

Notable Event Worksheet

(See [ES&H Manual Chapter 5200 Appendix T1 Event Investigation and Causal Analysis](#) for Instructions)

Click
For Word Doc

Title of Event			
Event Title:	ACC-12-0202 Unauthorized Access to the North and South Linac Service Buildings		
Date and Time of Occurrence:	~10:00 am 02/02/2012	Notable Event Number:	ACC-12-0202
Event Location:	North and South Linac Service Buildings	Date Notable Event Report is Due*:	03/02/2012

*The Notable Event Report is due to the ESH&Q Reporting Officer with 30 days of the Initial Fact Finding Meeting unless an extension is requested.

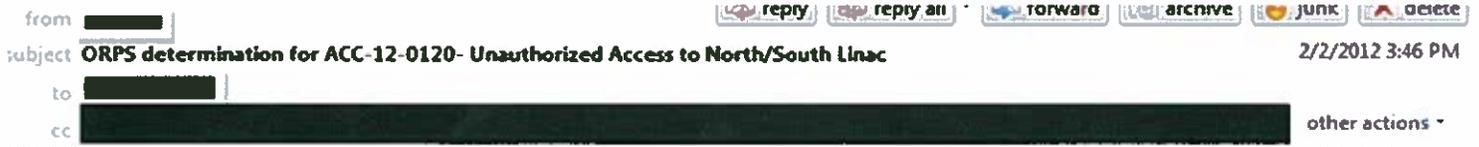
Categorization and Reporting
(To be completed by ESH&Q Reporting Officer within two hours – unless essential information is still pending)

ORPS Determination:	Date: 02/02/2012	Time:	3:46 pm
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This event was deemed as not meeting ORPS reportable criteria. It was deemed to be a notable event by the JLab reporting officer with Accelerator Division Safety Officer concurrence.

All names have been redacted. To avoid confusion, identification will be maintained using designations like J1 (short for JLab employee #1) or V1 (Visitor #1).

Please note that in the following image, a typo occurred in the Subject line with the Event Number. It should read ACC-12-0202.



This morning, a Jefferson Lab employee observed a Jefferson Lab SRF employee escorting 2 visitors into the roped off areas of the South Linac building. This area is roped off and the proper signs are posted. Only one of two of three has dosimetry, which is against our policy. The three left on their own accord before the first Jefferson Lab employee could ask them to leave.

Upon investigation, one of the RadCon staff reported seeing the 3 in the North Access Building. According to the sign-in sheet at the guard house indicated that the plan was to visit the MCC and FEL.

Based on information obtained so far, this event does **not** meet ORPS reportable criteria, however, we will follow the Notable Event Process.

Please feel free to call me with any questions or concerns.

10 CFR 851 Screen:	Date: 02/02/2012	Time:	~3:46 pm
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This incident does not meet the voluntary reporting criteria either as a discreet event or as a programmatic weakness.

Unless otherwise specified the following is to be completed by the [Lead Investigator](#).

Step 1 Initial Fact-Finding Meeting

Date:	02/03/2012	Time:	9:00 am	Location:	Test Lab , Room 204
Required Attendees:			Optional Attendees:		√ if Present
Lead Investigator:			Associate Director:		√
(Print Name): Steve Suhring			(Print Name): Robert Rimmer		
ESH&Q Representative:			TJSO Observer:		√
(Print Name): Tina Johnson			(Print Name): Patty Hunt		
Supervisor of involved persons(s):			Subject Matter Expert(s), Facility/Equipment Owner as applicable:		
(Print Name): Kirk Davis			(Print Name): Dave Hamlette , RadCon		√
Involved or impacted person(s):			(Print Name): Tony Reilly		√
(Print Name): Emailed detail account			(Print Name): Harry Fanning		√
(Print Name):			(Print Name):		
Witness(es):			(Print Name):		
(Print Name):			(Print Name):		

Agenda (Ensure the pace of the meeting allows time for accurate note taking.)		√ if Complete
1. Introduction – Provide Event Title, Date and Time of Occurrence, and Location:		√
2. Attendance - Are Required Attendees present.		√
3. Purpose of Initial Fact-Finding meeting.		√
4. Event Reconstruction – Use information to complete Section 3. Summary of Event and/or Injuries below.		√
a. Personnel and organizations involved in the event.		√
b. Conditions and actions preceding the event.		√
c. Chronology (timeline) of the event; and		√
d. Immediate actions taken in response to the event.		√
5. Clarify information – Subject-Matter Expert (SME) confirms work conditions.		√
6. Stop Work or the Tag Out Required? If “Yes” – establish the restart criteria and inform the affected Management chain.		-
7. Compensatory Actions Required? If “Yes” determine responsibility and include confirmation documentation.		-
8. Records or documentation required to confirm, clarify, or complete information (i.e., work plans, work control documents, photos, etc).		-
9. Other Questions or Concerns: Ask attendees if there are any other questions, concerns, or information that they wish to provide.		√
10. Obtain TJSO Observer feedback on conduct of fact finding meeting and potential improvements.		√

Step 2 Investigation Team:		Date Convened: (Within 24 hours of Fact Finding Meeting.)	
Role	Name	Department/Group	Phone
Lead Investigator	Steve Suhring	ACC/OPS	7670
Subject Matter Exp.	David Hamlette	ESHDIV/RADCON	7219
Supervisor	Kirk Davis	SRFTM	6086
<u>TJSO Observer</u>	Patty Hunt	TJSO	7039

Step 3 Summary of Event and / or Injuries, including Initial Fact Finding Meeting information: determine the chain of events and timeline. Use attachment as necessary.

On Thursday 2/2/12 visitors (V1&V2) from another lab were taken on an unofficial tour of the Accelerator Site with a JLab employee (J1). The JLab employee (J1) taking the visitors had spoken with both his direct supervisor (J2) and two other managers (J3&J4) about the tour prior to going out to the Accelerator Site.

The tour group (J1, V1, V2) visited the MCC, the North Linac Service Building, the FEL, and the South Linac Service Building. When entering the SLSB, a radiation barrier (rope and sign) was encountered. The tour group exited the SLSB and proceeded to a different door. They entered this door to look at the commissioning work station setup and general RF infrastructure.

At this point, they were approached by a JLab employee (J5) who questioned them on their dosimetry since the employee (J5) didn't recognize them and the area was posted as a Radiologically Controlled Area. The JLab tour lead (J1) was properly trained and had personal dosimetry and the visitors (V1&V2) were properly trained but did not have the necessary tour dosimetry.

The tour group left the SLSB and returned to the Test Lab. The JLab employee (J5) in the SLSB contacted the Raditation Control Group (RCG) to report the encounter.

From there the proper sequence of notification was followed and an event investigation team was formed by the end of the work day. Written statements were collected from the witnesses and the investigation team met the next morning (2/3/12) per the process used by JLab.

Notable Event Report

Emergency Notifications Made (Subsequent to the Event):	Date	Time
Fire, Rescue & Emergency Medical: (9-911)		
Guard Post: x4444; 269-5822		
Occupational Medicine 269-7539		
ESH&Q Reporting Officer: 876-1750	02/02/2012	~3:00 pm
Crew Chief 630-7050		
Industrial Hygiene: 269-7863:		
Other: RadCon	02/02/2012	~10:30

Witness Accounts: (Use attachments as necessary. Box will expand as necessary)

Witness Accounts: (Use attachments as necessary. Box will expand as necessary)

To whom it may concern,

The actions that took place on the 2 of February, 2012, in the account of J1, follow;

After discussing the tour locations and access with J3 and J4, a conversation took place concerning the visitor's possession of Dosimeters. I was told by both of these gentlemen that they were in fact issued JLab Dosimetry, due to the visitor's previous attendance of a VTA-RF test.

After discussing with the gentlemen mentioned above, I contacted J8 of the FEL to request access and explained the visitors' situation. I was told full access was possible.

I asked the visitors directly, "Do you have your badges and your TLD's, do you mind walking instead of driving" Both parties replied yes, and we departed the SRF Test Lab at this time. I was operating under the belief that at the time that both parties were in possession of dosimeters.

Our tour began by signing both parties in at the front gate. We walked directly to the MCC, viewed the control room. From the front door of the MCC we walked to the service building above NL24-NL25. A maintenance garage door was open, no ropes, signs, or barriers were present. I showed the gentleman the equipment racks with a brief description of their purpose and functionality. We walked across the campus to the entrance of the FEL. I walked the gentlemen through the tour section, checked the safety precautions posted on the entry point for heading downstairs, and took the gentlemen to the controlled access point at the entrance to the vault. Using the phone I called the MCC to verify access, double checked to see if I needed a key, and proceeded with a tour and limited explanation of the FEL. We completed our FEL tour and exited the building.

We walked down the outside of the south linac service building, discussing the C100 upgrade. We entered the door in the SL24 area which was clearly marked with the proper dosimeter requirement for a radiological controlled area. I, at this time, was still operating under the belief that the two visitor's possessed valid dosimeters (see above paragraph 2 and 4). I provided an explanation of the equipment racks at the location of 2L24, and at this time, was challenged by a JLab employee concerning our possession of TLD's. I responded yes, showing my TLD attached to my shirt, the visitors both tapped their shirt and pocket area and responded yes. At this time we completed our viewing, and departed SL24. Walked across the campus via the MCC overflow parking area, spoke with the security team to insure that the visitors had been fully signed out, and returned with the visitors to the SRF Test Lab.

Respectfully,

J1

Approximately 10:15 this morning I (J5) found three gentlemen in the South Linac in zone 24 apparently taking pictures. This area is roped off and the proper signs are posted. I asked them if they had TLDs as they did not appear to have them. Two of them did the third appeared to be a visitor as the first gentleman stated he was escorting him. It was my understanding the visitor did not have a TLD and I thought this was strange for them to be escorting someone in a radiation area that requires dosimetry without a SRPD or similar device. Even though the first two had JLab badges I did not recognize them. As a separate note of interest the CARM had gone off once this morning and J6 was informed. I called you (J7) and as we discussed this is the follow-up e-mail.

J5

From: V1
Date: February 2, 2012 11:26:46 PM EST
To: J2
Cc: V2
Subject: Incident Report from 2FEB12

J2,

To the best of my recollection, this is the events that occurred this morning. I have included as much detail as I am sure of, but left out anything I am not positive about.

At approximately 9:30 am, J1 escorted V2 and myself (V1) to the secure area of the facility, towards the accelerating linac. We attempted to use our passes to enter the area, but after that did not work, V2 and myself signed in at the guard shack, and J1 was

Witness Accounts: (Use attachments as necessary. Box will expand as necessary)

permitted to escort us into the area.

We first went to the operations area, where J1 showed us the terminal he worked at when he was commissioning a cryomodule the previous night. We briefly looked around the room, but did not travel very far.

We exited the building and headed towards the FEL, but saw an open door on the North side of the linac hall. This was a large overhead door, and I believe there were some workers in or around the area. We went inside and J1 indicated this area had ongoing work, and pointed out the empty racks.

After a very short time (2-3 minutes maximum) we went to the FEL. We walked through the lobby area, then proceeded downstairs. This was a secure area, so J1 called somebody on the phone (I am not sure who) and indicated he wanted to show us the accelerator ring. He was granted permission, and was told he was not required to take a key. We walked to the far end of the room, crossed over to the linac side using the approved crosswalks, and looked at the cryomodules. We then crossed back, and exited the area. We went upstairs to the experiment area, and J1 sought approval before we entered an experimental room and spoke briefly with some workers about the ongoing work. We then left the FEL and headed towards the cryobuilding. We turned to head towards the South Hall, but could not cross due to a ditch. We circled around the chiller tower, back towards the cryobuilding (by the broken down semi-trailer with pipes) and towards the South hall again.

When we first entered, I do not call for sure if the door was propped open to some extent. I do not remember J1 unlocking this door. We went in adjacent to a radiation area rope. J1 told us we could not cross this rope to look at the equipment, so we exited the hall and went west to the next doorway. We went back inside (I do recall J1 unlocking the door this time) and looked and saw no ropes or radiation signs posted. We were discussing the klystrons and equipment when a man, who did not identify himself, inquired if we had [some acronym referring to a dosimeter] and J1 indicated he had his, but we (V2 and myself) had no such device. The man stated we were in a radiation controlled area. (At this point I believe the man walked away, but I am not sure). The three of us, J1, V2 and myself exited the building. We were not escorted by the man working, nor did he tell us we had to leave the area.

All three of us proceeded to exit the security controlled area, badging ourselves out through the turnstile. We proceeded back to the SRF test building to the cryomodule test area. J1 stayed down in the room to work on testing, and V2 and I went upstairs to look for you (J2) before leaving for the afternoon. We could not locate you, and told J4 that we were leaving for a while, to return later in the evening, and that I could be called if anything "came up"

Upon returning to the facility later in the afternoon (~6:00 pm) J2 immediately notified us of the incident, and I verbally explained what was written above.

At no time did anybody in the group knowingly break any rules, and intentionally enter a restricted area. After being confronted in the hall, we exited immediately even though we were not asked/told to do so. J1 was completely cautious of our safety during the entire time.

I (V1) apologize for any inconvenience this incident may have caused. I hope this doesn't influence the opinion of us or our facility, and that J1 is not penalized in any way.

From:V2

Date:February 3, 2012 12:22:32 AM EST

To:J2

Subject: Record of events February 2, 2012 as recalled with time frames from photos taken.

J1 escorted V1 and I (V2) to several locations on the CEBAF grounds. It was understood ahead of time we would NOT be allowed in the tunnels for CEBAF due to the issues with them being hot this time.

Witness Accounts: (Use attachments as necessary. Box will expand as necessary)

The control room building (looking over the overall control room layout (3 – 4 minutes)

Walked the road along the north linac power supply building where there is a roll up door that was open and two workers installing equipment into the new racks. We briefly viewed this area just inside the door for no more than 30 to 45 seconds, @ 9:41AM moving out of the doorway and moving on our walk down the street.

The FEL building, entered the northeast entrance and J1 telephoned MCC for status of the lower level and whether access for a brief tour was allowed. It is my understanding our entrance is allowed and NO key lock process was needed per that conversation. We viewed the lower level and the upper floor. It must be noted J1 was very cognizant to ensure we were not taken into any or areas of exposure. Recorded time for FEL approximately 9:45AM to 10:08AM.

Leaving FEL, J1 escorted us past the helium tanks to the west 10:13, moving toward the south side of the CEBAF grounds toward the ground level utility / support buildings for the south side of the linac.

The last location, which is in question here regarding access, was the south linac building. J1 looked in an access door that was not locked as being recalled and took a very brief look down and saw a yellow roped radiation hazard sign estimated to be 15 to 20 feet toward the west. Approximately 10:15AM when at this door, J1 immediately said we needed to leave and move down to a point where past the roped off area by the workers. We walked further to the west a one or two entrance doors where J1 accessed this door and we stepped in @ 10:16 for a 15 – 20 seconds when a worker (J5) approached us asking, what was fist thought to mean our ID's, then restated the dosimeter question. We responded that J1 was our escort with which J1 had shown him his dosimeter. The worker (J5) said this area was determined an exclusion zone. We were out of the door, including this brief discussion with the worker by 10:18AM.

We walked back from our look at other JLAB facilities to the SRF Assembly building and in the cryo-module test control room by 10:29AM per my records.

V2

Environmental Aspects

Type of Material Released:

N/A

Quantity:

Source:

Time Flow was Halted or Controlled:

For Investigation Team (✓ All That Apply):

Reportable Quantity

Impact Ground/Soil

Storm Water Channel/Drain

Sanitary Sewer

Records, Documents, Pictures, and Other References: (Copy and paste, use attachments or document links as necessary)

See next page.

Records, Documents, Pictures, and Other References: (Copy and paste, use attachments or document links as necessary)



Picture of SLSB Door where entry was made.

Causal Analysis: (Use attachment as necessary)

<p>Root Cause:</p>	<p>No dosimetry while making an entry into a Radiologically Controlled Area. (Inattention to detail)</p>
<p>Contributing Causes: (List as many as apply.)</p>	<ol style="list-style-type: none"> 1. Lack of experience as a tour guide. 2. Initial entry into the North Linac Service Building was through an open un-posted roll-up door. 3. Misunderstanding/miscommunication on status of supplemental dosimetry. (Dosimetry had been issued earlier in the week). 4. Imprecise language. 'Badge' could mean either JLab issued identification badge or a dosimetry badge. 5. Environmental cause: In a noisy work environment, TLD and ID could be confused. 6. Familiarity with routine work space (entry into the area in the South Linac Service Building where C100 commissioning had occurred).

Notable Event & Lessons Learned Worksheet

Extent of Condition Check	Responsible Person(s)	JLab CATS Number	Target Date
Check the Radiological postings in above mentioned areas (Found all postings are proper.)	D. Hamlette	NE-2012-04	2/3/12

Corrective Action(s)	JLab CATS Number	Target Date
JLab employee #1 radiation worker revoked	NE-2012-04	2/6/12
JLab employee #1 radiation worker re-trained	NE-2012-04	2/6/12

Lessons Learned (Confer with Division/Department Lessons-Learned Coordinator) (Use attachment as necessary)	JLab COE Number
Consider using Radiation Control Department (RCD) postings when roll-up doors provide a point of entry that is not normally available.	N/A

Investigation Team Confirmation:

The below signees, confirm to the best of their knowledge, that the information presented in this document is accurate and complete.

Role	Print	Signature	Date
Lead Investigator	Steve Suhring		2-23-12
Team Member	David Hamlette		2-29-12
Team Member	Kirk Davis		2/23/12

Upon confirmation submit document to the [ES&H Reporting Officer](#) for completion and distribution.

Documentation of Findings: (To be Completed by ESH&Q Reporting Officer)

Notable Event Number:	ACC-12-0202
CATS Number:	<u>NE-2012-04</u>
JLab COE Number:	N/A
ORPS Number:	N/A
NTS Number:	N/A
CAIRS Entry:	N/A
DOE Cause Code:	A6 Training Deficiencies, B2 Training Methods LTA, C01 Practice or hands on experience LTA; B4 Verbal Communication LTA, C01 Communications between work groups LTA and C03 Correct Terminology not used
ISM Code:	Define the scope of work, Analyze the Hazards, Perform Work Within Controls

Acceptance/Acknowledgement of Facts

	Print	Signature	Date:
Associate Director/ Department Manger	_____	_____	_____

Distribution:

- ES&H Reporting Officer (Original)
- Associate Director/Department Manager
- Division Safety Officer
- Investigation Team Members

Form Revision Summary

- Revision 1.3 – 01/31/12** – Updated ESH&Q Reporting Officer assignment from SSmith to CJohnson per MLogue Edited to clarify process steps.
- Revision 1.2 – 10/20/11** – Updated ESH&Q Reporting Officer assignment from JKelly to SSmith per MLogue.
- Revision 1.1 – 05/24/11** - Edited to clarify process steps.
- Revision 1 – 11/23/10** – Updated to reflect current laboratory operations.

ISSUING AUTHORITY	FORM TECHNICAL POINT-OF-CONTACT	APPROVAL DATE	EXPIRATION DATE	REV.
ESH&Q Division	<u>Tina Johnson</u>	10/19/09	10/09/12	1.3

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