



# **Supervisor of Summer Students Training Class**

Training Group  
ESHQ Section

Introduce yourself.



Explain the importance of making a good first impression:

- Do everything you can to make your summer student's time at Fermilab safe and productive and remember that the way to accomplish this is through a good orientation program. (Both laboratory general and job specific).
- Failure to provide a good orientation means bad habits and unsafe work practice, whereby, breaking employees of bad habits & retraining is bad for business and more difficult to achieve.

## Class Objectives

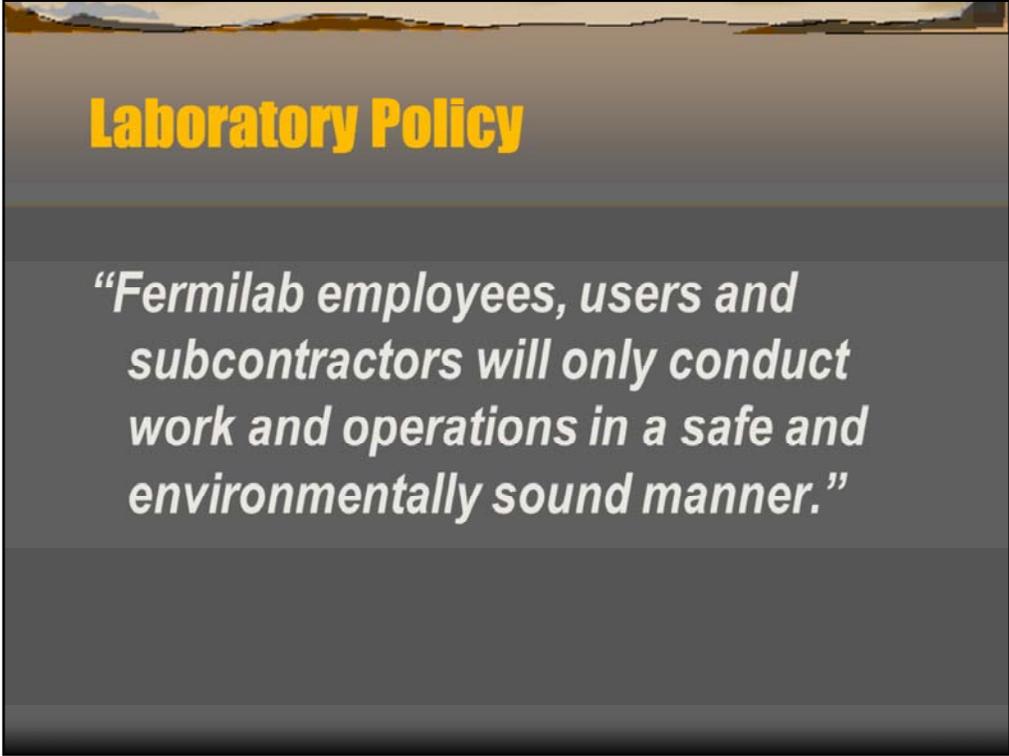
- ⇒ Understand the special precautions necessary for supervising summer students
- ⇒ Show how the IESHM Core Functions directly apply to job supervision of summer students
- ⇒ Learn the steps supervisors can take to minimize potential injuries to summer students
- ⇒ The importance of making a good first impression

Explain class objectives to your audience

## **Class Content**

- ⇒ Laboratory Policy and Goals
- ⇒ Issues surrounding Working Teens
- ⇒ Summer Student Injury Data
- ⇒ New Employee Orientation (NEO)
- ⇒ Supervisor Actions for Teen Worker Safety
- ⇒ Prohibited Activities for employees under 18
- ⇒ Radiation Exposure for employees under 18
- ⇒ Informational Resources

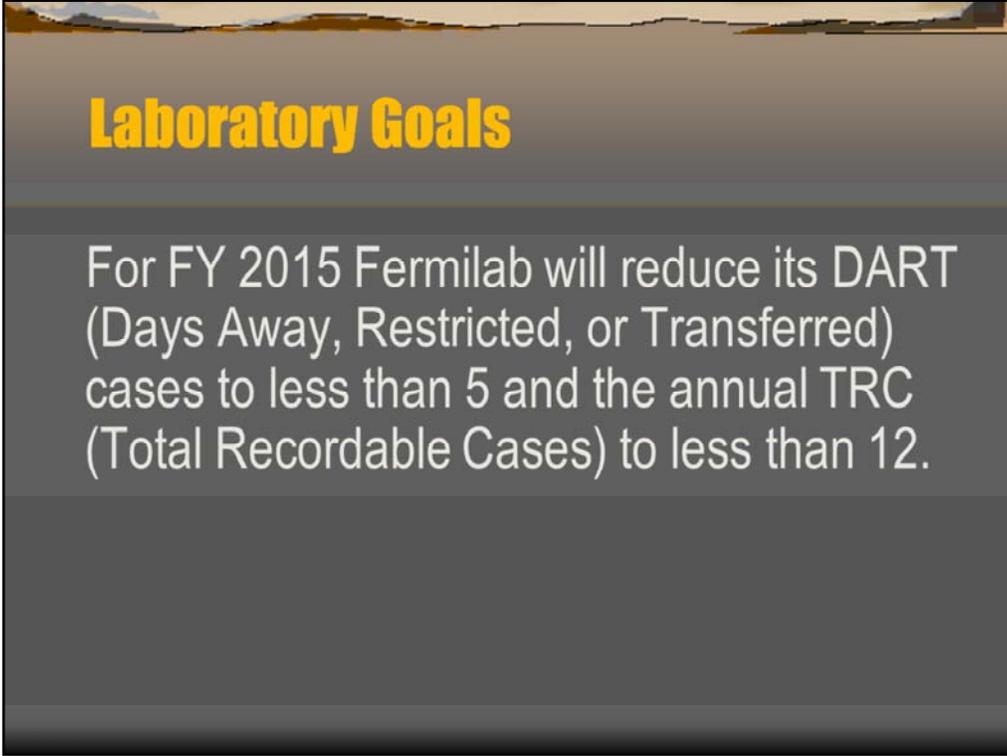
Explain class content to your audience

A presentation slide with a dark background and a light-colored header. The header contains the title "Laboratory Policy" in yellow. Below the header, the main text is in white and italicized, enclosed in quotation marks. The slide has a thin landscape image at the top.

## Laboratory Policy

*“Fermilab employees, users and subcontractors will only conduct work and operations in a safe and environmentally sound manner.”*

This lab Policy was developed in conjunction with the initiatives to reduce injuries on site beginning in 1997-1998.

A presentation slide with a dark background and a light-colored header. The header contains the title "Laboratory Goals" in yellow text. Below the header, the main text is in white and states: "For FY 2015 Fermilab will reduce its DART (Days Away, Restricted, or Transferred) cases to less than 5 and the annual TRC (Total Recordable Cases) to less than 12." The slide has a decorative top border with a landscape image.

## Laboratory Goals

For FY 2015 Fermilab will reduce its DART (Days Away, Restricted, or Transferred) cases to less than 5 and the annual TRC (Total Recordable Cases) to less than 12.

- Ask your audience if anyone knows whether or not Fermilab met its DART rate goals for 2015.
- Days Away, Restricted or Transferred are injuries that either cause an employee to lose a day of work or be restricted or transferred from doing his or her normal job.

## Laboratory Goals – Cont'd

YEAR	2009	2010	2011	2012	2013	2014	<u>2015 Goals</u>
TRC	26	19	21	38	24	23	< 12
DART	12	6	6	17	7	10	< 5

No, in 2014 the lab did not meet its TRC and DART Goals. Click on the 2015 Goals link to see how the lab is doing as of the date the class is given.

Recent Human Performance Improvement (HPI) analysis of our injury data have identified five (5) key areas in need of improvement:

**Planning Scheduling**  
**Procedure Development or Use**  
**Supervisory Involvement**  
**Communication**  
**Work Practices**

## Why Set Safety Goals?

- ⇒ Moral Responsibility
- ⇒ Demanded by contemporary society
- ⇒ Good Business Practice

- Pain of an injury
- Loss of productivity
- Loss of franchise to operate
- Injury Costs (\$)

## Young Workers\*

- ⇒ 18.1 million young workers (ages 16-24) worked in the labor force in 2013. This represents 13% of the US workforce
- ⇒ 335 young workers were killed on the job in 2013
- ⇒ Workers < 25 years old were **twice as likely** to end up in the emergency room as those 25 years and older.
- ⇒ Every 9 minutes, a U.S. teen gets hurt on the job

\* According to CDC and OSHA Websites

Ask some rhetorical questions of your audience:

- How many of these injuries will be at Fermilab?
- Could any of these deaths occur in your work areas?

## Working Teens-Cont'd

- ⇒ Inexperience
- ⇒ Superman syndrome

- For Inexperience use discussion on “No chance to gain Common Sense.” They don’t know the process well enough to know what may or may not hurt them.

- For Superman syndrome mention that they don’t believe they can be hurt and therefore are inclined to take higher risks.

## Summer Student Injury Data 2005-2014

Year	DART	Medical Treatment	First Aid	All Injury
2005	0	0	4	4
2006	0	0	2	2
2007	0	0	5	5
2008	0	1	1	2
2009	0	0	1	1
2010	0	1	1	2
2011	0	0	4	4
2012	0	0	1	1
2013	1	0	4	5
2014	0	0	0	0
<b>Total</b>	<b>1</b>	<b>2</b>	<b>23</b>	<b>26</b>

Explain what DART, MT and FT and AI mean;

DART = Days Away, Restricted or Transferred

MT = Medical Treatment Cases

FA = First Aid Cases

AI = All Injury Cases (Total)

## Summer Student Injury Data 2005-2014

- ⇒ Hands make up ~40% of all injuries
- ⇒ Arms (including the hand) account for ~50% of all injuries
- ⇒ Occupations with frequent injuries include:
  - outdoor work
  - soldering operations
  - equipment maintenance

Some general observations of the injuries

## Summer Student Injury Data 2005-2014

### → Type of injuries:

- Lacerations (cuts)
- Allergic reactions (poison ivy & insects bites)
- Contusions (struck by or against)
- Repetitive Motion/Overexertion
- Burns (heat)
- Foreign Body (eyes/hand)
- Slips, Trips and Falls

Here is a slide showing the GENERAL injury types. Read some individual cases of serious injuries from past years.

## New Employee Orientation

- Fermilab's safety policies
- Stop work authority
- IESHM core functions and principles
- Hazard Analysis Process
- OSH protection for employees at Government Owned Contractor Operated (GOCO) facilities

Open by mentioning the importance of the NEO, and review the topics the summer students receive in NEO.

## New Employee Orientation - Cont'd

- ⇒ Employee access to exposure and medical records
- ⇒ Lab's emergency procedures
- ⇒ Lab's EMS and WM/P2
- ⇒ Lab's HazCom and GHS Program
- ⇒ General Employee Radiation Training

- In addition to the NEO you should provide a local orientation

- Mention to the Supervisors that the Summer Students will also receive this very training session in NEO, however from the reference point of the Summer Student and not the Supervisor.

# Supervisor Actions for Teen Worker Safety

## Pre-job orientation & (IESHM Principles and Core Functions)

- a.) Explain Division/Department operations
- b.) Give them clear instructions and review safety/health requirements of job
- c.) Ask them to repeat your instruction and give them an opportunity to ask questions
- d.) Show them how to perform the task, then watch them as they do it, correcting the mistakes

- Let this over head segue into a short discussion on the ISM Core Functions (given on the next overhead):

- 1.) Define Work
- 2.) Analyze Hazards
- 3.) Establish Controls
- 4.) Perform Work
- 5.) Provide Feedback & Improvements

## Supervisor Actions for Teen Worker Safety-Cont'd

- e.) Ask them if they have any additional questions
- f.) Utilize “buddy or mentoring systems” where possible
- g.) Ensure employees get any additional required training (Individual Training Needs Assessment on WEB)
- h.) Utilize Fermilab New Employee Checklist

- Supervisors should instill within the employee the concept to “Stop--Ask Questions--Take Precautions.”

— SHOW CHECKLIST by clicking on link

## **Integrated ESH Management Principles**

- ⇒ Line Management responsible for safety
- ⇒ Clear roles & responsibilities
- ⇒ Competence commensurate with responsibilities
- ⇒ Balanced priorities
- ⇒ Identification of safety standards & requirements
- ⇒ Hazard controls tailored to work
- ⇒ Operations authorization

# Integrated ESH Management Core Functions

- ➔ Define Work
- ➔ Analyze Hazards
- ➔ Establish Controls
- ➔ Perform Work
- ➔ Provide Feedback & Improvements

Rehash part of the Fermilab Safety Stand-down efforts from last December.

## **Prohibited Activities for employees under 18 years of age\***

- ⇒ Driving a motor vehicle and being an outside helper on a motor vehicle
- ⇒ Power-driven woodworking machines
- ⇒ Power-driven hoisting apparatus
- ⇒ Power-driven metal-forming, punching, and shearing machines

\* From Fair Labor Standards Act

This information is taken from the Fair Labor Standards Act. Be sure to click on link and show information for FLSA **and** other pertinent course handouts and informational resources.

### [Summer Student and Safety Websites](#)

1. [Teen Workers – OSHA Link](#)
2. [Young Worker Safety and Health](#)
3. [DOL – Restricted Activities for Employees Between the Ages of 16-18](#)
4. [IL Statutes – Restricted Activities Under the Age of 16 See Section 205/7 Hazardous Occupations](#)

## **Prohibited Activities for employees under 18 years of age -Cont'd**

- ⇒ Power-driven circular saws, band saws, guillotine shears, chain saws, reciprocating saws, wood chippers, and abrasive cutting discs
- ⇒ Roofing operations and all work on or about a roof
- ⇒ Excavation operations
- ⇒ Exposure to radioactive substances and to ionizing radiation unless specific permission has been granted by the Laboratory Senior Radiation Safety Officer

- Ask if anyone in the class has a summer student greater than or equal to 18 years of age. If yes, ask if they will be exposed to radiation exposure beyond GERT level training.

## **Specific Radiation Requirements for employees under 18 years of age**

- ➔ Prior approval of the Senior Radiation Safety Officer (SRSO) is needed to enter a posted radiation area or any other radiological area.
- ➔ Not permitted to enter radiation areas where the dose rate exceeds 10 mrem/hr.
- ➔ Annual radiation dose may not exceed 100 mrem.

From Radiation Manual



## **Specific Radiation Requirements for employees under 18 years of age-Cont'd**

- Must carry a dosimeter when entering any radiation area and a daily dosimeter log must be kept by the supervisor and reviewed by the ES&H Department/Group.
- Special radiation safety training, approved by the SRSO, must be given to persons under 18 years of age who could potentially receive more than 10 mrem, as estimated by the RSO.

## Summary

- ⇒ Reviewed Laboratory policy and goals
- ⇒ Discussed concerns associated with working teens
- ⇒ Reviewed summer student injury data
- ⇒ Reviewed what's covered in NEO
- ⇒ Discussed supervisor actions for teen worker safety
- ⇒ Reviewed the prohibited activities and radiation exposure policy for employees under 18
- ⇒ Reviewed informational resources

Summarize what was discussed and if there are any additional questions. Show class the additional information available to them on the ESH webpage.