

# Environmental Impact Assessment & Risk Assessment

Water Heater Manufacturer, Mexico

HRP Associates, Inc. was retained by a multi-site water heater manufacturing company to assist in the environmental engineering and health & safety compliance efforts in converting their manufacturing operations to a “green” facility by changing the chemical formulations of the foaming process to a product utilizing non-HCFC’s. Specifically, HRP was asked to secure Mexican air quality permits for a flammable VOC source, as well as to provide safety management planning according to both Mexican SEMARNET Risk Planning and US-OSHA Regulation 29 CFR 1910.119 Process Safety Management.

In association with the introduction of the new process, HRP and its subcontractors assisted the company in the electrical/instrumentation, mechanical, ventilation, fire protection, and structural upgrades to existing plant equipment and processes. HRP conducted this project to meet all requirements of the Mexican authorities including: local/state Fire Marshals, SEMARNET Environmental Regulations, NFPA and NEC electrical and safety codes. Tasks completed include the following:

## Environmental Impact Assessment (EIA)

In accordance with Mexico’s General Law of Ecological Equilibrium and Environmental Protection (LGEEPA), the facility was required to notify the environmental agency of the production modifications and expansions involving the flammable chemical substitution. An EIA was therefore prepared and approved prior to the initiation of the projected activity.

## Risk Assessment (RA)

A RA was necessary because operations involved the use/storage in Reportable Quantities (RQs) of a chemical listed in the First and Second Lists of Activities considered High-Risk (*Primero y Segundo Listados de Actividades Altamente Riesgosas*). The RA was submitted and approved prior to installation of the projected high-risk operation at each plant.

## Program for Prevention of Accidents (PPA)

Concurrent with the RA, each facility submitted a PPA to SEMARNET. The PPA was a comprehensive document that reflected the risk conditions at each site and the appropriate response actions that were to be taken during an emergency event.

## Single Environmental License (LAU)

Air emission sources under Federal jurisdiction were required to obtain a Single Environmental License (LAU by its Spanish initials). The License application was approved by the regional office of the Federal environmental agency SEMARMAT. Typical information required in the LAU application included: general information of the company, description and flow charts of manufacturing processes, air emissions data, stack configurations, site layouts, information on the generation of hazardous waste, information on water usage and generation of wastewater, etc.

## FIRM

HRP Associates, Inc.  
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## VALUE

\$230,000

- *HRP was retained to assist in the environmental engineering and health & safety compliance efforts in converting their chemical usage non ozone depleting or global warning*
- *HRP was asked to secure air quality permits for a flammable VOC source, as well as to provide safety management planning and engineering*
- *HRP conducted this project to meet all requirements of the Mexican authorities, while also incorporating safety goals and missions represented by Corporate protocols*