

**LIST OF ISSUES
PWS RCAC
FIRE PROTECTION REVIEW
7/13/00**

O.M. Bud Slye, PE of Loss Control Associates, Inc. (LCAI) and Fire Protection Consultant Tony Semenza conducted reviews of the fire protection systems at the VMT during December 1999, January and June of 2000. The current status of the recommendations for these reviews is as follows:

Underway and Effective

- **Fire Chief Responsibility for Fire System Maintenance** – Alyeska has assigned the VMT Fire Team the responsibility for management of water based fire protection systems. (Recommended in the Dec LCAI reports). VMT Fire Chief **Andy** Postishek is ably managing fire protection systems maintenance. Considerable progress is being made in correcting long-standing problems. An approach that is highly unusual for an industrial operation is the Fire Chief Top 5 program which is placing emphasis on critical issues in fire system performance, operating conditions and maintenance. An overall review should be held in the fall to gauge progress in this area however, RCAC and other oversight groups should express support to Alyeska for the progress on this item in a relatively short time span.
- **Storage Tank Fire Protection** - Crude tank spiders are being cleaned in up to 5 tanks and a protocol has been developed for cleaning the spiders. Follow-up to the final cleaning program and results of tank inspections is still required. Emphasis should be given during a fall review of the lessons learned from the summer tank cleaning projects, implementation of crude oil to foam line jumpers on the remaining tanks, a schedule for inspection and testing of spiders using the jump over lines and related issues. It is important to note that the tank and spider inspection and cleaning program has demonstrated an aggressive approach to the problem and development of new technologies for cleaning and inspection of tank spiders.
- **Fire Main Water Flow and Hydraulics** - **Alyeska** has conducted a 100 % flow test of the VMT fire system. Follow up tests were also conducted of sections of the fire main system. In the 7/10/00 letter to JPO Alyeska reports that programs have been initiated to flow test the entire system over a 5-year period to develop data on system performance. This program is an excellent approach to understanding the performance of the fire main system and a means to develop meaningful data for a hydraulic model of the fire main system. Follow up to the tests should be conducted in the fall by RCAC consultants to include a review of a completed hydraulic model applied to data obtained from the tests as a means to verify model reliability and

calibration. The hydraulic model is essential as a tool to provide evaluative assistance to the fire chief when considering fire main closures and changes in the performance of the fire water system.

- **Contingency Planning for Winter Tank Fires** – The RCAC Consultants feel that this concern has been fully addressed. Adequate procedures and safety measures are in place to maintain tanks in a safe operating mode and adequate means are provided for fire protection should the unlikely event of a fire occur in the tanks. During a fall review, RCAC consultants should review the plans to verify that the appropriate procedures and training are being maintained.

Progress Underway Requiring Further Information and Updating

- **VMT Fire Water System** – Recent leaks in the system have underscored the importance of continuing a project to line the larger fire water main systems to prevent corrosion of the fire water mains. A workable project has been developed but continuous implementation has not occurred since the project was identified in 1997 (See Alyeska Letter dated 7/10/00 to JPO). Implementation of the upgrades to the fire mains is likely to take over 5 years to complete. RCAC Consultants LCAI / Semenza endorse the VMT Fire Chiefs concerns that appropriate measures are taken to assure that fire main outages required for upgrading the pipe do not place VMT at risk should breaks or extensive repairs be required during main lining operations. A review of the progress of this project and an update of the lessons learned during the upgrades conducted this summer should be conducted in the fall.
- **Fire Fighter Training** - Plans have been made to train fire teams from VMT in offsite fire training sessions during the fall. Valdez Fire Department personnel will be included in the training. Additionally, joint drills in the City and at VMT should be conducted. A review of the progress of training efforts and should be conducted in the fall to assess the implementation of this valuable fire safety program.
- **Upgrade in Fire Protection for Vital Areas** – During the June 2000 RCAC consultants tour of VMT, preliminary discussions were held with operations, fire team and management personnel concerning potential upgrades to the protection systems in East and West Metering. This effort should be emphasized during a review during the fall to assure that progress is being made toward upgrading of the protection in these vital areas.
- **Fire Truck Purchase** – During the June 2000 review, RCAC consultants determined that specifications were being prepared for a new truck and details were close to being worked out for early procurement of a new vehicle.

This effort may have been delayed and during a fall review the progress being made towards purchase of a fire truck should be reviewed.

- **Protective Clothing for Fire Fighters** – This program was partially implemented during the June 2000 visit by RCAC consultants. An update of the program and a review of the effectiveness of the purchased equipment should be conducted during the fall.
- **Fire Fighting Foams** - During the June 2000 visit questions were raised concerning the effectiveness and appropriateness of fire fighting foams in use at VMT. Annual testing of foams should be continued to assure that foam quality is at the range required for reliability and effectiveness. Evaluation of annual testing results should be conducted during the fall.
- **East Metering Building** – During the June 2000 visit, the installation of a pressure regulating valve for the foam system for East Metering was discussed. Early installation of a pressure regulating valve was planned on an urgent basis. Evaluation of the new valve and demonstration of the valve operation should be conducted during the fall.