



Mission Success Starts With Safety



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# SSC Construction Contractor Safety Meeting

June 06, 2024



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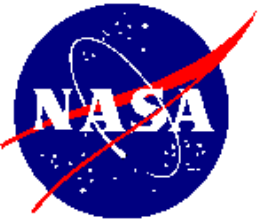
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# Construction Safety

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SSC Construction Inspection  
Safety Findings/Stats

May 2024



# Construction Safety Report: 01 May – 31 May 2024

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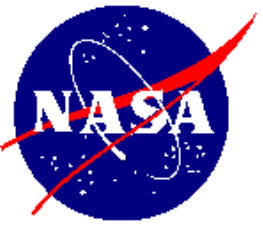
## Findings: 2

### Level 1 Severity : 2

On May 2, contractors were observed welding inside a 64" pipe at A1 test stand, utilizing an extension cord routed in front of an entry access foot hold, creating a potential tripping hazard. The same cord also showed signs of strain relief. It was immediately removed from service.

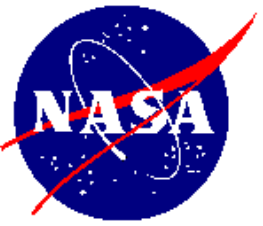
### Level 2 Severity : 0

### NMIS Mishaps/Close Calls: 0



# Tripping Hazard





# Discussion Topics

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- Safety Topics:
  - Heat and Hydration
  - Smoking while on SSC
  - Hurricane Preparedness for construction sites



# HEAT STRESS Risk Factors

Workers should be aware of the many factors that can impact the risk of heat illness.

## Environment

- High temperatures, especially with high humidity, which makes sweating less effective
- Direct sun exposure
- Lack of wind or breeze to cool the body; however, when ambient conditions are higher than body temperature, warm airflow can actually *increase* heat gain
- Proximity to engines or other hot equipment



## Activities

- High exertion
- Not enough rest breaks
- Repeated strenuous days in the heat
- High motivation to push through discomfort from heat strain



Photo by NIOSH

## Points to Remember:

- **Acclimatization is critical**  
Lack of acclimatization is a major factor in heat-related deaths on the job.
- **Hydration is critical**  
Dehydration greatly increases the risk of heat illness. Don't wait to hydrate! Drink cool water even if you are not thirsty – at least 1 cup every 20 minutes.
- **A recent illness can temporarily lower your heat tolerance**
- **Be aware of other personal risk factors for heat illness:**
  - Prior heat illness
  - Certain medications
  - Certain health conditions
  - Alcohol use within 24 hours of working in heat

## No Acclimatization

- New employees
- Experienced employees returning from time away from the heat
- Acclimatized workers who experience a sudden change in worksite temperature, such as heat waves or mining in a new area



## Medications

- Heat tolerance can be affected by medications taken for
- cold, allergies, and congestion
  - muscle spasms
  - blood pressure
  - urine production (diuretics)
  - high blood pressure
  - diarrhea
  - dizziness/vertigo
  - psychosis
  - depression



## Dehydration

- One of the most important risk factors



## Health Conditions

- Short-term illnesses, such as diarrhea, vomiting, or respiratory infections
- Chronic conditions, such as diabetes and heart disease
- Being overweight or obese
- Poor physical fitness



## Prior Heat Illness

- Increases the risk of heat illness in the future



## Other Factors

- Age over 60
- Non-breathable clothing or personal protective equipment
- Alcohol use in the past 24 hours

## Water Keeps You Going.





# Summer Months

## Heat and Hydration awareness April thru September.

- All AHA's / SPA's **MUST** address Heat and Hydration daily.
- Heat topics included in all new hire orientations.
- Drinking water coolers are sanitized weekly and a log kept.
- Drinking water coolers are taped daily with the date of fresh water
- We encourage job rotations when working in direct sunlight.
- We encourage covers over workers in direct sunlight.
- Posted signs all work areas:
  - Are you drinking enough water recommended intake.
  - Post heat index matrix in work areas.
  - Post urine color levels in portable johns.
- Monitor coolers all day for availability of cool water.
- Ask if staff is drinking water.
- Take breaks for hydration as needed.
- Post a thermometer for quick temperature reference.
- Any worker feeling the effects of heat notify their supervisor immediately, remove them to a cool area and provide water.

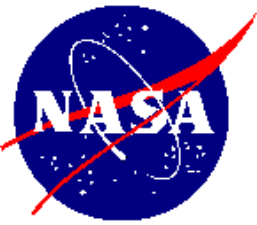
## AM I HYDRATED?

Urine Color Chart

1		
2		If your urine matches the colors 1, 2, or 3, you are properly hydrated.
3		Continue to consume fluids at the recommended amounts.
4		If your urine color is below the <b>RED</b> line, you are
5		<b>DEHYDRATED</b> and at risk for cramping and/or a heat illness!!
6		<b>YOU NEED TO DRINK MORE WATER!</b>
7		
8		

Source: <http://tt.tennis-warehouse.com/showthread.php?t=440453>





# Heat Category & Index

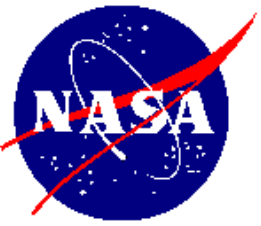
Category	Flag	Heat Index	Intensity of Prolonged Exposure and/or Physical Activity
Okay		Less than 80°F (< 27°C)	
Caution		80 - 90°F (27 - 32°C)	Fatigue possible with prolonged exposure and/or physical activity.
Extreme Caution		90 - 105°F (32 - 41°C)	Sunstroke, muscle cramps, and/or heat exhaustion possible with prolonged exposure and/or physical activity.
Danger		105 - 129°F (41 - 54°C)	Sunstroke, muscle cramps, and/or heat exhaustion likely. Heat stroke possible with prolonged exposure and/or physical activity.
Extreme Danger		130°F or higher (54°C or higher)	Heat stroke or sunstroke likely.

Heat Index Chart (air temperature and relative humidity)

Temperature (F) versus Relative Humidity (%)

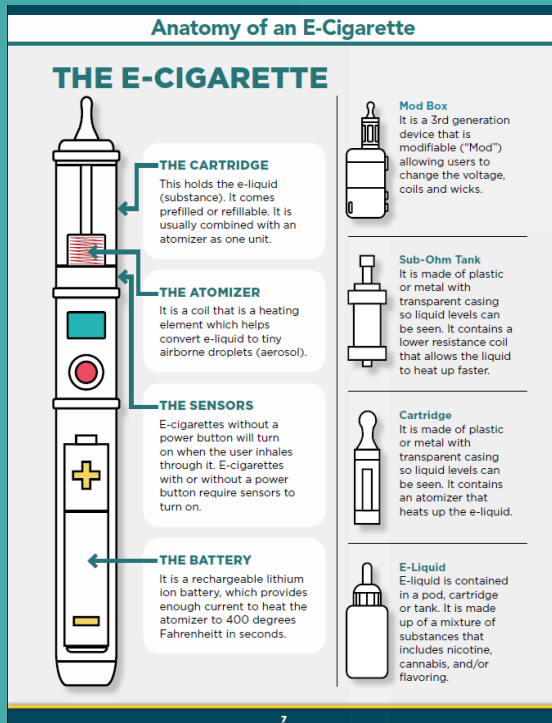
°F	90%	80%	70%	60%	50%	40%
80	85	84	82	81	80	79
85	101	95	92	90	86	84
90	121	113	105	99	94	90
95		133	122	113	106	98
100			142	129	116	103
105				148	133	121
110						135

HI	Possible Heat Disorder:
80°F - 90°F	Fatigue possible with prolonged exposure and physical activity.
90°F - 105°F	Sunstroke, heat cramps and heat exhaustion possible.
105°F - 130°F	Sunstroke, heat cramps, and heat exhaustion likely, and heat stroke possible.
130°F or greater	Heat stroke highly likely with continued exposure.



# Smoking While on SSC

## E-CIGARETTES AND OTHER VAPING DEVICES



Per NASA NPD 1800.1 Smoking, including electronic cigarettes (e-cigarettes) at SSC is prohibited as follows:

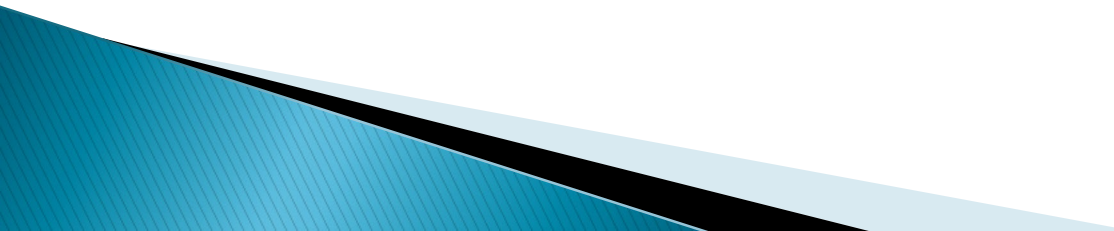
- (1) Inside all interior space owned, rented, or leased by NASA Stennis Space Center (SSC).
- (2) In courtyards and in any outdoor areas within 25 feet of doorways and air intake ducts.
- (3) In any location identified as a no-smoking area (e.g., liquid hydrogen storage tanks, fuel storage and transfer areas, etc.).
- (4) In SSC vehicles leased through the General Services Administration (GSA) or Government owned vehicles.
- (5) In any location where flammable or combustible materials are present.

# Hurricane Preparation Tips for Construction Sites

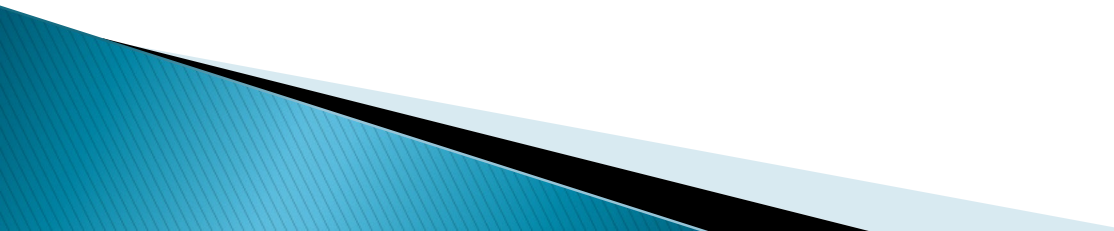
6/6/2019



# Hurricane Preparation Tips for Construction Sites

- ▶ Just as you prepare your home and family for an impending hurricane, it's important to prepare construction job sites.
  - ▶ Planning ahead now can make a big difference in how well your construction site fares during the storm.
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# Hurricane Preparation Tips for Construction Sites

- ▶ Local emergency operations officials and the National Weather Service will provide hurricane landfall probabilities.
  - ▶ Approximately 60 to 48 hours before the hurricane is expected to make landfall, consider canceling the delivery of building materials to your job site except any materials needed to secure the building site from storm damage.
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# Hurricane Preparation Tips for Construction Sites

- ▶ While contractors generally don't want to stop or delay construction activities, the 48 to 24 hour window before landfall is the suggested time to stop all construction activity.

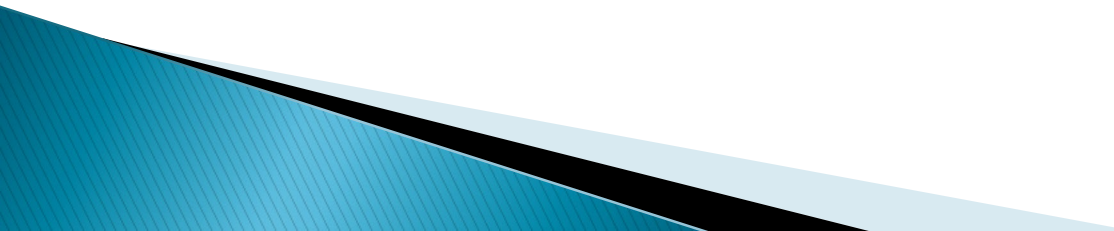


# Hurricane Preparation Tips for Construction Sites


Contractors are encouraged to activate their hurricane job site plan during this window of time.

- ▶ Helpful hints for site protection include:
  - Secure all job sites.
  - Clean up all construction debris.
  - Tie or band together all loose plywood and lumber.
  - Secure other loose building materials/supplies.
  - Remove permit board and all job site signage.
  - Locate and turn off electricity, water and gas.

# Hurricane Preparation Tips for Construction Sites

- ▶ After the site is secure, advise subcontractors to leave and not return until the hurricane threat has passed.
  - ▶ Make sure to have contact numbers for all subcontractors stored in a secure and dry place, and that they know who will contact them after the hurricane passes.
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# Hurricane Preparation Tips for Construction Sites

- ▶ Other sensible precautions include ensuring batteries are reliable in all important tools – including cell phones. The construction industry depends on cell phones and other wireless communication devices to coordinate hurricane preparations and clean up after the hurricane passes. Reliable batteries are vital for getting back to normal on the job.
  - ▶ Make sure to fill up gas tanks in all vehicles and equipment that might be needed to secure or escape job sites.
  - ▶ If there are valuable items that must remain at the site, take photographs for insurance purposes before leaving.
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# Hurricane Preparation Tips for Construction Sites

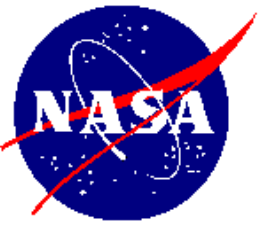
- ▶ During the last 24 hours before the hurricane makes landfall, go home and take care of your family and personal property.



# Reminders

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- End of month MER's and Training reports need to be turned in for MAY.
- Next meeting will be held on July 11<sup>th</sup> due to the 4<sup>th</sup> of July holiday.



# Questions



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