Jefferson Lab
Thomas Jefferson National Accelerator Facility

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:	**Finger Cut on Band Saw**		
Date and Time of Occurrence:	1/20/2012 @ 07:05	**Notable Event Number:**	ENG-12-0120
Event Location:	Machine Shop, EEL Building (#90)	**Date Notable Event Report is Due*:**	2/20/2012

*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:**	01/20/2012	**Time:**	1400

reply | reply all | forward | archive | junk | delete

from: You
subject: CAIRS/ORPS determination for ENG-12-0120- Laceration to the finger — 1/20/2012 2:00 PM
to: Steve Neilson, Patty Hunt
cc: Ned Walker, Jennifer Williams, John Kelly, kujawa, Bert Manzlak, Dick Owen, Tina Menefee, Paul Collins, Mary Logue — other actions

Steve,

Early this morning an employee of in the Machine shop was operating a operating a band saw when the blade caught on the material he was cutting, torqued and sliced his finger. The employee was taken to the emergency room, where he received 4 sutures (2-in his nail bed and 2-in the pad of his finger), and received two prescriptions, one of which is a narcotic. The ER doctor placed him on 2 days away from work (today and tomorrow), followed by 5 days of light duty

Dr. Chandler has confirmed that because the injury is to his dominant hand, and because of the narcotic prescription, the employee is unable to work. This case looks like it will be a DART case, however, we will know more on Monday

The following incident is OSHA recordable.

See OSHA regulations below:

Which work-related injuries and illnesses should you record?

Record those work-related injuries and illnesses that result in:

- death,
- loss of consciousness,
- days away from work,
- restricted work activity or job transfer
- medical treatment beyond first aid

Based on information obtained so far, we do not bekeve the event meets ORPS reportable criteria

We will follow the Notable Event Process and we will complete the CAIRS entry within the 7 day time limit. Please call me with any questions or concerns

Tina

--
Tina Johnson
ESH&Q Executive Assistant
JSA/Jefferson Lab
12050 Jefferson Ave
Suite 602
Newport News, VA 23606
757-269-7611

10 CFR 851 Screen:	**Date:**	**01/20/2012**	**Time:**	**2:05 pm**

This incident does not meet the voluntary reporting criteria either as a discreet event or as a programmatic weakness.

2012

Unless otherwise specified the following is to be completed by the Lead Investigator.

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Notable Event & Lessons Learned Worksheet

Step 1 Initial Fact-Finding Meeting					
Date:	1/20/2012	**Time:**	15:00	**Location:**	Machine Shop Break Room

Required Attendees:	Optional Attendees:	√ if Present
Lead Investigator:	**Associate Director:**	N
(Print Name): Henry Robertson	(Print Name): Will Oren	
ESH&Q Representative:	**TJSO Representative:**	Y
(Print Name): Tina Johnson/ John Kelly	(Print Name): Steve Neilson/Patty Hunt	
Supervisor of involved persons(s):	**Subject Matter Expert(s), Facility/Equipment Owner as applicable:**	
(Print Name): Dave McCay/ Casy Apeldoorn	(Print Name):	
Involved or impacted person(s):	(Print Name): Casy Apeldoorn	Y
(Print Name):	(Print Name):	
(Print Name):	(Print Name):	
Witness(es):	(Print Name):	
(Print Name): Jeffrey Dail	(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:	Y
2. Attendance - Are Required Attendees present.	N*
3. Purpose of Initial Fact-Finding meeting.	Y
4. Event Reconstruction – Use information to complete Section 3. Summary of Event and/or Injuries below.	Y
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.	Y
6. Stop Work or the Tag Out Required? If "Yes" – establish the restart criteria and inform the affected Management chain.	Y
7. Compensatory Actions Required? If "Yes" determine responsibility and include confirmation documentation.	N
8. Records or documentation required to confirm, clarify, or complete information (i.e., work plans, work control documents, photos, etc).	Y
9. Other Questions or Concerns: Ask attendees if there are any other questions, concerns, or information that they wish to provide.	Y
10. Obtain TJSO Representative feedback on conduct of critique and potential improvements.	Y

* Not all questions/conditions could be furnished during the initial fact-finding meeting as the worker was not able to attend, however, through subsequent interviews, written testimony and meetings; the necessary information was obtained and made available to the investigation team.

Step 2 Investigation Team:	**Date Convened:** (Within 24 hours of Fact Finding Meeting.)	1/24/2012	
Members	**Role**	**Department/Group**	**Phone**
Henry Robertson	Lead Investigator	ENGSAF	7285
Steve Neilson	TJSO Observer:	TJSO	7215
Tina Johnson	ES&H Representative	ESHDIV	7611
Ned Walker	Machinery SME	ESHDIV	6638
Dave McCay	Area Supervisor/SME	MACHSP	7300
John Kelly	ES&H Liaison	ESHDIV	7531

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.

Event:

Friday, 1/20/2012

05:30 - Employee arrives at JLab.
Starts cutting 1/8" x 3/4" flat stainless steel stock on the band saw using a 6" nylon push block.
The task was to cut the stock to a desired length of approximately 1".
The size of these pieces required additional support in close proximity to the saw blade.
The employee chose to hold the material with his fingers.
07:05 - While cutting the last piece, the material was grabbed by the saw and his finger was drawn into the saw blade slicing through the flesh of his right index finger.
The worker notified another employee of the incident and both proceeded to the bathroom to cleanse and wrap the finger.
He then reported the injury to his supervisor.
As the Medical Services office was not open yet, he was transported by a fellow employee to the Sentara Clinic.
07:30 - Once registered, the medical staff proceeded to provide shot, x-rays, and stitches. Doctor specifies limited duty work for two days. Employee was written out of work on the 20th and 21st. He was scheduled to return to work on Monday the 23rd.
Dr. Chandler evaluated him and stated that the employee could have returned to work on Sunday, regular duty, no restrictions.
10:30 - Employee returns to work and is sent by supervisor to Medical Services to check in.
Medical Services interviewed the worker provided him with proper worker's comp and prescription paperwork and recommendations, and collected the necessary documentation from Sentara.
11:00 - Worker returned to Machine Shop to discuss events with his supervisor.
Supervisor sent the worker home as advised by the Sentara doctor and reminds him to report to Medical Services upon returning to JLab on Monday.
11:15 - Worker leaves JLab.

Monday, 1/23/2012

05:30 - Employee arrives at JLab.
08:15 - Employee reports to Medical Services to check in and get clearance to resume regular work activities.

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.

Post event response:

Friday, 1/20/2012

11:30 - Henry Robertson (DSO) and John Kelly (ES&H Liaison) review site and begin fact-finding.
12:00 - Request blood cleanup by Industrial Hygiene.
12:15 - Industrial Hygiene responds to inspect and clean the area.
15:00 - Fact-finding continues with Patty Hunt (TJSO) and Tina Johnson (ES&H).

Report from JLab Medical Services:

FYI: Engineering Incident Notification
Date/Time of Incident: January 20, 2012 at approximately 7:05 a.m.
Place: Bldg. 90 Machine Shop

Description: While working with a band saw, employee was cutting a piece of building material when it was grabbed by the blade causing his finger to be cut by the saw.

Diagnosis: Lacerated nail bed and finger tip of right index finger.

Treatment: Employee was evaluated by Port Warwick Emergency Dept as Occupational Medicine was not open yet. Employee received sutures and was prescribed oral antibiotics and pain medication.

Work Status: Per Port Warwick instructions, employee is to remain out of work remainder of today and will return to work on January 23, 2012 with limited use of right hand. Dr. Chandler evaluated the employee and stated that the employee could have returned to work on Sunday, regular duty, no restrictions.

Team discussion of other factors:

What other methods of performing the work intended were available to the employee?

- Use of the "Marvel" type saw - operator is isolated from the cutting operation.
  - Per the supervisor, the Marvel saw option would not have taken an appreciable difference in time or complexity to conduct the cutting task.
- Use of a milling machine to remove the excess material.
- Use of guides, clamps, and blocks on the band saw would have minimized likelihood of event.
  - Additional push blocks were available that would have kept the worker's hands at a safe distance from the saw blade.

What type and extent of training is required on machine shop equipment prior to its authorized use?

ES&H Manual Chapter 6121 Appendix T1 states:
4.2 Training of Operators

- Attend specialized training as required by Machine Owner.
- Read/sign the appropriate OSP for the machine tool.
- Demonstrate performance to a competent and trained operator.
- Receive management authorization.

- Since the band saw is the least used type, its OSP has yet to be completed.
- This worker has 20+ years experience in a machine shop environment.

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.

The removable plate that surrounds the blade had significant damage from previous use. Its gap was wider that the material being cut and possibly contributed to the blade seizing the work piece.

The blade guide/guard was set at approximately 1" supposedly to allow a close approach by the push block. It should have been set only nominally higher than the material thickness.

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	1/20/2012	10:30
ESH&Q Reporting Officer: 876-1750	1/20/2012	11:00
Crew Chief 630-7050		
Industrial Hygiene: 269-7863:	1/20/2012	12:00
Other:		

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

1-20-2012

Morning of January 20, 2012 Started work at 5:30 AM. I was working with Stainless Steel plate. After milling operation I went over to the Bandsaw to cut into 1" pieces. I 1st turned on the saw, used a piece of plastic for a push tool and would cut 1 part off each end of material, 1" long.

After cutting 2 pieces, I would go back and mill saw cut ends, then repeat bandsaw operation. After cutting 7 pieces I was sawing the last piece approximately 1 1/4 long using the push tool I sawed into material about an 1/8" deep and material grabbed in the saw blade and my right index finger that was holding the right end of the piece was thrown into the saw blade, cutting the top of my right index finger. Material being sawed ended up between saw blade and table of saw.

7:05 AM

After accident I let a co worker know I had cut myself, also told the machine shop Safety Warden. Went to the restroom, rinsed and wrapped injured finger in paper towels. Found supervisor and reported my injury.

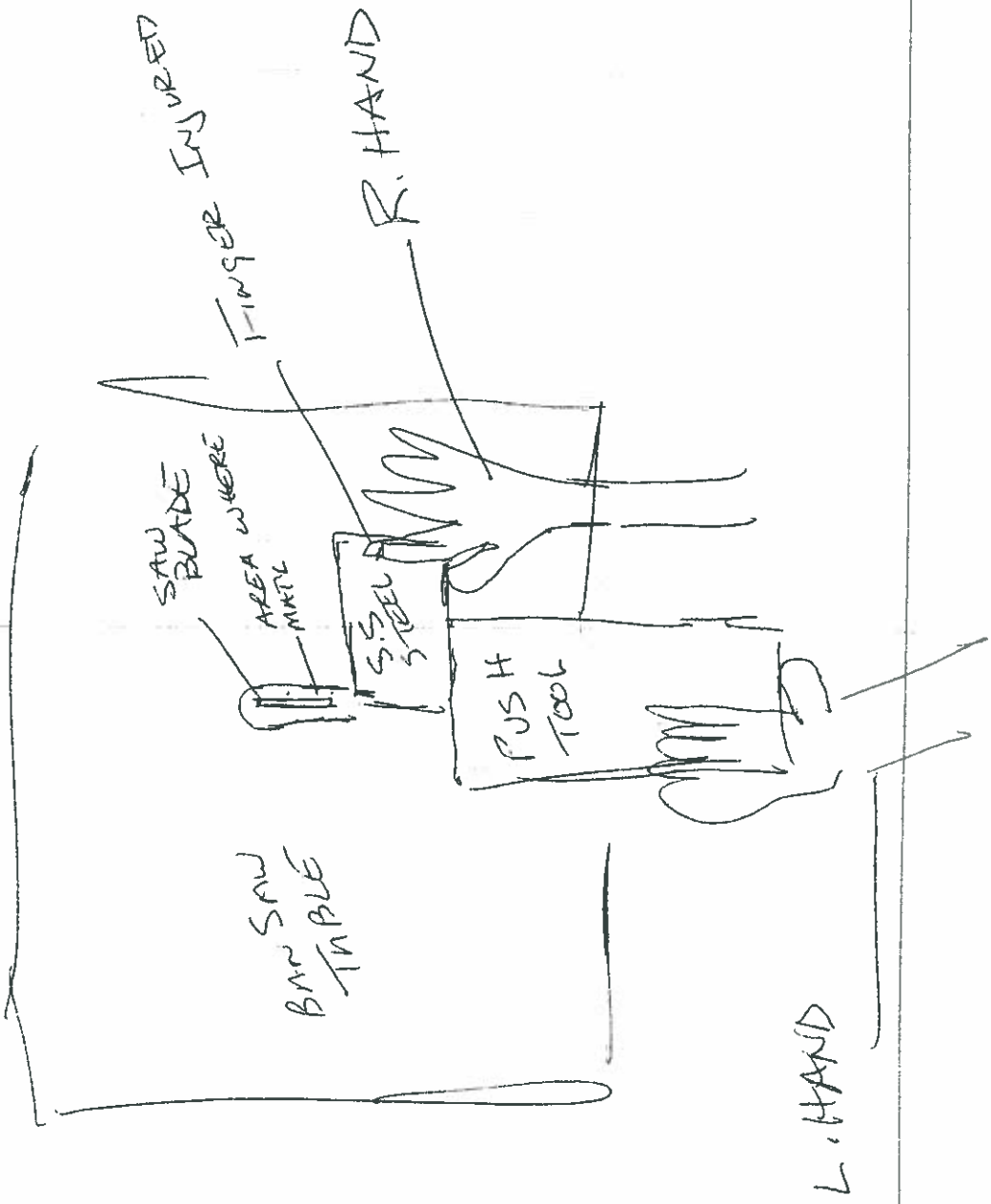
Since J. Lab medical clinic was not open, supervisor asked a co-worker to drive me to Sentara Emergency facility at Port Warwick. Registered in at approximately 7 30 AM. Nurse checked my vitals, received Tetnus shot and went to X-Ray

Dr. Cole put in 2 stitches in the tip of my index finger and 2 stitches in my fingernail. Issued 2 prescriptions, antibiotic and pain medication. Dr. Cole wrote me out of work for the rest of the day and the following day (1-21-12). SAT. To report back to work on Monday (1-23-12). Returned to J. Lab approximately 10 30 AM, immediately contacted supervisor and was told to report to J. Lab medical clinic. Took paperwork from Sentara to clinic (Ms. Banks), she took a brief statement of the accident and gave me workers compensation information and paperwork for prescriptions. She also told me not to use pain medication 6 hours prior to work start.

Returned to machine shop and spoke to my supervisor and was told to follow Sentara's orders and was done for the day. I was told to report to J Lab medical clinic

Monday Morning (1-23-12). LEFT
Machine shop @ 8 TO 11:30 AM.
These are in my own words events
of the day I injured my finger
as best as I can recall.

1-22-12


FINGER INJURED
R. HAND
SAW BLADE
AREA WHERE MATL
S.S. STEEL
PUSH TOOL
BAN SAW TABLE
L. HAND

Interview with injured worker:

The worker said he was not in a hurry or felt a sense of urgency that led him to take shortcuts with the completion this job.

Interview with co-worker:

He was notified of a problem by the injured staff.
He helped him through the doors into the men's room.
He accompanied him to report to the supervisor and then drove him to and from the urgent care center.

Environmental Aspects	
Type of Material Released:	**Quantity:**
NA	NA
Source:	**Time Flow was Halted or Controlled:**
NA	

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)

Photos of the work site:

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

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

Causal Analysis: (Use attachment as necessary)

Root Cause:	Insufficient Work Planning
Contributing Causes: (List as many as apply.)	1. Poor selection of equipment to accomplish the work. (Two Marvel saws were available to use and would have eliminated the employee's exposure to the "point of operation". 2. Poor set up of the band saw used. (The blade guide/guard should have been lowered to nearly the thickness of the stock being cut. Use of the sled built into the band saw table would have kept his fingers from being behind the blade.) 3. Poor selection of "push sticks/block(s)". Use of two blocks or a longer and thinner one would have increased the distance from the blade (point of operation) or could also have used the sled built into the band saw table to keep his fingers from being behind the blade. 4. No formal procedure or OSP for machine use was in place. 5. Too much reliance on prior experience and "skill of the trade".

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Notable Event & Lessons Learned Worksheet

Extent of Condition Check	Responsible Person(s)	JLab CATS Number	Target Date
N/A			

Corrective Action(s)	JLab CATS Number	Target Date
Prepare OSP for the bandsaw(s) (McCay)	NE-2012-03-01-01	February 29, 2012
Hold stand down meeting with the other Machinists to discuss this event and how to avoid similar incidents.(McCay)	NE-2012-03-01-02	February 29, 2012
Have all the saw operators read and sign the OSP for the bandsaw(s). (McCay)	NE-2012-03-01-03	February 29, 2012
Replace the plate that surrounds the blade on the band saw table.	NE-2012-03-01-04	February 29, 2012

Lessons Learned (Confer with Division/Department Lessons-Learned Coordinator) (Use attachment as necessary)	JLab COE Number
Pre-task planning plays a vital role in site safety.	369

Lead Investigator Confirmation: As Lead Investigator, I confirm to the best of my knowledge, that the information presented in this document is accurate and complete.

	Print	Signature	Date:
Lead Investigator	Henry Robinson	Henry Robinson	2-20-12

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:	ENG-12-0120
	CATS Number:	Pending

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Notable Event & Lessons Learned Worksheet

Documentation of Findings: (To be Completed by ESH&Q Reporting Officer)	
JLab COE Number:	369
ORPS Number:	N/A
NTS Number:	N/A
CAIRS Entry:	12-0120
DOE Cause Code:	A3 Human Performance LTA, B2 Rule Based Error, C04 Previous success in use of rule reinforced continued use of rule;A1 Design/ Engineering Problem, B5 Operability of Design/Environment LTA, C01 Ergonomics LTA; A6 Training Deficiency, No Training Provided, C03 Work incorrectly considered" skill of the craft"
ISM Code:	Develop and Implement Hazard Controls, Analyze the hazards, Perform the work within Controls

Acceptance/Acknowledgement of Facts

	Print	Signature	Date:
Associate Director/ Department Manger			2/24/12

Distribution:

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

Revision Summary

Revision 1.2 – 10/20/11 – Updated ESH&Q Reporting Officer assignment from John Kelly to Steve Smith per Mary Logue.
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	Steve Smith	10/19/09	10/09/12	1.2

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