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Included with this Numerical Index are details for contacting the EMRE ENGINEERING PRACTICES COORDINATOR who is available to help on general questions related to content and use of the *Design Practices*. User feedback regarding errors, omissions, or desirable new material for the Design Practices should also be addressed to the COORDINATOR.

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1 INTRODUCTION

The purpose of the Marine Terminal Design Practices Manual is to give the designer the benefit of extensive ExxonMobil experience and know-how by presenting the selection criteria, design considerations, correlations and calculation procedures which have been developed over a period of decades. These techniques are by no means exclusive, and are to be used as a guide, rather than as a "cook book."

1.1 USE OF THE DESIGN PRACTICES

Subsections of the Manual updated or added after 1994 have been reviewed to assure that they satisfy the expectations of the Corporation's Operations Integrity Management System (OIMS). DP subsections are defined to have OIMS impact, if an exception could lead to an increase in the risk of a safety, health, or environmental incident.

- S** Assigned to portions of practices containing information whose primary purpose is avoidance of personnel and operational safety incidents. Any deviation from such designated portions of practices requires formal review and approval according to local safety policy.

Personnel Safety: Refers to the avoidance of recordable personnel injuries - e.g., burns, cuts, abrasions, inhalation, or exposure to dangerous substances, etc., that can result in medical treatment, restricted work, lost-time incidents, or fatalities.

Operational Safety: Refers to the prevention and control of process releases, fires, explosions, etc.

- E** Assigned to portions of practices containing information whose primary purpose is driven by environmental considerations. Environmental considerations typically include designs intended to protect against emissions/leakage to the air, water, and/or soil. Deviations from such portions of practices require formal review and approval according to local environmental policy.

OIMS impact of DP subsections is subject to the following qualifications:

- DP subsections generally do **not** have OIMS impact unless they provide specific formula, nomographs, or detailed circulation methods that are translated into equipment or facilities specifications or operating practices.
- DP subsections do **not** have OIMS impact if detail design is governed by codes, standards, or Company practices (International or Regional practices, for example).
- DP subsections do **not** have OIMS impact if they are tutorial in nature.

- S,E** Portions of practices that have OIMS impact and satisfy the preceding qualifications are marked with an **S** or **E** letter code, and a vertical stripe in the left-hand margin.

An **S** or **E** marking adjacent to the title of a table, figure, or subsection without the vertical stripe indicates that the entire portion of the practice has OIMS impact.

These markings are provided to help affiliates in the application of the practices by identifying where special care is urged when taking an exception or deviation. Users should consider implementing a process for justifying, approving, and recording deviations from S or E designated practices, such as reviews by the local safe operating committee or environmental steward. Following is a suggested basis for this procedure:

Justification - Describe the local operating, business, or other factors that support the deviation.

Approval - Formal approval is required on designs for approved/authorized projects. However, no formal approval is required for screening studies.

Recording - All deviations shall be logged in the project or design file.

The design of safe, operable, and economical plant equipment is facilitated by the application of:

- Fundamental engineering principles** and calculation procedures, such as those covered in college textbooks and in the technical literature, or those learned through ExxonMobil's engineering research and development.
- Knowhow**, selection criteria, practical considerations, empirical factors, etc., gained from experience in the plants of ExxonMobil affiliates. These factors can sometimes be controlling; for example, in cases where applicable fundamental information is very limited or difficult to obtain.

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