

A risk profile is a structured management tool for identifying the various exposures associated with an operation. Typically, a risk profile will encompass a review of an organization's operations with a focus on administrative strategies / protocol for reducing or managing particular risks. Environmental risk should not be exempt from this process. In fact, many organizations create stand-alone Environmental Risk Profiles (ERPs) to specifically address the area of environmental liability. This process adds to an organization's ability to systematically identify environmental risk and effectively manage it. Below is an excerpt from an ERP for Oil & Gas Facility, which identifies some major exposures. A completed ERP can show the impact such exposures can have on the organization, as well as the risk management strategies available.

Oil & Gas Facilities confront environmental liability every day. Specifically, they face environmental exposures in five major areas: property development, operations, transportation, disposal liabilities and owned premises. Each area must be explored to identify risks that may expose the organization to environmental liability. This hypothetical ERP identifies some of the major exposures and associated claims.

## EXPOSURES

### PROPERTY DEVELOPMENT

- Contamination from historical usage of property. Large parcels of undeveloped property tend to have fewer environmental issues. As a result, many times, there are poor or inadequate records of activity on those lands. Environmental assessments, especially Phase I's, are cursory reviews of the site with a "walk-through" of the property to physically identify issues. In the event there was illegal or "midnight" dumping of waste or materials on these lands, no environmental reports would identify them. The contamination may only be revealed during development.
- Errors and omissions in environmental site assessments, especially Phase I's due to their limited scope of work, can lead to unidentified underground structures or contamination.

### OPERATIONAL EXPOSURES

- Inadvertent disturbances of natural occurring substances and / or in-place contamination in the site preparation / construction activities.
- Liability associated with sub-surface soil / groundwater contamination resulting from hydraulic fracturing:
  - Improper well casing construction leading to potential "leaks" into subsurface fresh-water aquifers
  - Shallow "coal-bed" fracturing exposing aquifer to chemicals used in the fracturing process.
  - Directional drilling and fracking activities leading to vertical and horizontal migration paths for chemicals used in fracking process.

### CONTACT

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## EXPOSURES (CONT'D)

- Erosion and storm water run-off during well pad construction and drilling.
- Improper handling and disposal of flow back fluids.
- Improper installation and maintenance of gas collection facilities and pipelines.
- Inadequate secondary containment of storage tank batteries.
- Leaking containment pits and ponds – flow back fluids.
- Contamination resulting from salt-water injections.
- Leaking of fluids during storage of trucks and equipment.
- Poor housekeeping and preventive maintenance for operations equipment and pollution control equipment.
- Poor underground and aboveground tank management programs, resulting in surface and subsurface soil and groundwater contamination.
- Poor waste storage / handling of incompatible materials, resulting in fires or explosion.
- Resulting property damage and clean-up costs, from accidental damage / interruption of utility and product supply lines.
- Drums of spent solvents, acids and caustics causing residual contamination on- and off-site.
- Violations of various environmental permits - air, water discharge, etc. resulting in fines for exceedances.
- Natural Resource Damages, resulting in substantial costs for state- and federal- mandated clean-up requirements and potential fines.
- Release of product from pipelines and gathering lines resulting in soil and groundwater contamination.
- Exacerbate contamination by excavation of access roads & well pad; improper testing of potentially contaminated soil; improper disposal / treatment of contaminated soil.

### TRANSPORTATION EXPOSURES

- Inadvertent transport and subsequent disposal of unknown contaminated soil from on-site activities such as small spills resulting in waste product.

- Loading and unloading of product at rail cars, tankers, etc.
- Spills of contents (e.g., fuel, corn products or constituents, ethanol products, contaminated soil, etc.) during transport.
- Fuel / oil spills / leaks from vandalism during the transport of any materials.

### DISPOSAL EXPOSURES

- Inadequate disposal of drilling materials in lagoons and ponds.
- Clean up and liability associated with the disposal of waste / materials at disposal facilities or recyclers. This has potential Superfund ramifications.
- Improper “disposal” of saltwater, drilling flow-back fluids and drilling muds.
- Improper disposal of potentially contaminated soil.

### OWNED PREMISES EXPOSURES

(maintenance garages, fabrication shops, offices, etc.)

- Leaking underground / aboveground storage tanks.
- Residual contamination from minor spills of oils, fuel, lubricants, etc., and poor housekeeping during maintenance operations.
- Leaks from vehicles and / or equipment stored on premises.
- Surface contamination from fuels and lubricants stored improperly (without secondary containment).
- Improper disposal of waste materials on site.
- Unidentified, pre-existing contamination from past owners of the premises.
- If the firm owns commercial or habitational structures, there is a major exposure from mold growth. Mold could result from construction defect, inadequate maintenance from both property manager and / or occupant, poor HVAC systems etc.

# OIL & GAS FACILITY

Name of Organization: \_\_\_\_\_

Lasts Updated: \_\_\_\_\_

## SAMPLE ENVIRONMENTAL RISK PROFILE

Below is the start of a sample ERP for Oil & Gas Facility. A complete ERP can be added to provide a detailed profile: reference documents, website links, details on prior claims / incidents and the organization's response.

A complete ERP can be used to help risk and insurance managers better identify, manage, reduce and even eliminate the organization's exposures to environmental liability and the related costs.

EXPOSURE	IMPACT ON ORGANIZATION	RESPONSIBILITY	RISK MANAGEMENT TECHNIQUE	PRIOR INCIDENTS
<b>OPERATIONAL EXPOSURES:</b>				
<b>OWNED PREMISES EXPOSURES:</b>				
<b>TRANSPORTATION EXPOSURES:</b>				
<b>DISPOSAL EXPOSURES:</b>				