

**SAFETY & ENVIRONMENTAL**

1. Reduce the number of 10ppm Cl<sub>2</sub> detections from 88 in 1990 to 75 in 1991.

**Process: Cooke/Supervisors**

- \* Continue thorough "root cause" analysis and documentation of each spill.
- \* Assign follow-up action points to an engineer.
- \* Report status of corrective action quarterly in Plant Safety Report.

2. Maintain the number of Chlorine Plant RMT Cases at 1 in 1991.

**Process: Serpas/Supervisors**

- \* Improve Chlorine Plant Safety Committee activity
- \* Improve tracking of followup on all UCR's and Incidents
- \* Develop UCR database for improved analysis/reporting of data

3. Maintain the number of NPDES violations at 0 in 1991.

**Process: Cooke/Supervisors**

4. Reduce the number of Contractor OSHA Recordables from 2 in 1990 to 0 in 1991.

**Process: Serpas**

- \* Conduct daily contractor "tailgate" safety meetings.
- \* Conduct weekly project/maintenance safety planning meetings.
- \* Staff member to attend weekly contractor safety meeting.
- \* Hard money contractor program

5. Implement a program to improve the reliability of containment of liquid chlorine.

**Process: Landers**

- \* Complete EBV testing, Pressure Vessel Program inspections, repair/upgrade necessary piping and insulation for T-54
- \* Develop similar program for T-56
- \* Identify and develop PM program for critical liquid chlorine piping.
- \* Develop criteria for a reliable one chlorine storage sphere operation

6. Increase environmental awareness in the Plant

**Process: Cooke**

- \* Conduct one communication/training meeting per quarter.

7. Continue a Housekeeping Improvement Program

**Process: Yonts**

- \* Improve Housekeeping Index 10% over last year as measured by quarterly audits
- \* Provide 100% follow-up on audit action points with quarterly report to Plt. Supt/Staff
- \* Improve plant janitorial service
- Get rid of the off-site "boneyard"

**8. Develop and implement a program of identification and elimination of Leak Repair Devices**

**Process: Yonts/LeBlanc**

- \* Provide 100% compliance to S&LP Standard S-317
- \* Develop and implement a program to identify and record all leak repair devices
- \* Reduce the number of leak repair devices by 20%

**9. Know what our plant emissions are. Develop on line Waste Production Report**

**Process: Guillory**

- \* Develop a computer program to calculate plant waste from process data
- \* Issue a monthly report showing waste sources, destinations, and the balance of waste discharged versus waste generated
- \* Concentrate on STP, HCL, NaOH, and Freon in 1991

**10. Develop 5 and 10 year "Environmental Improvement Plan"**

**Process: Jefferies**

- \* Develop a priority list of plant improvement projects to meet the following criteria:
  - 1) No regulatory non-compliances
  - 2) Minimize the volume of waste requiring secondary treatment
  - 3) Continuously monitor the quantity of waste generated
- \* Provide a brief project scope, alternatives, schedule and preliminary cost estimate

**QUALITY PERFORMANCE**

**1. Finalize internal customer product specifications for chlorine, cell effluent and H2.**

**Process: Cooke**

- \* Visit each of 6 chlorine, 3 caustic and 2 hydrogen customers
- Develop and communicate a customer product specification for each

**2. Finalize raw material specifications for brine, HCl, H2SO4, CCl4, CO2 and Na2S2O3.**

**Process: Cooke**

- Develop specification parameters
- Obtain signed agreements with each vendor
- \* Provide method to verify compliance

**3. Improve customer complaint program**

**Process: Landers**

- Provide permanent record keeping system for all customer complaints
- \* Provide preliminary response to all customer complaints within 4 working days
- \* Provide quarterly report to Plt Supt/Staff which includes events, response, cause and corrective action

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**4. Apply for General Manager's Quality Award by 1 Aug.**

**Process: Serpas**

- \* Complete draft in March
- \* Submit application in April
- \* Prepare for audit in June
- \* Schedule audit in July

**5. Redefine and implement a Plant Improvement Suggestion Program**

**Process: Guillory**

- \* Review the new suggestion program with staff and shifts during 1Q91
- \* Furnish suggestion feedback by distributing a quarterly report showing the status of all incomplete suggestions
- \* Forward at least 10 suggestions to the Operation Upswing Committee

**6. Hydrogen Collection & Distribution Reliability**

**Process: Haney**

- \* Use statistical tools to track quality and calculate process capabilities for each spec component.
- \* Reduce the number of unit trips caused by sudden load changes by 20 %.
- \* Investigate all unit (Chlorine and CA-II) service interruptions and quality excursions. Assign follow-up action to appropriate personnel.
- \* Continue communications with APCI:
  - Publish a monthly report which includes H2 availability and monthly highlights.
  - Continue monthly planning meetings with APCI personnel.

**7. Track key controllable process variables in SPC format.**

**Process: Hull**

- \* Work with Paul Yonts, Dickie LeBlanc, Jim Haney and Steve Landers
- \* Reduce the use of key supplies (Freon, HCl, Na2S2O3, CCl4, H2SO4) while maintaining or improving product quality and process reliability

**PEOPLE DEVELOPMENT**

**1. Continue the development of a comprehensive plant training program (IPT).**

**Process: Serpas**

- \* Progress during 1991 should be consistent with the plan to complete the program by 3Q91 working within overtime restrictions.

**2. Develop a Management of Process Change program.**

**Process: Meyer**

- Complete 1st pass on plant P&ID's conversion to electronic format
- \* Utilize and document all 6 phases of project discipline on all physical and procedural changes.
- \* Develop a program of documenting plant process changes, either physical or procedural, before these changes occur.

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3. Complete Chlorine Plant Performance Review Cycle. (attached)

Process: Cl2 Plant Supervisors/Muller

4. Develop a 5-year Quality Performance Plan

Process: Serpas

- \* Items to be included are: further education of plant personnel of customers' needs; SPC/SQC development; personal growth plans; long term use of IPT by everyone
- \* Schedule: Identify areas for improvement by August; Develop outline in October

5. Provide training opportunities for all Chlorine Plant personnel

Process: Muller

- \* Document personal development training history for each person - 1Q91
- \* Discuss personal development needs/desires in coaching session - 2Q91
- \* Develop and communicate training opportunities list for each person - 4Q91

6. Optional team building exercise(s).

Process: Muller

COST MANAGEMENT

1. Achieve 1990 Chlorine Plant Strategic Projects benchmarks.

Sponsors as indicated on attached list.

2. Manage expense and capital spending within specified budgets.

Process: Meyer and All

- \* The 1991 plant budget is:

|                   |      |      |     |       |      |
|-------------------|------|------|-----|-------|------|
| WORK ORDER TYPES  | 11   | 12   | 13  | TOTAL | 21   |
| 1991 BUDGET (M\$) | 4350 | 3100 | 200 | 7650  | 2600 |

Track controllable costs, history and commitments, on a monthly basis.

- \* Project final costs verses budgeted amounts for controllable spending.
- \* Promote use of "Project Report" sheets as a tool to communicate plant needs and approvals.

3. Develop 5-year Plant Improvement Project Plan

Process: Guillory

Develop a 5-year vision of the plant in coordination with the Chlor-Alkali Tech Team

- \* Develop a schedule of plant improvement projects to achieve the vision

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4. Operate the plant at 96.5% chlorine availability

defined as follows:

shortages = internal customer service interruptions + T/C missed shipments

demand = production + shortages

Availability = actual production/demand

Process: Serpas

- \* Calculate monthly availability by the 15th of the following month
- \* Define/categorize causes of shortfalls monthly

5. Solve the cell foaming problem

Process: Serpas

- \* Work with R&D to identify foaming agent
- \* Determine contributing factors
- \* Evaluate/provide corrective action items

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# **CHLORINE PLANT PERFORMANCE REVIEW CYCLE - 1991**

## **JANUARY**

- 1990 Performance Ratings communicated
- 1990 Plant Goals Assessment completed
- 1990 JPR's conducted

## **FEBRUARY**

- 1991 Plant Goals developed
- 1990 JPR's completed
- 1991 Individual Goals development begins
- Contingent Performance Award determination completed

## **MARCH**

- 1991 Individual Goals developed
- CPA's distributed
- Merit Program Planning completed

## **APRIL - NOVEMBER**

- Individual and Plant goals are reviewed and updated formally at mid-year.
- Communication/coaching is ongoing.

## **DECEMBER**

- Performance Ratings completed

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**CHLORINE PLANT PROJECT GOALS - 1991**

| DESCRIPTION                            | Proj No | Ph | EoY | Mfg Rep     | Auth Date | Plan   | Type |
|----------------------------------------|---------|----|-----|-------------|-----------|--------|------|
| Clean Main Brine Head Tank             | 282936  | 6  | 6   | Hull        | Jan-91    | 50     | 21   |
| Relocate T-103B 50# Sniff              | 277000  | 6  | 6   | Haney       | Nov-90    | 10     | 21   |
| Chlorine Air Ecology                   | 76991   | 5  | 6   | Meyer       | Nov-89    | 10,400 | 24   |
| Salt System Renovation                 | 78754   | 5  | 6   | Yonts       | Sep-90    | 780    | 24   |
| Plant Painting Program                 | 296489  | 5  | 6   | Bertrand    | Oct-90    | 310    | 12   |
| Upgrade H2SO4 Piping to Alloy-20       | 278115  | 5  | 6   | Haney       | Nov-90    | 50     | 21   |
| Update P&ID's                          | 217101  | 5  | 6   | Meyer, etal | Jan-90    | 50     | 21   |
| Upgrade FRP H2SO4 Walls                | 292085  | 5  | 6   | Haney       | Jan-91    | 25     | 21   |
| Repair P-20 Foundations                | 278937  | 5  | 6   | Haney       |           | 25     | 21   |
| APCI Metering Improvements             | 289993  | 5  | 6   | Haney       | Jan-91    | 15     | 21   |
| Chlorine Instrumentation Upgrade       | 77930   | 4  | 5   | Jeff/Hull   | Jan-90    | 9,700  | 24   |
| Rectifier 1 Replacement                | 62100   | 4  | 5   | Hull        | Jan-89    | 2,000  | 12   |
| Rebuild Circuit # 5                    | 22500   | 4  | 6   | LeBlanc     | Oct-90    | 600    | 21   |
| T-102B Replacement                     | 232893  | 4  | 6   | Haney       | Jun-90    | 400    | 12   |
| Replace MC-500/600 - 1500Hp            | 277554  | 4  | 6   | Hull        | Oct-90    | 200    | 12   |
| Venturi Scrubber Upgrade               | 209604  | 4  | 6   | Haney       | Mar-90    | 100    | 12   |
| Repl Aux Brine to Cir #5               | 277744  | 4  | 6   | Jefferies   | Dec-90    | 90     | 21   |
| Bellows Valve Program                  | 289500  | 4  | 6   | Landers     | Jan-91    | 40     | 21   |
| Replace C-91 PSV's                     | 289496  | 4  | 6   | Landers     |           | 25     | 21   |
| D-100B Cl2-H2O Evactor                 | 291010  | 4  | 6   | Haney       | Mar-91    | 20     | 12   |
| PC Additions - 2                       | 79124   | 4  | 6   | Williams    | Feb-91    | 17     | 24   |
| Upgrade EC-600 to DR Piping            | 292997  | 4  | 6   | Landers     | Feb-91    | 10     | 12   |
| Replace C-100B lube oil pumps/pipe     | 290995  | 4  | 6   | Haney       | Jan-91    | 10     | 12   |
| Wet Chlorine Vacuum Relief System      | 78938   | 2  | 6   | Haney       |           | 315    | 24   |
| Condensate Collection & Distr          | 78937   | 2  | 6   | Guillory    |           | 180    | 24   |
| Insulation Improvement                 | 294689  | 2  | 6   | Landers     | Jan-91    | 100    | 12   |
| Cl2 Liquid Containment Improvements    |         | 2  | 6   | Landers     | Jan-91    | 100    | 21   |
| T-54 Inspection                        |         | 2  | 6   | Landers     | Jan-91    | 50     | 13   |
| New Plant Radio System                 | 291823  | 2  | 6   | Yonts       | Jan-91    | 25     | 21   |
| Wet Chlorine Compr Reliability         | 77540   | 1  | 2   | Guillory    | Jan-92    | 9,500  | 24   |
| Waste Alkalinity Recovery              | 78943   | 1  | 2   | Guillory    |           | 1,100  | 24   |
| Cell Effluent Hypochlorite Removal     | 78936   | 1  | 6   | Haney       |           | 350    | 24   |
| Hydrogen Collection O2 Analyser        | 78941   | 1  | 6   | Haney       |           | 300    | 24   |
| Degass H2 in Cell Effluent             | 78894   | 1  | 2   | Haney       |           | 300    | 24   |
| Chlorinated Organics Storage           | 78940   | 1  | 3   | Landers     |           | 200    | 24   |
| Oil/Freon Seperator                    |         | 1  | 6   | Guillory    |           | 80     | 24   |
| Floc System Upgrade                    |         | 1  | 6   | Yonts       |           | 75     | 24   |
| Hard Freon Replacement                 | 79085   | 0  | 1   | Guillory    |           | 15,000 | 24   |
| Rebuild East/West Trench               | 78755   | 0  | 1   | Meyer       |           | 5,500  | 24   |
| Chlorine Air Monitors                  | 77539   | 0  | 1   | Cooke       |           | 1,100  | 24   |
| Redundant Sludge Acidification         | 78950   | 0  | 1   | Cooke       |           | 525    | 24   |
| N2 Auto Purge Chlorine Cells           |         | 0  | 2   | Haney       |           | 300    | 24   |
| Replace Cell Area Utility Piping       |         | 0  | 6   | Yonts       |           | 170    | 12   |
| Replace C-40 Lube oil Pumps & Htrs     |         | 0  | 6   | Yonts       |           | 50     | 12   |
| Instal Air Flowmeters to Brine Filters |         | 0  | 6   | Yonts       |           | 40     | 24   |
| T-13 Control Upgrade                   |         | 0  | 6   | Yonts       |           | 20     | 21   |
| Aux Cells from Western Div             |         | 0  | 1   | Hull        |           |        | 24   |
| T.L. Line Replacement                  |         | 0  | 2   | Hull        |           |        | 12   |
| Start-up Blower Vacuum Relief          |         | 0  | 2   | Haney       |           |        | 24   |

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