

CRITIQUE OF 1984 ANNUAL SAFETY AND HOUSEKEEPING INSPECTIONA. DATE OF INSPECTION

1. Get the date of the inspection established as early as possible.
2. It will be of help if the plant manager, the plant engineer, and the safety superintendent are in the plant the two weeks prior to the inspection--as well as for the inspection.
3. The schedule should avoid major shutdowns or startups.
4. The 1984 committee recommends late September or October for pleasant weather conditions.
5. Try to avoid other major activities such as the United Fund.
6. Establish a preparation action plan with responsibilities and due dates (EXHIBIT I) several months ahead of the inspection.
7. A large effort will be required to get housekeeping up to standard without a last minute blitz.

B. PRE-INSPECTIONS

1. The quarterly safety and housekeeping inspections were scheduled 4-5 weeks prior to the annual inspection.
 - a) All of the inspections were completed in one week.
 - b) This effort should start at least two months prior to the Annual Inspection to allow time to correct deficiencies.
 - c) The request for ladder inspections should be issued at least two weeks before this inspection. The 1984 SHAC committee believe this inspection should be completed in one week. Ladders tend to travel from unit to unit, and unless the inspections are scheduled together some will be missed. It's a good idea for the units to check the ladders again the week before the annual inspection.
 - d) Prior to the annual inspection, polaroid pictures should be taken during the quarterly inspection and should be given to the appropriate general superintendent to hi-lite deficiencies. Prior to the annual inspection, each general superintendent should be inspecting his own areas in the quarterly inspection.
 - e) Extra emphasis should be given to warehouses, and the use of safety equipment during this inspection. All areas should anticipate being asked to demonstrate the safety equipment in their areas.

B. PRE-INSPECTIONS - cont'd.

2. A member of the SHAC committee and a safety inspector made a drive-around inspection of the plant approximately three weeks before the annual inspection and two days before an expanded staff meeting. Slides were made, developed in Houston on a one-day basis (Ektachrome), and shown at the expanded staff meeting. The staff was told most of the details of the inspection and presented with checklists to be used.
3. Next, the general superintendents and plant manager made a drive-around inspection with SHAC representatives. Providing them with the tape recorders for their comments will cut down the time required for these inspections.
4. A good idea is to encourage all groups in the plant to have daily safety meetings the two weeks prior to the inspection. Maintenance and some units did and the results were evident. See EXHIBIT II for topics which were covered.
5. Development of the inspection booklet should begin very early. PT/technical organization charts should be added to the booklet.

C. PERSONNEL INVOLVEMENT

1. It is important that as many plant personnel as feasible be used in preparing for the annual inspection.
 - a) Be sure contact supervisors and Hourly Safety Committee members are used on the guest inspection teams.
 - b) Units being inspected should use members of their unit/craft safety teams to host the guest inspectors.

D. INSPECTION PUBLICITY

1. Publicity should start early - at least two months prior to the inspection. In 1984, the Office Safety Committee was asked to organize the publicity, but they got off to such a late start that publicity was minimal.
2. A "countdown" board on the main gate and west gate should be considered.
3. Articles on the inspection should be included each week in the Plant Newsletter. Articles could highlight the emphasis areas of the inspection (EXHIBIT III). The issue prior to the inspection should include pictures and biographical data for each of the inspectors (EXHIBIT IV).
4. Messages about the inspection should be included on Touch 85 and on the hourly paychecks.

E. TEAM MAKEUP

In 1984, all of the inspectors were from the Chocolate Bayou Plant. They represented a cross section of positions from a general superintendent to an operator. This wide range of experience was an excellent idea and should be continued.

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F. ANNUAL INSPECTION

1. The night before the inspection, the plant manager, SHAC, and the chairman of SAC, HSC, OSC, and TCSC met the inspection team for dinner. The plant manager presented some plant history, and the chairman of each safety committee reviewed the purpose of their committee (EXHIBIT V). This dinner was a great success. It not only gave the inspectors a good background prior to the inspection, but it also helped establish a relationship between the inspectors and the SHAC members who hosted them during the inspection.
2. All units should have a 5-minute presentation to cover their safety performance, what they make, hazards involved, number of people, and to introduce the guides. These presentations should be made in as large a room as possible.
3. A couple of days prior to the inspection, those units where breaks will be taken, should be reminded to have drinks and snacks available.
4. Lunch was held in the cafeteria conference room. The inspectors went through the food lines, but Texas City Plant paid for the lunches. During the 1984 lunches, an attempt was made to give the inspectors a chance to meet the higher levels of supervision in the plant. This was less than successful. In the future, the lunch should just be the inspectors and their hosts and should be considered as a break.
5. The 1984 SHAC members critiqued the inspection schedule after the inspection. The modified schedule (EXHIBIT V) is recommended for the 1985 inspection.
6. Car reservations should be made early, and keys should be obtained the day before the inspection. Cars should be inspected, cleaned, and filled with gas.
7. Office personnel should be encouraged to be in their office when the inspectors are scheduled to be in their area.
8. Tour Guides - Guides, who host the inspection teams at each unit, should be prepared and have a message. Involved discussions about the process should be discouraged. Use hourly personnel where possible. Guides should have a pre-planned route, but should be flexible to the inspector's desires. Every person in the units should have a name tag, listing occupation, the day the unit is inspected. It should be emphasized to the units to minimize the number of changes in guides after the names have been given to SHAC.
9. Hosts - Each inspector was hosted by a SHAC member. Hosts were rotated at noon each day. The plant manager "free-lanced", but was with the inspection teams throughout the inspection. General superintendents met the teams at each area of responsibility.

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F. ANNUAL INSPECTION - cont'd.

10. Information packets - Each inspector was presented an information packet containing the following items:
 - a) Monsanto vinyl attache case with name embossed.
 - b) Brown vinyl Monsanto clipboard.
 - c) Monsanto pen and pencil set.
 - d) Monsanto Guide to Accident Prevention booklet.
 - e) Contractor Guide to Accident Prevention.
 - f) Emergency Procedure and Fire/Spill Alarm card.
 - g) Battery limits piping color code chart.
 - h) Miscellaneous literature of Texas City Plant.
 - i) Small pocket notebook.
11. Personal Needs - Each inspector was supplied with a hard hat, safety glasses, ear plugs, and cover goggles. Rain gear (suits and boots) were obtained in case of rain. Names were pre-printed on the hard hats. Name tags and temporary badges were also provided.
12. The 1984 inspection team made a summary report to 400 members of the plant in the cafeteria. The report took approximately one-half hour and was well received by all who attended.

E. P. Bailey, Chairman
R. T. Hammann
S. W. Moncla
J. T. Payne
J. D. Richards
J. A. Stal

EXHIBIT I

ANNUAL INSPECTION PREPARATION ACTION PLAN

<u>DATE</u>		<u>RESP.</u>	<u>STATUS</u>
7/1	Inspection route and timing defined - dry run completed to parking places, cars needed, guide meeting place.	JTP/JDR	Complete.
	Assign Office Safety Committee responsibility for publicity.	RTH	Complete.
	Send copy of previous inspection, recommendations to Superintendents. By 8/31 all items complete - written response.	JAS	Complete.
7/23	Send out notice that all ladders are to be inspected and new tags attached by 9/1.	RTH	Complete.
8/1	Inspectors named.	RAF	Complete
8/1	Encourage Plant Manager, Plant Engineer, and Safety Superintendent to be in the plant the 2 weeks prior to the inspection.	EPB	Complete.
8/15	Obtain pictures and information on the inspectors, sizes, etc.	JAS	Complete.
8/6-17	3rd Quarter Safety & Housekeeping Insp.	SWM	Complete.
8/15	Guides named for each area of plant. SHAC member will host each inspector - rotate at noon each day. Plant Manager will freelance. General Superintendents will meet team at each area of responsibility.	JTP/JDR	Complete.
8/31	All recommendations from last annual inspection completed. Route and guide list published and issued.	JTP/JDR	Complete
	Information for inspectors (booklet, etc.) completed.	JAS	Complete
	Name tags (name and position) completed for inspectors, guides, etc.	RTH	On Order.
	Lunch arrangements completed (catered by cafeteria including designated eaters).	JAS	Complete.
	Four cars reserved - drivers & movers selected.	JTP	Complete.

9/4	Mail information to inspectors.	JAS	Complete
9/5	SHAC drive around inspection -- made slides. Use 3rd Quarter comments. Communicate inspection schedule.	JTP	Complete
9/5	Include pictures and history of inspectors in plant newsletter.	JAS	Complete
9/10	Expanded Staff -- review slides, inspection details and check list.	JTP	Complete
9/10	Obtain equipment for inspectors -- hard hats (with names), safety glasses, ear plugs, cover goggles, rain gear (suits and boots), name tags, and temporary badges.	RTH	
9/13-14	Drive around inspection -- each General Superintendent accompanied by one SHAC members. Short wrap-up staff meeting after inspection.	EPB	Complete
9/18	Evening meal with inspectors and presentations.	EPB	
9/19-21	Inspection	ALL	
9/24	Feedback	JAS	
10/3	Critique	SHAC	

JAS:sr
6-12-84

EXBIHIT II

EMERGENCIES

1. What is your area fire/spill code? Where can you find out if you're not sure?

The area fire code is listed on the plant phones.

2. How do you report a fire/spill?

Dial 112 + the area code, stay on phone till the guard answers; tell guard location and nature of problem.

3. How would you get an ambulance or medical assistance to an area?

Dial 2222 on the plant phone -- the guard will answer -- tell him the location and nature of the problem; he will contact the medical department for response.

4. Where and who do you report to when the fire/spill alarm sounds?

"STOP ALL WORK AND SPARK PRODUCING EQUIPMENT" -- Go to the nearest designated instruction point and report to the warden. All people report to an instruction point when the fire/spill alarm sounds. REMEMBER -- Spectators are not permitted to attend any emergency.

5. What do you do when you are driving a motorized vehicle, and the fire/spill alarm sounds?

Move the vehicle to side of road, turn-off Ignition, leave keys in Ignition, and report to nearest instruction point.

6. Why should you know the wind direction, and how can you find out?

Observe steam vents, flags, wind socks, etc. for wind direction. You should know this for a plan of escape, if necessary for vapor movement. Once at your instruction point, wind direction and velocity will be passed on to you by your warden.

7. What is the alarm for a major emergency?

10 second blast of plant siren, and air horn followed by rapid succession of blasts on air horn.

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8. What is the alarm for evacuation?

Continuous blast of plant siren, and air horn.

9. Do you know where the fire extinguishers are in your work areas, and do you know how to use them?

After you've located the fire extinguishers, learn to use it. Ask your supervisor for assistance, so you will know how to use it.

10. How often are fire extinguishers' capacity checked?

Each area should read the gauge weekly on their fire extinguishers, and our Loss Prevention group checks them each 6 months.

11. How do you get a fire extinguisher recharged or repaired?

Call the Fire Department, and report the problem; they will send someone to correct it.

12. How is a fireman's bicycle designated, and what is the rule for using it?

All firemen's bicycles are painted red, and they are to be ridden by firemen only.

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INSPECTIONS

1. How often do we inspect building elevators?

Each month by Houston Elevator Company.

All elevators are required to have an annual inspection.

2. How often do we inspect hoses? What color tape should the current inspected hose have on them?

Utility hoses are inspected every 6 months. The current color code (tape) should be white. Steam hoses are hydrostatically tested each year and are visually inspected each 6 months. Transfer hoses, as on the docks, are hydrostatically tested each 12 months and are stamped on a plate on the hose.

3. How often do we inspect hoists (chain falls), and what color dot designate the current inspected hoists?

Inspected with a test load yearly, and current inspected hoist should have a white dot on them.

4. How often do we inspect fire extinguishers?

They should be checked weekly by owning department, and checked by Fire Department every 6 months which is recorded on a tag hanging on the extinguisher.

5. How often do we check eye baths and emergency showers?

Operating units check theirs daily. Others should be checked daily also. The required period is weekly.

6. How often do we inspect manlifts?

They are inspected monthly by Safety Department, but should be inspected daily by users.

7. How often do we inspect grinding wheels?

Wheels are dressed and inspected weekly by machinists, but should be checked daily by users.

8. What is the normal inspection time on relief valves?

Normal inspection time is yearly. Some valves are scheduled on a 24 month cycle as determined by area needs.

9. How often are ladders inspected?

Ladders should be visually inspected by the user each time the ladder is used. Annually all ladders must be inspected and have a Ladder Safety Inspection tag permanently attached to the ladder. A permanent record of the annual ladder inspection will be kept in each area by the owners.

10. How often are breathing air hoses inspected?

Every 6 months, and color coded for the period inspected. Present color is white.

11. How often are deluged sprinkler systems checked?

They are checked and recorded weekly. A drain test is performed monthly.

12. How often are area emergency lights checked?

They are checked weekly.

13. What pressure are steam hoses hydrostatically tested?

Once a year, normally in January, steam hoses are to be hydrostatically tested at 115 psig.

14. Is record keeping for utility hose inspections required?

NO -- ONLY color coding of the hose itself. Current color is WHITE ("2nd Half - Even Year")

15. How often must boilers be inspected?

Every boiler must be inspected by an authorized inspector, stamped with a state registration number, and a Certificate of Operation issued and displayed under glass, on or near the boiler before the boiler is placed in service. Thereafter, boilers must be inspected internally at intervals not to exceed 12 months; unless, an extension has been requested and granted by the inspection agency. Major repairs and all repairs to pressure parts by welding are subject to inspection and approval by the authorized inspection agency.

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WORK PROCEDURES & PRECAUTIONS

1. When assigned a job to be done in a Production unit, what should be done before entering the unit, and why?

Check with Chief Operator to be sure to be sure it is safe to work in the unit, and also to let him know you are in the unit in the event of an emergency. Inform him when you leave the area also.

2. What procedure must be used before working on any rotating equipment? Describe this procedure.

The Lock-Out Procedure must be used. Inform Chief Operator of what equipment is to be worked. His people should go to the equipment and turn-off switch. Both you and operator go to the breaker room and install production lock and your lock on breaker that has been turned off for this equipment. Both you and operator go back to the piece of equipment and try switch to make sure the correct main breaker was turned off. Be sure to remove your lock when the job is complete.

3. When entering a unit to perform work, what are some things that you should be aware of?

You should be find out what the fire and spill code is for that area.

You should find out what type of personal protective equipment is to be used, such as, cover goggles, ear plugs, etc.

You should find out where the emergency instruction point is, and who the wardens are.

You should be aware of the chemical hazards in the area.

You should locate safety shower or eye baths near your assigned work.

You should be aware of the wind direction and an escape route in the event of an emergency.

You should locate the nearest fire extinguisher in the event you need it.

Think of others _____.

4. What work requires a Fire, Entry, or Special Permit?

Work performed in the plant which might provide a source of ignition, require the entry into a closed vessel, or be of an especially hazardous nature. A closed vessel is defined as any piece of equipment which must be entered through a manhole, or constricted opening; this could be a ditch or excavated area.

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5. What is the rule for people who wear contact lenses, that enter laboratories, or manufacturing areas?

Contact lenses are not be worn in manufacturing areas, or laboratories; unless cover goggles are worn.

6. Is a work permit required for hydroblasting?

Only trained people shall be permitted to operate hydroblasting equipment. A work permit is required.

7. Who is required to wear a life jacket on barges?

Any employee who goes onto the barge for any reason.

8. Where may work be performed that might provide a source of ignition and not require a fire permit?

In main Shops Building, unless work is to be done on a closed or contaminated vessel. Also, in certain designated "open areas" in the plant that have an open area permit.

9. When does the Texas City terminal railroad switch engine in the Plant normally?

On Monday through Friday at 1700 till about 2000, depending on the number of cars being switched in and out. On Saturday, a switch normally does not occur. The switch on Sunday is normally in the early afternoon. When the engine is in the plant, the yellow lights along the track should be flashing.

10. How far from the railroad track can equipment be placed?

No less than 6 feet from the rail. This clearance must be maintained at all times.

11. Who checks condition of electrical hand tools and extension cords; how do you know they have been checked?

All electrical hand tools and extension cords must be checked and tagged as to their safe condition by the Electric Shop, before they are issued from the Tool Room.

12. Yellow colored pipe designates what type of material?

Superhazardous products, such as, HCN, ACY, LN, liquid chlorine, or any line which normally contains or may contain greater than 0.5% free HCN.

PLANT INSPECTION & SAFETY PROMOTION TEAMS

1. When is the plant inspection set for?

Wednesday, September 19, 1984
Thursday, September 20, 1984
Friday, September 21, 1984

2. What is the 1984 THEME for the inspection?

"Safety Through Employee Involvement"

3. Who are the inspectors, and where are they from?

All of the inspectors are from the Chocolate Bayou Plant.

They are: Bob Jones - Chairman
 Rick Atchinson
 Jim Graham
 Neil Ingram
 Dave Scarr
 Pete Colburn

4. When will the inspection results be given and where?

Monday, September 24, 1984, at 1400 p.m. in the Cafeteria. Everyone available is invited.

5. What does STOP stand for?

Safety Training Observation Program

6. What does PMSB stand for, and who is on PMSB?

Plant Manager's Safety Board.

Members are: Gene Tromblee - Chairman
 Ray Forsthoffer
 Jack Trafton
 R. L. Hammond
 Paul Bailey
 George Bostick
 Bob Hammann
 George Pappas
 Tom Ryan
 Gene Wofford
 Doug Metten
 Bill Lancaster
 George Small
 John Hagood

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7. What is the function of PMSB?

The PMSB will act to establish and approve safety policies at the Texas City location. They will establish goals and objectives to fulfill the Monsanto Safety Policy.

8. How often does the PMSB meet?

Monthly.

9. What does SHAC stand for and who is on SHAC for 1984?

Safety and Housekeeping Action Committee for 1984.

Members are: Paul Bailey - Chairman
Jack Richards
Joe Stal
Thurman Payne
Steve Moncla
Bob Hammann

10. What is the function of SHAC?

This committee is responsible for:

- a. Management and execution of overall Plant safety and housekeeping programs.
- b. Decision and follow through on the appropriate actions necessary to resolve specific problems.
- c. Investigation and response to suggestions from the Hourly Safety Committee.
- d. Execution of assignments as designated by PMSB/SAC.
- e. Implementation of the contractor safety rules as pertains to CED and non-plant employees working on the site.

11. How often does SHAC meet?

Weekly.

12. What does SAC stand for, and who are the members of SAC?

Safety Advisory Committee.

The members are:

Tom Ryan - Chairman
George Bostick
R. L. Hammond
Bob Hammann - Exofficio member

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13. What is the function of SAC?

Formulating and recommending plant safety policies to the Plant Manager and PMSB. The committee has the responsibility and authority to investigate individual safety matters, to consult with others for advice or assistance and to decide those changes in policy which will be presented to the Plant Manager and PMSB for approval.

14. How often does SAC meet?

Monthly.

15. Who is on the Process Technology (PT) Safety Committee this year?

Kay Finney - Chairman
Bill Haynes
James McGinty
Glen Olson
Y. C. Liu
David Hanson

16. What is the function of the PT Safety Committee?

Due to the unique problems of the PT Department as pertains to safety and housekeeping considerations, a special committee of members from this organization will be maintained to formulate internal policies and to provide input to the PMSB and SHAC.

17. How often does the PT Safety Committee meet?

Monthly.

18. Who is on the Office Safety Committee this year?

Leo Garza - Chairman
Penny Johnson
Tom Biegel
Laura Inskeep
Sue Mears
Elaine Salles
Greg Stadter
Martha Thompson
Mike Ward
Mark Riddle

19. What is the function of the Office Safety Committee?

Provide safety programming of all types, including safety meetings for office personnel wherever their offices may be located.

20. How often does the Office Safety Committee meet?

Monthly.

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21. Who is on the Hourly Safety Committee (HSC)?

Oscar Jordan - Chairman
Larry Bonds
James Platt
Ben Peek
Robert Kozlek
Daniel Nelson
Charles Davis
Madeline Hare

22. What is the function of the HSC?

Provides participation in the plant safety program by hourly employees wherein the exchange of ideas and suggestions can lead to an improvement in the plant overall safety performance.

23. How often does the HSC meet?

Monthly.

24. Who is the unit/craft safety representatives for your unit or craft?

Discuss your contact supervisor, hourly representative, instrument representative, HSC, unit maintenance foreman, and unit maintenance craft representative as it pertains to your area or craft.

25. What is the function of the unit safety promotion teams?

Provide an effective tool to deal with safety needs and problems unique to individual operating units or groups.

GUIDE TO ACCIDENT PREVENTION

1. Your job has 4 basic requirements. What are they?

1. Knowledge - THE SAFE WAY - know the safe way to perform your work.
2. Thought - THINK BEFORE YOU ACT.
3. Awareness - TAKE NOTHING FOR GRANTED.
4. Application - WHEN IN DOUBT - CONSULT YOUR SUPERVISOR OR CHIEF OPERATOR.

2. What is our safety slogan?

SAFETY IS AN INDIVIDUAL RESPONSIBILITY.

3. What does RED barricade tape mean around an area?

This color tape used to restrict entry into an area by unauthorized personnel because of chemical spill or fire.

4. What is the normal personal protective equipment required in the plant?

Hard hat, safety glasses, cover goggles, long pants, and closed toed, non-porous shoes.

5. What safety device is required to prevent two crow's feet from coming apart?

A lanyard pin.

6. What are the 3 classes of fire extinguishers, and what are they used on?

<u>CLASS OF FIRE</u>	<u>TYPE OF FIRE</u>	<u>EXTINGUISHER TO USE</u>
A	WOOD, PAPER	WATER
B	OIL	DRY CHEMICAL OR CO ₂
C	ELECTRICAL	DRY CHEMICAL OR CO ₂

7. What type of vessels or line CAN NOT be hot tapped?

Lines or vessels containing acetylene, ammonia, chlorine, or oxygen including compressed air shall NOT be hot tapped.

8. Do you add water to acids or acids to water?

Always add acid to water slowly and stir to dissipate heat.

9. Name some of the respiratory protection available in the plant.

1. Canister type gas masks.
2. Air line or supplied air equipment.
3. Chemical cartridge-type respirators.
4. Dust (filter-type) respirators.
5. Self-contained air mask (Scott & MSA)
6. Pocket type respirator.
7. Escape mask.

10. What requirement is necessary on platforms or scaffold more than 10 feet above the ground or floor?

Handrails and toeboards are required on all open sides and ends of the scaffold or platform.

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SAFETY PRACTICES

1. EMERGENCY PROCEDURE PLAN (EPP)

When there is little or no advance warning of the emergency, the EPP will be activated by a ten-second blast of the plant siren followed by a rapid succession of blasts on the code horn lasting for approximately one and one-half minutes. At this signal, emergency organization personnel will report to duty stations. Non-assigned personnel should report to their instruction points.

2. LADDER INSPECTIONS

Each area which owns ladders must have written record of annual inspections. Ladders must have annual inspection tag on ladder. The ladder must be numbered to identify the ladder and show ownership. It must have sticker which states "Inspect Ladder Before Using". All ladders to be inspected visually by the user before using it.

3. SAFETY EQUIPMENT INSPECTIONS

A. Weekly

1. CO₂ extinguishers and dry chemical extinguishers
2. Eyebath and safety showers (Including flushing, alarm testing, and condition of light and signs)

B. Monthly

1. Breathing air pipelines
2. Respiratory equipment

C. Semi-Annually

1. Utility hoses
2. Breathing air hoses
3. All fire extinguishers

D. Annually

1. Ladders
2. Steam hoses - hydrostatic
3. Marine and chemical hoses

4. LOCKOUT PROCEDURE

- A. Used on mechanical equipment to prevent movement which could cause injury to personnel or damage to equipment (padlocks).
- B. Used on piping systems to prevent contamination or pressure release while a system is isolated (padlocks and carseals).
- C. Electrical circuits to prevent energizing a system which could cause personnel injury or equipment damage (padlocks).
- D. Electrical/Instrument Devices may require valves blocked in as well as electrical circuits locked out (padlocks and carseals).

- 5. Chain hoists are Inspected yearly with a test load. The ones tested this year have a WHITE dot on the body. The user should visually check a hoist each time it is used.
- 6. Utility hoses are inspected each 6 months. The present color for 2ND HALF EVEN YEAR is WHITE.
- 7. Relief valves are normally pulled and tested once a year unless specified. They are tagged with the test date and test pressure on the valve. A IBM print-out is sent to all owners with records of relief valves and test dates.
- 8. All contractors working in the Plant are presented a safety orientation program conducted by plant personnel. They all have monthly safety meetings along with weekly area meetings. All contractors abide by Monsanto's safety policies as described in our P-Bulletin manual. Their health practices such as, personnel exposure reductions, noise hygiene, asbestos hygiene, etc. follow Monsanto's guidelines.
- 9. STOP is a method of safety training to learn to observe conditions and situations to eliminate safety hazards and personnel injury. STOP cards are utilized not only to identify the condition, but to report the corrective action taken to eliminate the unsafe act or condition.

10. INJURY/INCIDENT INVESTIGATION

The general superintendent of the department in which the injury or incident occurs is responsible for the investigation of the injury/incident review, approval, and distribution of the reports, and for corrective actions defined in the report.

The timing allowed for these investigations and reports is no longer than 5 working days. Investigations are to start immediately on injuries or incidents. This applies to contractors as well as Monsanto personnel. Follow-up on corrective actions is ongoing with written updates required.

11. PLANT SAFETY

This year we've had only two recordable injuries. There have been no loss work day cases. Find out safety statistics from your area or craft foreman. This is one of the best safety records this plant has had.

12. What are some of the off-the-job safety promotions the plant has?

- A. Safety magazine sent to homes.
- B. Health fair at Nessler Center.
- C. RAPE program by Office Safety Committee.
- D. Defensive driving course.
- E. Red Cross sponsored CPR courses.

EXHIBIT III

1984 TEXAS CITY SAFETY AND HOUSEKEEPING INSPECTION

GUIDELINES

THEME

SAFETY THROUGH EMPLOYEE INVOLVEMENT

MAJOR OBJECTIVES

- Help the Plant.
- Emphasis involvement at all levels while specifically keying into wage and first line supervision.
- Provide ample opportunity to share experiences.
- Audit bottom line effectiveness of plant programs.
- Be cost effective.

EMPHASIS AREA

- Safety/Loss Prevention Programs/Practices
 - Procedures
 - *Are safety procedures up-to-date and accessible to everyone
 - Job Safety Analysis/STOP Program Effectiveness
 - Personal Protective Equipment
 - Industrial Hygiene Practices
 - *Hearing Conservation Program
 - Incident Investigations
 - *Timeliness and Follow-up
 - Emergency/Disaster Planning
 - *Employee understanding
 - Participative Management Approaches
 - *Acceptance and effectiveness of unit/craft safety team
 - *Effectiveness of safety log book
 - Condition of Safety Equipment
 - *Ladders, hoses, hoists, relief valves
- Safety Training
- Employee Perception of Safety Commitments
- Off-The-Job Safety
 - *What can plant do to help
- Contractor Safety & Health
- Housekeeping

INSPECTION DATE

The plant will be inspected September 19, 20, 21, 1984.

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INSPECTION TEAM

- Team Organization
 - Exchange Inspection Teams
 - Inspection Team - Texas City
 - General Superintendent-Chairman- Bob Jones
 - Superintendent - Neal Ingram
 - Safety Superintendent - John Usrey
 - Engineer - Jim Graham
 - Foreman - Dave Scarr
 - Hourly - Rich Atchison
 - One Team Member From Safety Department
 - Inspection Will Last Three Days Plus Feedback
 - Training Will Be Responsibility of Team Chairman

RATINGS

No competition between plants.
Outstanding departments will be highlighted for recognition.

INSPECTION RESULTS

The general results of the plant inspection, including the outside areas, will be communicated at 2 P.M., Monday, September 24, 1984. The results will be communicated to all personnel not needed to run the plant in the cafeteria.

*An Equal Opportunity Employer***Monsanto*****Plant News***

TEXAS CITY, TEXAS

SEPTEMBER 14, 1984

VOLUME 17, NO. 38

Plant Inspection Set For September 19, 20, 21

This year's Safety and Housekeeping Inspection will be September 19, 20 and 21. The 1984 theme, "Safety through Employee Involvement", means the inspectors will be looking for employee participation in safety programs and practices. Some examples of possible topics for discussion include:

- *Permits and Procedures
- *Job Safety Analysis and STOP effectiveness
- *Incident Investigation Practices
- *Safety Training

In addition, as always, the team will be checking on housekeeping and the condition of safety equipment.

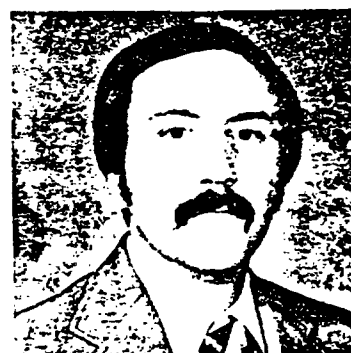
The inspection results will be given Monday, September 24 at 2 p.m. in the cafeteria. Everyone available is invited to attend.

Inspectors for this year are all from the Chocolate Bayou plant: Rick Atchison, Jim Graham, Neil Ingram, Bob Jones, Dave Scarr, and Red Usrey. Following is a picture and brief background on each.

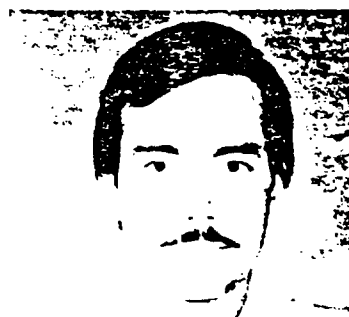
**RICK ATCHISON**

Richard L. "Rick" Atchison is a processor in the sorbic manufacturing area at Chocolate Bayou. He joined Mon-

santo-Chocolate Bayou in 1976. Rick resides in League City with his wife, Patricia, and their two children.

**JIM GRAHAM**

James P. "Jim" Graham is Group Supervisor, Instrument Development and Control in the Technology group at Chocolate Bayou. He earned a B.S. degree in chemical engineering from New Mexico State in 1969 and joined Monsanto-Texas City as a process engineer in the Technology group that same year. Jim assumed his current position in 1983. He and his wife, Susan, and their son live in LaMarque.

**NEIL INGRAM**

Neil M. Ingram is Superintendent of Plant Engineering at Monsanto-Chocolate Bayou. He earned a B.S. degree in electrical engineering from Louisiana Tech in 1977 and joined Monsanto-Chocolate Bayou that same year as a maintenance engineer. Neil and his wife, Kay, reside in Alvin.



BOB JONES

Robert N. "Bob" Jones is Superintendent of Manufacturing at Monsanto-Chocolate Bayou with responsibility for the IDA/NTA, SAB, DPO/Formalin product lines. He earned a B.S. and M.S. in chemical engineering from the University of Arkansas in 1965 and 1966, respectively. Prior to assuming his current responsibilities this year, Bob worked at El Dorado, Arkansas; Anniston, Alabama; Muscatine, Iowa; Deep River, Connecticut and General Offices and Queeny plant in St. Louis. Bob resides in Alvin with his wife, Barbara, and their three children.



DAVE SCARR

David A. "Dave" Scarr is a shift foreman in the acrylonitrile manufacturing area at Chocolate Bayou. He joined Monsanto Chocolate Bayou as a processor in 1979 and assumed his current position in 1982. Dave resides in Alvin with his wife, Barbara, and their son.



RED USREY

John C. "Red" Usrey is Safety and Loss Prevention Superintendent at Chocolate Bayou. He began his career at Chemstrand in Pensacola, Florida in February, 1954 as a chemical operator trainee. He transferred to Chocolate Bayou as a production foreman in hydrocarbons in February, 1962 and assumed his current position in June, 1980. Red and his wife, Nell, reside in Alvin.

TEST YOUR SAFETY KNOWLEDGE

In preparation for the September 19-21 Safety and Housekeeping Inspection, test your safety knowledge on the puzzle below. The answers are on Page 4.

ACROSS

- 1) Abbr. for Plant Manager's Safety Board
- 4) _____ safety rules and regulations
- 5) Think _____ you act
- 6) 1984 Safety and Housekeeping Inspection Theme-

Involvement (with 17 across and 7 down)

- 8) Complacency _____ to accidents
- 9) I am responsible for _____ actions
- 11) See 10 down
- 12) Do you know your fire and spill _____
- 13) Practice _____ driving
- 14) Safety is _____ to cost, quality, production and morale
- 17) See 6 across
- 18) _____ permit before starting work

DOWN

- 2) Plant Safety Slogan - _____ is an Individual Responsibility
- 3) Take immediate _____ action when you observe an unsafe act
- 7) See 6 across
- 10) Be safe both at _____ and at _____ (with 11 across)
- 15) Most injuries are caused by unsafe _____
- 16) Always wear _____ protective equipment

EXHIBIT V

INSPECTION TOUR SCHEDULE

TUESDAY NIGHT, SEPTEMBER 18

P R E S E N T A T I O N S

		Minutes
1. Introduction - Welcome - Plant History and Operating Status	G. L. Tromblee (Gene) Plant Manager	15
2. Overall Texas City Safety Program	R. T. Hammann (Bob) Loss Prevention & Safety Supt.	15
3. Plant Manager's Safety Board (PMSB) and Safety Advisory Committee (SAC)	G. W. Bostick (George) Services Superintendent	15
4. Safety and Housekeeping Action Committee (SHAC)	E. P. Bailey (Paul) Maint. Supt., West Plant	15
5. Hourly Safety Committee (HSC)	O. D. Jordan (Don) Carpenter, Plant Engineering	5
6. Technical Center Safety Committee (TCSC)	K. Finney (Kaz) Sr. Chemist, Technical Services	5
7. Office Safety Committee (OSC)	L. Garza (Leo) Technician, Process Technology	5
8. Inspection Kickoff	J. A. Stal (Joe) Group Supv., Process Technology	5

LAM001415

SC

000218

EXHIBIT VI

1985 RECOMMENDED
INSPECTION TOUR SCHEDULE

FIRST DAY

Arrive Texas City (Cafeteria Conference Room) 0800
Distribution of Safety Equipment. Coffee & Rolls.

Begin Inspection. 0815

Walk To Power 2.

WATER TREATING - PLANT AIR - POWER 2 0820-0900

Treatment of raw Brazos River water for plant use and generation
facilities for breathing, instrument, and general plant air.
Facilities for steam generation and boiler feed water treatment.

HOSTS

INSPECTORS

SHAC MEMBER

Meet in Control Room.

Pick up cars parked by cylinder racks beside Stores.
Drive to Acetic Acid Control House.

DEPT. 50 ACETIC ACID

0905-0945

Acetic Acid is produced from carbonylation of methanol.
This area includes catalyst preparation and product distillation
facilities.

HOSTS

INSPECTORS

SHAC MEMBER

Park beside Control
House.
Meet in Control Room.

Drive to Phthalic Anhydride Control House.

LAM001416

DEPT. 53 PHTHALIC ANHYDRIDE

0950-1030

Manufacturing process which uses BASF technology
to convert air and orthoxylene to phthalic anhydride.

HOSTS

INSPECTORS

SHAC MEMBER

Park beside Control
House.
Meet in Control Room.

Drive to Dept. 48-56.

COFFEE - OXO-ALCOHOL - PHTHALATE ESTERS

1035-1050

DEPT. 48/56 OXO ALCOHOL-PHTHALATE ESTERS

1050-1120

Oxo alcohol area uses CO + H₂ blend gas and olefins as
raw materials. Phthalic anhydride and oxo alcohol used
to manufacture phthalate esters.

HOSTS

INSPECTORS

SHAC MEMBER

Park at Formaldehyde
Storage Area
(77T101). Walter
Meet in Control
House.

Walk to Dept. 33

DEPT. 33 LACTIC ACID, DRUMMING FACILITIES & CT-8

1120-1150

Manufacturing for pharmaceutical grade
lactic acid from lactronitrile.

HOSTS

INSPECTORS

SHAC MEMBER

Meet in Control
House.

Pick up cars at 56T16, drive to car port.

LUNCH - Cafeteria Conference Room

1155-1255

SC

000220

- 2 -

LAM001417

Walk to Zone I Office.

ZONE I OFFICE - OPERATING ENGINEER'S OFFICE

1300-1310

Offices and conference room used by maintenance personnel for styrene process.

Offices for operating engineers personnel.

HOSTS

INSPECTORS

SHAC MEMBER

Split Team.

HOSTS

INSPECTORS

SHAC MEMBER

Walk to Fire Station.

FIRE STATION

1315-1325

Two buildings which house the Texas City plant's fire fighting facilities.

HOSTS

INSPECTORS

SHAC MEMBER

Walk to Electric Shop.

ELECTRIC SHOP

1325-1340

Consists of central shop facilities and offices for power distribution, electrical maintenance, and maintenance engineering personnel.

HOSTS

INSPECTORS

SHAC MEMBER

Walk to AN loading rack.

AN LOADING RACK, ESTERS LOADING RACK, TANK TRUCK RACK, SCALE HOUSE

1340-1410

Rail car handling facilities for acetic acid, methanol, TBA, sulfuric acid, IBY, ACH, and esters.

HOSTS

INSPECTORS

SHAC MEMBER

Pick up cars at truck loading spot west of 51T17-2.

Drive to Dept. 513 Control House.

COFFEE - PRIMARY TREATMENT (arrangements by department)

1415-1430

PRIMARY TREATMENT, AMMONIA TANK

1430-1500

Facilities for primary treatment of all plant aqueous waste streams. Ammonia storage tank provides raw material for AN manufacturing facilities at Texas City and Chocolate Bayou.

HOSTS

INSPECTORS

SHAC MEMBER

Meet at 513 Control Room.

Drive through sandblasting, NSI Warehouse,
Maintenance Laydown, Salvage Areas

1500-1510

HOSTS

INSPECTORS

SHAC MEMBER

BARGE & SHIP DOCKS 5, 4, 3, 2, 1

1510-1550

Barge and ship loading/unloading facilities
for raw materials, products, used at and
produced by Texas City plant.

HOSTS

INSPECTORS

SHAC MEMBER

Drive through South 22.

1550-1605

HOSTS

INSPECTORS

SHAC MEMBER

Drive to carport

RECAP - Cafeteria Conference Room

1605-?

1985 RECOMMENDED
INSPECTION TOUR SCHEDULE

SECOND DAY

CAFETERIA CONFERENCE ROOM - Coffee & Rolls

0800-0815

Walk to Material Handling

Park cars beside old
Pilot Plant.

MATERIAL HANDLING OFFICE BUILDING

0820-0830

Offices for supervision of distribution operations,
materials handling foreman and clerk; mail room,
printing & office services; QA Lab offices.

HOSTS

INSPECTORS

SHAC MEMBER

SUPER SHACK, AN INCINERATOR, STYRENE RACKS,
AND ACY RACK

0830-0850

HOSTS

INSPECTORS

SHAC MEMBER

DEPT. 13 AKLYLATION, CT-1

0855-0920

Ethylbenzene is produced by the reaction of
benzene with ethylene in the presence of an
aluminum chloride-organic catalyst complex.

HOSTS

INSPECTORS

SHAC MEMBER

Meet In Control Room.

SC

000224

- 6 -

LAM001421

DEPT. 15 DEHYDROGENATION

0920-0945

Synthesis area for dehydrogenation of ethylbenzene to crude styrene.

HOSTS

INSPECTORS

SHAC MEMBER

Meet at CT-1

COFFEE - STYRENE/EB (arrangements by department)

0945-1000

DEPTS. 14 & 16 STYRENE - EB DISTILLATION

1000-1020

Dept. 14 - Ethylbenzene purification facilities.

Dept. 16 - Styrene purification facilities.

HOSTS

INSPECTORS

SHAC MEMBER

Meet in Control Room.

EB

SM

Drive to Salt Water Pump House and Zone 1 Warehouse.

SALTWATER PUMP HOUSE AND ZONE 1 WAREHOUSE

1025-1035

HOSTS

INSPECTORS

SHAC MEMBER

Split Team.

Zone 1 Warehouse

Pump House

LAM001422

Drive to car port.

Walk to Stores.

STORES

1040-1110

Stores Includes the shipping and receiving docks,
storage bins of Inventory items, and offices.

HOSTS

INSPECTORS

SHAC MEMBER

Pick up cars in car port.

Drive to Warehouses.

WAREHOUSE A-B-C-E-F-G

1115-1135

Warehouse A contains class A materials
such as spare parts, paper goods, packing
materials. Serves receiving function.

Warehouse B contain flammable liquids,
acid, paint.

Warehouse C contains class A materials, such
as, Insulation, packing.

Warehouse E contain materials needed for
maintenance work orders.

Warehouse F contains long storage items, such
as, mechanical equipment.

Warehouse G contains dry raw materials, such
as, Iodine, Fullers Earth, etc.

HOSTS

INSPECTORS

SHAC MEMBER

Split team.
Park across from
Zone 2.

SC

000226

- 8 -

LAM001423

Drive to Zone 2 office

ZONE 2 OFFICE

1135-1145

Offices for west plant maintenance personnel.

HOSTS

INSPECTORS

SHAC MEMBER

CED OFFICE AND WAREHOUSE

1145-1155

Offices for CED construction personnel and CED project storage.

HOSTS

INSPECTORS

SHAC MEMBER

Split team.

Drive to Cafeteria

LUNCH - Cafeteria Conference Room

1200-1300

Walk to Research 1

RESEARCH NO. 1

1305-1345

This building houses analytical, catalyst characterization, radioisotope, and MIC Tech Services labs and bench scale reactor systems.

HOSTS

INSPECTORS

SHAC MEMBER

Meet 1st floor west side.

LAM001424

RESEARCH NO. 2

1345-1425

This building houses Technology Dept. and Industrial Hygiene labs, AN Catalyst Preparation facilities and AN and Styrene bench scale reactor systems. The instrument development and control department is located upstairs.

HOSTSINSPECTORSSHAC MEMBER

Meet at Visitor's
lobby Northwest
corner - 1st floor.

RESEARCH NO. 3

1425-1445

This building houses MMTS offices, QA Lab chemists offices, crafts and maintenance offices and MMTS labs and shops as well as lab supply overstock.

HOSTSINSPECTORSSHAC MEMBER

Meet at North
entrance below
stairway outside.

PT WAREHOUSE & SOLVENT STORAGE

1445-1500

HOSTSINSPECTORSSHAC MEMBER

Meet at PT Warehouse

Walk to Main Office Building.

COFFEE - CAFETERIA (arrangements by Cafeteria)

1505-1520

CAFETERIA

1520-1530

Main plant cafeteria.

HOSTS

INSPECTORS

SHAC MEMBER

Meet at cash
register.

DISPENSARY

1530-1540

Provides facilities for emergency first aid
and for monitoring employee health.

HOSTS

INSPECTORS

SHAC MEMBER

MAIN OFFICE - 2nd and 3rd floors

1540-1600

Main Office building for manufacturing,
distribution, environmental, safety,
personnel and marketing personnel.

HOSTS

INSPECTORS

SHAC MEMBER

Split teams.
Meet in foyer.
2nd Floor
3rd Floor

LAM001426

QUALITY ASSURANCE LAB

1605-1625

Laboratory facilities needed to conduct analyses required for production and shipment of petrochemicals from Texas City plant and for environmental control.

HOSTS

INSPECTORS

SHAC MEMBER

RECAP - Cafeteria Conference Room

1630-?

SC

000230

- 12 -

LAM001427

1985 RECOMMENDED
INSPECTION TOUR SCHEDULE

THIRD DAY

CAFETERIA CONFERENCE ROOM - Coffee & Rolls

0800-0815

OFFICE ANNEX

0815-0840

First floor of this building contains office for Technology Dept., Engineering Services and Guest Tech Service Group, Central Files, technical library and computer room.

HOSTS

INSPECTORS

SHAC MEMBER

Split Teams.
Meet In Main Lobby.

Second floor contains office facilities for Accounting, MIS Department with computer facilities, Plant Engineering Technical Support.

HOSTS

INSPECTORS

SHAC MEMBER

Meet In Front
Entrance 2nd floor
(at Xerox).

PERSONNEL TRAINING, PURCHASING BUILDING

0840-0855

Building contains plant purchasing offices, training facilities, video tape lab.

HOSTS

INSPECTORS

SHAC MEMBER

Meet In Personnel
Building Training
Room.

LOCKER BUILDING NO. 1 & SAFETY SUPPLY

0855-0910

Building houses separate lockers, showers,
and changing rooms as well as the safety
supply store.

HOSTS

INSPECTORS

SHAC MEMBER

GUARD HOUSE

0910-0920

Major plant entry gate with offices for
supervisors and security group.

HOSTS

INSPECTORS

SHAC MEMBER

Drive to Dept. 51.

DEPT. 51 ACRYLONITRILE, CT-9

0920-1025

Two reactor trains and a single purification
train are used to produce acrylonitrile,
acetonitrile and hydrogen cyanide as a
by-product. Ammonia and propylene are used
as raw materials. Includes slip stream
reactor. (Start in South end/ End near MeOH.)

HOSTS

INSPECTORS

SHAC MEMBER

Meet in Control House
Park East of Control
House off South St.

SC

000232

LAM001429

Drive car to methanol (AN hosts drive cars to Methanol)

COFFEE - METHANOL (arrangements by dept.)

1025-1040

DEPTS. 44-45-46 METHANOL, CT-3&4

1040-1110

Methanol, CO, and H₂ are produced by steam reforming of natural gas and CO₂. CO and H₂ are used in the production of oxo-alcohol and acetic acid.

HOSTS

INSPECTORS

SHAC MEMBER

Meet In Control House

DEPTS. 19-23-25-27-29 HCN-ACN-TBA-LN-ACY, CT-2

1115-1145

Manufacturing facilities for acetonitrile purification, tertiary butylamine, lactonitrile and acetone cyanohydrin. HCN Storage.

HOSTS

INSPECTORS

SHAC MEMBER

Meet In Control House

Drive to Cafeteria

LUNCH - Trays In Cafeteria Conference Room

1150-1250

SHOP BUILDING

1250-1320

Central shops consists of facilities for pipe fabrication and plate and exchanger, machine and paint shops. Building also includes training rooms and various maintenance offices.

HOSTS

INSPECTORS

SHAC MEMBER

Meet at Shift Office

SOUTH MAINTENANCE BUILDINGS, INSTRUMENT SHOP & GARAGE

1320-1405

Building include carpenter-insulator shop, instrument department shop, field maintenance offices, and garage facilities.

HOSTS

INSPECTORS

SHAC MEMBER

Maintenance

Instrument

RECAP - Cafeteria Conference Room

1410-?

LAM001431