LOOP LLC
EMERGENCY PREPAREDNESS

The LOOP deepwater port complex is constructed, operated and maintained in accordance with the philosophy that spill prevention is the first line of defense in emergency response. To accomplish this, numerous preventive measures were incorporated in the design of all components of the complex. Additionally, detailed emergency plans have been developed and are routinely tested. Extensive mechanical and alternative technology response resources have been acquired and are maintained to aid the Company's preparation for response to various natural or manmade operational emergencies which may occur. The following describes those measures and resources which are in place to prevent or, where necessary, respond to emergencies in the port.

PREVENTIVE AND MITIGATIVE MEASURES

LOOP's original design, as well as its operating procedures, contains measures intended to effectively prevent an emergency situation. Examples of such additional safety measures include:

- Deepwater Port Safety Zone – *configured to allow safe navigation of tankers and work vessels in port. Water depths range from approximately 100 to 115 feet to minimize the risk of grounding and associated damage to tanker or facility components. The Safety Zone is approximately 60 square miles in area, the largest in the Gulf of Mexico.*
- Tanker navigation excursion zones – *tanker traffic separation scheme for enhanced safety*
- Two mooring hawsers on all ships* – *to minimize risk of tanker "break-away"*
- Stern tow on tankers* – *to avoid damage to floating hoses*
- Continuous deck watch* – *visual monitoring of tanker manifold area and marine hoses*
- Emergency shutdown signal to tanker* – *audible alarm for the immediate stop of transfer*
- Computational leak detection system – *quick detection of potential pipeline issues*
- Containment of Clovelly Terminal - *levee system and fence boom prevent spills from leaving the confines of the facility*
- Emergency Response Vessel (LOOP Responder)* – *tanker escort and emergency response.*
- Containment of Clovelly Tank Facility – *all tanks are located within a secondary containment dike system with minimum capacity of 110% the volume of the largest tank.*

Measures voluntarily added by LOOP to enhance safety of operations.

EMERGENCY RESPONSE PLANS

Several plans have been developed to aid the Company in its emergency preparedness and response objectives. These include, but are not limited to the following examples:

Facility Response Plan – Delineates response actions to oil spills from the LOOP complex. Meets planning requirements of the Deepwater Port Regulations and the Oil Pollution Act of 1990 (OPA 90).

Operating Procedures – Includes procedures for response to abnormal operational conditions and recommended emergency measures. Developed in accordance with 49 CFR 195.

Disaster Response and Recovery Plan - Provides guidelines for response to incidents which result in damage or destruction to key components of the LOOP operating system. D elineates responsibilities, strategies, and procedures to stabilize and restore facilities to interim safe operation pending permanent repairs or replacement. This plan is not required by regulation.

Pipeline Repair Manual - Outlines procedures, access me asures and equipment required to repair the pipeline under various scenarios (offshore, onshore, marsh, etc.). This manual is not required by regulation.

Facility Security Plan – USCG approved plan describes the measures LOOP facilities take for each MARSEC Level, the roles of LOOP security personnel, procedures for handling a security event , and required training and drills for the organization.

PLANNING LEVELS FOR RESPONSE

In accordance with OPA 90, LOOP has addressed its average most probable discharge, maximum most probable discharge and worst case discharge. All were determined using the operating history of its facilities as well as procedures employed by personnel in routine operations (to isolate components under emergency conditions). In response, LOOP established that its average most probable discharge of crude oil is 50 barrels while its maximum most probable discharge is 1,200 barrels.

LOOP's worst case discharge is calculated at 14,524 barrels of crude oil. The worst case discharge scenario is based on an event in which a 6 -inch barge loading fitting from a cavern wellhead at the Clovelly Dome Storage Terminal is sheared. In this scenario, a work barge in the facility breaks loose from its mooring during inclement weather making contact with the wellhead, shearing off the piping. The calculation assumes a worst case detection and shut-in time of approximately 30 minutes.

OPA 90 further required that a comprehensive study be conducted to determine the maximum credible spill from the facilities to facilitate the establishment of appropriate limits of liability for the deepwater port complex. A Coast Guard study concluded that the maximum credible spill from t he deepwater port would involve a release from the main oil line which would likely be limited to 5,000 barrels. This volume was confirmed by the Coast Guard in the Deepwater Port Liability Study conducted by the OPA 90 staff in September 1994.

RESPONSE RESOURCES

Equipment

LOOP maintains a cache of response equipment in excess of the required planning levels for each of the stated discharge categories. Therefore, LOOP does not require the services of an Oil Spill Response Organization (OSRO) in order to meet its planning requirements under OPA 90. Using the planning criteria of OPA 90, the total daily recovery capability with LOOP -owned response equipment is 25,960 barrels. This includes the use of 13 skimmers and hydraulic power units to opera te the skimmers. Additionally, LOOP maintains approximately 25,000 feet of containment boom. Recovered crude oil can be stored in one of LOOP's twenty 2,000 gallon capacity storage tanks for recovered liquids. In the offshore environment, approximately 6,200 barrels of recovered oil capacity is available in the tanks aboard the M/V LOOP Lifter and M/V LOOP Responder, as well as the maintenance oil tank on the LOOP Marine Terminal.

As an alternative to its mechanical recovery capability, LOOP maintains an inventory of 30,600 gallons of dispersant to respond to an incident. Because this inventory exceeds the volume required to be maintained by LOOP under OPA 90 regulations, it is made available to Responsible Parties (RP) in the event of a significant rele ase. Such release is conditioned upon the agreement of the RP to replace the depleted inventory *in kind* or make payment to LOOP in the amount of the current replacement cost (within LOOP's discretion). The Company also has a long-term agreement with Airborne Support, Inc. at Houma, Louisiana to provide aircraft for dispersant application.

Personnel

LOOP is committed to utilize operating personnel for the initial response to a discharge from the facility. At all times, LOOP has sufficient operating p ersonnel available to respond to the average most probable discharge and to maintain a response effort for a minimum seven-day period. Contract personnel are also available to provide response assistance including Marine Spill Response Corporation (MSRC), National Response Corporation (NRC), Louisiana Emergency Resources Supply Network, U. S. Environmental Services, and the St. James Parish Mutual Aid Association (fire/explosion support with personnel and equipment).

In addition to the numerous contractors available to support LOOP in an emergency response, the Company has in place a cooperative endeavor agreement with the American Pollution Control Corporation (AMPOL). Under this agreement, AMPOL maintains most of the LOOP response equipment inventory (above that required to respond to its average most probable spill). In exchange, AMPOL has the ability to provide spill response for other operators at time of need. This contract requires AMPOL to immediately return any deployed equipment to LOOP in the event of a release from any component of the deepwater port complex. AMPOL also has approximately 120 personnel available to respond to an emergency.

Priorities for Sensitive Areas

LOOP has performed a sensitive area analysis for the entire coastline of Louisiana and has identified 39 priority areas. Containment and protection drills have been performed on many of these critical areas to verify the resources required to respond in a practicable manner. The analysis of sensitive areas includes information on the following:

- A listing of sensitive areas on each quadrangle map

- A general description of the sensitive areas
- Specific instructions for protection of the area
- Tactical deployment requirements and caveats
- Personnel requirements
- Equipment and material requirements.

Critical Asset Recovery Outline

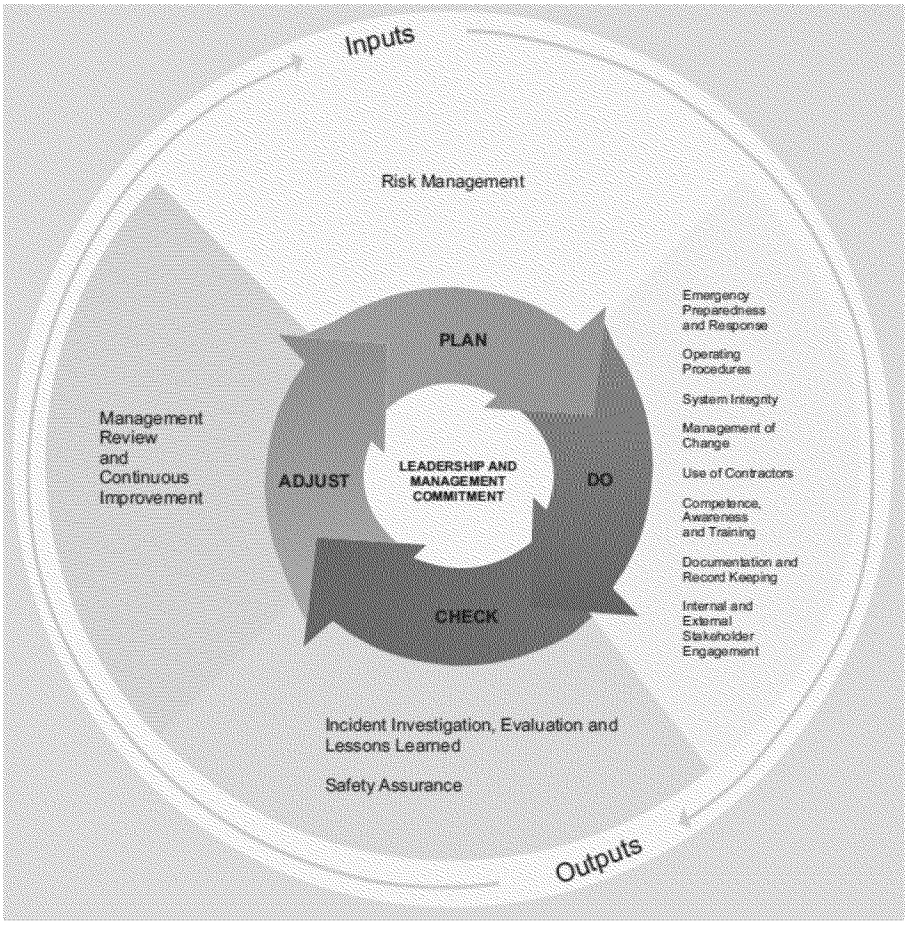
Twenty-eight scenarios have been developed by operations, environmental and security personnel under which critical facility assets could potentially be damaged or destroyed. Each analysis addresses the consequences of the scenario on the Company's operations or business activity, and includes short-term and permanent recovery measures. Additionally, these scenarios include an estimated time for complete recovery of operations or business activity. Testing of the scenarios and the associated response and recovery measures occur on an annual basis to validate the plans for each critical asset.

Training and Drills

Paramount to the success of each of the preparedness elements reviewed is the orientation and training of personnel on prevention, mitigation and response procedures. In addition, drill and exercises which include various quarterly, semi-annual and annual activations and deployments are designed and conducted to test, validate and enhance the Company's level of preparedness. These exercises are consistent with the National Preparedness for Response Exercise Program (NPREP) Guidelines.

Continuous Improvement

In an effort to continuously improve with the ultimate objective of Goal Zero (zero accidents and zero spills), LOOP has made a company-wide commitment to adhere to the guiding principles of API RP 1173 – Safety Management Systems. Because Emergency Preparedness and Response is one of the elements of API RP 1173, Key Performance Indicators (KPIs) are created, evaluated and improved upon using the Plan-Do-Check-Adjust (PDCA) cycle in this area. The PDCA cycle provides employees with the framework to continually re-evaluate (check) and improve upon (adjust) any company policy or procedure. To give industry further guidance on the managerial elements required for a safe, timely and effective emergency response, API has issued API RP 1174 –Recommended Practice for Onshore Hazardous Liquid Pipeline Emergency Preparedness and Response. It is LOOP's intent to use this Recommended Practice as a guidance document to continuously improve in areas such as: risked-based planning, drill preparation and execution and emergency response team activation utilizing the National Incident Management System (NIMS) Incident Command System (ICS). The diagram below depicts the elements of API RP 1173 and the PDCA cycle.



Summary

Prevention of significant operational incidents was paramount in the design of the LOOP deepwater port complex and remains the preferred strategy in emergency preparedness. Throughout the course of operations, LOOP has instituted several measures to further enhance the safety of operations at each location. In additio n to these preventive measures, the Company has substantial conventional and alternative response tools available to respond to spills and other emergencies within the port. With the routine review, testing and refinement of these resources, the Company s trives to remain positioned to respond according to its plans.

RESPONSE EQUIPMENT LIST

(Located onsite or within 2 hrs. of Galliano)

CONTAINMENT BOOM

Model	Type	Manufacturer	Connector	Height	Application	Location	Quantity
3000	Curtain	Expandi	U/S	30”	A,B,C	MT/POI/SBH	5,670’
4300	Curtain	Expandi	U/S	43”	B,C	MT/POI	3,700’
Ollfence	Fence	Albany	U/S	24”	A	CDST	500’
Globeboom	Fence	Albany	U/S	12”	A	BMFD/CDST	1,000’
	Containment	Albany	U/S	18”	A	CDST/LCP	12,850’
Auto Boom	Curtain	OilStop	U/S	43”	B,C	MT/POI/SBH	3,300’

A – Inland B – Shoreline C – Offshore U/S – Universal Slide

** Current inspection records are maintained by Environmental and Regulatory Affairs.

RESPONSE EQUIPMENT LIST

(Located onsite or within 2 hrs. of Galliano)

SKIMMING DEVICES

Model	Quantity	Type	Manufacturer	Application	bpd Recovery	Location
GT-185	2	Weir	Pharos Marine	A,B,C	1370	SBH/POI
GT-260	1	Weir	Pharos Marine	A,B,C	2740	POI
W-1	1	Weir	Walosep	A,B,C	1440	POI
W-3	1	Weir	Walosep	A,B,C	2880	POI
W-4	3	Weir	Walosep	A,B,C	3566	SBH/POI
Seaskimmer 50	2	Disc	Vikoma Int.	A,B,C	1508	SBH/MT
Komara 12K II	2	Disc	Vikoma Int.	A,B	23	SBH/CDST
Lamor	1	Brush	Larsen Marin	A,B,C	2400	POI

A – Inland B – Shoreline C – Offshore

Total ***Skimming capability "onsite"***

Inland – 25,960 barrels/day

Shoreline/offshore – 25,914 barrels/day

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RESPONSE EQUIPMENT LIST

(Located onsite or within 2 hrs. of Galliano)

TEMPORARY OIL STORAGE

Model	Quantity	Type	Manufacturer	bpd Capacity	Location
Port. Tank	15	IM102	HCustom	714	SBH/OC
Aux tank	1	Floating roof	N/A	55,000	CDST
Diesel tank	1	Fixed roof	N/A	30,000	FBS
Oily water tank	1	Sump	N/A	1,400	MT
Maintenance Oil tank	1	Sump	N/A	1,400	MT
M/V LOOP LIFTER	1	Onboard	ECC	1,800	MT
M/V LOOP RESPONDER	1	Onboard	ECC	3,000	MT

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