

Acme Coke  
11236 S. Torrence Ave.  
Chicago IL 60617



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Document archive

Ovens Best Practice Team  
Dated: 1992

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BP-CP-CP-CH2  
IPL-PP-CP-001

OVENS BEST PRACTICE TEAM  
ACME STEEL CO.

- FUNCTION: Charging ovens.
- SUPPLIER: Larry car operator.
- CUSTOMER: Ovens department.
- PROCESS VARIABLE: Low and high level of coal in ovens.
- RESPONSIBILITY: Larry car operator.
- GOALS: Making the maximum amount of quality coke.
- MEASUREMENT: Visual inspection to volumetric level setting.
- PROCEDURE:
- 1.) When loading make sure the hoppers are full.
  - 2.) Larry car operator spots the larry car over the charging holes.
  - 3.) Larry car operator fills the oven with coal.
  - 4.) Following the established stage charging procedure.
  - 5.) Make sure the larry car is empty.
  - 6.) Check drag back from oven.
- CORRECTIVE ACTION:
- 1.) Physically check coal level through the charging holes.
  - 2.) Communicate with pusherman and the lidman.
  - 3.) Draw coal from all coal bins on a rotational basis.

*Perry Bindgen*

10-1-92

3P-CP-CP-018

OVENS BEST PRACTICE TEAM  
ACME STEEL CO.

FUNCTION: Quenching outside the station ( through tank)

SUPPLIER: Quench station.

PROCESS VARIABLE: Moisture and fire.

RESPONSIBILITY: Quench car operator.

GOALS: To met I.P.L. on moisture control.

MEASUREMENT: Lab.

- PROCEDURE:
1. Spot car with the north spray four feet from the north end of car, spray should be over hot coke in north end of car.
  2. Slowly rock the car back and forth under the spray trying to keep as much water off the wharf as possible.
  3. Monitor coke during windy conditions the timer might need adjusting (increased) notify shift manager.
  4. Use a watch as a timer when quenching outside because you do not loose power. This will insure a proper drain each time.
  5. Let coke drain properly before dumping.

- CORRECTIVE ACTION:
1. Change timer if necessary (notify shift manager)
  2. If this is going to be an extended operating condition cover lip of wharf to keep water off wharf.

Perry B. [signature]

10-1-92

BP-CP-CP-043

OVENS BEST PRACTICE TEAM  
ACME STEEL CO.

FUNCTION: Changing flue casting.

SUPPLIER: Patcher.

CUSTOMER: Oven (heating department)

PROCESS VARIABLE: Plugged flues.

REASON FOR CONTROL: Prevent plugged flues.

RESPONSIBILITY: Patcher and lidman.

GOALS: To meet I.P.L. recommendation of consistant work practice on the ovens.

MEASURMENT: Visually inspection of flue during patching, souping or demolition work around flues and or tie rods.

PROCEDURE:

1. Check flues before, during and after doing a job.
2. Use something to block the entry into flue of foriegn material or objects.
3. Notify heating of any accidental obstruction of flues.
4. During the pouring of flue castings be extremely cautious as to material getting into flues.

CORRECTIVE ACTION:

1. Train all employees on procedure.
2. Develope a communication between heating and patching.

*Perry Bridgman*

10-1-92

OVENS BEST PRACTICE TEAM  
ACME STEEL CO.

FUNCTION: Uniform flue temperature.

SUPPLIER: By products department.

CUSTOMER: Ovens department underfiring system.

PROCESS VARIABLE: Flue temperature.

REASON FOR CONTROL: To assure proper flue temperatures  
in heating the batteries.

RESPONSIBILITY: Heating department and By products dept.

GOALS: To meet I.P.L. on consistant coke oven gas flow  
to the By products department from the ovens.

MEASURMENT: Visual observation and temperatures shot  
every shift by heating department.

PROCEDURE: 1. Remove proper flue caps for shooting  
temperatures.  
2. Visually inspect any flues that shoot cool.  
3. Monitor the pushing of coke to determine  
condition of coke in referance to heats.  
4. Communicate with the operating foreman  
both top and bottom as to any information  
he may be able to supply you with on cool  
ovens.

CORRECTIVE ACTION: 1. Check cool flues to determine  
reason.  
2. Take necessary steps to correct any  
malfunction.  
3. Maintain good open communication  
between operations and heating.  
4. During low production or changes in  
production schedules make necessary  
changes in heating controls.  
5. Inspect monthly the #1 and #2 flues  
both batteries.

*Perry Bridgman*  
10-1-92

92

OVENS BEST PRACTICE TEAM  
ACME STEEL CO.

FUNCTION: Throwing scrap on the pusher pad and quench tracks.

SUPPLIER: All departments involved in the coke making process.

CUSTOMER: Tractor operator.

PROCESS VARIABLE: COAL MIX

REASON FOR CONTROL: To meet I.P.L. standard of no scrap on pusher pad.

GOALS: 1. To keep scrap out of coal mix.  
2. To improve quality of coke.

MEASUREMENT: Visual inspection.

PROCEDURE: 1. After coke is pushed throw scrap back into oven from pusher side bench and the scrap on the coke side must be thrown into the oven or quench car.  
2. Develop a communication between all departments on house keeping practices.

CORRECTIVE ACTION: 1. Review housekeeping procedures as often as necessary.

*Perry Bridgman*  
10-1-92

BPOV 15

OVENS BEST PRACTICE TEAM  
ACME STEEL CO.

FUNCTION: Quenching coke.

SUPPLIER: Quench station and it's controls.

CUSTOMER: Wharf.

PROCESS VARIABLE: Moisture and fires.

REASON FOR CONTROL: Moisture control.

RESPONSIBILITY: Quench car operator.

GOALS: To meet I.P.L. on moisture control in coke.

MEASUREMENT: Lab.

PROCEDURE: 1. Determine if tank is fully recovered by visually looking at the overflow pipe this will give you maximum pressure for quenching.  
2. Spot the car properly under the sprays before initiating the quench cycle.  
3. Rock the car back and forth during both quench cycles.  
4. If you get any fire after quenching notify the oven shift manager so problem can be determined.  
5. Quench timers should be set properly.  
6. Let loads drain properly.  
7. In windy conditions you may have to change operationing practice to avoid fires.

CORRECTIVE ACTION: 1. Monitor each quench.  
2. Communicate problems to the shift manager.  
3. Maintain consistency in quench practice.  
4. Assist shift manager in cleaning sprays on back turns.

*Perry Bridgen*  
10-1-92

OVENS BEST PRACTICE TEAM  
ACME STEEL CO.

FUNCTION: Spotting of the quench car.

SUPPLIER: Quench car operator.

CUSTOMER: Quench car.

PROCESS VARIABLE: Spotting of car.

REASON FOR CONTROL: To catch a level load.

RESPONSIBILITY: Quench car operator.

GOALS: Meet I.P.L. on moisture control.

MEASUREMENT: Visual inspection.

PROCEDURE: 1. Use the mechanical spotting device to spot the quench car properly.  
2. When your vision is obstructed get help spotting the car.  
3. Set the brakes to prevent the car from rolling.  
4. Notify the door machine that you are spotted up and do not move the car unless you notify door machine operator and pusher operator.

CORRECTIVE ACTION: 1. Travel slowly when spotting.  
2. Do not call for the push.

Perry Bridgeman  
10-2-92



OVENS BEST PRACTICE TEAM  
ACME STEEL CO.

FUNCTION: Charging ovens.

SUPPLIER: Larry car operator.

CUSTOMER: Lidman.

PROCESS VARIABLE: Coal (keep foreign objects out of mix)

REASON FOR CONTROL: To meet I.P.L. specifications for coke quality.

GOALS: To make better quality coke and protect ovens.

MEASUREMENT: Visual observation and physical sample.

PROCEDURE: 1.) Follow all basic operating practices.  
2.) Do not sweep anything but raw coal into ovens.  
3.) Any loose foreign objects remove and discard them on ends of batteries in the proper container or place.  
4.) If anything is accidentally dropped into the oven report this to the oven shift foreman-charging.

CORRECTIVE ACTION:

- 1.) While sweeping pay attention to any foreign objects.
- 2.) Keep all metal out of ovens.
- 3.) Keep patcher material out of ovens.

Perry Bridgen  
10-2-92

BPV 9

OVENS BEST PRACTICE TEAM  
ACME STEEL CO.

FUNCTION: Tar quality.

SUPPLIER: Ovens.

CUSTOMER: By products.

PROCESS VARIABLE: Q.I.'S in the tar.

RESPONSIBILITY: Oven shift manager- charging.

GOALS: To meet I.P.L. on less than 5.0% Q.I.'S  
in tar product.

MEASUREMENT: Lab.

PROCEDURE:

1. Charge full ovens, but do not overfill.
2. Control charging steam pressure.
3. Control amount of coal being put into ovens.
4. Better communications between ovens and By products department.
5. Rapid response to analysis of tar from lab.

CORRECTIVE ACTION:

1. Monitor volumetric settings.
2. Check steam pressure 4 times a shift, same as back pressure.
3. Watch drag back from ovens.

Perry Bridgman  
10-1-92

BPOU 7

OVENS BEST PRACTICE TEAM  
ACME STEEL CO.

FUNCTION: Charging ovens

SUPPLIER: Larry car

CUSTOMER: Oven

PROCESS VARIABLE: Moisture and coal texture.

REASON FOR CONTROL: Low backs.

RESPONSIBILITY: Larry car operator.

GOAL: Meet I.P.L. on charging practice.

MEASUREMENT: Sample taken by hand for feel of coal.

PROCEDURE: 1. On sight inspection of coal.  
2. Check pulverization by feel.  
3. Smell of coal for oil.  
4. Ball coal up in hand to test for moisture.

CORRECTIVE ACTION: 1. Notify heating department of wet coal.  
2. Notify shift manager of results.  
3. Pull coal from all bins on a rotational operating practice.

*Perry Bridgman*  
10-1-92

OVENS BEST PRACTICE TEAM  
ACME STEEL CO.

FUNCTION: Coke oven gas B.T.U

SUPPLIER: Ovens\By products departments.

CUSTOMER: Ovens\By products departments.

PROCESS VARIABLE: Coke oven gas B.T.U.

RESPONSIBILITY: Ovens shift manager.

GOALS: To meet I.P.L. on desired range of coke oven gas  
B.T.U of 520 to 540.

MEASUREMENT: Instrument department.

PROCEDURE: 1. Consistant charging ovens on time.  
2. Consistant pushing of ovens as close to  
schedule time as possible.  
3. Minimize use of steam for charging.  
4. Consistant lidding practice.

CORRECTIVE ACTION: 1. Minimize turnover of oven  
personnel.  
2. Control the use of steam by  
everyone more closely.  
3. Consistant coal blending.

Perry Bridgman  
10-1-92

OVENS BEST PRACTICE TEAM  
ACME STEEL CO.

FUNCTION: Catching a load of coke.

SUPPLIER: Door machine operator.

CUSTOMER: Quench car operator.

PROCESS VARIABLE: Uneven loading of quench car.

REASON FOR CONTROL: Meet I.P.L. on moisture control of coke.

RESPONSIBILITY: Quench car operator.

GOALS: Minimize fire and moisture in coke.

MEASUREMENT: Visual sighting.

PROCEDURE: 1. Spot car at proper location by using the spotting device welded on the door machine and quench car.  
2. Set the brakes to prevent rolling.  
3. When coke starts falling into the car move the car at the correct speed.  
4. Visually monitor the coke falling into the car.  
5. If you should have trouble with the car travel signal to stop the push.

CORRECTIVE ACTION: 1. If a travel failure develops use femco to call for the stop of push.  
2. Install sander on the quench car for better traction.

*Perry Bridgeman*

10-1-92

OVENS BEST PRACTICE TEAM  
ACME STEEL CO.

FUNCTION: Quenching outside the station (emergency quenching)

supplier: by products (mill water)

CUSTOMER: QUENCH CAR OPERATOR.

PROCESS VARIABLE: MOISTURE AND FIRE.

RESPONSIBILITY: QUENCH CAR OPERATOR.

GOALS: TO MEET I.P.L. CONTROL ON MOISTURE IN COKE.

MEASUREMENT: LAB

- PROCEDURE:
- 1) Spot the car with the north spray approximately 4 feet from the north end of the quench car. Sprays should be over the hot coke in north end of quench car.
  - 2) Slowly rock the car back and forth under the sprays, trying to keep as much water off the wharf as possible.
  - 3) Monitor coke, it can take as long as twenty minutes to quench using this procedure depending on the water pressure and wind conditions.
  - 4) Once you establish how long it takes use a watch as a timer.
  - 5) Ask for assistance if necessary in spotting the quench car.
  - 6) Scatter fires so they can be extinguished with water.
  - 7) Drain the coke properly before dumping.

CORRECTIVE ACTION 1) Stay under the sprays long enough if getting fires.

2) Notify by products if possible to raise the mill water pressure.

3) Something can be placed on lip of wharf to prevent water from draining onto wharf.

*Perry Bridgman*  
10-1-92

BP0V14

OVENS BEST PRACTICE TEAM  
ACME STEEL CO.

FUNCTION: Dropping coke on the wharf.

SUPPLIER: Quench car operator.

CUSTOMER: Conveyorman.

PROCESS VARIABLE: Fires on the wharf.

REASON FOR CONTROL: Moisture control and damage to belts.

RESPONSIBILITY: Quench car operator.

GOALS: To meet I.P.L. on coke moisture control.

MEASUREMENT: Visual inspection and the lab dept.

PROCEDURE: 1. Quench car operator and conveyorman should communicate continuously.  
2. Quench car must travel at a proper speed to drop loads evenly.  
3. Drop the north gate first then the south gate spreading any fires that you might have.  
4. Do not over shoot the ends of the wharf.  
5. Report all fires to shift manager of ovens and try to determine why you are getting them.

CORRECTIVE ACTION: 1. Reduce speed or stop to drop coke.  
2. Clean the sprays if they are plugged.  
3. Adjust your operating practice for windy conditions.  
4. Scatter fires don't pile them up.

*Perry Bridgman*  
10-1-92

OVENS BEST PRACTICE TEAM  
ACME STEEL CO.

FUNCTION: Charging ovens.

SUPPLIER: Larry car operator.

CUSTOMER: Ovens.

PROCESS VARIABLE: Low and high level of coal in ovens.

RESPONSIBILITY: Pusherman and larry car operator.

GOALS: To make the maximum amount of quality coke.

MEASUREMENT: Drag back from the oven visually inspected.

PROCEDURE: 1.) Leveling bar is entered into the oven one full stroke brought of oven halfway and returned one half stroke.  
2.) Communication from the larry car to the pusherman that hoppers are empty.  
3.) Leveling bar is completely retracted from the oven.

CORRECTIVE ACTION: 1.) Inspect the level of coal in oven by looking into the chuck door opening.  
2.) Listening to the sound of the oven while steam is on, a roaring sound (hollow) will indicate a low charge.  
3.) Check the drag back from oven.  
4.) Pusherman can extend a bar into the chuck door opening to feel the level of coal if he believes the oven is low.

*Perry Bridgeman*  
10-2-92



OVENS BEST PRACTICE TEAM  
ACME STEEL CO.

FUNCTION: Consistent gas flow.

SUPPLIER: Oven/By products.

CUSTOMER: Oven dept./Furnace and Boiler house.

PROCESS VARIABLE: Gas flow.

REASON FOR CONTROL: Uniform heating of ovens.

RESPONSIBILITY: Oven shift manager.

GOALS: To meet I.P.L. on a more consistent gas flow  
to the by products department and oven  
underfiring system.

MEASUREMENT: Instrument department.

PROCEDURE: 1.)Charging oven properly.(as scheduled)  
2.)Remove assist lid only when larry car  
is ready to charge, minimizing the use  
of steam.  
3.)Replace lids on oven as quickly as  
possible to minimize air being pulled  
into oven.  
4.)Remove all steam after charge.

CORRECTIVE ACTION:1.)Adhere to a strict pushing  
schedule.  
2.)Notify by products of any  
problems.  
3.)Assure consistent work  
practices on all shifts.  
4.)Changes in bulk density and  
moisture should be reported  
to the heating department  
daily.  
5.)Improve communications between  
all departments.

REC NO 1

FUTURE RECOMMENDATIONS  
OVENS BEST PRACTICE  
TEAM  
JULY 23, 1992

function: charging.

SUPPLIER: Larry car.

1. Investigate the possibility of digital scales to weigh coal.
2. Door machine needs to report low backs.
3. Pull coal out of all bins every shift.
4. Mechanical probe to accurately check the East side of oven to assure full ovens. First two ovens of each shift would be probed and recorded.
5. Investigate the preheating of coal before it is charged.
6. Lab take more samples of coal during the grinding operation and report the findings to the heating department four times a shift.
7. Sweep all loose foreign objects into piles and remove to North or South ends of batteries for disposal.
8. If needed a labor could be added for housekeeping on top of the batteries. Sweeping up super 3,000 from the riser caps to prevent putting it into the ovens.
9. Study a system or procedure for spraying the roofs all the way across. This would stop leakage into the flues and we could burn higher and build carbon.
10. Light ovens as they are opened up. ( need a safe procedure written)

ACME STEEL COMPANY

TGI PROCESS  
CUSTOMER/SUPPLIER CONTRACT

DEPARTMENT: OVENS  
SUPPLIER: COAL HANDLING  
MATERIAL/SERVICE SUPPLIER: COAL MIX

REQUIREMENT/SPECIFICATIONS/IN PROCESS LIMITS

	<u>DESIRED RANGE</u>	<u>I.P.L. ACCEPTED LIMITS</u>
PULVERIZATION:		
THRU 1/8:	81.00 - 84.00	80.50 - 83.00
THRU 1/4:	94.00	94.00 (NOTIFY BP IF OVER)
(CFW) BULK DENSITY:	46.5	45.0 - 45.5
COAL MOISTURE:	8% - 10%	8% - 10%

THE IPL TEAMS RESERVE THE RIGHT TO RENEGOTIATE THESE LIMITS AFTER A TWELVE (12) MONTH PERIOD HAS PASSED OR ANY MAJOR SHIFT IN OVEN PRODUCTION AND/OR COAL AVAILABILITY. THIS WILL GIVE THE OVENS AND THE COAL HANDLING BEST PRACTICE TEAMS A REASONABLE AMOUNT OF TIME TO AFFECT A FAVORABLE CHANGE ON THE PROCESS TO MORE CLOSELY MEET THE OVEN'S DESIRED RANGES.

SUPPLIER:

CUSTOMER:

SIGNATURE: *M. Gilbert*

SIGNATURE: *P. Bideman*

DATE: 6-18-92

DATE: 6-19-92

REC-89

FUTURE RECOMMENDATIONS

OVENS BEST PRACTICE

TEAM

JULY 23, 1992

FUNCTION: Consistant gas flow.

SUPPLIER: By products department.

1. Investigate the instalation of a fuel gas holding tank to eleminate the inconsistency in B.T.U. of the gas and to stablize the flow rate to the ovens underfiring system.
2. One major practice that should be addressed is the lack of communications in the coke making process.
3. Computor tie in to all departments.
4. Shift manager should notify furnace of any changes in his operations.
5. A spellman would eleminate the one hour gap that the operators on the ovens must be given.
6. Investigate an in line gas cleaning system to assure clean gas to the underfiring system all the time installed between the blue room and the preheaters at the ovens.
7. Investigate an enrichment process inline to assure proper B.T.U to the ovens underfiring system (maybe with natural gas) it would only be added in small amounts as the B.T.U 'S drop off during charging . Someplace inline after the blueroom.
8. Distribute information on all products coke, gas, tarand light oil to everyone who might be able to put it to some use is improving the quality. ( to the hourly employee's )

COMPLYING WITH CLEAN  
AIR ACT

1. Investigate a jamb cleaner for the pusher side.
2. develope procedure for lighting of ovens as they are opened we presently use an old broom or paper.
3. investigate the possibility ofan automatic bleeding system for theovens so we do not blow all the seals on our doors when the b.p. has a malfunction with the pressure.
4. investigate a system whereby the volume of gas being produced from the ovens would be charted and suction could be better controlled.

Recd

FUTURE RECOMMENDATIONS

OVENS BEST PRACTICE

TEAM

JULY 23, 1992

FUNCTION: Quench car.

SUPPLIER; Door machine operator.

1. Improve communications between quench car and door machine operator.
2. Laser spotting of the quench car.
3. Investigate one spot quench car and quench station.
4. Rack and pinion gear between quench car and door machine to assure a correct load every time.
5. Pressure gauge or altemiter gauge for the quench car operator to monitor the pressure.
6. Secronize the ram speed to the quench car while catching a load . This could be done remote controlled.
7. Indicator lights showing the quench car operator how far the ram has progressed through the oven.
8. Have the car designed electrically for catching a load. push a button and car will travel slow at the same speed.
9. Install a spray header lined up with the gates to spray up through the gates and we might be able to use less water.
- 10 Investigate installing a enclosure someplace past the station for dumping coke into with hydraulic gates that would close and allow us to quench with no fall out of steam. Steam could be used for other purposes mainly energy savings.

ACME STEEL COMPANY

TBI PROCESS  
CUSTOMER/SUPPLIER CONTRACT

DEPARTMENT: OVENS  
SUPPLIER: COAL HANDLING  
MATERIAL/SERVICE SUPPLIER: COAL MIX

REQUIREMENT/SPECIFICATIONS/IN PROCESS LIMITS

	<u>DESIRED RANGE</u>	<u>I. P. L. ACCEPTED LIMITS</u>
PULVERIZATION:		
THRU 1/8:	81.00 - 84.00	80.50 - 83.00
THRU 1/4:	94.00	94.00 (NOTIFY BP IF OVER)
(CTW) BULK DENSITY:	46.5	45.0 - 45.5
COAL MOISTURE:	8% - 10%	8% - 10%

THE IPL TEAMS RESERVE THE RIGHT TO RENEGOTIATE THESE LIMITS AFTER A TWELVE (12) MONTH PERIOD HAS PASSED OR ANY MAJOR SHIFT IN OVEN PRODUCTION AND/OR COAL AVAILABILITY. THIS WILL GIVE THE OVENS AND THE COAL HANDLING BEST PRACTICE TEAMS A REASONABLE AMOUNT OF TIME TO AFFECT A FAVORABLE CHANGE ON THE PROCESS TO MORE CLOSELY MEET THE OVEN'S DESIRED RANGES.

SUPPLIER:

CUSTOMER:

SIGNATURE: M. Gilbert

SIGNATURE: P. Bridgman

DATE: 6-18-92

DATE: 6-19-92

T. Q. I. PROCESS  
CUSTOMER/SUPPLIER CONTRACT

DEPARTMENT: OVENS  
SUPPLIER: COAL HANDLING  
SERVICE SUPPLIER: RECOMMENDATIONS FOR COAL HANDLING/OVENS B.P.T.

COAL HANDLING WILL ACHIEVE CONSISTENT PULVERIZATION AND BULK DENSITY.

COAL HANDLING WILL INVESTIGATE WAYS TO IMPROVE IN-PLANT MOISTURE CONTROL IN THE COALS.

COAL HANDLING WILL INVESTIGATE WAYS TO MEASURE BDO FLOW AND IMPROVE EQUIPMENT RELIABILITY.

COAL HANDLING WILL INVESTIGATE WAYS TO INVOLVE WHARF FEEDERS IN THE COKE QUALITY EVALUATION PROCESS.

OVENS WILL DRAW COAL OUT OF ALL CHARGING BINS. (KEEP ALL BINS RUNNING).

OVENS WILL REFRAIN FROM THROWING (NON-COKE) GARBAGE ON FUSHER PAD, RAILS, AND QUENCH TRACK.

OVENS WILL MAINTAIN CONSISTENT QUENCHING PRACTICES.

COAL HANDLING AND THE OVENS WILL IMPROVE AND MAINTAIN GOOD COMMUNICATION BETWEEN THE (2) DEPARTMENTS.

SUPPLIER:

CUSTOMER:

SIGNATURE: *m. Albert*

SIGNATURE: *P. R. Kamen*

DATE: 6-18-92

DATE: 6-19-92

TOI PROCESS  
CUSTOMER/SUPPLIER CONTRACT

DEPARTMENT: OVENS  
SUPPLIER: COAL HANDLING  
SERVICE SUPPLIER: GENERAL RECOMMENDATIONS FOR COAL HANDLING/OVENS

TO MAINTAIN OPTIMUM CONSISTENCY OF COAL MIX BLEND:

A. MAINTAIN INVENTORY OF COALS WITH PROPER SPECIFICATIONS AS NOTED IN CUSTOMER/SUPPLIER CONTRACT (COAL PURCHASING) WITH LEE ENGLISH.

B. UPGRADE EQUIPMENT:

a. INVESTIGATE IN HOUSE CHECKS ON PULVERIZATION AND BULK DENSITY.

b. INVESTIGATE AUTOMATING B.D.O. SYSTEM (RECORD ACTUAL USAGE.)

c. INVESTIGATE USE OF SPC CHARTS WITHIN COAL HANDLING AND OVENS.

1. BULK DENSITY
2. PULVERIZATION
3. COKE MOISTURE AT THE WHARF

d. BETTER PRE-PLANNING OF MOBILE EQUIPMENT USE.

e. INVESTIGATE IMPLEMENTATION OF "ONE SPOT" QUENCH CAR/STATION.

f. INVESTIGATE (+/-) 20 MINUTE PUSHING SCHEDULE.

g. INVESTIGATE MEANS OF REDUCING TURN OVER OF OVEN PERSONNEL.



TGI PROCESS  
CUSTOMER/SUPPLIER CONTRACT

DEPARTMENT: OVENS  
SUPPLIER: COAL HANDLING  
MATERIAL/SERVICE SUPPLIER: SIGN OFF SHEET  
REQUIREMENT/SPECIFICATIONS/IN PROCESS LIMITS

OVENS TEAM:

Isabel Castillo  
Felipe Salazar  
Julian Ruiz

COAL HANDLING TEAM:

Walter  
Walter Rodriguez  
PKC

SUPPLIER:

SIGNATURE: M. Corbett

DATE: 6-5-92

CUSTOMER:

SIGNATURE: P. Bridgman

DATE: 6-19-92

ASSISTANT DIVISION MANAGER:

[Signature]  
DATE: 6/19/92

DIVISION MANAGER:

[Signature]  
DATE: 6/19/92

RECOMMENDATIONS

THE I.P.L. TEAM FEELS THAT THE FOLLOWING ITEMS SHOULD ALSO BE TAKEN INTO CONSIDERATION BY THE BEST PRACTICE TEAM :

ITEM: A BETTER WORK ENVIRONMENT  
ISSUE: CREATE AN "OUR COMPANY" ATTITUDE WHICH RAISES MORAL AND INCREASES THE FEELING OF OWNERSHIP.

ITEM: EDUCATION  
ISSUE: CREATE A CLIMATE THAT ALLOWS AN INDIVIDUAL TO SAY "I DON'T KNOW" WITHOUT FEELING INFERIOR OR INTIMIDATED.

ITEM: B.P. SUCTION AND PRIMARY COOLERS  
ISSUE: MAINTAIN A STEADY SUCTION TO THE OVENS SO THAT OVEN EMISSIONS ARE MINIMIZED.

ITEM: TAR DECANTERS  
ISSUE: LIQUOR QUALITY

ITEM: TAR INJECTION AT SECONDARIES  
ISSUE: TAR QUALITY CONTROL

ITEM: TAR PRECIPITATOR  
ISSUE: GAS QUALITY

ITEM: NHC REMOVAL  
ISSUE: GAS QUALITY

ITEM: LIGHT OIL REMOVAL  
ISSUE: IMPROVED BTU/FT<sup>3</sup> CONSISTENCY

ITEM: INFORMATION  
ISSUE: HOW DO WE GET THE WORD OUT ABOUT T.Q.I. AND OTHER RELEVANT NEWS.

ITEM: GAS BLEEDING  
ISSUE: IS OUR PROCESS ALLOWING A VALUABLE PRODUCT TO BE WASTED?

ITEM: INSTRUMENTATION  
ISSUE: INVESTIGATE THE WORKING RELATIONSHIP BETWEEN INSTRUMENTS AND WORKER'S RESPONSE. AND WORKERS.

ITEM: PUSHING AND CHARGING  
ISSUE: CONSEQUENT WORK PRACTICES.

Mass Shorter Jr 6/5/92 Chris Brown 6/5/92  
John L. Kennedy 6/5/92 Willie H. Nabhan 6/5/92