

INTEGRITY TESTLABS, LLC

September 29, 2016

Director
Office of Nuclear Material Safety and Safeguards,
U.S. Nuclear Regulatory Commission,
Washington, DC 20555-0001.

USNRC, Region I,
2100 Renaissance Boulevard, Suite 100,
King of Prussia, PA
19406-2713.

RE: EVENT 52215
Inability to Retract Industrial Radiography Source

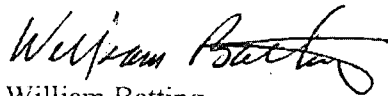
This correspondence satisfies the written report requirements of 10 CFR Part 34.101 and Part 30.06 as it applies to Integrity Testlabs Event #52215.

Attached to this correspondence are the following documents:

1. Integrity Testlabs Radiation Safety Program Form RS-17 NEAR MISS / INCIDENT REPORT
2. Initial Email Correspondence of the Event to HOC
3. Radiographer's, Assistant Radiographer's and Senior Radiographer's Statements
4. Radiation Survey Report RS-04
5. Photographs (2) of the Hot Piping Causing the Event
6. The Weekly Safety Toolbox Topics Detailing the Event (page 2 of 3)

If there are any concerns or if additional information is required please contact this office.

Sincerely,



William Batting

ASNT LEVEL III #100898

Radiation Safety Officer

RADIATION SAFETY PROGRAM – NEAR MISS / INCIDENT REPORT		
TIME: Approx. 11:15am	DATE: 09/01/2016	LOCATION: Unit 23, Exchangers 23-4B & 4C PBF Delaware City Refinery, Delaware City, DE
RADIOGRAPHY CREW: Redacted. Certified Radiographer Assistant Radiographer		NAME OF COMPANY: Integrity Testlabs, LLC
NAME OF INDIVIDUAL: Redacted. Certified Radiographer, and onsite Senior Radiographer / Supervisor		NAME OF COMPANY: Integrity Testlabs, LLC
EXPOSURE DEVICE: QSA Global 880S #S1667		IR-192 Source S/N: 32053G Curies: 56.5
Time of Exposure: Approx. 11:15am to 12:00 pm		Number of Exposures: One (1)
Was the source in the exposed position? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Estimated time individual in the radiation boundary: Not known
Was the source immediately retracted? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Estimated distance from collimator / source stop: Approx. 39ft
DESCRIPTION OF OCCURRENCE <p>The RT crew was performing wall profile/thickness radiography on piping located between two exchangers within the operating unit of the refinery. The initial exposure time was to be one (1) minute. The crew was using the following QSA Global/Sentinel equipment at the time of the event: Exposure Device Model 880S, 1-Handle Grip Control Assembly (Remote Control Drive Cable [cranks])-Extreme Condition 25ft, 1-Extreme Condition Source Guide Tube with Fixed Stop, 7ft long, 1-Extreme Condition Source Guide Tube Extension, 7ft long, and 1-4HVL Tungsten Collimator. Just prior to exposing the source, the radiographer positioned the drive cable [cranks] past the end of one of the exchangers, in order to use the exchanger for additional personal shielding.</p> <p>Upon completing the one minute exposure, the radiographer retracted the source from the exposed position within the collimator in the direction of the exposure device/shielded position. The source would not fully retract to the shielded position. The radiographer then exposed the source so that it was within the collimator. The radiographer proceeded towards the exposure device with survey meter and discovered that the drive cable assembly was inadvertently laid upon uninsulated piping. (This uninsulated piping was approx. 500°F.) This caused the control assembly housing to melt. (The melted condition was later determined to be approx. 4 feet from the rear of the exposure device and on the retract side of the control assembly housing that prevented the total retraction of the source into the shielded position).</p> <p>The radiographer returned to the handle grip of the control assembly, and pulled the control assembly in order to get the assembled exposure system into as straight line as practical with the thoughts that this would allow the source to be fully retracted. The radiographer attempted a second time to retract the source to its shielded position but it would not. The radiographer then exposed the source until it was fully exposed within the collimator.</p> <p>The radiographer instructed the assistant radiographer to expand outward the radiation perimeter to 2mR/hr or less. The radiographer then proceeded to contact the RSO via mobile phone. After contacting the RSO, the RSO contacted the office and explained the situation (event) to the operations manager. At the time of the event, the RSO was approx. 50 miles from the refinery. The operations manager contacted the onsite supervisor.</p> <p>The onsite supervisor proceeded to the unit where the event occurred and assisted the radiography crew. The supervisor checked the work area and verified the reestablished postings of the radiation perimeter. After the supervisor assessed the situation, he contacted the RSO.</p> <p>The supervisor's assessment was such that the source was free to travel but the retraction process stopped shy by approx. 2-3 feet from fully shielded position. With this information, the RSO proceeded to give the supervisor step by step instruction to get the source into the shielded/safe position. The instructions included:</p> <p>Acquire an 11/16" open end wrench or an adjusted wrench to remove the yellow control conduit (housing) swage fitting at the crank handle body. Then separate the conduit (housing) from the handle body enough to facilitate pulling of the control cable in the retract direction so that the source would be shielded within the exposure device. The supervisor followed these instructions and the source was fully shielded at approx. 12:00pm.</p> <p>The radiographic operations were suspended for the day. The radiography crew returned all equipment to Integrity Testlabs' facility and the RSO removed this equipment from service. The RSO preformed inspection and maintenance on the exposure device and the associated equipment. The RSO determined that only the Remote Control Drive Cable housings were damaged. This caused the event. The exposure device, guide tubes, and collimator were returned to service. After disassembly of the Remote Control Drive Cable, the housings were replaced and the drive cable was cleaned, inspected and lubricated per manufacturer's instructions, reassembled with new housings, then returned to service.</p> <p>This event was avoidable in that the radiographer should have taken the time to evaluate the work environment during the setup for this exposure. In haste, the radiographer overlooked the hot piping when locating the cranks past the end of the exchanger and placed the remote control cable housing on the associated hot piping, which contributed directly to this event.</p>		

DESCRIPTION OF OCCURRENCE (Cont'd)

No member of the public was exposed to ionizing radiation in excess of 2mR/hr.

The radiography crew received the following exposures as recorded on their self-reading pocket dosimeters:

Radiographer: 100mR

Assistant Radiographer: 20mR

Senior Radiographer: 23mR

The RSO believes that these recorded pocket dosimeter exposures to the radiographic personnel are just and accurate and does not require additional investigation based upon the RSO reviews of the involved personnel dosimetry results from Landauer for the previous 7 months.

ACTION TAKEN TO CORRECT OCCURRENCE (Use additional paper as needed)

As straightforward as it may be to perform radiographic operations safely following established regulations and procedures, appraising the work environment for hazardous conditions where the radiography will be conducted must be performed.

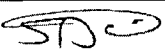
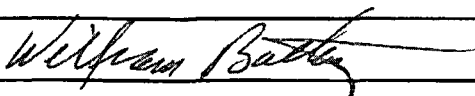
The corrective action to prevent another occurrence such as this event is to place importance of considering the work environment for hazardous conditions when performing field radiography. As always, Integrity Testlabs procedures shall be followed including the Operating and Emergency Procedure RSP-310. In this specific case, radiography crews must adhere to:

Section 13.0 - Radiographic Operations, Paragraph 13.3, in particular;

Item #4 - "Protect the radiographic equipment from temperature extremes, especially source guide tubes (and drive cable housings) from heated surfaces above 140°F; and

Item #5 - Always attempt to maintain the radiographic system in a straight line, as is practical".

Additional Training to all radiographic personnel concerning this event and how to prevent this type of event in the future will be conducted within 30 days of this report. (Tentatively, annual refresher training is scheduled in the next two weeks.) Also, a weekly safety toolbox topic which covered the initial report of this event during the week of 09/05/2016 to employees of Integrity Testlabs was performed.

Was the RSO Notified? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	By Whom? Donald Burke	Date Notified: 09/01/2016
Action taken is Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Completion Date By: 10/14/2016 (tentative refresher training)	
President's Signature: 	Date: 09/29/2016	
Radiation Safety Office's Signature: 	Date: 09/29/2016	

Delaware City, DE

Equipment: QSA Global Model 880s #S1667 w/ IR-192 #32053G – 56.5Curies
25Ft Extreme Control Cables with two extreme guide tubes, each guide tube 7ft long and the
outer most guide stop having a source stop.
One – 4HVL Tungsten collimator

At 11:22am, the RSO for Integrity Testlabs, LLC, received telephone notification from the field radiographer at the client's location that he was unable to retract the source fully into the shielded portion. The radiographer attempted to retract the source twice. The radiographer realized the source was not going to get shielded because he noticed that the control cable housing was laying on equipment which was later determined to be approximately 500°F. This melted the control cable housing and in turn prevented the complete retraction of the source into the shielded position. The radiographer kept the source to the fully exposed position within the 4HVL collimator, and proceeded to extend the posted radiation area boundaries to 2mR/hr or less, then contacted the RSO at 11:22am. The RSO was approximately 50 miles away and stated he was on his way to assist in the recovery process. The company and RSO are authorized to perform recovery of sources.

The radiographer then contact his supervisor, who was the senior radiographer onsite. The supervisor also attempted to retract the source into the shielded position. The supervisor contacted the RSO and explained the situation. By direction from the RSO via telephone communication, the supervisor was able to disconnect the control housing at remote control crank and pull the control cable so that the source was retracted into the shielded position. The radiography operations was terminated for the day. Surveys were performed after the source was shielded with no unusual readings. All equipment was returned ITL's facility.

The following self-reading pocket dosimeter readings were recorded at the conclusion of this event.
The radiographer and assistant radiographer had performed 6 exposures for the day. The 6 exposures included the event.

Radiographer 100mR

Assistant 20mR

Supervisor 23mR during the recovery process

No radiographic personnel or member of the public was overexposed during the entire event.

The affected equipment will be inspected, repaired or replaced, as needed.

A follow report will be submitted to Region I as soon as practical.

Regards,

BILL BATTING
ASNT LEVEL III #100898
Radiation Safety Officer

302-325-2365 Office
302-325-2467 Fax

302-632-1624 Cell

<http://www.integritytestlabsllc.com/>

SAFETY and QUALITY in NDT

- 1.) Received a phone call from our office at ITL stating the situation.
 - 2.) Went over to the unit and signed in and walked over to the job site.
 - 3.) Double checked the work site by surveying the area and rope boundaries, that it was safe to proceed closer.
 - 4.) Looked at the situation and contacted our RSO Bill Batting and told him about my findings.
 - 5.) I was instructed to safely check the crank connections and guide tubes. I told Bill Batting that I seen the cranks were burnt and thought that could be the hold up from cranking the source all the way back to camera into the locked position. Structures in the area were 422-499 degrees F
 - 6.) I was then instructed to undo the yellow side of the cable from the crank handle and pull it back by hand.
 - 7.) By doing what I was told by Bill Batting the source went back into the locked position. I surveyed the camera and guide tubes to make sure everything was secure.
 - 8.) After I made sure everything was secure I contacted Bill Batting and let him know the situation was under control, and then let the client know.
-

Name and signature redacted.

Name redacted.

9-1-16

Film Badge 078 Pocket Dosimeter: NK294612 Alarm Rate Meter: 49574
Exp: 12-17-16 Exp: 12-17-16

I set up to shoot a shot inbetween two exchangers. I placed the film on the pipe and clamped the guide tube with a collimator to an insulation band on an exchanger. I proceeded to ready the camera and pulled the cranks around an exchanger to practice ALARA with the extra shielding from the steel. I cranked the source all the way out into the collimator as my survey meter showed. We had an exposure of 1 minute. After that one minute I proceeded to retract the source, but would not fully retract. I cranked the source back into the collimator, grabbed my survey meter and walked towards the camera to see if I could notice what was wrong. I then noticed that the cranks were pulled onto a 500° pipe when turning the corner which caused it to melt. I tried to straighten out the cranks, then attempted to retract again. At this time I told my assistant to start making bigger boundaries. It would not retract again so I

cranked it back out into the collimator, locked the cranks and called the RSO. He told me he would be there as soon as he could. I then tried to pull the camera with the survey meter in hand to straighten the guide tubes and attempted one more retract. After that was unsuccessful a senior radiographer arrived to help. I then helped my assistant & the senior radiographers assist finish the new boundaries which were no greater than 2mr/h at ~~any~~ any point and verified them myself. I watched the senior radiographer attempt a couple retracts unsuccessfully until the RSO instructed him to unscrew a piece on the crank handle and manually pull it in. The source went back into the locked position, surveys were took and everything was broken down. The senior radiographer notified the RSO of the retrieval and the ropes were broken down and pictures were taken. My pocket dosimeter read 100 mr and all equipment was taken to the RSO for inspection repairs and replacement.

Signature redacted

Name redacted.

Rate Alarm: cal on 12/17/15

Doc Date 12/17/16

Project Alarm: LK 251218
(20 MR)

cal 4/15/16

Doc Date 4/15/17

BSL # 00124

I with [Name redacted.] set up the shot on a 1 inch pipe between to exchanger. Donnie then gave me the green light. So we move around the exchanger to take the shot. Don grab the cranks and crank out. after 1 min [] crank back in. The source would not go complete back in the camera. After [] try crank out then back in he then called Bill Boring. after we finished talking to [] we then made our rope area bigger. once we finished that [] was there. Him and [] work on the cranks to get the source back in. after about 5 mins of working on the cranks. They were able to get the source back in the camera. [] then broke down the camera as I broke down the ropes. we then pack up the truck and sign out of the unit. Drive straight to the office in fill out a report.

Signature redacted.

9/1/16

Integrity Testlabs 2016 Weekly Safety Toolbox Topics Meeting

GENERAL SAFETY TOPIC

DEHYDRATION and HOT WEATHER

I know what you are thinking... It is getting a bit cooler and Batting talks about dehydration and hot weather.

The human body contains a high proportion of water, so when the temperature rises and the body tries to cool itself by sweating, dehydration can be a real concern, particularly for those of us that work in hot environments such as power plants and refineries.

What is dehydration?

Dehydration is the loss of water and salts from the body. We need water to maintain enough blood and other fluids to function properly, and to maintain our blood pressure. Along with the fluids, the body also needs electrolytes, which are salts normally found in blood, other fluids, and cells.

How do we lose fluid?

The body may lose fluids in a variety of ways:

- When urinating;
- When you vomit or have diarrhea;
- When sweating; and
- From the lungs when you breathe.

Why do we need water?

The human body consists of nearly 60 percent water; brain tissue is said to consist of about 85 percent water. This is why drinking 6-8 glasses of water a day helps our body function efficiently. It is estimated that if we lost just one-tenth of the water within our body, we would not be able to stand, let alone walk.

Although fluid loss occurs during hard physical work, even simple tasks like walking can result in a significant loss of fluid within a very short period, especially in the environments where we work. We can also lose more body fluids in hot or humid conditions.

Know the Stages of Dehydration

The early stages of dehydration usually have no signs or symptoms, but can include dryness of the mouth and thirst. Other symptoms in early or mild dehydration may include dry, warm skin; dizziness; or cramping in the arms and legs. As dehydration increases, signs may include:

- A flushed face;
- Rapid pulse;
- Dark, yellow urine; or Passing less urine than normal;
- Sunken eyes;
- Skin that has lost its elasticity and does not quickly return to its normal position after being pinched; and
- Irritability or drowsiness as well as irrational behavior;

If you are with someone, who suddenly becomes dizzy, nauseated or weak during hot weather, get him or her indoors or in the shade. Replace lost fluids with cool water and cool the person down with a cool shower or sponge bath. Seek medical attention if the symptoms get worse or last for more than an hour.

If someone has dry, red skin, has a fast pulse, looks confused or delirious, or feels very hot, that person is in extreme danger and you should seek medical attention immediately, as well as taking the steps outlined above. In severe cases, dehydration can result in shock and even death.

How do I combat dehydration during hot weather?

Water should be given to counteract dehydration. Drink plenty of water before you get to the stage of feeling thirsty. It is best to remember that other drinks, such as soft drinks, coffee, or alcohol-containing beverages, are no real substitute for water. Although they contain water, they also contain dehydrating agents.

So-called isotonic sports drinks can replace some of the salts lost when sweating during intense or prolonged exercise, and are an appropriate fluid replacement in this setting.

Preventing dehydration during hot weather

It is recommended that during hot weather you should be drinking water even when not thirsty. Drink at least one-and-a-half cups of water every half hour and at least one-and-a-half cups of water 20-30 minutes before working in the heat.

Other things you can do to avoid dehydration during hot weather include:

- Avoiding the sun in the middle of the day whenever possible, do outdoor activities early in the morning or evening instead;
- Wearing sunscreen and a hat that shades your head, neck, ears and face, sunburn stops your body from cooling itself down properly;
- Wearing thin, loose clothing as this allows good airflow, which helps sweat evaporate; and
- Avoiding dark clothing, as this absorbs more heat than light clothing.

By recognizing the signs of dehydration and taking measures to prevent it, you can be safe and prevent dehydration.

**Integrity Testlabs 2016 Weekly Safety Toolbox Topics Meeting
WHEN UNSAFE WORKING CONDITIONS ARE IGNORED,
OR SAFE PRACTICES ARE MINIMIZED;
PEOPLE GET HURT, PEOPLE GET SICK, PEOPLE DO DIE!
SAFETY IS ALWAYS UP TO YOU!**

Page 2 of 3

**RADIATION SAFETY TOPIC
INABILITY TO RETRACT SOURCE**

INTEGRITY TESTLABS

Event: The inability to retract an industrial radiography source into the shielded position

Date: 09/01/2016 Time Approx. 11:15am

Location: Delaware City Refinery,
4550 Wrangle Hill Rd.
Delaware City, DE

Equipment: QSA Global Model 880S #S1667 w/ IR-192 #32053G – 56.5Curies
25Ft Extreme Control Cables with two extreme guide tubes, each guide tube 7ft long and the outer most guide tube having a source stop.
One – 4HVL Tungsten collimator

At 11:22am, the RSO for Integrity Testlabs, LLC, received telephone notification from the field radiographer at the client's location that he was unable to retract the source fully into the shielded portion. The radiographer attempted to retract the source twice. The radiographer realized the source was not going to get shielded because he noticed that the control cable housing was laying on equipment which was later determined to be approximately 500°F. This melted the control cable housing and in turn prevented the complete retraction of the source into the shielded position. The radiographer kept the source to the fully exposed position within the 4HVL collimator, and proceeded to extend the posted radiation area boundaries to 2mR/hr or less, then contacted the RSO at 11:22am. The RSO was approximately 50 miles away and stated he was on his way to assist in the recovery process. The company and RSO are authorized to perform recovery of sources.

The radiographer then contacted his supervisor, who was the senior radiographer onsite. The supervisor also attempted to retract the source into the shielded position. The supervisor contacted the RSO and explained the situation. By direction from the RSO via telephone communication, the supervisor was able to disconnect the control housing at the remote control crank and pull the control cable so that the source was retracted into the shielded position. The radiography operations were terminated for the day. Surveys were performed after the source was shielded with no unusual readings. All equipment was returned to ITL's facility.

The following self-reading pocket dosimeter readings were recorded at the conclusion of this event.

The radiographer and assistant radiographer had performed 6 exposures for the day. The 6 exposures included the event.

Radiographer 100mR

Assistant 20mR

Supervisor 23mR during the recovery process

No radiographic personnel or members of the public were overexposed during the entire event.

The affected equipment will be inspected, repaired or replaced, as needed.

Kudos to [] and [] for recognizing the emergency and responding accordingly; their training paid off. Kudos also go out as well to [] who was instrumental in assessing the situation and relaying the information to me. With the information from all personnel involved, the source was able to be retracted into the shielded position with no overexposures. A JOB WELL DONE UNDER THE CIRCUMSTANCES!

REMEMBER TO VISUALLY SUPERVISOR THE RADIOGRAPHER TRAINEE/ASSISTANT

NOTIFY THE RSO IF:

1. During your daily inspections you encounter problems with the radiography equipment
2. The vehicle's security system daily checks does not function as installed
3. The rear door of the transport vehicle cannot be kept locked at all times (except when in use)
4. While performing radiography you notice a change in the equipment's normal operating characteristics

SAFETY HOTLINE: 302-545-5663 or RSO's mobile #302-632-1624 (CALL OR TEXT)

page 2 of 3

Week of 09/05/16

INABILITY TO RETRACT SOURCE

Toolbox Meeting Conducted By (Please Print Name):

Email: bbatting@itlndt.com

Fax: 302-325-2467

INTEGRITY TESTLABS TRANSPORTATION DOCUMENT

Form RS-05 R-6 08/24/2015

DATED: (MM/DD/YY) 09 / 01 / 16

This document must be the top most document during transportation.

This document must be placed on the driver's seat or driver's door holder when exiting the vehicle

FIRST TRANSPORT FROM		SHIPPER: NAME, STREET ADDRESS, CITY, STATE	
		258 Quigley Blvd New Castle, DE 172	
FIRST TRANSPORT TO		CONSIGNEE: NAME, STREET ADDRESS, CITY, STATE	
		4550 Wrangle Hill Road Delaware City, DE PBF	
NATURE and QUANTITY of DANGEROUS GOODS			
RO, UN-2916, RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, CLASS 7, IR-192, SPECIAL FORM			
Certificates of Compliance: 880D/S USA/9296/B(U)-96 and SPECIAL FORM Certificate: USA/0335/S-96			
880 SERIAL NUMBER:	51667	IR-192 SERIAL NUMBER:	32053 G
		IR-192 ACTIVITY (Ci x 37)	2091.8 GBq
INSPECTION OF THE 880 & TRANSPORT/LOCK BOX PRIOR TO TRANSPORTING			
CHECK BOX AFTER COMPLETING THE INSPECTION			
<input checked="" type="checkbox"/> Inspection of the 880 was Performed and is Acceptable For Transport			
<input checked="" type="checkbox"/> Inspection of the Transport/Lock Box was Performed, Has Required Labels and is Acceptable For Transport			
TRANSPORT/LOCK BOX & VEHICLE SURVEYS — RECORD THE HIGHEST READINGS		mR/hr	µSv/hr
Transport/Lock Box Exterior Surface* NOTE: equal to or less than 50.0mR/hr (500 µSv/hr)		1.0	10.0
1-Meter from Transport/Lock Box Surface NOTE: equal to or less than 1.0		YELLOW-II T.I. = 0.2	
Vehicle's Exterior Surface NOTE: equal to or less than 2.0mR/hr (20.0 µSv/hr)		0.1	1.0
Driver's Compartment NOTE: equal to or less than 2.0mR/hr (20.0 µSv/hr)		0	0
* RADIOACTIVE YELLOW III REQUIRES VEHICLE PLACARDS. DO NOT TRANSPORT!!!			
CONTACT INTEGRITY TESTLABS' RSO FOR INSTRUCTIONS			
SECOND TRANSPORT FROM		SHIPPER: NAME, STREET ADDRESS, CITY, STATE	
		4550 Wrangle Hill Rd Delaware City, DE PBF	
SECOND TRANSPORT TO		CONSIGNEE: NAME, STREET ADDRESS, CITY, STATE	
		258 Quigley Blvd New Castle, DE 172	
<input type="checkbox"/> RADIOACTIVE MATERIALS WERE NOT TRANSPORTED ON THIS DATE: / /			
WARNING: FAILURE TO COMPLY IN ALL RESPECTS WITH THE APPLICABLE DANGEROUS GOODS REGULATIONS MAY BE IN BREACH OF THE APPLICABLE LAW, SUBJECT TO LEGAL PENALTIES.			
1. "This is to certify that the above-named materials are properly classified, described, packaged, marked & labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation."			
2. "I further understand that failure to comply with all safety and security procedures may cause Integrity Testlabs to be in violation of the DOT and NRC / Agreement States Regulations and license(s) conditions and will result in disciplinary enforcement or termination of employment actions against me by Integrity Testlabs Management."			
RADIOGRAPHER: PRINT YOUR NAME:		RADIOGRAPHER'S SIGNATURE:	
Name redacted.		Name redacted.	
Must Be Legibly Printed		Must Be Legibly Signed	

**IN THE EVENT OF AN EMERGENCY OR ACCIDENT,
CONTACT QUALIFIED AUTHORITIES FOR ASSISTANCE
LOCAL AUTHORITIES: 911**

EMERGENCY TELEPHONE NUMBERS:

Radiation Safety Officer: 302-632-1624

(RSO may be contacted for assistance, but emergency response for vehicle accidents or spills, the local authorities should first be contacted.)

Integrity Testlabs Office: 302-325-2365

Stacey Spike Mobile: 302-545-5663

24-Hour Emergency: CHEMTREC 800-424-9300 (CCN701472)

**REFER TO EMERGENCY RESPONSE GUIDE BOOK:
GUIDE #163 RADIOACTIVE MATERIALS
(LOW TO HIGH LEVEL RADIATION)**

DATE: 9-1-16	CUSTOMER: PBF	LOCATION: (City & State) Delaware City, DE	PAGE 1 of 1							
RADIOGRAPHIC PERSONNEL	OSL NUMBER	RADIOGRAPHER CERTIFYING AGENCY CERTIFICATION		ALARMING RATEMETERS		POCKET DOSIMETER (SRPD)		DAILY DOSIMETER RECORDINGS (mR)		
		ISSUED BY:	RAM, XRAY or BOTH	EXPIRATION DATE:	SERIAL NUMBER	EXPIRATION DATE:	SERIAL NUMBER	EXPIRATION DATE:	BEGINNING of SHIFT	END of SHIFT
	078	ASNT	RAM	6-19	49574	12-17-16	NK294612	12-17-16	Ø	100
	124	-	-	-	92397	12-17-16	LK251218	4-15-17	Ø	20
EXPOSURE DEVICE		SURVEY INSTRUMENTS			DAILY EQUIPMENT INSPECTION & OPERATIONAL & VEHICLE CHECKS					
MODEL #: 650L <input type="checkbox"/> 880D/S <input checked="" type="checkbox"/>		MANUFACTURER: NDS PRODUCTS	EXPOSURE DEVICE DAILY INSPECTION: ACCEPT <input checked="" type="checkbox"/> REJECT <input type="checkbox"/>							
CAMERA #: 51447		MODEL NUMBER: ND-2000	EXP. DEVICE ASSOCIATED EQUIPMENT INSPECTION: ACCEPT <input checked="" type="checkbox"/> REJECT <input type="checkbox"/>							
MAINT. DUE DATE: 10-1-16		SERIAL NUMBER: 49581	SURVEY INSTRUMENT INSPECTION & CHECKS: ACCEPT <input checked="" type="checkbox"/> REJECT <input type="checkbox"/>							
RADIOACTIVE MATERIAL		CALIBRATION DATE: 6-17-16	ALARMING RATEMETER INSPECTION & CHECKS: ACCEPT <input checked="" type="checkbox"/> REJECT <input type="checkbox"/>							
ISOTOPE: IR192 <input checked="" type="checkbox"/> SE75 <input type="checkbox"/>		CALIBRATION DUE DATE: 12-17-16	POCKET DOSIMETERS INSPECTION & CHECKS: ACCEPT <input checked="" type="checkbox"/> REJECT <input type="checkbox"/>							
SOURCE #: 320536		SERIAL NUMBER: 48342	VEHICLE ALARM SECURITY SYSTEM CHECKS: ACCEPT <input checked="" type="checkbox"/> REJECT <input type="checkbox"/>							
ACTIVITY - Curies: 56.5		CALIBRATION DATE: 8-4-16	COMMENTS / REMARKS ON INSPECTION & CHECKS (Red Tag ALL Rejected Items. Do not use. Notify the RSO):							
ACTIVITY - GBq: 2091.8		CALIBRATION DUE DATE: 2-4-17								
EXPOSURE DEVICE SURVEYS			RADIATION AREA SURVEYS				Maximum Permissible Intensity Level			
REMOVED FROM STORAGE SURVEY Record the Highest Reading	36 mR/hr	360 µS/hr	Document the distances from the source of radiation to the Radiation Area Boundaries. The Radiation Area Shall Be Posted So That The Radiation Intensity Does Not Exceed 2 mR In Any One Hour.				# of Exposures In 1 Hr = 2			
AFTER LAST EXPOSURE SURVEY Record the Highest Reading	36 mR/hr	360 µS/hr	Total Number of Exposures	6	Time Per Exposure	45 min	# of Exposures In 1 Hr. × Minutes Per Exposure = 90 (60 ÷ 90) × 2 = Maximum Intensity at Boundary in mR/hr			
PRIOR TO FINAL STORAGE SURVEY Record the Highest Reading	36 mR/hr	360 µS/hr	4 HVL Collimator Used <input checked="" type="checkbox"/> Feet 250 mR/hr < 2 Feet 256 mR/hr < 2 Feet 256 mR/hr < 2				Intensity Level at Boundary 2 mR/hr			
Comments and Additional Shielding: concrete, steel										
CERTIFYING STATEMENT with SIGNATURE - By my signature below, I certify that: <ul style="list-style-type: none"> All radiation safety procedures and precautions required by Integrity Testlab Radiation Safety Program, including the Operating and Emergency procedure, associated Radiation Safety Procedures, the License and its' conditions, as well as applicable regulations, were observed with full compliance and maintained during all licensed activities. The perimeter of the storage area was surveyed prior to removal of the exposure device from storage and immediately following placement of the exposure device upon final storage. The maximum radiation intensity was not in excess of 2mR/hr. After every completed exposure, the exterior of the exposure device, all attached source guide tubes, including the collimator, when used, was surveyed to insure that the source had returned to its' fully shielded position within the exposure device. Integrity Testlab Security Procedures were followed and the vehicle's security systems were inspected, checked and activated whenever the vehicle was left unattended that contained exposure devices. All information, statements, and representations documented on this form are true and correct, to the best of my knowledge. I further understand that failure to comply with all safety and security procedures and regulations may cause Integrity Testlab to be in violation of the NRC regulations and license conditions and will result in disciplinary, enforcement or termination of employment actions against me by the RSO and/or INTEGRITY TESTLAB Management. 										
CERTIFIED RADIOGRAPHER'S SIGNATURE: [Signature]										

Bill Batting

From: Hoc, HOO X <HOO.Hoc@nrc.gov>
Sent: Thursday, September 01, 2016 2:27 PM
To: Bill Batting
Subject: RE: FW: Event 52215

Received. Thank you.

Headquarters Operations Officer
U. S. Nuclear Regulatory Commission
Phone: 301-816-5100
Fax: 301-816-5151
email: hoo.hoc@nrc.gov
secure email: hoo1@nrc.sgov.gov



From: Bill Batting [<mailto:bbatting@itlndt.com>]
Sent: Thursday, September 01, 2016 2:50 PM
To: Hoc, HOO X <HOO.Hoc@nrc.gov>
Subject: [External_Sender] FW: Event 52215

BILL BATTING
ASNT LEVEL III #100898
Radiation Safety Officer

302-325-2365 Office
302-325-2467 Fax

302-632-1624 Cell

<http://www.integritytestlabsllc.com/>

SAFETY and QUALITY in NDT

From: Bill Batting [<mailto:bbatting@itlndt.com>]
Sent: Thursday, September 01, 2016 2:35 PM
To: 'hoo.hoc@nrc.gov'
Cc: sspike@itlndt.com
Subject: Event 52215

NRC Operations Center

Event: The inability to retract an industrial radiography source into the shielded position.
Date: 09/01/2016 Time Approx. 11:15am
Location: Delaware City Refinery,
4550 Wrangle Hill Rd.