

Poston-Brown, Martha

From: Eddie Stelly [estellyande@bellsouth.net]
Sent: Thursday, September 20, 2012 2:32 PM
To: Poston-Brown, Martha
Subject: Fw: Conformatory Order, Conditions - B & C
Attachments: condition-B.pdf; condition-C.pdf; condition-C-4.pdf; condition-D.pdf

----- Original Message -----

From: Eddie Stelly
To: Vasquez, Michael
Cc: Thompson, James
Sent: Monday, March 12, 2012 2:57 PM
Subject: Conformatory Order, Conditions - B & C

Mr. Vasquez,

Please see attached Conditions B & C for the Confirmatory Order being submitted for your review. The highlighted portions are proposed changes to our Radiological Operating & Emergency Procedures Manual.

Condition - B

O&E Section 3.15.5 (Page 27) was changed to say that offshore field audits will be performed at interval not exceed 6 months for each radiographer and radiographer assistants that perform radiographic operations in offshore waters. The field audit will consist of elements as described on Attachment 7, Offshore Radiographic Audit Form.

Condition - C

Conditions C-1, C-2 and C-3 were added to O&E Section 8.2.0 (Page 70).

Condition C-5 was added to O&E Section 8.4.0 (Page 71), this states that the radiographer shall inspect all equipment assigned to him and his radiographer assistant prior to leaving to perform work and that the inspection shall be documented on Attachment 13 (Offshore Darkroom Checklist) or Attachment 15 (Bucket Job Checklist).

Please note that *Condition C-4* and *Condition - D* are also attached, these were submitted for your review last week.

If you have any questions please call me 337-839-1055

Thanks
Eddie Stelly
Accurate NDE & Inspection

- 3.14.1.4 Wipe around source pigtail connector and just inside source tube connector on the exposure device with the dampened swab.
- 3.14.1.5 Replace swab in plastic bag inside kit.
- 3.14.1.6 Remove the other swab in the kit and repeat the above operation with the swab dry, instead of dampened.
- 3.14.1.7 Survey the leak test kit with a survey meter. If a reading in excess of background is detected, DO NOT MAIL the kit; instead follow the procedures outlined in Section 4 - Emergency Procedures.
- 3.14.1.8 If no radiation levels, in excess of background, are detected, mail the kit to Radiation Consultants, Inc., Houston, TX (TX License #L02179), or other approved company.

3.15.0 INTERNAL INSPECTION PROGRAM

It shall be the responsibility of the Radiation Safety Officer to see that the following procedures are performed as an internal method of assuring that the radiation safety program functions in accordance with these procedures.

- 3.15.1 Dosimeters, monitoring badges and alarming ratemeters shall be checked daily, before allowing individuals to leave for a job-site, to ensure that they are being worn.
- 3.15.2 Reports shall be reviewed weekly to check for high dosimeter readings and to ensure that all surveys are being completed.
- 3.15.3 Field site inspections shall be performed to ensure that proper procedures (i.e., posting signs, maintaining area surveillance, etc.) are being complied with.
- 3.15.4 Field inspections shall be performed on each radiographic employee at intervals not to exceed six months and shall be on an unannounced basis.
- 3.15.5 Offshore audits of radiographic operations shall be performed on each radiographer and radiographer assistant during an actual industrial radiographic operation in offshore waters, at intervals not to exceed 6 months. When possible the audits must be unannounced. The audits must contain the elements as described on Attachment 7, Offshore Radiographic Audit Form.
- 3.15.6 Records of field inspections and offshore audits shall be maintained by the Radiation Safety Officer and an annual meeting will be held with all personnel to discuss violations found during the inspections.
- 3.15.7 Field inspections shall be recorded on the Field Inspection Report form. (See Attachment 6 at the end of these procedures.)
- 3.15.8 Inspection of equipment, by the Radiation Safety Officer, shall be performed on a quarterly basis to ensure equipment availability and proper functioning of such equipment.
- 3.15.9 Records of equipment inspections shall be maintained by the Radiation Safety Officer for inspection by the regulatory agencies.

3.16.0 INVENTORY, INSPECTION AND MAINTENANCE OF EQUIPMENT

Attachment 7

OFFSHORE RADIOGRAPHIC AUDIT REPORT

Radiographic Location: _____		Date: _____
Rad. Employee: _____	Inspector: _____	
Meter Mfg: _____	Meter S/N: _____	Cal Due Date: _____
Isotope Information		
Source Type: _____	Source S/N: _____	Activity(Curies): _____
Exposure Device Model: _____	Exposure Device S/N: _____	

INSPECTION FINDINGS

	YES	NO
Were all personnel monitoring devices' calibration up-to-date?		
Were radiographic personnel wearing all of their personnel monitoring devices?		
Was the restricted area posted with "Caution-Radiation Area" signs?		
Were ropes, barricades, etc. properly erected around the restricted area?		
Was the high radiation area posted with "Caution-High Radiation Area" signs?		
Was the restricted area properly controlled to prevent unauthorized entry?		
Were there two calibrated and properly operating survey meters present?		
Did the radiographer survey the exposure device after each exposure?		
Did the radiographer's exposure device survey include the guide tube?		
Did the radiography crew use a collimator?		
Was the radiography crew working with any defective equipment?		
Did the radiographer have sufficient knowledge of the safety rules?		
Were radioactive sources properly stored on the job-site when hot in use?		
Were the sources properly locked to prevent unauthorized removal?		
Was the storage area posted with a "Caution-Radioactive Materials" sign?		
Was a copy of ANDE's O & E manual available at the job-site?		
Was there a copy of the pertinent regulations available at the job-site?		
Was ANDE's radioactive materials license available at the job site?		
Was the darkroom's alarm in working order?		
Were there any items of non-conformance not listed above?		

COMMENTS/REMARKS

Rad. Employee's Signature: _____ Date: _____
 Inspector's Signature: _____ Date: _____
 Certification of Field Inspection: _____ Date: _____

**RADIOLOGICAL
OPERATING & EMERGENCY PROCEDURES
MANUAL**
(09/08 Rev. 3)

ACCURATE NDE & INSPECTION, LLC
Broussard, Louisiana

SECTION 8

**PROCEDURES FOR
LAY BARGES & OFFSHORE PLATFORMS**

8.1.0 PURPOSE AND SCOPE

This section establishes the procedures to be followed when utilizing radioactive sources on lay barges and offshore platforms. The procedures are intended to ensure compliance with practices outlined in this manual. This section applies to all personnel working with radiation producing devices on lay barges and offshore platforms.

8.2.0 GENERAL POLICY

The objective of these instructions is to establish a program which will protect the health of all persons working on lay barges and offshore platforms where radiation producing devices are used and ensure that all radiation doses to workers and members of the public are kept As Low As Reasonably Achievable (ALARA). It is the responsibility of the person(s) using radioactive devices to ensure their proper use, so as not to unnecessarily expose any radiographic personnel, or other persons on the job site.

Due to the inherent characteristics of lay barges and offshore platforms and the physical distance limitations, the primary safety principles that must be used are time and shielding; rather than distance. For this reason, the instructions in this section must be followed explicitly to avoid any infractions of the regulations set forth by the Federal and State authorities.

In the event of an emergency arising from malfunction of an exposure device (including a disconnected source), the radiography crew must ALWAYS contact the Accurate NDE RSO or a qualified individual designated by the Accurate NDE President, before attempting any source retrieval, no matter if the source is determined to be inside or outside of the guide tube.

When performing work in offshore waters, at least one radiographer who is qualified to perform source retrievals will be assigned to the crew and will be physically present while radiography is being conducted.

After contacting the RSO or qualified individual and obtaining authorization, the radiographer who is qualified to perform source retrievals, may perform source retrievals as directed by the RSO or a qualified individual designated by the company President.

8.3.0 STORAGE OF RADIOACTIVE MATERIAL

The procedures outlined below shall be followed when storing radioactive materials on lay barges and offshore platforms.

8.3.1 Any Ir-192 source above 22 curies and any Co-60 source above 8.1 Curies must conform to Increased Controls policies (see Sec 9).

8.3.2 Preferred method is to keep the exposure device locked, when not in use, in an offshore darkroom that is not only double locked, but also has an alarming system installed as well. This alarming system must be able to notify the crew of attempted tampering at any and all times.

8.3.3 If a darkroom facility is not available on the job-site, constant surveillance of the exposure device is the preferred method of security. This would mean that at least one member of the crew would have to remain with the exposure device at all times. The crew would then have to take this into consideration when taking scheduled breaks.

8.3.4 If constant surveillance is not possible (i.e. the crew spends the night on the offshore platform or barge) the camera will have to be secured with the provided chains and padlocks.

8.4.0 DAILY EQUIPMENT INSPECTION

It is the responsibility of the radiographer to inspect all equipment assigned to him and his radiographer assistant prior to leaving to perform work and on a daily basis. This inspection shall be documented on Attachment 13 (Offshore Darkroom Job Checklist) or Attachment 15 (Bucket Job Checklist). Procedures for performing such equipment inspections are outlined in Section VI of the Operating & Emergency Procedures manual and all radiographers are expected to adhere to those procedures.

8.5.0 POSTING AND RESTRICTING RADIOGRAPHIC AREAS

Since radiography will be performed in limited areas only, it is necessary that these areas be established and clearly posted. The following procedures must be adhered to when establishing such areas.

8.5.1 Establish a particular area, in conjunction with the barge or platform operator, where radiography will be performed (if one has not been previously established).

8.5.2 Calculate the distance to the 2 mR/hr boundary and post this barrier with signs that read "Caution - Radiation Area".

8.5.3 If the radiography area should happen to have walls, sides or other structures that define the area and the 2 mR/hr boundary is beyond the walls, a separate barrier must be erected and the caution signs must be posted at these new barriers.

8.5.4 The posted area shall be kept under constant visual surveillance by a radiographer during all radiographic operations.

8.5.5 If, due to limited space, the boundary requirements cannot be met, shielding must be erected to reduce the radiation levels to 2 mR/hr at whatever distance is obtainable.

8.6.0 COLLIMATORS

Either directional or panoramic collimators will be used on all sources of radiation which are used in crank-out type exposure devices.

8.7.0 SURVEYS

8.7.1 **Surveys of the perimeter of radiographic areas:** Boundaries shall be surveyed to ensure that radiation levels are within limits, and that any shielding which is present is adequate.

8.7.2 **Surveys for skyshine:** If shielding is used around the exposure area, surveys shall be performed in all occupied areas to ensure that exposure levels from skyshine are within limits.

8.7.3 **Surveys of berthing spaces:** All berthing spaces shall be surveyed to ensure that no excessive radiation levels exist. If excessive radiation levels are found, additional shielding must be added before radiographic operations begin.

8.7.4 **Surveys of storage area:** Surveys shall be performed on the outer surfaces of the storage vault/darkroom. Radiation levels cannot exceed 2 mR/hr on the outer surface. If levels are found to be in excess of this, additional shielding must be added.

8.7.5 **Surveys after completion of each exposure:** After each exposure, prior to approaching the exposure device, a survey shall be made to ensure that no radiation levels are present. If radiation levels exist, emergency procedures shall be followed.

8.7.6 Survey upon completion of final exposure: Upon completion of the final exposure of the day/shift, a survey shall be made of the exposure device. This shall be done prior to placing the exposure device into storage.

8.7.7 Surveys upon removing devices from storage: If an exposure device containing radioactive materials is used, it must be surveyed upon removal from the storage vault, prior to the initial exposure of the day.

8.7.8 Recording of surveys: Surveys required in 7.1, 7.6 and 7.7 above shall be recorded on a daily basis on the Daily Radiation Report. Storage surveys shall be recorded on the storage survey form upon initial storage of radioactive materials and thereafter at the time of quarterly inventory.

8.8.0 OPERATING PROCEDURES FOR RADIOACTIVE SOURCES

The following procedures shall be adhered to when using radioactive sources on lay barges and offshore platforms.

8.8.1 The following equipment must be present prior to beginning any radiographic operation:

- ◆ Two (2) operable and calibrated survey instruments.
- ◆ One monitoring badge per person for the current period.
- ◆ One pocket dosimeter per person.
- ◆ One audible rate alarm per person.
- ◆ Adequate number of "Caution - Radiation Area" and "Caution - High Radiation Area" signs.
- ◆ Ropes and stands for restricting areas.
- ◆ Collimators for use with all crank-out type devices.

8.8.2 The maximum activities of radioactive sources used on lay barges and offshore platforms shall be as follows:

Ir-192	100 Ci (max. w/ darkroom)
Ir-192.....	22 Ci (max. w/out darkroom)
Co-60.....	60 Ci (max. w/ darkroom)
Co-60	8.1 Ci (max. w/out darkroom)

8.8.3 Step-by-step procedures for making radiographic exposures with radioactive sources shall be followed, as outlined in Section VI of the Operating & Emergency Procedures manual.

8.9.0 RECORDS TO BE MAINTAINED ON OFFSHORE JOB-SITES

The following records must be maintained on all lay barges and offshore platforms. If any records are lost, it will be the responsibility of the Radiographer to notify the Radiation Safety Officer in order that they may be replaced.

- ◆ Radioactive materials license/certificate of registration
- ◆ Operating and Emergency Procedures manual
- ◆ Applicable parts of the regulations
- ◆ Survey records that are required for the job-site
- ◆ Daily dosimeter records
- ◆ Current instrument calibrations and leak test records

8.10.0 EMERGENCY PROCEDURES

The procedures for handling emergencies are outlined in Section IV of the Operating & Emergency Procedures manual. A list of people to contact and the appropriate telephone numbers are given at the end of the procedures.

Attachment 13

OFFSHORE DARKROOM JOB CHECKLIST (Form 13-72808)

Darkroom Number _____ Date _____

MANAGEMENT RESPONSIBILITIES

- 1) Darkroom & Transportation
2) Chemicals
3) Dosimeter Charger
4) Thermometer
5) Hangers
6) Safety Harness
7) Envelopes
8) Ticket Book
9) China Markers
10) ISO Paper
11) Pencils
12) Scissors
13) View Light & Bulbs
14) Rad. Material Cones
15) High Rad. Area Signs
16) Barricade Tape
17) Tape
18) Duct Tape
19) Extra Batteries
20) Code Book
21) Extension Cord
22) Chill Chaser
23) Paper Towels
24) Paint Sticks
25) Lock On Door
26) Extra Heat Gun
27) A/C Working
28) Dryer Working

CUSTOMER: _____
CONTRACTOR: _____
LOCATION: _____
BOAT: _____
DOCK: _____
HELIPORT: _____
DATE TO ARRIVE: _____
TIME TO ARRIVE: _____
JOB DUTIES: _____
CONTACT PERSON: _____
CONTACT NUMBER: _____

CREW ASSIGNED

TECHNICIAN RESPONSIBILITIES

Camera Info: Model: Spec-150 Ser. No. _____ Source Ser. No. _____ Current Activity in Curies _____

- 1) Camera _____ Daily Inspection Performed
2) 2 Small Crankouts
3) 2 Survey Meters _____ Calibrated & Working*
4) Film
5) Cassettes & 70MM Cassettes
6) Source Tube
7) Pennies & Penny Box
8) Number Belts
9) Bungee
10) Collimator
11) 2" Clamp
12) Exposure Calculator
13) Survey Sketches
14) O&E Procedures
15) Template
16) Flight Papers
17) MSDS For Chemicals
18) Steel Ruler
19) Dosimeter _____ Calibrated & Working*
20) Film Badge _____ Current Month*
21) Rate Alarm _____ Calibrated & Working*
22) Hard Hat
23) Safety Glasses
24) Steel Toe Boots
25) Darkroom Key *Technician is Responsible for checking both his and assistant's PME's before leaving for jobsite.

TECHNICIAN: _____
ASSISTANT: _____
SPECIAL INSTRUCTIONS: _____
NUMBER OF HANGERS: _____
NUMBER OF FILM TAKEN: _____
NUMBER OF CASSETTES: _____
MANAGER SIGNOFF: _____ DATE: _____
TECHNICIAN SIGNOFF: _____ DATE: _____
OFFSHORE NOTIFICATION: _____ DATE: _____
(Management or RSO must be contacted after arriving on jobsite)
CO. MAN SIGNATURE: _____ DATE: _____
(Onsite safety man or company rep. has to be notified of dangers pertaining to x-ray)

THIS SHEET MUST BE TURNED IN WITH TIME TICKETS
Note: Camera must be double locked when not under constant visual surveillance.

Attachment 15

BUCKET JOB CHECKLIST (Form 15-72808)

Darkroom Number _____ Date _____

MANAGEMENT RESPONSIBILITIES CUSTOMER: _____

- 1) Bucket & Bags
- 2) Spools & Rods
- 3) White Light
- 4) Red Light
- 5) String
- 6) Clothes Pins
- 7) China Markers
- 8) Scissors
- 9) Barricade Tape
- 10) High Radiation Sign
- 11) Red Electrical Tape
- 12) 2 Chains & 2 Padlocks

CONTRACTOR: _____

LOCATION: _____

BOAT: _____

DOCK: _____

HELIPORT: _____

DATE TO ARRIVE: _____

TECHNICIAN RESPONSIBILITIES TIME TO ARRIVE: _____

Camera Info: Model: Spec-150 Ser. No. _____ Source Ser. No. _____ Current Activity in Curies _____

- 1) Camera _____ Daily Inspection Performed
- 2) 2 Small Crankouts
- 3) 2 Survey Meters _____ Calibrated & Working*
- 4) Film
- 5) Cassettes & 70MM Cassettes
- 6) Source Tube
- 7) Pennies & Penny Box
- 8) Number Belts
- 9) Bungee
- 10) Collimator
- 11) 2" Clamp
- 12) Exposure Calculator
- 13) Survey Sketches
- 14) O&E Procedures
- 15) Template
- 16) Flight Papers
- 17) MSDS For Chemicals
- 18) Steel Ruler
- 19) Dosimeter _____ Calibrated & Working*
- 20) Film Badge _____ Current Month*
- 21) Rate Alarm _____ Calibrated & Working*
- 22) Hard Hat
- 23) Safety Glasses
- 24) Steel Toe Boots
- 25) Keys To Padlocks
- 26) Chemicals
- 27) Envelopes
- 28) Ticket Books
- 29) ISO Paper

JOB DUTIES: _____

CONTACT PERSON: _____

CONTACT NUMBER: _____

CREW ASSIGNED

TECHNICIAN: _____

ASSISTANT: _____

SPECIAL INSTRUCTIONS: _____

NUMBER OF HANGERS: _____

NUMBER OF FILM TAKEN: _____

NUMBER OF CASSETTES: _____

MANAGER SIGNOFF: _____ DATE: _____

TECHNICIAN SIGNOFF: _____ DATE: _____

** Technician is responsible for checking both his and assistant's PME's before leaving for jobsite.*

NOTE: If there is no obvious way to secure the camera when it is not in use, please contact ANDE management immediately.

OFFSHORE NOTIFICATION: _____ DATE: _____

(Management or RSO must be contacted after arriving on jobsite)

CO. MAN SIGNATURE: _____ DATE: _____

(Onsite safety man or company rep. has to be notified of dangers pertaining to x-ray)

THIS SHEET MUST BE TURNED IN WITH TIME TICKET