

## **Focused Facility Inspection Program**

Shannon J. Shaw  
Petroleum Engineer  
Minerals Management Service-Camarillo District Office

### ***Abstract***

This paper discusses the evolution, development, and objectives of the Focused Facility Inspection (FFI) program.

The FFI program was initiated in 1996 by the Pacific Outer Continental Shelf Region (POCSR) of the Minerals Management Service (MMS). This enhanced inspection program is based on a systemic (focused) approach with increased emphasis on the Safety and Environmental Management Program (SEMP) concept. The FFI program is designed to complement the present offshore platform inspection program by integrating engineers and other specialists with inspectors to form teams with technical expertise in drilling, production, and other "specialty" areas of offshore operations. The critical roles of human, organizational, and management influences on safety and environmental protection are emphasized in these inspections.

### ***The FFI Program***

MMS has long recognized that human, organizational, and management influences play a critical role in company performance relative to safety and environmental protection during oil and gas operations on the Outer Continental Shelf (OCS). However, MMS inspection programs have traditionally concentrated on the functional testing of various safety and environmental protection devices with limited emphasis on the human, organizational, and management factors mentioned above.

In 1993, the American Petroleum Institute (API) published their Recommended Practice 75 (RP75) entitled "Recommended Practices for Development of a Safety and Environmental Management Program for Outer Continental Shelf (OCS) Operations and Facilities."

In response to that API publication, MMS encouraged operators to voluntarily develop their own SEMP programs. The Camarillo District of the POCSR of MMS developed an enhanced inspection program based on a systems approach with increased emphasis on the SEMP concept. This inspection process was named the "Focused Facility Inspection" (FFI) program.

Based on the principles presented in API RP75, eight major inspection focus areas were originally identified for evaluation under the FFI. Recently, and in response to a downsizing in the Pacific Region of MMS, the inspection elements

in the focus area of Hazardous Materials were redistributed among the remaining seven focus areas. These focus areas are:

- 1) Facility Condition
- 2) Safety Systems
- 3) Documents
- 4) Training
- 5) Environmental
- 6) Electrical
- 7) Policies/Performance

These inspection focus areas were further divided into discreet elements that the FFI team could use to provide a qualitative basis for analysis. The Focused Facility Inspection Matrix at the end of this paper summarizes the elements for each major focus area. Some elements are common to more than one focus area.

The FFI program is designed to complement the traditional OCS facility inspection strategy for each platform, which consists of comprehensive annual inspections supplemented by monthly, unannounced partial inspections.

While the traditional inspection program was performed by MMS inspectors exclusively, the FFI promotes an integrated, collaborative approach by combining inspectors with engineers and other specialists with technical expertise in drilling, well completion, well workover, production, electrical, and environmental issues. Representatives from the United States Coast Guard (USCG), from MMS Headquarters in Herndon, Virginia, from MMS's Gulf of Mexico Region, and from the California State Lands Commission have also participated in FFI efforts. FFI team members are selected based on their expertise in one or more of the inspection topic areas. The POCSR of MMS is fortunate to have a diverse staff of individuals with the requisite knowledge needed to make a comprehensive assessment of operator performance as it relates to the captioned inspection focus areas. A team leader is designated for every FFI. The team leader position is alternated between team members to sharpen leadership skills. The team leader also takes responsibility for at least one of the focus areas. The other team members assume responsibility for the remaining focus areas. Team members are encouraged to rotate to different focus areas to develop expertise in different categories. Team members often share the responsibilities of inspection and report preparation, which provides the opportunity for mentoring among colleagues. A report coordinator is designated by the team to compile and serve as chief editor for the FFI report. Perhaps one of the most important features of the FFI team is the inclusion, as team members, of operators and specialists that work at the OCS facility being inspected. This promotes the collaborative team approach that is at the core of a successful FFI.

Because the FFI focuses on systems rather than devices, the emphasis is on continual improvement of technical and human factors as they relate to environmental protection and operational safety concerns. Inspections result in "Action Items" instead of Incidences of Noncompliance (INCs) being identified and documented during the inspection, (unless the action item constitutes an immediate and significant threat to safety or the environment, in which case an INC is issued). Similarly, the USCG may issue a citation depending on the severity of the finding. Timeframes for rectifying action items are determined on a case-by-case basis, but the majority of the action items are attended to by the operators immediately.

The first FFI was conducted in January 1996. As of this writing, FFIs have been completed on eighteen out of the nineteen OCS platforms in the Camarillo District and have involved eight different operators. FFIs have been performed a second time on five Camarillo District platforms. The only platform in the jurisdiction of the Camarillo District that has not been inspected under the FFI program is Platform Grace, where production is shut-in and the platform was thought to be a poor FFI candidate. The Santa Maria District of the POCSR adopted the FFI program and has completed FFIs on two of the platforms under their jurisdiction. Table I at the end of this paper shows FFI completion status. The POCSR intends to complete FFIs on all platforms under its jurisdiction at the rate of at least three per year.

MMS considers many factors when deciding which platform would make the highest priority candidate for an FFI, including:

- 1) Safety record at the facility
- 2) Presence of simultaneous operations/level of present or planned operations
- 3) Input from MMS inspectors regarding observed operations and facility condition
- 4) Presence of safety hazards such as high concentrations of H<sub>2</sub>S and SO<sub>2</sub>, high pressures, etc.
- 5) Time of year and anticipated weather conditions
- 6) Frequency of past FFI activity on a given operator's platform

Operators are contacted by MMS well in advance of planned FFI activity. MMS makes every effort to accommodate operators' scheduling preferences. A timeline is established based on when the facility inspection is to be performed. The facility inspection is normally accomplished in two days. Once the field portion of the FFI is completed, the team strives to meet each suspense date on the timeline. A typical FFI timeline is presented in Table II at the end of this paper.

Each FFI is kicked-off with a daily morning meeting at the subject facility. All participants are introduced and their areas of responsibility are defined. Plans for the day's inspection are coordinated. The purpose of the FFI is restated...it is a collaborative effort between industry and regulators in support of SEMP and concentrating on the system as a whole, with emphasis on continual improvement with respect to human and technical factors as they relate to operations at the facility. A daily close-out meeting is held where observations and action items are discussed. The operator's representatives provide feedback on the observations, action items, and overall effectiveness of the FFI.

The FFI report provides narrative statements regarding the team's findings in each of the seven major inspection focus areas. Opportunities for improvement in each area are discussed. Positive findings are emphasized as well. Identified action items are listed at the end of the report. Photographs taken during inspection of the facility, including pictures of select action items, are an integral part of the report.

Operators are appreciative of the opportunity to participate in the FFIs conducted at their facilities. Improved communication between the operators and MMS has been observed and is attributed to the FFI. Many action items have been identified by the FFI process that went undetected through the conventional facility inspection program.

Additional information about the FFI program may be obtained by contacting the Camarillo District Office at (805) 389-7775. The mailing address is 770 Paseo Camarillo, Camarillo CA 93010.

**FOCUSED FACILITY INSPECTION MATRIX**

<b>FACILITY CONDITION</b>	<b>SAFETY SYSTEMS</b>	<b>ENVIRONMENTAL</b>	<b>TRAINING</b>
Helideck	Flare Systems	Drilling	Training Programs
Crane	Fire Systems	Produced Water	OSE
Housekeeping	ESD	Other Discharges	H2S
Deck/Grating	Fire/Smoke/Lighting	Painting	T1/T2/T3
Stairs/Walkways	H2S/Gas	Wildlife	Work Practices
Piping Support/Brackets	Press/Level/Temp	NORM	Contractor Qualifications
Measurement Systems	Lifeboats	Pollution Prevent Sys	Personnel Safety
MOC	Piping/Instrumentation	Hazardous Waste Mgmt	EEP
Drilling/Workover Rigs	Pressure Vessels		Hazardous Materials
BOP Equipment	MOC		Crane
Sump Systems	SCBA		Hazwoper
Containment Systems	Cascade		Hazcom
PP & PV Inspect Plan	BOP Equipment		
PP Ext Inspect Checklist	Sump Systems		
Hazard Identification	Containment Systems		
Containers	Computer Interface		
Diesel Fuel Systems			
Labels/Placards/Signs			

<b>DOCUMENTS</b>	<b>ELECTRICAL</b>	<b>POLICIES/PERFORMANCE</b>
MSDS	System Overview	Management
Manifest	One Lines	Morale
Pipeline/Structure	Area Classification Dwgs	Cooperation
Work Practices	Distribution/Protection	SEMP
OSCP	Switching/Ground	Reactive/Proactive
H2S/Gas	Staffing/Training	Lease Stipulations
P&IDs	Outages	Development Plan
SAFE Charts	Spec Contractors	MOC
Personnel Safety	Work Pol/Pract/Control	Contractor Qualifications
OSE	MOC	Confined Space Entry
Welding/Burning Plans	Redlines/Documentation	Human Factors
Welding/Burning Procedures	Elect Safety References	Corporate Vision/Values
Lockout/Tagout Procedures	Personal Protective Equip	Simultaneous Operations
Work Permit	Contingencies	Orientation/Sign in
Rules and Regulations	Emergency Power & Loads	Communication
Simultaneous Operations	Area Inspections	Delegation of Responsibility
Rig Movement	Div 1 & Div 2 Areas	Crew Changeout
Confined Space Entry	Forced Ventilation	Safety Meetings
Accident Notification	Purging/Seals/Fire Walls	Priorities - Safety/Env/Prod
EEP	Lighting	Hot Work
Crane	High Temperature Devices	Lockout/Tagout
PP & PV Inspect Plan	Instrumentation	PP & PV Inspect Plan
PP Ext Inspect Checklist		PP Ext Inspect Checklist
		Chemical Mgmt

Blow Out Prevention (BOP)	Oil Spill Exercise (OSE)	
Drilling Well-Control Training (T1)	Piping & Instrumentation Diagrams (P&IDs)	
Emergency Evacuation Plan (EEP)	Production Safety System Training (T2)	
Emergency Shutdown (ESD)	Safety Analysis Function Evaluation (SAFE)	
Management of Change (MOC)	Safety and Environmental Management Program (SEMP)	
Material Safety Data Sheets (MSDS)	Self Contained Breathing Apparatus (SCBA)	
Naturally Occurring Radioactive Material (NORM)	Well-Completion and Well-Workover	
Oil Spill Contingency Plan (OSCP)	Well-Control Training (T3)	
Process Piping (PP)	Pressure Vessel (PV)	FFIMatrixUpdate.xls 6/20/02

**Table I  
FFI Completion Status**

FACILITY	OPERATOR	DATES		
		Start	End	Final Rpt.
Henry	Unocal	01-29-96	01-30-96	03-22-96
Gail	Chevron	04-29-96	05-01-96	06-11-96
Habitat	Texaco	07-22-96	07-23-96	08-30-96
Gina	Nuevo/Torch	10-28-96	10-29-96	12-12-96
Hondo	Exxon	03-18-97	03-19-97	04-17-97
Eureka	Aera	06-16-97	06-17-97	07-25-97
Hogan	POOI	09-03-97	09-04-97	10-17-97
Edith	Nuevo/Torch	11-12-97	11-13-97	12-22-97
Hillhouse	Nuevo/Torch	02-24-98	02-26-98	03-31-98
Gilda	Nuevo/Torch	05-26-98	05-27-98	07-01-98
Heritage	Exxon	09-15-98	09-16-98	10-22-98
Hidalgo	Chevron	12-01-98	12-04-98	05-15-99
Ellen/Elly	Aera	02-09-99	02-10-99	03-19-99
Platform B	Nuevo/Torch	05-25-99	05-26-99	07-07-99
Harmony	Exxon	09-16-99	09-17-99	11-01-99
Irene	Torch	02-08-00	02-10-00	Pending
Houchin	POOI	02-15-00	02-16-00	03-28-00
Platform A	Nuevo/Torch	07-18-00	07-19-00	08-29-00
Platform C	Nuevo/Torch	10-17-00	10-23-00	12-19-00
Gail	Venoco	03-07-01	03-08-01	04-23-01
Habitat	Nuevo/Torch	07-31-01	08-01-01	09-14-01
Hondo	ExxonMobil	10-22-01	10-25-01	12-10-01
Henry	Nuevo/Torch	02-26-02	02-27-02	04-19-02
Hogan	POOI	07-30-02	07-31-02	Pending

**Table II  
FFI Timeline**

<b>Week Ending Number</b>	<b>Week Ending Date</b>	<b>Activity to be Completed</b>
1	4/24/02	Team leader notifies operator and coordinates next FFI
1	4/24/02	Team leader sends confirmation letter to operator
5	5/29/02	Team conducts FFI, records and provides copies of Action Items (AIs) to operator and all team members (see asterisks below)
6	6/05/02	Team members finalize observations and distribute copies of same to all team members
7	6/12/02	Team members finalize findings/write report sections and distribute copies of same to all team members. Photographs for report are finalized. Operator submits response to AIs
8	6/19/02	Team members conduct follow-up inspection and provide progress report to team leader
8	6/19/02	Report editor/coordinator provides copies of draft report to all team members
9	6/26/02	Team members review draft report and provide comments to report editor/coordinator
10	7/03/02	Report editor/coordinator finalizes report and distributes copies to the operator, all team members, and MMS and USCG offices.
11	7/10/02	FFI team meeting to critique last inspection and plan next inspection

\* Daily AIs are handwritten on AI form & given to operator.

\* Typewritten final AIs on AI form are forwarded to team leader by close of business one day after last day of facility inspection.

\* Team leader forwards final typewritten AIs to operator via fax or e-mail one day after receipt from team members.