

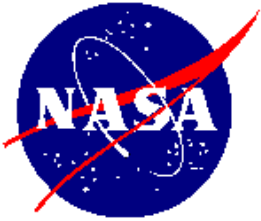
Mission Success Starts With Safety



Construction Safety

SSC Construction Inspection
Safety Findings/Stats

November 2013



Mission Success Starts With Safety



Contact Info:

NASA Safety

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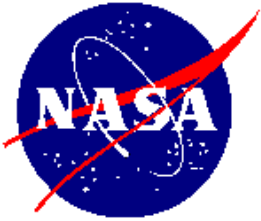
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Mission Success Starts With Safety



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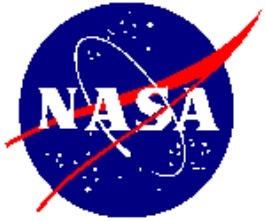
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228-688-3701 fax

<http://constructionsafety.ssc.nasa.gov/>



Construction Safety Findings: 4-8 November 2013

Findings Total: 2

-Serious Findings: 0

-Less than Serious Findings: 2

1. Multiple minor issues found incorrect on an in-use scaffold, indicating the scaffold was not inspected by a competent person. 29 CFR 1926.451(F)(3)
2. Concrete cutting or chipping wet method was not in place while an was employee jack hammering concrete block, creating a visible dust cloud. SCWI 8715.0008 (9.23.2)

Mishaps / Close Calls: 1

-Mishap: 1

1. A construction contractor struck a buried natural gas line while excavating for the placement of a potable water line.

-Close Call: 1

1. A gust of wind blew the blast door at the east pier B-2 Test Stand into a 480 volt temporary power line, cutting the insulation, and tripping the circuit breaker which fed it. The breaker panel/circuit breaker (which was in the T/S basement) was identified and tagged out. The power was then verified to be off and the line was repaired.





Construction Safety Findings: 11-15 November 2013

Findings Total: 1

-Serious Findings: 1

-Less than Serious Findings: 0

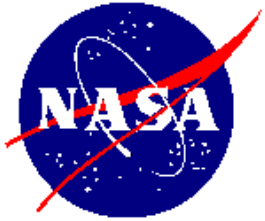
1. A worker was observed in an area clearly marked "Fall Protection Required" without wearing the appropriate fall protection gear. SCWI-8715-0003 (4.4)

Mishaps / Close Calls: 1

-Close Call: 1

1. Contractor employees were working on B-2, level 8 when a maul hammer dropped to level 7 due to vibration from jackhammer activities. The hammer was laying unsecured and unattended and not in use when the vibration caused it to fall. The hammer fell from level 8 to level 7, then continued down the flame bucket to the ground. There were no injuries and no property damage.





Mission Success Starts With Safety



Construction Safety Findings: 18-24 November 2013

Findings Total: 0

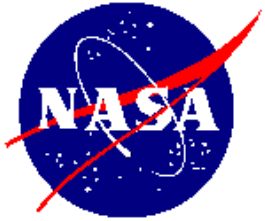
-Serious Findings: 0

-Less than Serious Findings: 0

Mishaps / Close Calls: 0

Other:

Over the weekend, emissions testing occurred on the recently installed catalysts on Cooper-Bessemer # 1 and Nordberg #9 at Building 4400 (HPIW). Some of the work involved highly hazardous activities and was executed without incident due to proper planning by the contractor and outstanding support from FOSC and TOC employees. Initial results of the testing look positive.



Mission Success Starts With Safety



Construction Safety Findings: 25-29 November 2013

Findings Total: 0

-Serious Findings: 0

-Less than Serious Findings: 0

Mishaps / Close Calls: 0



Mission Success Starts With Safety



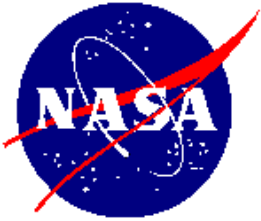
Construction Safety



National Aeronautics and
Space Administration
John C. Stennis Space Center
Stennis Space Center, MS 39529-6000

SCWI-8715-0008
Rev. E
October 2014

John C. Stennis Space Center
Construction Safety and Health Program



Construction Safety

4.0 ROLES AND RESPONSIBILITIES *(page 11)*

4.1 NASA SSC Construction Contractors

Construction contractors at SSC shall:

Old:

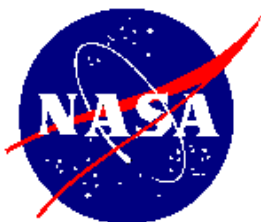
6. Ensure at least one (1) supervisory employee is trained in the course "Intro to Mishap Investigations" per contract. This course shall be taken within five (5) working days after being named to perform or support an accident investigation.

New:

6. Ensure at least one employee is trained in the Mishap Investigation Board Orientation (posted to the Construction Safety Site at <http://constructionsafety.ssc.nasa.gov/> per contract. This course shall be taken within five (5) working days after granting of notice to proceed to enable support of an accident investigation.


Justification:

This is a NPR 8621.1 (NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating and Recordkeeping) imposed on each Organization under NASA contract that incurs the responsibility of reporting, investigating and recording of mishaps/close calls. This course was only offered through SATERN and was extremely difficult to administer to construction contractor personnel. There was a very small percentage of training that actually took place.



Construction Safety

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Monday, December 02, 2013

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Publications¹

- [SPR 8715.1](#) SSC Safety and Health Requirements
- [SSP-8715.0001](#) SSC Safety and Health Handbook
- [SCWI 8715.0001](#) John C. Stennis Space Center Lightning Warning System
- [SCWI 8715.0002](#) Personal Protective Equipment
- [SCWI 8715.0003](#) John C. Stennis Space Center Fall Protection Program
- [SCWI 8715.0004](#) Confined Space Entry Program
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- [SCWI 8715.0008](#) SSC Construction Safety and Health Program
- [SCWI 8715.0012](#) John C. Stennis Space Center Work In Hazard Classification Areas
- [SCWI 8715.0013](#) SSC Control of Hazardous Energy Lockout/Tagout and Non-Service/Maintenance Hazardous Energy Isolation
- [SCWI 8715.0014](#) Heat Stress Program
- [SCWI 8700.0002](#) Health Physics (Radiation) Program Procedures
- [SCWI 8838.0002](#) Hot Work Program Procedure
- [SSTD-8070-0115-MSC](#) Office Trailer Tie-downs, Blocking & Electrical Connections
- [SPLN 1040.0006](#) Emergency Management Plan
- [36 CFR 1026](#) Safety and Health Regulations for

Tool Box & Monthly Meeting

Tool Box Topics from OSHA
Despite its high fatality rate, construction can be a safe occupation when workers are aware of the hazards, and use an effective Safety and Health Program. This eTool will help you identify and control the hazards that commonly cause the most serious construction injuries. [View more](#)

Monthly Safety Presentations¹

DATE	MINUTES	PRESENTATIONS	VIDEOS
Nov 7, 2013	Minutes	Presentations	Videos
Sept 5, 2013	Minutes	Presentations	Videos
Aug 1, 2013	Minutes	Presentations	Videos
July 11, 2013	Minutes	Presentations	Videos
June 6, 2013	Minutes	Presentations	Videos
May 2, 2013	Minutes	Presentations	Videos
Apr 4, 2013	Minutes	Presentations	Videos
Mar 7, 2013	Minutes	Presentations	Videos
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NASA Construction Safety:

Primary:
Mike Rewis
228-688-2663

Alternate:
Robert Gargiulo
228-688-3842

Construction POC:
Daryl Kostareck
228-688-3641

> Mishap Exposure Report

> SHETrak

Mishap Investigation Board Orientation

Welcome to Your New Job Investigating Mishaps

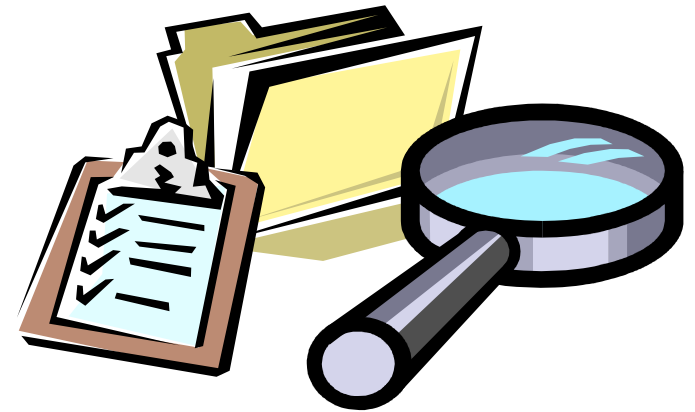


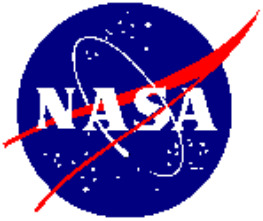
The explosion of a Titan IVA with a NRO satellite in August 1999 was caused by wiring defects. Titan IV quality defects were linked to the overemphasis on cost cutting and the loss of experienced personnel.

Source: General Tattini, ELV Payload Safety Conference 2004.

Agenda

- **NPR 8621.1 Overview**
- **What's a Mishap?**
- **Classification of Mishaps**
- **What Happens After a Mishap Occurs**
- **Notional Investigation Timeline**
- **Two Types of Mishap Investigations**
- **Purpose of Safety Investigation**
- **Investigating Authority**
- **Products of Investigation – Report Contents**
- **Endorsement of Report**
- **Overview of Investigation Process**
- **Summary**





Construction Safety

8.0 SAFETY AND HEALTH PROVISIONS *(page 34)*

8.1 Contractor's General Safety and Health Plan

8.2 Plan Contents

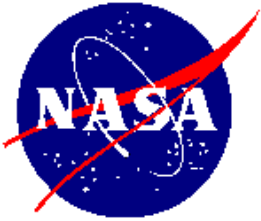
2. Individual work instructions or procedures shall include the following:

Added:

vv. Workplace Violence prevention

Justification:

This is an OSHA "Area of Emphasis." As an OSHA VPP site, SSC should assist contractors in preparing a safety and health plan that meets or exceeds OSHA requirements.



Construction Safety

9.0 SPECIFIC REQUIREMENTS OVERVIEW *(page 40)*

9.3 Personal Protective Equipment

Construction contractors at SSC shall:

Old:

All personnel performing construction activities and visitors to construction sites shall wear appropriate PPE. Contractors will provide appropriate PPE to employees and ensure that all visitors to construction sites are allowed access only when wearing appropriate PPE.

Minimum PPE on construction sites shall be hard hats, safety glasses with side shields, protective-toed shoes, and high-visibility safety apparel.

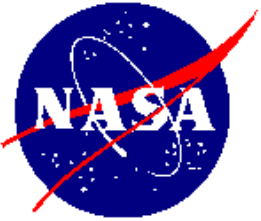
New:

All personnel performing construction activities and visitors to construction sites shall wear appropriate PPE. Contractors will provide appropriate PPE to employees and ensure that all visitors to construction sites are allowed access only when wearing appropriate PPE. The appropriate PPE ensemble shall be decided by the activity hazard analysis for the construction activity.

For Designated Construction Zones, the minimum PPE shall be hard hats, safety glasses with side shields, protective-toed shoes, and high-visibility safety apparel. The minimum PPE requirements pertain to all personnel entering the Designated Construction Zone. Additional PPE above the minimum shall be based upon the activity hazard analysis.

Justification:

There appeared to be some confusion at SSC about who was/was not performing construction work and what PPE was required.



Construction Safety

9.0 SPECIFIC REQUIREMENTS OVERVIEW *(page 73)*

Added:

9.34 Barricades

Barricades shall be used to warn or to control/block access to an area with potential and/or existing hazards. When the work is completed or the barricade is no longer needed the tape shall immediately be taken down. It is the responsibility of the person/group that set the barricade up to take it down.

1. Physical barriers/barricades (ropes, chains, cables, boards, steel piping, etc) shall be used to prevent access to an area with existing hazards. As the hazards warrant, the physical barrier may need to be of sufficient strength to prevent a person from falling or breaking through, such as to prevent a person from falling to a lower level or to block an opening. Physical barriers may also be used to force the flow of traffic in the desired direction.
2. Barricade tape shall be used to as a minor impediment to warn personnel or to prevent “accidental” entrance to an area or situation. Tape is not considered a physical barrier/barricade.
 - a. Red tape with black “DANGER” or “DANGER DO NOT ENTER” lettering designates immediate danger and the area it guards shall not be entered until and unless permission is obtained from the owner of the area. Only authorized personnel shall enter a designated “DANGER” area. All others shall go around or get permission to enter from the responsible person. A sign shall be attached on or near the red barricade tape, in a conspicuous location, detailing the reason for the barricade, approximate length of time the area will be barricaded, and identifying the party who put it up and the number where they can be contacted. The tape must encompass, completely around, on all sides, of the area it is protecting.
 - b. Yellow tape with black “CAUTION” lettering shall designate an area of caution to warn personnel against potential hazards or caution against unsafe conditions or practices. You do not need permission to enter a yellow barricaded area, but you must look before you enter.
 - c. Magenta (Purple)/Yellow tape denotes DANGER and POSSIBLE RADIATION EXPOSURE and shall be used to designate a radiation area along with the required signage. Employees shall not be allowed to enter unless authorized by the radiographic personnel in charge.

Justification:

There appeared to be some confusion at SSC about who was/was not performing construction work and what PPE was required.



Construction Safety

Appendix A – Definitions *(page 74)*

Old:

Construction Site – An area where construction activities are in progress including: construction, excavation, alteration, renovation, repair, painting, decorating, surveying, and demolition.

New:

Construction Activities – Construction, excavation, alteration, renovation, repair, painting, decorating, surveying, and demolition.

Justification:

There appeared to be some confusion at SSC about who was/was not performing construction work and what PPE was required.



Construction Safety

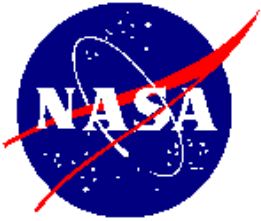
Appendix A – Definitions *(page 77)*

Added:

Designated Construction Zone – An area where construction occurs which is designated by Construction Safety Officials as having heightened risk commensurate with the need to establish a baseline minimum safety protocol to assure safe work practice.

Justification:

There appeared to be some confusion at SSC about who was/was not performing construction work and what PPE was required.



Construction Safety

<http://constructionsafety.ssc.nasa.gov/>

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Monday, December 02, 2013

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NASA Construction Safety:

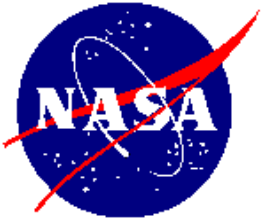
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228-688-3641

> Mishap Exposure Report

> SHETrak



Construction Safety

To: NASA SSC Community
Subject: Emergency Outdoor Notification System Information
Date: November 4, 2013

**What is
Happening:**

The Emergency Outdoor Notification System is a new accessible web site for all SSC personnel. The “All Clear” tones have been changed in order to differentiate from the “Warning” tones.

Please click on the link, <http://ssccommunity.ssc.nasa.gov/ONS/index.asp>, to view the information and listen to the different warning announcements and warning tones during severe weather or emergencies.

For questions:

Contact:

- Stennis Data Center:
- via email: ssc-sdcops@mail.nasa.gov
- via Phone: x8-2525 option 2, sub-option 2

Source: SSC Office of Safety & Mission Assurance

<http://constructionsafety.ssc.nasa.gov/>

What's a Close Call? A close call is an event or condition that may have resulted in an accident, injury, or illness, but due to other factors did not.

Examples: * A broken circular saw is not locked and tagged out; someone turns on the saw but notices the defect before trying to use it. * A forklift operator takes a turn too quickly, dropping his cargo and nearly hitting a nearby worker.

Why report close calls? The best method to PREVENT accidents is to correct hazards before they result in injury, illness, or damage. Reporting close calls gives us a chance to correct these hazards before an accident occurs.

Who reports close calls? YOU! Just fill out the reverse of this page and fold on the line below to show mail stop; drop in site mail.

Contact **NASA Safety** at 228-688-2762 for immediate attention.

Let's Keep Each Other Safe

REPORT CLOSE CALLS

**NASA SMA
Bldg. 1100, Room 309**

Stennis Space Center

Close Call Report

Location: Building _____ Room _____ Date _____ Time _____

Describe Incident: What happened? What was the potential danger? Could people have been hurt, equipment have been damaged or test data been affected?

Suggested Action: Offer your recommendation for preventing this close call. List any actions taken.

I have fixed this problem and do not need any further action.

Originator:

I give permission to release my name & number to the person investigating the close call.

Note: Do not check this box if you want your name kept confidential.

"You do not have to give us your name, mail code, or phone number. However, without them, we cannot contact you if there are any questions and may not be able to address the problem or provide you feedback on the results of the investigation. Safety will keep your name confidential unless you check the box above."

Name _____

Mail Code/Company _____

Phone _____

File Number
(Office Use Only)

--

Safety Alert

MSA Rope Grab Assembly Failure



DESCRIPTION: A worker was performing a mid-day inspection on their fall protection equipment when a defect in the snap hook was noted. A rivet on the locking/release mechanism was missing rendering the locking mechanism inoperable. In the right circumstances, the snap hook could actually be locked in the open position.

PHOTO:



CONTRIBUTING FACTORS/INVESTIGATION FINDINGS:

- Investigation ongoing – the failed rivet was located and is being sent for failure analysis.
- In February 2013, a product inspection notice was issued by another fall protection system manufacturer (attached) regarding possible rivet failure on YOKE Industrial Corp snap hooks. The same YOKE snap hooks are utilized on the MSA system that failed. The YOKE manufacturer symbol is identified by the red arrow in the above picture.



An excerpt from the Yoke Industrial Corp. notice: "snap hook products produced by YOKE Industrial Corp. in 2012 wherein one or more of the rivets used to secure the gate or back latch of the hook to the body of the hook may have been installed but not pressed to permanently hold the rivet in place. YOKE Industrial Corp. has stated that the un-pressed rivets are the result of infrequent random human error. This manufacturing defect may cause the un-pressed rivet to fall out of the hook and/or be pushed out of the hook. Using hooks with this defect may cause accidental disengagement or unfastening of the hook while it is in use; which could result in serious injury or death."

Incident:
304800

Facility:
Redwater

Date Posted:
10/2/2013



MSA Rope Grab Assembly Failure



CORRECTIVE ACTIONS:

- Removed all MSA fall protection equipment utilized in this project from service. This is the second MSA component failure on this project. Replacement equipment will be from another manufacturer.
- Issue a Wholesale wide alert recommending increased inspection on MSA fall protection assemblies and any other fall protection systems utilizing YOKE Industrial Corp snap hooks.

TENETS OF OPERATION:

1. Perform Hazard assessments and correct unsafe actions or conditions.
5. Report personal safety, process safety, environmental and near miss incidents immediately and implement corrective actions.
10. Protect yourself, others and equipment from risk by understanding the situation before proceeding..

Use the Tenets of Operation as a set of values to influence and guide your everyday work decisions and activities, as these values will challenge risk and prevent incidents.

Incident:
304800

Facility:
Redwater

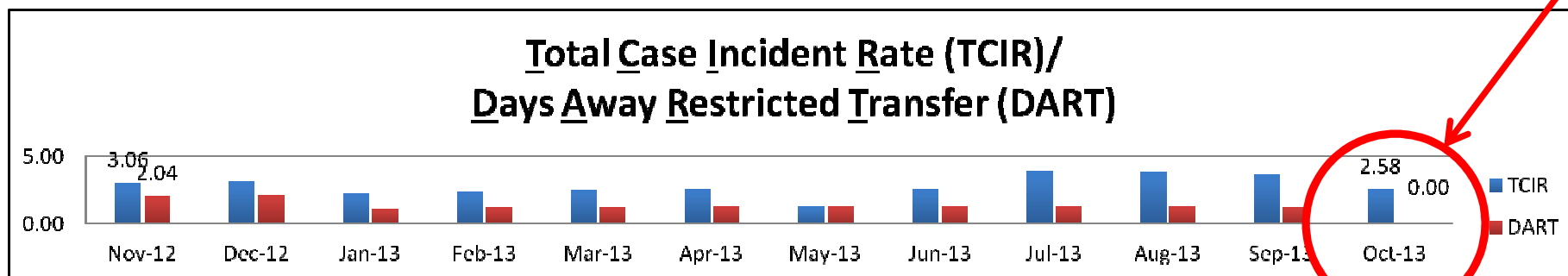
Date Posted:
10/2/2013





SSC Construction Metrics

- For the month of September:
 - No NASA Direct Construction Recordable Injury/Illnesses occurred.
 - One NASA Direct Construction Close Call occurred, specifically:
 - A potable water construction contractor struck a natural gas vent while backing up a refueling truck.
- For the month of October:
 - No NASA Direct Construction Recordable Injury/Illnesses occurred.
 - One NASA Direct Construction Close Call occurred, specifically:
 - A potable water construction contractor employee was digging a trench to install a sixteen inch diameter water line when the excavator bucket damaged a two inch compressed air line that was buried at a depth of two feet. (The air line, which ran perpendicular to the water line was not represented on any drawing, thus was not located/safed via vacuum excavation.)



2011 NAICS Industry Code (Construction) TCIR = 3.9
2011 NAICS Industry Code (Construction) DART = 2.1



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Questions?

<http://constructionsafety.ssc.nasa.gov/>



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Have a SAFE month!

<http://constructionsafety.ssc.nasa.gov/>