

Acme Coke
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COG Main Shutdown

Dated: 1974

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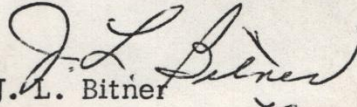
Copies to:

Date: May 14, 1974

To: As Noted
From: J. L. Bitner
Subject: COG Main Outage

Reference:

A shutdown of the interplant Coke Oven Gas Main is now scheduled for May 23, 1974 so that Piping System can replace a drip leg at the Coke Plant and an expansion joint at the Furnace Plant. A meeting will be held in Mr. Cook's office on May 21, 1974 at 9:30 AM for those involved in the shutdown so as to finalize the outage.


J. L. Bitner

jlb/lb.

A. Cook
T. Danko
R. Hoffman
R. Langhoff

R. Nagan
R. Rankin ✓
W. Weinberg
J. Zbos

INTEROFFICE
CORRESPONDENCE

Copies to:

Date: May 22, 1974

To: A. Cook

From: R. Hoffman

Subject:
COG MAIN SHUTDOWN - MAY 23, 1974

Reference:

PURPOSE: Repair leaky portions of COG main, both at the Coke Plant and Furnace locales.

PROCEDURE: All uses of Coke Oven Gas are to be shut off prior to 5:00 AM on May 23, 1974.

These at the Furnace Plant consist of:

1. COG Compressor (To be shut down at 4:30 AM and inlet and discharge cocks closed immediately).
2. COG Enrichment into BFG main for stove fuel (Cocks on this to be closed about the same time as for COG compressor).
3. Boiler House (This includes main burners and pilot lights for all boilers).
4. Republic Steel Corporation (The main cock for this is to be closed by Republic personnel at 4:30 AM).
5. Sinter Plant (Sinter Plant will have to be shut down early to meet the 5:00 AM deadline).
6. BFG bleeder pilot lights.
7. Ladle Repair Building.
8. Ladle Heating Station.
9. Pig Machine
10. Furnaces (All miscellaneous usages such as lances, drying of runners, ect.).

After it has been ascertained that the above usages have been shut off Mr. Rankin at the Coke Plant will be notified.

The Coke Plant will then reduce pressure in the coke oven gas system, shut down the remaining booster that was operating and install a slip blank in the gas main. Thus sealing off that portion of the gas system from the system that will remain activated at the BP.

Upon finishing the slip-blanking procedure the Coke Plant will place the purge machine into operation and notify Mr. Hoffman at the Furnace Plant.

At this step Pipefitters stationed at the termini of the gas line branches will open vents to the atmosphere so that the purge gas will displace the live COG.

Full purging will be carried on first on the branch leading to Republic Steel by opening the vent just upstream of Republic's valve.

Purging will proceed simultaneously from the vents just upstream and down stream of the COG compressor.

More intensified purging will take place from the drips along the branch line to Republic as long as the purge gas pressure holds up, and until a safe end point of 7 to 7½% CO₂ is reached at the end of that branch. Then only the vent at the end of this branch will be left open but in a throttled position to minimize purging there.

Meanwhile if purge pressure has held up satisfactorily more purge vents will be open further down stream. Namely at the Sinter Plant where a vent pipe will have been installed from the burner area to an open window, at the Ladle Heating Station, at the high line by "A" Furnace, at the Pig Machine, and at the Ladle Repair Station.

As long as the purge pressure holds up, further and more rapid purging will be accomplished by opening drip legs along the main.

As safe end points are reached at intermediate points along the system, progressing in the direction of purging the upstream vents will be throttled back to impel a larger flow of purge gas further down-stream.

In case of a flame-out of the purge machine the Pipefitters located at the various stations are to immediately shut off all the vents and drains when a loss of pressure occurs. They will re-open the vents and drains when, upon careful checking, to see indication of resumption of purge pressure again.

Orsat testing will be carried out by a chemist from the chemical laboratory. The goal is to have a sample test consistently of 7 to 7½% CO₂ at all the branch line termini vents. A negative test with the portable explosion meter is also required at the same points.

When the end point has been reached Mr. Rankin and Mr. Bitner will be notified and they will coordinate their efforts with contractors who are to perform the schedule repairs to the COG main.

About three hours previous to the completion of repairs the purge machine will again put into operation and purging will proceed as before, this time to expel the air that had entered the gas main during repairs.

Upon final completion of repairs the purge will continue until the necessary end points are reached at all the termini vent points.

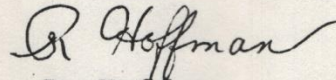
At this point the vents and drains will all be closed and the slip blank at the Coke Plant BP will be removed.

The system will then be pressurized with COG from the boosters. The system will again be vented at all termini until COG issues from them. Testing for this will be by drawing samples of gas in bags and running a flame test on the samples. As each sample point checks out the venting will stop from there.

At the completion of this venting all interested parties will be notified so that the usages of COG can begin and operations returned to normal.

There is to be no smoking or other open flames in the proximity of the locations where purging of venting valves are open.

Pipefitters are to be stationed in each area during periods of venting and purging and they are to be instructed to safeguard other personnel and close off the vents when the pressure drops off.



R. Hoffman

RH/bjm

CC: J. Seaman
R. Nagan
R. Rankin
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J. Bitner
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