

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 40-3392/90001(DRSS)

Docket Nos. 40-3392

License No. SUB-526

Licensee: Allied Signal Corporation  
P.O. Box 430  
Metropolis, Illinois

Facility Name: Allied Signal Corporation

Inspection At: Allied Signal Metropolis Plant  
Metropolis, Illinois

Inspection Conducted: February 5-7, 1990

Inspector: *J. E. Foster*  
J. E. Foster

*2/20/90*  
Date

Approved By: *W. B. Snell for*  
William Snell, Chief  
Radiological Controls and  
Emergency Preparedness Section

*2/20/90*  
Date

Inspection Summary

Inspection on February 5-7, 1990 (Report No. 40-3392/90001(DRSS));

Areas Inspected: Routine unannounced inspection of the following areas of the Allied Signal Corporation's emergency preparedness program: fuel cycle emergency preparedness program (IP 88050). The inspection involved one NRC inspector.

Results: No violations, deficiencies or deviations were identified during this inspection. The Allied Signal Corporation emergency preparedness program was being adequately maintained and minor enhancements had been made to the program during 1989. The Emergency Preparedness program continues to have adequate management support.

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## DETAILS

### 1. Persons Contacted

#### Allied Signal Corporation, Metropolis, Illinois

- \*M. Kosmider, Plant Manager
- \*J. Honey, Manager, Regulatory Affairs
- \*R. Yates, Supervisor, Health Physics/Medical Services
- J. Ogle, Safety Supervisor
- \*H. Roberts, Supervisor, Health Physics

\*The above personnel attended the February 7, 1990 exit interview.

The inspector also contacted other members of the licensee's staff during the course of the inspection.

### 2. Fuel Cycle Emergency Preparedness Program (IP 88050)

#### a. Offsite Support Agencies

##### Coordination of Emergency Planning

Licensee personnel confirmed that the Massac County Hospital, Metropolis Police and Fire Departments were the offsite agencies most likely to be called upon to support response to an emergency at the Allied facility. The Chairman of the County Commission is the responsible County official under the Plan and the Illinois Chemical Safety Act. The contact point for emergencies is the Metropolis Police Department, due to their 24-hour communications capability.

Illinois Department of Nuclear Safety personnel had recently visited the Allied plant, toured the facilities, and investigated the feasibility of placing on-line monitoring equipment around the site. Considerations included the likelihood of detecting the very low-level radioactive emissions from the plant and the cost of installing, maintaining and monitoring the equipment. According to licensee personnel, no final determination had been made.

Discussion with management personnel indicated that additional letters of agreement with offsite agencies had been considered, but were determined to be unnecessary. This was largely due to the view that emergency response at the plant was essentially a plant responsibility involving chemical hazards best understood by trained plant personnel. Historically, the local ambulance is the sole off-site responding organization.

A verbal agreement continues to exist with the Metropolis Fire Department, that they would respond to the plant if requested. By letter of November 7, 1989, the licensee offered plant tours/orientation to fire department personnel.

A standing offer for training of hospital personnel has been made to the Massac Hospital. It was recommended that this offer be made via annual letter, so that the hospital will understand that the offer is current. Coordination of Cardio Pulmonary Resuscitation (CPR) classes for plant emergency response teams occurred late in 1989.

Based upon the above findings, this portion of the licensee's program was acceptable.

b. Emergency Plans, Procedures, Facilities, and Equipment

Emergency Plans and Procedures

Section 7.1 of the current plan provides for the review of initial and revised procedures by the plant Coordinator for Radiological Contingency Planning, Regulatory Affairs Manager, and Plant Manager before being incorporated into the Radiological Contingency Plan (Emergency Plan). Section 7.4 requires an annual review and updating of the plan and procedures.

In July, 1989, the licensee initiated review and revision of the emergency plan to meet the requirements of the revised Rule on Emergency Preparedness for Fuel Cycle Facilities and Other Radioactive Material Licensees, published in the Federal Register on April 7, 1989, with an effective date of April 7, 1990. This revised Rule affects portions of 10 CFR 30, 40, and 70, and specifies provisions to be contained in required Emergency Plans.

The revised Emergency Plan is now in final draft, and is being reviewed by the Plant Manager in preparation for submittal with the license renewal request to be submitted in the near future. Discussion with licensee personnel indicated that, as required by the new Rule, the new Emergency Plan would be submitted to State and local authorities (Chairman of County Commission, Illinois Department of Nuclear Safety, local hospital and fire department) for comment, and the comments would subsequently be sent to the NRC for consideration. Licensee personnel indicated that changes to the Plan included upgrading of various calculations, deletion of reference to portable air samplers and revision of the emergency classification scheme to include two classifications; Alert and Site Area Emergency. While the revised Rule would allow emergency exercises every two years, Allied Signal has determined that at the current commitment for an annual exercise will be continued.

The inspector discussed the procedure for review, modification and approval of changes to the licensee's Emergency Plan, and verified that plan modifications have been transmitted to the NRC within 30 days of approval. The previous plan revision, with an implementation date of February 1, 1988, had been sent to NRC Region III on January 21, 1988.

A procedure has been developed for notification of area residents of major plant emergencies. The procedure calls for the plant security officer or Chief officer to notify the on-duty security guard that an

emergency exists. Wind direction and severity of the emergency will be considered prior to alerting nearby residents. The security guard would then appoint an individual to assist him in notifying five residences and two rental trailers (trailers would require notification using a plant vehicle). Residents would be advised that they should go indoors and close all windows and doors. The procedure provides for notification of residents when the emergency has ended, and that follow-up visits would be made by plant personnel.

A routine urinalysis program is in effect, and provisions exist for accelerated sampling in case of accidental exposure. A whole-body counter is available onsite, but is seldom utilized, as urinalysis is a more sensitive detection method.

Based upon the above findings, this portion of the licensee's program was acceptable.

c. Emergency Kits, Communications, Rendezvous Facilities (Evacuation Facilities), and Onsite Medical Facilities

A system for partially pressurizing of the Southwest plant stairwell is under investigation. In case of a large building release of uranium hexafluoride ( $UF_6$ ), the system would be initiated, pulling clean air to pressurize the stairwell, minimizing leakage of  $UF_6$ . This could provide a "safe area" in case of a large building release. In addition, a modification to the stairwell wall is planned so that the building can be exited without having to reenter the building, as is now the case. Both of these actions would enhance the safe evacuation from the plant in case of a release. The Southwest stairwell air fans and ductwork are partially completed. Completion of the ductwork (scheduled for completion prior to May, 1990), plugging of obvious air leaks, testing of the completed system, proceduralization of the use of the system and training of plant personnel will be required before the system is fully operational. Licensee personnel indicated that additional stairwell systems would be considered if the completed system appears worthwhile.

Discussion with licensee personnel indicated that there had been no activations of the Emergency Plan during 1989. The licensee does maintain records of plant "incidents" and 109 incident reports for 1989 were reviewed, focusing on those involving releases of  $UF_6$ . In all incidents, the amount of  $UF_6$  released had been very minor, such as from fitting leaks and material inadvertently left in lines subsequently opened when disconnecting fittings. All reviewed incidents were well below the Alert level as specified in the Emergency Plan (only normal plant responses required).

The onsite facilities were toured and were as described in the Emergency Plan. All facilities appeared to be in an acceptable state of operational readiness. Telephones were tested for operability at each location and found to be functional. An emergency call list with a current date was observed at each telephone location.

Review of completed checklists for the period January 1989 through January 1990 indicated that all procedurally required periodic communications equipment checks, first aid supplies inventories, and inventories of emergency tools, Health Physics and office supplies reserved for use by emergency responders had been completed. Locations addressed in these checklists included: the Control Room, the onsite decontamination/first aid room, and various locations throughout the plant. Inventory checklists specified minimum quantities of items and required verification of the supplies' locations and completeness. It was noted that some of the cabinets containing emergency tools were painted the same color as their general surroundings, and it was recommended that they be painted more distinctively.

Quarterly radio tests were performed in accordance with memos issued to radio-assigned individuals. These quarterly memos requested that the individual contact the Guard Office via assigned radio and specify that the contact was a radio check. The memo would request that the communications check be performed by a specified date. A review of records indicated that the tests had been properly performed on a quarterly basis. Review of the overall radio communications system indicated that three communications channels were in use; one for routine in-plant use; one for emergency usage; and one for contact with the Metropolis Police Department (Security Department only). Routine checks of radio channel #2 had not been made on a routine basis, as the Guard Office radio did not have channel #2 capability. Discussion with licensee personnel indicated that this was an oversight, and a commitment was made to test channel #2 on a routine basis.

Documentation of monthly tests of the UF<sub>6</sub> facility Evacuation Alarm and Disaster Alarm was reviewed for the period June 1988 - January 1990. In conjunction with these tests, the Control Room positive pressure blower was tested. No problems were identified.

Inventory procedures included provisions for conducting inventories after use of the supplies or following discovery of an unsealed supply container, in addition to the periodic inventory requirement.

Records reviewed indicated that all problems identified during inventories and communications equipment checks had been corrected in a timely manner.

During a plant tour the inspector tested a small sample of eye wash fountains and acid removal showers and found them to be operational.

Onsite rendezvous facilities were examined and determined to be readily accessible, with operable communication equipment and emergency supplies as specified in the Emergency Plan. Various Scott Air Packs were also examined and determined to be ready for use.

A small medical dispensary is onsite, staffed by a plant nurse. Medical supplies and equipment in the dispensary appeared adequate for most minor in-plant personnel accidents, including acid burns.

Based upon the above findings, this portion of the licensee's program was acceptable.

#### Offsite Environmental Equipment

The Allied facility has six air samplers on site, oriented to sample in the prevailing wind and between the closest offsite residences. Offsite air sampling stations are located at the nearest resident and the airport. The licensee also has thermoluminescent dosimeters (TLDs) mounted on the site fence line, supplemented by TLD's placed by the Illinois Department of Nuclear Safety.

Based upon the above findings, this portion of the licensee's program was acceptable.

#### d. Tests and Drills

##### Implementation of Tests and Conduct of Drills

Records of quarterly evacuation drills were reviewed and found adequate.

The inspector reviewed documentation pertaining to the November 7, 1989 Emergency Exercise. This exercise was not observed/evaluated by the NRC.

The exercise scenario involved a release of approximately 400 pounds of uranium hexafluoride (UF<sub>6</sub>) in the plant and a total of six simulated casualties. An attempt was made to utilize a newly purchased smoke generator for added realism, but it was not capable of generating sufficient smoke. "Drill instructions" were reviewed and appeared to be adequate. The (scenario) release occurred at approximately 10:55 hours, and the "all-clear" notification was made at approximately 11:55 hours. Documentation for the exercise and subsequent critique was well detailed and complete. Eighteen resultant critique items were categorized as pertaining to communications, procedures, training or equipment.

Documentation for the exercise included the following areas: Health Physics, Maintenance Personnel Accounting, Laboratory Personnel Accounting, First Aid Officer, Administrative Personnel Accounting, Communications Officer, Storehouse Personnel Accounting, Plant Security Personnel Accounting, Control Room Officer, Chief Control Officer, Emergency Response Officer and Chief Officer. Corrective actions had already been assigned and completed for the majority of the items identified by the exercise critique.

Based upon the above findings, this portion of the licensee's program was acceptable.

#### e. Fire Protection

Fire protection was extensively reviewed in NRC Inspection Report No. 40-3392/89001. Open Items 19 - 31 resulted from this review,

dealing with various aspects of fire protection. The majority of these items have been closed in a subsequent NRC inspection. Open Items 20, 22, 28 and 29 remain to be closed. During the course of this inspection, the inspector checked a number of fire extinguishers and found current inspection stickers and acceptable extinguisher pressures. The equipment appeared to be in an acceptable state of operational readiness.

Discussion with licensee personnel indicated that the four shift maintenance groups comprise the plant fire brigades. These personnel are given quarterly training in various plant emergency procedures. During normal working hours (except Thursdays, per current plant schedule) two fire brigades would be available, and one brigade would be available on the night shift.

Based upon the above findings, this portion of the licensee's program was acceptable.

3. Exit Interview (IP 30703)

On February 7, 1990, the inspector met with those licensee representatives identified in Section 1 to present the preliminary inspection findings. The inspector provided his evaluation that the Allied Signal Corp. emergency preparedness program was being adequately maintained and that minor enhancements had been made to the program during 1989.

The licensee indicated that none of the matters discussed during the exit interview were proprietary.