L patch plate approx. 8" from lower edge and 4" from left edge. Welded 18" x 35" x 1/2" x 72" OD SA-240-316L wear plate lapped on the interior of the 1/2" SA-240-316L shell patch.
Removed existing 3" nozzle and lap joint flange ("feed nozzle") from shell and replaced by welding new 3" Sch80 SA-312-316L nozzle x 10" to 72" ID" SA-240-316L and a 3" 150# SA-182-316L RFSO flange welded to new 3" Sch80 SA-312-316L nozzle.

N/A (Liquid, Pneumatic, Vacuum, Leak) Pressure Test, if applied _____ psi MAWP 25/FV psi

9. REPLACEMENT PARTS: (Attached are Manufacturer's Partial Data Reports or Form R-3's properly completed for the following items of this report):
(name of part, item number, data report type or Certificate of Compliance, mfg's. name and identifying stamp)

N/A

10. REMARKS:

Welded per HWP-SS-S-1 by #143 B. Gorz, #144 D. Crossen, #146 M. McLaughlin, & #152 T. Buffington. Shearwave UT performed in lieu of RT as NDE on shell patch. PT performed as NDE in lieu of hydrotest.

N/A
(Form "R" Registration no.)

28365
(P.O. no., job no., etc.)

CERTIFICATE OF COMPLIANCE

I, Chris Woodill, certify that to the best of my knowledge and belief the statements made in this report are correct and that all material, construction, and workmanship on this Repair conforms to the *National Board Inspection Code*. National Board "R" *Certificate of Authorization* No. R-189 Expiration date: 05/29/2022

Repair Organization: Hudson Boiler and Tank Company

Signed: _____
(authorized representative)

Date: 07/29/2020

CERTIFICATE OF INSPECTION

I, Zachary Taylor, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and certificate of competency, where required, issued by the Jurisdiction of Illinois and employed by The Hartford Steam Boiler Inspection and Insurance Company of Hartford, CT have inspected the work described in this report on July 29, 2020 and state that to the best of my knowledge and belief, this work complies with the applicable requirements of the National Board Inspection Code. By signing this certificate, neither the undersigned nor my employer makes any warranty, expressed or implied, concerning the work described in this report. Furthermore, neither the undersigned nor my employer shall be liable in any manner for any personal injury, property damage, or loss of any kind arising from or connected with this inspection.

Commissions: 16506R IL02386IC
(National Board and Jurisdiction no. including endorsement)

Signed: _____
(inspector)

Date: 07/29/2020

Boiler Inspection
Services Company
Engineering, Inspection & Testing

1755 S. Naperville Rd.
Suite #100
Wheaton, IL 60189
Tel: (630) 510-3223
Fax: (630) 510-3261
www.boilerinspection.com

INSPECTION, TESTING, AND ASSESSMENT
NO. 2 REBOILER
FOR
KOPPERS, INC.
CICERO, ILLINOIS

SUBMITTED BY:

BOILER INSPECTION SERVICES COMPANY
1755 S. Naperville Rd., Suite 100
Wheaton, IL 60189

Dated: November 2020

**** THE BOILER & PRESSURE VESSELS EVALUATION SPECIALISTS ****

TABLE OF CONTENTS

INTRODUCTION

On November 13, 2020, Boiler Inspection Services Company performed inspection, testing, and assessment of No. 2 Reboiler for Koppers, Inc. located in Cicero, Illinois. The objective of the assessment is to determine the existing condition of No. 2 Reboiler.

The reboilers' physical condition, description and evaluation are based upon information obtained through visual inspection, nondestructive testing by means of ultrasonic thickness (UT) testing and assessment of present operation, maintenance, and repair data. The ultrasonic thickness (UT) testing was performed on selected accessible surfaces of the No. 2 Reboiler coils.

An exit meeting was held on November 13, 2020 with Mr. Michael Dutczak, Reliability Engineer, to relate the preliminary results of the evaluation.

This evaluation was directed by Ron Avalos Project Manager and NDE Level III, and assisted by Casimir Soczyk, NDE Level II.

We thank Koppers, Inc. personnel for the courtesies extended to us during our on-site inspection.

If you have any questions regarding this report or the services offered by Boiler Inspection Services Company, please contact the Operations Manager at (630) 510-3223.

OBJECT DESCRIPTION

OBJECT	-	No. 2 Reboiler
Manufacturer	-	The American Schack Company, Inc.
National Board #	-	Unknown
Max Design Pressure	-	120 psi @ 650°F
Year Built	-	1967 (Estimated)
Coil Size	-	2 ½" OD (Assumed)
Material	-	SA-106-B Seamless (Assumed)

SUMMARY

INTERNAL INSPECTION

Visual internal inspection of the reboiler revealed the following:

A) The coil was replaced in January 2020. No indications of significant corrosion or erosion were noted on the coil. Repair window welds were observed on tube 36 and 38. The accessible circumferential coil welds appeared to be in satisfactory condition. (See photos)

B) The broken U-bolts noted in the 2017 inspection were replaced during the coil replacement. No broken U-bolts were observed. (See photos)

C) Light staining and moderate black discoloration (soot) were noted on the coil throughout the reboiler. The presence of soot is an indication of flame impingement and/or low firing of the burner. (See photos)

D) As in the 2017 inspection, the manway opening showed light to moderate corrosion and pitting; however, a crack and warping in the metal ring were also observed. (See photos)

E) The significant chunk of refractory and insulation missing at the top of the reboiler noted in the 2017 inspection has been repaired; however, light cracking and spalling were observed in the refractory. Areas of water staining were noted on the refractory around the coil supports attached to the top head, indications of possible leakage into the reboiler. (See photos)

F) Areas of eroded or scrapped away refractory were observed on the accessible shell refractory. The accessible shell refractory appeared to be in satisfactory condition. Openings were noted in the reboiler at the coil inlet and outlet. Light accumulation of debris was observed at the bottom. (See photos)

G) The burner and burner box appeared to be in satisfactory condition for continued service; however, accumulation of loose insulation and debris were observed. (See photos)

H) Light general corrosion was observed on the economizer tubes at the top of the reboiler. Several bent fins were noted; however, it is not considered significant. (See photos)

EXTERNAL INSPECTION

Visual external inspection of the reboiler revealed the following:

A) A crack in the southeast side of the burner box underneath the nozzle was observed. (See photos)

B) Light general corrosion was observed on the bottom plate of the reboiler, as noted in the 2017 inspection. Areas of general corrosion were also observed at the top of the reboiler. (See photos)

C) A small patch of moderate general corrosion was observed on the shell of the reboiler. This condition was noted during the 2017 inspection and does not appear to be significantly worse. (See photos)

D) The inspection port was burnt and deteriorated. Cracks were noted around the bolts. These conditions were noted during the 2017 inspection. (See photos)

E) Staining and moderate general corrosion at the top of the vessel were still observed. (See photos)

F) Light cracks were noted in the concrete pillars of the support legs of the reboiler and is not considered significant at this time. This condition was noted during the 2017 inspection. (See photos)

G) Significant cracks and separation in the ladder support welds connecting the ladder to the support bracket were noted. This condition was noted during the 2017 inspection and does not appear to be significantly worse. (See photos)

NONDESTRUCTIVE TESTING (NDE)

NDE testing performed on the boiler revealed the following:

A) Ultrasonic thickness (UT) testing of the coil revealed no significant thickness wall loss at the tested locations. (See UT Results)

RECOMMENDATIONS

1. The reboiler's burner should be tuned-up by a qualified and experienced burner repair company prior to the operation of the reboiler to prevent flame impingement and ensure the correct fuel to air ratio for proper combustion and reboiler efficiency. The black soot currently on the coil tubes throughout the reboiler be removed prior to operation to better serve as an indicator for the tuning of the burner.

2. The crack in the southeast side of the burner box underneath the nozzle should be repaired prior to the operation of the reboiler.

3. The cracks and separation observed in the ladder support welds connecting the ladder to the support bracket should be repaired at the next available opportunity.

4. The accumulation of loose debris at the bottom of the reboiler and burner box should be removed prior to the operation of the reboiler.

5. The light cracks and spalling refractory observed on the top head of the reboiler should be repaired at the next available opportunity. The refractory throughout the reboiler should be monitored every annual shutdown and repaired as needed.

6. The corrosion/rust observed on the exterior of the reboiler should be removed/cleaned and repainted with an appropriate paint to prevent further corrosion.

CALCULATIONS AND ASSESSMENT

Reboiler No.	-	2
Year Built	-	1967 (Estimated)
MAWP	-	120 psi @ 650°F

COIL TUBE CALCULATIONS

Tube Size	-	2 ½" OD (Assumed)
Tube Material	-	SA-106-B Seamless (Assumed)
Material Stress Value	-	15,000 psi (Assumed)

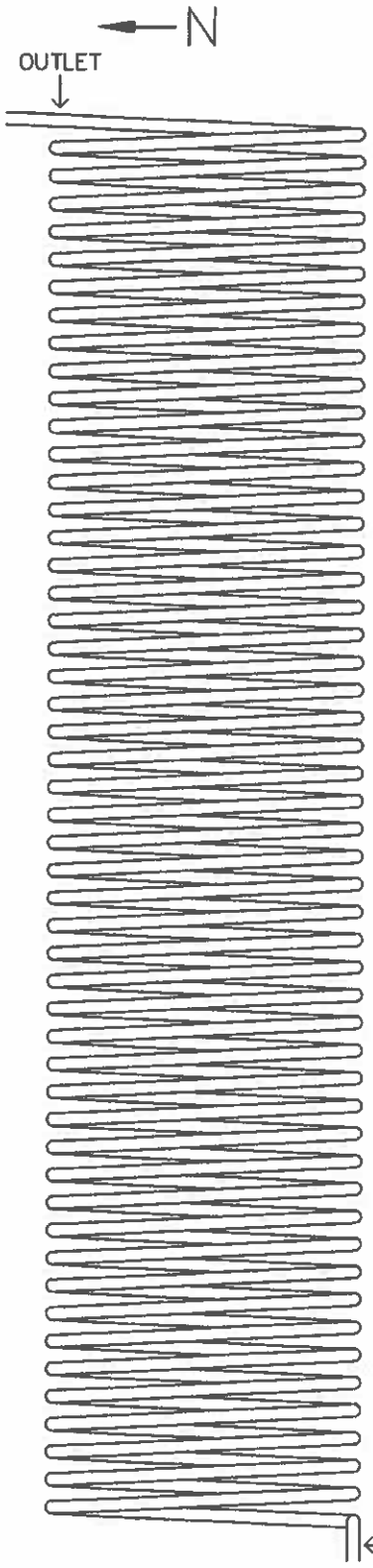
Lowest thickness measured	-	.210"
Minimum required thickness @ 120 psi	-	.023"
Remaining Actual Thickness	-	.187"

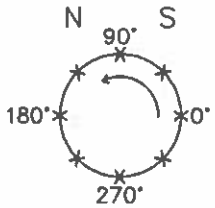
Note: *The lowest thickness measured is greater than the minimum required thickness. No further calculations are required.*

- **ASME Section VIII – Div, 1 – 1967 Edition.**

ULTRASONIC THICKNESS TESTING RESULTS

KOPPERS, INC.
CICERO, ILLINOIS
REBOILER #2
ULTRASONIC THICKNESS READINGS
COIL TUBES





TOP VIEW

NOTE: 0° = INLET

COIL LOCATIONS

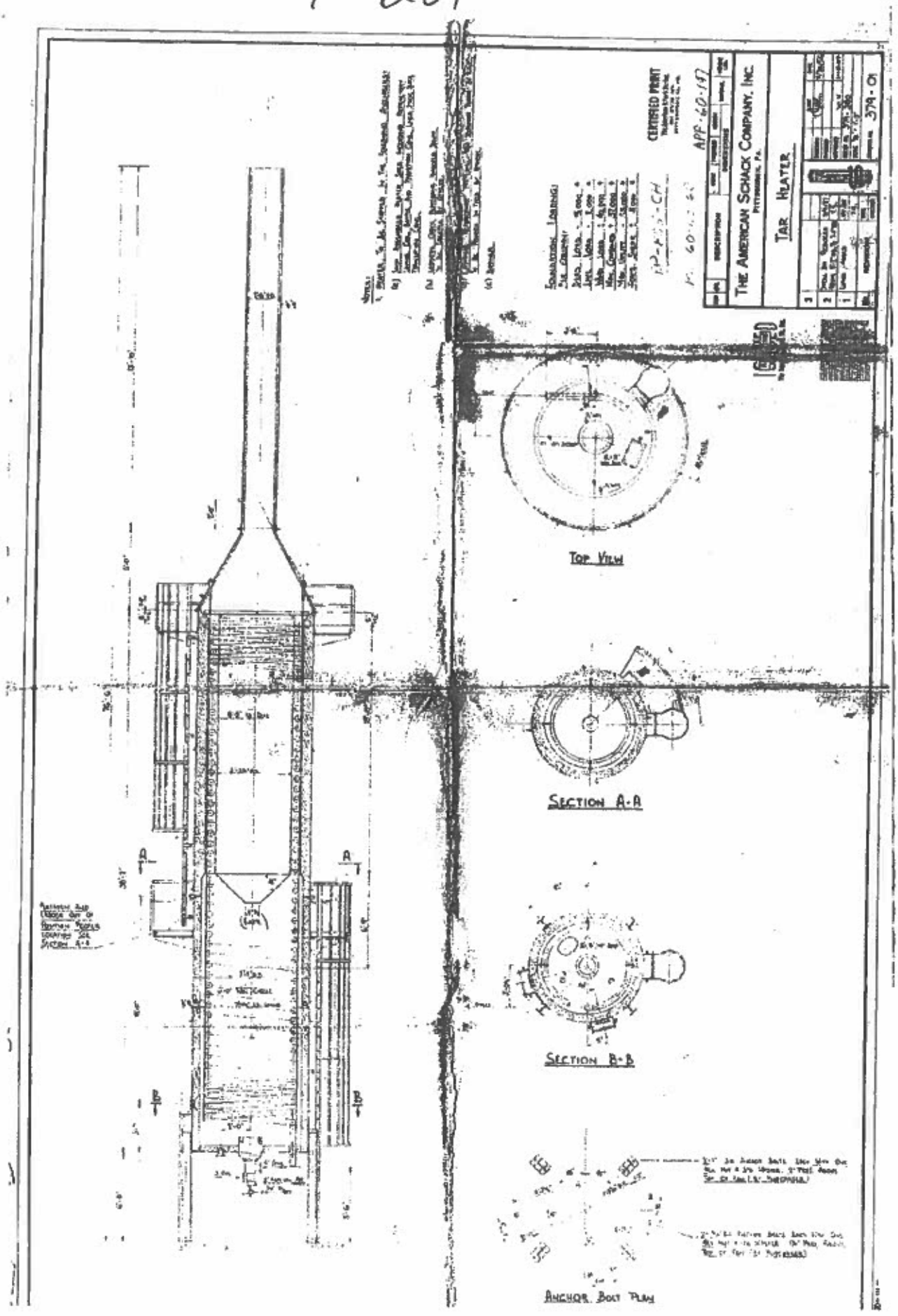
	0°	45°	90°	135°	180°	225°	270°	315°
50	0.236	0.241	0.238	0.234	0.231	0.236	0.238	0.247
49	0.234	0.238	0.231	0.241	0.222	0.243	0.247	0.241
48	0.231	0.234	0.241	0.245	0.249	0.231	0.241	0.229
47	0.224	0.234	0.241	0.231	0.240	0.238	0.240	0.239
46	0.244	0.231	0.234	0.236	0.247	0.234	0.230	0.229
45	0.238	0.235	0.236	0.233	0.224	0.236	0.238	0.247
44	0.248	0.236	0.234	0.237	0.239	0.241	0.240	0.240
43	0.241	0.234	0.238	0.233	0.234	0.224	0.228	0.229
42	0.241	0.234	0.228	0.224	0.234	0.241	0.248	0.242
41	0.245	0.241	0.243	0.246	0.234	0.235	0.248	0.236
40	0.248	0.236	0.245	0.250	0.231	0.233	0.236	0.243
39	0.231	0.234	0.239	0.241	0.244	0.245	0.246	0.244
38	0.226	0.224	0.234	0.219	0.233	0.234	0.228	0.231
37	0.217	0.226	0.224	0.231	0.233	0.238	0.242	0.236
36	0.227	0.245	0.238	0.244	0.238	0.232	0.232	0.234
35	0.225	0.228	0.224	0.223	0.224	0.226	0.229	0.230
34	0.238	0.241	0.245	0.244	0.241	0.231	0.224	0.228
33	0.235	0.231	0.238	0.228	0.234	0.238	0.227	0.229
32	0.234	0.233	0.231	0.228	0.224	0.247	0.241	0.234
31	0.228	0.227	0.231	0.225	0.226	0.226	0.228	0.224
30	0.238	0.234	0.231	0.234	0.236	0.233	0.241	0.245
29	0.225	0.228	0.231	0.234	0.244	0.245	0.248	0.231
28	0.232	0.227	0.231	0.234	0.233	0.241	0.229	0.228
27	0.228	0.234	0.219	0.233	0.234	0.228	0.232	0.232
26	0.232	0.229	0.224	0.228	0.224	0.226	0.224	0.241
25	0.241	0.249	0.248	0.246	0.222	0.231	0.241	0.234
24	0.231	0.222	0.241	0.251	0.248	0.244	0.246	0.238
23	0.228	0.229	0.222	0.228	0.237	0.231	0.240	0.228
22	0.249	0.244	0.241	0.230	0.236	0.248	0.241	0.245
21	0.234	0.233	0.220	0.237	0.241	0.234	0.234	0.231
20	0.241	0.247	0.233	0.234	0.242	0.239	0.241	0.229
19	0.213	0.234	0.223	0.233	0.245	0.239	0.243	0.228
18	0.238	0.233	0.238	0.241	0.250	0.244	0.246	0.248
17	0.238	0.220	0.224	0.243	0.241	0.234	0.235	0.243
16	0.238	0.243	0.238	0.233	0.239	0.241	0.239	0.234
15	0.236	0.234	0.228	0.241	0.245	0.241	0.229	0.237
14	0.235	0.239	0.234	0.235	0.231	0.229	0.222	0.234
13	0.224	0.224	0.223	0.224	0.224	0.238	0.228	0.229
12	0.228	0.230	0.229	0.230	0.229	0.228	0.226	0.227
11	0.232	0.222	0.232	0.227	0.232	0.232	0.233	0.235
10	0.226	0.226	0.228	0.228	0.227	0.227	0.224	0.233
9	0.227	0.229	0.228	0.229	0.219	0.228	0.227	0.228
8	0.230	0.232	0.232	0.232	0.234	0.231	0.225	0.221
7	0.241	0.241	0.242	0.241	0.241	0.239	0.224	0.228
6	0.231	0.233	0.210	0.227	0.226	0.234	0.230	0.233
5	0.240	0.238	0.241	0.233	0.241	0.240	0.241	0.240
4	0.232	0.238	0.234	0.241	0.243	0.238	0.239	0.241
3	0.236	0.241	0.238	0.238	0.235	0.236	0.236	0.234
2	0.229	0.240	0.243	0.222	0.243	0.241	0.239	0.240
1	0.227	0.235	0.231	0.236	0.235	0.236	0.235	0.235

CLIENT: KOPPERS, INC.	INSPECTION ENGINEER:		BOILER INSPECTION SERVICES COMPANY 1755 S. Naperville Rd. Suite #100 Wheaton, Illinois 60189
	DRAWN BY:	M. COLLINS	
TITLE: REBOILER #2	CAD SUPER:	D. JIMENEZ	
	SCALE:	NONE	

11-13-2020 1-COIL-UT

DESIGN DRAWING

F-201


THE AMERICAN SCHACK COMPANY, INC.
PITTSBURGH, PA.
TAR HEATER
379-01
APP-60-157
CERTIFIED PRINT
TOP VIEW
SECTION A-A
SECTION B-B
ANCHOR BOLT PLAN

PHOTOGRAPHIC DOCUMENTATION

INTERNAL

The following ten (10) photos show the internal condition of the reboiler. A crack and warping in the manway metal ring were observed. Areas of water staining were observed in the refractory around top head attachments. Areas of eroded or scrapped away shell refractory was noted. Light cracking and spalling were noted in the top refractory. Openings were observed in the reboiler at the coil inlet and outlet. Light general corrosion and bent fins were noted on the accessible economizer tubes.

1)

2)

The following ten (10) photos show the internal condition of the reboiler. A crack and warping in the manway metal ring were observed. Areas of water staining were observed in the refractory around top head attachments. Areas of eroded or scrapped away shell refractory was noted. Light cracking and spalling were noted in the top refractory. Openings were observed in the reboiler at the coil inlet and outlet. Light general corrosion and bent fins were noted on the accessible economizer tubes.

3)

4)

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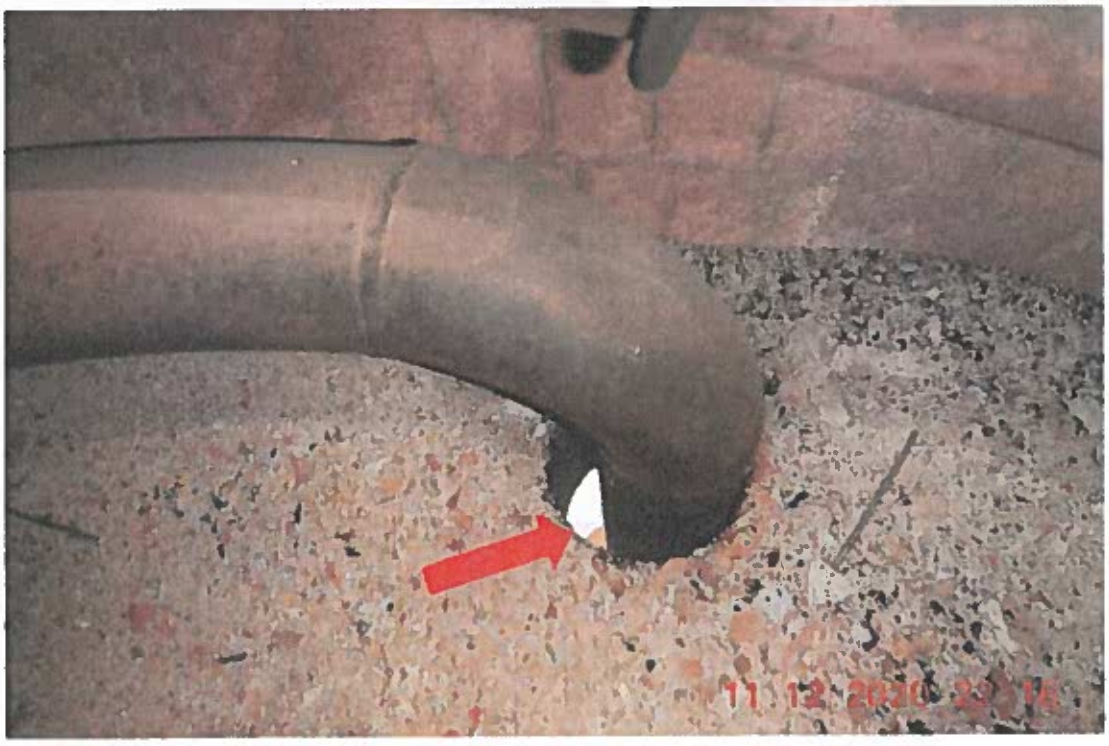
5)

6)

The following ten (10) photos show the internal condition of the reboiler. A crack and warping in the manway metal ring were observed. Areas of water staining were observed in the refractory around top head attachments. Areas of eroded or scrapped away shell refractory was noted. Light cracking and spalling were noted in the top refractory. Openings were observed in the reboiler at the coil inlet and outlet. Light general corrosion and bent fins were noted on the accessible economizer tubes.

7)

8)



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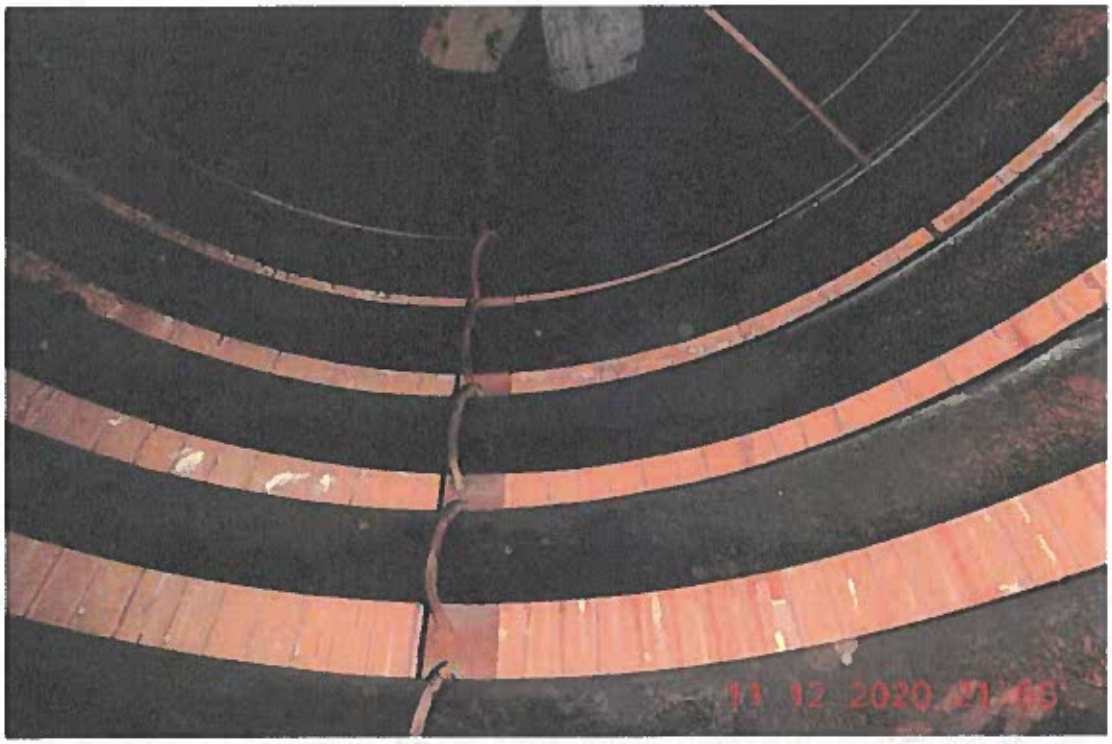
9)

10)

The following ten (10) photos show the condition of the coil tubes and U-bolts. No indications of significant corrosion or erosion were noted on the coil. Repair window welds were observed on tubes 36 and 38. Light staining and moderate black discoloration (soot) were noted on the coil throughout. No broken U-bolts were observed.

1)



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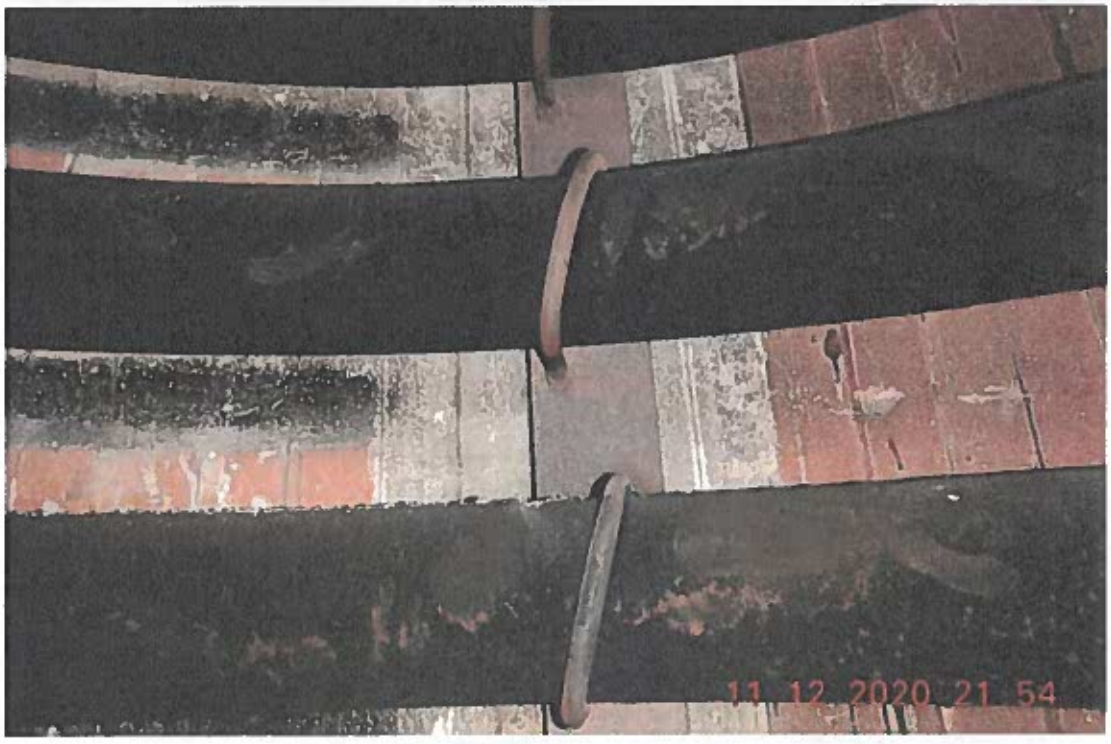

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3)

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9)

10)

The following four (4) photos show the internal condition of the burner and burner box. The burner and burner box appeared to be in satisfactory condition for continued service; however, accumulation of loose insulation and debris were observed.

1)

2)

The following four (4) photos show the internal condition of the burner and burner box. The burner and burner box appeared to be in satisfactory condition for continued service; however, accumulation of loose insulation and debris were observed.

3)

4)

EXTERNAL

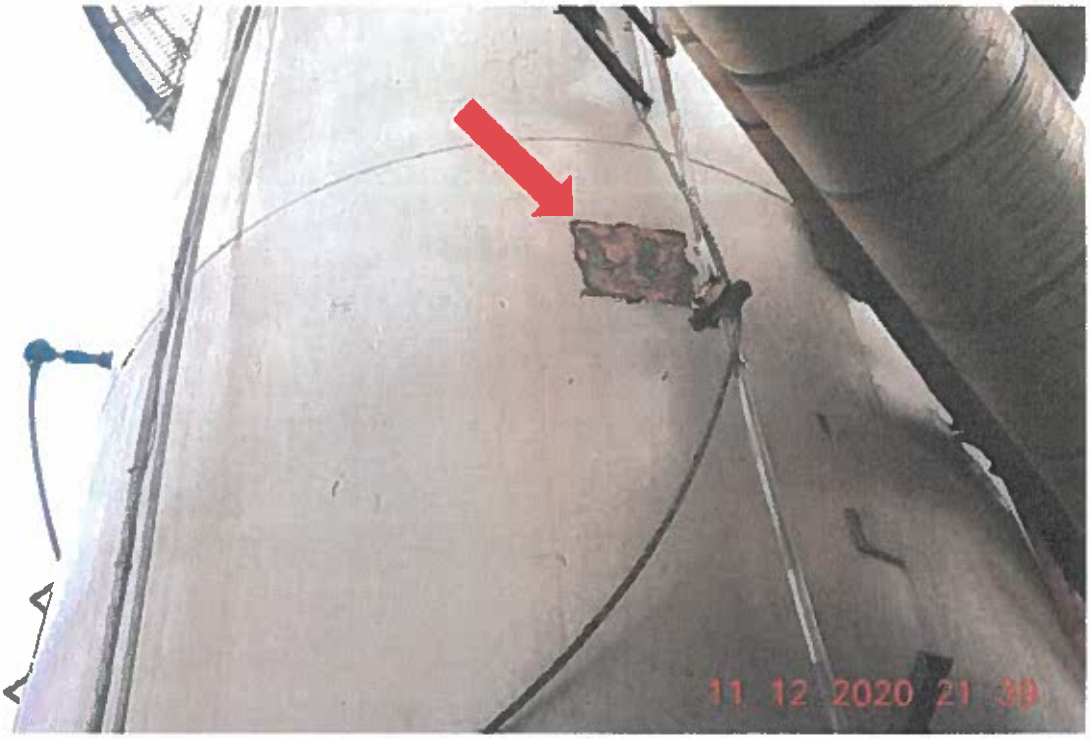
The following sixteen (16) photos show the external condition of the reboiler. Areas of general corrosion were observed on the exterior of the reboiler. A crack in the southeast side of the burner box was observed. Cracks were noted around the bolts of the inspection ports. Light cracks were noted in the concrete pillars of the support legs. Significant cracks and separation in the ladder support welds were noted.

1)

2)

The following sixteen (16) photos show the external condition of the reboiler. Areas of general corrosion were observed on the exterior of the reboiler. A crack in the southeast side of the burner box was observed. Cracks were noted around the bolts of the inspection ports. Light cracks were noted in the concrete pillars of the support legs. Significant cracks and separation in the ladder support welds were noted.

3)

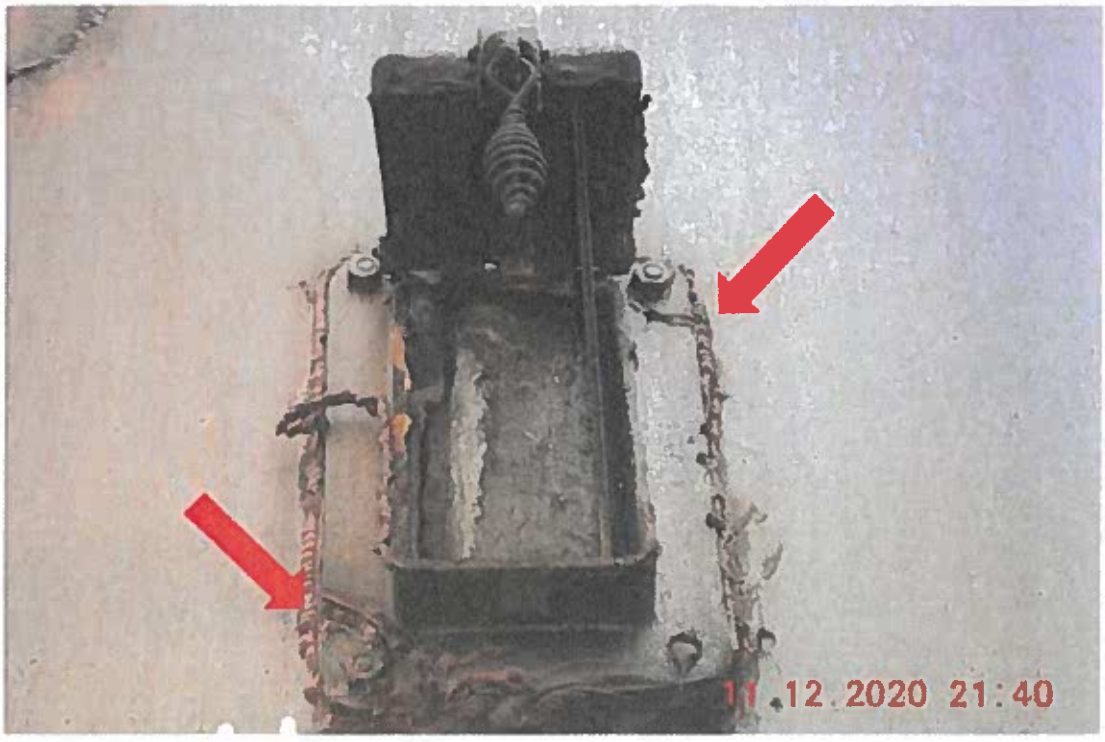


4)

The following sixteen (16) photos show the external condition of the reboiler. Areas of general corrosion were observed on the exterior of the reboiler. A crack in the southeast side of the burner box was observed. Cracks were noted around the bolts of the inspection ports. Light cracks were noted in the concrete pillars of the support legs. Significant cracks and separation in the ladder support welds were noted.

5)

6)



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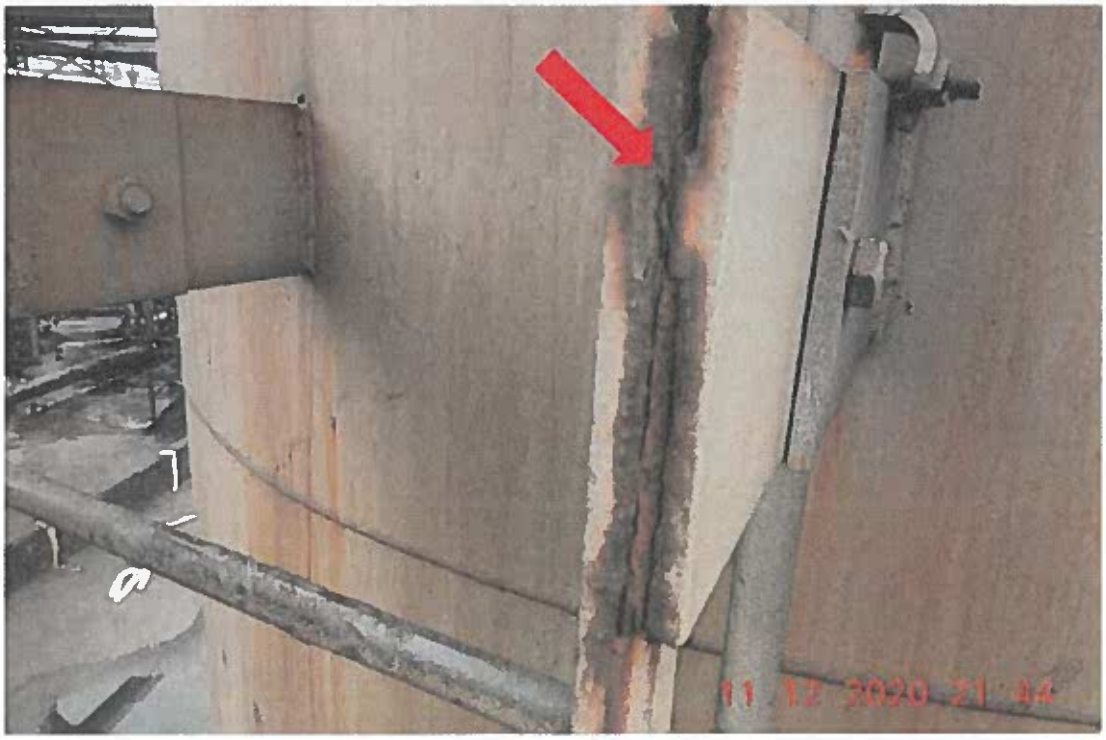
11)

12)

The following sixteen (16) photos show the external condition of the reboiler. Areas of general corrosion were observed on the exterior of the reboiler. A crack in the southeast side of the burner box was observed. Cracks were noted around the bolts of the inspection ports. Light cracks were noted in the concrete pillars of the support legs. Significant cracks and separation in the ladder support welds were noted.

13)

14)



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15)

16)

KOCH
SPECIALTY PLANT SERVICES
12221 East Sam Houston Parkway North • Houston, TX 77044 • Phone 1-713-427-7700 • Fax 1-713-427-7747

Fixed Equipment Internal Inspection Report

Unit:	U-03		**Insp. Date:**	11-10-2020 THRU 11-XX-2020	
Equipment:	V-101 & V-201				
Description:	TAR FRACTIONATOR		**Inspector(s):**	STEPHEN ZANELLA	**API 510#:** 68344
Serial Number:	74-413B	**National Board:** N/A			**API 510#:**
Customer:	KOPPERS		**Location:**	U-03 TAR PLANT	
Street Address:	3900 S LARAMIE AVE		**Contact:**	KYLE URBAN	
City:	CICERO	**State:** ILLINOIS	**Zip Code:** 60804	**Outage:**	NO

SUMMARY:

REPAIR SUMMARY:

RECOMMENDATIONS:

Condition Before Cleaning:

Cleaning Method:

Accessibility:

SHELL & HEADS:

Top Head:

Shell:

Bottom Head:

Internal Components:

Nozzles:

KOCH.
SPECIALTY PLANT SERVICES
12221 East Sam Houston Parkway North • Houston, TX 77044 • Phone 1-713-427-7700 • Fax 1-713-427-7747

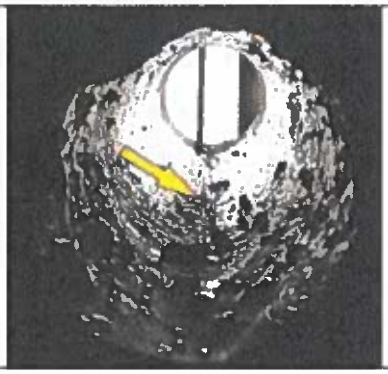
Fixed Equipment Internal Inspection Report

Unit: U-03
Equipment: V-101 & V-201
Description: TAR FRACTIONATOR
Serial Number: 74-413B **National Board:** N/A

Insp. Date: 11-10-2020 THRU 11-XX-2020
Inspector(s): STEPHEN ZANELLA **API 510#:** 68344
API 510#:

Internal Pictures:

Reference ID: 1

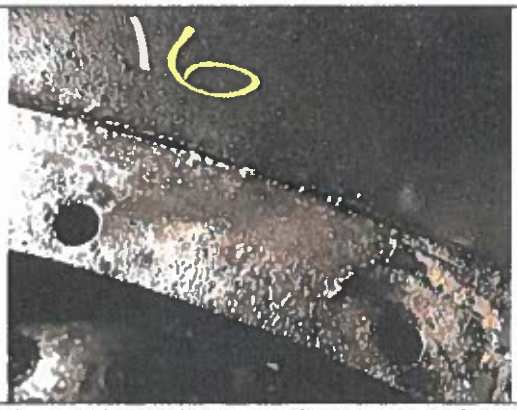


Description: Erosion at nozzle 10 upper liquid level 3" nozzle (dirty Inspection)

Reference ID: 2

Description: Tray ring 13 weld corrosion

Reference ID: 3



Description: weld corrosion at tray ring 16. Approximately 8" long

Reference ID: 4

Description: Tray ring 16 thinning and deflected

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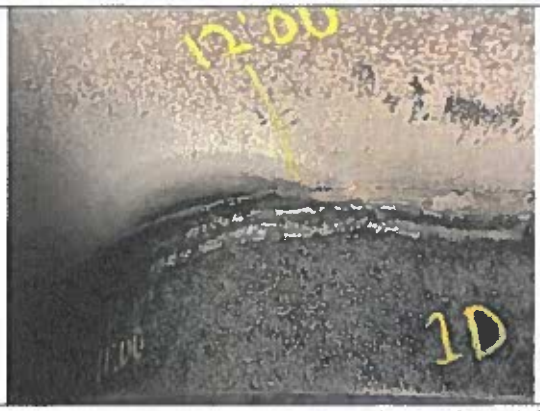
Fixed Equipment Internal Inspection Report

Unit: U-03 **Insp. Date:** 11-10-2020 THRU 11-XX-2020
Equipment: V-101 & V-201
Description: TAR FRACTIONATOR **Inspector(s):** STEPHEN ZANELLA **API 510#:** 68344
Serial Number: 74-413B **National Board:** N/A **API 510#:**

Reference ID: 5

Description: Corroded areas above tray ring 19. Depths as noted

Reference ID: 6



Description: Manway nozzle 1D at the top has surface pitting greater than .150" deep and weld corrosion at the vessel wall

Reference ID: 7

Description: Close up view of nozzle 1D corrosion

Reference ID: 8

Description: N 2 Internal projection corrosion .065 x .500"

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Fixed Equipment Internal Inspection Report

Unit: U-03 **Insp. Date:** 11-10-2020 THRU 11-XX-2020
Equipment: V-101 & V-201
Description: TAR FRACTIONATOR **Inspector(s):** STEPHEN ZANELLA **API 510#:** 68344
Serial Number: 74-413B **National Board:** N/A **API 510#:**

Reference ID: 9

Description: 3x .100" corrosion at N 2 TOC Vapor Outlet shell

Reference ID: 10

Description: Tray ring 20 vertical weld seam has .150 x .200" pin hole and tray ring splice has a crack and pin hole in the attachment weld (unknown depth of crack

Reference ID: 11

Description: Manway Nozzle 1E mechanical damage and arc strike

Reference ID: 12

Description: Vertical seam near bottom head of dehydrator. Undercut/weld defect .040" deep

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Fixed Equipment Internal Inspection Report

Unit: U-03
Equipment: V-101 & V-201
Description: TAR FRACTIONATOR
Serial Number: 74-413B **National Board:** N/A

Insp. Date: 11-10-2020 THRU 11-XX-2020
Inspector(s): STEPHEN ZANELLA **API 510#:** 68344
API 510#:

Reference ID: 13

Description: Baffle bracket attachment weld below tray 21. Typical 4 places. Weld quality issues, arc strikes, undercutting, buckshot, etc.

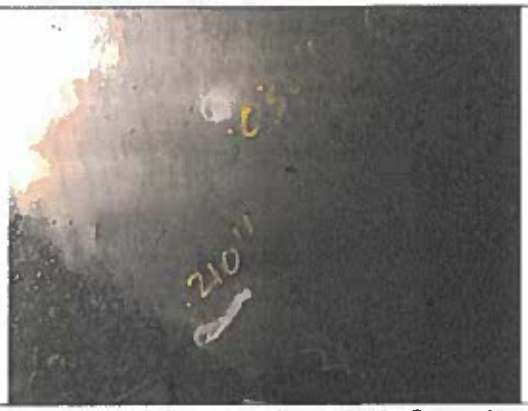
Reference ID: 14

Description: Baffle bracket attachment weld below tray 21. Typical 4 places. Weld quality issues, arc strikes, undercutting, buckshot, etc.

Reference ID: 15

Description: Baffle bracket attachment weld below tray 21. Crack developing at the top of the weld. Weld quality issues, arc strikes, undercutting, buckshot.

Reference ID: 16



Description: Shell defect areas above tray 21@ xxx degrees

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Fixed Equipment Internal Inspection Report

Unit: U-03 **Insp. Date:** 11-10-2020 THRU 11-XX-2020
Equipment: V-101 & V-201
Description: TAR FRACTIONATOR **Inspector(s):** STEPHEN ZANELLA **API 510#:** 68344
Serial Number: 74-413B **National Board:** N/A **API 510#:**

Reference ID: 17

Description: Shell defect areas above tray 22@ xxx degrees. .090 x .325". Arc strikes.

Reference ID: 18

Description: Erosion of weld metal buildup area above tray 22. Unknown depth of erosion.

Reference ID: 19

Description: Vertical seam above tray 22. Undercut/weld defect .030" deep, pin hole.

Reference ID: 20

Description: Thru hole above tray 22 @west side. .375" diameter

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Fixed Equipment Internal Inspection Report

Unit: U-03 **Insp. Date:** 11-10-2020 THRU 11-XX-2020
Equipment: V-101 & V-201
Description: TAR FRACTIONATOR **Inspector(s):** STEPHEN ZANELLA **API 510#:** 68344
Serial Number: 74-413B **National Board:** N/A **API 510#:**

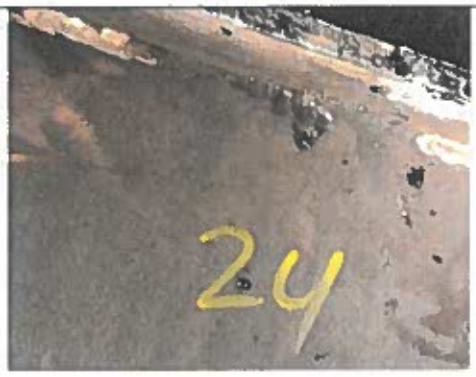
Reference ID: 21

Description: Thru hole above tray 22 @west side. .375" diameter

Reference ID: 22

Description: Arc gouged area under tray ring 24. .065 x 1.25"

Reference ID: 23



Description: Arc gouged area under tray ring 24. .050 x 1.5"

Reference ID: 24

Description: Arc gouged area under tray ring 24. .060 x 1.25"

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Fixed Equipment Internal Inspection Report

Unit: U-03 **Insp. Date:** 11-10-2020 THRU 11-XX-2020
Equipment: V-101 & V-201
Description: TAR FRACTIONATOR **Inspector(s):** STEPHEN ZANELLA **API 510#:** 68344
Serial Number: 74-413B **National Board:** N/A **API 510#:**

Reference ID: 25

Description: Arc gouged area under tray ring 24. .070 x 1"

Reference ID: 26

Description: Shell defect areas above tray 23@ xxx degrees

Reference ID: 27

Description: 3 arc gouged areas at tray level 24. Depth as marked

Reference ID: 28

Description: Arc gouged area at tray level 26. .080 x 1.5"

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Fixed Equipment Internal Inspection Report

Unit: U-03
Equipment: V-101 & V-201
Description: TAR FRACTIONATOR
Serial Number: 74-413B **National Board:** N/A

Insp. Date: 11-10-2020 THRU 11-XX-2020
Inspector(s): STEPHEN ZANELLA **API 510#:** 68344
API 510#:

Reference ID: 29

Description: Arc gouged areas at tray level 26. .090 x 1.5"& .090 x 2"

Reference ID: 30

Description: Undercut area below tray 27. .060 x .190"

Reference ID: 31

Description: Undercut area below tray 27. .050 x .500"

Buckshot, slag

Reference ID: 32

Description: Undercut area above tray 27. .060 x .500"

Buckshot, slag

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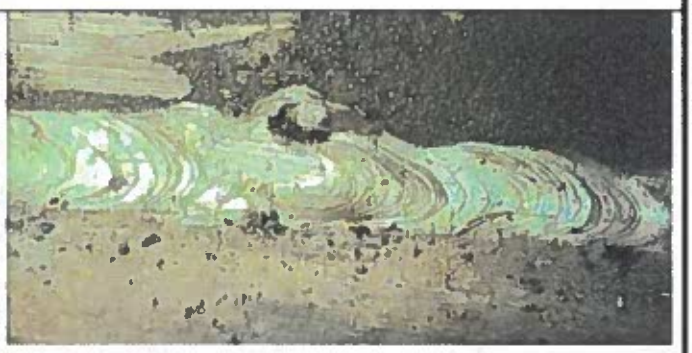
Fixed Equipment Internal Inspection Report

Unit: U-03
Equipment: V-101 & V-201
Description: TAR FRACTIONATOR
Serial Number: 74-413B **National Board:** N/A

Insp. Date: 11-10-2020 THRU 11-XX-2020
Inspector(s): STEPHEN ZANELLA **API 510#:** 68344
API 510#:

Reference ID: 33



Description: Undercut area above tray 27. .060 x .500"

Reference ID: 34

Description: Dehyd Vapor nozzle N 4 fillet weld crater crack, arc strikes

Reference ID: 35

Description: Dehyd Vapor nozzle N4 fillet weld crater crack

Reference ID: 36

Description: N28 pin hole with crack and arc strike area. .030" depth of arc strikes

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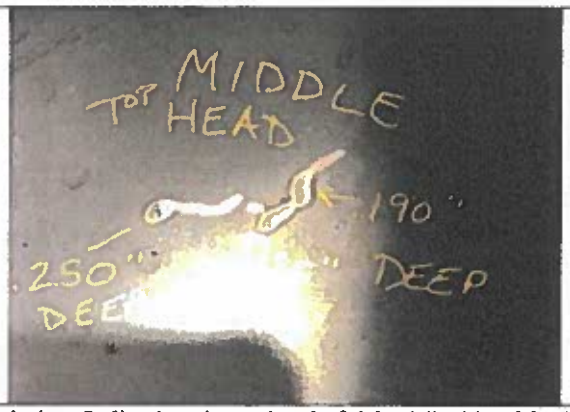
Fixed Equipment Internal Inspection Report

Unit: U-03 **Insp. Date:** 11-10-2020 THRU 11-XX-2020
Equipment: V-101 & V-201
Description: TAR FRACTIONATOR **Inspector(s):** STEPHEN ZANELLA **API 510#:** 68344
Serial Number: 74-413B **National Board:** N/A **API 510#:**

Reference ID: 37

Description: close up view of item 36

Reference ID: 38

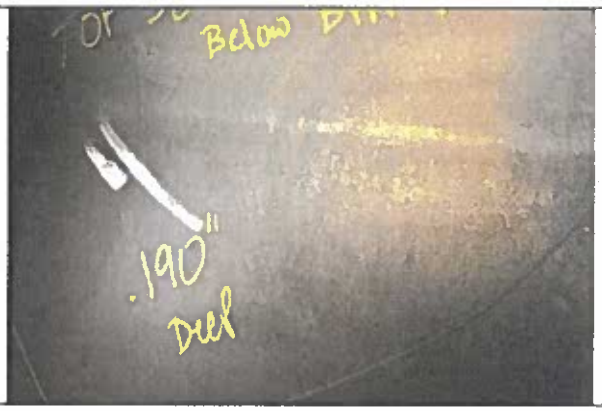


Description: Indications in top head of dehyd (inside of flash drum). Depths as noted

Reference ID: 39

Description: Close up view of item 38

Reference ID: 40



Description: Indication in wall of flash drum. .190 x 2"

INSPECTION TRAVELER *Koch Specialty Plant Services*	Customer: Koppers Cicero, IL Vessel Identification: V-201 Vessel Description: TAR Fractionator Column	Orig. Mfg: Dixie Steel & Supply Co., Inc. Mfg S/N: 74-413B N.B.#: 1040 Year Built: 1975 Orig. Const. Code: ASME Code for Unfired Pressure	Project No.: 9PRR09647-A Sheet 1 of 13 Rev.: 0 Date: 11/12/20
Const./Design Code: ASME Section VIII, Div. 1, 2019 Ed. Repair/Alt Code: API-510 - 10th Edition		Ref. Drawings: —	
Prepared by: Duke Levert Approved by: Duke Levert		Ref. Client Specs: —	

Task Group: Preliminary Tasks

Tsk	Operation/Task Description	Reference Data	Welder	KSPS QC		N.B./API-510 Insp		Client	
1	Review design documents & traveler w/ API-510 Inspector & obtain hold points	Indicate Inspector's hold points with an "H" in the appropriate column at hold point steps	N/A	H					
2	Review NDE procedures & personnel qualifications	Initial NDE Procedures and personnel qualifications after review and approval	N/A	H					
	****End of Task Group****								

H = Hold point (do not proceed past this step w/o acceptance) ♦ W = Notify for Witness ♦ R = Review records prior to final acceptance ♦ Unmarked steps are subject to random/intermittent surveillance

INSPECTION TRAVELER *Koch Specialty Plant Services*	Customer: Koppers Cicero, IL Vessel Identification: V-201 Vessel Description: TAR Fractionator Column	Orig. Mfg: Dixie Steel & Supply Co., Inc. Mfg S/N: 74-413B N.B.#: 1040 Year Built: 1975 Orig. Const. Code: ASME Code for Unfired Pressure	Project No.: 9PRR09647-A Sheet 2 of 13 Rev.: 0 Date: 11/12/20
Const./Design Code: ASME Section VIII, Div. 1, 2019 Ed. Repair/Alt Code: API-510 - 10th Edition		Ref. Drawings: ---	
Prepared by: Duke Levert Approved by: Duke Levert		Ref. Client Specs: ---	

Task Group: (Lower Section) Weld Metal Build Up on Shell Area

Tsk	Operation/Task Description	Reference Data	Welder	KSPS QC		N.B./API-510 Insp		Client	
1	Verify materials for this task group have been received, inspected, & accepted	Document acceptance on MRRF	N/A	H					
2	Layout locations for WMBU and confirm with Client	Ref. KSPS Fixed Equipment Internal Inspection Report	N/A	H					
3	UT examine shell thickness	Per NDE Contractor's Procedure Document on UT Report	N/A	H					
4	Perform PMI on shell base metal	Per NDE Contractor's Procedure Document on PMI Report	N/A	H					
5	Grind WMBU areas to remove any indications	---	N/A	H					
6	Blend grind & prep areas for welding and visually examine	---	N/A	H					
7	PT examine weld prep areas	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
8	Perform WMBU on repair areas	WPS: 8-8-B-1-3 (ER316)		H					
9	PT examine completed weld areas	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
	****End of Task Group****								

H = Hold point (do not proceed past this step w/o acceptance) ♦ W = Notify for Witness ♦ R = Review records prior to final acceptance ♦ Unmarked steps are subject to random/intermittent surveillance

INSPECTION TRAVELER *Koch Specialty Plant Services*	Customer: Koppers Cicero, IL Vessel Identification: V-201 Vessel Description: TAR Fractionator Column	Orig. Mfg: Dixie Steel & Supply Co., Inc. Mfg S/N: 74-413B N.B.#: 1040 Year Built: 1975 Orig. Const. Code: ASME Code for Unfired Pressure	Project No.: 9PRR09647-A Sheet 3 of 13 Rev.: 0 Date: 11/12/20
Const./Design Code: ASME Section VIII, Div. 1, 2019 Ed. Repair/Alt Code: API-510 - 10th Edition		Ref. Drawings: ---	
Prepared by: Duke Levert Approved by: Duke Levert		Ref. Client Specs: ---	

Task Group: (Lower Section) Weld Repair at Tray Rings

Tsk	Operation/Task Description	Reference Data	Welder	KSPS QC		N.B./API-510 Insp		Client	
1	Verify materials for this task group have been received, inspected, & accepted	Document acceptance on MRRF	N/A	H					
2	Layout locations for repair areas and confirm with Client	Ref. KSPS Fixed Equipment Internal Inspection Report	N/A	H					
3	Grind repair areas to remove any indications	---	N/A	H					
4	Blend grind & prep areas for welding and visually examine	---	N/A	H					
5	PT examine weld prep areas	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
6	Perform weld repairs	WPS: 8-8-B-1-3 (ER316)		H					
7	PT examine completed weld areas	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
	****End of Task Group****								

H = Hold point (do not proceed past this step w/o acceptance) ♦ W = Notify for Witness ♦ R = Review records prior to final acceptance ♦ Unmarked steps are subject to random/intermittent surveillance

INSPECTION TRAVELER *Koch Specialty Plant Services*	Customer: Koppers Cicero, IL Vessel Identification: V-201 Vessel Description: TAR Fractionator Column	Orig. Mfg: Dixie Steel & Supply Co., Inc. Mfg S/N: 74-413B N.B.#: 1040 Year Built: 1975 Orig. Const. Code: ASME Code for Unfired Pressure	Project No.: 9PRR09647-A Sheet 4 of 13 Rev.: 0 Date: 11/12/20
Const./Design Code: ASME Section VIII, Div. 1, 2019 Ed. Repair/Alt Code: API-510 - 10th Edition		Ref. Drawings: ---	
Prepared by: Duke Levert Approved by: Duke Levert		Ref. Client Specs: ---	

Task Group: (Lower Section) Manway Nozzle 1D Weld Repair

Tsk	Operation/Task Description	Reference Data	Welder	KSPS QC		N.B./API-510 Insp		Client	
1	Verify materials for this task group have been received, inspected, & accepted	Document acceptance on MRRF	N/A	H					
2	Layout locations for weld repair and confirm with Client	Ref. KSPS Fixed Equipment Internal Inspection Report	N/A	H					
3	Grind weld repair area to remove any indications	---	N/A	H					
4	Blend grind & prep area for welding and visually examine	—	N/A	H					
5	PT examine weld prep area	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
6	Perform fillet weld repair	WPS: 8-8-B-1-3 (ER316)		H					
7	PT examine completed weld area	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
	****End of Task Group****								

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INSPECTION TRAVELER *Koch Specialty Plant Services*	Customer: Koppers Cicero, IL Vessel Identification: V-201 Vessel Description: TAR Fractionator Column	Orig. Mfg: Dixie Steel & Supply Co., Inc. Mfg S/N: 74-413B N.B.#: 1040 Year Built: 1975 Orig. Const. Code: ASME Code for Unfired Pressure	Project No.: 9PRR09647-A Sheet 5 of 13 Rev.: 0 Date: 11/12/20
Const./Design Code: ASME Section VIII, Div. 1, 2019 Ed. Repair/Alt Code: API-510 - 10th Edition		Ref. Drawings: ---	
Prepared by: Duke Levert Approved by: Duke Levert		Ref. Client Specs: ---	

Task Group: (Lower Section) Repair Vertical Weld Seam

Tsk	Operation/Task Description	Reference Data	Welder	KSPS QC		N.B./API-510 Insp		Client	
1	Verify materials for this task group have been received, inspected, & accepted	Document acceptance on MRRF	N/A	H					
2	Layout locations for weld repair and confirm with Client	Ref. KSPS Fixed Equipment Internal Inspection Report	N/A	H					
3	Grind weld repair area to remove any indications	---	N/A	H					
4	Blend grind & prep area for welding and visually examine	---	N/A	H					
5	PT examine weld prep area	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
6	Perform weld repair	WPS: 8-8-B-1-3 (ER316)		H					
7	PT examine completed weld area	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
8	UT examine completed weld repair	Per NDE Contractor's Procedure Document on UT Report	N/A	H					
	****End of Task Group****								

H = Hold point (do not proceed past this step w/o acceptance) ♦ W = Notify for Witness ♦ R = Review records prior to final acceptance ♦ Unmarked steps are subject to random/intermittent surveillance

INSPECTION TRAVELER *Koch Specialty Plant Services*	Customer: Koppers Cicero, IL Vessel Identification: V-201 Vessel Description: TAR Fractionator Column	Orig. Mfg: Dixie Steel & Supply Co., Inc. Mfg S/N: 74-413B N.B.#: 1040 Year Built: 1975 Orig. Const. Code: ASME Code for Unfired Pressure	Project No.: 9PRR09647-A Sheet 6 of 13 Rev.: 0 Date: 11/12/20
Const./Design Code: ASME Section VIII, Div. 1, 2019 Ed. Repair/Alt Code: API-510 - 10th Edition		Ref. Drawings: ---	
Prepared by: Duke Levert Approved by: Duke Levert		Ref. Client Specs: ---	

Task Group: (Middle Section) Weld Metal Build Up on Shell Area

Tsk	Operation/Task Description	Reference Data	Welder	KSPS QC		N.B./API-510 Insp		Client	
1	Verify materials for this task group have been received, inspected, & accepted	Document acceptance on MRRF	N/A	H					
2	Layout locations for WMBU and confirm with Client	Ref. KSPS Fixed Equipment Internal Inspection Report	N/A	H					
3	UT examine shell thickness	Per NDE Contractor's Procedure Document on UT Report	N/A	H					
4	Perform PMI on shell base metal	Per NDE Contractor's Procedure Document on PMI Report	N/A	H					
5	Grind WMBU areas to remove any indications	---	N/A	H					
6	Blend grind & prep areas for welding and visually examine	---	N/A	H					
7	PT examine weld prep areas	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
8	Perform WMBU on repair areas	WPS: 8-8-B-1-3 (ER316)		H					
9	PT examine completed weld areas	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
	****End of Task Group****								

H = Hold point (do not proceed past this step w/o acceptance) ♦ W = Notify for Witness ♦ R = Review records prior to final acceptance ♦ Unmarked steps are subject to random/intermittent surveillance

INSPECTION TRAVELER *Koch Specialty Plant Services*	Customer: Koppers Cicero, IL Vessel Identification: V-201 Vessel Description: TAR Fractionator Column	Orig. Mfg: Dixie Steel & Supply Co., Inc. Mfg S/N: 74-413B N.B.#: 1040 Year Built: 1975 Orig. Const. Code: ASME Code for Unfired Pressure	Project No.: 9PRR09647-A Sheet 7 of 13 Rev.: 0 Date: 11/12/20
Const./Design Code: ASME Section VIII, Div. 1, 2019 Ed. Repair/Alt Code: API-510 - 10th Edition		Ref. Drawings: ---	
Prepared by: Duke Levert Approved by: Duke Levert		Ref. Client Specs: ---	

Task Group: (Middle Section) Baffle Support Repairs

Tsk	Operation/Task Description	Reference Data	Welder	KSPS QC		N.B./API-510 Insp		Client	
1	Verify materials for this task group have been received, inspected, & accepted	Document acceptance on MRRF	N/A	H					
2	Layout locations for weld repairs and confirm with Client	Ref. KSPS Fixed Equipment Internal Inspection Report	N/A	H					
3	Grind weld repair areas to remove any indications	---	N/A	H					
4	Blend grind & prep areas for welding and visually examine	---	N/A	H					
5	PT examine weld prep areas	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
6	Perform weld repairs	WPS: 8-8-B-1-3 (ER316)		H					
7	PT examine completed weld areas	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
	****End of Task Group****								

H = Hold point (do not proceed past this step w/o acceptance) ♦ W = Notify for Witness ♦ R = Review records prior to final acceptance ♦ Unmarked steps are subject to random/intermittent surveillance

INSPECTION TRAVELER *Koch Specialty Plant Services*	Customer: Koppers Cicero, IL Vessel Identification: V-201 Vessel Description: TAR Fractionator Column	Orig. Mfg: Dixie Steel & Supply Co., Inc. Mfg S/N: 74-413B N.B.#: 1040 Year Built: 1975 Orig. Const. Code: ASME Code for Unfired Pressure	Project No.: 9PRR09647-A Sheet 8 of 13 Rev.: 0 Date: 11/12/20
Const./Design Code: ASME Section VIII, Div. 1, 2019 Ed. Repair/Alt Code: API-510 - 10th Edition		Ref. Drawings: ---	
Prepared by: Duke Levert Approved by: Duke Levert		Ref. Client Specs: ---	

Task Group: (Middle Section) Install Flush Patch

Tsk	Operation/Task Description	Reference Data	Welder	KSPS QC		N.B./API-510 Insp		Client	
1	Verify materials for this task group have been received, inspected, & accepted	Document acceptance on MRRF	N/A	H					
2	Identify damaged area to be replaced, layout opening, and confirm with client	Ref. KSPS Fixed Equipment Internal Inspection Report	N/A	H					
3	Cut opening (removing damaged area) and bevel prep opening	---	N/A						
4	Visually inspect and PT examine bevel prep	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
5	Fit & tack new flush patch to shell and verify fit	WPS: 8-8-B-1-3 (ER316)		H					
6	Weld outside passes & visually examine	WPS: 8-8-B-1-3 (ER316)		H					
7	Back-gouge/-grind to sound metal, and PT back prep	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
8	Weld inside passes & visually examine	WPS: 8-8-B-1-3 (ER316)		H					
9	PT examine completed installation weld (IS & OS)	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
10	100% RT Examine completed flush patch installation weld	Per NDE Contractor's Procedure Document on RT Report	N/A	H					
	****End of Task Group****								

H = Hold point (do not proceed past this step w/o acceptance) ♦ W = Notify for Witness ♦ R = Review records prior to final acceptance ♦ Unmarked steps are subject to random/intermittent surveillance

INSPECTION TRAVELER *Koch Specialty Plant Services*	Customer: Koppers Cicero, IL Vessel Identification: V-201 Vessel Description: TAR Fractionator Column	Orig. Mfg: Dixie Steel & Supply Co., Inc. Mfg S/N: 74-413B N.B.#: 1040 Year Built: 1975 Orig. Const. Code: ASME Code for Unfired Pressure	Project No.: 9PRR09647-A Sheet 9 of 13 Rev.: 0 Date: 11/12/20
Const./Design Code: ASME Section VIII, Div. 1, 2019 Ed. Repair/Alt Code: API-510 - 10th Edition		Ref. Drawings: ---	
Prepared by: Duke Levert Approved by: Duke Levert		Ref. Client Specs: ---	

Task Group: (Middle Section) Weld Repairs at Tray Rings

Tsk	Operation/Task Description	Reference Data	Welder	KSPS QC		N.B./API-510 Insp		Client	
1	Verify materials for this task group have been received, inspected, & accepted	Document acceptance on MRRF	N/A	H					
2	Layout locations for weld repairs and confirm with Client	Ref. KSPS Fixed Equipment Internal Inspection Report	N/A	H					
3	Grind repair areas to remove any indications	---	N/A	H					
4	Blend grind & prep areas for welding and visually examine	---	N/A	H					
5	PT examine weld prep areas	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
6	Perform weld repairs	WPS: 8-8-B-1-3 (ER316)		H					
7	PT examine completed weld areas	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
	****End of Task Group****								

H = Hold point (do not proceed past this step w/o acceptance) ♦ W = Notify for Witness ♦ R = Review records prior to final acceptance ♦ Unmarked steps are subject to random/intermittent surveillance

INSPECTION TRAVELER *Koch Specialty Plant Services*	Customer: Koppers Cicero, IL Vessel Identification: V-201 Vessel Description: TAR Fractionator Column	Orig. Mfg: Dixie Steel & Supply Co., Inc. Mfg S/N: 74-413B N.B.#: 1040 Year Built: 1975 Orig. Const. Code: ASME Code for Unfired Pressure	Project No.: 9PRR09647-A Sheet 10 of 13 Rev.: 0 Date: 11/12/20
Const./Design Code: ASME Section VIII, Div. 1, 2019 Ed. Repair/Alt Code: API-510 - 10th Edition		Ref. Drawings: ---	
Prepared by: Duke Levert Approved by: Duke Levert		Ref. Client Specs: ---	

Task Group: (Middle Section) Nozzle 28 Weld Repair

Tsk	Operation/Task Description	Reference Data	Welder	KSPS QC		N.B./API-510 Insp		Client	
1	Verify materials for this task group have been received, inspected, & accepted	Document acceptance on MRRF	N/A	H					
2	Layout locations for weld repair and confirm with Client	Ref. KSPS Fixed Equipment Internal Inspection Report	N/A	H					
3	Grind weld repair area to remove any indications	---	N/A	H					
4	Blend grind & prep area for welding and visually examine	---	N/A	H					
5	PT examine weld prep area	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
6	Perform weld repair	WPS: 8-8-B-1-3 (ER316)		H					
7	PT examine completed weld area	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
	End of Task Group								

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INSPECTION TRAVELER *Koch Specialty Plant Services*	Customer: Koppers Cicero, IL Vessel Identification: V-201 Vessel Description: TAR Fractionator Column	Orig. Mfg: Dixie Steel & Supply Co., Inc. Mfg S/N: 74-413B N.B.#: 1040 Year Built: 1975 Orig. Const. Code: ASME Code for Unfired Pressure	Project No.: 9PRR09647-A Sheet 11 of 13 Rev.: 0 Date: 11/12/20
Const./Design Code: ASME Section VIII, Div. 1, 2019 Ed. Repair/Alt Code: API-510 - 10th Edition		Ref. Drawings: ---	
Prepared by: Duke Levert Approved by: Duke Levert		Ref. Client Specs: ---	

Task Group: (Top Section) Weld Metal Build Up Head Area

Tsk	Operation/Task Description	Reference Data	Welder	KSPS QC		N.B./API-510 Insp		Client	
1	Verify materials for this task group have been received, inspected, & accepted	Document acceptance on MRRF	N/A	H					
2	Layout locations for WMBU and confirm with Client	Ref. KSPS Fixed Equipment Internal Inspection Report	N/A	H					
3	UT examine shell thickness	Per NDE Contractor's Procedure Document on UT Report	N/A	H					
4	Perform PMI on shell base metal	Per NDE Contractor's Procedure Document on PMI Report	N/A	H					
5	Grind WMBU areas to remove any indications	---	N/A	H					
6	Blend grind & prep areas for welding and visually examine	---	N/A	H					
7	PT examine weld prep areas	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
8	Perform WMBU on repair areas	WPS: 8-8-B-1-3 (ER316)		H					
9	PT examine completed weld areas	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
	****End of Task Group****								

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INSPECTION TRAVELER *Koch Specialty Plant Services*	Customer: Koppers Cicero, IL Vessel Identification: V-201 Vessel Description: TAR Fractionator Column	Orig. Mfg: Dixie Steel & Supply Co., Inc. Mfg S/N: 74-413B N.B.#: 1040 Year Built: 1975 Orig. Const. Code: ASME Code for Unfired Pressure	Project No.: 9PRR09647-A Sheet 12 of 13 Rev.: 0 Date: 11/12/20
Const./Design Code: ASME Section VIII, Div. 1, 2019 Ed. Repair/Alt Code: API-510 - 10th Edition		Ref. Drawings: ---	
Prepared by: Duke Levert Approved by: Duke Levert		Ref. Client Specs: ---	

Task Group: (Top Section) Weld Metal Build Up Shell Area

Tsk	Operation/Task Description	Reference Data	Welder	KSPS QC		N.B./API-510 Insp		Client	
1	Verify materials for this task group have been received, inspected, & accepted	Document acceptance on MRRF	N/A	H					
2	Layout locations for WMBU and confirm with Client	Ref. KSPS Fixed Equipment Internal Inspection Report	N/A	H					
3	UT examine shell thickness	Per NDE Contractor's Procedure Document on UT Report	N/A	H					
4	Perform PMI on shell base metal	Per NDE Contractor's Procedure Document on PMI Report	N/A	H					
5	Grind WMBU areas to remove any indications	—	N/A	H					
6	Blend grind & prep areas for welding and visually examine	—	N/A	H					
7	PT examine weld prep areas	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
8	Perform WMBU on repair areas	WPS: 8-8-B-1-3 (ER316)		H					
9	PT examine completed weld areas	Per NDE Contractor's Procedure Document on PT Report	N/A	H					
	****End of Task Group****								

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INSPECTION TRAVELER *Koch Specialty Plant Services*	Customer: Koppers Cicero, IL Vessel Identification: V-201 Vessel Description: TAR Fractionator Column	Orig. Mfg: Dixie Steel & Supply Co., Inc. Mfg S/N: 74-413B N.B.#: 1040 Year Built: 1975 Orig. Const. Code: ASME Code for Unfired Pressure	Project No.: 9PRR09647-A Sheet 13 of 13 Rev.: 0 Date: 11/12/20
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Prepared by: Duke Levert Approved by: Duke Levert		Ref. Client Specs: ---	

Task Group: Final QC Steps

Tsk	Operation/Task Description	Reference Data	Welder	KSPS QC		N.B./API-510 Insp		Client	
1	Review completed traveler and supporting documents	Verify that all above steps have been accepted Verify that any addendum pages have been completed	N/A	R					
2	Verify that any NCR's have been resolved (if applicable)		N/A	R					
3	Sign API-510 Forms	(2) copies	N/A	H					
4	Complete Welder Update Sheet	Leave updated column blank for Project Engineer to complete	N/A	H					
	End of Task Group								

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TEAM

ULTRASONIC DATA REPORT

TEAM Industrial Services
7920 Maryland Ave.
Hammond, IN 46323
(219) 838-0505 Office
(219) 838-8558 Fax

Form: 1203-TQ-004 Rev.0

Client: Koch Specialty @ Koppers	Address: 3900 South Laramie, Cicero, IL 60804		Date: 11/14/20
TEAM Project Number: 1105-005118-01	Purchase Order Number: 6017085	Procedure: UT. ASME.3 REV. 13	
Part Number or Identification: V-201-C		Specification: ASME SEC. V 2020 ED.	
Drawing Number: N/A		Acceptance: ASME SEC. V 2020 ED.	
Item Description: Flash drum head and shell		Material Alloy: SS	Material Thickness: 5/16 and 7/16

Instrument Make & Model: OLYMPUS 38DL PLUS	Serial Number: 140871304	Calibration Date: 3/17/21
Calibration Block Material: SS	Calibration Block Serial Number: 15-3486	Calibration Range: .100-.500
Transducer Size: .434	Transducer Serial Number: D-790 SM S/N 1272954	Transducer Frequency: 5 MHZ
Couplant: ULTRAGEL II	Couplant Batch Number: 15E002	Surface Condition: As installed

Disposition

Thickness readings were taken around gouge defects in the shell (Sxx) and head (Hxx) of the V-201-C flash drum.

Location Numbers	Readings	Location Numbers	Readings	Location Numbers	Readings	Location Numbers	Readings	Location Numbers	Readings
S01	.350	H01	.439						
S02	.350	H02	.440						
S03	.349	H03	.437						
S04	.348	H04	.441						
S05	.346	H05	.440						

Technician Name:	Technician Signature:	Level:	Date:
Niklas Gustafson		II	11/14/2020

Attachment: Yes ☐ No ☑