POLICY # 05-1

H-2 Gas Modules Under 1500 Square Feet

It is the purpose of this policy to take a proactive approach in dealing with small portable, H-2 occupancies, less than 1500 square feet aggregate.

INTRODUCTION/PURPOSE – Unique conditions and needs exist in the oil and gas industries. Due to conditions in the winter time the oil and gas industries use small portable structures to house their equipment that would normally be in the open air. By enclosing this equipment they have created small H-2 occupancies requiring them to have an approved fire suppression system and explosion venting. These locations are at secure sites with limited access and are normally unoccupied. With the remoteness and the security at these sites, proper set backs from other buildings and coupled with early gas detection and blowdown/shutdown procedures, dangerous conditions are mitigated. Compressor modules, dehydration modules, metering modules and heater/separator modules handling only liquefied natural gas and its byproducts and excluding any excessive amounts of class I or II liquids can be permitted without an approved fire suppression system. This policy is in effect until modified or canceled by written notice.

I) The solutions proposed herein will form the basis for approval of applications for modifications where required. Proposed designs outside of these guidelines will be reviewed on a case by case basis.

II) **IFC 903.2.4.1 –** An automatic sprinkler system shall be provided in all H occupancies.

Problem – If the scenario of a gas leak in a module with only the required automatic sprinkler system and smoke detection is viewed, the hazard will not be detected until a fire produces either enough smoke or heat to cause system activation. It is understood that activation of a sprinkler head is an “after the fact” occurrence.

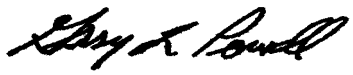
Resolution – By use of advanced safety system design features of the well site process versus the design limitations of the sprinkler system we will be taking a proactive approach by removing the hazard before there is a catastrophic event. Each well site must be in a secured area to keep the public out. H-2 facilities meeting the less than 1500 square foot requirement of this policy letter must have 30 foot separation from other H-2 occupancies. Other facilities on site will be kept 30 feet (wall to wall) from all H-2 facilities. Modules will have gas and flame detection. Each module will have a mechanical ventilation system running at 4 air exchanges per hour at normal conditions. At 20% LEL, low level alarm, the mechanical ventilation will be

increased to12 exchanges per hour. At 40% LEL, emergency shut down and blow down procedures will begin, stopping the flow of any gas to or from the facilities and removing all gas from the building and piping.

III) IFC 911.1 – Explosion controls shall be provided in all H occupancies.

Problem – Venting systems or panels are designed to relieve pressures at levels higher than rated internal wall panel systems that are normally used for Alaska Oil and Gas facilities.

Resolution - Examples of the effects of an internal gas pressure exceeding 1 psi have shown the wall panels in most instances will separate from the enclosure's structural steel thus relieving the internal pressure faster than a listed system/panel could.



Gary L. Powell
Alaska State Fire Marshal

Sept. 18, 2006
Date