

144

RECORD #144

TITLE: Personnel Monitoring Requirements for Unlicensed
Contractors Working at Licensed Facilities

FICHE: 67711-125

FEB 01 1985

MEMORANDUM FOR: Those on Attached List

FROM: L. J. Cunningham, Chief, Section 2
Operating Reactor Programs Branch
Division of Quality Assurance, Safeguards,
and Inspection Programs, IE

SUBJECT: PERSONNEL MONITORING REPORTS

Enclosed for your information are copies of a recent exchange of correspondence between Inryco, Inc., Concrete Systems Division, and the NRC regarding reports of personnel monitoring for contractor employees at nuclear power plants.

L. J. Cunningham, Chief, Section 2
Operating Reactor Programs Branch
Division of Quality Assurance, Safeguards,
and Inspection Programs, IE

Enclosures:

1. Ltr D. W. Waitkus to
J. M. Grace, dtd 12/13/84
2. Ltr J. N. Grace to
D. W. Waitkus, dtd 01/31/85

Distribution:

DCS 016
ORPB Reading
DQASIP Reading
RAlexander, RES
FCongel, NRR
LCobb, IE
JWigginton, IE
RVollmer, IE
JPartlow, IE
PFMcKee, IE
LJCunningham, IE
RCPaulus, IE

Concurrence:

ORPB/DQASIP/IE
RCPaulus:mlr
01/ /85


ORPB/DQASIP/IE
LJCunningham
01/2/85

Memorandum dated -----

Attached List

Ronald R. Bellany, Chief
Radiological Protection Branch
Region I

James H. Joyner, Chief
Nuclear Materials and Safeguards Branch
Region I

Douglas M. Collins, Chief
Emergency Preparedness and Radiological
Protection Branch
Region II

Kenneth P. Barr, Chief
Nuclear Materials Safety and Safeguards Branch
Region II

Carl J. Paperiello, Chief
Emergency Preparedness and Radiological
Protection Branch
Region III

William L. Axelson, Chief
Materials and Safeguards Branch
Region III

Ramon E. Hall, Chief
Technical Programs Branch
Region IV

Robert J. Everett, Acting Chief
Nuclear Materials and Safeguards Branch
Region IV

Frank A. Wenslawski, Chief
Emergency Preparedness and Radiological Protection Branch
Region V

James L. Montgomery, Chief
Nuclear Materials and Safeguards Branch
Region V



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JAN 31 1985

Mr. Donald W. Waitkus
Supervisor, Quality Assurance
INRYCO, Inc.
Concrete Systems Division
7200 S. Narragansett Avenue
Chicago, Illinois 60638-6087

Dear Mr. Waitkus:

SUBJECT: INRYCO LETTER QA841213-1

Thank you for your letter of December 13, 1984, regarding personnel monitoring reports and related matters.

The subjects discussed in your letter are covered by the NRC's regulations in 10 CFR Part 19, "Notices, Instructions and Reports to Workers; Inspections," and 10 CFR Part 20, "Standards for Protection Against Radiation." Copies of these regulations are enclosed.

Under the "Scope" sections of the regulations, 10 CFR 19.2 and 10 CFR 20.2, the regulations apply to persons who, among other activities, are licensed by the Nuclear Regulatory Commission to operate nuclear power plants. The utility that operates a particular facility is the licensee and is responsible for assuring that operations are conducted safely and in compliance with NRC regulations. Under the conditions described in your letter, Inryco is not a licensee and, therefore, its operations are outside the scope of Parts 19 and 20. When Inryco employees work at a nuclear power plant with an operating license, the utility licensee is responsible for the health and safety of such employees under the requirements of Parts 19 and 20. For example, when Inryco employees work at a nuclear power plant, the utility must assure that the individuals do not receive radiation doses in excess of the limits specified in 10 CFR 20.101.

Answers to your numbered questions follow. These answers are given in the context of Inryco acting as a contractor supplying goods and services to a utility operating a nuclear plant.

1. Do the NRC regulations cited in NRC Form 3 dated 6-82 regarding reports on radiation exposure history, apply to non-licensed organizations such as Inryco?

Answer

No. The reports referred to in NRC Form 3 are specified in 10 CFR

20.409 and 19.13. Although NRC Form 3 uses the phrase, "your employer," the utility licensee is considered the employer for purposes of providing the required reports. The regulations in 20.409 and 19.13 are more specific in this regard. They provide, essentially, that the licensee (utility) shall report radiation exposure data:

- a. annually, upon request, to a worker as shown in records maintained by the licensee - 19.13(b).
- b. at the request of a worker formerly engaged in licensed activities controlled by the licensee - 19.13(c).
- c. to an individual who has received an exposure in excess of NRC limits - 19.13(d).
- d. to an individual who has terminated employment with the licensee, or to an individual assigned to work in the licensee's facility but not employed by the licensee, who has completed the work assignment in the licensee's facility - 19.13(d).
- e. upon request, to a worker who is terminating employment, or a worker employed by another person who is terminating the work assignment involving radiation dose in the licensee's facility. This report must include the radiation dose received by that worker from operations of the licensee during the specifically identified calendar quarter during which the termination occurs. If finally determined personnel monitoring results are not available, the licensee may provide a written estimate of the dose received - 19.13(e).

10 CFR 19.13(e) allows a worker who is terminating employment or work assignment to designate another person to receive the radiation dose report. Other reports of radiation dose must be provided to the individual who received such dose. This is why some Inryco employees have received copies of radiation exposure reports at their homes. Presumably, these reports were made in compliance with 10 CFR 19.13(d).

2. While the terms "Restricted Areas" and "Unrestricted Areas" apply to licensees, how do these terms related to personnel not in the employ of licensees, even though these personnel are being monitored for radiation?

Answer

"Restricted area" is defined in Part 20 as, "...any area access to which is controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials." The individuals to be protected from radiation exposure are not limited to utility employees but include others such as Inryco employees. Sections 20.101 and 20.103 contain the limits for

exposure of individuals in restricted areas to radiation and radioactive materials. Also, 10 CFR 19.12 contains requirements for instructions to individuals who work in or frequent a restricted area. Again, the requirement to instruct individuals is not limited to utility employees but applies to all individuals who work in or frequent a restricted area. The NRC has published Regulatory Guide 8.27, "Radiation Protection Training for Personnel at Light-Water-Cooled Nuclear Power Plants." This document provides guidance to licensees on the development of a radiation protection training program to meet the requirements of 10 CFR 19.12. A copy of Regulatory Guide 8.27 is enclosed.

3. How does the term "Controlled Area" fit into the picture? Is this just another term for "Restricted Area"?

Answer

As you have surmised, "Controlled Area" is another term for "Restricted Area." Some licensees use still other terms to define the equivalent of a restricted area.

4. What radiation exposure limits would apply to Inryco personnel in these circumstances? Would this mean because we are being monitored that the quarterly whole body limit of 1.25 Rads would still apply?

Answer

The radiation dose limits for all individuals who work in a restricted area are contained in 10 CFR 20.101 for external radiation exposure and in 10 CFR 20.103 for exposure to concentrations of radioactive materials. The basic whole body dose limit for external radiation is 1.25 rems per calendar quarter [(20.101(a))]. Under the conditions specified in 10 CFR 20.101(b), a licensee may permit an individual in a restricted area to receive an occupational dose to the whole body of 3 rems.

5. While it seems unlikely that Inryco personnel could exceed the whole body limit on a quarterly basis, there remains the possibility that this could occur, especially when you consider that we anticipate performing 4 or more surveillances per year. What are we required to do as a non-licensed employer to protect both the employee and the company?

Answer

As stated previously, the licensee at whose facility you perform contractual services is the person responsible for assuring the radiation doses received by Inryco personnel do not exceed NRC limits. It appears possible that Inryco personnel could receive radiation exposures at two or more nuclear power plants during a single calendar quarter. 10 CFR 20.102(a) requires a licensee to obtain a written

signed statement from individuals disclosing either (1) that the individual had not occupational dose during the current calendar quarter, or (2) the nature and amount of occupational dose which the individual may have received during the calendar quarter from sources of radiation possessed or controlled by other persons. Further, 10 CFR 20.102(b) contains the requirement to obtain an individual's accumulated occupational dose to the whole body. This is one of the conditions that must be met prior to permitting an individual to receive a whole body dose greater than 1.25 rems during a calendar quarter. (See answer to Question No. 4.) These requirements probably are the reason why some utilities have, in their project specifications, included a requirement for supportive documentation of previous radiation exposure for those personnel who are to enter restricted areas.

I hope the above information is suitable for your needs. If you wish to discuss any of these matters in more detail, please contact Mr. Cunningham (301-492-9664) or Mr. Paulus (301-492-9733) of my staff.

Sincerely,

JAMES G. PARTLOW *JGP*

J. Nelson Grace, Director
Division of Quality Assurance,
Safeguards, and Inspection Programs
Office of Inspection and Enforcement

Enclosures:

- 1. 10 CFR Part 19
- 2. 10 CFR Part 20
- 3. Regulatory Guide 8.27

Distribution:

- DCS 016
- ORPB reading
- DQASIP reading
- R. C. Paulus, IE
- L. J. Cunningham, IE
- P. F. McKee, IE
- B. K. Grimes, IE
- J. G. Partlow, IE
- J. N. Grace, IE
- J. M. Taylor, IE

SP IE:DQASIP:ORPB
RCPaulus:mlr
01/22/85

NJO IE:DQASIP:ORPB
LJCunningham
01/22/85

PM IE:DQASIP:ORPB
PFMcKee
01/24/85

WJ IE:DQASIP:DD
JGPartlow
01/24/85

WJ IE:DQASIP:D
JNGrace
01/23/85

INRYCO, Inc.
Concrete Systems Division
7200 S. Narragansett Avenue
Bedford Park
Chicago, Illinois 60638-6087

312 585 7300 Chicago
312 594 7300 Suburban

TLX-72-1497 BDPK
FAX: Ext. 202

Plz draft reply

86
Michael Cunningham

Inryco

December 13, 1984

action
reply
draft by 1/10/85

United States Nuclear Regulatory Commission
Division of Quality Assurance, Safeguards,
and Inspection Programs
Office of Inspection and Enforcement
Washington, DC 20555

Attention: Mr. J. Nelson Grace,
Director

SUBJECT: Inquiry Regarding Employee Radiation Exposure
Inryco, Inc. Concrete Systems Division
Re: Inryco Letter QA841213-1

Dear Mr. Grace:

We have a number of questions concerning the responsibility for employee radiation exposure for non-licensed organizations, which appears to be within your authority for Safeguards. If these questions are not within your authority, please direct us to the responsible organization.

BACKGROUND

Before presenting the questions, we think it best to provide some background pertinent to the problem.

The Inryco, Inc. Concrete Systems Division has been involved in no less than 26 In-Service Inspections of post-tensioning systems (Regulatory Guide 1.35) for various nuclear plants over the past ten years. At least 18 of these plants were in an operating mode, reduced operating mode, or shutdown for refueling during the progress of the inspections. With the cessation of new construction for nuclear plants, our activities are now directed to providing materials, equipment, quality control and/or technical assistance to those plants requiring In-Service Inspections of the post-tensioning system. We expect this to be on the increase in the near future and have directed our sales energies to bid each project that becomes available.

Depending on the contractual requirements, these inspections vary from one month to three months in duration.

The amount of personnel involved will vary dependent upon the magnitude of the work to be performed. In all cases at least one surveillance technician/construction manager will be involved and he will be an Inryco employee. For those circumstances requiring Quality Control, from one to three inspectors will be provided, also Inryco employees. Where Quality Assurance audits are to be performed by Inryco, at least one lead auditor will be provided. If Inryco is to perform the construction activities, iron workers will be hired locally.

While the operating plants provide radiation exposure monitoring and in some cases radiation health/physics training, it does not appear that these programs are of a consistent nature, nor, to our knowledge, do the acquired radiation exposure values get entered into some form of central control system. Of late, Inryco employees performing the inspections have copies of the exposure records sent to their homes. These records are not normally submitted to Inryco.

As I am still certified to SNT-TC-IA as Level III for Industrial Radiography Inspection, I do have some familiarity with the requirements for State licensing and employee radiation exposure control. As we no longer perform radiography we are not licensed, but recognize a need for some type of control to prevent radiation exposure beyond established limits. In fact, recent project specifications and contract documents included a requirement for supportive documentation of previous radiation exposure for those personnel entering "Controlled Areas". At this time we do not have a definition of the term "Controlled Area", perhaps you could help in this matter.

QUESTIONS

1. Do the NRC regulations cited in NRC Form 3 dated 6-82 regarding reports on radiation exposure history, apply to non-licensed organizations such as Inryco?
2. While the terms "Restricted Areas" and "Unrestricted Areas" apply to licensees, how do these terms relate to personnel not in the employ of licensees, even though these personnel are being monitored for radiation?
3. How does the term "Controlled Area" fit into the picture? Is this just another term for "Restricted Area"?
4. What radiation exposure limits would apply to Inryco personnel in these circumstances? Would this mean because we are being monitored that the quarterly whole body limit of 1.25 Rads would still apply?

USNRC

-3-

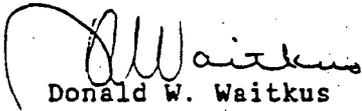
December 13, 1984

5. While it seems unlikely that Inryco personnel could exceed the whole body limit on a quarterly basis, there remains a possibility that this could occur, especially when you consider that we anticipate performing 4 or more surveillances per year. What are we required to do as a non-licensed employer to protect both the employee and the company?

We are grateful for any help that you can provide in this matter. I am taking the liberty of enclosing an Inryco Surveillance brochure with this letter, so that you may better understand the various limitations that might apply for various inspections. This brochure contains the names of the various projects for which we have performed surveillances, to the date of October 1984.

Thank you.

Sincerely,



Donald W. Waitkus
Supervisor, Quality Assurance

DWW:lgw

cc: R. W. Lawler
R. Brozovich
G. Crosby
J. Heise
I. Sounderarajan
H. Hendrickson