

Authored By: Earl Streaker	<b>Blanchard Refining Company LLC Galveston Bay Refinery</b>	Doc No.: RSW-000042-GB Rev No: 0
Doc Custodian: Safety Supervisor		<b>ADM-16 Ergonomic Stress Exposure Control</b>
Approved By: Von Meeks		
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## 1.0 Purpose

The purpose of this HESS Procedure is to establish a program by which employees are educated in basic ergonomic concepts, understand how to arrange their office to best meet their needs, measure if each employee's office is equipped to fit the employee, and implement the necessary changes to ensure an ergonomically safe environment.

## 2.0 Scope

This program applies to all office, routine, turnaround and shutdown work performed by employees in any area or office located on Marathon Petroleum Company's Galveston Bay Refinery.

## 3.0 Procedure

### 3.1 General Requirements

#### 3.1.1 Reporting of Concerns or Symptoms

If any employee has ergonomic concerns, they should be reported to their immediate supervisor and an Industrial Hygienist from the Health, Environmental, Safety and Security Department (HESS). If experiencing any discomfort (i.e. prolonged or repeated discomfort, discomfort that does not subside with rest), they should report this immediately to their immediate supervisor and the Medical Department.

#### 3.1.2 Furniture Requirements

3.1.2.1 All office furniture should be in good working condition and should be stable with no broken parts that may cause a safety hazard. In addition to providing structurally safe office furniture, MPC will provide office equipment that meets the recommended criteria for new and existing furniture (Attachment A).

Note: If furniture is not in good working order, contact Facilities and Services for repair/replacement.

3.1.2.2 To ensure furniture meets established specifications, Facilities and Services (F&S) will coordinate all furniture purchases in conjunction with Industrial Hygienists input.

#### 3.1.3 Furniture Layout

3.1.3.1 Furniture layout (desks, chairs, drawers etc.) should provide adequate clearance within the office for accessibility.

3.1.3.2 Furniture should be arranged to insure sufficient clearance between furniture and walls (minimum 30 inches) for ingress and egress.

#### 3.1.4 Lifting

3.1.4.1 Individuals should obtain human or mechanical assistance when lifting objects that exceed their own physical limitations. A general rule of thumb is to avoid lifting objects heavier than 55 pounds. If lifting objects heavier than 55 pounds, the individual should consider ways to reduce the ergonomic risk factors of the lift, such as reducing the load weight where possible, reducing the load travel distance, eliminating twisting of the body, human or mechanical assistance, etc.

### 3.2 Training

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- 3.2.1 Office and/or industrial ergonomics training shall be provided to MPC employees in accordance with the Master Curriculum Catalog (HESS training matrix).
- 3.2.2 The training program shall include:
  - 3.2.2.1 Basic ergonomic concepts
  - 3.2.2.2 How to adjust the workstation or work area
  - 3.2.2.3 How to adjust the chair, tools or work surfaces
  - 3.2.2.4 Work area layout and clearance
  - 3.2.2.5 Risk factors and symptoms of ergonomic problems
  - 3.2.2.6 Safe lifting procedures
  - 3.2.2.7 Reporting of ergonomic problems
- 3.2.3 Training shall be documented by the completion of a test at the end of the training session.
- 3.2.4 Training shall be completed on the frequency established by the Master Curriculum Catalog (HESS training matrix).
- 3.2.5 The training shall consist of a CBT. The test will be documented through CBT.
- 3.3 Employee Participation and Involvement  
Employee participation and involvement in ergonomics will be accomplished through the following means:
  - 3.3.1 Encourage employees to report ergonomic concerns and to provide suggestions and comments via surveys, observations, meetings, etc., of ways to improve current conditions or mitigate potential problems.
  - 3.3.2 Involve employees in the investigation of alleged work-related ergonomic injuries or illnesses along with Supervision and Safety to help determine the nature and causes and; where appropriate, to implement control measures.
- 3.4 Evaluations
  - 3.4.1 Self-Assessment:
    - 3.4.1.1 All office-based employees may complete the office ergonomic self-assessment ErgoPoint as part of the office ergonomics training. This site will help the employee to evaluate their workstation and will assist in the evaluation process if the employee has additional ergonomic concerns.
      - 3.4.1.1.1 Employees should contact the Subject Matter Expert (SME) for ErgoPoint access.
      - 3.4.1.1.2 Attachment B illustrates an ideal workstation. This may also help in the self-assessment
      - 3.4.1.1.3 The ADM-16A Ergonomic Self Evaluation is also available for self-assessment.
    - 3.4.1.2 In addition to completing the self-assessment as part of the training, a self-assessment may be completed anytime an employees' workstation is rearranged.
    - 3.4.1.3 Completed self-assessment forms should be retained by the employee for

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future reference.

3.4.1.4 Employees noting deficiencies during the office ergonomic self-assessment should discuss these deficiencies with their immediate supervisor.

3.4.2 Individual Ergonomic Evaluation by the Subject Matter Expert (SME):

3.4.2.1 Employees should contact the Subject Matter Expert (SME) to schedule an individual ergonomic evaluation. A committee consisting of the affected employee, their supervisor, safety team member, and if applicable union representation may be formed for the evaluation process. Individual ergonomic evaluations will be conducted when:

3.4.2.1.1 employees have additional concerns after completing the office ergonomics training,

3.4.2.1.2 they are experiencing discomfort at their workstation,

3.4.2.1.3 it is recommended by the Medical Department, or

3.4.2.1.4 employees just want an evaluation by a trained individual

3.4.2.2 Documentation of the evaluation will be maintained by the SME.

3.4.2.3 In situations where equipment is needed, the employee and their supervisor will work with F&S to order and install it. The safety and ergonomic value of office equipment will be evaluated using the "Recommended Criteria For New And Existing Furniture", see Attachment A.

3.4.2.4 Supervisors and employees shall ensure recommendations made in evaluation reports are implemented in a timely manner.

3.4.2.5 Follow-up evaluations will be completed by the Safety Department to ensure that changes to the workspace meet the employee's needs.

3.4.3 The Safety Department will coordinate all ergonomic evaluations conducted, other than self-assessments.

### 3.5 Contractors

3.5.1 If contractors have been provided workspace within the MPC Galveston Bay Refinery, all furniture should meet the recommended criteria for new and existing furniture. It is the responsibility of the contract company to ensure proper furniture and ergonomic training is provided to their employees if their work duties include more than an average of 2 hours of work on a desktop computer per day.

## 4.0 **Definitions**

4.1 Ergonomics - The science of studying people at work, and the designing of (tasks, jobs, information, tools, equipment, facilities) the working environment so that people can be safe and healthy (effective, productive, and comfortable).

4.2 Neutral position - The position of keyboard that allows shoulders to be relaxed, forearms to remain parallel to the keyboard, and wrists to be straight without bending or flexing. (Note: If you see wrinkles in the skin on the top of the hand, wrists are usually not straight.)

4.3 Width - The distance from left to right.

4.4 Height - The distance from top to bottom.

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- 4.5 Depth - The distance from front to back.
- 4.6 Articulating - Allows lateral movement of tray by means of a jointed connection.
- 4.7 Height adjustable - Allows tray to descend and ascend in height from a previous position.
- 4.8 Front pivot - Allows rotation of tray from the front of the articulating joint.
- 4.9 Slide - Allows smooth movement of tray from the stored position to the active position and back again.
- 4.10 Rear swivel - Allows rotation of tray from the rear of an articulating joint.
- 4.11 Tilt - Allows angle of tray to change forward (positive) or backward (negative).

## 5.0 References

- 5.1 HLT-2006 Ergonomics Stress Exposure Control, Revision 001

## 6.0 Attachments

- 6.1 Attachment A – Recommended Criteria for New and Existing Furniture
- 6.2 Attachment B – Picture of a Good Workstation Set Up with a Chair and Computer

## 7.0 Revision History

Revision Number	Description of Change	Written by	Approved by	Revision Date	Effective Date
0	Original Issue. Integrated site procedure that replaces GBR-HESS-ADM-16 and RSW-0024-TC under MOC 61989.	E. S. Streacker	V. J. Meeks	7/17/2019	8/1/2019

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## Attachment A: Recommended Criteria for New and Existing Furniture

- A. Computer Task Chair - for continuous computer work > 2 hours per day
1. Recommendations - applicable to all new purchases
    - a. Pneumatic seat height adjustment (15" to 21")
    - b. Lumbar support
    - c. Back height adjustment (at least 2")
    - d. Back and seat combined angle adjustment (allow either a forward-leaning or backward-leaning posture)
    - e. Back tension adjustment (must provide 90-120° angle in range of motion from 5th percentile female to 95th percentile male)
    - f. Variable back stop adjustment
    - g. Seat depth (seat pan) adjustment with pan rounded down (waterfall front)
    - h. Seat angle adjustment (positive 1° to negative 5-10°)
    - i. Arm height adjustment (at least 4")
    - j. Arm width adjustment (telescoping at least 4")
    - k. Swivel base
    - l. 5 or more star base
    - m. Hard wheel casters (for carpet) or soft wheel casters (for hard flooring)
    - n. Anti-static or static-dissipating chair rollers
    - o. Breathable chair fabric covering and no-slip texture
    - p. Chair controls accessible from the seated position (intuitive to use)
  2. Recommendations - acceptable for existing furniture
    - a. Chair is safe and stable
    - b. Mechanical seat height adjustment (15" to 21")
    - c. Lumbar support (built-in or provided by additional lumbar cushion)
    - d. Swivel base
    - e. Wheel casters
    - f. Breathable chair fabric covering and no-slip texture
- B. Task Stool - for drafting or other elevated work surfaces
1. Recommendations - applicable to all new purchases
    - a. Pneumatic seat height adjustment (24" to 29")
    - b. Lumbar support
    - c. Back height adjustment (at least 2")
    - d. Back and seat combined angle adjustment (allow either a forward-leaning or backward-leaning posture)
    - e. Back tension adjustment (must provide 90-120° angle in range of motion from 5th percentile female to 95th percentile male)
    - f. Variable back stop adjustment
    - g. Seat depth (seat pan) adjustment with pan rounded down (waterfall front)
    - h. Seat angle adjustment (positive 1° to negative 5-10°)
    - i. Arm height adjustment (at least 4")
    - j. Arm width adjustment (telescoping at least 4")
    - k. Swivel base
    - l. 5 or more star base
    - m. Height-adjustable foot ring
    - n. Hard wheel casters (for carpet) or soft wheel casters (for hard flooring)
    - o. Anti-static or static-dissipating chair rollers
    - p. Breathable chair fabric covering and no-slip texture
    - q. Chair controls accessible from the seated position (intuitive to use)

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2. Recommendations - acceptable for existing furniture
  - a. Chair is safe and stable
  - b. Mechanical seat height adjustment (24" to 29")
  - c. Lumbar support (built-in or provided by additional lumbar cushion)
  - d. Swivel base
  - e. Wheel casters
  - f. Breathable chair fabric covering and no-slip texture
- C. Standard Chair - for occasional computer work < 2 hours per day, desk work, or away-from-desk for the remainder of the day
  1. Chair is safe and stable
  2. Mechanical seat height adjustment (15" to 21")
  3. Lumbar support (built-in or provided by additional lumbar cushion)
  4. Arm rest
  5. Swivel base
  6. 5-Star base (new purchases)
  7. Breathable chair fabric covering and no-slip texture
- D. Conference/Training Room Chair - for lengthy sitting with some desk work
  1. Chair is safe and stable
  2. Lumbar support
  3. Arm rest (new purchases)
  4. Breathable chair fabric covering and no-slip texture
- E. Board Operator's Chair - for continuous periods of sitting.
  1. Recommendations - applicable to all new purchases
    - a. Pneumatic seat height adjustment (15" to 21")
    - b. Lumbar support
    - c. Back height adjustment (at least 2")
    - d. High back (adequate to support head)
    - e. Back tension adjustment (must provide 90-120° angle in range of motion from 5th percentile female to 95th percentile male)
    - f. Variable back stop adjustment
    - g. Seat depth (seat pan) adjustment with pan rounded down (waterfall front)
    - h. Arm height adjustment (at least 4")
    - i. Arm width adjustment (telescoping at least 4")
    - j. Swivel base
    - k. 5 or more star base
    - l. Hard wheel casters (for carpet) or soft wheel casters (for hard flooring)
    - m. Anti-static or static-dissipating chair rollers
    - n. Breathable chair fabric covering and no-slip texture
    - o. Chair controls accessible from the seated position (intuitive to use)
  2. Recommendations - acceptable for existing furniture
    - a. Chair is safe and stable
    - b. Mechanical seat height adjustment (15" to 21")
    - c. Lumbar support (built-in or provided by additional lumbar cushion)
    - d. Swivel base
    - e. Wheel casters
    - f. Breathable chair fabric covering and no-slip texture

II. **WORKSURFACES - (Keyboard Trays/Mouse Trays/Articulating Arms/Palm Rests)**

- A. General Recommendations of Worksurfaces
  1. Hands/wrists should not rest on sharp edges.

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2. There should be sufficient space on the worksurface for employee to work tasks and it should accommodate office equipment (i.e. the tray, mouse and monitor).
  3. Worksurface should be of sufficient height to avoid contact with knees/thighs.
- B. General Recommendations of Keyboard and/or Mouse Trays:
- NOTE:** Selection of keyboard tray will depend on orientation of the computer monitor(s) and the worksurface height's ability to support user in neutral position.
1. Shallow profile of tray/arm assembly on trays should avoid contact with knees thighs when fully descended
  2. Rigid support for trays to minimize "bounce" when keying
  3. Ability to store attached tray under the worksurface by sliding or swiveling
  4. Accommodates keyboards up to 22" wide by 9-1/2" deep
  5. Tray options should include: a full length tray which accommodates both the keyboard and mouse; a compact tray for a keyboard or mouse only; a compact tray which accommodates the keyboard and has a mousing surface which swivels or slides over the number keys on the keyboard; and mouse bridges which can be placed over the number keys on the keyboard of most trays. Note: Compact keyboard/mousing trays and mouse bridges allow the arm to remain close to torso for people who do not have wide shoulders.
  6. Tray should accommodate both the mouse and the keyboard on the same level (or within one inch of the other).
- C. Keyboard and/or Mouse Trays
1. Single straight-on attached
    - a. Keyboard adjustment necessary to achieve neutral position
    - b. Single PC monitor on a horizontal surface with straight-on orientation
    - c. Tray is attached underneath worksurface with arm or other device
  2. Single straight-on desktop
    - a. Worksurface height supports neutral position
    - b. Single PC monitor on a horizontal surface with straight-on orientation
    - c. Tray rests on worksurface which is fixed or adjustable
  3. Double straight-on attached
    - a. Keyboard adjustment necessary to achieve neutral position
    - b. Double monitor used with single keyboard with straight-on orientation for each monitor or both simultaneously
  4. Corner attached
    - a. Keyboard adjustment necessary to achieve neutral position
    - b. Single or double monitor with corner orientation ("V" or "U" shape)
    - c. Single keyboard for one or both monitors
    - d. Tray is attached underneath worksurface by arm or other device
  5. Corner desktop ("V" shape only)
    - a. Worksurface height supports neutral position
    - b. Single or double monitor with corner orientation and single keyboard
    - c. Tray bridges open corner space to achieve straight-on orientation
- D. Palm Rests
1. Preferred Recommendations:
    - a. Integrated height-adjustable (.5" to 2")
    - b. Detachable or standalone for cleaning and/or replacement
    - c. Variable length/position
  2. Keyboard length only or keyboard/mouse combined length
  3. Keyboard length to accommodate right or left handedness
  4. Minimum Recommendations:



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- a. Spans length of keyboard
- b. Soft, flexible construction (not solid) - padded or gel-filled
- c. Depth 1-1/2" to 3"
- d. Height not to exceed 2"

## Attachment B: Picture of a Good Workstation Set Up with a Chair and Computer

### OPERATOR WORKSTATION FEATURES

