

# Woodward-Clyde Consultants

201 Willowbrook Boulevard  
P.O. Box 290  
Wayne, NJ 07470  
201 785-0700  
212 926-2878  
Telex 133-541

September 6, 1985

United States Nuclear Regulatory Commission  
Region I  
631 Park Avenue  
King of Prussia, Pennsylvania 19406

Re: License Number 29-19765-01

Dear Sirs:

We would like to amend our license number 29-19765-01 on the following items:

Item 12 We would like to delete the names of Stephen A. Cox and Steffan R. Helbig. We would also like to add the names of Brian E. Healy and Roy J. Redmond. We have included Mr. Healy's and Mr. Redmond's resumes stating their qualifications and training.

Item 18 We would like to delete the name of Stephen A. Cox and add the names of Brian E. Healy and Roy J. Redmond. Besides their present qualifications and training, both will have completed an isotope training program given by Gamma Industries by Sept. 13, 1985. Enclosed is a description of the program.

We have attached the required amendment fee of \$170.00 along with our request. Should you require any further information, please do not hesitate to contact me.

Sincerely,

*C. Thomas Statton*  
C. Thomas Statton  
Vice-President

Applicant Sept 11<sup>I</sup>  
Check No. 038733  
Amount/Fee Category \$170 (5A)  
Type of Fee AMD  
Date Check Recd 9/10/85  
received By SK

U.S. NRC  
LIC. FEE MGMT. BRANCH  
SEP 20 10:43 85

"OFFICIAL RECORD COPY"

8510240024 851002  
REG1 LIC30  
29-19765-01 PDR

Consulting Engineers, Geologists  
and Environmental Scientists

Offices in Other Principal Cities

104387

ML10

SEP 16 1985

BRIAN E. HEALY

geology  
hydro-geology  
geophysics

## EDUCATION

Illinois State University: B.S., Geology, 1984

## PROFESSIONAL HISTORY

Woodward-Clyde Consultants, Staff Geologist, 1984-present

## REPRESENTATIVE EXPERIENCE

Mr. Healy is experienced in a variety of geologic and hydrogeologic studies, dealing mainly with hazardous waste investigations. He is in charge of maintaining and operating the Woodward-Clyde environmental sampling van. This consists of ground-water and soil sampling collection in compliance with U.S. EPA sampling standards, field analyses of aqueous samples and calibration of field equipment. He is also in charge of maintaining and operating the Woodward-Clyde geophysical logging truck. Mr. Healy has experience in neutron porosity, natural gamma, resistivity, self potential, density and caliper logging and interpretation of results. Mr. Healy received instruction on the operation of the nuclear geophysical tools by Woodward-Clyde Radiation Safety Officers, Steven Cox and Steffan Helbig. The training included classroom lectures on radiation safety and on the job training in the proper handling and operation of the nuclear sources.

In addition, Mr. Healy also has experience in technical report writing, proposal preparation, running pump tests and analyzing acquired data, packer testing and analyses, slug testing and analyses, bore hole inspection and classification, and monitor well installation.

## PROFESSIONAL AFFILIATIONS

National Water Well Association

## CERTIFICATIONS/TRAINING

Well Log Interpretation, University of Wisconsin, 1983

Hazardous Waste Management Practice Health and Safety Training, 1985

Ground Water and Unsaturated Zone Monitoring and Sampling, National Water Well Association, 1985

ROY J. REDMOND

applied geophysics  
reflection seismology

## EDUCATION

Lehigh University: M.S., Geophysics, 1982

Rutgers University: B.A., Geology, 1979

## PROFESSIONAL HISTORY

Woodward-Clyde Consultants, Senior Staff Geologist, 1985-date

NUS Corporation, Geophysicist/Geologist, 1984-1985

Chevron USA, Inc., Exploration Geophysicist, 1982-1983

## REPRESENTATIVE EXPERIENCE

Since joining Woodward-Clyde Consultants, Mr. Redmond has been involved strictly with applied geophysics. His experience includes the acquisition, processing, and interpretation of shallow seismic reflection data for the coal mining industry; the acquisition, processing, and interpretation of resistivity and terrain conductivity data as applied to hydrogeological studies; and writing bid proposals for geophysical work to be performed at hazardous waste sites.

Mr. Redmond has experience in operating the Woodward-Clyde Consultants geophysical logging truck. He has received instruction on the operation of the nuclear geophysical tools by Woodward-Clyde Radiation Safety Officers, Steven Cox and Steffen Helbig. The training included classroom lectures on radiation safety and on the job training in the proper handling and operation of the nuclear sources.

Mr. Redmond has worked for the USEPA under the Superfund (CERCLA) contract. He was responsible for various study phases of uncontrolled hazardous waste sites. These phases included preliminary assessments, site inspections and environmental sampling, Hazard Ranking System (HRS) models to quantitatively determine a site's position on the National Priority List (NPL), and geophysical and geological reports for Remedial Investigation/Feasibility Study (RIFS) of hazardous waste sites.

Previous to this environmentally oriented work, Mr. Redmond was responsible for subsurface exploration for oil and gas reserves in offshore Gulf of Mexico. This subsurface interpretation was based on the integration of geophysical and geological techniques. These techniques included seismic data interpretation and interpretation and correlation of geophysical borehole logging.

In his graduate studies Mr. Redmond did a paleomagnetic study of the north Palisades Sill. This study included the collection of orientated rock cores, and the analysis, and interpretation of the earth's

magnetic field as it existed at the time of the sill's intrusion. His thesis work consisted of the acquisition, processing, and interpretation of digital wide-angle reflection data in eastern Pennsylvania-northern New Jersey. This data was inverted to determine crustal thickness and crustal velocities in this area.

#### PROFESSIONAL AFFILIATIONS

American Geophysical Union  
Society of Exploration Geophysicists  
Sigma Xi Society

#### PUBLICATIONS

"Wide-Angle Reflection Study of Crustal Structure, Eastern Pennsylvania - Northern New Jersey" (accepted to Earthquake Notes, pending publication), with K. P. Kodama.

#### PROFESSIONAL TRAINING

NUS Corporation, Superfund Training - Pittsburgh, PA, 1984

# Isotope Radiography Training Program

This program has been organized specifically to fulfill the requirements of "initial training" as specified in Title 10, Code of Federal Regulations, Part 34, Appendix A, U.S. Nuclear Regulatory Commission Rules and Regulations and equivalent Agreement State regulations. Classroom and demonstrations will include, but not be limited to, the following topics:

- \*\*Fundamentals of Nuclear Energy and Radiation Safety
- \*\*Characteristics and Units of Radiation
- \*\*Hazards and Effects
- \*\*Methods of Controlling Radiation Dose
- \*\*Radiation Detection and Measurement Instrumentation
- \*\*Survey Techniques and Requirements
- \*\*Personnel Monitoring
- \*\*Radiographic Equipment
- \*\*Regulatory Agencies and Requirements
- \*\*Operating and Emergency Procedures
- \*\*Shipping Regulations
- \*\*Film Interpretation

Several different exposure devices, isotopes and radiation monitoring and survey instruments will be used. The student will observe source fabrication during "master-slave manipulator hot cell" operations. He will observe fabrication of exposure devices and shipping containers. Radiation monitoring, surveying, wipe testing, and decontamination operations will be observed. Examples of equipment failures and human error will be discussed.

All of these are deemed advisable for the radiographer to understand the equipment functions. Sufficient knowledge will permit him to react properly in the event of any malfunction or error during normal operations.

While there is not sufficient time in this one week course for a student to develop desired skills as a radiographer, the program will provide opportunities for the student to prepare for qualification under the recommended practice of the American Society for Nondestructive Testing (SNT-TC-1A). Additional training can be scheduled in other programs to be offered by Gamma Industries.

To enroll in this course, fill out and mail the self addressed card.

For additional information phone (504) 387-1707

Toll Free No. 1-800-535-8132 Except in LA.

REGISTRATION CARD

## ISOTOPE RADIOGRAPHY TRAINING PROGRAM

Name \_\_\_\_\_ Position \_\_\_\_\_  
 Company \_\_\_\_\_ Telephone \_\_\_\_\_  
 Address \_\_\_\_\_

### Isotope Radiography Training Program

#210-	1/(14-18)/85	#216-	7/(15-19)/85
#211-	2/(11-15)/85	#217-	8/(12-16)/85
#212-	3/(18-22)/85	#218-	9/( 9-13)/85
#213-	4/(15-19)/85	#219-	10/( 7-11)/85
#214-	5/(13-17)/85	#220-	11/(11-15)/85
#215-	6/(10-14)/85	#221-	12/( 2- 6)/85

PROGRAM ENROLLMENT WILL BE LIMITED TO 12 STUDENTS. STATE YOUR PREFERRED PROGRAM NUMBER

First Choice \_\_\_\_\_  
 Second Choice \_\_\_\_\_  
 Third Choice \_\_\_\_\_

FEE \$330 PER STUDENT

PLEASE RESERVE A ROOM FOR (Dates) From \_\_\_\_\_ To \_\_\_\_\_

# Isotope Radiography Training

2255 TED DUNHAM AVENUE  
BATON ROUGE, LA 70802

**Gamma Industries** 

**Class Size**—The enrollment will be limited to twelve students for each class. This limitation to a small group will permit individual attention of the instructor to each student.

**Teaching Method**—Learning the detailed knowledge for a radiographer to work effectively and safely requires lectures by the instructor followed by student discussions. Problems on radiation detection, measurement and personnel dosage must be solved by the student. Laboratory exercises will be presented to simulate actual working conditions. During these exercises the student will make radiation measurements and prepare records required for a licensed radiography program.

Students will be given study assignments. An instructor will be available to students who need additional assistance outside of classes.

A written examination will be given on the last day of the course. Disposition of the examination results will be determined by the student's employer.

**Student Qualifications**—This program is organized and presented for students having the equivalent of a high school diploma.

**Registration**—A \$330 fee covers the cost of instruction, facilities, and all classroom materials and laboratory supplies. To register, insert the required information and mail the self-addressed tear card. The fee can be paid on the day the course begins or an invoice can be submitted to the student's employer.

**Location**—These courses will be presented at Gamma Industries in Baton Rouge, Louisiana.

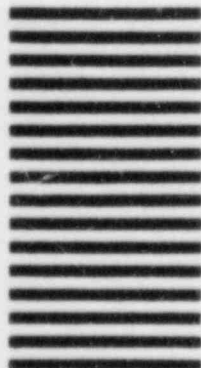
2255 TED DUNHAM AVENUE  
BATON ROUGE, LA 70802

**Gamma Industries**

POSTAGE WILL BE PAID BY ADDRESSEE

**BUSINESS REPLY MAIL**  
FIRST CLASS PERMIT NO. 3325 BATON ROUGE, LA

NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES



A Program developed by  
Harry D. Richardson  
Specifically organized to cover  
Initial Training, as required in  
Title 10, CFR, Part 34, Appendix A,  
and equivalent Agreement State regulations.



BETWEEN: William O. Miller, Chief  
License Fee Management Branch  
Office of Administration

# John E. Glenn, Chief  
Nuclear Materials Section B  
Division of Engineering and  
Technical Programs

LICENSE FEE TRANSMITTAL

A. REGION 2

1. APPLICATION ATTACHED

Applicant/Licensee: Woodward-Clyde Consultants

Application Dated: 9/6/85

Control No.: 104387

License No.: 29-19765-01

2. FEE ATTACHED

Amount: \$ 170.00

Check No.: 038733

3. COMMENTS

03111  
dms 032  
3/87

Signed Brenda Platchk

Date 9/17/85

B. LICENSE FEE MANAGEMENT BRANCH

1. Fee Category and Amount: BA - \$170

2. Correct Fee Paid. Application may be processed for:

Amendment                     

Renewal                     

License                     

Signed B Jackson

Date 9/23/85