

4 June 1999

MEMORANDUM FOR THE RECORD

SUBJECT: Laboratory Audit - O'Brien & Gere, 2-3 June 1999

FROM: Brian K. Murphy, CSP  
Environmental Officer  
Camp Stanley Storage Activity

1. A laboratory audit was conducted at O'Brien and Gere (OBG) in Syracuse, New York on 2-3 June 1999. The audit was conducted by representatives from Parsons Engineering Science, Incorporated, Air Force Center for Environmental Excellence (AFCEE) and U.S. Army, Camp Stanley Storage Activity's (CSSA) Environmental Officer. Parsons is considered the prime contractor by AFCEE. AFCEE is the service center chosen by CSSA to assist the facility in its environmental restoration program. The audit consisted of reviewing the labs standard operating procedures (SOPs), sample management from the time one is received until a final report of analysis, occupational safety and health programs and plans, and lab personnel interviews. The laboratory from a technical perspective is in excellent condition, only minor modification to SOPs and documentation procedures will be required prior to performance of work. However, there are several occupational safety and health issues that will directly impact CSSA sample processes and could potentially impact the labs ability to continue to perform analytical activities. Should there be an outside inspection by another regulatory body such as OSHA or EPA there would be several areas of concern, violations, and potential fines and penalties.

2. Below are the findings as documented by me during the two-day audit process. However, it should be stated up front that the original intention of the audit was their ability to perform under a contract from Parsons for processing samples and providing defensible analytical results. The intention was not to perform a safety audit of the facility in general. There are very limited safety issues associated with the Parsons audit, such as, basic programmatic activities - safety meetings, personal protective equipment, fire drills, eyewash stations, showers, portable fire extinguishers, signage, flammable liquids storage, and emergency lighting.

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#### **Corporate Safety Program**

In May 1995 there was a written "Employee Safety Program" generated by OBG. There have been no updates to the document since then. A copy is attached for reference. The document fails to provide for current day occupational safety and health issues and standards. The document requires periodic review as a part of program management. The document discusses initial (orientation) and quarterly training requirements. However, no quarterly training is conducted or documented.

There have been no annual safety audits either internal or external. It is unknown when the last audit occurred, since no documentation was available.

The program needs management's support, attention, and endorsement to promote a much needed occupational safety and health program.

#### **Hazard Communications Standard**

There is no written hazard communications program. There are materials safety data sheets in the front office area of the lab for personnel to review. No update training is provided. (29CFR1910.1200)

#### **Laboratory Safety Program**

There is no laboratory safety program. There is a definite need for a laboratory specific program. The following deficiencies were noted in the following program areas:

There was no Chemical Hygiene Plan.

There was a lack eye protection worn throughout the lab.

There was very few persons wearing hand/glove protection in the lab.

Some personnel wear respiratory protection. There is no formal program in place that documents the program. They were unaware of the standards' changes last year.

There is no formal hearing protection program in place. There are sounds in the lab that exceeds 85 decibels.

Lab Hoods require periodic testing, at least annually, and a check sheet or signature sheet posted on the hood. Also, there should be a more rapid response to corrective action for hoods that do not meet standards.

There are numerous compressed gas cylinders for various pieces of equipment. A compressed gas cylinder management plan or SOP should be developed for guidance on handling,

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use, and storage of the cylinders.

There are eyewash and shower stations located throughout the lab. There is no weekly testing, check sheet or signature sheet posted adjacent to the appliance, labeling/signs identifying where they are located in the rooms.

Limited training has been provided to lab technicians/analysts for their jobs, not for safety or occupational health.

Periodic reviews of SOPs, plans, policies, etc. should be conducted.

#### **Emergency Response/Spill Plan**

There is no written program that outlines and policy or procedure in the event of a spill or release from chemicals being used or samples being analyzed.

Spill kits and supplies were not located in the lab area. They were reportedly in a storage area totally away from the lab.

When a emergency response plan is developed periodic exercises should be conducted to determine if the documentation is adequate or if changes need to be made to correct any deficiencies.

Training should be provided to emergency response and lab personnel.

Waste disposal procedures need to developed for spilled materials.

Periodic reviews of the plan are necessary to ensure adequate occupational safety and health and environmental measures are in place.

#### **Hazardous Waste Management**

This is an area of major concern due to the fines and violations that can be brought by Federal or State inspectors should they visit the site before corrective action of all issues are addressed. Any deficiencies noted below are from Federal regulations. I am not familiar with State requirements.

There is a hazardous waste SOP. However, it should be updated or reviewed for accuracy.

The storage area is considered a less than 90-day site. No permit is desired nor required.

The storage area is in desperate need of order. There is a need for general housekeeping of the area.

Shelves used for storage of hazardous waste should be replaced. Materials can easily be knocked off of the shelves and should materials leak there is no containment to prevent contamination.

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The storage area was unlocked/uncontrolled at all times while we were present.

All the drums were not labeled or when they had labels the information was not completed, such as accumulation start date, it was not on some drums that contained materials.

There was no adequate aisle space provided in the storage area.

OBG needs to determine the compatibility of materials being stored in the room and/or provide adequate separation.

There were several open containers in the storage area. There were open head 55-gallon drums without the locking ring on the lid. No containers for liquids were found open, however tightness of bungs was not checked.

There was no up-to-date inventory of the hazardous waste materials in the room or materials by drum. An inventory of the contents in each drum/container should be affixed to the drum to ensure proper disposal when the container is full.

There were no clearly identified satellite accumulation points in the lab. All materials were taken from the labs and placed in drums in the less than 90-day storage area. However, materials were generated in the labs in one-gallon glass jars and kept there until they were full and then they were taken to the storage area and then transferred into 55-gallon drums. These materials consisted of acids mostly.

Copies of Federal and State environmental regulations should be readily available for management and personnel review.

The ventilating/evaporating of sample solvents and freons prior to disposal should not be conducted. When samples have finished their processes they should be closed and contained to prevent unnecessary releases from occurring.

No formal training documentation was observed or reported by lab personnel.

#### Fire protection

There were no sprinkler systems in each of the labs. However, there was a system in the hallway for what that's worth.

Fire drills are conducted monthly. These are conducted due to a childcare facility located in an adjacent wing of the OBG complex.

There is no written fire drill plan. There are no signs posted depicting emergency escape routes for building occupants/visitors.

The Halon 1301 fire suppression system in HW storage

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area has been expended four times in last year due to malfunctions.

There are Halon 1211 portable fire extinguishers located throughout the labs. They are tested annually. No employee training has been given on the proper use of the extinguishers.

There are several areas in the lab where materials in paths of egress (boxes, coolers, trash cans).

#### **Electrical**

OBG should verify if outlets adjacent to water sources are protected by GFCIs

As a best management practice, OBG should consider placement of GFCIs near work areas where chemicals and other liquids are being used or dispensed.

#### **Emergency First Aid**

There is no written program for handling first aid injuries. There are three emergency medical technicians in the building that the Lab Director can call upon, but there are no formal procedures for this to occur or what actions they can and cannot perform.

Personnel should be trained on the aspects of the emergency first aid program.

Periodic reviews of the program should be conducted to ensure the plan meets the current needs of the employees and management's requirements.

Bloodborne Pathogens should be considered for laboratory personnel training and a program developed for any bodily fluids should an employee become injured.

#### **Syringes**

OBG should consider the liability associated with placing unbroken syringes/sharps in the company trash/dumpsters. The needle portion of the syringe should be removed to prevent an accidental injection from occurring.

#### **Waste Minimization/Pollution Prevention**

OBG should review its practices to determine where the company can save money and the environment by conducting a waste minimization and pollution prevention assessment.

3. Should there be any questions or comments please contact the undersigned at (210) 698-5208.

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**Corporate Safety Program**

- Written in 95
- Needs periodic review
- Need lab specific program
- Lack of compliance with written plan (periodic training)

**Hazard Communications Standard  
29CFR1910.1200**

**Laboratory Safety Program-**

- ✓ Chemical Hygiene Plan  
29CFR1910.1450 *lab coat*
- ✓ Eye protection 29CFR1910.133
- ✓ Hand/glove protection 29CFR1910.138
- Respiratory protection 29CFR1910.134
- Hearing Protection 29CFR1910.95
- Lab Hoods (periodic testing and check sheet) Corrective action for hoods that do not meet standards
- Compressed gas cylinder management plan
- Eyewash and shower stations (testing, check sheet, labeling - signs)
- Training
- Periodic Reviews

**Spill Plan**

- Written Program
- ✓ Spill Kits
- Exercise the Plan
- Training
- Waste disposal
- Periodic Reviews

**Hazardous Waste Management**

- Storage Area
- Houskeeping
- Unlocked
- Labeling
- Aisle Space
- Compatibility of materials
- Open containers
- Up-to-date inventory
- Inventory of contents in each drum/container
- Satellite Accumulation Points
- Less than 90-day storage area
- Federal & State regulations
- Ventilating/Evaporating sample solvents and freons prior to disposal
- Training
- Written Program

**Fire protection**

- No sprinkler system in labs
- Fire drills are conducted
- No written fire drill plan
- Posted escape routes

Halon system in HW storage area has been expended 4 times in last year  
Halon fire extinguishers  
Materials in paths of egress ( boxes, coolers, trash cans)

**Electrical**

- GFCI's near water
- GFCI's near chemicals and other liquids, best management practice

**Emergency First Aid**

- Written program
- Training
- Periodic reviews

**Bloodborne Pathogens**

- Sharps disposal - injection needles
- Waste Minimization/Pollution Prevention