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THE ROLE OF THE OFFICE OF GENERAL SERVICES

AND ITS CONSULTANT, VERSAR INC.

IN THE DECONTAMINATION OF THE BINGHAMTON STATE OFFICE BUILDING

The Office of General Services is responsible to the Governor for the development and administration of operations and activities required to support State agencies.

In this regard, OGS is responsible for the overall management of major office building facilities throughout the State, including Binghamton, New York.

The Office of General Services also provides architectural/engineering and construction management services through its Design and Construction Group in regard to State buildings and ancillary facilities. Since the February 1981 fire at the Binghamton State Office Building, the Design and Construction Group has been primarily responsible for the administration of the decontamination project and has been responsible for the oversight of the activities of Versar Inc., the State's retained consultant for this project.

The involvement of the Design and Construction Group began with an emergency response on February 5, 1981 as a result of the fire and ensuing power failure which created a construction type emergency condition. At that time, measures were taken to furnish temporary power to the building to replace the destroyed electrical distribution system and also to commence preliminary cleanup operations.

Shortly after the February 5 incident, the Office of General Services identified the need for a personal representative of the agency's Commissioner and Executive Deputy Commissioner to manage ongoing aspects of the project related to intergovernmental coordination, general administration, and media management for the project. A new position of Executive Coordinator was established and was filled in June 1981. The incumbent of this position is based in Albany but spends at least one day a week in Binghamton to ensure that the concerns of the local levels of government as well as those of all interested groups are addressed. Additionally, the Executive Coordinator ensures that the Commissioner and Executive Deputy Commissioner are fully aware of all ongoing aspects of the project, especially those matters which may require their personal attention.

Since that time, the Design and Construction Group has been assigned responsibility for four areas of the building's rehabilitation; namely, retention of Versar Inc. as the State's consultant, the coordination, for review and approval, of various plans and research developed by Versar; the direction of field operations on the site to be certain that plans and procedures developed are followed, along with appropriate contract supervision; and the issuance of contracts implementing various plans and procedures developed by the consultant and approved by reviewing agencies having jurisdiction. The primary State agencies involved are the Departments of Environmental Conservation, Health, and Labor, along with the Office of General Services as the lead agency. The agencies identified

here have been provided copies of various plans for review in accordance with the scope of their jurisdiction so that a high level of credibility is maintained, while at the same time, maintaining a practical level of expected performance for site operations.

After having been retained by the State, Versar Inc. embarked upon several major areas of planning and research to develop proper direction for the cleanup of the State Office Building, including the development of specific plans for health and safety, building cleaning, solid waste disposal, air pollution control, water treatment, building security, and research in the area of chemical toxicity.

Because of the nature of the contaminants inside the State Office Building, Versar developed a comprehensive Health and Safety Plan to protect both the workers who would be entering the building and the residents of the community. The elements of this plan include medical surveillance, protective equipment, exposure surveillance or industrial hygiene, air pollution control, and enforcement components. Critical sub-parts of the general programs are the respirator program required by the Occupational Safety and Health Administration and the emergency response program. The details of the Health and Safety Program are presented in two documents: A general Health and Safety Plan which presents the broad outlines of the program emphasizing organization, implementation, justification, and program elements, and, as a second document, the Health and Safety Standard Operating Procedures, which relate, in a detailed manner, the operation of the various elements of the program.

As plans were developed, they were circulated for review and comment by the reviewing agencies previously identified and were not finalized until the concurrence of all parties had been achieved. Plans in final form were then shared with the local levels of government for their information, and presented publicly at open meetings of the Intergovernmental Coordination Group consisting of the State agencies previously described and representatives of Broome County government and the City of Binghamton government. Concurrently, the plans were made available to the public by placement in the reference section of the public libraries in the area.

The Department of Environmental Conservation has provided its expertise concerning environmental management, primarily in the areas of the discharge of air and water, and the management of solid waste generated by the cleanup process. The New York State Department of Labor and the National Institute of Occupational Safety and Health have participated in the development of our workers' safety and health program.

Three separate contracts have been issued to implement the various areas that have been developed and ultimately approved:

1. Air Pollution Control Systems Contract - Provided for the purchase and installation of air pollution control equipment on the roof, including fans, chemical and particulate filters and necessary duct work. Material was placed on the roof by helicopter to minimize contact with the building. Originally this equipment was operated in a recirculating mode until test data proving the

effectiveness of the systems was available. At that time, the equipment was reconfigured to exhaust to the atmosphere as originally intended.

2. Entry Module Contract - This facility was provided through the purchase of a partially outfitted mobile structure which was then expanded and modified to include temporary entry facilities and locker areas, rest rooms, and security offices so that complete control could be maintained over the workmen and other personnel authorized to enter the building for various reasons. All routine entry and exit from the building is through this facility which is located on the basement level, adjacent to the loading dock.
3. Preliminary Cleanup Contract - This contract is considered an extension of the operations which were started on an emergency basis in February and March of 1981. However, procedures have been modified to ensure a thorough, safe, and structured approach to this activity. This contract is not intended to produce a building ready for occupancy, but rather is intended to accomplish removal of soot, thereby reducing significantly the overall level of toxicity. This operation will include high efficiency vacuum cleaning, wiping and washing of all exposed surfaces, and many of the readily accessible hidden areas in the building. Files, records, personal effects and furniture will be removed and most of the records and personal effects will be destroyed. Furniture will be wiped down and stored in the sub-basement.

The Design and Construction Group also maintains direct control over the entire building for contract operations and for routine building operation and maintenance functions. The Director of field operations is the senior officer on the site and supervises a staff of nine inspectors to oversee both contractor work and the execution of necessary preliminary functions. Employees of the contractor, identified in No. 3 above, are inventorying materials and equipment within the building and collecting soot samples where untouched grossly contaminated areas can be found.

At the present time, we are awaiting a decision from the Department of Environmental Conservation on the appropriate disposal of records and materials described above.

Under the direction of the Design and Construction Group, the Office of General Services has authorized Versar Inc., its consultant, to undertake a variety of ongoing activities related to the site, the program and the overall management of ongoing activities, as follows:

A. PROGRAM ORGANIZATION

The Program Coordinator, a Versar employee, manages the Health and Safety Program. As a part of his staff, a Certified Industrial Hygienist manages the

Exposure Surveillance Program while an Occupational Physician is responsible for the Medical Surveillance Program. In addition to their specific Program responsibilities, the Industrial Hygienist and the Occupational Physician act as technical consultants to the Health and Safety Officer. All on-site safety activities are supervised by the Safety Officer.

Presently, the Safety Office is staffed on-site with 1 full-time Safety Officer, 1 combination Safety Officer and Site Engineer, 3 Safety Technicians, 1 Respirator Technician, 2 full-time and 11 part-time Security personnel. All of the part-time personnel are off-duty policemen from the Binghamton City Police Department.

B. SECURITY

The Health and Safety Office is responsible for 24-hour security of the Building and the entry/exit facility. Two full-time security guards work during regular working hours. They primarily regulate the movement of authorized personnel in and out of the Building and issue proper safety clothing and gear. Off-duty policemen maintain security during non-working hours. A close working relationship with the Police Department ensures that all security emergencies can be dealt with in a prompt, efficient and safe manner.

C. CONTAMINANT CONTROL

Personnel exiting through the entry-exit facility or air backflowing from inside to outside through the facility could cause the movement of contaminants from the Building. To control air flow, an air pollution control system has been installed on top of the Building which maintains negative pressure inside the Building. As a result, air is constrained to move from outside the entry facility to inside the Building. In the event that the APC system shuts down, special alarms alert in-Building personnel and a special door closes adjacent to the entry-exit facility to block movement of contaminants through the facility to the outside. To ensure that workers do not inadvertently carry contaminants from the Building they must remove all protective gear and clothing inside the Building and shower out prior to exiting. A specially designed personnel trailer facility containing lockers, showers and special clothes washers and dryers has been built and connected to the Building to facilitate the movement of people in and out of the Building. Daily smoke tests ensure that air flow in the trailer facility is always directed into the Building.

D. EMERGENCY RESPONSE

In the event of a fire, medical emergency or security emergency inside the Building, complete emergency response plans have been implemented.

E. SUPPORT BY COMMUNITY RESOURCES

The ultimate success of any project of this scope and complexity depends upon the close cooperation of many individuals and groups. Included in this category are the community resources of Binghamton City and Broome County. All emergency personnel in the community including the Fire Department, County Health Department and the Police Department have worked closely with the Safety Officer to ensure that the proper response will be made during any emergency.

Medical examinations are being carried out by Our Lady of Lourdes Hospital located in Binghamton.

F. CONTROL OF WATER DISCHARGED FROM THE BINGHAMTON STATE OFFICE BUILDING

Temporary storage tanks have been installed in the sub-basement of the Building to store all of the water generated during the cleanup of the Building, including water used to clean the building, water from the clothes washers and showers in the personnel entry facility, and water generated by condensation on cooling coils in the air conditioning system. Water in the storage tanks is treated by filtering through sand and activated carbon and is not released until chemical analysis of the treated water has demonstrated that it contains less than one microgram of PCBs per liter. Spent carbon from the treatment system is being stored in drums for eventual disposal in a landfill approved for disposal of high level PCB wastes.

G. CONTROL OF AIR MOVEMENTS THROUGH THE BINGHAMTON STATE OFFICE BUILDING

A number of modifications of the Binghamton State Office Building have been made to control the flow through and out of the Building. The purpose of achieving control of the air flow is to assure that the air flow through the personnel entry trailer and through the disposal exit will be into the building, thereby preventing contamination of the personnel dressing facilities and the areas adjacent to the Building. It was also required to prevent the dispersion of toxic materials into the community due to movement of dusty contaminated air out of the building at ventilation louvers, ventilating ducts, and other normal air interchange points.

Building modifications included sealing all points of possible air leaks through the exterior of the Building, constructing personnel entry facilities with fan forced air flow through the entry areas and into the Building, construction of an air lock to be used to remove contaminated material from the sub-basement of the Building, and installation of two 2500 cfm exhaust fans on the roof connected to the ventilating ducts leading to the men's and women's restrooms on each floor. The exhaust air from the roof mounted fans is pulled through a series of filters before being released. These filters are similar to those commonly used to treat the air exhausted by hoods in chemical and biological laboratories: the air is pulled through particulate filters which are 99% effective in removing particles having a diameter of 0.3 micrometers, and then through two activated carbon filters, each of which removes 99% plus of the volatile organic compounds from the air. The performance of the air pollution control systems has been demonstrated through a comprehensive series of tests performed prior to using the exhaust fans to remove air from the Building, and the performance is continuing to be monitored by periodic tests.

In addition to the testing of the Air Pollution Control System, a number of other air samples have been taken to determine the concentration of PCBs in ambient air in Binghamton and to determine the concentration of PCBs in the air inside the Building as a function of time after the exhaust fans were turned on.

H. PLANNING FOR SOLID WASTE DISPOSAL FROM THE BINGHAMTON STATE OFFICE BUILDING

The loose paper and desk top items in the Building have been removed and placed in 55-gallon steel drums for eventual disposal in a land fill approved for disposal of PCBs. Typewriters and other office equipment have been stored in a locked storage area of the basement for possible decontamination. The rest of the Building and its furnishings, including furniture, floors, ceiling spaces, etc., is being washed with detergent and water. The contaminated cleaning rags are being stored for eventual disposal as PCBs. A preliminary risk assessment of the consequences of disposing of precleaned material as non-hazardous industrial waste has been prepared and is being reviewed by the New York State Department of Environmental Conservation.

A major study has been performed of the comparative cost of decontamination of the Building by cleaning followed by testing to verify cleanliness vs. disposal of most of the removable material followed by reconstruction of the building. The cleaning option would be less expensive provided that a criteria of cleanliness is established that is obtainable and that does not result in prohibitively high analytical costs.

I. DISPOSAL OF CONTAMINATED DOCUMENTS IN THE BINGHAMTON STATE OFFICE BUILDING

The New York State Department of Health has advised that it is not feasible to attempt to clean the documents that were in the Building to the point where they can be guaranteed to be safe to handle. Various alternatives have been considered for identifying important documents without having a large number of people entering and working in the Building. The recommendation has been made to destroy and bury the paper records while attempting to locate, segregate, and save a limited number of specific items involved in litigation.

J. COLLECTION OF SOOT SAMPLES FROM THE BINGHAMTON STATE OFFICE BUILDING

An extensive effort has been made to collect soot from horizontal surfaces in office areas where the soot would not be contaminated by heavy dust deposits existing before the fire. Several hundred samples have been collected from measured areas and have been given to the New York State Department of Health for use in toxicity testing and development of analytical methods.

K. AIR SAMPLING IN THE GARAGE OF THE BINGHAMTON GOVERNMENT COMPLEX

Versar New York has monitored the concentration of PCBs in the air in the publicly used County garage adjacent to the contaminated areas of the Binghamton State Office Building. This sampling and analysis activity was performed for the Broome County Department of Health under the sponsorship of OGS.

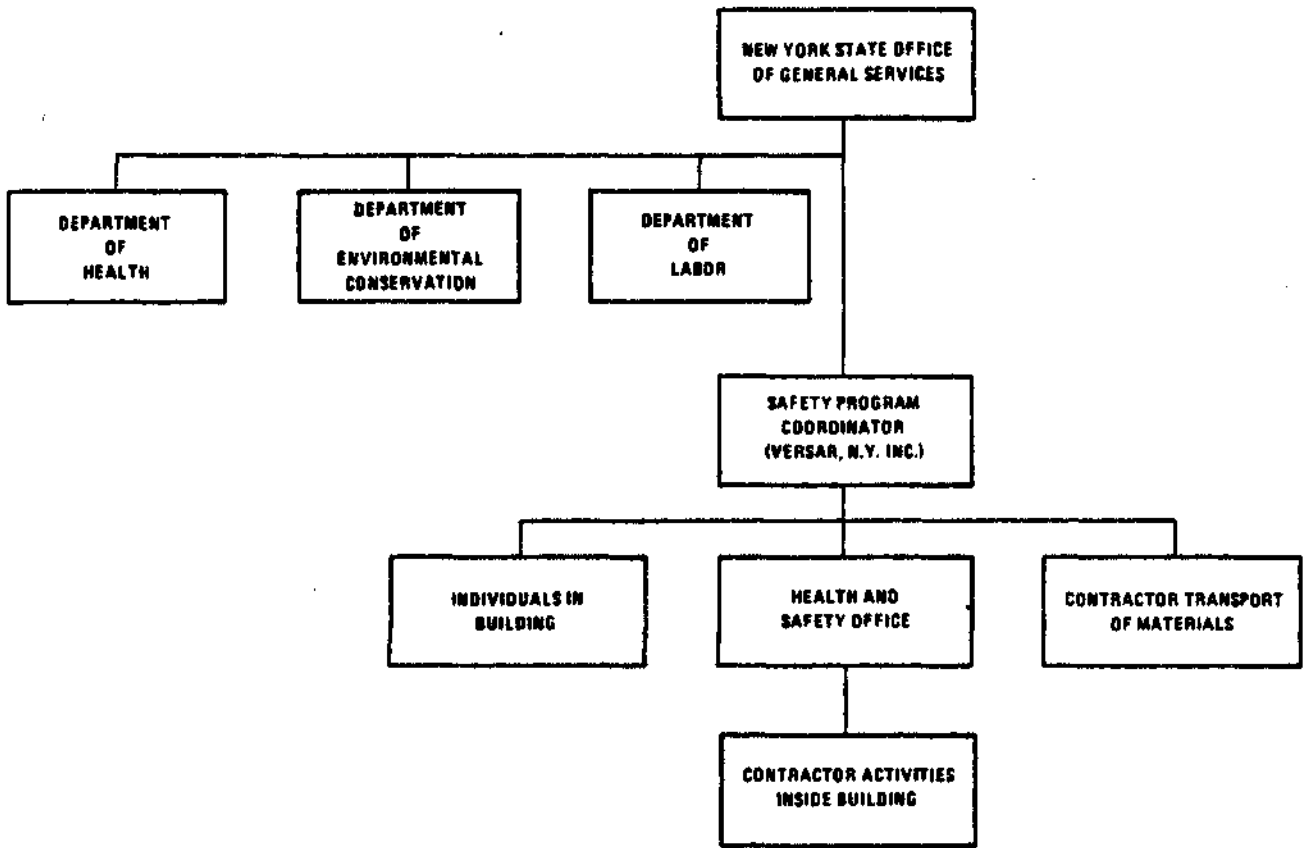


FIGURE 1 HEALTH AND SAFETY PROGRAM ORGANIZATION

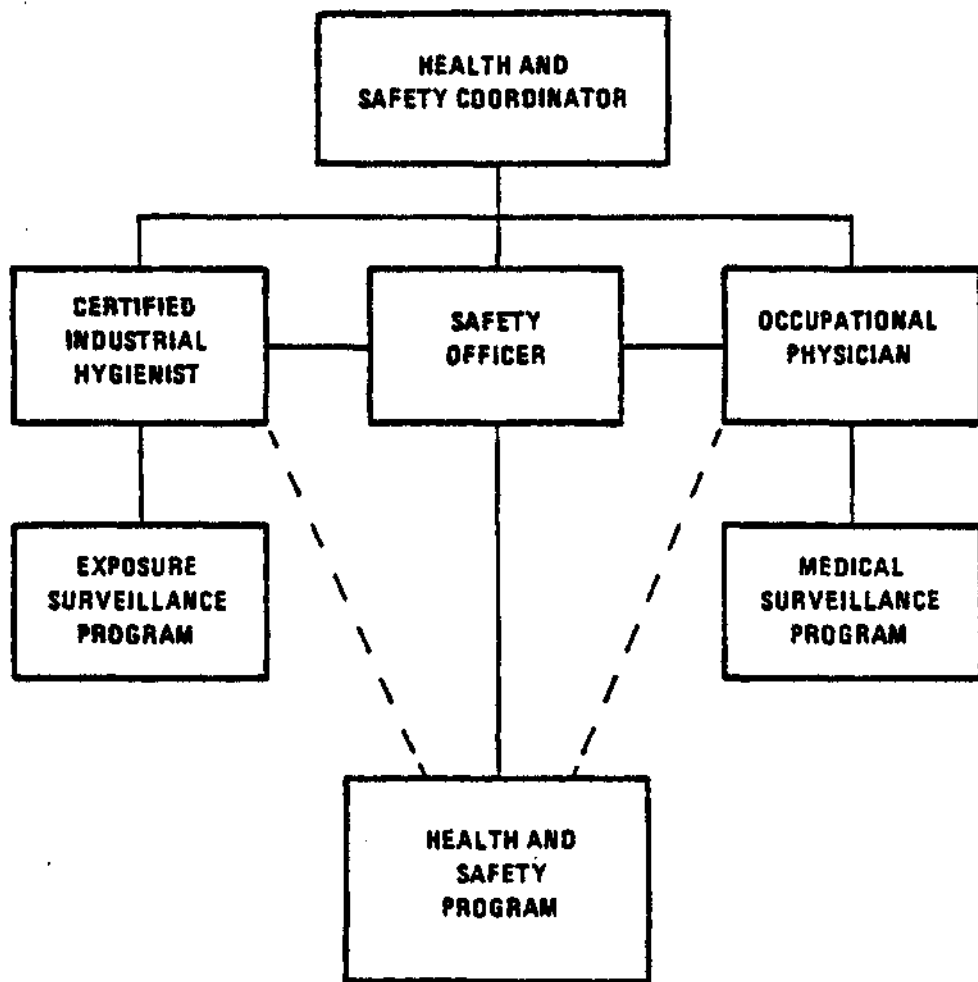


FIGURE 2 HEALTH AND SAFETY OFFICE ORGANIZATION