Hazardous Materials Offeror Site Security Plan

George H. Holliday, Holliday Environmental Services, Inc.

ABSTRACT

Department of Transportation, Research and Special Programs Administration (RSPA) (now, Pipeline and Hazardous Materials Safety Administration, PHMSA), on 25 March 2003 at 57 FR 14509–14521, promulgated "Hazardous Materials: Security Requirements for Offerors and Transporters of Hazardous Materials", which modified or added 49 CFR §§172. 704, 800, 802 and 804, as follows:

"RSPA has established new security requirements making use of ·two strategies for hazardous materials transported in commerce, Security Plan and Training.

Security Plan

The owner or operator must develop and implement a security plan if the owner or operator offers for transportation or transports the following types and quantities of hazardous materials:

A hazardous material in an amount that must be placarded in accordance with the Hazardous Materials Regulations;

- A hazardous material in a bulk packaging having a capacity ≥13,248 L (3,500 gallons) for liquids or gases; or >13.24 cubic meters (468 cubic feet) for solids; or
- A select agent or toxin regulated by the Centers for Disease Control and Prevention under 42 CFR Part 73".

Training

"Each Hazmat Employee working for a hazardous material transporter must be trained in Security, Environmental Protection, and Occupational Safety and Health Compliance."

Each person (individual, company, society, etc.) who transports or offers for transport hazardous materials above the specified amount is an "offeror". That offeror must prepare a Site Security Plan as specified in 49 CFR §172.802. Plan rule must be implemented by 25 September 2003.

It appears many companies and organizations misunderstood the rule when promulgated. The popular interpretation is oil and gas facilities from which oil or condensate are trucked, are not subject to the security plan rule. The author of this paper interprets the rule to require producers of oil and condensate having the product trucked from the lease is subject to the Security Plan rule. Thus, there is a need to review: the rule, how to comply and how to prepare a Security Plan. This paper aims to accomplish these objectives, with particular emphases on oil and gas field operations.

BACKGROUND

On 2 May 2002, at 67 FR 22028, the Research and Special Programs Administration (RSPA) published a notice of proposed rulemaking (NPRM) to improve security of hazardous materials transportation. The proposed rule, Summary (67 FR 22028), states "….(W)e [RSPA] propose to require shippers and carriers of certain highly hazardous materials to develop and implement security plans. We also propose to require hazardous materials shippers and carriers to assure that their employees training include a security component."

The proposed rule, in the Summary, inadvertently used "hazardous materials" and "highly hazardous materials" terminology interchangeably "Highly hazardous materials" is an Occupational Safety and Health Administration [OSHA] term of art, while "Hazardous Materials" is a RSPA term. This interchange of terminologies appears to have confused Federal Register readers. A review of the RSPA comments (http://dms.dot.gov, simple search, 12064) indicates no Exploration and Production, drilling or oil and gas Trade Association recognized the Security Plan rule affected Exploration and Production (E&P) operations or members.

RSPA promulgated the offeror Security Plan rule on 25 March 2003 at 68 FR 14510. The rule became effective 25 March 2003. The rule was amended 9 December 2005 (70 FR 73164) and 2 June 2006 (71 FR 32258). If a facility offers hazardous materials (49 CFR §§107.601–107.620) above the threshold amount (49 CFR §107.601(a) the operator of the facility is an "offeror". If the offeror employs a person full time, part time or on a temporary basis, and that person, in the course of his employment, directly affects hazardous materials transportation safety, is a "Hazmat Employee" (49 CFR §171.8). Oil or gas field pumpers, lease operators, etc. do not directly affect transportation *safety*, since the pumper, lease operator, etc. seldom, if ever, is present at the time the trucker loads the tank truck. Accordingly, pumpers, lease operators, etc. are not Hazmat Employees. Similarly, drilling personnel, typically, are not involved in hazardous materials transportation safety.

SECURITY PLAN RULE

The 25 March 2003 (68 FR 14510) final rule revised 49 CFR Part 172 by adding Security Plan requirements (§§172.800, 802 and 804) and Training requirements (§172.704).

Security Plans (§172 Subpart I)

A security Plan must be written and available to all employees and contractors on a "need to know" basis. A Security Plan is written to discuss and provide means to safeguard loading, handling and transporting of affected hazardous materials. An offeror or transporter of certain hazardous materials (as discussed below) must prepare and implement a security plan by 25 September 2003 or upon initial startup, which ever is later.

Security Plan Applicability.

The Security plan (49 CFR §172.800(b)) is required if you transport or offer for transport:

(1) A highway route-controlled quantity of a Class 7 (radioactive) material, as defined in §173.403 of this subchapter, in a motor vehicle, rail car, or freight container;
(2) More than 25 Kg (55 pounds) of a Division 1.1, 1.2, or 1.3 (explosive) material in a motor vehicle, rail car, or freight container;
(3) More than one L (1.06 qt) per package of a material poisonous by inhalation, as defined in §171.8 of this subchapter, that meets the criteria for Hazard Zone A, as specified in §173.116(a) or §173.133(a);
(4) A shipment of a quantity of hazardous materials in a bulk packaging having a capacity ≥13,248 L (3,500 gallons) for liquids or gases or >13.24 cubic meters (468 cubic feet) for solids;

(5) A shipment in other than a bulk packaging of 2,268 kg (5,000 pounds) gross weight or more of one class of hazardous materials for which placarding of a vehicle, rail car, or freight container is required for that class under the provisions of subpart F of Part 172;
(6) A select agent or toxin regulated by the Centers for Disease Control and Prevention under 42 CFR part 73 or, by April 1, 2007, a select agent or toxin regulated by the United States Department of Agriculture under 9 CFR part 121; or
(7) A quantity of hazardous material that requires placarding under the provisions of subpart F (placarding) part172.

Security Plan Minimum Elements.

At a minimum a Security Plan must include:

- Personnel security – Confirmation of job applicants who may gain access to affected hazardous materials. — Review of previous job performance;
- Unauthorized access prevention — Limiting access to affected hazardous materials by unauthorized persons, and;
- If a transporter, the plan must include en route security — Highway routing, and intermediate storage safety.

Security Plan Preparation (49 CFR §172.800)

RSPA recognized many offers need relatively simple security plans, because the danger is small (68 FR 14514). Accordingly, security plans will vary substantially from facility to facility. To facilitate preparing a security plan, RSPA provides a template at http://hazmat.dot.gov/riskmgt/rmsel/rmsel_security_template.pdf. This template should be considered as a suggested guide and not a mandated format.

The complexity of a facility security plan depends on the number of hazardous materials involved and the size of the facility. The following general procedure for Plan development provides reasonable guidance.

1. Make a Security Assessment of the facility. List:
    - Hazardous materials offered for transport
    - Hazardous materials which could be used by terrorists
    - How secure are the hazardous materials
2 Review of new employment applicants
    - Encourage current employees to report suspicious activities at or near the facility.
    - Implement periodic security inspections.
    - Include security discussions during routine safety meeting.
3 Train appropriate new employees in plan details within 90 day of employment.
4 Physical Facility Modifications
    - Lock lease gates
    - Lock tank unloading line valves
    - Seal tank bleed line valves
    - Bull plug drain line valves
5 Review /Security Plan periodically and revise plan as required

Training Requirements (§172.704)

No later than 24 March 2006 each Hazmat Employee must receive training regarding:

1. How to recognize and respond to security threats
2. Security objectives
3. Specific security procedures
4. Action to be undertaken in the event of a security breach
5. Organizational security structure
6. Occupational Safety and Health Administration Hazard Communication (HAZCOM) standard (29 CFR §1910.120 or §1910.1200); Permit Required Confined Spaces (29 CFR §1910.146); and Spill Prevention, Control and Countermeasure Plan (40 CFR part 112), if appropriate for the facility.

As stated above pumpers, lease operators, etc. do not "directly affect hazardous materials transportation safety". Accordingly, training provisions (§172.704) are not mandatory for E&P operators; however, having a Security Plan without training employees would be wasteful. Accordingly, training is recommended, for oil and gas field employees and contractors, who are involved in producing hazardous materials.

DISCUSSION

The need for Security Planning is heightened by recent terrorist attacks within the U.S. The Department of Transportation, in an effort to make hazardous material transportation safer, promulgated Security Plan rule 49 CFR Part 172 Subpart I. The rule imposes security plan requirements on offerors and transporters of hazardous materials. The transportation industry and chemical shippers commented on the proposed rule. However, most of the offerors were caught unawares and have not complied with the Security Plan rule. In fact, a number of major and independent oil and gas upstream operators claim they are exempt from the rule. The author's reading of the rule, as expressed in this paper, do not support that interpretation

RSPA promulgated a flexible rule allowing transporters and offerors great latitude in preparing the Security Plan to fit the complexity or lack of complexity of the facility. A simple facility such as an oil and gas lease from which crude oil/condensate are trucked needs a short, concise plan. A model plan for an oil and gas lease is provided as Attachment 1. On the other hand, a chemical plant would require an elaborate security plan, because they have many and varied hazardous materials streams leaving the facility.

Regardless of the complexity of the plan, there is a need to train operating personnel in the purpose, content and use of the plan. In the case of oil and gas producing operations, training should include not only company employees but should include contract pumpers, lease operators, etc. For the plan to remain useful, the plan must be updated periodically.

Drilling contractors may be subject to the Security Plan rule, if a drilling rig diesel oil tank, containing ≥3500 gallons of diesel fuel, is offered for transport to the next location. However this situation is rare.

While the plan offers enhanced security for field operations, the plan makes daily operations more difficult. For example, a large ranch may have several leases operated by different companies. The landowner typical desires access to the property. The landowners, most likely, have cattle or live stock operations, which require cattle trucking companies to have access to the property. Several oil/condensate trucking companies, drilling crews or well pulling contractors need access to the unattended property at all hours of the day or night. This results a multitude of locks at property line and/or intermediate gates. Also, since oil/condensate is trucked day and night from unattended tank batteries, the tank-truck drivers must have keys to all the gates and tank batteries visited each day and night.

The Security Plan can be made viable, but when this plan is added to the Spill Prevention, Control, and Countermeasure Plan; the Hazard Communication Standard; Community Right to Know reporting; Hazardous Air Pollutant rule reporting; Underground Injection Control permit monitoring reporting; Permit Required Confined Entry Plan monitoring, reporting and recordkeeping, to name a few controls, the Production Foreman is hard pressed to monitor the wells he is there to supervise.

CONCLUSIONS

a. Many offerors missed the Security Plan proposed and/or final RSPA rule publication.
b. RSPA provides latitude in the security plan complexity.
c. The rule forces oil and gas operators to lock lease and intermediate gates; lock or seal sample, bleed and loading valves at leases from which oil or condensate are trucked day and night.
d. The requirement for locking unattended gates through which many differing people need access will present a major problem to oil and gas operators.

RECOMMENDATIONS

a. Each organization offering hazardous materials for transport in commerce is obligated to evaluate if a the Security Plan rule applies to their operations
b. Each organization required to comply with the Security Plan rule must prepare and implement the Plan immediately.
c. Each organization required to prepare a Plan must train it's Hazmat Employees

ATTACHMENT 1

Hazardous Material

Security Plan

ABC Oil Company
111 A Street
McAllen, Texas

713-222-1111

Prepared:
3 April 2003

Table of Contents

Introduction

Purpose

Security Review

Security Plan Review

Training Records

Security Plan

Introduction

The U.S. Transportation Security Administration reports terror groups could use hazardous materials as weapons. In response to this treat, the Department of Transportation, Research and Special Programs Administration (now, Pipeline and Hazardous Materials Safety Administration) promulgated "Safety Requirements for Offerors and Transporters of Hazardous Materials" (49 CFR part 172, Subpart I).

The ABC Oil Company operations include offering crude oil and/or condensate for truck transportation from numerous leases to a pump stations.

Purpose

This written security plan, developed in accordance with 49 CFR part 172, provides a means for improving hazardous materials security, training of employees and restricting access to the leases by unauthorized persons.

Security Review

ABC Oil Company Production Foreman inspected each producing lease on where crude oil or condensate is store. Also, the Foreman noted all tank batteries from which these liquids are shipped by truck or rail. The Foreman visited and noted all shipping valves, bleed valve, sample valves, and shipping valves not plugged, sealed or locked. Any of these valves not secured, were provided with appropriate secure closures. In addition, lease and intermediate gates were secured with locks.

Security Plan training was given to all employees and contactors on "as needed basis." New employee and contract pumpers will be trained within 90 day of employment. All appropriate employees will be retrained annually. The Production Foreman retains training records. In addition, all field personnel receive Hazard Communication (HAZCOM), and Spill Prevention, Control and Countermeasure Plan (SPCC) Training.

Security Plan Revisions

The Security Plan will be reviewed annually and revised as necessary.

Training Records

The Production Foreman maintains the Security Plan and records. The records are updated annually following employee training.