E&C *HSE Best Practices Manual*



E&C Improvement Plan	Pre-Project HSE	Education and Orientation	HSE Awareness
Incident Reporting and Investigation	Pretask Planning	Management in Action	Audit and Assessment
		Attachments	Index

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E&C HSE Improvement and Consistency Program

Best Practice: E&C's HSE Improvement and Consistency Plan

E&C Improvement Plan | Pre-Project HSE | Education and Orientation | HSE Awareness

Incident Reporting and Investigation | Pretask Planning | Management in Action | Audit and Assessment

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Best Practice: E&C's HSE Improvement and Consistency Plan

Where used: Globally

Purpose: The E&C HSE Improvement and Consistency Plan is designed and implemented to provide consistency in applying the HSE Management System and improve safety performance across all E&C sites.

Results: Sites successfully implementing this program will experience heightened worker HSE awareness, HSE consistency in operations, reduced incidents due to the observation of leading indicators, and better alignment with client expectations and programs

How-To: This program was introduced in 2010 with a **letter from Frank Erichson** (Attachment 1).

The Program should be implemented and measured according to the following instructions. The program has four elements, numbered below.

1. **Increase awareness and adherence to Fluor's ZERO Incident 12 high impact incident reduction techniques.** See **HSE Management System** **Practice 000.653.0100** (Attachment 2).
2. **Measure performance with four leading indicator activities involving all levels of the workforce:**
   - **Management Assessments** (Attachment 3)**.** Site management assessments in field.
   - **Supervisor Hazard Recognition** (Attachment 4)**.** Supervisor assessments in field.
   - **Safety Task Assignments** (Attachment 5)**.** Supervision completing preplanning activities.
   - **Hazard Elimination** (Attachment 6)**.** All employees involved in identifying, correcting, and documenting hazards.
3. **Raise awareness with a continuous communication plan.** The importance of keeping our HSE awareness at the highest levels at all times is paramount. Therefore, an HSE communication series has been developed that involves frequent reminders of the 12 ZERO Incidents techniques throughout the next year. These are continuously put in front of the projects from the local and corporate level to keep the ZERO Incidents culture fresh.
4. **Align with customer-driven programs.** Many of our clients have practices or processes that are considered best-of-the-best, either in the industry or to the client themselves. At E&C, we want to make sure we are appropriately evaluating, implementing, and using these practices with the objective of achieving the ZERO Incidents culture.

In accordance with the Improvement Plan, E&C sites are required to:

- Implement the ZERO Incidents program training, which includes a training video and a comprehension test for participants.
- Implement the ZERO Incidents program communication awareness campaign to maintain high visibility. The sites are provided with awareness materials such as **posters**, **toolbox topics**, **brochures**, and **handouts** (Attachments 7, 8, 9 and 10).
- Communicate and implement the 12 ZERO Incidents techniques throughout the project.
- Engage our clients in the plan, conduct gap analyses, and make sure client best practices are implemented.
- Implement and track the four leading indicator activities.

Pre-Project HSE

Best Practice: Site Strategic Safety Improvement Plan

Best Practice: Safety, Security, Health, and Environmental Activity Schedule

Best Practice: Incident Flow Chart – Fluor and Client Agreement

Best Practice: Weekly One-on-One Contractor Management Dialog

Best Practice: Site Strategic Safety Improvement Plan

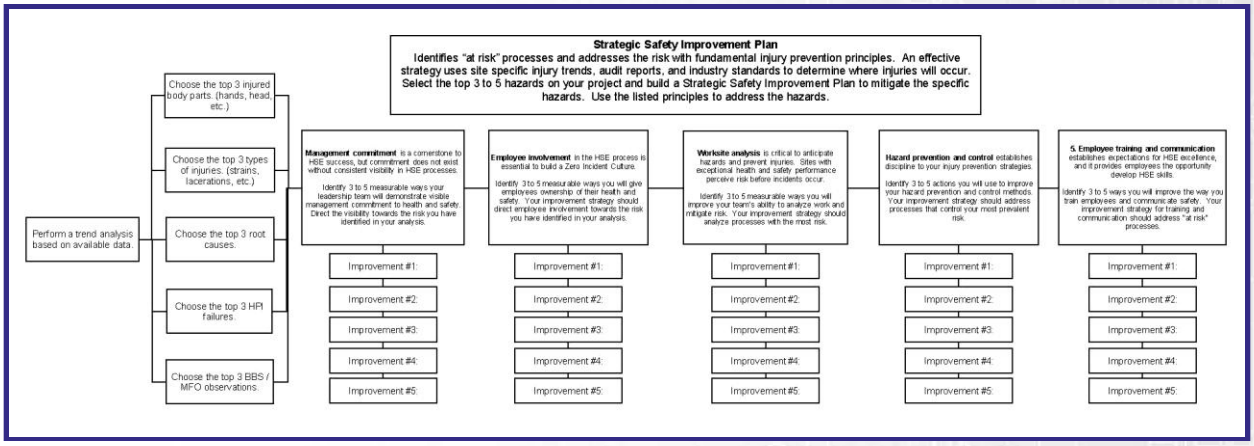
Where used: Globally

Purpose: The Safety Improvement Plan identifies at risk processes and addresses the risk with fundamental injury prevention principles.

Results: Hazard identification and mitigation improves safe performance and lessens injuries.

How-to: An effective strategy uses site-specific injury trends, audit reports, and industry standards to determine where injuries will occur. Select the top three to five hazards on your project and build a strategic safety improvement plan to mitigate the specific hazards. Then use the listed principles to address the hazards.

See an example **Site Strategic Safety Improvement Plan** (Attachment 11).



Best Practice: Safety, Security, Health and Environmental Activity Schedule

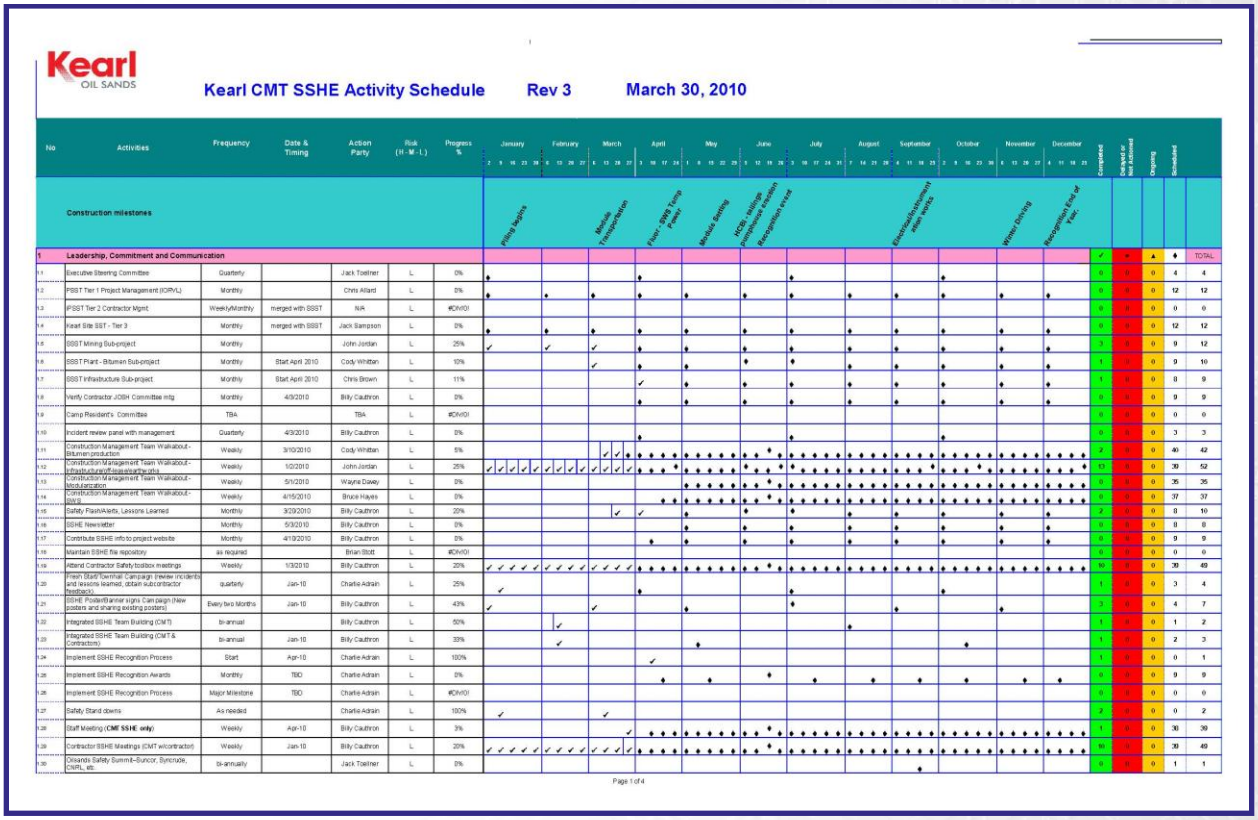
Where used: Exxon Mobil Development Company (EMDC), Client: Exxon Mobil, Country: Canada
Kearl Oil Sands, Client: Kearl, Country: Canada, Region: North America
RasGas, Country: Qatar, Region: EAME

Purpose: This activity schedule is used to plan important activities and plot their progress.

Results: Improved preplanning of activities will allow for better prediction and mitigation of hazards, thus better mitigation of incidents.

How-to: The Activity Schedule is used at the front end of the project to help identify and determine the necessary systems and programs that will be required. It is used to track and close out specific program elements throughout the life cycle of the project.

See Kearl's **Safety, Security, Health and Environmental (SSHE) Activity Schedule** (Attachment 12).



Kearl OIL SANDS

Kearl CMT SSHE Activity Schedule Rev 3 March 30, 2010

No	Activities	Frequency	Date & Timing	Action Party	Risk (H - M - L)	Progress %
	Construction milestones					
1	**Leadership, Commitment and Communication**					
1.1	Executive Steering Committee	Quarterly		Jack Toellner	L	0%
1.2	PSST Tier 1 Project Management (IOR/VL)	Monthly		Chris Allard	L	0%
1.3	PSST Tier 2 Contractor Mgmt	Weekly/Monthly	merged with SSST	N/A	L	#DIV/0!
1.4	Kearl Site SST - Tier 3	Monthly	merged with SSST	Jack Sampson	L	0%
1.5	SSST Mining Sub-project	Monthly		John Jordan	L	25%
1.6	SSST Plant - Bitumen Sub-project	Monthly	Start April 2010	Cody Whitton	L	10%
1.7	SSST Infrastructure Sub-project	Monthly	Start April 2010	Chris Brown	L	11%
1.8	Verify Contractor JOBH Committee mtg	Monthly	4/9/2010	Billy Cauthron	L	0%
1.9	Camp Resident's Committee	TBA		TBA	L	#DIV/0!
1.10	Incident review panel with management	Quarterly	4/3/2010	Billy Cauthron	L	0%
1.11	Construction Management Team Walkabout - Bitumen production	Weekly	3/10/2010	Cody Whitton	L	5%
1.12	Construction Management Team Walkabout - Infrastructure/Mobilization/Plant/Mine	Weekly	1/2/2010	John Jordan	L	25%
1.13	Construction Management Team Walkabout - Mobilization	Weekly	5/1/2010	Wayne Davey	L	0%
1.14	Construction Management Team Walkabout - SWS	Weekly	4/15/2010	Bruce Hayes	L	0%
1.15	Safety Flash/Alerts, Lessons Learned	Monthly	3/29/2010	Billy Cauthron	L	20%
1.16	SSHE Newsletter	Monthly	5/3/2010	Billy Cauthron	L	0%
1.17	Contribute SSHE info to project website	Monthly	4/19/2010	Billy Cauthron	L	0%
1.18	Maintain SSHE file repository	as required		Brian Stott	L	#DIV/0!
1.19	Attend Contractor Safety toolbox meetings	Weekly	1/3/2010	Billy Cauthron	L	25%
1.20	Fresh Start/Townhall Campaign (review incidents and lessons learned, obtain subcontractor feedback)	quarterly	Jan-10	Charlie Adrain	L	25%
1.21	SSHE Poster/Banner signs Campaign (New posters and sharing existing posters)	Every two Months	Jan-10	Billy Cauthron	L	43%
1.22	Integrated SSHE Team Building (CMT)	bi-annual		Billy Cauthron	L	50%
1.23	Integrated SSHE Team Building (CMT & Contractors)	bi-annual	Jan-10	Billy Cauthron	L	33%
1.24	Implement SSHE Recognition Process	Start	Apr-10	Charlie Adrain	L	100%
1.25	Implement SSHE Recognition Awards	Monthly	TBD	Charlie Adrain	L	0%
1.26	Implement SSHE Recognition Process	Major Milestone	TBD	Charlie Adrain	L	#DIV/0!
1.27	Safety Stand downs	As needed		Charlie Adrain	L	100%
1.28	Staff Meeting (**CMT SSHE only**)	Weekly	Apr-10	Billy Cauthron	L	3%
1.29	Contractor SSHE Meetings (CMT w/contractor)	Weekly	Jan-10	Billy Cauthron	L	20%
1.30	Oilsands Safety Summit-Suncor, Syncrude, CNRL, etc.	bi-annually		Jack Toellner	L	0%

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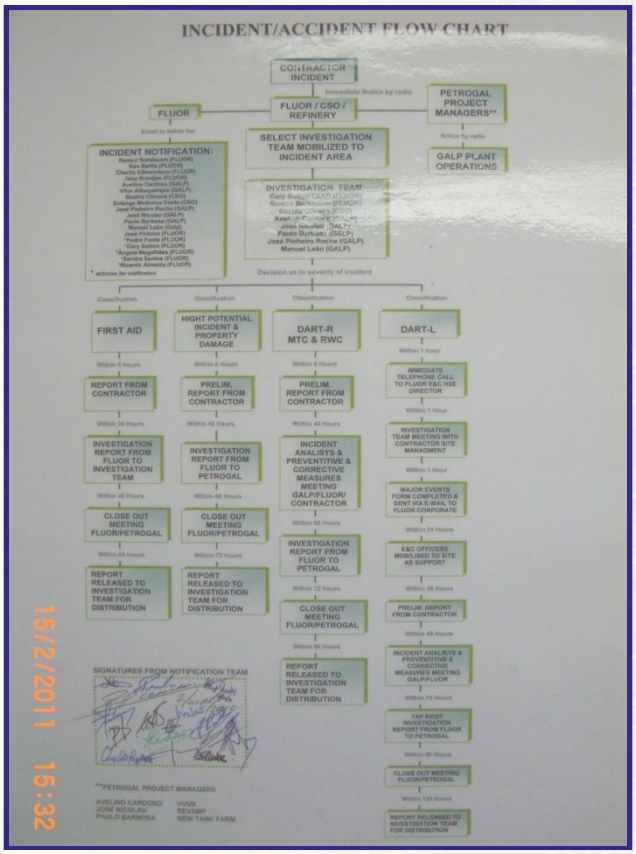
Best Practice: Incident Flow Chart – Fluor and Client Agreement

Where used: Porto GALP PRCP Project, Client: Energia, Country: Portugal, Region: EAME

Purpose: This flow chart is used as a reference to align Fluor and the client in a seamless process to enable instant notification of all responsible parties in the event of an incident.

Results: Improved communications and alignment with the client, as well as more immediate and focused response during an incident.

How-to: Reference the flow chart below. Note that each participant has signed off in agreement with the process and his or her responsibility.



Best Practice: Weekly One-on-One Contractor Management Dialog

Where used: Ticona TiGer Project, Client: Celanese, Country: Germany, Region: EAME

Purpose: This weekly meeting is used to gain a very tight and continuous HSE alignment with the contractor's top management and Fluor/client HSE Management.

Results: Improved alignment and relationship in HSE and more effective communication.

How-to: Establish weekly meeting time with contractor management and ensure follow through.

- The highest level manager for each contractor is involved.
- Discuss issues that need to be corrected.
- Communicate upcoming activities.
- Get feedback and input for improvements.
- Request support of the safety program.
- Make sure top manager has clear commitment to our safety program.
- Keeps safety on the radar screen of every manager onsite.

Education and Orientation

Best Practice: Working at Height Scaffold Training Structure

Best Practice: HSE Honors Program

Best Practice: Working at Height Scaffold Training Structure

Where used: Ticona TiGer Project, Client: Celanese, Country: Germany, Region: EAME

Purpose: The structure gives trainees hands-on experience on how to work safely at height.

Results: The structure has proven quite useful as it permits training of workers on multiple safe work practices at height under the supervision of the trainer.

How-to: After a classroom session on working at heights, employees go to a scaffold structure to demonstrate individuals' ability to properly climb stairs and ladders (maintaining three points of contact), transitioning from one level to another, 100 percent tie off technique, proper grating barricading, and removal policy.





- Induction training to cover basics of the site expectations.
- Specialty training (Do not assume workers are trained to the standards CE expects).
  - Confined space
  - Working at heights
  - Lock out – Tag out
  - Grinder safety
  - Hot work
  - Permit and STA
- Hands on training – Work at heights class (second level).
- Classes translated to native languages.
- Use of local translators, as well as contractor's translators, to make certain of understanding.
- Refresher training offered and accepted.
- Managed behavior in class – Improper attitude/behavior in class equals out the gate.



- Training was resisted by contractors at first, but now contractors are requesting training.

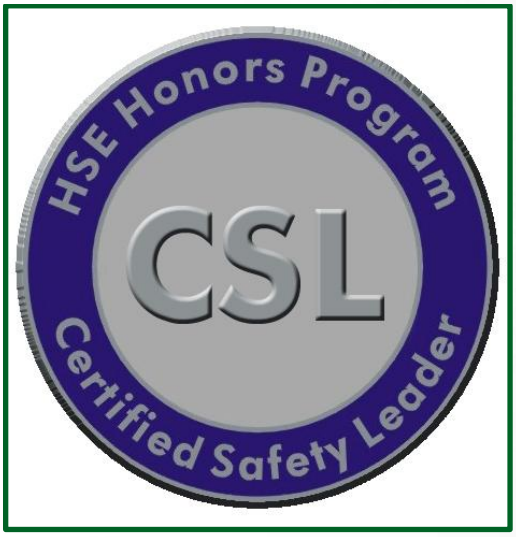
Best Practice: HSE Honors Program

Where used: Globally

Purpose: The HSE Honors program was established for Office and Field employees to enable Fluor to expand training globally and develop goals for HSE professionals.

Results: The diversity of this program and the end result of the Certified Safety Leader (CSL) medals will provide employees with a consistent method to experience different learning opportunities and encourage professionals to continue their learning throughout their career at Fluor.

How-to: The program is a progressive process where employees can take classes and accumulate credit hours from approved HSE Honors classes. After achieving a designated level of credit hours, through courses described in Knowledge OnLine and Fluor University, along with other approved courses, employees will receive a CSL medal acknowledging they have completed the requirements defined in the progressive-level program. As employees obtain more credit hours through the program, they can graduate through a bronze, silver, gold, and platinum status.









HSE Awareness

Best Practice: Daily Bugle Newsletter

Best Practice: Project Signage, Posters, and Banners

Best Practice: Multilingual Flash Cards

Best Practice: Scope Split Recognition High-Visibility Vests

Best Practice: Site Manager Message

Best Practice: Human versus Machine Interface Safety

Best Practice: Site Specific Safety Alerts

Best Practice: Safety Passport

Best Practice: "Safety Johnny" On-the-Job Field Demonstrations

Best Practice: Monthly Lottery

Best Practice: Housekeeping

- *Adopt a Floor*
- *Housekeeping Visual Plan*

Best Practice: Knowledge Centers

Best Practice: Daily Bugle Newsletter

Where used: Porto GALP PRCP Project, Client: Energia, Country: Portugal, Region: EAME

Purpose: The Daily Bugle Newsletter is a safety related newsletter published for the Project Turnaround. It is intended to give Fluor, the client, and the contractors safety-related information and progress during the project turn around.

Results: Forty-six newsletters were published and displayed on project boards in one of the turnaround units, which was completed without any recordable incidents. The newsletter was part of the overall HSE turnaround plan/strategy. It was essential that safety awareness and Fluor campaigns be relayed to all project personnel. Enhanced safety performance and reduced incidents were the result.



FLUOR galp

DAILY BUGLE

PORTO REFINERY CONVERSION PROJECT - SHUTDOWN – EDITION 33
DAYS REMAINING 9
TIE INS COMPLETED 723
TIE INS REMAINING 134

PERSON FALLS THROUGH ACCESS TRAP DOOR ON SCAFFOLD

On 26th October 2009 24 year old laborer Antonio Santos was working on a construction site in the North of Portugal. He was required to help the pipe fitters and welders install pipe work on a new large pipe rack. The morning of 26th October was just like any other day, Antonio left his house and said goodbye to his wife and small child who at the time was only 6 months old.

When he arrived at work he got into his work clothes and met his supervisor who told him to get tools and go to the pipe rack with the pipe fitter and welder.

To climb the scaffold they had to use an access way with trap doors and would work in the top platform. At 9 30 am in the morning he was talking to his friend the pipe fitter and stepped back through the trap door opening. He fell only 2 ½ meters but hit his head on the way down and could not move his right leg.

The supervisor called the ambulance and Antonio was taken to the local Hospital. He had a left broken leg and a cracked skull and had to stay in the hospital under observation for 3 days.

Antonio has not worked since his accident and has found it difficult to pay the family bills for the house and living. His wife had to get work and works long hours so he has to try and take care of his daughter. The family was planning to go on holidays that Antonio had saved for but because of the accident all their money has gone on surviving.

Antonio was a good footballer and had even had trials with local football teams. But the doctor said he will never fully recover from his injury enough to play football to a high standard

Antonio's little daughter is now 18 months old and is as any other child is always full of energy and running round. This is something he cannot do.

And the reason for all this....somebody could not be bothered to close the trap door on the access scaffold.

Remember it is your life that will be shattered...

INFORMATION CENTRE

SAFETY TICKETS GREEN 250 YELLOW 13 ORANGE 7 RED 2

NEAR MISSES 5
LOST TIME 0
MEDICAL TREATMENT 0
FIRST AID 3

WEATHER

MATOSINHOS

DATE THU 6 FRI 9 SAT 6 SUN 7 MON 8

Published by: Gary Sutton & Ângela Magalhães 05.11.2010

- Little to no cost because it was produced by HSE manager and administrator
- Daily kickoff sessions with employees
- Communicates recognition
- Communicates areas for improvement
- Based for NED employees
- Specific focus on shutdown
- Visual aid
- Multilingual
- Day and night shifts

Best Practice: Project Signage, Posters, and Banners

Where used:
Ticona TiGer Project, Client: Celanese, Country: Germany, Region: EAME, and Porto GALP PRCP Project, Client: Energia, Country: Portugal, Region: EAME

Purpose: Signage, banners, and posters all lend in keeping HSE programs, awareness, and pride high. They all act in unifying workers with a shared pride of accomplishment or shared goal.

Results: Highly visible HSE awareness tools keep safety on employees' minds and are a constant reminder and guide for safe behaviors.

How-to: Project sign boards, erected in a safe and visible location, become a focal point for employees. The boards are updated daily to be a primary information center. The board displays management messages, HSE alerts, MS20 reports, safe work hours, weekly management walk scores, contractor of the month winner, etc. Banners displayed from the buildings and stairways with key safety messages spread HSE pride and awareness.



Signs are used for many purposes:

- Warning signs on barricades, energized electrical gear, and energized systems
- Signs to show walkway passages

Posters with photos of unsafe behaviors and correct behaviors help demonstrate safe work processes to employees and offer them visual and sometimes striking reminders of the importance of safety.

Signage should be changed periodically to keep employees' interest up. Themes should target current or near-term risks.








Falling objects can kill!


TiGer Project
Hunt the hazards
Erkenne die Gefahren


Willkommen
im
TiGer Project
Arbeite sicher
Pass auf dich auf
Mach mit
Mach deinen
Tag sicher!!!


TiGer Project
DANKE FÜR
IHR SICHERES
ARBEITEN
THANK YOU
FOR
WORKING SAFELY
FLUOR


WEAR
TRAGE
INDOSSA
GLOVES
HANDSCHUH
GUANTI

Ticona TiGer FLUOR

What can happen



How we stop it from happening





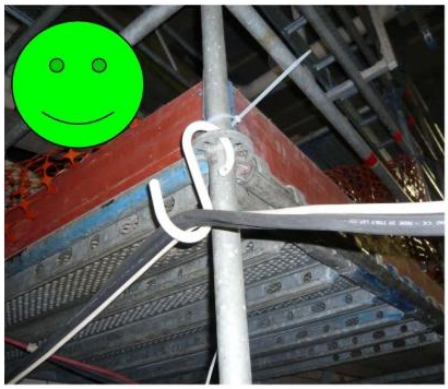
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Ticona TiGer FLUOR

Incorrect cable fastening
Do Not use Metal WIRE!



Correct fastening of Cables



1

Best Practice: Multilingual Flash Cards

Where used: Porto GALP PRCP Project, Client: Energia, Country: Portugal, Region: EAME

Purpose: These cards are produced in simple conversational wording in seven different languages. They immediately communicate a key positive response or a concern to employees of various, multilingual cultures.



Results: The flash cards greatly improve communication and demonstrate management in action. They also make certain workers with different language and cultures understand HSE processes, safe operations, and what is expected of them. The cards help unify the workers.

How-to:

When an employee performs positively, they are recognized for their actions with a positive (green “thumbs up”) card in their language. The card recognizes and commends their actions.

When an employee does not perform safely or in a positive manner, they are shown the negative (orange) card in the employee’s language. This card ensures the employee reads and understands at their actions are not acceptable.

Best Practice: Scope Split Recognition High-Visibility Vests

Where used: Porto GALP PRCP Project, Client: Energia, Country: Portugal, Region: EAME

Purpose: Visual aid for scope splits for operations, Fluor, and the contractor. Different colored vests are used for specific scopes during shut down operations or certain types of activities. This allows the client and contractor management to differentiate between the contractors and the work being performed.



Results: The use of these high visibility vests with reflective stripes promotes safety, improve morale and accountability, scope recognition, and impart a pride in Fluor and the job site.

How-to: Determine at the onset which contractor will be performing which scope. Each contractor will be assigned a specific high visibility vest color. It is best to include these details in the contract to ensure full cooperation and budget. Contractor personnel will wear the vests while on site during their assigned work activity.

Best Practice: Site Manager Message

Where used: Porto GALP PRCP Project, Client: Energia, Country: Portugal, Region: EAME

Purpose: The site manager message is a project leadership message that clearly demonstrates management in action and shows the leadership's core values.

Results: Employees see that site leadership places importance on HSE, cares about preventing incidents, and expects workers to do their part to work safely as well. Employees felt closer to Management and better informed of HSE expectations.

How-to: This message from senior management is displayed on project boards and is used as the first slide in employee orientation.



Message from the FLUOR Site Manager

Let me take the opportunity to introduce myself.

My name is Remco Borsboom, I am from Holland and I am the Site Manager from Fluor for the Porto Refinery Conversion Project.

I have a strong belief in the HSE policies that are implemented on this project that ensures a safe and pleasent working environment for all people working on the Porto Refinery Conversion Project.

H ⟶ Health S ⟶ Safety E ⟶ Environment

Health

It is Fluor's and my personal belief that all work can be executed without causing harm to the health of the people executing the works. To reach this goal we developed procedures that must be adhered to by everybody. There are always exceptions to the rules and we need everybody's help to inform Fluor (directly or via your manager) to bring these exception to Fluor's attention so we can take the necessary actions.

Safety

It is Fluor's and my personal belief that all work can be executed in a safe manner. The primary goal for this project is to achieve the project milestones WITHOUT any incidents. To achieve this Fluor has the philosophy that Safety is everybody's responsability and can only be achieved when People Care and Respect one another. We need your help to identify Hazards and unsafe situations, correct them and report them to your direct supervisor to avoid same situation in the future.

Environment

The environmental aspect is often an area that is underestimated during the execution of the works. Fluor believes that protection of the environment is as important as the Health and Safety aspect. Pollution of the environment has a direct impact on our health and/or impact on the health of the next generation(s). We all need to work as a team and take the responsability to protect the environment at all cause and adhere to the procedures applicable for this project.

As you can read in the above statements the project HSE goals can only be achieved when we all work as a team and feel personally responsable for your own safety and that of others around you.

There is NO job important enough that can not be executed in a safe manner.

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Best Practice: Human versus Machine Interface Safety

Where used: Multiple sites



Purpose: The Pedestrian Safety Campaign is meant to bring immediate awareness and risk mitigation to the serious incidents and near misses involving pedestrians and vehicular/mobile equipment.

Results: Reduced incidents and injuries resulting from human versus machine interface.

How-to: Implement a Pedestrian Safety Program in the following manner:

- Evaluate and determine Human/Vehicle Incidents and Near Misses and determine root causes. Complete one analysis per quarter.
- **Vehicle and equipment blind spots recognition and training** (Attachment 13). Diagrams within this PowerPoint detail blind spots for cranes, man lifts, backhoes, bulldozers, front-end loaders, bobcats, forklifts, semi-tractor trailers, and dump trucks. It is recommended that the diagrams found in this PowerPoint are posted inside the cabs and other areas on the equipment to increase the operators' and pedestrians' awareness.
- Heavy equipment safety interface with pedestrian workers presentation regarding **pedestrian safety around heavy equipment** (Attachment 14). Using a role reversal technique, allow pedestrians to sit in the equipment operator's position, and the operators to assume the pedestrian's position to get a feel for the hazards associated with the both jobs.
- **Awareness posters** (Attachments 15 and 16) help heighten awareness of pedestrian/mobile equipment interface.
- **Banksman Training Course** (Attachment 17) is a short PowerPoint presentation covering the basic requirements for the use of standard hand signals which are given in the Health and Safety (Signs and Signals) Regulations 1996 L64. Inspired by the Yield for Safety Pedestrian Safety Campaign 2010, this presentation covers the features and specific rules governing the use of hand signals, including accessories and the coded signals to be used. It includes a link to a short video which is available on the UK Health and Safety Executive (HSE) website, and a short quiz. This presentation is designed to be used in conjunction with a practical demonstration and training session.
- Map out physical barriers, pedestrian protection and walkways.

- **Work Zone Traffic Toolbox Topic** (Attachment 18). When implementing a pedestrian and traffic safety program at your site, it's important to develop and use a site plan that provides traffic flow details. Be sure to use flaggers, traffic cones, and/or highway channeling devices to steer vehicles/mobile equipment away from workers. Enforce signs or message boards to warn approaching vehicles/mobile equipment of work area.
- Reference Practices:
  - **000.653.3200 Motorized Heavy Equipment and Light Vehicles** (Attachment 19). This practice defines the requirements for the safe operation of motorized heavy equipment and light vehicles.
  - **000.653.3211 Traffic Management Practice** (Attachment 20) defines the requirements for managing traffic in construction areas

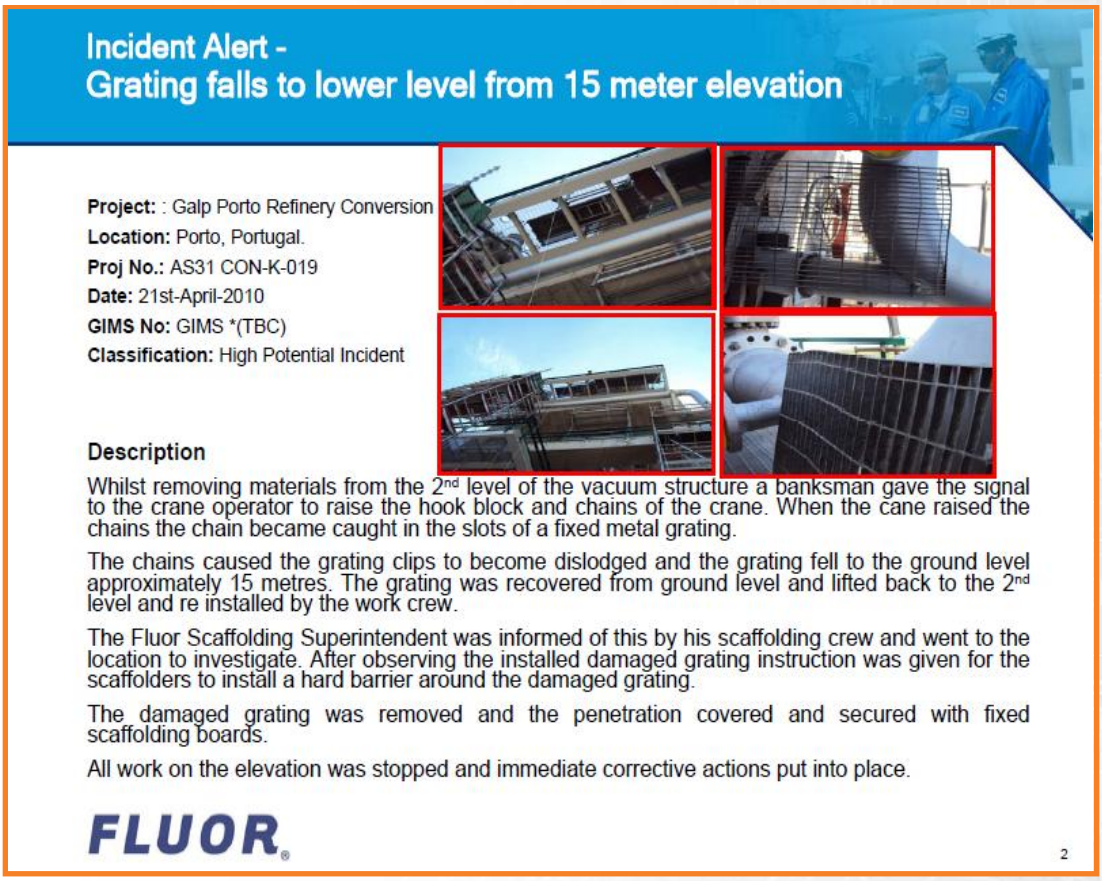
Best Practice: Site Specific Safety Alerts

Where used: Porto GALP PRCP Project, Client: Energia, Country: Portugal, Region: EAME

Purpose: Incident alerts provide employees with real life examples of incidents and injuries. This heightens awareness of what could happen.

Results: Employees are reminded of the outcome of improper safety practices, and are more inclined to work safely.

How-to: One incident alert per week (or as needed) is communicated to all project EPCs in a single, consistent format.



Incident Alert -
Grating falls to lower level from 15 meter elevation

Project: : Galp Porto Refinery Conversion
Location: Porto, Portugal.
Proj No.: AS31 CON-K-019
Date: 21st-April-2010
GIMS No: GIMS *(TBC)
Classification: High Potential Incident

Description

Whilst removing materials from the 2nd level of the vacuum structure a banksman gave the signal to the crane operator to raise the hook block and chains of the crane. When the cane raised the chains the chain became caught in the slots of a fixed metal grating.

The chains caused the grating clips to become dislodged and the grating fell to the ground level approximately 15 metres. The grating was recovered from ground level and lifted back to the 2nd level and re installed by the work crew.

The Fluor Scaffolding Superintendent was informed of this by his scaffolding crew and went to the location to investigate. After observing the installed damaged grating instruction was given for the scaffolders to install a hard barrier around the damaged grating.

The damaged grating was removed and the penetration covered and secured with fixed scaffolding boards.

All work on the elevation was stopped and immediate corrective actions put into place.

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2

Incident Alert - Leg injury caused by Grinding machine

Project: : Galp Porto Refinery Conversion

Location: Porto, Portuagal.

Proj No.: AS31 CON-K-019

Date: 17-April-2010

GIMS Inc.: TBC

Classification: First aid.

Description: A welder was performing works on a scaffolding with perforated metal scaffold boards. He was performing his works in a sitting position. The grinder was positioned next to him on the scaffold with the on/off switch faced down on the scaffold. When the welder turned around to fetch some tools he put his leg on the grinder blade and which caused the machine to switch on and injured the welder in the left lower leg.



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Findings:

- Worker was working in a sitting position because of tight space.
- Metal scaffold boards are perforated and have an up stand around the hole.
- The fitter was not nearby the welder when the incident happened.
- Grinding tool used is CE certified, was undamaged, recently inspected (Color coded) and switch was working properly (Slide up and then push in)

Lessons Learned:

- When storing a grinder next to the work place on a surface that is not smooth, the grinder must be positioned with the switch parallel to the surface it is stored on to prevent accidently activating the machine

Corrective Actions.

- Safety stand down arranged to inform all people on the incident
- Separate induction will be prepared on the correct usage of grinding machines
- Storage/usage of grinders will get special attention during Weekly Eye round by the supervisors

2

-Alerta de Segurança - Aprender a Lição

- **Se puder tente não inverter marcha**
- **Sinalizem as cabines do motoristas para lembrar o correcto procedimento**
- **Alertar todos os motoristas visitantes (use este alerta de segurança)**
- **Completar a formação no local da ocorrência do acidente**
- **Manter as pessoas longe da área de inversão**
- **Minimizar a distância que um veículo tem que percorrer**
- **Usar um sinaleiro habilitado**
- **Certificar que o veículo está equipado com um alarme audível**





2

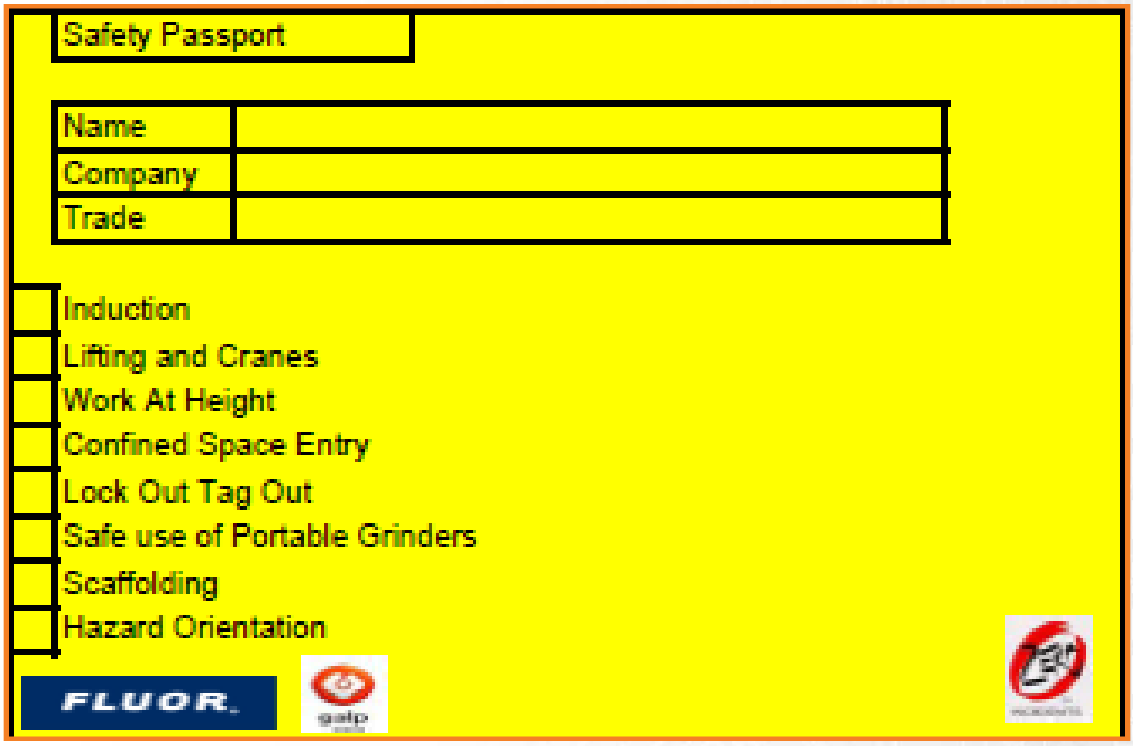
Best Practice: Safety Passport

Where used: Porto GALP PRCP Project, Client: Energia, Country: Portugal, Region: EAME

Purpose: This onsite auditing-verification system issued by HSE tracks all training for employees.

Results: The passport displays one pass for all training earned.

How-to: All training is tracked in a spreadsheet format by employee name. Each essential training course is checked off as the employee completes it. This allows the employee to track and proudly display all his/her training on one card.



Best Practice: “Safety Johnny” On-the-Job Field Demonstrations

Where used: Ticona TiGer Project, Client: Celanese, Country: Germany, Region: EAME

Purpose: Safety Johnny provides a visual consequence to not working safely. Workers can actually see a simulation of a “body” of a coworker who has been involved in a simulated accident.

Results: Workers are reminded what could happen in the event of an incident.

How-to: Safety Johnny is placed in areas on the site staged to appear as if an incident has occurred. Workers learn about the mock incident at a toolbox meeting, and preventive measures and safe work practices are discussed.









Best Practice: Monthly Lottery

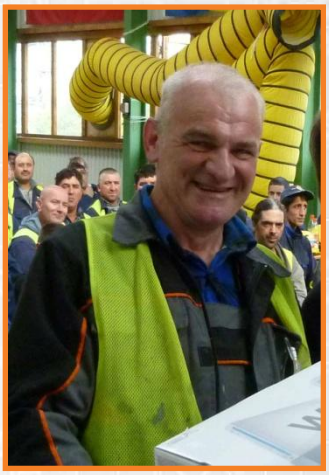
Where used: Ticona TiGer Project, Client: Celanese, Country: Germany, Region: EAME

Purpose: Safe performance is recognized and rewarded with this monthly safety lottery.

Results: Employees feel valued and recognized for their efforts. Pride and camaraderie is felt as employees rally around a shared HSE celebration.

How-to:

- Monthly safety goals are near term and keep the workers' attention.
- Started out with goal to have month with zero lost time incidents.
- Then, after a few months reset goal to zero OSHA recordables.
- Within one to two days of the end of a successful month, lottery tickets are handed out to the workers as they arrive at the site in the morning.
- Lottery held at 4:30 p.m. in canteen.
- Drinks and candy bars are handed out to everyone coming to the lottery event so everyone gets something.
- Prizes are provided by Fluor, Ticona, and the contractors (more than 70 prizes from iPods to bikes to TVs and laptops).
- Photos of winners are posted on the podium in the canteen for the following month.








55

Best Practice: Housekeeping

Where used: Globally, Client: All, Country: All, Region: All

Purpose: Housekeeping must be a part of every successful HSE program. Good housekeeping practices reduce incidents simply by making certain work areas are clear of hazards, and equipment is in good working order and is stored where it can be found when needed.

Results: Proper housekeeping improves morale, reduces injuries, and improves the condition of equipment, tools, and the work environment.

How-to:

1. Adopt a Floor

Ticona TiGer Project, Client: Celanese, Country: Germany, Region: EAME

At the TiGer Tacona Project in Frankfurt, Germany, HSE management became increasingly aware that housekeeping at the project site was becoming a concern, so they implemented the **Adopt a Floor Program** (Attachment 21) to emphasize the importance of keeping things straight.

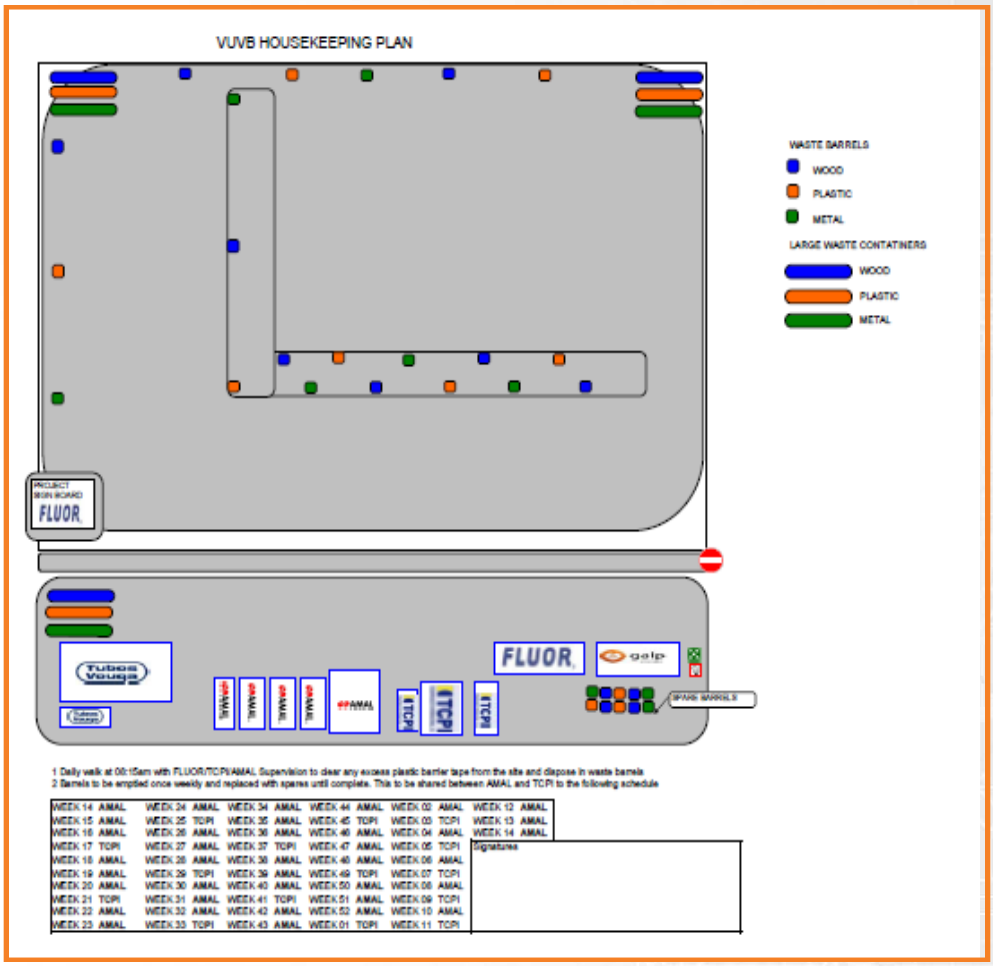
- A team is assigned a floor or area in which to control housekeeping.
- A Floor Warder completes daily focused housekeeping inspections.
- Actions are immediate and issues are resolved quickly.
- Any issues are communicated to the contractor to improve housekeeping.

2. Housekeeping Visual Plan

Porto GALP PRCP Project, Client: Energia, Country: Portugal, Region: EAME

Use a plan/diagram to ensure proper, organized housekeeping on site. The plan addresses:

- Overall housekeeping plan
- Housekeeping team
- Led by HSE department
- Specific contract
- Segregation of waste
- Teams of cleaners
- Floor are wardens



Reference

000.653.3300 (Attachment 22) establishes the expectations and requirements for housekeeping. It applies to work activities and employees under the control of Fluor and its contractors.

000.653.3305, Manual Handling (Attachment 23)

000.653.2002, Eating and Sanitation Facilities (Attachment 24) is for areas in which food is stored or prepared, including lunch and break rooms.

000.653.1002, Office Safety (Attachment 25) is for offices and administrative storage areas on the site, including temporary contractor trailers.

Toolbox topics, **Housekeeping Makes Your Job Easier** (Attachment 26) and **Don't Forget Good Housekeeping** (Attachment 27) help acquaint employees to the benefits of housekeeping.

Best Practice: Knowledge Centers

Where used: Ticona TiGer Project, Client: Celanese, Country: Germany, Region: EAME

Purpose: Knowledge Centers are focal points situated around the site for employees to gather for safety meetings and find information and supplies to help them perform and complete their jobs safely.

Results: The Knowledge Centers assisted both Fluor and the subcontractors in effectively communicating HSE information to employees in the field and providing necessary PPE items.

How-to: The Knowledge Centers are focal points situated around the site for employees who may need extra information to help them perform and complete their jobs safely. The site established 16 centers and add more as needed.

Within these Knowledge Centers, we keep lists of personnel mobile/cell numbers, weather reports for the forthcoming week, color coding inspection charts, ear plugs and glasses cleaner, copies of the safety task assessment form in multiple languages, permits, and a pigeon hole where all contractors can place their permits once signed.

Our construction and safety superintendents are found at these Knowledge Centers first thing in the morning to sign off on these permits, ensuring our subcontractors can begin their work with minimal delay. We also keep a list of dos and don'ts, which provide that extra information to help employees maintain compliance with our safety rules, as well as the most up-to-date project safety statistics; any HSE alerts that may be issued, like the recent H1N1 flu alert; and information regarding project HSE competitions.

The project director and client project director hold weekly sessions each Wednesday at noon, with a nominated eight work crew members from each contractor on the TiGer Project. The crews are invited to lunch and asked to share their views and thoughts on the various aspects of the project from safety to daily construction tasks. They also gain an inside view of what steps management are taking towards the successful completion of the TiGer Project. This is also a chance for the crews to tell management of what actions they can take to help them complete their activities safely.

During the sessions, management show the crews videos, dos and don'ts of safety, and progress charts to help them understand how the project is doing. Some feedback received includes the praising of the Knowledge Centers, as many, if not all, the crews have never seen these utilized. In my opinion, this is a step forward for safety and in building a closer relationship with the work crews.



To add to the success, Knowledge Centers are sustainable as they are constructed from leftover shipping crates.

Knowledge Centers provide:

- Safety haven out on the site
- Posted photos and contact numbers for the area's responsible supervisors
- Issued permits

- Available forms – permits, STAs, safety observation cards, etc.
- Eye wash stations
- Ear plugs and eye glasses cleaners
- Fresh drinking water
- Posted safety notices
- Posted safety posters











Incident Reporting and Investigation

Best Practice: Tracking Leading Indicators

Best Practice: $MS_2 0$

Best Practice: Tracking Leading Indicators

Where used: Globally; Client: All; Country: All; Region: All

Purpose: Part of predicting and preventing incidents and near misses is observing and reacting to leading indicators.

Results: Keeping incident numbers low means paying attention to near misses and minor accidents.

How-to: According to E&C's improvement and consistency plan, sites should implement and track the following four leading indicator activities, involving all levels of the workforce.

1. **Management Assessments** (Attachment 28). Site management assessments in field.
2. **Supervisor Hazard Recognition** (Attachment 29). Supervisor assessments in field.
3. **Safety Task Assignments** (Attachment 30). Supervision completing preplanning activities.
4. **Hazard Elimination** (Attachment 31). All employees involved in identifying, correcting, and documenting hazards.

Adherence to the above linked leading indicator procedures is measured with this **key leading indicator charting tool** (Attachment 32). Sites enter the number of leading indicators observed or performed, and the tool automatically produces a compliance score. This enables the user to see easily how well the site is measuring up against E&C's plans and goals.

Best Practice: MS_20

Where used: Most E&C project sites; Client: All; Country: All; Region: All

Purpose: Another tool in the site's arsenal against incidents is the computer based program called Managing Safety to Zero, or MS_20.

Results: MS_20 has driven management supervisory and employee engagement in the HSE program. It has proven that positive results occur when all project personnel are engaged in HSE.

How-to: MS_20 is comprised of four major components that are used to track leading indicators and safety performance.

1. **Safety Audit Performance System (SAPS)** is based on a daily audit process where findings are quantified and measured and root causes are determined. SAPS has a developed database to collect the aforementioned data from the audits for trending and accountability purposes.
2. **Safety Leading Indicator Metrics (SLIM)** is a measurement database that documents proactive intervention by employees, supervision, and management.
3. **Safety Perception Surveys (SPS)** help provide safety alignment between project management and field workforces.
4. **Key Performance Indicators (KPI)** is a multi-purpose component of the MS20 program that captures individual audit results and measures them, provides a trailing indicator data bank, and measures trailing indicators in relation to audit performance.

These four components are made up of several subcomponents themselves, which are described and provided below.

Safety Audit Performance System (SAPS)

SAPS is a daily audit process and data collection center. It is a leading indicator measurement process that involves root cause determinations, quantification, and measuring of unsafe acts/conditions on a project site. It provides positive/negative trends in an effort to indicate injury or illness potential. It has recently been enhanced with KPIs that allows individual measurements of supervision, contractors, etc. SAPS consists of three components:

1. **Audit approach.** Safety performs daily audits themselves, with supervision, or with proctors but always involved during the audit process to maintain consistency and order.
2. **Audit process.** Audits are conducted and unsafe acts/conditions are documented, accountable supervision is documented, and the amount of personnel observed on each audit is documented. The auditor(s) also will follow a root cause determination process and correct and document all observed violations accordingly.
3. **Performance system.** The performance system is an automated component of SAPS that quantifies and measures data found from the daily audit process. The performance system produces probability and severity indices, accountability charts, etc. based on findings of the audits. The performance information can be produced weekly, year-to-date, and project-to-date in various forms and graphs.

Safety Leading Indicator Metrics (SLIM)

SLIM is a proactive intervention database program that allows the actions and communication of safety progress to be tangible.

It is comprised of seven leading indicator components that are measured:

1. **Safety assessment.** The safety assessment is an auditing tool a project uses when evaluating safety compliance of directives, procedures, work methods, etc. that have been established. It is effective for contractors to measure and track weekly safety performance. The total amount of assessments conducted weekly will be inputted into the SLIM database program to obtain measurements and feedback.
2. **Adopt-a-Crew program.** This program is designed to capture project superintendent participation and efforts not only at Monday morning safety meetings but at safety task assignment (STA) meetings as well. Some projects go to another level and require engineers, staff, etc. to attend these meetings. However, the main effort is making certain of thorough participation and direction from the superintendents. Participation efforts based on amount of superintendents (and others) will be inputted into the SLIM database program to obtain measurements and feedback.
3. **STA.** STAs are planning tools for supervision to aid in preparing employees for the assigned tasks and possible hazards faced during those tasks. STAs will be evaluated on a weekly basis and quantified to show all supervision required to conduct and use this tool are providing the necessary documentation needed. Once quantified, STAs will be inputted into the SLIM database program.
4. **Hazard elimination.** Hazard elimination is designed for employees in the field to acknowledge and eliminate hazards in the work areas and to document on a form provided in order to provide feedback to management. This gives employees ownership of the safety program and provides management the safety support from all employees on the project. Hazards found will be quantified as the other components are then inputted into the SLIM database program.
5. **Management walkabouts.** These are site inspections conducted by top project management (site manager) with the safety department which indicates and shows management support, visibility, and teamwork. Items found or observed will be corrected and documented as any other safety inspection. The amount of walkabouts will be quantified and inputted into the SLIM database program.
6. **Near misses.** Though many think of near misses as a trailing indicator, in this program it is established as a leading indicator. A near miss is classified as a non-incident although an incident occurred. Near misses are now measured as a component of SLIM. This particular measurement has several other subcomponents that will capture valuable information about each near miss.
7. **Training.** Employee training is a vital part of every project and important to maintain. Training is a preparatory necessity before job tasks are taken on and conducted. As part of the planning and prevention process, training hours will be quantified and inputted into the SLIM database program.

The SLIM database will generate a SLIM score by a developed formula and will measure against the current recordable rate or trailing indicator. This measurement will show trends of positive or negative proactive actions compared to the recordable rate. SLIM's main use is to indicate any failures in the leading indicator components mentioned and to provide insight on possible incidents that may occur.

Safety Perception Survey

The safety perception survey is a tool used to measure project safety status. Craft workers are given the opportunity to rate the safety program, which allows management the opportunity to improve on poorly rated areas. The survey is comprised of two components:

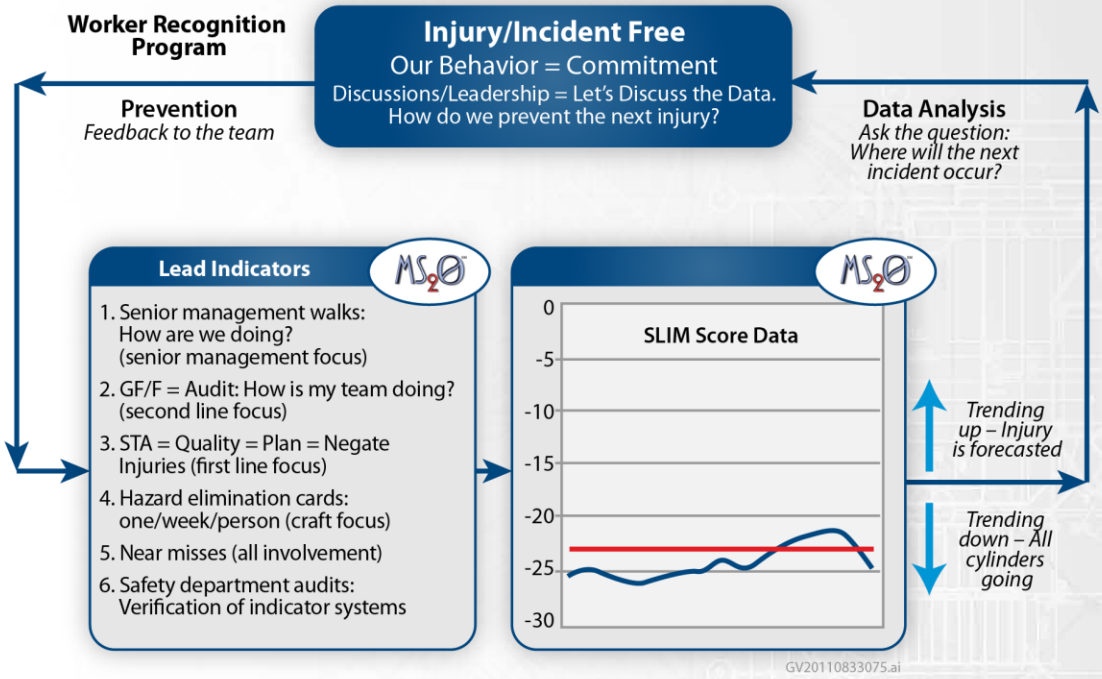
1. **Safety survey questionnaire process.** The survey consists of 25 questions with 7 main categories to answer. These include training, communication, rules and procedures, work environment, safety promotion programs, management, and individual category. A random sample of site employees is taken and a questionnaire or survey form is provided to employees. The questionnaire is completed and returned to a central location. After collection of surveys, the data is inputted into the program and results are produced.
2. **Safety survey results.** Survey results include positive and negative responses to questions about the safety program. Each question of the survey is broken out into an individual charts that show positive and/or negative responses to that question. Then all questions are wrapped up into categorical results and overall positive and negative results. Once the survey process and results are complete, the information is shared with site management where they design a path forward to each of the negative responses. Based on past survey results, management should focus on all negative responses but primarily focus on questions that produce negative responses ranging higher than 10 to 15 percent.

Key Performance Indicators (KPI)

KPI is a multi-purpose analytical component of the MS20 program. KPI has the following associated components:

1. **SAP audit enhancement.** It enhances the safety audit performance system by capturing individual field assessment results and trending them as applicable by area, discipline supervision, and contractor then assembling the data into an overall project average score and trend analysis. The analysis allows management to view overall project safety performance in a minimal amount of time, detect any negative trend that may be developing, and intervene before a negative pattern can develop increasing the potential for injury, equipment damage, or process upset.
2. **Trailing indicator analysis.** It provides a trend analysis of near miss, first aid, and recordable incidents by date, type, body part, and injury classification. This allows management to assess the data and identify a trend that may be developing in a specific craft, area, or under the supervision of particular superintendent, supervisor, or contractor.
3. **Performance rate.** It tracks the projects labor hours and OSHA recordable incident rate by both project-to-date and year-to-date, providing a comparison of current statistics to previous performance and project/company goals.

Example Integration Model



Pre-task Planning

Best Practice: Pre-task Planning

Best Practice: Pre-task Planning

Where used: Ticona TiGer Project, Client: Celanese, Country: Germany, Region: EAME

Purpose: It has been said that “if you fail to plan, you plan to fail.” Workers must identify and mitigate hazards before beginning work. An effective pre-task plan requires people to think before they act. Think about it – how do you perform a job safely when you are facing the unexpected? Learning the details of a work procedure is like studying a map before you begin driving!

Results: Safe project execution requires detailed upfront planning. Successful projects identify and mitigate hazards before work begins. Effective pre-task planning requires all of us to think before we act.

How-to: Two critical tools used to support our pre-planning efforts include job safety analyses (JSA) and safety task analyses (STA). Each tool promotes early risk anticipation, identification, recognition, and mitigation.

Job Safety Analysis (JSA)

A JSA evaluates a job in its entirety. Each job step is evaluated in effort to identify the hazards associated with that step. Once hazards have been identified, protective measures that will eliminate or control risk to an acceptable level are put in place. A JSA facilitates our need to review the risks of each job by asking questions specific to each step of that job. JSAs are completed prior to commencement of work. A team approach is used when developing JSAs. The team should include members across various functional areas that can provide specific information about the work to be performed.

Safety Task Analysis (STA)

An STA focuses on the risks associated with a specific step of a job or specific tasks for that day. The STA reminds the team of the hazards that have been identified for the task. Explain how hazards will be eliminated or controlled, any required permits, required PPE, training or certification requirements, or other measures used to minimize risk.

A supervisor should perform a STA with their crew every morning before beginning work. The STA review serves as a pre-job briefing for the day. Potential hazards in the work environment or associated with tasks to be performed are identified and discussed. Each employee should sign the STA at the start of the shift and then initial it again during a post-shift briefing. The supervisor should document any concerns or incidents that occur during the shift.

Effective pre-task planning tools require detailed thinking throughout all stages of work. Continue to document and monitor the process daily.



One-Safety Team Attendance Summary
Week Ending 22 October 2010

		18-Oct	19-Oct	20-Oct	21-Oct	22-Oct
Fluor	Safety	7	6	10	8	7
	Mgmt	13	16	20	20	14
Ticona	Safety	2	3	2	4	2
	Mgmt	5	6	7	9	7
IREM	Safety	3	4	5	5	3
	Mgmt	3	3	2	2	1
Doman	Safety	2	3	3	2	1
	Mgmt	3	5	3	3	1
WWV	Safety	1	1	3	1	1
	Mgmt	0	3	3	2	1
Hertel	Safety	1	1	2	1	1
	Mgmt	2	1	3	2	2
Iemants*	Safety		1			
	Mgmt	3		1	1	1
R&M*	Safety					
	Mgmt	4	1	1	2	2
Zoth	Safety	1	1	3	3	3
	Mgmt	1	1	3	3	2
Leffer	Safety	1	1	1	1	1
	Mgmt	5	5	5	1	5
Mammoet*	Safety					
	Mgmt	5	5	2	1	5
Schunack*	Safety					
	Mgmt	1	1	1	1	1
Bickhardt Bau*	Safety					
	Mgmt	1	5	2	5	1
Bähr** (Doman Sub)	Safety					
	Mgmt					
M&E Const** (Iemants Sub)	Safety					
	Mgmt					1
Schäfer**	Safety					
	Mgmt					
Bofa** (Hertel Sub)	Safety					
	Mgmt					
Wilsko** (Iemants Sub)	Safety					
	Mgmt				1	
JC Eckardt** (Doman Sub)	Safety				1	
	Mgmt	1	1	1		
BIS**	Safety					
	Mgmt	1	1	1	1	1
SUBTOTALS	Safety	18	21	23	23	16
	Mgmt	31	34	50	49	35
TOTAL		49	55	73	72	51

STA Meetings

- Conducted onsite.
- Supervisors review the hazards of the work to be performed with their crews.
- Complete and sign the STA forms.
- Review of the STAs by CM supervision, management, and safety throughout the day.

Ticona Organizes a 6:45 Mass Safety Meeting

- Attendees include one safety team member, Ticona and Fluor management and supervisors, and contractors' management supervisors.
- Conducted rain/snow or shine.
- Held at entrance to site so all workers see the gathering.
- Discuss issues observed the prior day to target problem, risk situations, and behaviors.
- Hand out printed copies of those observations in German and English for sharing across the site as part of the toolbox talks.
- Communicate key activities planned for the day.
- Give feedback on safety performance.
- Following meeting, management does an informal safety walk around the site.
- Recording and publishing attendance is critical.



Management in Action

Best Practice: Managers' HSE Walkthrough Guide

Best Practice: Adopt a Crew Enhancement

Best Practice: Managers' HSE Walkthrough Guide

Where used: Globally; Client: All, Country: All, Region: All

Purpose: The booklet provides visiting management and/or site management with a simple observation guide for conducting site HSE visits or Walk-Abouts.

Results: An HSE walkthrough is an examination of the workplace to assess how the site maintains acceptable standards. Senior managers can optimize their HSE visibility with an HSE walkthrough. A manager's presence sends the message that Fluor values each employee's safety. It has been proven that HSE performance improves with increased engagement and exposure from management.

How-To: Fluor's HSE culture is a way of life that has a positive influence at home and at work. Our employees sustain our HSE culture with shared beliefs, values, and practices. These character traits create a work environment that shapes our behavior. Make it easy on your management to increase their HSE visibility and commitment with the **Managers' HSE Walkthrough Guide** (Attachment 33). You may print the attached guide or order your preprinted guide in a leather planner with journal and calendar from www.fluorstore.net.

Our HSE culture is world-class, and we sustain this culture with a visible and uncompromised commitment to the protection of our greatest asset – our employees. An HSE walkthrough is an examination of the workplace to assess how the site maintains acceptable standards. Senior managers can optimize their HSE visibility with an HSE walkthrough. A manager's presence sends the message that Fluor values each employee's safety.

The following activities will help to assess the site's overall HSE culture:

- Review current performance versus company goals.
- Note if you were offered or given an orientation.
- Conduct a field tour with the HSE professional and project manager.
- Talk with employees about safety.
- Wear the proper approved safety equipment.
- Look at PPE utilization.
- Look for supervisors in the work area.
- Look at housekeeping, order, and material storage.
- Look for displays, signs, and measurements.
- Discuss safety with the client.
- View work tasks being performed.
- Note if meetings are started with a safety topic.
- Observe client's adherence to safety rules.
- Observe use of tools and equipment.
- Get a feel of project morale.
- Ask about disciplinary program.



Sections 1 through 17 identify specific items to assess during an HSE walkthrough:

1. Safety Signs
2. PPE
3. Housekeeping
4. Rigging
5. STA
6. Confined Space
7. Working at Height
8. Energy Control
9. Scaffolding
10. Offices, Warehouses, and Storage
11. Excavations
12. Barricades
13. Vehicles
14. Fire precautions
15. Cranes
16. Temporary Electrical
17. Highway Safety

Best Practice: Adopt a Crew Enhancement

Where used: Ticona TiGer Project, Client: Celanese, Country: Germany, Region: EAME

Purpose: An attentive manager who participates in his crew's activities is showing employees what is of importance and what is valued – the employees' safety.

Results: The workers' safety culture improves over time due to participation and recognition for safety improvement ideas. Issues and ideas are acted on, showing follow through and improving employee morale.

How-To: The **Adopt a Crew Quality Audit booklet** (Attachment 34) serves as a guide and a record for this best practice.

The site shares the following experience with their Adopt a Crew weekly lunch with senior management:

- Each Wednesday, a team of workers or supervisors (approximately eight people).
- Different contractors each week.
- The attendees are limited to the workers and supervisors.
- Lunch and drinks are served.
- Start off with a discussion on a safety topic or a safety video.
- Then ask them a set of eight standard questions to get their responses and feedback.
- Encourage them to bring up issues and questions.
- Notes are taken to record their input, but no names are recorded.
- After luncheon, notes are published internally to our senior CM management and actioned
- Typically get one to three good ideas for improvement at nearly every luncheon.
- Reading the notes over time one can see the safety culture of these workers changing.
- Excellent tool.

The site uses the **Adopt a Crew notes spreadsheet** (Attachment 35) to record questions and answers from their lunch with senior management.



Audit and Assessment

Best Practice: HSE Audit/HSE Observation Award Program

Best Practice: Risk Ranking Matrix

Best Practice: Construction Equipment Incident Matrix

Best Practice: Dropped Object Calculator

Best Practice: Observation and Intervention Assessment Spreadsheet

Best Practice: Hand Injury Prevention Audit Results Spreadsheet

Best Practice: HSE Audit/HSE Observation Award Program

Where used: Porto GALP PRCP Project, Client: Energia, Country: Portugal, Region: EAME

Purpose: Increase employee accountability and recognize and reward desired behaviors.

Results: Spot recognition and reward encourages desired behaviors and increases morale and pride among the workforce. Frequent assessments and observations alerts management to incorrect or unsafe behaviors.

How-to: This program:

- Is color coded for ease of use
- Combines disciplinary action and awards
- Enables motivation through coaching
- Is cultural based and football/soccer oriented

They use spot recognition and an awards program for employees behaving safely.

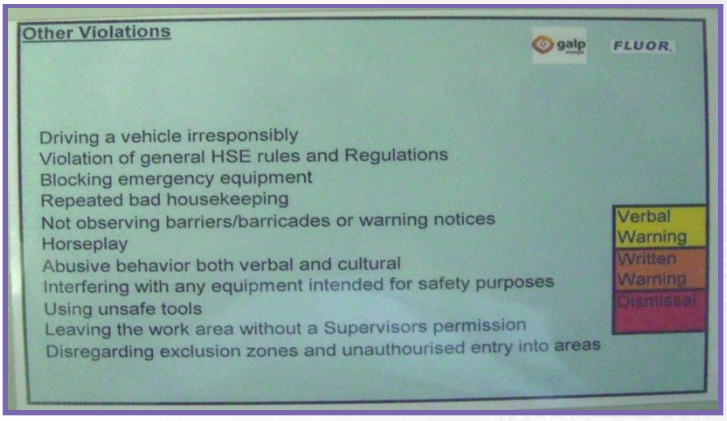


- About 20 cards are handed out each Wednesday during the management walkthroughs to workers demonstrating superior safety behavior. Cards are exchanged for a small gift at the end of the day and the workers name is recorded.
- Other rewards are given out at other times during the week for notable good performance observed onsite.
- Lunches or dinners are held for crews who safely complete notable activities
- During daily site walkthroughs, managers stop and congratulate workers demonstrating good safety behaviors. They offer encouragement like handshakes, pats on the shoulder, or thumbs up.

HSE Observations

- The site uses several cards and forms for submitting safety observations.
- Observations are recorded in a database.
- Observations include location, what was observed, what was done immediately to correct the situation or behavior, which contractor created the hazard or contractor with improper behavior works for worker who, and the observers' name.
- Each observation is categorized by type of infraction.
- Database can then be analyzed to see trends and frequency of occurrences by type or contractor.
- Results are normalized based on work hours to target contractors who may be having high numbers of at risk observations per 10,000 labor hours.
- The data are then used to target programs, toolbox meetings, etc. for improvement.
- The data is shared with contractors' management for their action as well.

Example of Unsafe Observations



Examples of Recognition Items



Best Practice: Risk Ranking Matrix

Where used: Port Arthur Refinery's Deep Conversion Project, Client: TOTAL, Country: United States, Region: North America

Purpose: Identify the severity of risk for planning work after an incident.

Results: Risk mitigation, elimination, and awareness for all work crews and management. It also helped determine fatal actions from incidents that occurred.

How-to: The **Risk Ranking Matrix** (Attachment 36) establishes a numbered severity rate for consequences to people, property, environment, and production. Risk is assigned a low, medium, high, or serious rating based on possibility and consequence.

PORT ARTHUR REFINERY DCP	DEEP CONVERSION PROJECT DCP	DCP – PPM-60-01 Revision: 05 Date: 22 July 2009
	DCP RISK RANKING MATRIX	

	ACTUAL (OR REASONABLE POTENTIAL) CONSEQUENCES				POSSIBILITY				
SEVERITY	People	Property Damage	Environment	Downtime	1 HIGH Potential to Occur Frequently	2 MEDIUM Potential to Occur Occasionally	3 MODERATE Potential to Occur under Unusual Circumstances	4 LOW Could Occur within Petroleum/Construction Industry	5 NONE Theoretically Possible – Very few known occurrences within Petroleum/Construction Industry
1 SERIOUS	In Plant Fatality or Public Fatalities	Extensive Damage	Major Damage	Extensive ≥ 2 days	1	2	3	4	5
2 HIGH	Lost Time Injury or Public Injury or Public Impact	Significant Damage	Local Effect	1 to 2 days	2	4	5	7	8
3 MEDIUM	Medical Treatment	Moderate Damage	Minor Effect	4 to 24 hours	3	5	7	8	9
4 LOW	First Aid	Minor Damage	Slight Effect	< 4 hours	5	7	8	9	10
5 NONE	No Worker Injuries	No Damage	Zero Effect	Recoverable Operational Problem	7	8	9	10	10

Intolerable Risk	Undesirable Risk *	Tolerable Risk **	Negligible Risk **
High Potential (HI-PO)	Incident of Interest (I.O.I)		
1 - 2	3 - 5	6 - 8	9 - 10

F0-250

This form is referenced in Procedure 000 653 8610.

*All Undesirable Risk issues / incidents will be reviewed for possible HI-PO inclusion.

HSE Page 1 of 1

Best Practice: Construction Equipment Incident Matrix

Where used: Port Arthur Refinery's Deep Conversion Project, Client: TOTAL, Country: United States, Region: North America

Purpose: The **Construction Equipment Incident Matrix** (Attachment 37) establishes a severity rate for damage assessment and evaluation for construction equipment.

Results: Helped mitigate incidents and increased hazard recognition for all operators/employees. Enforced accountability and allowed a supporting qualitative element to disciplinary actions.

How-to: It models personnel/health impacts, refinery/environmental impacts, and cost of property damage. Risk is assigned a color code and a category of insignificant, minor, moderate, major, or catastrophic.

This matrix also assigns an appropriate disciplinary action appropriate to the associated risk.

CONSTRUCTION EQUIPMENT INCIDENT MATRIX

Date: _____

Area: _____

Damage Assessment and Evaluation

Rev.3 (011510)

INSTRUCTIONS

- Complete incident description.
- Make sure Fluor and TOTAL Representatives are involved in rating.
- Circle the boxes that apply.
- Discipline is governed by the most severe box circled.

CATEGORIES / DISCIPLINE	PERSONNEL / HEALTH IMPACTS	REFINERY / ENVIRONMENTAL IMPACTS	PROPERTY DAMAGE / DOLLAR AMOUNT
INSIGNIFICANT Verbal Reprimand (Documented)	No Injury	No Interruption.	No Damage Less than $150
MINOR Written Reprimand	First Aid	No damage requiring repair. Minor contact with refinery structure, piping, instrument, or electrical systems.	Less than $1,000
MODERATE Written Reprimand (with suspension if Contractor's Policies allow it.)	Medical Treatment	Refinery issue or inconvenience requiring follow-up.	Between $1,000 - $5,000
MAJOR Removal from site	DART Days away from work Days of restricted activity	Refinery production interference.	Between $5,000 - $10,000
CATASTROPHIC Removal from site	Multiple DART / Fatality	Refinery production interference.	Greater than $10,000

RECOMMENDED DISCIPLINARY ACTION (SEVERITY BASED)	
Verbal Reprimand	
Written Reprimand	
Written Reprimand (with 3 days suspension if available)	
Removal from site	

Incident Description (include damage / injuries / equipment / specific location)
Company:
Employee Name:

HSE Representative _____

TOTAL HSE Representative _____

Construction Representative _____

TOTAL Const. Representative _____

Equipment Superintendent _____

HR Representative _____

Best Practice: Dropped Object Calculator

Where used: Port Arthur Refinery's Deep Conversion Project, Client: TOTAL, Country: United States, Region: North America

Purpose: The **Dropped Object Calculator** (Attachment 38) is a tool to promote consistency in their approach to address disciplinary actions related to procedural violations (i.e. not following rules, procedures, STAs, listening to instructions, etc.).

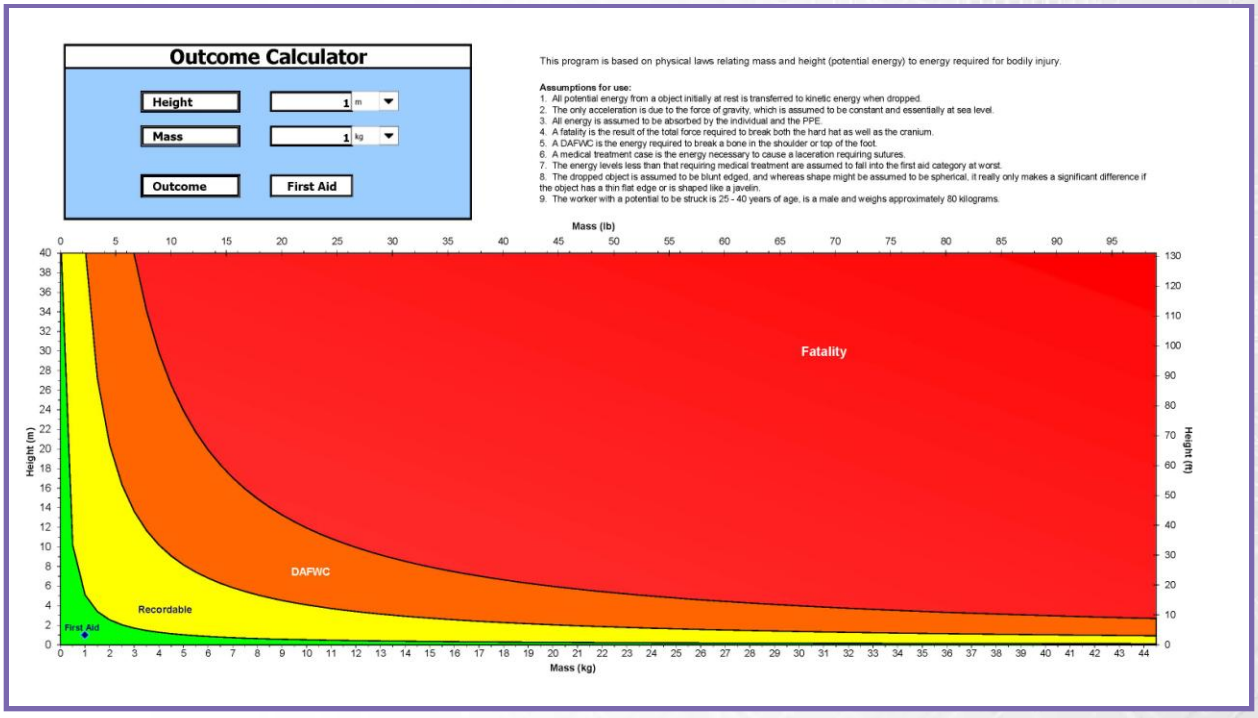
Results: Greater consistency around disciplinary actions and risk assessment.

How-to: Use the Dropped Object Calculator guiding tool for mistakes which may not be addressed as severely as procedural violations depending on conditions and/or circumstances.

The dropped object's mass/weight is entered, along with the height from which it was dropped. The outcome of first aid, recordable, DAFWC, or fatality is automatically calculated and graphed.

Disciplinary actions for each outcome are as follows:

Calculated Potential Outcome	Disciplinary Action
First Aid	Written reprimand
Recordable	Written reprimand and three-day suspension (if available)
DAFWC	Termination or loss of site access privileges
Fatality	Termination or loss of site access privileges



Best Practice: Observation and Intervention Assessment Spreadsheet

Where used: Odoptu Project, Client: Exxon Neftegas, Country: Russia, Region: EAME

Purpose: This spreadsheet records and calculates a score based on entered data regarding safe and at risk observations.

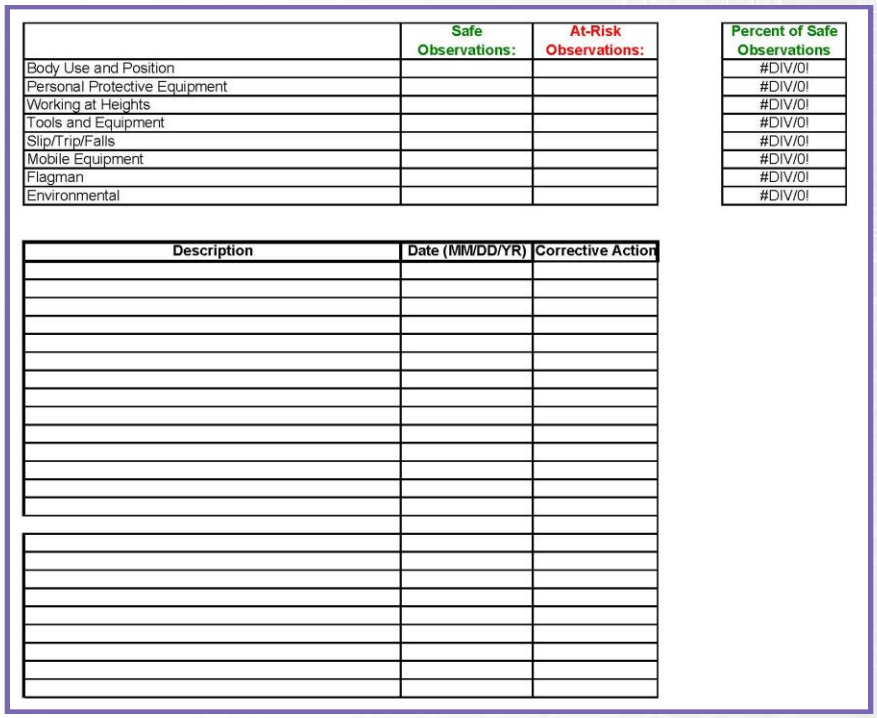
Results: Management engagement and increased hazard recognition and employee involvement. An actively caring tool engages management and craft to reduce risk.

How-to: Access the **Observation and Intervention Assessment Spreadsheet** (Attachment 39). Enter the number of safe or at-risk observations for the following categories of work activities:

- Body use and position
- Personal protective equipment
- Working at heights
- Tools and equipment
- Slip/trip/falls
- Mobile equipment
- Flagman
- Environmental

Further description of the observation may also be recorded, along with any corrective action resulting from the assessment.

The percent of safe observations will automatically be calculated, along with graphs of safe, at-risk, and percent safe data.



	Safe Observations:	At-Risk Observations:	Percent of Safe Observations
Body Use and Position			#DIV/0!
Personal Protective Equipment			#DIV/0!
Working at Heights			#DIV/0!
Tools and Equipment			#DIV/0!
Slip/Trip/Falls			#DIV/0!
Mobile Equipment			#DIV/0!
Flagman			#DIV/0!
Environmental			#DIV/0!

Description	Date (MM/DD/YR)	Corrective Action

Best Practice: Hand Injury Prevention Audit Results Spreadsheet

Where used: Conoco Phillips Wood River Project, Client: Conoco Phillips, Country: United States, Region: North America

Purpose: Used to record and track safe and at risk behaviors observed during the supervisor's weekly observations.

Results: Reduction in hand injuries due to constant supervisory observation and intervention.

How-to: Conoco uses their **HIP Audit Results Spreadsheet** (Attachment 40) to record and track observed safe and at risk behaviors each week.

The employees being observed are identified, and the time and place of the assessment is recorded. A description of the deficiency and those responsible for correction is recorded.

The number of safe and unsafe activities observed is entered for the following categories of work activities:

- Proper tools in use/used properly
- Guards/safety devices in place
- Gloves being used
- Appropriate gloves for specific task
- Avoiding/protected from pinch points
- Avoiding/protected from splinters
- Avoiding/protected from hot surfaces
- Avoiding/protected from sharp edges
- Body positioning/movement
- Hands positioned properly
- Cutting or pushing away from body
- Kept away from rotating parts
- Kept away from impact area
- Line of fire
- If a slip occurs, no nearby object
- Eyes/attention to task
- Pushing/pulling
- Repetitive motion

Attachments

Attachment 1 – Letter from Frank Erichson

Attachment 2 – HSE Management System Practice 000.653.0100

Attachment 3 – Management Assessments

Attachment 4 – Supervisor Hazard Recognition

Attachment 5 – Safety Task Assignments

Attachment 6 – Hazard Elimination

Attachment 7 – ZERO Incidents℠ Program Poster

Attachment 8 – ZERO Incidents℠ Program: 12 High-Impact Incident Reduction Techniques

Attachment 9 – ZERO Incidents℠ Program Brochure

Attachment 10 – ZERO Incidents℠ Program Handout

Attachment 11 – Site Strategic Safety Improvement Plan

Attachment 12 – Safety, Security, Health and Environmental (SSHE) Activity Schedule

Attachment 13 – Vehicle and Equipment Blind Spots Recognition and Training

Attachment 14 – Pedestrian Safety Around Heavy Equipment

Attachment 15 – Pedestrian Awareness Poster 1

Attachment 16 – Pedestrian Awareness Poster 2

Attachment 17 – Banksman Training Course

Attachment 18 – Work Zone Traffic Toolbox Topic

Attachment 19 – 000.653.3200 Motorized Heavy Equipment and Light Vehicles

Attachment 20 – 000.653.3211 Traffic Management Practice

Attachment 21 – Adopt a Floor Program

Attachment 22 – 000.653.3300

Attachment 23 – 000.653.3305, Manual Handling

Attachment 24 – 000.653.2002, Eating and Sanitation Facilities

Attachment 25 – 000.653.1002, Office Safety

Attachment 26 – Housekeeping Makes Your Job Easier

Attachment 27 – Don't Forget Good Housekeeping

Attachment 28 – Management Assessments

Attachment 29 – Supervisor Hazard Recognition

Attachment 30 – Safety Task Assignments

Attachment 31 – Hazard Elimination

Attachment 32 – Key Leading Indicator Charting Tool

Attachment 33 – Managers' HSE Walkthrough Guide

Attachment 34 – Adopt a Crew Quality Audit Booklet

Attachment 35 – Adopt a Crew Notes Spreadsheet

Attachment 36 – Risk Ranking Matrix

Attachment 37 – Construction Equipment Incident Matrix

Attachment 38 – Dropped Object Calculator

Attachment 39 – Observation and Intervention Assessment Spreadsheet

Attachment 40 – HIP Audit Results Spreadsheet

Fluor Enterprises, Inc.
1 Fluor Daniel Drive
Sugar Land, Texas 77487
USA

Frank Erichson
Senior Vice President
E&C Construction and Commissioning

June 15, 2010

2010 E&C HSE Improvement and Consistency Program

E&C's year-over-year HSE Total Case Incident Rate (TCIR) is not improving. In fact, as we near the completion of 2Q10, we are at risk of not meeting E&C's goal of 0.19 TCIR.

Clients have commented they do not see a step change in our performance. Business line management is concerned about the lack of consistent application of our HSE programs across all projects, and we are experiencing an increase in the number of troubled projects. These messages are a wake-up call telling us business as usual is not good enough. We need to take action to reinforce behaviors and commitment to safety.

Over the coming weeks and months, you will be exposed to programs that are designed to:

- Provide consistency in applying Fluor's HSE Management System
- Improve safety performance

The following information introduces E&C's path forward for HSE improvement and consistency.

E&C HSE Improvements and Consistency

For improvement and consistency in E&C's HSE program, four elements have been identified that will be implemented over the course of this year and next. The information below describes each of these elements and the actions required to be taken by all projects.

1. Fluor's ZERO Incidents Program Training Roll Out

Description. Fluor's ZERO Incidents program includes 12 HSE high impact ZERO Incidents techniques that are considered to be the fundamentals of HSE and of Fluor's HSE Management System. The 12 techniques include:

1. Subcontractor management
2. Pre-project HSE
3. HSE education and orientation
4. New employee development
5. HSE awareness program
6. Substance abuse program
7. Recognition and rewards
8. Incident reporting and investigation
9. Pre-task planning
10. Management in action
11. Audits/assessments
12. Utilization of networking and resources

When these 12 techniques of the program are executed with excellence, HSE performance improves and a ZERO Incidents culture is sustained. It is the desire and mandate from E&C's senior level management that all site management and HSE professionals understand, apply, and execute this program and its components.

Action. All management (site superintendents through site managers), including all HSE professionals, will train and test (via web) on the ZERO Incidents techniques training video and complete by set target dates. The required training and information will be provided on a flash drive to all projects and mailed to each respective lead HSE manager or lead HSE representative on the project for appropriate distribution to required employees. It will be the project's responsibility to maintain training effort for positions with turnover. At the end of 12 months, ZERO Incidents program refresher training will be completed for all those required for training per this action.

2. Measuring Results

Description. Four leading indicator measurements have been identified as key HSE performance leading indicators in which all E&C projects will be measured. These four key leading indicators are:

1. Management assessments participation and observation
2. Supervisor hazard recognition participation and observation
3. Safety task assignment or preplanning participation and observation (supervision)
4. Hazard elimination participation and observation (workers)

The provided flash drives will also contain the definition of each key measure and how the programs to support them are to be implemented. By implementing these programs and measuring the results, we can benchmark our current status. We will the measure positive or negative progress in our HSE performance. Over time, we will use this data to identify opportunities to make a step change in our program and performance.

Action. Each project will be required to implement and report the results of all four measurements weekly into a designated, centralized location within the E&C group. This location and a contact person will be provided to each project via an instructional document. The results will be reported to Brad Dunker (E&C HSE director) and me (E&C VP of construction and commissioning) for review of performance trends. Accountability and responsibilities will be assessed for projects experiencing needed improvement in any of the four key areas. Each project is expected to continuously evaluate the leading indicator trending data and institute continuous improvement through necessary response and actions.

3. Continuous Communications Plan

Description. The importance of keeping our HSE awareness at the highest levels at all times is paramount. Therefore, an HSE communication series has been developed that will involve frequent distributions of knowledge packs and reminders of the 12 HSE high impact ZERO Incidents techniques throughout the next year. These techniques will be continuously put in front of the projects from the local and corporate level, keeping the ZERO Incident culture fresh.

Action. Each month for the next year, one of the 12 techniques will be issued describing what it is and the details of all associated information with it. The project will receive a technique each month and is expected to use it in its local communication processes, such as toolbox topics, safety topics in management meetings, postings in break rooms, management trailers, etc. An effective communication effort from the site level is the most important aspect of this action. As a note, the president of E&C and/or the business line leaders will possibly be asking questions on just how much management and HSE knows about the 12 high impact ZERO Incidents techniques.

4. Customer Driven Programs

Description. Many of our clients have practices or processes that are considered the best-of-the-best, either in industry or to the client themselves. At E&C, we want to make sure we are appropriately evaluating, implementing, and using these practices with the objective of achieving the ZERO Incidents culture.

Action. Over the months to come, with the assistance from each site, we will be evaluating each site for client best practices and processes to determine if we are consistent in our application locally and if the practice is specific to that site or if it can be used as a global application for E&C to get closer to achieving our ZERO Incidents culture. As part of this action, we will integrate the ZERO Incidents techniques and identify client best practices into the communication process to make certain of visibility internally to Fluor and our clients. This will be accomplished through means such as pocket cards, FDNet, and other communications.

Sincerely,



Frank Erichson
Senior Vice President
E&C Construction and Commissioning

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This page is provided for information only and is not part of the practice. Review of this summary does not relieve the reader of responsibility for the contents of the practice.

Summary:

New practice.

For additional information, contact Dan Palmer at 509.376.4240.

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PURPOSE

This practice identifies and describes the 12 high-impact injury reduction techniques that have — over the years — proven to make a significant, positive difference in health, safety, and environmental (HSE) performance.

SCOPE

This practice includes the following major sections:

- Contractor Management
- Pre-Project HSE
- HSE Education and Orientation
- New Employee Development
- HSE Awareness Program
- Substance Abuse Program
- Recognition and Rewards
- Incident Reporting and Investigation
- Pre-Task Planning
- Management in Action
- Audit/Assessments
- Use of Networking and Resources

APPLICATION

This practice applies to work activities and employees under the control of Fluor and its contractors.

DEFINITIONS

None.

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Although they have been around for a while, the high impact ZERO Incidents reduction techniques continue to show results when used on jobsites. Fluor HSE believes these techniques are the basis of a good HSE program, and every project will benefit from implementing them. This program of incident reduction techniques has helped Fluor raise the level of expectation for HSE performance and provided the tools for us to make it happen.

The Fluor Corporate HSE audit measures how effectively projects execute the ZERO Incidents techniques. If projects are not adhering to this program, they will not perform well on their audits. Additionally, projects applying for ZERO Incident awards (One-Star through Five-Star awards) are audited against these techniques.

Background

It all started with the Construction Industry Institute (CII), which is a group of owners (like Exxon, DuPont, and GM); contractors (including Fluor); and universities that study and support industry to improve safety, quality, and cost for its members.

A CII task force studied the construction industry first in 1993 and then again in 1999, looking at companies with construction projects valued from $50 million to $600 million, to produce what they found to be the most effective techniques to reduce workplace injuries. They identified best practices used by companies that had achieved safety excellence.

The first study found 5 high-impact ZERO Incidents techniques that seemed to make a difference in safety performance; in 2001, CII expanded these 5 to 9 best practices.

CII compared the safety performance rates of companies that used these techniques with those that did not, with astounding results. Incident rates plummeted on projects using the techniques.

Fluor adopted the results of the CII study, using CII's high-impact techniques as the basis of the ZERO Incidents Program, added our own commitment and experience, and raised the bar to produce a list of 12 high-impact ZERO incident reduction techniques.

1.0 CONTRACTOR MANAGEMENT

1.1 General

In keeping with Fluor's commitment to contractor safety, it is our policy to review, evaluate, and approve contractors' and contractors' safety qualifications before they may perform work for Fluor. Prequalification and alignment is critical. Evaluation of the HSE qualifications of Fluor's potential contractors and sub-/lower-tier contractors is a vital component of the selection process. The process of prequalification or prescreening is a proven, proactive HSE improvement strategy. Selecting contractors and contractors

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who are aligned with Fluor's HSE philosophy and culture provides for a safer workplace, protection of the environment, and enhanced project execution.

To obtain prequalification, potential contractors are required to complete Form 000.653.F0219, Contractor and Subcontractor HSE Prequalification Questionnaire, along with any supplemental documentation, at the same time as they complete the other (non-HSE) prequalification data. Fluor's Procurement and HSE departments review and evaluate the approval questionnaire and supplemental documentation provided.

Contractor supplemental information may include:

- Contractor HSE program
- OSHA 300 Logs (3 years plus current) safety statistics
- Experience Modification Rates (EMR) or intRA state risk rating(s)
- Accident cost data
- Orientation and training programs
- Proposed work hours
- Audits and assessment programs
- Safety execution plans/corrective action plans based on performance

Contract preparation is one of the most critical elements regarding contractor expectations. The front-end expectations must be clearly defined, all portions of the contract must be understood to be properly executed, and accountability and responsibility must be clearly defined.

It is Fluor's general intention to employ contractors and subcontractors whose HSE performance records are substantially better than the industry average.

Before commencing work on the site, each contractor's management and HSE Representatives will attend a meeting with members of the Fluor site management team. HSE items to be addressed will be detailed on the meeting agenda, and action items arising will be noted, with responsibility for action assigned with a completion date.

1.2 Alignment

Once mobilized to the site, each contractor is expected to conduct its own kickoff meetings with its contractors, as the need arises, for each separate phase of the site activities.

Key items that should be considered when aligning with contractors are as follows:

- HSE is considered a Fluor core value
- HSE philosophy "Commitment starts at the top"
- HSE begins in the design stage
- Proactive as opposed to reactive

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- Accountability and responsibility
- Audit programs
- HSE program elements compared to Fluor's HSE Management System
- Employee training/orientation
- Management-in-action philosophy
- Safety Task Assignment/Job Safety Analysis (STA/JSA) program
- Self-inspection
- Substance abuse program
- Safety incentive program
- Sufficient HSE representation
- Supervisor training
- Safety meetings
- Incident investigation
- Recordkeeping/statistical reports
- Workers' compensation program

Once the contractor is approved to work, they should be included in all site activities such as the site's HSE orientation and training program.

Contractors must also be included in the site's drug testing program and applicable medical testing examinations.

A contractor/subcontractor must furnish medical services to its employees. If the contractor does not provide its own first-aid services, Fluor's management will determine whether Fluor will furnish such services in accordance with contractual requirements.

Contractors will be expected to comply with HSE site requirements to include but not be limited to: personal protective equipment (PPE), fall protection, site security protocols, equipment operator licenses, and any other required training/certifications before participating in specific work activities. Contractors are empowered and expected to exercise "STOP WORK AUTHORITY" any time an unsafe act or condition is recognized, just as any Fluor employee would do.

Just as each site reports self-perform, joint venture, or Limited Liability Company (LLC) hours and injuries, they must also report this information for contractors, as described in Practice 000.653.1203, MIER/MSISR/GIMS.

Contractors and subcontractors will be responsible for the following activities:

- Development of project-specific HSE plan

- Preparation of HSE procedures for hazardous tasks

- Copies of documented procedures to be provided to the relevant supervisors

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- Contractor supervisors to provide training for personnel on the job at the daily prestart meetings, safety meetings, and structured training sessions
- Maintenance of a register of all contractor HSE procedures, with the register being available to all personnel at all times
- Nomination contractor manager to retain copies of superseded HSE procedures
- HSE procedures to be reviewed on a regular basis through the safe work observation process

Sanctions for substandard performance must also be in place. These sanctions are enforced for noncompliance to Fluor's standards. Contractors that are evaluated and found to have substandard HSE performance may be required to submit correction action plans (CAP) to outline specific measures that will be taken toward HSE improvement. Contractors performing work at the facility must comply with Occupational Safety and Health Administration (OSHA) and/or applicable codes and established HSE regulations. Violations of such regulations will be cause for termination of the contract/subcontract.

1.3 Resources

Fluor's Contractor/Subcontractor Safety Handbook (S19) is a valuable resource for managing contractors and subcontractors. This handbook is available through Fluor's Forms Management Department (order from Forms.Management.GVL@fluor.com).

Refer to Practice 000.653.1003, Contractor Selection and Alignment, for requirements, additional information, and details.

2.0 PRE-PROJECT HSE

Pre-planning and focused attention around how the HSE systems are initially set up on the project will increase the success of the HSE program, improve awareness, and help reduce injuries.

Step 1: Review Critical HSE Practices

Becoming familiar with the following practices will help you understand what tools are available within the HSE Management System to support your project or office HSE.

- 000.653.0010 – HSE Management System – Table of Contents
- 000.653.0020 – HSE Management System – Execution
- 000.653.1002 – Office Safety

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Step 2: Perform a Risk Assessment

Practice 000.653.1304, Pre-Task Planning/Risk Analysis, provides requirements for identifying and analyzing hazards on site and developing the work procedures to make sure the work is done safely.

Step 3: Customize the Management System

By picking and choosing the practices that are applicable to the work that is done at your project, one can build a customized system that is site-specific. Thumb through the table of contents, selecting only the practices needed to build your plan.

When beginning a project, it is helpful to be mindful of the HSE and training records that should be retained and what information should be provided in the project's closeout report. For example, if you know that you will have to provide details around any breathing air test results at a later date go ahead and set up a file to manage that information from the beginning, making it easier on yourself to gather it during demobilization. Practice 000.653.1500, Records Management and Document Control, details HSE records retention and document control procedures.

It is critical that each project has a written and approved site-specific HSE plan in place and that it is communicated to the project team, management, and contractors. Practice 000.653.1301, Site-Specific HSE Plan, provides a go-by or template to document the development of a site-specific plan. Form 000.653.F0229, Site-Specific HSE Plan, is a checklist that helps assign and track the necessary tasks involved in developing the plan.

Step 4: Perform a Gap Analysis

Use Form 000.653.F0270, HSE Management System Compliance and Equivalency, to make sure the project is covered. This chart lists each Management System document and tracks if it is needed on the project, and if an equivalent document is used.

Step 5: Perform Prejob HSE Planning

Form 000.653.F0215, Project Startup – HSE Program Checklist, lists the tasks that should be performed at project startup, from ordering copies of the Fluor Safety Handbook, as well as ordering posters and signage, establishing an HSE audit schedule, and meeting with medical and insurance providers.

Step 6: Identify Training Requirements

Training is a major component of a successful HSE culture. Informed employees are more likely to make good choices and feel cared for and part of the greater good. Practice 000.653.1001, Training and Orientation, describes the orientation and training content and processes. It provides an attendance roster, comprehension test template, and

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matrix to help identify what training is needed for your workforce and refers the reader to records retention requirements.

Step 7: Prepare for Incident Investigations

Refer to Practice 000.653.1202, Incident Reporting and Investigation, and then print out all of the attached forms. Create a kit with a camera, tape measure, barricade tape, and other materials you will need on hand should you be called on to investigate and document an incident.

Step 8: Verify Your Site's Compliance

Projects can conduct a corporate audit on your site without calling corporate. Use Form 000.653.F0951, HSE Site Self-Assessment, to measure the project's compliance with the HSE Management System.

Step 9: Verify Your Program's Effectiveness

Practice 000.653.1305, Inspections/Assessments and Audits, will help determine if the project plan is highly effective or is in need of improvement.

Step 10: Cover your Bases

This last step ensures nothing is forgotten — from aligning with engineering and the client, to requesting an HSE startup kit, equipping the first-aid supply, and promoting your HSE program with signage.

3.0 HSE EDUCATION AND ORIENTATION

CII found that, when workers go through a formal orientation, project incident rates are cut in half.

Incident rates plummet when a site-specific orientation and training program are implemented, there is follow-up and monthly training, toolbox meetings take place, and safety training is a line item in the project budget.

Thorough site-specific employee orientation programs are critical in not only providing regulatory training, but more important in the relaying of clear HSE expectations. Site management's presence and direct interaction with employees during this orientation process is critical in demonstrating both leadership and commitment to the agreed-upon site HSE plan.

Weekly and daily safety "toolbox" meetings are a proven means to communicate HSE information to employees. Projects should review settings and atmospheres of meeting areas (such as loud noise and dim lighting) to ensure employees have the opportunity to clearly receive valuable HSE messages. Studies performed by CII have identified that

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some days are better than others to hold toolbox meetings and gain the most value. Mondays are used quite often, but are noted in the study as possibly being the worst; Tuesdays through Thursdays are only a little better, but when the meetings are varied through the week, this is noted as being the best.

3.1 Resources

Refer to Practice 000.653.1001 for requirements, additional information, and details.

4.0 NEW EMPLOYEE DEVELOPMENT

New employees deserve our attention. An aggressive new employee development program reduces the potential for injuries with employees who are not familiar with the project, and the program offers an opportunity for managers to share their expectations at new hire orientations.

An HSE culture begins with visible management leadership and a commitment to HSE ZERO Incidents techniques. When top management gets involved with inspections, leads investigations, and participates in employee orientations, they demonstrate the value of the HSE program. New employees see the commitment, and they begin to adapt to Fluor's HSE culture as they have more exposure to management leadership during their first few months onsite.

Note: *A new employee who meets a manager during orientation and hears a personal commitment to safety is more likely to start work with a safe attitude.*

Industry workplace injury trends indicate that approximately 40 percent of injuries occur to new-hire employees with less than 3 months' tenure on the job.

Early identification and correction of unsafe work habits will help to promote a safe and healthy workplace. Our new employee development (NED) program is designed to heighten safety awareness during the new-hire acclimation process.

Practice 000.653.1001 details how the program works:

- All newly hired and newly assigned field employees will attach an NED sticker to their hard hats (or badges where applicable) for a period of 30 days (or less during shorter scheduled events such as outages/turnarounds and as approved in the Site HSE Plan). The intent is to assist project/site management, supervision, and others in identifying new employees and allowing intervention when their behavior or environment puts them at risk.

- During this time, each new employee will have assigned to them an experienced "mentor" who has demonstrated safe work habits and has been on the job more than 30 days. When a new project/site is in the process of deployment, the Project/Site

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Manager will determine the respective mentors. Mentor training is available and will be used to promote ownership and accountability of this key initiative.

- New Employee Development evaluation forms should be completed and shared with the employee upon completion of the program.

- The outer ring of the perforated sticker will be removed after 30 days, given the employee's demonstration of his/her ability to safely perform their work and with approval of their respective mentor.

The NED program enhances the well-being of employees, reduces workers' compensation cost, and distinguishes Fluor's safety performance from competitors. Contractors also benefit from this high-impact program because they witness Fluor's commitment to HSE.

NED and safety mentor hard hat stickers are available through Fluor's online store at www.fluorstore.net.

4.1 Resources

Refer to Practice 000.653.1001 for requirements, additional information, and details.

5.0 HSE AWARENESS PROGRAM

5.1 General

HSE performance begins and ends with each individual's awareness and attitude toward maintaining an incident-free environment.

A successful HSE awareness program reminds employees to work safe and use proper procedures for all tasks. To achieve the greatest impact, the awareness program must be specific to activities in the workplace, and it must be consistent day to day. However, the program and its messages must have enough variety so they do not become routine or mundane.

5.2 Employee Involvement

The HSE committee is one method to engage employees and management in supporting first-line supervision in identifying and correcting unsafe conditions, coordinating the facility HSE process, and promoting HSE awareness in the facility with the objective of incident prevention.

The objectives of the HSE committee are to:

- Act in an advisory capacity.

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- Cultivate an active interest in HSE issues and assist in reducing work injuries, work-related illnesses, and hazards.

- Consider measures for the training and education in, and promotion of, HSE management and make recommendations in relation to those measures.

- Propose and review the project-specific procedures relating to HSE that are to be carried out or complied with at the workplace.

- Review the circumstances surrounding recent work injuries and work-related illnesses and incidents at the workplace concerned and make recommendations to office/facility management.

- Propose programs aimed at raising and maintaining interest in the workplace HSE program.

- Maintain records of meetings including any recommendations made.

Creating and sustaining a safe working environment is a collaborative effort that involves employees at all levels of the company. A critical component of this effort is effective HSE communication. HSE education and knowledge rely on open communication that involves not only giving our employees information but also listening to what they have to say. Conduct Safety Perception Surveys (Form 000.653.F0276) to gauge the success of your HSE program and act on your findings.

The STA process is a vital part of sustaining HSE awareness and employee involvement. The STA process includes:

- Pre-task planning
- Hazard identification and correction
- Supervisor and employee accountability

There are many ways to keep employees involved with your HSE program. Make it personal, and make it relatable.

In order to foster a continual HSE culture and mindset in employees, projects may consider addressing hazards that employees might encounter outside the workplace

Training, orientation, signage, posters, banners, and toolbox talks all promote HSE awareness. Check HSE Knowledge OnLine to download hundreds of training presentations, graphics, and toolbox topics, or contact HSE.Communications@Fluor.com for help finding what you are looking for.

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6.0 SUBSTANCE ABUSE PROGRAM

6.1 General

Fluor's program applies to all field project sites and covers salaried, hourly, full-time, part-time, and temporary Fluor employees as well as consultants, temporary agency workers, and candidates for hire. Contractors should also have a substance abuse prevention program in place.

Compliance with the program is a condition of employment or continued employment, and violation will result in disciplinary action, up to and including termination.

Fluor is committed to providing a safe environment for our employees, clients, and contractors. Illicit drug use and alcohol abuse constitute not only a significant danger to the safety and health of the user but also to fellow employees, contractors, and clients. The program goal is to maintain a safe, productive, and drug-free workplace.

Fluor considers substance abuse screening part of the overall program to prevent illicit substances from entering the workplace.

Site-specific programs are developed for each individual site using the Fluor standard program as a base and then addressing client-specific requirements and state-/country-specific regulations. Refer to Form 000.653.F0259, Contractor Request and Release Form.

In countries or regions where legislation prohibits certain aspects of the Fluor standard program from being implemented, a site-specific program must be developed, incorporating all aspects of the Fluor program deemed acceptable under such legislation.

Managers and supervisors should attend substance abuse awareness training at project startup.

6.2 Testing

Each site receives the test administrator's guide and a random number generation program disk (available from corporate HSE).

Persons to be tested will receive Form 000.653.F0262, Management Letter to Employees Form, explaining the policy and company rules, and they must review and sign Form 000.653.F0265, Substance Abuse Prevention/Statement of Understanding Form.

Persons to be alcohol tested must review and complete Forms 000.653.F0266, Alcohol Testing Form, 000.653.F0261, Individual Release Form, and 000.653.F0267, Consent to Substance Abuse Screening.

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Each Fluor project, site, and office will establish a time limitation for employees to comply with the screening process. Refer to Form 000.653.F0264, Site Standard Time Limit for Providing Sample. Testing should be performed in accordance with the test administrator's guide.

Fluor performs the following types of testing:

- Post-offer/preemployment screening. All newly hired salaried and hourly employees and all transferred salaried and hourly employees will be screened after the decision is made to hire. Potential applicants will be advised of this requirement at the time applications are distributed to them.

- For cause/reasonable suspicion. Employees reasonably suspected of using or being under the influence of illicit substances or alcohol as manifested, among other ways, through deteriorating job performance, uncharacteristic behavior, safety violations, mood swings, falling asleep, inability to appropriately respond to questions, the odor of alcohol on the breath or person, inappropriate or aggressive behavior, accident or near-miss accident, or other credible evidence are subject to drug and alcohol screening at the Fluor Project Manager's discretion. Refer to Form 000.653.F0260, Description of Suspicious Behavior Form.

- Random screening. All employees on site will be subject to random screening unless disallowed by state law. It is recommended that a minimum of 10 percent of site employees be tested each month. Refer to Form 000.653.F0263, Random Selection Verification Example.

- Other screening. Other types of testing may be established for individual sites based on site specifics.

6.3 Resources

Refer to Practice 000.653.1400, Substance Abuse Prevention Program, for requirements, additional information, and details.

7.0 RECOGNITION AND AWARDS

Fluor's projects and offices around the world celebrate milestones with commemorative plaques, recognition luncheons, and site celebrations. Employees are recognized for their contributions to keeping our workforce safe and our company's incident rates low.

Fluor believes all incidents are predictable and preventable. By training our employees to anticipate potential hazards and equipping them with safe work practices to alleviate or prevent those hazards, we reaffirm Fluor's status as one of the safest contractors in the world. While this keeps Fluor competitive in the global marketplace, above all it protects our most valuable asset – our employees.

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Based on the value placed on safe work practices, Fluor has developed programs to recognize projects and offices on a global scale that successfully implement safe work practices by setting and achieving safe work-hour goals. Following are the awards for which a project site or office may become eligible, as well as the criteria for each.

Note: *In addition to the following corporate awards/recognition programs, projects can develop internal programs in accordance with Practice 000.653.1100, Awards Program.*

7.1 ZERO Incidents Program

The ZERO Incidents Star awards are reserved for the very best performers. The ZERO Incidents Program has established a new standard of expectation and recognition in the industry. The criteria are as follows:

- No injury or illness resulting in a DART-L case
- No environmental citations or other regulatory agency citations
- No fatalities on the project site or office for the 6-month period immediately proceeding the accomplishment period
- The project site's or office's application of the High-Impact ZERO Incidents Reduction Techniques successful completion of the verification audit

Projects and offices can apply for ZERO Incidents awards of One-, Two-, Three-, Four-, and Five-Star awards based upon completion of 100,000; 250,000; 500,000; and 1,000,000 safe work hours and 500,000 increments thereafter.

7.2 Awards of Excellence and Awards of Merit

Fluor's Safety Excellence award is reserved for Million Plus safe work-hour achievements and the Fluor Awards of Merit for achievements that are less than one million safe work hours.

Awards are based on total project site or office performance, including contractor personnel. The project may be self-perform, construction management, or operations and maintenance.

7.3 Safety Cross Awards

The Safety Cross Award Program was established to encourage safety awareness among Fluor employees and contractors – an awareness that is essential to the continuous performance improvement for which we strive. By recognizing employees who assume responsibility for the safety of themselves, their coworkers, and those in the communities in which they work, we reinforce the vital role that safety plays in maintaining Fluor's

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status as a leader in the construction industry. Most importantly, this program recognizes employees for protecting each other.

The Silver Safety Cross Award recognizes those employees who have acted in a lifesaving manner and assisted others in distress either on or off the job, and is the most esteemed award Fluor offers.

The Bronze Safety Cross Award is awarded to employees who have been involved in an accident or incident where serious injury was avoided through the use of proper personal protective equipment (PPE).

7.4 Fluor Star Quality HSE Certifications

Practice 000.653.1101, Fluor Star Quality HSE Certifications, defines the process for Fluor to apply for external certifications such as the U.S. OSHA Voluntary Protection Program (VPP), OSHAS 18001, ISO 140001, ANSI Z10, or the Australian Standard 1408. The practice currently addresses the steps sites must complete to apply for participation in the U.S. OSHA VPP. As the program expands, the application processes for other certifications will be added.

Fluor's Star Quality signifies the site has demonstrated an exceptional level of HSE performance compared to established standards in Fluor's HSE Management System. Fluor's Star Quality sites may be encouraged to pursue external certifications such as the following:

- U.S. OSHA VPP
- ISO 14001
- OSHAS 18001
- ANSI Z10
- Australian Standard 1408

7.5 Resources

Refer to Practices 000.653.1100, Awards Program, and 000.653.1101, Fluor Star Quality HSE Program, for requirements, additional information, and details.

8.0 INCIDENT REPORTING AND INVESTIGATION

Incident investigations are designed to answer the reason why, so you can prevent future incidents.

No one wants to investigate an incident because it reminds you that people are impacted by the incidents. However, an investigation process is vital to the success of any HSE program. Investigation processes driven by systematic urgency and discipline prevent future problems when they identify the cause of the problems. We learn from mistakes.

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Projects should investigate any incident that could cause or did cause an injury.

Minor incidents every day are a precursor to future tragedy. Projects should investigate the small things with relentless consistency.

Every employee has the responsibility of reporting an incident after they become aware of it. Practice 000.653.1202 defines the requirements for reporting, investigating, and managing incidents that have health, safety, or environmental significance.

8.1 Resources

Refer to Practice 000.653.1202 for requirements, additional information, and details.

9.0 PRE-TASK PLANNING

Someone once said that "if you fail to plan, you plan to fail." Safe execution takes detailed planning. Projects must identify and mitigate hazards before beginning work. An effective pre-task plan requires people to think before they act.

There are 2 critical ways to discipline a project organization to preplan work and anticipate risk; a JSA and a STA. Each tool addresses different stages of a plan, but both tools require you to anticipate and mitigate risk.

9.1 Job Safety Analysis

A JSA evaluates a job in its entirety; evaluate each step in a job and identify the hazards associated with each step. Once one knows the hazards, defenses can be put in place to protect people. A JSA allows project staff to think through the job as a whole and prepare for individual steps. A JSA is developed before you begin a project. It is similar to a work procedure that identifies risk throughout the procedure, and leaders should use a team approach to develop the JSA. The more input received from different perspectives, the more effective the tool is.

9.2 Safety Task Analysis

An STA focuses on the risks associated for a specific task for that day. The STA is used to remind the team of the required permits, PPE, training qualifications, and other miscellaneous safety precautions associated for a specific task for the day. A supervisor should perform an STA with their crew every morning before employees start work, and use this time as a prejob brief for the day. Identify potential hazards in the work environment. Have each employee sign the STA at the start of the shift and then initial it again during a post-shift briefing. The supervisor should document all concerns or incidents that happened that day.

Good pre-task planning tools require thinking through all stages of work. Document the process and monitor your system daily, so employees never say, "I just wasn't thinking."

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9.3 Resources

Refer to Practice 000.653.1304 for requirements, additional information, and details.

10.0 MANAGEMENT IN ACTION

When the CII conducted the research that led to their list of high-impact incident reduction techniques, they clearly showed that, when management demonstrates HSE commitment, incident rates drop dramatically. CII said management can demonstrate their commitment by issuing a safety mission statement, participating in incident investigations and field inspections, reviewing safety performance reports, and attending employee orientations.

When a new employee meets a manager during orientation, they are more likely to start work with a safe attitude. Safety commitment does not exist without visibility. Leaders can demonstrate their conviction in strategic ways. Where do you spend your time? The most critical point managers need to remember about strategic visibility is that it does not have to cost money. Presence in the right safety-related processes demonstrates what is important to the manager.

New employees can form opinions in the first couple of hours they are on site. This is a perfect opportunity for Site Managers to set the safety tone by meeting with the new employees. Intentional interaction with employees during safety meetings, prejob meetings, and audits shows an employee safety is important to you. Ask safety-related questions. Workers know your interest by the questions you ask.

Note: *When leaders balance management participation with decisive action, they visibly demonstrate that safety is important.*

During an HSE walkthrough or field inspection, management has the opportunity to establish their expectation for HSE performance, raise HSE visibility, and positively affect the worksite's HSE culture. A manager's attention shows employees what he/she feels is important.

10.1 Adopt-A-Crew Program

Adopt-a-crew actions can include:

- Management participation in the morning STA meetings to demonstrate HSE commitment to the pre-planning of work and assistance around clear directions, identified hazards/barriers, and mitigation/control efforts to keep employee free from injury

- Contribution to the development of the STA quality — not just attend, observe, and leave without comments

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- Regular attendance/participation by Site Manager, Construction Manager, Quality Assurance/Quality Control, HSE, planners, etc.

- Sign off on STA in the Management Participation section to verify attendance

Note: *Elevated work locations have been noted as receiving "less attention" than more convenient lower- and ground-level locations. All project areas must be given consideration so that all work crews are given the opportunity to participate in the adopt-a-crew process with a management team member.*

10.2 Resources

Refer to Practice 000.653.1305 for requirements, additional information, and details.

11.0 AUDIT/ASSESSMENTS

How can you improve, if you are not sure how you are doing? Audits identify a project's strengths and weaknesses.

Six elements will make the field audit program successful:

1. Participation is vital. Anyone who supervises or directs employees should conduct audits appropriate for their area of responsibility. When leaders support the audit program with their participation, they instill a sense of urgency in the program, and their presence should drive corrective action.

2. You have to audit frequently. Participants should perform short audits every week. There is more value in frequent short audits than long drawn-out audits. People know if you look for risk on a regular basis, and that prompts them to be prepared.

3. Participants have to develop confidence with their audits. Leaders drive the success of the audit program with their confidence in their ability to identify and correct safety observations.

4. Use consistent standards to audit. What if oversight agencies did not audit standards and they had the authority to make up rules as they go from site to site? As the one being audited, you would never know how to prepare. Give people an opportunity to succeed.

5. Follow through with corrective actions. Document all observations and monitor corrective action. Also, keep in mind, true corrective action eliminates the hazard long-term.

6. Hold leaders accountable! If you expect a certain standard, do not let people perform less than the standard without consequences. Record, track, and eliminate repeat observations.

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11.1 Annual Site Self-Assessment

An annual, comprehensive self-assessment verifies compliance with the Fluor Corporate HSE Management System as well as applicable site-specific HSE requirements. Each site should conduct an assessment using a team approach, with the HSE Representative, supervisor, and a craft employee, using the checklist in Form 000.653.F0951. Results of the annual self-assessment should be communicated to the management team and used as an integral part of the continuous improvement process.

11.2 Weekly HSE Assessments

Each site should develop a weekly inspection/assessment schedule using Form 000.653.F0190, Site HSE Inspection Schedule. The schedule designates individuals performing the inspection/assessment and the area/process to be assessed. The entire Project Management team, including the foreman, general foreman, superintendent, construction manager, project manager, and appropriate field support staff, should participate in weekly assessments.

Inspectors should use Form 000.653.F0150, Hazard Inspection Checklist, and 000.653.F0172, HSE Weekly Self-Assessment Program, to ensure a standard format and consistent approach from week to week.

Results of the assessments should be made available to employees via scheduled toolbox meetings, together with results of remedial actions taken.

11.3 Resources

Refer to Practice 000.653.1305 for requirements, additional information, and details.

12.0 USE OF NETWORKING AND RESOURCES

Fluor has many people standing by to help you. Just reach out.

Log onto the Fluor HSE Knowledge Community. There you will find the entire HSE Management System, plus project-specific examples of programs and practices, training presentations, and toolbox topics. If you do not see what you are looking for, you can request help by posting a forum question. Subject matter experts from around the world will see your question, and it is their job to assist you!

Fluor's intranet site, News OnLine, offers you news about our projects and employees and a place to ask general questions about our company. There you will find important notifications about your benefits, events, and pandemic updates. You can also submit your own story ideas or profiles about your own worksite.

HSE's Training & Development group, Fluor University, and Skill-Soft all offer virtual classes, webinars, and instructor-led and computer-based training to meet your needs.

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Contact HSE.Training.&.Development@Fluor.com with any inquiries or to sign up for training on the techniques discussed here. Request the HSE Management System on CD by contacting Dan.Palmer@fluor.com.

13.0 RESOURCES

Global Standards	
Australian Government	Safety and Compensation Council; List of National Codes of Practice
	Safety and Compensation Council; List of National Standards
European Union	European Agency for Safety and Health at Work
United Kingdom	Construction Regulations 2007

14.0 REFERENCES

Document ID	**Document Title**
000.653.0010	HSE Management System – Table of Contents
000.653.0020	HSE Management System – Execution
000.653.1001	Training and Orientation
000.653.1002	Office Safety
000.653.1003	Contractor Selection and Alignment
000.653.1202	Incident Reporting and Investigation
000.653.1203	MIER/MSISR/GIMS
000.653.1100	Awards Program
000.653.1101	Fluor Star Quality HSE Program
000.653.1300	Project Startup – HSE Program
000.653.1301	Site-Specific HSE Plan
000.653.1304	Pre-Task Planning/Risk Analysis
000.653.1305	Inspections/Assessments and Audits
000.653.1400	Substance Abuse Prevention Program
000.653.1500	Records Management and Document Control

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Document ID	Document Title
Forms:	
S19	Contractor/Subcontractor Site HSE Requirements
000.653.F0150	Hazard Inspection Checklist
000.653.F0172	HSE Weekly Self-Assessment Program
000.653.F0190	Site HSE Inspection Schedule
000.653.F0215	Project Startup – HSE Program Checklist
000.653.F0219	Contractor and Subcontractor HSE Prequalification Questionnaire
000.653.F0229	Site-Specific HSE Plan
000.653.F0259	Contractor Request and Release Form
000.653.F0260	Description of Suspicious Behavior Form
000.653.F0261	Individual Release Form
000.653.F0262	Management Letter to Employees Form, Re: Substance Abuse Screening
000.653.F0263	Random Selection Verification Example
000.653.F0264	Site Standard Time Limit for Providing Test Sample
000.653.F0265	Substance Abuse Prevention/Statement of Understanding Form
000.653.F0266	Alcohol Testing Form
000.653.F0267	Consent to Substance Abuse Screening
000.653.F0270	HSE Management System Compliance and Equivalency
000.653.F0276	HSE Perception Survey
000.653.F0951	HSE Site Self-Assessment

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Management Assessment Participation

Purpose

The Management Assessment is a proactive practice designed to directly involve the site manager and the HSE lead on the project in an HSE Assessment or walk about. It brings exposure to Fluor's management in action and drives an actively caring attitude to the field.

Procedure

Each project will develop an audit practice that involves the site manager and the HSE lead. This of course is in addition to the other common auditing practices for the site. The site manager and HSE Lead will perform 2 assessments per week. These assessments can be focused on the entire project or in specific areas. Scheduling of times and locations will be left up to the project. However, there must be documentation of audit findings and corrective actions if any are found.

Management Assessments will be collected and quantified by the HSE department on a weekly basis. The total amount of assessments turned in will then be inputted into the Management Assessment section of the key leading indicator tool xls spreadsheet.

Goal

Minimum: Two Management Assessments per week.

Supervisor Hazard Recognition Participation

Purpose

Supervisor Hazard Recognition is a proactive practice designed to directly involve the general foreman or similar levels of supervision to include contractor supervision in auditing or assessing the project. It involves his/her foreman in an effort to recognize/assess for hazards to include unsafe acts or conditions throughout their work areas.

Procedure

Each project will develop a documented audit practice involving general foreman or comparable supervision as well as each subcontractor in assessing their first line supervisor(s) on a weekly basis. Fluor HSE self assessment form should be used to bring consistency for this practice. Audits will be conducted and turned in to the HSE office after completion. All open items must be closed out or assigned corrective actions by the general foreman or supervisor performing assessment.

Hazard Recognition Assessments will be collected and quantified by the HSE department on a weekly basis. The total amount of assessments turned in will then be inputted into the Supervisor Hazard Recognition section of the key leading indicator tool xls spreadsheet.

Goal

Minimum: One Hazard Recognition Assessment by General Foreman per 40 employees per week

Safety Task Assignment Participation

Purpose

The Safety Task Assignment program (STA) is a proactive tool used to provide quantification and insurance that pre task planning is being conducted by first line supervision.

Procedure

STA's are completed for each job task assigned for the day on each project. This involves Fluor self perform and subcontractor tasks. At the end of each day, all STA(s) that have been initiated will be closed out accordingly and turned in to the HSE Department at a set location, date and time by each respective first line supervisor.

STA's will be collected and quantified by the HSE department on a weekly basis. The total amount of STAs turned in will then be inputted into the STA section of the key leading indicator tool xls spreadsheet.

STA quality will be continually checked by HSE to drive accuracy. STA's turned in each week should be reviewed for quality with a goal of 10% of the total turned in for each period.

Goal

STA: One STA per Foreman/First Line Supervisor per day (Typical: One First Line Supervisor per 10 workers)

Hazard Elimination Participation

Purpose

Hazard Elimination Program (H.EL.P) is designed to involve employees in identifying and eliminating unsafe acts and conditions and to reward or recognize them for their active participation. This program has proven to be an effective tool when combined with the “site specific” safety incentive program. The results will enhance employee participation to “HELP” in safety awareness and promote hazard elimination by employees to a level not normally achieved on construction projects. This program also prevents employee safety recommendations from “falling through the cracks” and not getting corrected in a timely manner.

Procedure

Each project will design/produce “HELP” cards (see attachment 1) and insure that they are strategically handed out to employees or placed throughout the project for employee access. When a hazard or near miss is observed and needs correction or attention, the employee is expected to take necessary actions such as correcting immediately (if possible) or securing the hazard to prevent any unwanted outcome and notifying the correct authority. The employee will then complete a “HELP” card and put in the designated drop box or turn in to his or her supervisor. The drop box will be checked each week and/or the supervisor will turn in the “HELP” cards each week. Note: Drop boxes can be easily made and should be placed in strategic areas throughout the project site.

H.EL.P Cards will be collected and quantified by the HSE department on a weekly basis. The total amount of cards turned in will then be inputted into the Hazard Elimination section of the key leading indicator tool xls spreadsheet.

Goal

Minimum: One Hazard Elimination Card per employee per week

Attachment 1: Example of a Project HELP Program

Example

Hazard Elimination or H.EL.P Card (attachment 1) is filled out by an employee who identified a potential hazard or near miss. Again, the card describes the hazard, near miss, elimination or correction of hazard or the temporary controls taken until the supervisor is notified. The completed card will be turned in to the Safety Manager who shall review the document and log it. The Site Safety Committee will then review the document. The Site Safety Committee will determine the level of severity of the hazard, Level 1, Level 2, or Level 3, and communicate findings to the management team and employees on the project.

- For **three** Level 1 hazards eliminated by an employee, one additional Chance Ticket will be awarded for the Grand Prize/Monthly Drawing. Level 1 = minor injury potential/property damage
- For **two** Level 2 hazards eliminated by an employee, one additional Chance ticket will be awarded for the Grand Prize/Monthly Drawing. Level 2 = moderate to serious injury potential/property damage
- For **one** Level 3 hazards eliminated by an employee, two additional Chance tickets will be awarded for the Grand Prize/Monthly Drawing. Level 3 = IDLH potential/catastrophic property damage

Hazard Elimination Cards must be tabulated weekly. Projects should review all trend analysis related to Hazard Elimination and take appropriate actions. Also, all near miss incidents reported must be reviewed, documented and used to prevent future occurrences on the project.

Note: The HELP card process may be modified to fit project or client needs. Some clients have an existing Hazard Elimination program that can be supplemented for this one. Modifications for upgrades on HELP forms and process can occur but no downgrading modifications will be accepted.

Attachment 1 (sample)

HAZARD ELIMINATION PROGRAM (H.EL.P) Card

Employee Name _____ **Date** _____

Description and Location of Hazard

_____
_____
_____

Near Miss Incident (Include time/location)

_____
_____
_____

Corrective Action Taken

_____
_____
_____

Supervisor Signature _____ **Date** _____

Back

If corrective action cannot be taken and condition warrants a work order, forms must be attached. (Please provide additional information as needed, i.e., drawings, equipment numbers, location, etc.)

Safety Committee

Approved for further consideration? Yes _____ No _____

Level One Hazard _____ Level Two Hazard _____ Level Three Hazard _____

Disapproved (return to originator with explanation)

_____
_____

Safety Manager Review

_____
_____

Signature _____ **Date** _____

Fluor's ZERO Incidents℠ Program

12 High-Impact Incident Reduction Techniques

Successful execution of complex projects, delivered in a safe and environmentally sound manner, is a top priority at Fluor. Every day, Fluor helps clients safeguard the environment, conserve energy, protect lives, and strengthen the economies and social structures of communities in which we work and live.

Over the course of many years, Fluor has established simple but essential values that are both proven and time tested. At Fluor, we believe:

- No job is worth getting hurt.
- Safety can be managed.
- ZERO Incidents is an attainable goal.
- Safety is a condition of employment.

These types of shared values have shaped Fluor's Health, Safety & Environmental (HSE) culture.



Fluor's ZERO Incidents Program is a suite of 12 High-Impact Incident Reduction Techniques that have helped raise our level of expectation for HSE performance and provided the tools for us to achieve health, safety, and environmental excellence.

ZERO Incidents℠

1 Subcontractor Management

Prequalify and align with subcontractors. Include subcontractors in the implementation of the HSE Management System.

2 Pre-Project HSE

Implement a written and approved site HSE plan and communicate this plan to the project team, management, and subcontractors.

3 HSE Education and Orientation

Implement an orientation program. Conduct site-specific HSE and safety leadership training.

4 New Employee Development

Follow Fluor's New Employee Development plan and engage project management in the new employee orientation process.

5 HSE Awareness Program

Visually promote and involve employees in HSE programs.

6 Substance Abuse Program

Implement the corporate HSE site-specific substance abuse plan and ensure subcontractors have an approved substance abuse program in place.

7 Recognition and Rewards

Fund a recognition and reward program appropriately. Implement an employee incentive program to encourage participation in the HSE process; include subcontractors.

8 Incident Reporting and Investigation

Record and report incidents properly and use corporate approved investigative methodology to investigate incidents.





9 Pretask Planning

Fully execute the safety task assignment (STA) and conduct job hazard analyses (JHA), where applicable.

10 Management In Action

Engage site management (or designee) participation in 100 percent of new employee orientations. Site management should also participate in Adopt-A-Crew, weekly HSE assessments, and all investigations of recordable incidents and serious near misses.

11 Audit/ Assessments

Conduct annual corporate audits and weekly HSE assessments.

12 Use of Networking and Resources

Use Fluor's Knowledge Communities, NewsOnline, and computer-based training resources, where available.

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Fluor's ZERO Incidents℠ Program

12 High-Impact Incident Reduction Techniques



Introduction

Although they have been around for a while, the ZERO Incidents High Impact Injury Reduction Techniques continue to show results when used on jobsites. We feel these techniques are the basis of a good HSE program, and every project will benefit from implementing them. This program of incident reduction techniques has helped Fluor raise our level of expectation for HSE performance and provided the tools for us to make it happen.

Our current corporate HSE audit measures how effectively projects execute the ZERO Incidents Techniques. If projects are not adhering to this program, they will not perform well on their audits. Additionally, projects applying for our ZERO Incident Awards (One-Star through Five-Star Awards) are audited against these techniques.

Background

It all started with the Construction Industry Institute (CII), which is a group of owners (like Exxon, DuPont, and GM); contractors (including Fluor); and universities that study and support industry to improve safety, quality, and cost for its members.

A CII task force studied the construction industry first in 1993 and then again in 1999, looking at companies with construction projects valued from $50 million to $600 million, to produce what they found to be the most effective techniques to reduce workplace injuries. They identified best practices used by companies that had achieved safety excellence.

The first study found five high impact ZERO incident techniques that seemed to make a difference in safety performance, and, then in 2001, they expanded these five to nine best practices.

They compared the safety performance rates of companies that used these techniques with those that did not, with astounding results. Incident rates plummeted on projects using the techniques.

Fluor adapted the results of the CII study, using CII's high impact techniques as the basis of the ZERO Incidents program, added our own commitment and experience, and raised the bar to produce a list of 12 high impact incident reduction techniques.

In the coming months, we'll discuss each of the following 12 high impact incident techniques, along with the details and tools to support them.

1. Subcontractor Management
2. Pre-Project HSE
3. HSE Education and Orientation
4. New Employee Development
5. HSE Awareness Program
6. Substance Abuse Program
7. Recognition and Rewards
8. Incident Reporting and Investigation
9. Pre-Task Planning
10. Management In Action
11. Audit/Assessments
12. Use of Networking And Resources

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ZERO Incidents℠

Fluor's ZERO Incidents℠ Program

12 High-Impact Incident Reduction Techniques



1. Subcontractor Management Prequalification

In keeping with Fluor's commitment to subcontractor safety, it is our policy to review, evaluate, and approve contractors' and subcontractors' safety qualifications before they may perform work for Fluor. Prequalification and alignment is critical.

Evaluation of the HSE qualifications of Fluor's potential contractors and second-tier subcontractors is a vital component of the selection process. The process of prequalification or prescreening is a proven, proactive HSE improvement strategy. Selecting contractors and subcontractors who are aligned with Fluor's HSE philosophy and culture provides for a safer workplace, protection of the environment, and enhanced project execution.

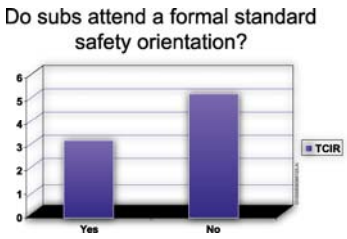
To obtain prequalification, potential contractors are required to complete the Contractor HSE Prequalification Questionnaire 000.653.F0219 along with any supplemental documentation, at the same time as they complete the other (non-HSE) prequalification data. Fluor's Procurement and HSE departments review and evaluate the approval questionnaire.

Contractor supplemental information may include:

- Contractor HSE program
- Safety statistics
- Experience modification rates
- Accident cost data
- Orientation and training programs
- Proposed work hours

"Contract preparation is one of the most critical elements regarding contractor expectations. The front-end expectations must be clearly defined," said Don Mitchell, HSE Manager for U.S. Operations. "All portions of the contract must be understood to be properly executed, and accountability and responsibility must be clearly defined."

It is Fluor's general intention to employ contractors and subcontractors whose HSE performance records are substantially better than the industry average.

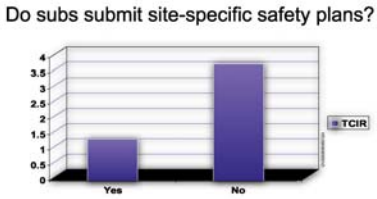


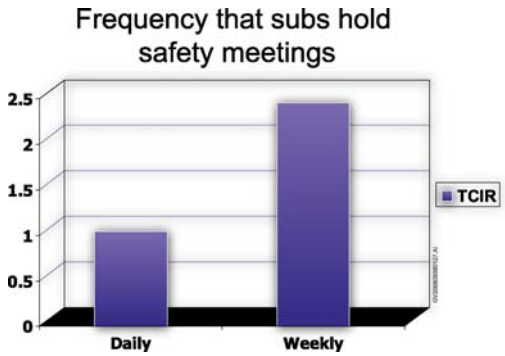
Before commencing work on the site, each contractor's management representative and the HSE manager/advisor will attend a meeting with members of the Fluor site management team. HSE items to be addressed will be detailed on the meeting agenda, and action items arising will be noted, with responsibility for action assigned with a completion date.

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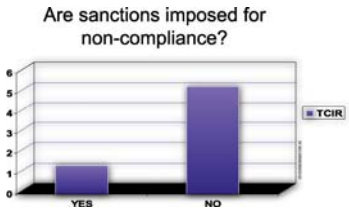






Alignment

Once mobilized to the site, each contractor is expected to conduct its own kickoff meetings with its subcontractors, as the need arises, for each separate phase of the site activities.



Key items that should be considered when aligning with subcontractors are as follows:

- HSE is a core value
- HSE philosophy begins at the top
- HSE begins in the design stage
- Proactive as opposed to reactive
- Accountability and responsibility
- HSE program
- Training/orientation
- Management-in-action philosophy
- STA/JSA program
- Self-inspection
- Substance abuse program
- Safety incentive program
- Sufficient HSE representation
- Safety meetings
- Incident investigation
- Recordkeeping/statistical reports
- Workers' compensation program



Once the subcontractor is approved to work, they should be included in all site activities, such as the site's HSE orientation and training program.

They must also be included in the site's drug testing program and applicable medical testing examinations.

A contractor/subcontractor should furnish medical services to its employees. If the subcontractor does not provide its own first aid services, Fluor's management shall determine whether Fluor will furnish such services. (See Procedure 000.653.1002 for further details.)

Of course, they are always required to use personal protective and fall arrest equipment, abide by all security measures in place, have proper equipment operators' licenses, participate properly in rigging and lifts, and retain the right to halt operations any time they see an unsafe act or situation, just as any Fluor employee.

Just as each site reports self-perform, joint venture, or LLC hours and injuries, they must also report this information for subcontractors, as described in Practice 000.653.1203- MIER/MSISR/GIMS; by filling out Form 000.653.F0134 – Monthly Subcontractor Incident Summary Report.

Contractors and subcontractors shall be responsible for the following activities:

- Development of project-specific HSE plan
- Preparation of HSE procedures for all hazardous tasks
- Copies of all documented procedures to be provided to the relevant supervisors
- Contractor supervisors to provide training for all personnel on the job at the daily pre-start meetings, safety meetings, and structured training sessions
- Maintenance of a register of all contractor HSE procedures, with the register being available to all personnel at all times
- Nomination contractor manager to retain copies of superseded HSE procedures
- HSE procedures to be reviewed on a regular basis through the safe work observation process

Sanctions for substandard performance must also be in place. These sanctions are enforced for noncompliance to Fluor's standards. Contractors/subcontractors performing work at the facility shall abide by OSHA and/or applicable codes and established HSE regulations. Violations of such regulations shall be cause for termination of the contract/subcontract.

Resources:
Fluor's Contractor/Subcontractor Safety Handbook (S19) is a valuable resource for managing subcontractors. This handbook is available through Fluor's Forms Management Department in Greenville, South Carolina at 864.281.5277.

HSE Management System Procedure 000.653.1003 (available on HSE Knowledge OnLine) deals with contractor selection and alignment. It also includes detailed forms which assist with subcontractor management.



2. Pre-Project HSE

Setting up the project regarding HSE will increase the success of the HSE program, improve awareness, and help reduce injuries.



Step 1: Review critical HSE practices

Becoming familiar with the following practices will help you understand what tools are available within the system to support your project or office HSE.

- 000.653.0010 – HSE Management System Table of Contents
- 000.653.0020 – HSE Management System- Execution
- 000.653.1002 – Office HSE Practices

Step 2: Perform a risk assessment

Procedure 000.653.1002 provides guidelines for identifying and analyzing hazards onsite and developing the work procedures to make sure the work is done safely.

Step 3: Customize the management system

By picking and choosing the practices that are applicable to the work that is done at your project, you can build a customized system that is site-specific. Thumb through the table of contents, selecting only the practices you need to build your plan.

When beginning a project, it is helpful to be mindful of the HSE and training records that should be retained and what information should be provided in the project's closeout report. For example, if you know that you will have to provide details around any breathing air test results at a later date go ahead and set up a file to manage that information from the beginning, making it easier on yourself to gather it during demobilization. Procedure 000.653.1500details HSE records retention and document control procedures. It charts the types of files and the number of years they must be retained.

It is critical that each project has a written and approved site-specific HSE plan in place and that it is communicated to the project team, management, and subcontractors. HSE Management System Procedure 000.653.1301 provides a go-by or template to document the development of a site-specific plan. The accompanying Form F0229 is a checklist that helps assign and track the necessary tasks involved in developing the plan.



Step 4: Perform a gap analysis

Use Form 000.653.F0270 to make sure your project is covered. This chart lists each management system document and tracks if it is needed on the project, if you are compliant, or if an equivalent document is used.

Step 5: Perform pre-job HSE planning

Form 000.653.F0215 lists the tasks that should be performed at project start-up, from ordering copies of the Fluor Safety Handbook, as well as ordering posters and signage, establishing an HSE audit schedule, and meeting with medical and insurance providers.

Step 6: Identify training requirements

Training is a major component of a successful HSE culture. Informed employees are more likely to make good choices and feel cared for and part of the greater good. Procedure 000.653.8101 describes orientation and training content and procedures. It provides an attendance roster, comprehension test template, and matrix to help identify what training is needed for your workforce and refers you to records retention requirements.

Step 7: Prepare for incident investigations

Look over Procedure 000.653.1202 and then print out all of the attached forms. Create a kit with a camera, tape measure, barricade tape, and other materials you will need on hand should you be called on to investigate and document an incident.

Step 8: Verify your site's compliance

You can conduct a corporate audit on your site without calling corporate. Use Form 000.653.F0951 to measure the project's compliance with the management system.

Step 9: Verify your program's effectiveness

Procedure 000.653.1305 will help you determine if your plan is highly effective or is in need of improvement.

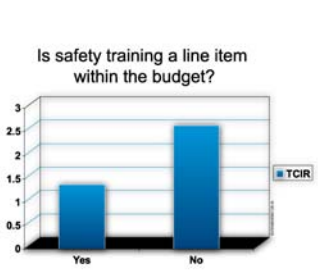
Step 10: Cover your bases

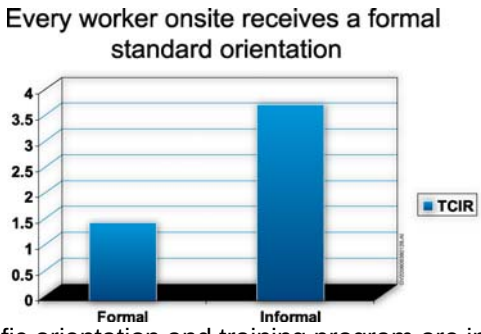
This last step ensures you have not forgotten anything, from aligning with engineering and the client, to requesting an HSE start-up kit, equipping the first aid supply, and promoting your HSE program with signage.



3. HSE Education and Orientation

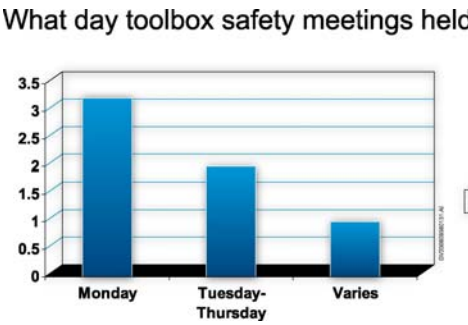
CII found that, when workers go through a formal orientation, project incident rates are cut in half.





Incident rates plummet when a site-specific orientation and training program are implemented, there is follow-up and monthly training, toolbox meetings take place, and safety training is a line item in the project budget.

CII even identified the best days to hold toolbox meetings! (Hint, Mondays are the worst; Tuesdays through Thursdays are only a little better; when the day is varied through the week, that is the best!)





See Procedure 000.653.1001 for all of the details around an education and orientation program



4. New Employee Development

New employees deserve our attention. An aggressive new employee development program reduces the potential for injuries with employees who are not familiar with the project, and the program offers an opportunity for managers to share their expectations at new hire orientations.

An HSE culture begins with visible management leadership and a commitment to HSE ZERO Incident principles. When top management gets involved with inspections, leads investigations, and participates in employee orientations, they demonstrate the value of the HSE program. New employees see the commitment, and they begin to adapt to a Fluor's HSE culture as they have more exposure to management leadership during their first few months onsite.

A new employee who meets a manager during orientation is more likely to start work with a safe attitude.



Industry workplace injury trends indicate that approximately 40 percent of injuries occur to new-hire employees with less than three months' tenure on the job. At Fluor, it is 55 percent of the injuries.

Early identification and correction of unsafe work habits will help to promote a safe and healthy workplace. Our new employee development (NED) program is designed to heighten safety awareness during the new-hire acclimation process.

HSE Management System Practice 000.653.1001 details how the program works:

All newly hired and newly assigned field employees will attach a NED sticker to their hard hats (or badges where applicable) for a period of 30 days. The intent is to assist project/site management, supervision, and others in identifying new employees and allowing intervention when their behavior or environment puts them at risk.

During this time, each new employee will have assigned to them an experienced "mentor" who has demonstrated safe work habits and has been on the job more than 30 days. When a new project/site is in the process of deployment, the project/site manager will determine the respective mentors. Mentor training is available to promote ownership and accountability of this key initiative.

The outer ring of the perforated sticker will be removed after 30 days, given the employee's demonstration of his/her ability to safely perform their work and with approval of their respective mentor.

The NED program enhances the well-being of our employees, reduces workers' compensation cost, and distinguishes Fluor's safety performance from competitors. Subcontractors also benefit from this high impact program because they witness Fluor's commitment to HSE.

NED and safety mentor hard hat stickers are available through Fluor's online store at www.fluorstore.net.



5. HSE Awareness Program

HSE performance begins and ends with each individual's awareness and attitude toward maintaining an incident-free environment.

How do you impart a healthy HSE attitude at your site?

A successful HSE awareness program reminds employees to work safe and use proper procedures for all tasks. To achieve the greatest impact, the awareness program must be specific to activities in the workplace, and it must be consistent day to day. However, the program and its messages must have enough variety so they do not become routine or mundane.

Employee Involvement

The HSE committee is one method to engage employees and management in supporting first-line supervision in identifying and correcting unsafe conditions, coordinating the facility HSE process, and promoting HSE awareness in the facility with the objective of incident prevention.

The objectives of the HSE committee are to:

- Act in an advisory capacity
- Cultivate an active interest in HSE issues and assist in reducing work injuries, work-related illnesses, and hazards
- Consider measures for the training and education in and promotion of HSE management and make recommendations in relation to those measures
- Propose and review the procedures relating to HSE that are to be carried out or complied with at the workplace
- Review the circumstances surrounding recent work injuries and work-related illnesses and incidents at the workplace concerned and make recommendations to office/facility management
- Propose programs aimed at raising and maintaining interest in the workplace HSE program
- Maintain records of meetings including any recommendations made



"Creating and sustaining a safe working environment is a collaborative effort that involves employees at all levels of the company. A critical component of this effort is effective HSE communication," said Garry Flowers, Senior Vice President of Construction Services, HSE and Corporate Security. "HSE education and knowledge rely on open communication that involves not only giving our employees information but also listening to what they have to say." Listen! Conduct Safety Perception Surveys (Form 000.653.F0276) to gauge the success of your HSE program and act on your findings.



The safety task assignment (Practice 000.653.1304) is a vital part of sustaining HSE awareness and employee involvement. The STA process includes:

- Pre-task planning
- Hazard identification and correction
- Supervisor and employee accountability

There are many ways to keep employees involved with your HSE program. Make it fun, make it personal, and make it relatable.

In order to foster a continual HSE culture and mindset in employees, one project addressed hazards that employees might encounter outside the workplace. "One afternoon, we stopped employees as they were leaving work for the day. Those who had fastened their seat belts were given a free soda to enjoy on their ride home, and those who had not were reminded to buckle up before leaving."

Training, orientation, signage, posters, banners, and toolbox talks all promote HSE awareness. Check HSE Knowledge OnLine to download hundreds of training presentations, graphics, and toolbox topics or contact HSE.Communications@Fluor.com for help finding what you are looking for.



6. Substance Abuse Program

Practice 000.653.1400 defines the requirements of Fluor's substance abuse prevention program for maintaining a safe, productive, and drug-free workplace.

Fluor's program applies to all field project sites and covers salaried, hourly, full-time, part-time, and temporary employees as well as consultants, temporary agency workers, and candidates for hire. Subcontractors should also have a substance abuse prevention program in place.

Compliance with the program is a condition of employment or continued employment, and violation will result in disciplinary action, up to and including termination.

We are committed to providing a safe environment for our employees, customers, and contractors. Illicit drug use and alcohol abuse constitute not only a significant danger to the safety and health of the user but also to fellow employees, contractors, and customers. Our goal is to maintain a safe, productive, and drug-free workplace.

Fluor considers substance abuse screening part of the overall program to prevent illicit substances from entering the workplace.

Site-specific programs are developed for each individual site using the Fluor standard program as a base and then addressing client-specific requirements and state-/country-specific regulations. Refer to Form 000.653.F0259, Contractor Request and Release Form.

In countries or regions where legislation prohibits certain aspects of the Fluor standard program from being implemented, the site-specific program must be developed, incorporating all aspects of the Fluor program deemed acceptable under such legislation.

Managers and supervisors should attend substance abuse awareness training at project start-up.

Testing

Each site receives the test administrator's guide and a random number generation program disk (available from corporate HSE).

All persons to be tested should receive Form 000.653.F0262, Management Letter to Employees Form, explaining the policy and company rules, and they should review and sign Form 000.653.F0265, Substance Abuse Prevention/Statement of Understanding Form.
Persons to be alcohol tested should review and complete Form 000.653.F0266, Alcohol Testing Form, and they should complete Forms 000.653.F0261, Individual Release Form, and 000.653.F0267, Consent to Substance Abuse Screening.

Each Fluor project, site, and office should establish a time limitation for employees to comply with the screening process. Refer to Form 000.653.F0264, Site Standard Time Limit for Providing Sample. Testing should be performed in accordance with the test administrator's guide (Attachment 01).



Fluor performs the following types of testing:

- Post-offer/ preemployment screening. All newly hired salaried and hourly employees and all transferred salaried and hourly employees will be screened after the decision is made to hire. Potential applicants will be advised of this requirement at the time applications are distributed to them.

- For cause/reasonable suspicion. Employees reasonably suspected of using or being under the influence of illicit substances or alcohol as manifested, among other ways, through deteriorating job performance, uncharacteristic behavior, safety violations, mood swings, falling asleep, inability to appropriately respond to questions, the odor of alcohol on the breath or person, inappropriate or aggressive behavior, accident or near-miss accident, or other credible evidence are subject to drug and alcohol screening at the Fluor project manager's discretion. Refer to Form 000.653.F0260, Description of Suspicious Behavior Form.

- Random Screening. All employees onsite will be subject to random screening unless disallowed by state law. It is recommended that a minimum of 10 percent of site employees be tested each month. Refer to Form 000.653.F0263, Random Selection Verification Example.

- Other types of testing may be established for individual sites based on site specifics.



7. Recognition and Rewards

Fluor's projects and offices around the world celebrate milestones with commemorative plaques, recognition luncheons, and site celebrations. Whether it's at the SIPCHEM Jubail Acetyls Complex Project in the Kingdom of Saudi Arabia or at the Chevron Phillips Maintenance Services Project in Guayama, Puerto Rico, our employees are being recognized for their contributions to keeping our workforce safe and our company's incident rates low.

Fluor believes all incidents are predictable and preventable. By training our employees to anticipate potential hazards and equipping them with safe work practices to alleviate or prevent those hazards, we reaffirm Fluor's status as one of the safest contractors in the world. While this keeps us competitive in the global marketplace, above all it protects our most valuable asset – our employees.

Based on the priority placed on safe work practices, Fluor has developed programs to recognize projects and offices on a global scale that successfully implement safe work practices by setting and achieving safe workhour goals. The awards for which a project site or office may become eligible, as well as the criteria for each, are provided here:

ZERO Incidents Program

The ZERO Incidents Star awards are reserved for the very best performers. The ZERO Incidents program has established a new standard of expectation and recognition in the industry. The criteria are as follows:

- No injury or illness resulting in a DART-L case
- No environmental citations or other regulatory agency citations
- No fatalities on the project site or office for the six-month period immediately proceeding the accomplishment period
- The project site's or office's application of the ZERO Incident High Impact Reduction Techniques successful completion of the verification audit

Projects and offices can apply for ZERO Incidents awards of One-, Two-, Three-, Four-, and Five-Star awards based upon completion of 100,000; 250,000; 500,000; and 1,000,000 safe workhours and 500,000 increments thereafter.

Awards of Excellence and Awards of Merit

Fluor's Safety Excellence award is reserved for million-plus safe workhour achievements and the Fluor Awards of Merit for achievements that are less than one million safe workhours.

Awards are based on total project site or office performance, including subcontractor personnel. The project may be self-perform, construction management, or operations and maintenance. More details and complete criteria can be found in Practice 000.653.1100.

Safety Cross Awards

The Safety Cross award program was established to encourage safety awareness among Fluor employees and contractors – an awareness that is essential to the continuous performance improvement for which we strive. By recognizing employees who assume responsibility for the safety of themselves,



their coworkers, and those in the communities in which they work, we reinforce the vital role that safety plays in maintaining Fluor's status as a leader in the construction industry. Most importantly, this program recognizes employees for protecting each other.

The Silver Safety Cross award recognizes those employees who have acted in a lifesaving manner and assisted others in distress either on or off the job. "This is the most esteemed award Fluor offers. Recipients demonstrate our most vital commitment of protecting each other,"says Linda Ligon, who coordinates Fluor's recognition and rewards program.

"The passion and heroism that these individuals display during these situations is amazing and moving. It is heartwarming to know there are people among us willing to give so much of theirselves. I love assisting projects with awards, and I'm always here to help!"

The Bronze Safety Cross award is awarded to employees who have been involved in an accident or incident where serious injury was avoided through the use of proper personal protective equipment.

To apply for any of the above mentioned awards, look up Practice 000.653.1100 in the HSE Management System and complete the accompanying application forms. Submit your application by emailing Linda.Ligon@Fluor.com or contact Linda at 864.281.5922.

Fluor Star Quality HSE Certifications

Practice 000.653.1101 defines the process for Fluor to apply for external certifications, such as the United States (U.S.) Occupational Safety and Health Administration (OSHA) Voluntary Protection Program (VPP), OSHAS 18001, ISO 140001, ANSI Z10, or the Australian Standard 1408. The practice currently addresses the steps sites must complete to apply for participation in the U.S. OSHA VPP. As the program expands, the application processes for other certifications will be added.

Fluor's Star Quality signifies the site has demonstrated an exceptional level of HSE performance compared to established standards in Fluor's HSE Management System. Fluor's Star Quality sites may be encouraged to pursue external certifications such as the following:

- U.S. OSHA VPP
- ISO 14001
- OSHAS 18001
- ANZI Z10
- Australian Standard 1408



8. Incident Reporting and Investigation

"Why did it happen?" David Lynn, corporate HSE programs manager, relates a story.

"When I worked with OSHA as a compliance officer, I performed several fatality investigations. I remember assisting a compliance officer with one of my first fatality investigations. It involved a fatality in a grain silo. The silo had an auger in the bottom that transported corn. The corn had formed a crust over the auger and prevented the flow of corn. Two teenage cousins went into the silo to shovel the corn to another opening in the side of the silo. They had to walk on top of the 15-foot pile of corn to perform their job in the silo. While they moved the grain to the side opening, they dislodged the corn above the bottom auger. As the corn began to funnel through the bottom auger, the flow created a whirlpool effect, and the boys could not escape. It was like they were stuck in quicksand. They screamed for help, but the response was too slow. One boy stood on a board on top of the corn holding his cousin's hands as he was sucked into the funnel of grain. He could not hold him, and he watched his cousin pulled into the corn where he suffocated.

The incident happened in the early 1990s, and I remember the investigation like it was yesterday. I had to interview the surviving cousin. That was one of the hardest conversations I ever had because you could picture every word he described and you could feel pain he felt for his loss. My memories of the investigation are vivid, but you can't imagine how vivid the memory is for the cousin who lived.

Your incident investigations are designed to answer the reason why, so you can prevent future incidents.

No one wants to investigate an incident because it reminds you that people are impacted by the incidents. However, an investigation process is vital to the success of any HSE program. Investigation processes driven by systematic urgency and discipline prevent future problems when they identify the cause of the problems. We learn from mistakes, so we avoid future memories like the ones I have interviewing the cousin who lived.

What type of incidents should you investigate? You should investigate any incident that could cause or did cause an injury. You prevent future incidents with exceptional, in-depth investigations. The more investigations you do, the more incidents you prevent.

Do you think the two cousins in the grain silo were the first to experience the situation? Was that the first time corn had crusted over an auger? Was that the first time they had to use alternative methods to remove grain? Is it reasonable to think that the corn would dislodge at some point? I wonder what would have happened if the leadership had investigated previous near misses. If they had recognized the potential for future incidents through past investigations, the situation could have been different.

Minor incidents every day are a precursor to future tragedy. Investigate the small things with relentless consistency, so you don't have to perform those hard interviews like I did with OSHA."

Every employee has the responsibility of reporting an incident after they become aware of it. HSE Management System Practice 000.653.1202 defines the requirements for reporting, investigating, and managing incidents that have health, safety, or environmental significance.



9. Pre-Task Planning

Someone once said that "if you fail to plan, you plan to fail." Safe execution takes detailed planning. We must identify and mitigate hazards before beginning work. An effective pre-task plan requires people to think before they act.

David Lynn says, "How do you perform a job safely when you are facing the unexpected? Learning the details of a work procedure is like studying a map before you begin driving!"

There are two critical ways to discipline your organization to pre-plan work and anticipate risk; a job safety analyses (JSA) and a safety task analyses (STA). Each tool addresses different stages of a plan, but both tools require you to anticipate and mitigate risk.

Job Safety Analysis (JSA)

A JSA evaluates a job in its entirety. You can evaluate each step in a job and identify the hazards associated with each step. Once you know the hazards, you can put defenses in place to protect people. A JSA allows you to think through the job as a whole and prepare for individual steps. You perform a JSA before you begin a project. It is similar to a work procedure that identifies risk throughout the procedure, and leaders should use a team approach to develop the JSA. The more input you get from different perspectives, the more effective the tool is.

Safety Task Analysis (STA)

An STA focuses on the risks associated for a specific task for that day. Use the STA to remind your team of the required permits, PPE, training qualifications, and other miscellaneous safety precautions associated for a specific task for the day. A supervisor should perform an STA with their crew every morning before employees start work. They use this time as a pre-job brief for the day. Identify all potential hazards in the work environment. Have each employee sign the STA at the start of the shift and then initial it again during a post shift briefing. The supervisor should document all concerns or incidents that happened that day.

Good pre-task planning tools require you to think through all stages of work. Document the process and monitor your system daily, so employees never say, "I just wasn't thinking."

Practice 000.653.1304 establishes the processes to systematically identify, evaluate, control, and communicate known and potential workplace safety and health hazards to employees before work activities begin.



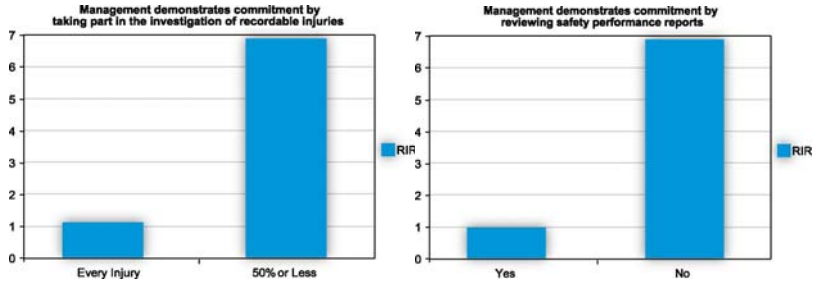
10. Management in Action

When the Construction Industry Institute, or CII, conducted the research that led to their list of high impact incident reduction techniques, they clearly showed that, when management demonstrates HSE commitment, incident rates drop dramatically. CII said management can demonstrate their commitment by issuing a safety mission statement, participating in incident investigations and field inspections, reviewing safety performance reports, and attending employee orientations.

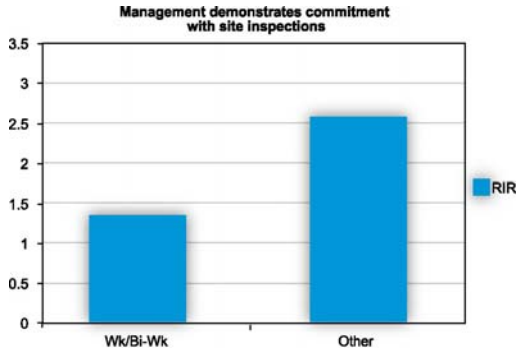
Fluor's HSE agrees. We know that, when a new employee meets a manager during orientation, they are more likely to start work with a safe attitude. HSE program manager David Lynn says, "Safety commitment does not exist without visibility. Leaders can demonstrate their conviction in strategic ways." He asks management, "Where do you spend your time? The most critical point you need to remember about strategic visibility is that it does not have to cost money. Your presence in the right safety-related processes demonstrates what is important to you. Employees have to see your obsession with safety!"

He continues, "New employees can form opinions in the first couple of hours they are onsite. This is a perfect opportunity for site managers to set the safety tone by meeting with the new employees. Intentional interaction with employees during safety meetings, pre-job meetings, and audits shows an employee safety is important to you. Ask safety related questions. Workers know your interest by the questions you ask."

When leaders balance management participation with decisive action, they visibly demonstrate that safety is important.



During an HSE walkthrough or field inspection, management has the opportunity to establish their expectation for HSE performance, raise HSE visibility, and positively affect the worksite's HSE culture. A manager's attention shows employees what he/she feels is important.





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11. Audits/Assessments

How can you improve, if you are not sure how you are doing? Audits identify your site's strengths and weaknesses.

David Lynn relates his experience with auditing:

"You have to audit your processes. I remember my first job after I graduated from college because that job made people uncomfortable. I was amazed at how people became so nervous when I introduced myself. I was only 23 years old. How could I intimidate people? I guess they were nervous because I was an OSHA compliance officer and 'I was there to help' – if you know what I mean.

I learned that there are six elements that will make your field audit program successful:
Participation is vital. Anyone who supervises or directs employees should conduct audits appropriate for their area of responsibility. When leaders support the audit program with their participation, they instill a sense of urgency in the program, and their presence should drive corrective action.

You have to audit frequently. Participants should perform short audits every week. There is more value in frequent short audits than long drawn-out audits. People know if you look for risk on a regular basis, and that prompts them to be prepared.

Participants have to develop confidence with their audits. Leaders drive the success of the audit program with their confidence in their ability to identify and correct safety observations.

Use consistent standards to audit. What if OSHA did not audit standards and they had the authority to make up rules as they go from site to site? As the one being audited, you would never know how to prepare. Give people an opportunity to succeed.

Follow through with corrective actions. Document all observations and monitor corrective action. Also, keep in mind, true corrective action eliminates the hazard long term.

Hold leaders accountable! If you expect a certain standard, do not let people perform less than the standard without consequences. Record, track, and eliminate repeat observations."

Annual Site Self-Assessment

An annual, comprehensive self-assessment verifies compliance with the HSE management system as well as applicable site-specific HSE requirements. Each site should conduct an assessment using a team approach, with the HSE representative, supervisor, and a craft employee, using the checklist in Form F0951. Results of the annual self-assessment should be communicated to the management team and used as an integral part of the continuous improvement process.

Weekly HSE Assessments

Each site should develop a weekly inspection/assessment schedule using Form F0190, Site HSE Inspection Schedule. The schedule designates individuals performing the inspection/assessment and the area/process to be assessed. The entire project management team, including the foreman, general



foreman, superintendent, construction manager, project manager, and appropriate field support staff, should participate in weekly assessments.

Inspectors should use Form F0150, Hazard Inspection Checklist, and F0172, HSE Weekly Self-Assessment Program, to ensure a standard format and consistent approach from week to week. Results of the assessments should be made available to employees via scheduled toolbox meetings, together with results of remedial actions taken.

Helpful HSE management system audit forms are listed here and are available for download via HSE Knowledge OnLine.

Document ID	Title
000.653.F0150	Hazard Inspection Checklist
000.653.F0172	HSE Weekly Self-Assessment Program
000.653.F0190	Site HSE Inspection Schedule
000.653.F0272	HSE Audit Protocol
000.653.F0273	HSE Audit Scorecard
000.653.F0274	HSE Audit Scoring Reference
000.653.F0950	HSE Discipline (Engineering) Audit
000.653.F0951	HSE Site Self-Assessment
000.653.F0952	Sample Audit Closeout Letter



12. Utilization of Networking and Resources

You have many people standing by to help you. Just reach out.

Log onto our HSE Knowledge Community. There you will find the entire HSE management system, plus project-specific examples of programs and practices, training presentations, and toolbox topics. If you do not see what you are looking for, you can request help by posting a forum question. Subject matter experts from around the world will see your question, and it is their job to assist you!

Fluor's intranet site, News OnLine, offers you news about our projects and employees and a place to ask general questions about our company. There you will find important notifications about your benefits, events, and pandemic updates. You can also submit your own story ideas or profiles about your own worksite.





HSE's Training & Development group, Fluor University, and Skill-Soft all offer virtual classes, webinars, and instructor-led and computer-based training to meet your needs. Contact HSE.Training.&.Development@Fluor.com with any inquiries or to sign up for training on the techniques discussed here. Request the HSE management system by contacting Daniel_S_Palmer@RL.gov or download it in its entirety from HSE Knowledge OnLine.



FLUOR®

ZERO Incidents℠

Fluor's ZERO Incidents℠ Program



12 High-Impact Incident Reduction Techniques

FLUOR®

Successful execution of complex projects, delivered in a safe and environmentally sound manner, is a top priority at Fluor. Every day, Fluor helps clients safeguard the environment, conserve energy, protect lives, and strengthen the economies and social structures of communities in which we work and live.

Over the course of many years, Fluor has established simple but essential values that are both proven and time tested. At Fluor, we believe:

- No job is worth getting hurt.
- Safety can be managed.
- ZERO Incidents is an attainable goal.
- Safety is a condition of employment.

These types of shared values have shaped Fluor's Health, Safety & Environmental (HSE) culture.

Fluor's ZERO Incidents Program is a suite of 12 High-Impact Incident Reduction Techniques that have helped raise our level of expectation for HSE performance and provided the tools for us to achieve health, safety, and environmental excellence.



1 Subcontractor Management

Prequalify and align with subcontractors. Include subcontractors in the implementation of the HSE Management System.

2 Pre-Project HSE

Implement a written and approved site HSE plan and communicate this plan to the project team, management, and subcontractors.

3 HSE Education and Orientation

Implement an orientation program. Conduct site-specific HSE and safety leadership training.

4 New Employee Development

Follow Fluor's New Employee Development plan and engage project management in the new employee orientation process.

5 HSE Awareness Program

Visually promote and involve employees in HSE programs.

6 Substance Abuse Program

Implement the corporate HSE site-specific substance abuse plan and ensure subcontractors have an approved substance abuse program in place.

7 Recognition and Rewards

Fund a recognition and reward program appropriately. Implement an employee incentive program to encourage participation in the HSE process; include subcontractors.

ZERO Incidents℠



8 Incident Reporting and Investigation

Record and report incidents properly and use corporate approved investigative methodology to investigate incidents.

9 Pretask Planning

Fully execute the safety task assignment (STA) and conduct job hazard analyses (JHA), where applicable.

10 Management In Action

Engage site management (or designee) participation in 100 percent of new employee orientations. Site management should also participate in Adopt-A-Crew, weekly HSE assessments, and all investigations of recordable incidents and serious near misses.

11 Audit/ Assessments

Conduct annual corporate audits and weekly HSE assessments.

12 Use of Networking and Resources

Use Fluor's Knowledge Communities, NewsOnline, and computer-based training resources, where available.





Greenville, South Carolina 29607-2762 – 864.281.4000 • www.fluor.com

H·S·E
communications

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Fluor's ZERO Incidents℠ Program

12 High-Impact Incident Reduction Techniques

Successful execution of complex projects, delivered in a safe and environmentally sound manner, is a top priority at Fluor. Every day, Fluor helps clients safeguard the environment, conserve energy, protect lives, and strengthen the economies and social structures of communities in which we work and live.



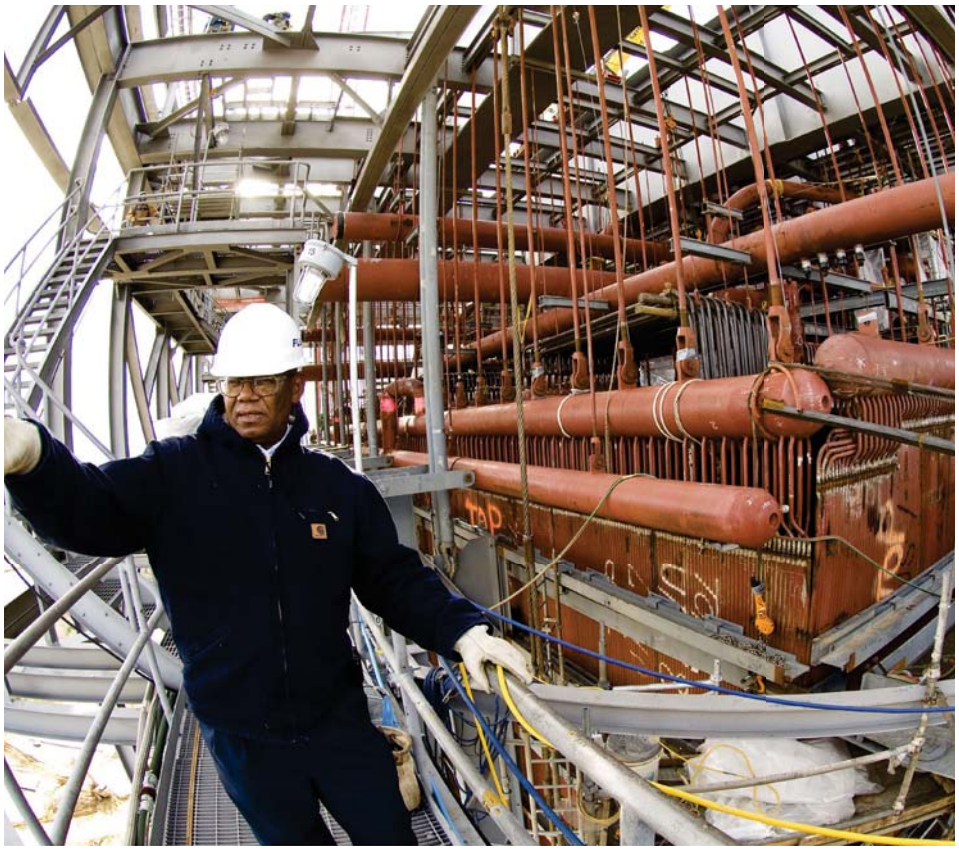
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H·S·E communications

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Conduct annual corporate audits and weekly HSE assessments.

12 Use of Networking and Resources

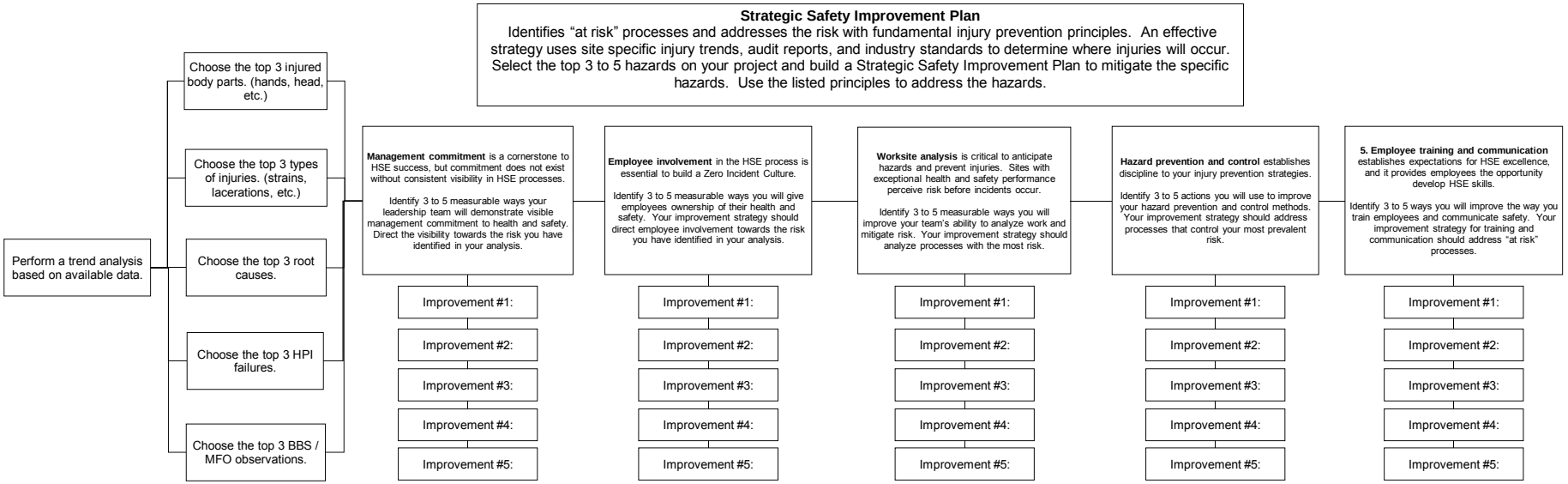
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Strategic Safety Improvement Plan

Identifies “at risk” processes and addresses the risk with fundamental injury prevention principles. An effective strategy uses site specific injury trends, audit reports, and industry standards to determine where injuries will occur. Select the top 3 to 5 hazards on your project and build a Strategic Safety Improvement Plan to mitigate the specific hazards. Use the listed principles to address the hazards.



Kearl CMT SSHE Activity Schedule — Rev 3 — March 30, 2010

No	Activities	Frequency	Date & Timing	Action Party	Risk (H-M-L)	Progress %	January 2 9 16 23 30	February 6 13 20 27	March 6 13 20 27	April 3 10 17 24	May 1 8 15 22 29	June 5 12 19 26	July 3 10 17 24 31	August 7 14 21 28	September 4 11 18 25	October 2 9 16 23 30	November 6 13 20 27	December 4 11 18 25	Completed	Delayed or Not Actioned	Ongoing	Scheduled	
	Construction milestones						Piling begins		Module Transportation	Fluor - SWS Temp Power	Module Setting	HCBI - tailings pumphouse erection	Recognition event		Electrical/Instrumentation works		Winter Driving	Recognition End of Year.					
1	**Leadership, Commitment and Communication**																		✓	✗	▲	♦	TOTAL
1.1	Executive Steering Committee	Quarterly		Jack Toellner	L	0%	♦			♦			♦			♦			0	0	0	4	4
1.2	PSST Tier 1 Project Management (IORVL)	Monthly		Chris Allard	L	0%	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	0	0	0	12	12
1.3	iPSST Tier 2 Contractor Mgmt	Weekly/Monthly	merged with SSST	N/A	L	#DIV/0!													0	0	0	0	0
1.4	Kearl Site SST - Tier 3	Monthly	merged with SSST	Jack Sampson	L	0%	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	0	0	0	12	12
1.5	SSST Mining Sub-project	Monthly		John Jordan	L	25%	✓	✓	✓	♦	♦	♦	♦	♦	♦	♦	♦	♦	3	0	0	9	12
1.6	SSST Plant - Bitumen Sub-project	Monthly	Start April 2010	Cody Whitten	L	10%			✓	♦	♦	♦	♦	♦	♦	♦	♦	♦	1	0	0	9	10
1.7	SSST Infrastructure Sub-project	Monthly	Start April 2010	Chris Brown	L	11%				✓	♦	♦	♦	♦	♦	♦	♦	♦	1	0	0	8	9
1.8	Verify Contractor JOSH Committee mtg	Monthly	4/3/2010	Billy Cauthron	L	0%				♦	♦	♦	♦	♦	♦	♦	♦	♦	0	0	0	9	9
1.9	Camp Resident's Committee	TBA		TBA	L	#DIV/0!													0	0	0	0	0
1.10	Incident review panel with management	Quarterly	4/3/2010	Billy Cauthron	L	0%				♦			♦			♦			0	0	0	3	3
1.11	Construction Management Team Walkabout - Bitumen production	Weekly	3/10/2010	Cody Whitten	L	5%			✓ ✓ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	2	0	0	40	42
1.12	Construction Management Team Walkabout - Infrastructure/off-lease/earthworks	Weekly	1/2/2010	John Jordan	L	25%	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	13	0	0	39	52
1.13	Construction Management Team Walkabout - Modularization	Weekly	5/1/2010	Wayne Davey	L	0%					♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	0	0	0	35	35
1.14	Construction Management Team Walkabout - SWS	Weekly	4/15/2010	Bruce Hayes	L	0%				♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	0	0	0	37	37
1.15	Safety Flash/Alerts, Lessons Learned	Monthly	3/20/2010	Billy Cauthron	L	20%			✓	✓	♦	♦	♦	♦	♦	♦	♦	♦	2	0	0	8	10
1.16	SSHE Newsletter	Monthly	5/3/2010	Billy Cauthron	L	0%					♦	♦	♦	♦	♦	♦	♦	♦	0	0	0	8	8
1.17	Contribute SSHE info to project website	Monthly	4/10/2010	Billy Cauthron	L	0%				♦	♦	♦	♦	♦	♦	♦	♦	♦	0	0	0	9	9
1.18	Maintain SSHE file repository	as required		Brian Stott	L	#DIV/0!													0	0	0	0	0
1.19	Attend Contractor Safety toolbox meetings	Weekly	1/3/2010	Billy Cauthron	L	20%	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	39	49
1.20	Fresh Start/Townhall Campaign (review incidents and lessons learned, obtain subcontractor feedback).	quarterly	Jan-10	Charlie Adrain	L	25%	✓			♦			♦			♦			1	0	0	3	4
1.21	SSHE Poster/Banner signs Campaign (New posters and sharing existing posters)	Every two Months	Jan-10	Billy Cauthron	L	43%	✓		✓		♦		♦		♦		♦		3	0	0	4	7
1.22	Integrated SSHE Team Building (CMT)	bi-annual		Billy Cauthron	L	50%		✓						♦					1	0	0	1	2
1.23	Integrated SSHE Team Building (CMT & Contractors)	bi-annual	Jan-10	Billy Cauthron	L	33%		✓			♦					♦			1	0	0	2	3
1.24	Implement SSHE Recognition Process	Start	Apr-10	Charlie Adrain	L	100%				✓									1	0	0	0	1
1.25	Implement SSHE Recognition Awards	Monthly	TBD	Charlie Adrain	L	0%				♦	♦	♦	♦	♦	♦	♦	♦	♦	0	0	0	9	9
1.26	Implement SSHE Recognition Process	Major Milestone	TBD	Charlie Adrain	L	#DIV/0!													0	0	0	0	0
1.27	Safety Stand downs	As needed		Charlie Adrain	L	100%	✓		✓										2	0	0	0	2
1.28	Staff Meeting (**CMT SSHE only**)	Weekly	Apr-10	Billy Cauthron	L	3%			✓	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	1	0	0	38	39
1.29	Contractor SSHE Meetings (CMT w/contractor)	Weekly	Jan-10	Billy Cauthron	L	20%	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	39	49
1.30	Oilsands Safety Summit--Suncor, Syncrude, CNRL, etc.	bi-annually		Jack Toellner	L	0%									♦				0	0	0	1	1

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1.31	BST Leadership Workshop (LDI)	bi-Annual		Jeff Layman	L	0%	♦						♦						0	0	0	2	2
1.32	BST Leadership Workshop (OCDI)	Annual		Jeff Layman	L	0%	♦												0	0	0	1	1
1.33	BST Leadership Workshop (Continuous coaching)	quarterly		Jeff Layman	L	0%	♦			♦			♦			♦			0	0	0	4	4
2	**Policy and Strategic Objectives**																						
2.1	Develop and Implement CMT SSHE Management Plan	once	4/30/2010	Charlie Adrain	M	0%				♦									0	0	0	1	1
2.2	Develop and issue Project SSHE KPI's	Annually	6/1/2010	Charlie Adrain	L	0%						♦							0	0	0	1	1
2.3	Update SSHE Activity Schedule	Annually	4/30/2010	Billy Cauthron	L	0%				♦									0	0	0	1	1
3	**Organization, Responsibilities, Resources**																						
3.1	Update and issue project SSHE org charts	as revised		Brian Stott	L	#DIV/0!													0	0	0	0	0
3.2	Maintain staffing plan	Quarterly		Brian Stott	M	0%	♦			♦			♦			♦			0	0	0	4	4
3.3	Review and update Roles & Responsiblities	As needed		Brian Stott	L	#DIV/0!													0	0	0	0	0
4	**Risk Management**																						
4.1	Emergency Response Committee meeting	weekly	2/27/2010	Charlie Adrain	L	5%		✓	✓ ✓ ✓ ✓	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	2	0	0	39	41
4.2	Emergency Response KPI update	monthly	4/1/2010	Charlie Adrain	L	0%				♦	♦	♦	♦	♦	♦	♦	♦	♦	0	0	0	12	12
4.3	Implement Summer Work Program (Action Items, Lessons learned & training)	Spring	5/15/2010	Charlie Adrain	H	0%					♦								0	0	0	1	1
4.4	Implement Winter Work (Action Items, Lessons learned & training)	Fall	9/14/2010	Charlie Adrain	H	0%									♦				0	0	0	1	1
4.5	Provide SSHE input to project Risk Register	Monthly	4/30/2010	Billy Cauthron	L	0%				♦	♦	♦	♦	♦	♦	♦	♦	♦	0	0	0	9	9
4.6	Develop, Issue & Update project SSHE Action Tracking Register	Monthly	4/17/2010	Billy Cauthron	M	0%				♦	♦	♦	♦	♦	♦	♦	♦	♦	0	0	0	9	9
4.7	Review & update Emergency Preparedness and Response Plan	Bi-Annually	3/6/2010	Charlie Adrain	M	50%			✓						♦				1	0	0	1	2
4.8	Review & update Mutual Aid Agreements	Annually		Jeff Layman	M	0%	♦												0	0	0	1	1
4.9	Review traffic management plan	Monthly	1/15/2010	Charlie Adrain	H	25%	✓	✓	✓	♦	♦	♦	♦	♦	♦	♦	♦	♦	3	0	0	9	12
4.10	Test office fire alarm system - Field Office	per code	TBD	Charlie Adrain	H	10%			✓	♦	♦	♦	♦	♦	♦	♦	♦	♦	1	0	0	9	10
4.11	Construction area emergency evacuation drill	Quarterly	1/15/2010	Charlie Adrain	H	25%	✓			♦			♦			♦			1	0	0	3	4
4.12	Level 3 emergency exercise	1 per year	4/30/2010	Charlie Adrain	H	0%			♦	♦									0	0	0	2	2
4.13	Verify Contractor project D&A Program	Ongoing		Billy Cauthron	L	100%	✓	✓	✓										3	0	0	0	3
4.14	Verify Contractor PTW Procedures in place	on going		Billy Cauthron	M	100%	✓	✓	✓										3	0	0	0	3
5	**Planning**																						
5.1	Update and issue Kearl CMT SSHE Plan	Annually	11/15/2010	Billy Cauthron	M	0%											♦		0	0	0	1	1
5.2	Review Kearl Site Business Continuity Plan	Annually	11/20/2010	Charlie Adrain	M	0%											♦		0	0	0	1	1
5.3	Ensure Rotation / vacation schedule provides adequate coverage of SSHE resources	Quarterly	9-Jan	Billy Cauthron	M	25%	✓			♦			♦			♦			1	0	0	3	4
5.4	Provide Human Factors in Constructability feedback	Ongoing	As required	Charlie Adrain	L	#DIV/0!													0	0	0	0	0

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6	**Implementation and Monitoring**																						
6.1	Provide One Page SSHE activity report	Daily	2/15/2010	Billy Cauthron	L	54%		✓ ✓ ✓	✓ ✓ ✓ ✓	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	46	0	0	39	85
6.2	Prepare and issue SSHE Performance Report (include summary of walk throughs)	Monthly	4/30/2010	Billy Cauthron	L	0%				♦	♦	♦	♦	♦	♦	♦	♦	♦	0	0	0	9	9
6.3	Prepare and issue SSHE Performance Scorecard	Monthly	30-Apr	Billy Cauthron	M	25%	✓	✓	✓	♦	♦	♦	♦	♦	♦	♦	♦	♦	3	0	0	9	12
6.4	Prepare and issue Project SSHE Report	Monthly		Brian Stott	M	#DIV/0!													0	0	0	0	0
6.5	Develop & Distribute Annual SSHE report	Annually		Brian Stott	M	#DIV/0!													0	0	0	0	0
6.6	Prepare and Issue Office SSHE Inspection Report	Monthly	4/15/2010	Billy Cauthron	L	100%				✓	✓	✓	✓	✓	✓	✓	✓	✓	9	0	0	0	9
7	**SSHE Management Procedure Assessment**																						
7.1	Verify Contractor SSHE Compliance with the following:	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦♦ ♦	10	0	0	51	61
7.1.1	Working at Height	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.2	Incident reporting/management	weekly	3-Jan	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.3	Falling Object Prevention	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.4	Vehicle & Equipment Refuelling	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.5	Energy control/Lockout Tagout	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.6	Confined Space Entry	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.7	Emergency Response / Fire Precautions	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.8	Transportation Safety/Journey Management	Monthly	30-Apr	Billy Cauthron	M	100%				✓	✓	✓	✓	✓	✓	✓	✓	✓	9	0	0	0	9
7.1.10	Lifting, rigging and slinging	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.12	SSHE training	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.13	SSHE Orientation	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.14	Subcontractor Management	weekly	3-Jan	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.15	Safety & Health Committees (JOSH)	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.16	Pre-shift SSHE meetings	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.17	Job Safety Analysis	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.18	Field Level Risk Assessments	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.19	Hazard Recognition Cards	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.20	Observation & Intervention	weekly	3-Jan	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.21	SSHE Walkthrough Inspections	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.22	Near Miss/Hazard Reporting	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.23	Short Service Worker Program	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.24	SSHE Recognition Program	weekly	TBD	Billy Cauthron	M	0%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	0	0	0	52	52
7.1.25	Permit to Work	weekly	TBD	Billy Cauthron	M	0%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	0	0	0	52	52
7.1.26	Hot Work	weekly	TBD	Billy Cauthron	M	0%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	0	0	0	52	52
7.1.27	Personal Protective Equipment	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.28	Housekeeping	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.29	Scaffolding	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.30	Tools & Equipment	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.31	Manual Lifting	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.32	Electrical	weekly	3-Jan	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.33	Fire Prevention	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.34	Stored Energy	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62
7.1.35	Spill Prevention	weekly	1/3/2010	Billy Cauthron	M	16%	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	10	0	0	52	62

Kearl CMT SSHE Activity Schedule — Rev 3 — March 30, 2010

No	Activities	Frequency	Date & Timing	Action Party	Risk (H-M-L)	Progress %	January 2 9 16 23 30	February 6 13 20 27	March 6 13 20 27	April 3 10 17 24	May 1 8 15 22 29	June 5 12 19 26	July 3 10 17 24 31	August 7 14 21 28	September 4 11 18 25	October 2 9 16 23 30	November 6 13 20 27	December 4 11 18 25	Completed	Delayed or Not Actioned	Ongoing	Scheduled	
7.1.36	Industrial Hygiene	weekly	4/15/2010	Billy Cauthron	M	#DIV/0!													0	0	0	0	0
7.2	Perform Camp Inspection	Weekly	TBD	Bruce Hayes	M	#DIV/0!													0	0	0	0	0
7.3	Cold Eyes Review (EMDC Supported)	Annually		Jeff Layman	L	#DIV/0!													0	0	0	0	0
7.4	Assess Contractor/Subcontractor Equipment Maintenance & Inspection Schedule	Monthly	1/13/2010	Billy Cauthron	L	18%	✓	✓	✓	♦	♦	♦	♦	♦	♦	♦	♦	♦	2	0	0	9	11
7.5	Assess Camp Maintenance and Inspection Schedule	Monthly		Bruce Hayes	L	#DIV/0!													0	0	0	0	0
8	**Management Review**																						
8.1	Review CMT SSHE Strategic Objectives	Annually	2/20/2010	Charlie Adrain	L	100%		✓											1	0	0	0	1
8.2	Review project SSHE Action Tracking Register	Quarterly	3/20/2010	Billy Cauthron	L	25%			✓			♦			♦			♦	1	0	0	3	4
8.3	Review Project SSHE Performance	Monthly	27-Mar	Charlie Adrain	M	10%			✓	♦	♦	♦	♦	♦	♦	♦	♦	♦	1	0	0	9	10
8.4	Annual SSHE Performance Review and Planning Presentation	Annually		Brian Stott	L	#DIV/0!													0	0	0	0	0
8.5	Benchmark Peer Projects	Annually		Jeff Layman	L	#DIV/0!													0	0	0	0	0
8.6	Benchmark Against EMDC President's Award Criteria	Quarterly		Brian Stott	L	#DIV/0!													0	0	0	0	0
																			439	0	0	2288	2727
																							16%
																							88%

439	Complete	0	Delayed / Not Act	0	Ongoing	2288	Planned

Yield for Safety

Pedestrian Safety Campaign 2010



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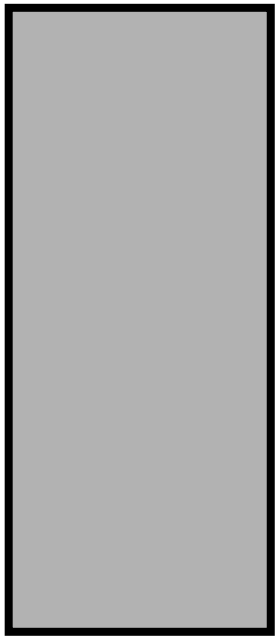
ZERO Incidents℠

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Blind Spots

Yield for Safety
Pedestrian Safety Campaign 2010

The shaded areas surrounding each vehicle in this presentation represents the danger zone.



Sometimes called the “No-Zone,” or “Blind Spot,” in which the vehicle operators view of pedestrian traffic is greatly reduced or obscured altogether.

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All Vehicles/Mobile Equipment are Different

Yield for Safety
Pedestrian Safety Campaign 2010

- Not all vehicles are the same.
- You can check the blind spots or areas with the help of a teammate. Be aware.
- Give your Flagman the chance to experience what you see. Let him sit in your seat and see what your view of the world is.
- Think, if a persons trips and falls down, how far has the vehicle travelled by the time he or she can stand up.
- Flagmen and Co-workers always maintain line of sight with the driver.

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Awareness

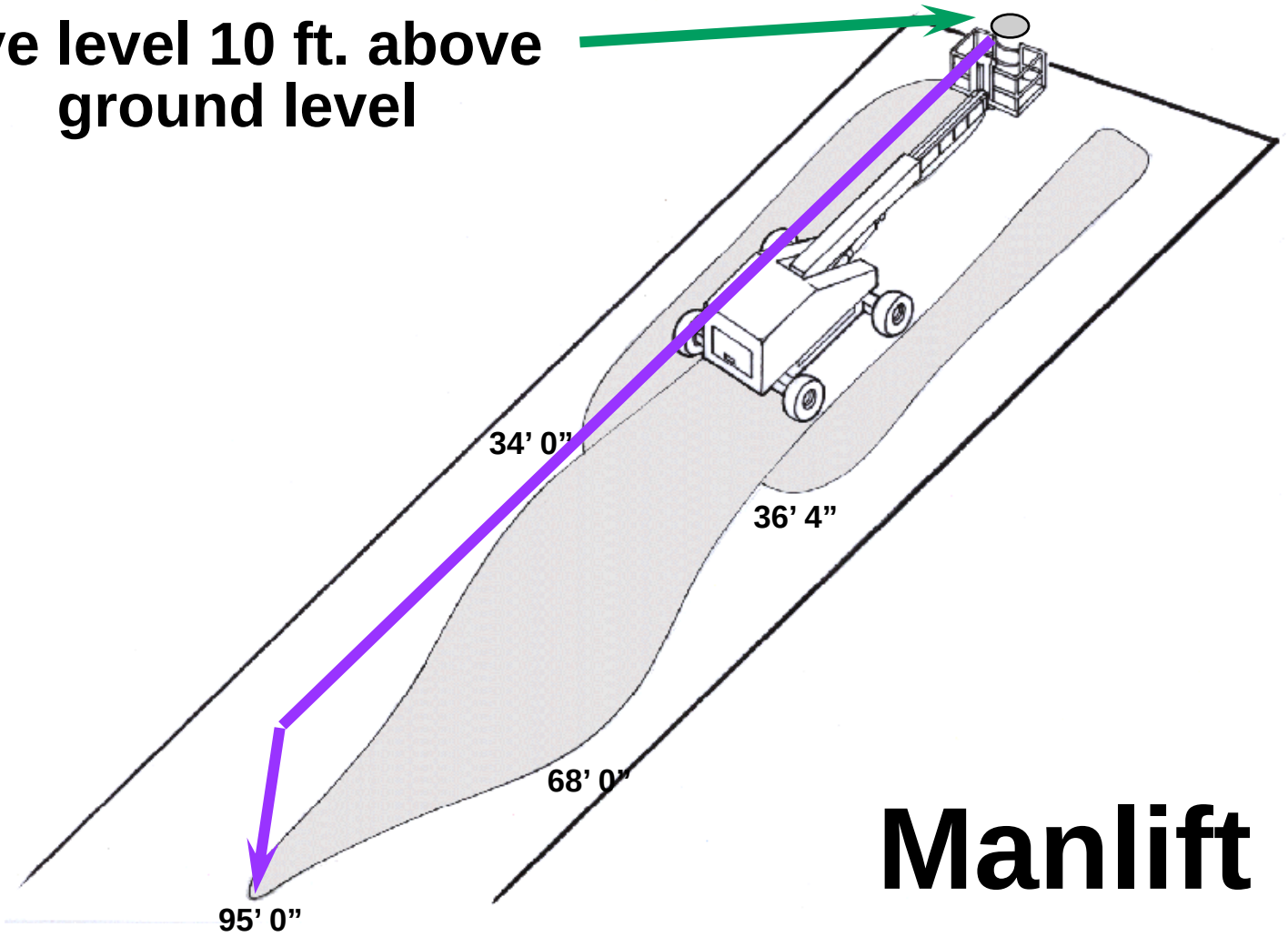
Yield for Safety
Pedestrian Safety Campaign 2010

- Learn to appreciate just how large these zones are.
- Remember people are not always standing up. Much work is done bending down or sitting. This can drastically alter there visibility to the Driver.
- Sometime other noise and hearing protection can obscure the reverse alarms on vehicles.
- In the cab of the vehicle you are also protected from noise. You may not hear someone call out a warning.

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Eye level 10 ft. above ground level



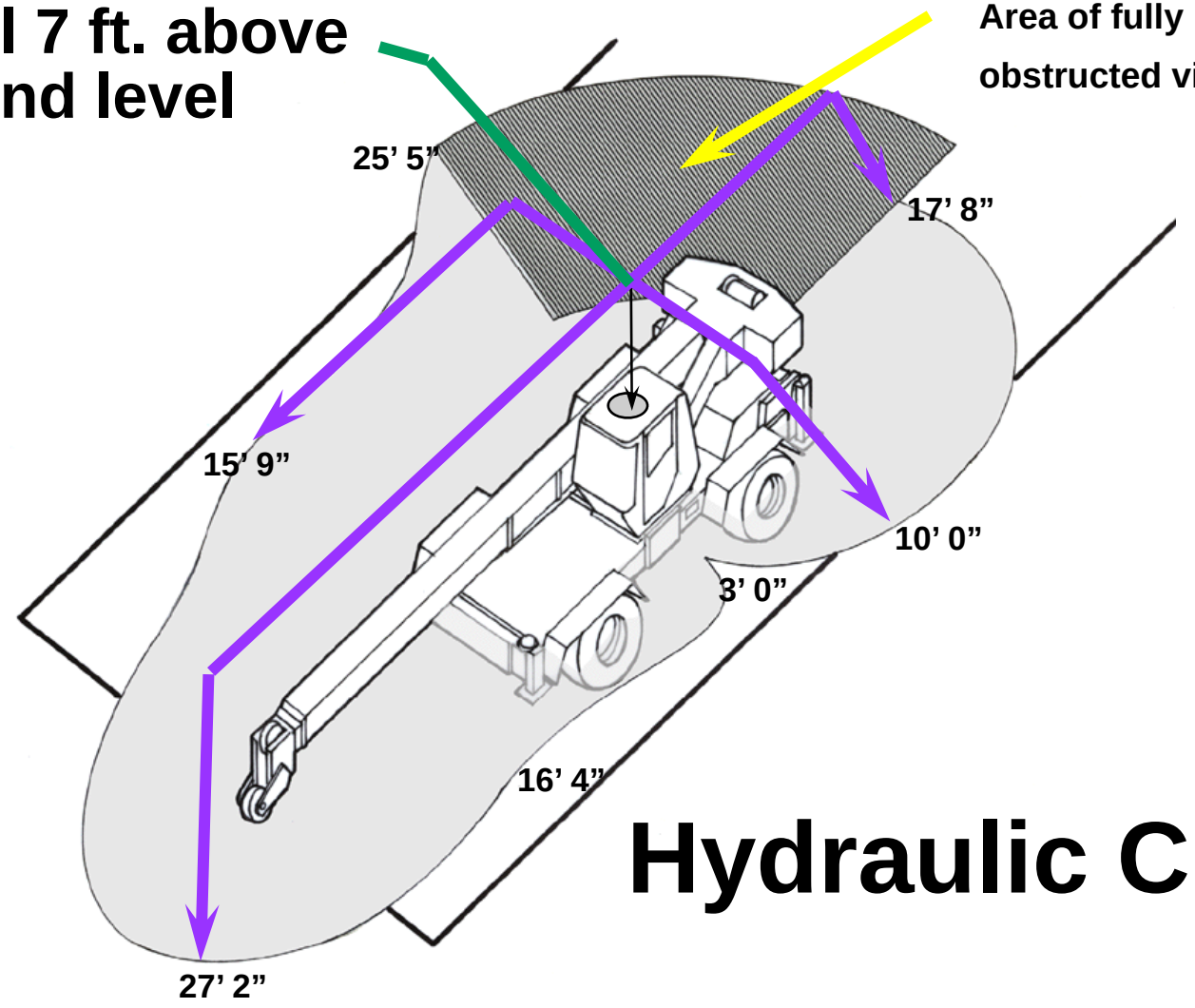
Manlift

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ZERO Incidents℠

Eye level 7 ft. above ground level

Area of fully obstructed view

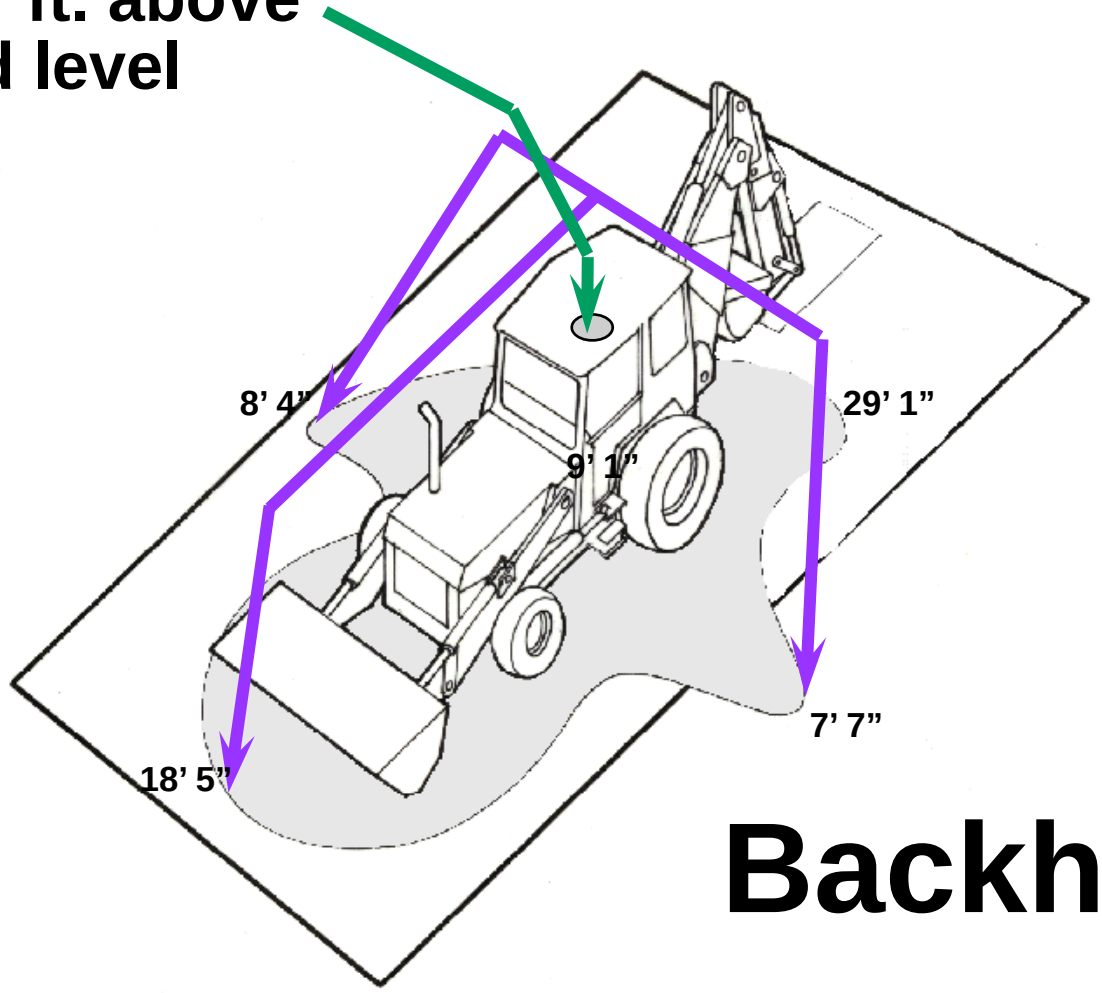


Hydraulic Crane

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ZERO Incidents℠

Eye level 7 ft. above ground level



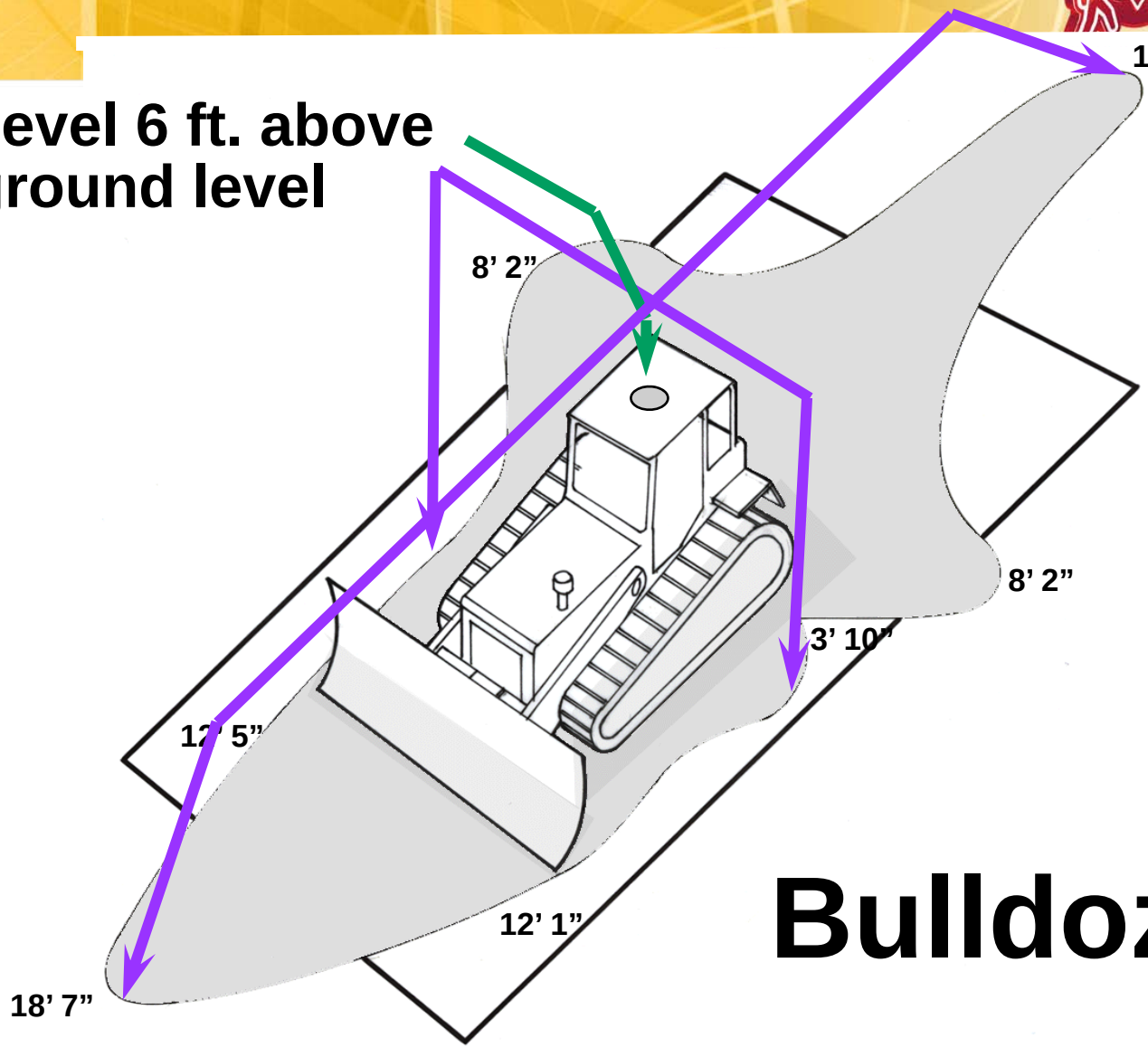
Backhoe

S-25 BACKHOE

FLUOR®

ZERO Incidents℠

Eye level 6 ft. above ground level

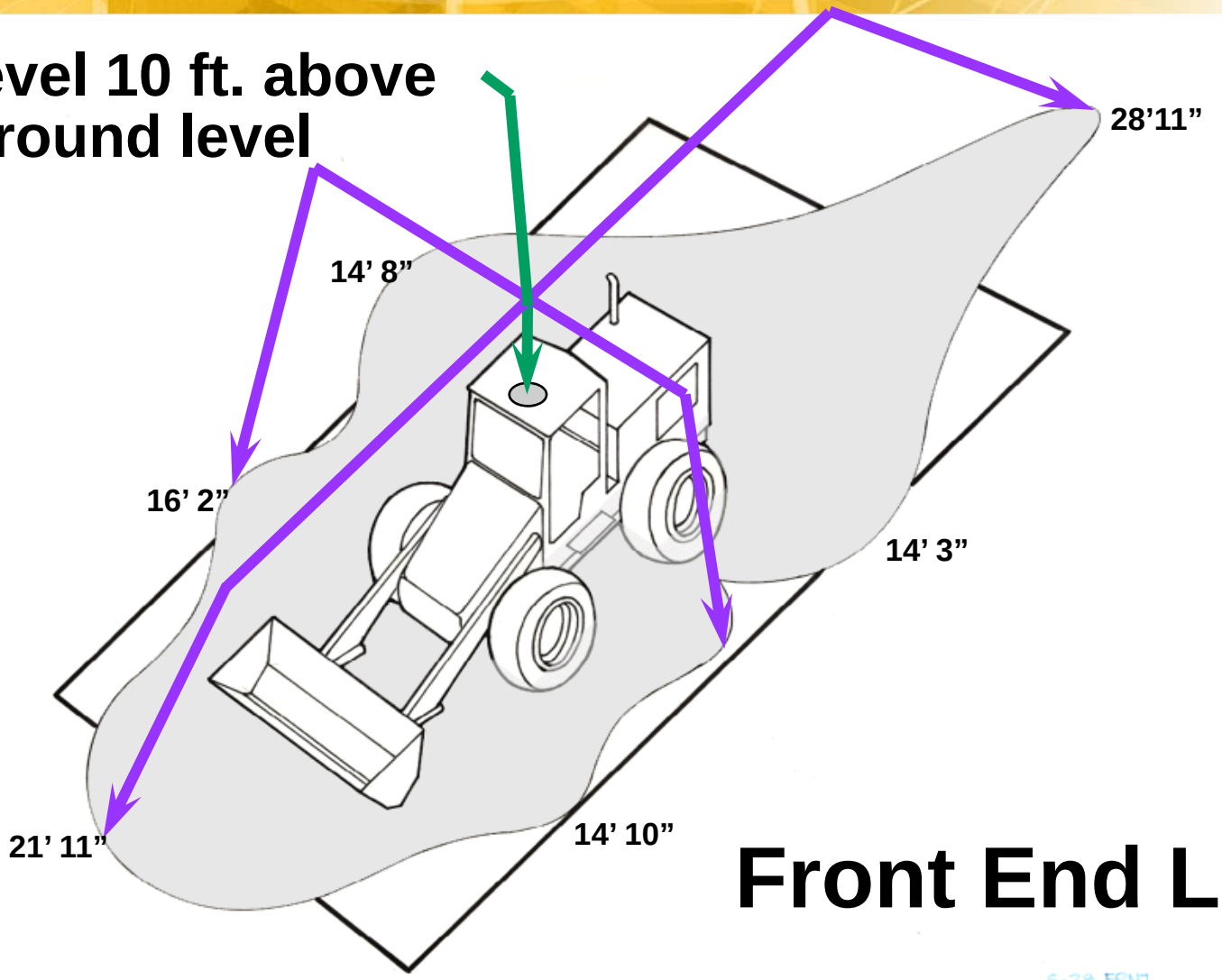


Bulldozer

FLUOR®

ZERO Incidents℠

Eye level 10 ft. above ground level



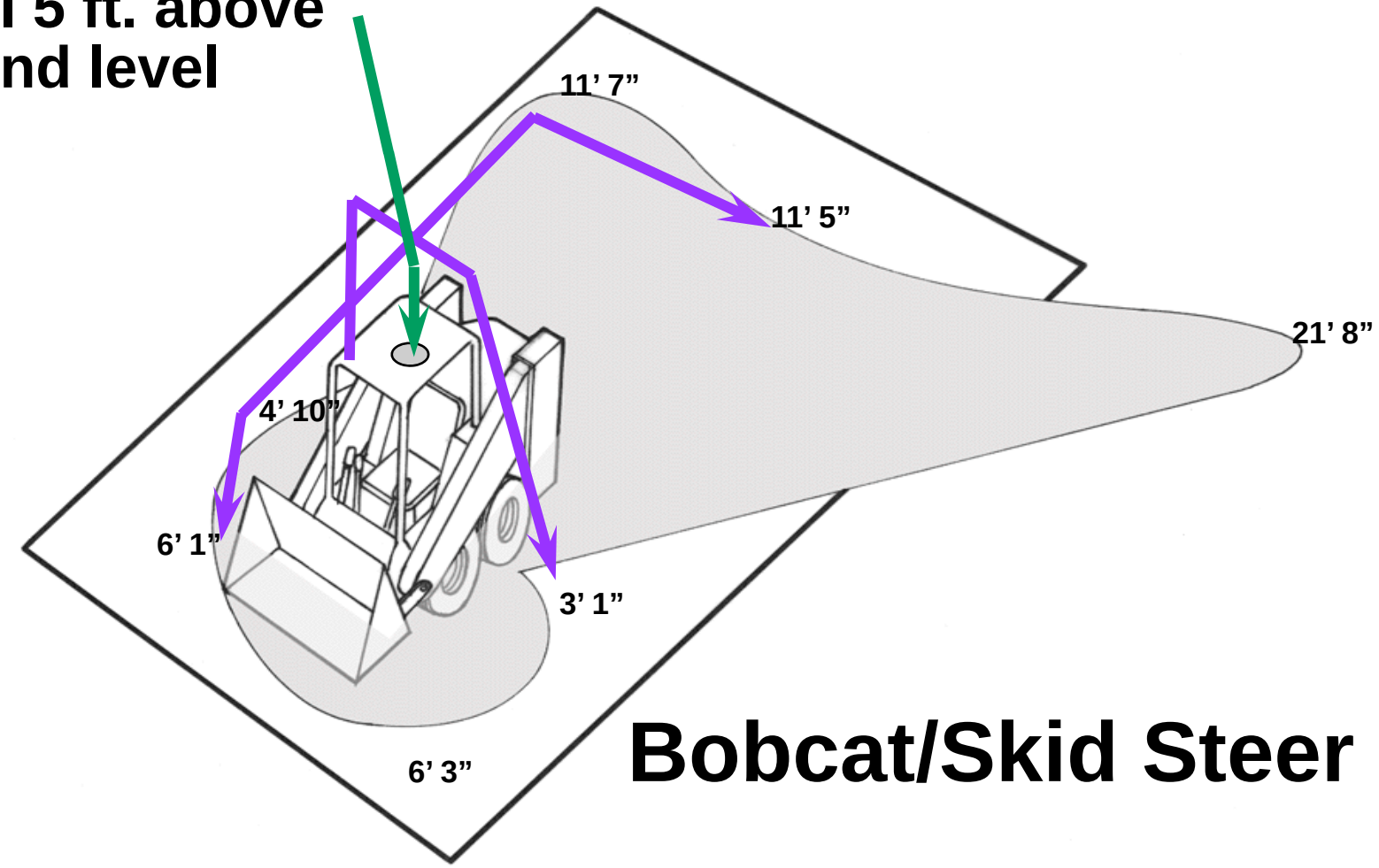
Front End Loader

S-28 FRNT

FLUOR®

ZERO Incidents℠

Eye level 5 ft. above ground level

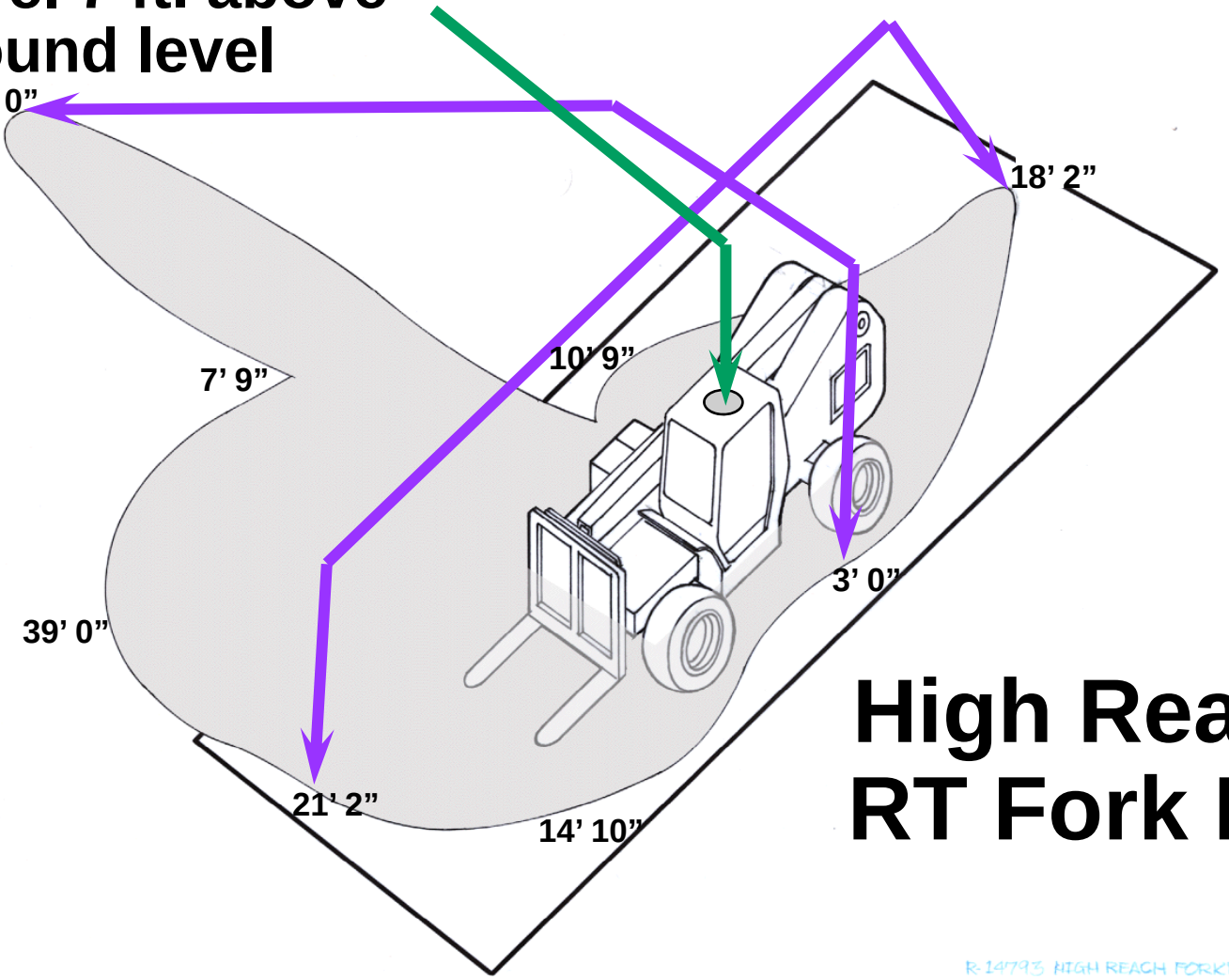


Bobcat/Skid Steer

FLUOR®

ZERO Incidents℠

Eye level 7 ft. above ground level



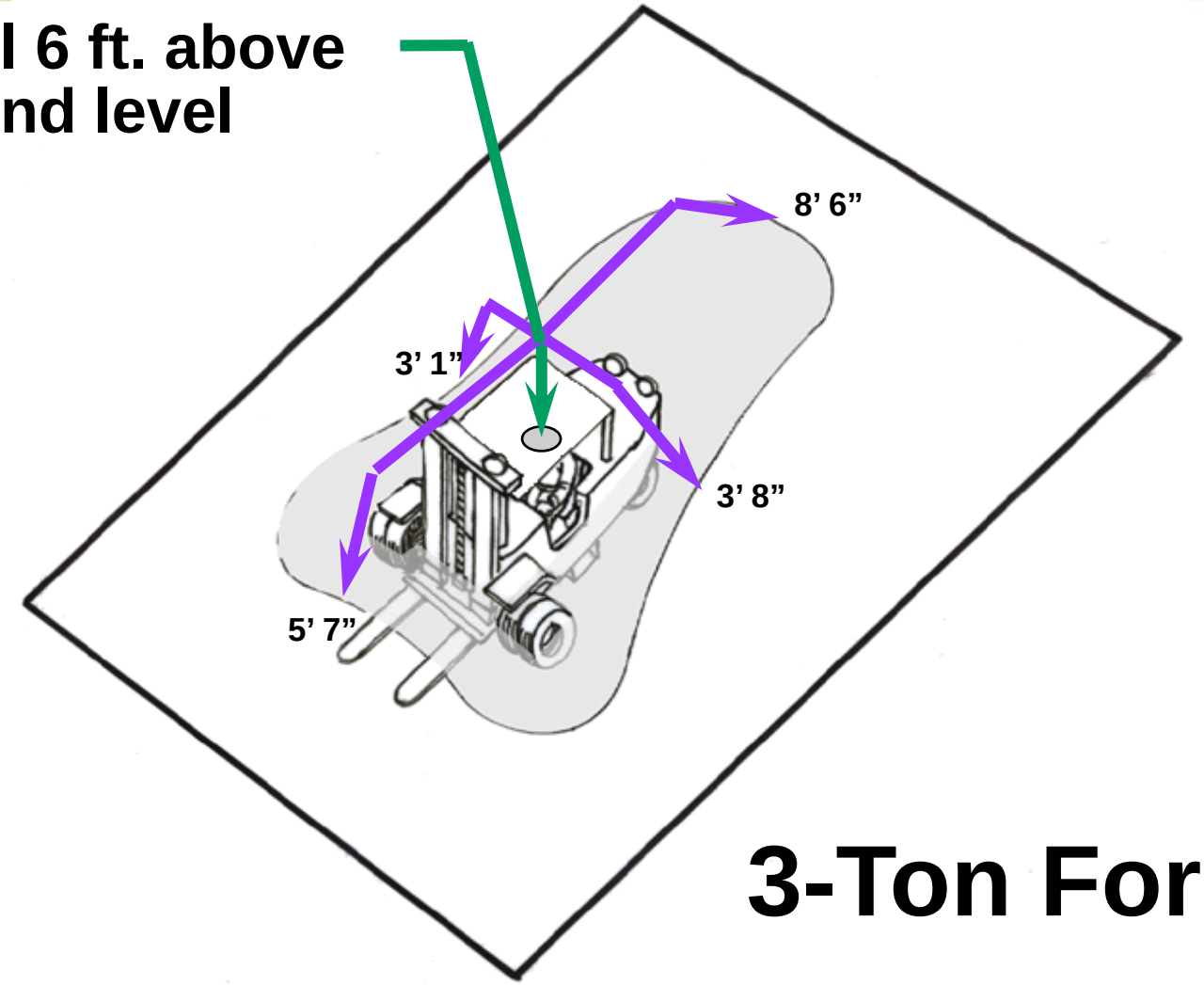
High Reach RT Fork Lift

R-14793 HIGH REACH FORKL

FLUOR®

ZERO Incidents℠

Eye level 6 ft. above ground level

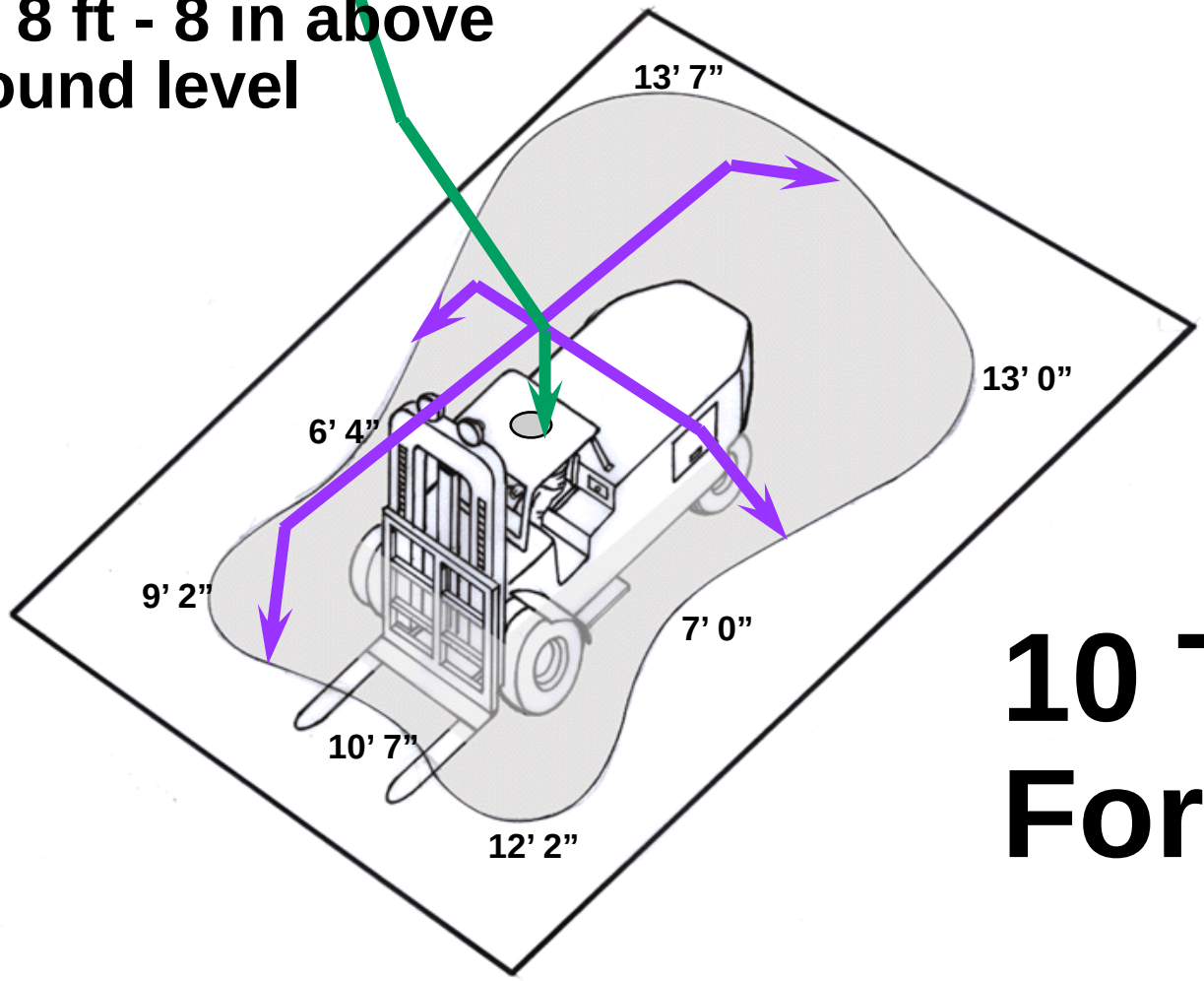


3-Ton Forklift

FLUOR®

ZERO Incidents℠

Eye level 8 ft - 8 in above ground level

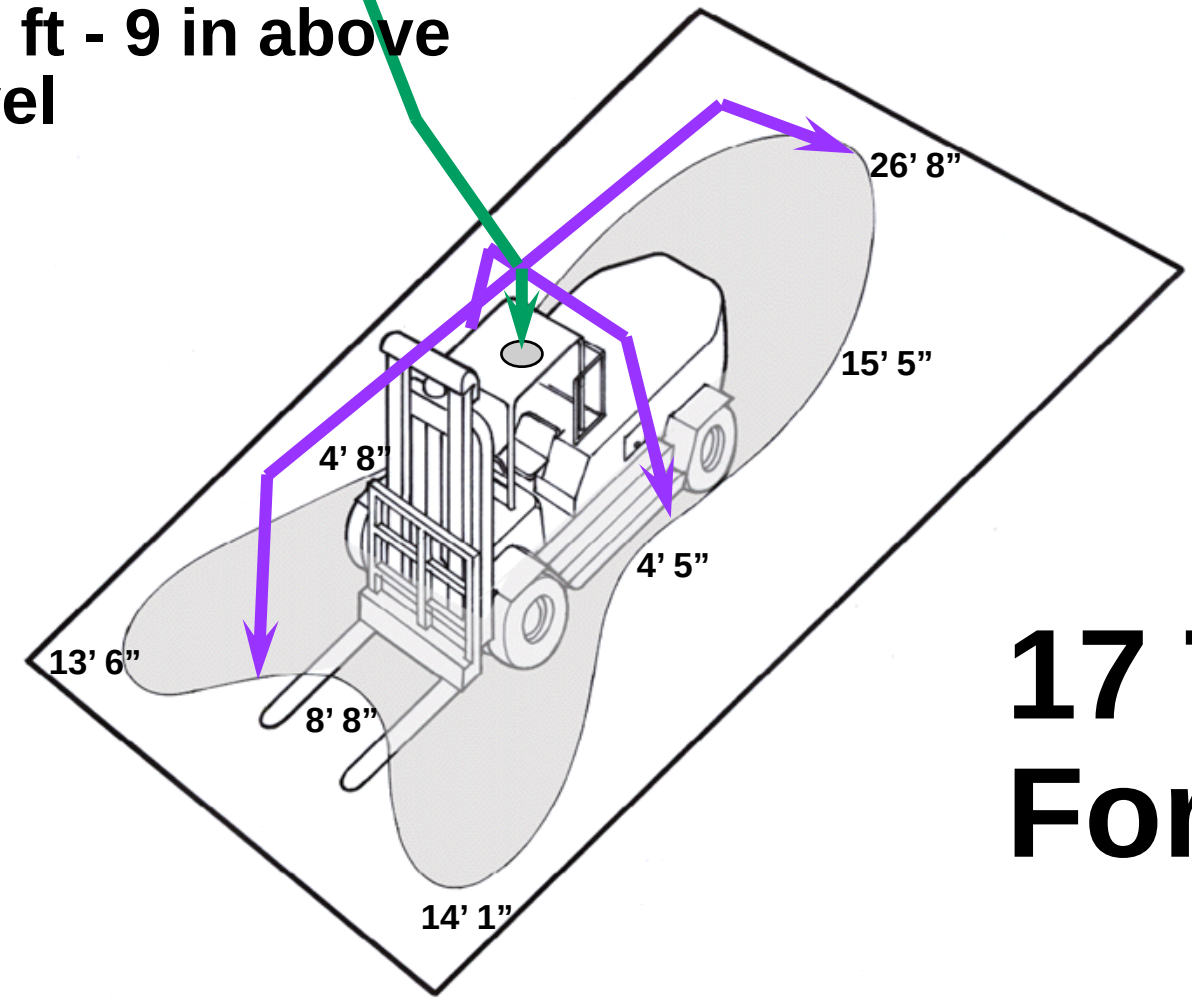


10 Ton Forklift

FLUOR®

ZERO Incidents℠

Eye level 8 ft - 9 in above ground level

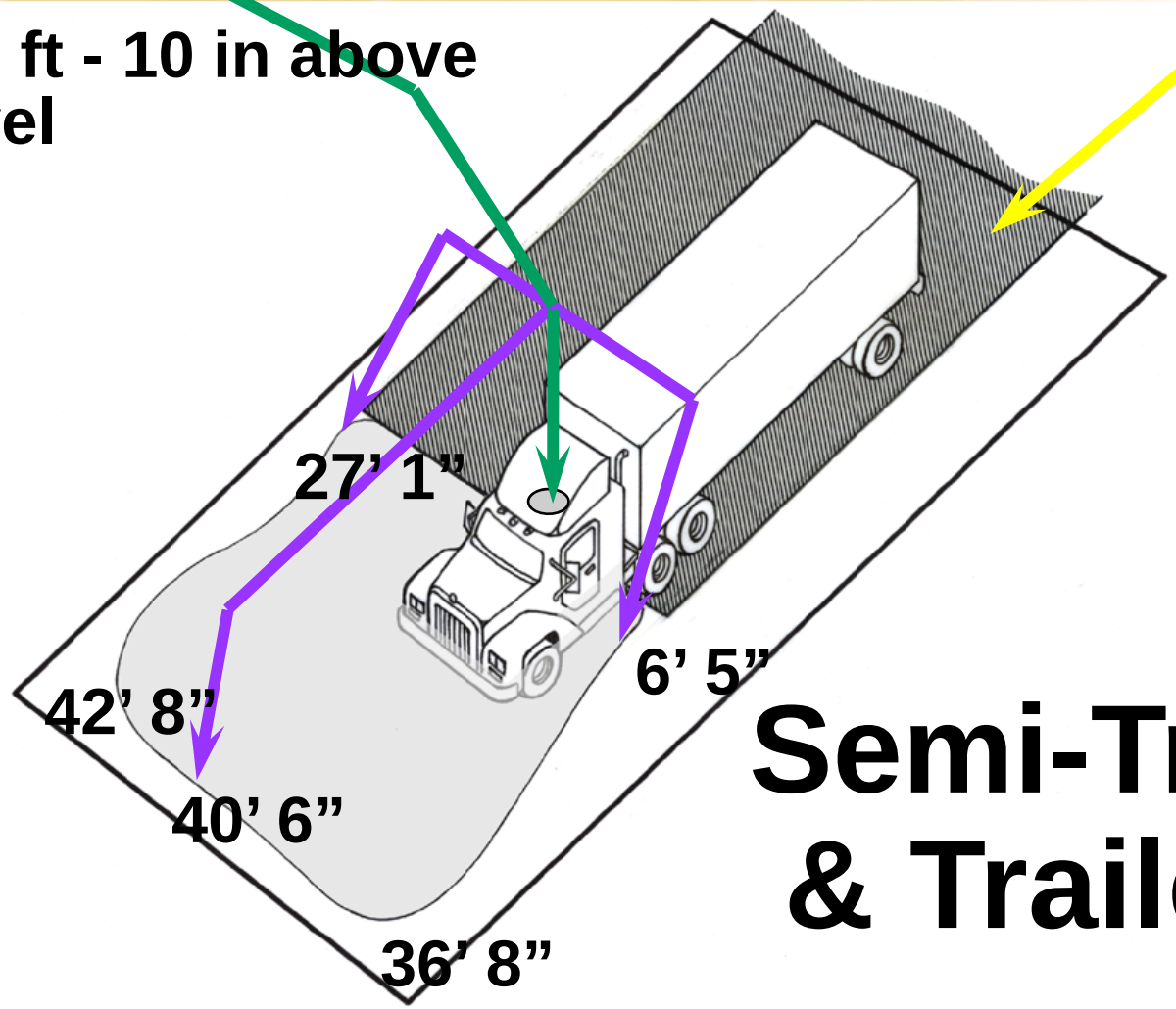


17 Ton Forklift

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Eye level 6 ft - 10 in above ground level

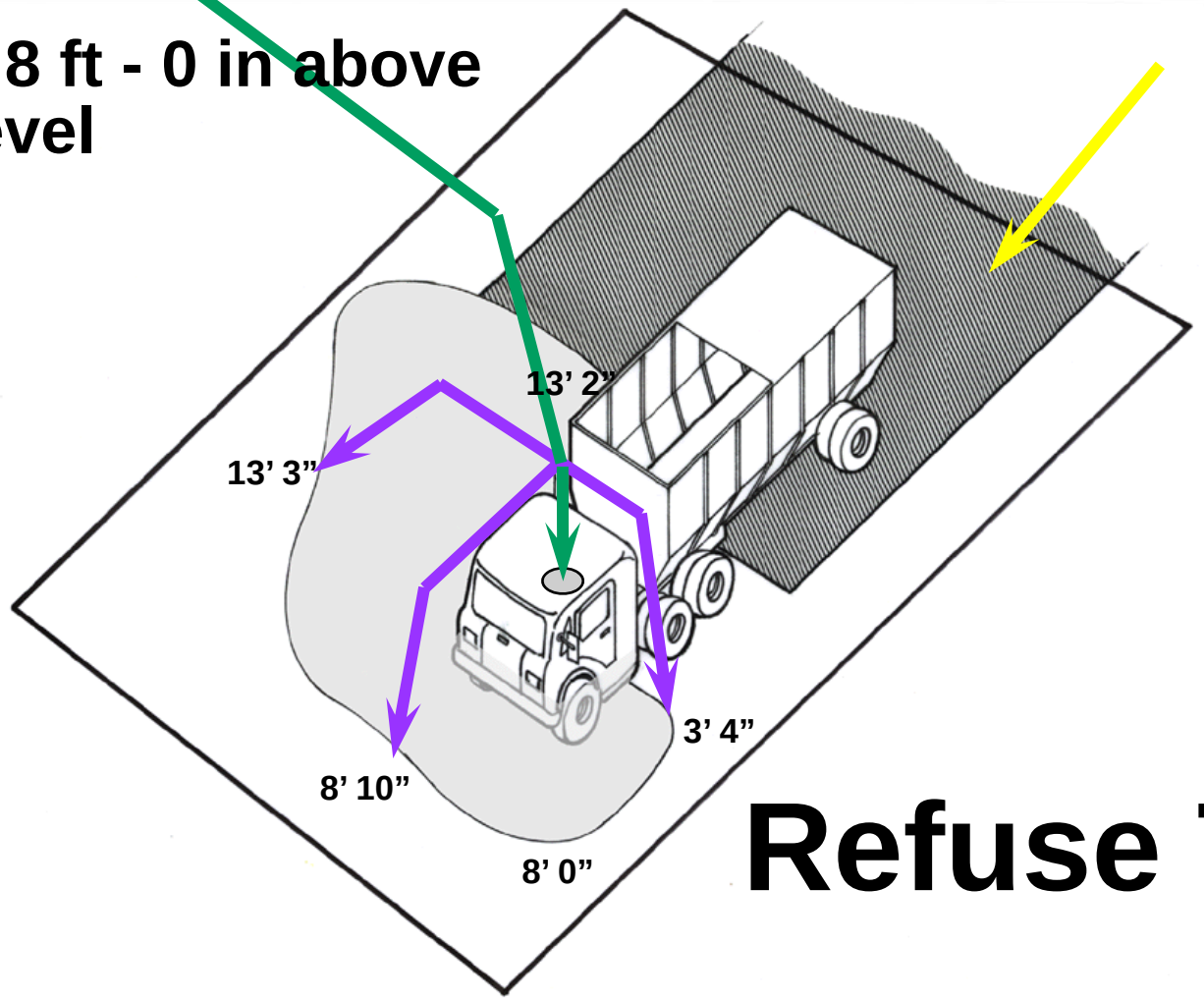


Semi-Truck & Trailer

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Eye level 8 ft - 0 in above ground level



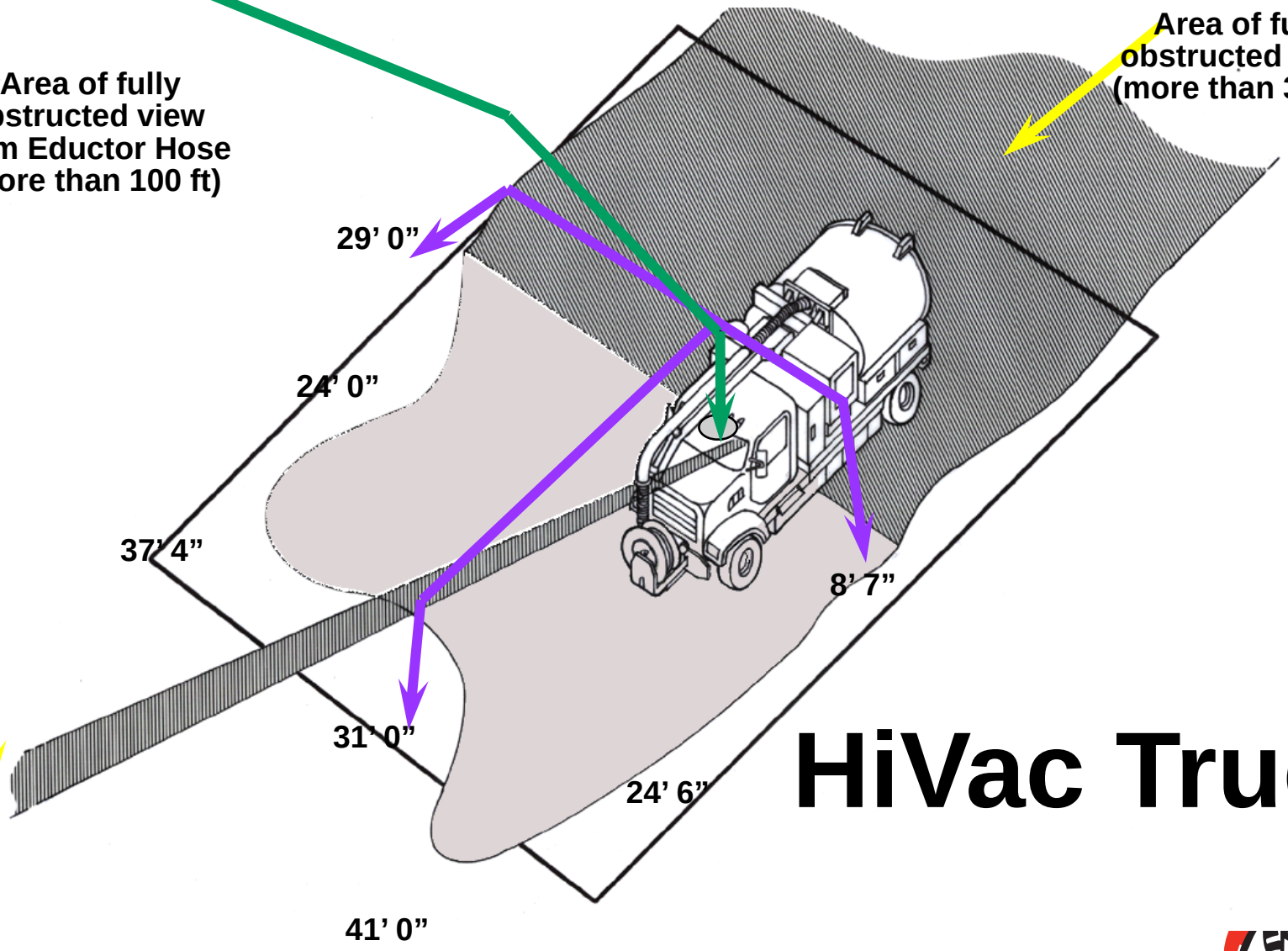
Refuse Truck

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Eye level 8 ft - 0 in above ground level

Yield for Safety
Pedestrian Safety Campaign 2010

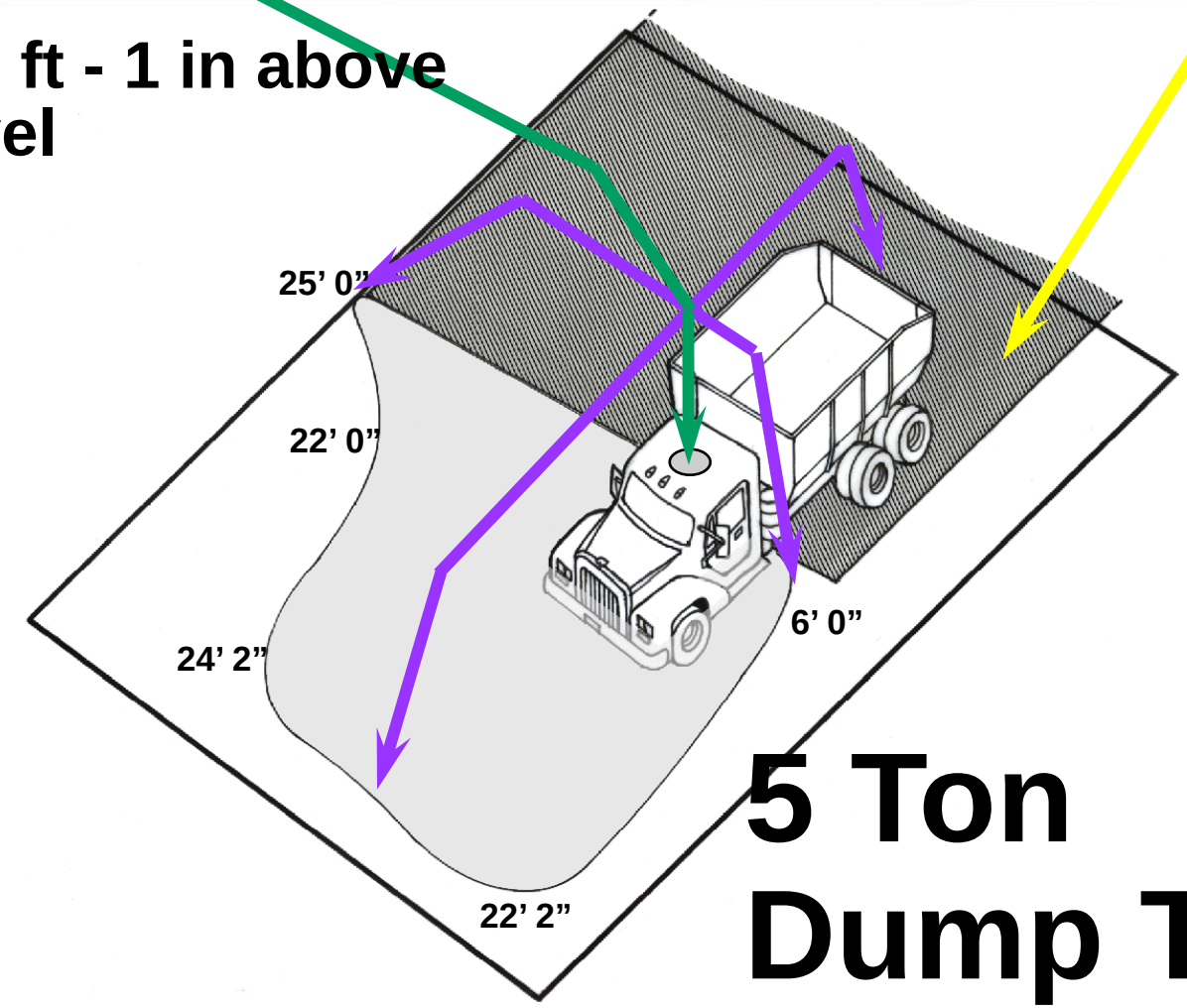


HiVac Truck

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ZERO Incidents℠

Eye level 7 ft - 1 in above ground level



5 Ton Dump Truck

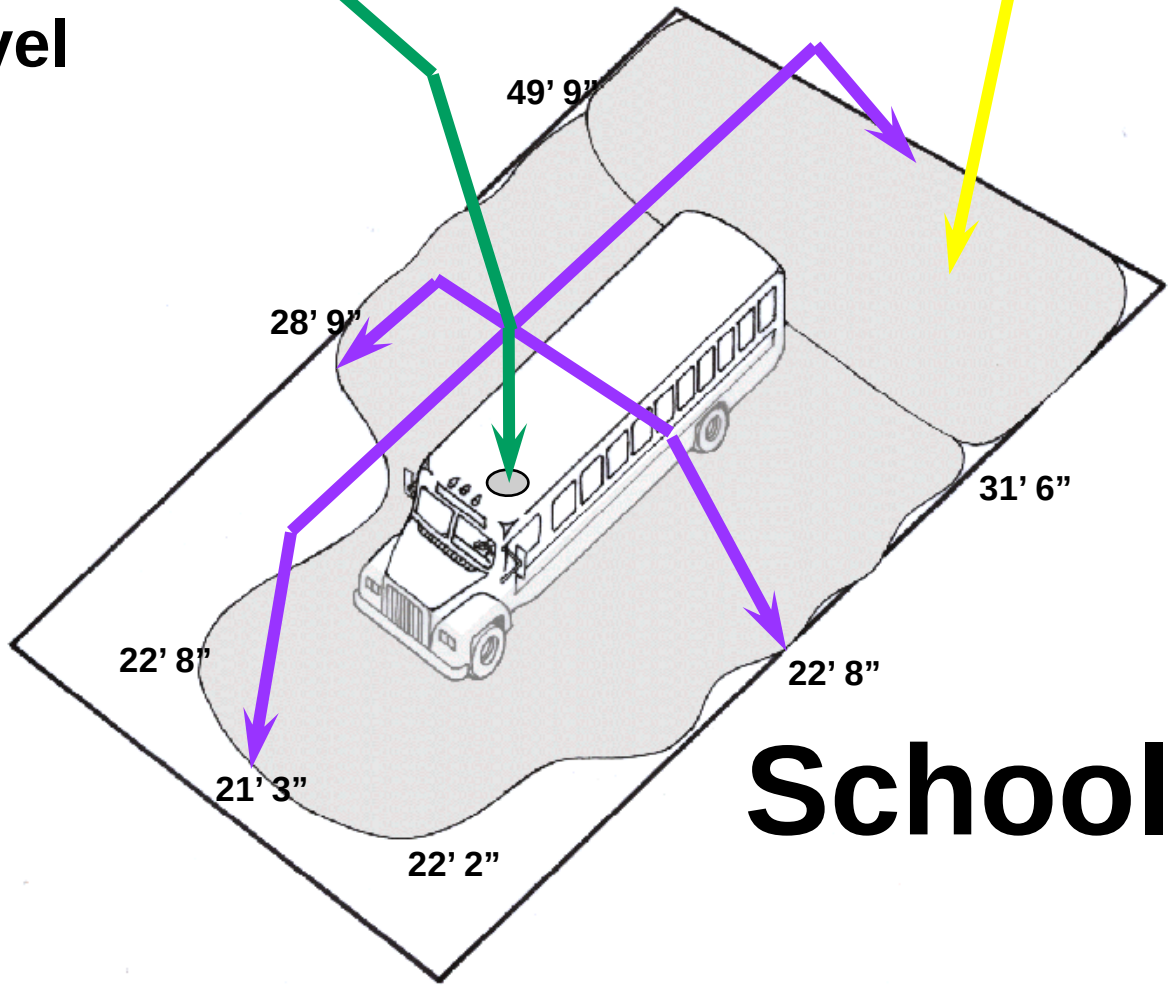
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ZERO Incidents℠

Yield for Safety
Pedestrian Safety Campaign 2010

Eye level 7 ft - 0 in above ground level

This area is fully obstructed when the vehicle is full

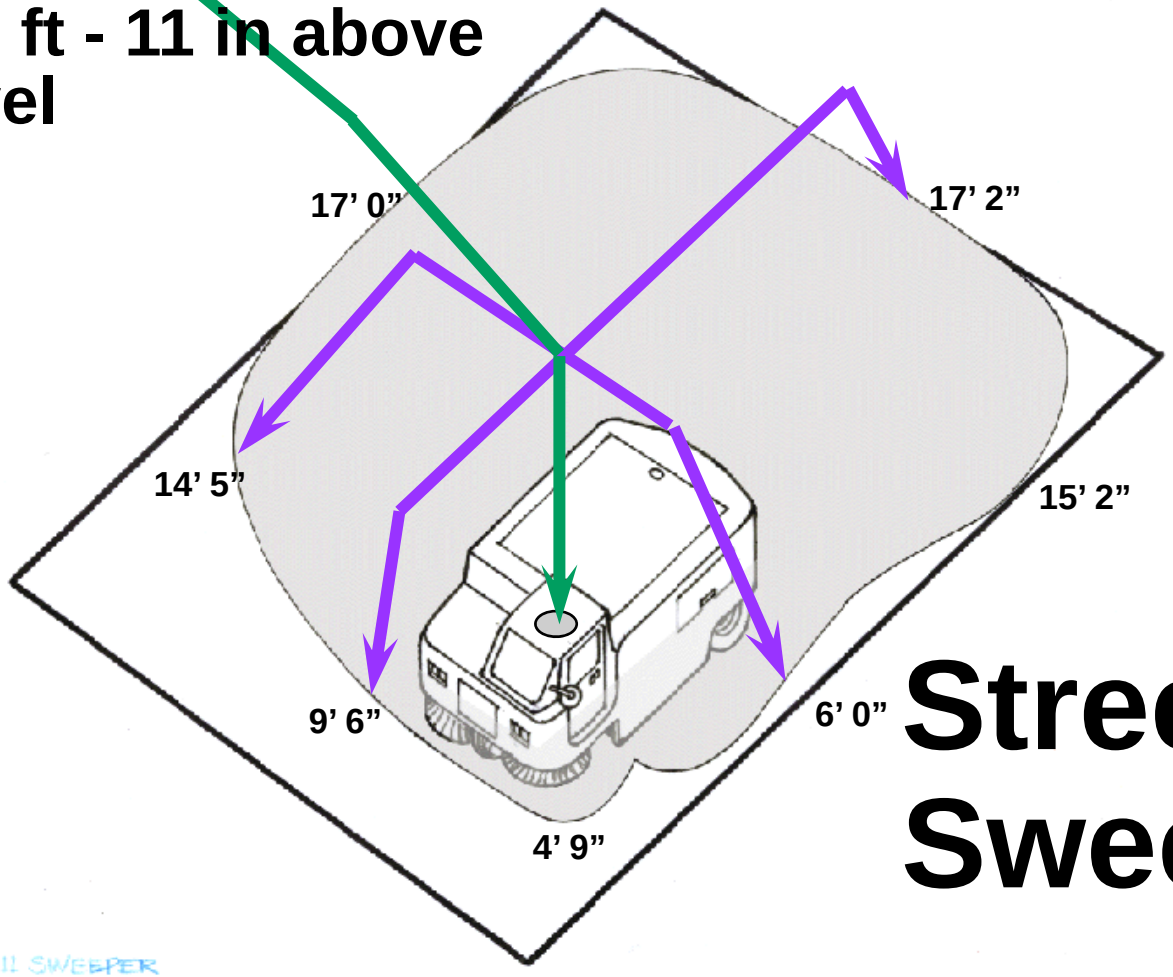


School Bus

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ZERO Incidents℠

Eye level 5 ft - 11 in above ground level

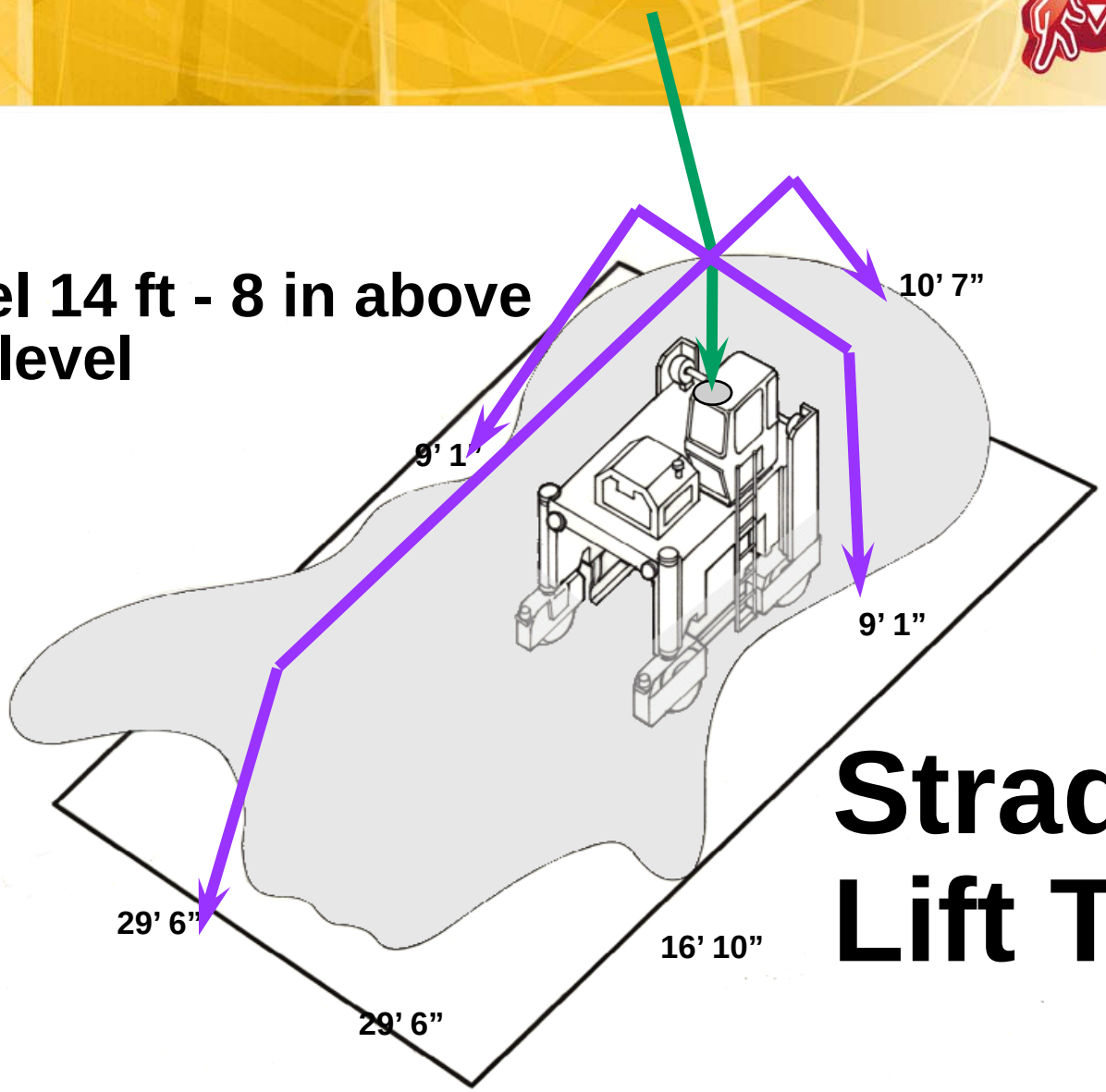


Street Sweeper

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ZERO Incidents℠

Eye level 14 ft - 8 in above ground level

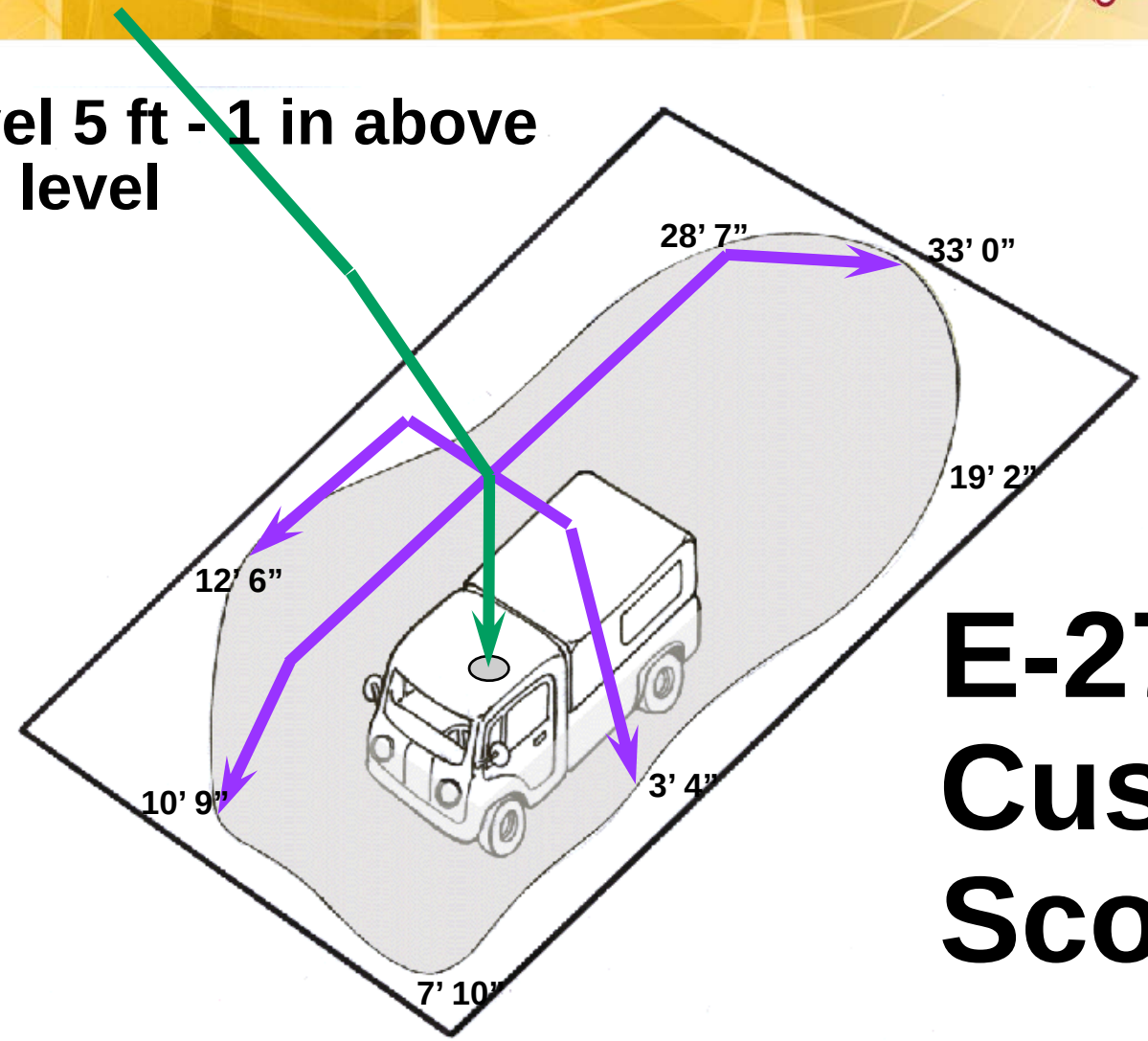


Straddle Lift Truck

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Eye level 5 ft - 1 in above ground level

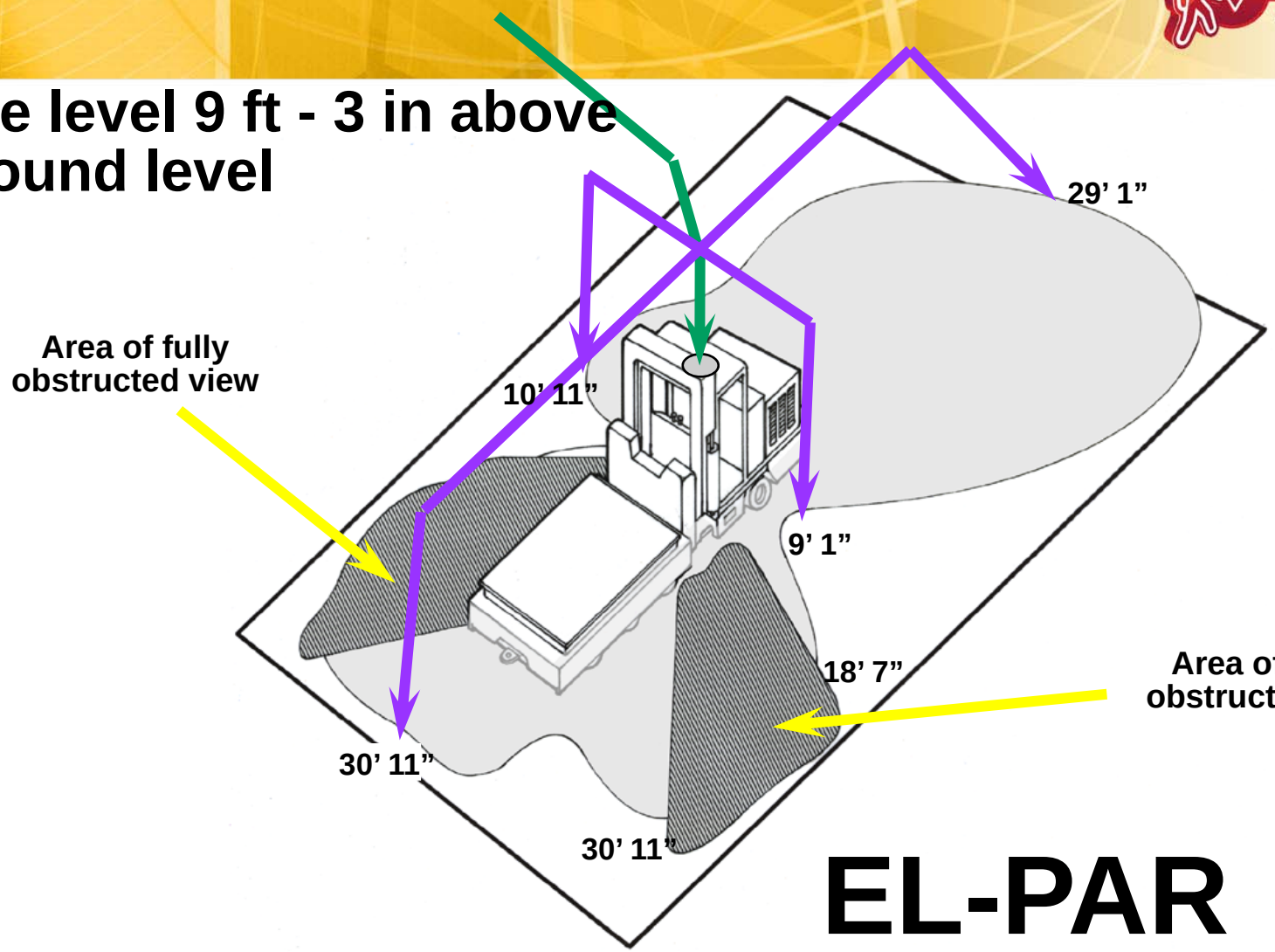


E-273 Cushman Scooter

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Eye level 9 ft - 3 in above ground level



EL-PAR

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Conclusion

Yield for Safety
Pedestrian Safety Campaign 2010

- Evaluate the vehicles in your area
- Discuss with your team mates
- Make sure the team are watching out for others entering the zone
- Agree that if someone slips or trips and falls down. The order will be given to stop movement of the vehicle
- Use the STA to align the safety awareness of team … and never take anyone's safety for granted

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Yield for Safety

Pedestrian Safety Campaign 2010

Incidents involving worksite pedestrians are preventable



Focus • Be aware • Be safe



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Yield for Safety

Pedestrian Safety Campaign 2010

Heighten Awareness to Worksite Pedestrians and Mobile Equipment Interface





Focus • Be aware • Be safe

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Pedestrian & Heavy Equipment Interface



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Statistics

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- Recent statistics identify that 17% of Construction Deaths in the US Industry were caused by mobile equipment (National Census of Fatal Occupational Injuries Summary - 2009)
- Of vehicle related deaths, 34% are workers on foot struck by heavy equipment or trucks
- Of workers struck by heavy equipment, 50% were vehicles in reverse, 25% involving dump trucks

Statistics borrowed from http://www.bls.gov/news.release/pdf/cfoi.pdf, National Census of Fatal Occupational Injuries Summary, 2009)

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Safely Working Together

Yield for Safety
Pedestrian Safety Campaign 2010

- Construction may sometimes require human activity to be in fairly close proximity to heavy equipment

- Every reasonable precaution must be taken to ensure the promotion of a safe working environment



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From the Eyes of the Operator

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Pedestrian Safety Campaign 2010



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4 Important Players Involved in Safety



- Equipment Operator
- Flagger / Spotter
- Construction Worker
- Management

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Critical Operator Requirements

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Pedestrian Safety Campaign 2010

- When in doubt, STOP – bring the speed rate to zero
- Operator and Flagger should plan route of travel and be in tune to safety concerns
- No flagger … no travel in pedestrian areas
- No flagger … no reverse operations
- Know your blind spots



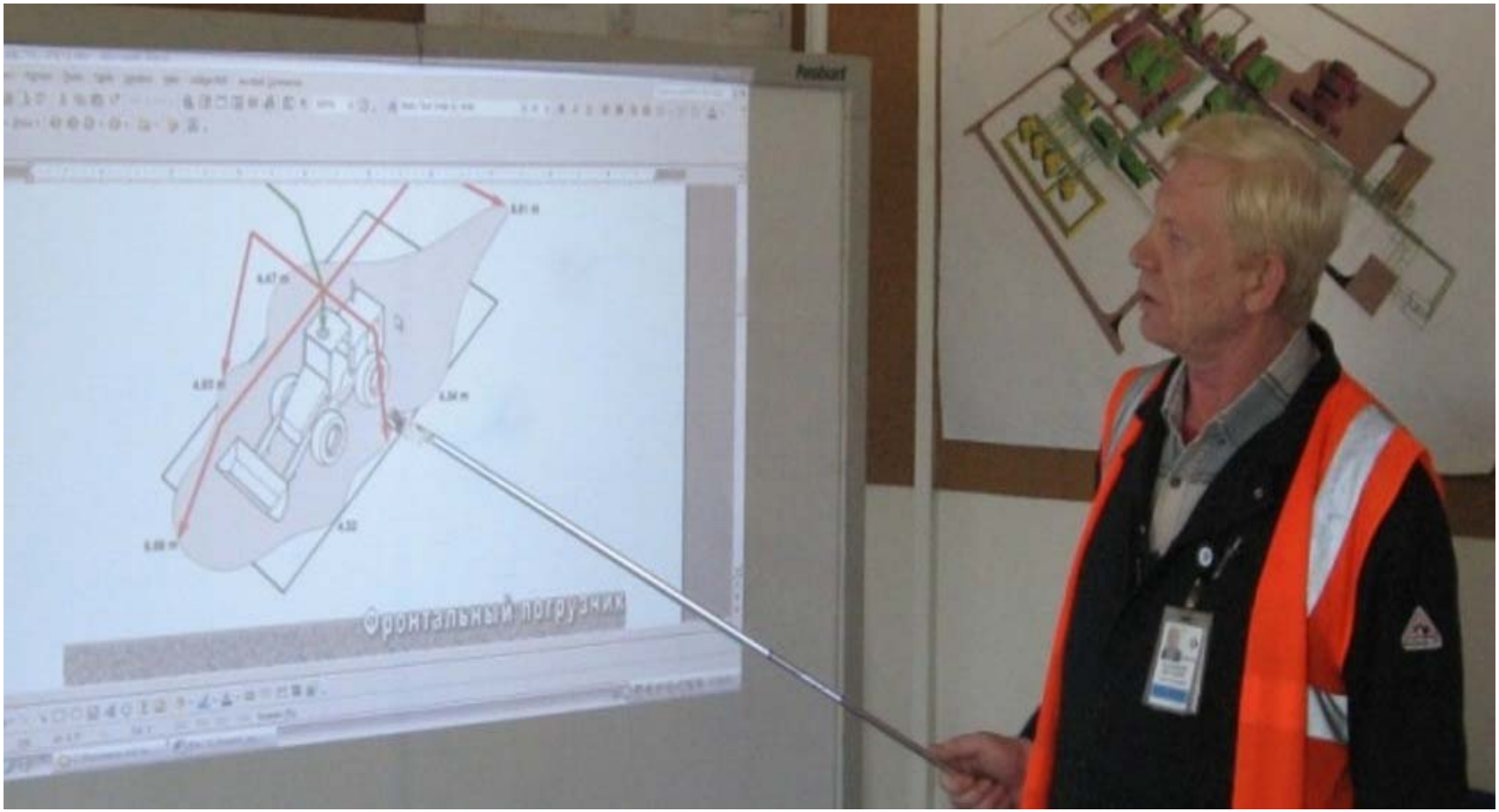
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Know Your Blind Spots

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Pedestrian Safety Campaign 2010

- Equipment Operators must know and understand their blind spots



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Critical Flagger Requirements

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- Always Be Seen … *High Visibility*
- Know mobile equipment blind spots
- Plan the route of travel with operator
- When needed, an “All Stop” command must be quickly delivered
- Be aware and accountable of all personnel in the work area
- Be aware of other vehicles/mobile equipment in addition to the one that you are directing



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Worksite Pedestrians and Mobile Equipment Interface

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- Heighten awareness to worksite pedestrians and mobile equipment interface
- Operator and flagger should be prepared at all times for emergency stops



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Critical Worker Requirements

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Pedestrian Safety Campaign 2010

- Wear your high visibility vest at all times
- Always be aware of heavy equipment around you
- At all times, assume the operator does not see you
- Walk facing traffic
- Never expose yourself to the path of an oncoming vehicle



Visibility restricted … in this operator's viewpoint, you can see that the raised outrigger is somewhat obscuring the pathway.

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Critical Management Requirements

Yield for Safety
Pedestrian Safety Campaign 2010

- Training
- Ensure compliant equipment
  - backup warning alarms
  - mirrors
  - lights / warning devices
- Establish safe walkways at all times for personnel
- Ensure high visibility vests are worn
- Manage the experience of the operator
- Manage complacency

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Training is Fundamental

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- We will always work like we practice
- An untrained worker isn't as safe as a trained worker

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Cell Phones and iPods

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- CELL PHONES AND iPODS ARE NOT TO BE USED NEAR MOBILE EQUIPMENT



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Conclusion

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Pedestrian Safety Campaign 2010

- Through management leadership and worker involvement, we can create a safe work place with regard to worker exposure to heavy equipment



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Banksman Training Course

Yield for Safety

Pedestrian Safety Campaign 2010



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Banksman Training Course

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Pedestrian Safety Campaign 2010

- Using banksmen to control reversing operations can put the Banksman in the potential danger area of a reversing vehicle. Every year banksmen suffer serious and fatal injuries whilst at work.
- Make sure you are trained to carry out your duties safely.
- Make sure that you can be easily seen (Hi-Visibility clothing and position).
- A safe system of work ensures that the Banksman and driver are using standard signals, so that they are easily understood, and that the driver knows to stop the vehicle immediately if the Banksman disappears from view.

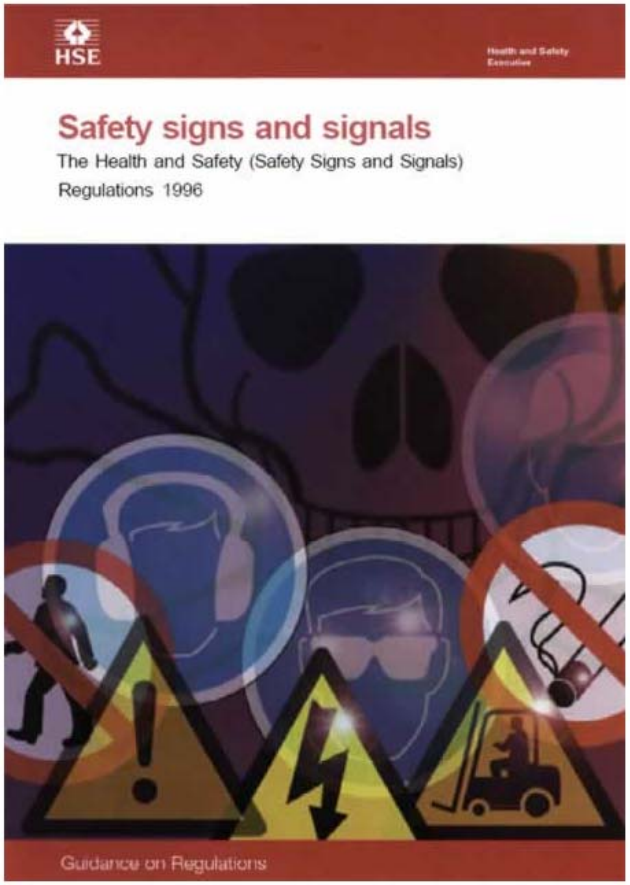
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Pedestrian Safety Campaign 2010

- The standard signals are given in the Health and Safety (Signs and Signals) Regulations 1996 L64.
- Reflects the Regulations, which implement a European Council Directive on minimum requirements for provision of workplace safety signs.
- The Directive standardised use throughout EU member states to ensure particular signs provide the same message wherever witnessed.



Safety signs and signals. The Health and Safety (Safety Signs and Signals) Regulations 1996. Guidance on Regulations

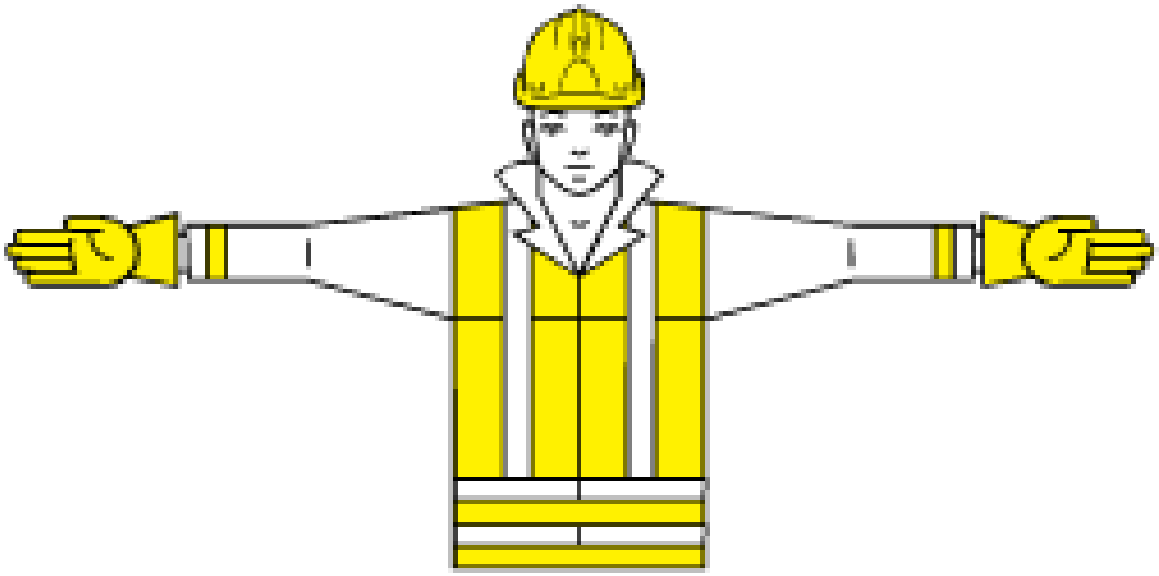
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Pedestrian Safety Campaign 2010

- Minimum requirements for hand signals
- Features
  - Hand signals must be precise, simple, expansive, easy to make and understand, and clearly distinct from other such signals;
  - Where both arms are used at the same time, they must be moved symmetrically and used for giving one sign only;



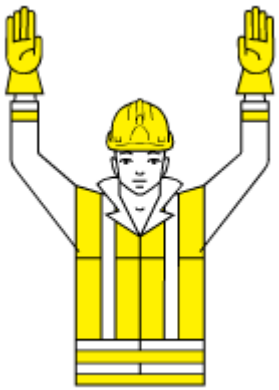
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- Minimum requirements for hand signals
- Specific rules governing use
  - The person giving the signs, hereafter referred to as the ‘signalman’, will used hand/arm movements to give manoeuvring instructions to the person receiving the signs, hereafter referred to as the ‘operator’;





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- Specific rules governing use
  - Accessories:
    - The operator must be able to recognise the signalman without difficulty;
    - The signalman is to wear one or more distinctive items, e.g. a jacket, helmet, sleeves or arm bands or carry bats; and
    - The distinctive items are to be brightly coloured, preferably all the same colour and for the exclusive use of signalmen.

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- Specific rules governing use
  - The signalman must be able to monitor all manoeuvres visually without being endangered thereby;
  - The signalman's duties must consist exclusively of directing manoeuvres and ensuring the safety of workers in the vicinity;
  - The operator must interrupt the ongoing manoeuvre in order to request new instructions when he is unable to carry out the orders he has received with the necessary safety guarantees;
  - Remember, vehicles have blind spots. If you can't see the driver or his mirrors, then he can't see you!

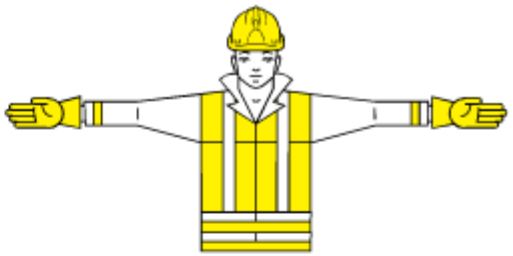
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- Coded signals to be used

START Attention Start of Command	both arms are extended horizontally with the palms facing forwards.	
STOP Interruption End of movement	the right arm points upwards with the palm facing forwards.	
END of the operation	both hands are clasped at chest height.	

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- Coded signals to be used

RAISE	the right arm points upwards with the palm facing forward and slowly makes a circle.	
LOWER	the right arm points downwards with the palm facing inwards and slowly makes a circle.	
VERTICAL DISTANCE	the hands indicate the relevant distance.	

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- Coded signals to be used

MOVE FORWARDS both arms are bent with the palms facing upwards, and the forearms make slow movements towards the body.



MOVE BACKWARDS both arms are bent with the palms facing downwards, and the forearms make slow movements away from the body.



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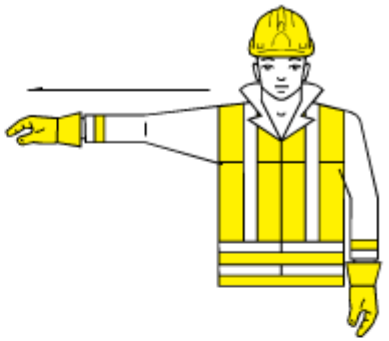
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Pedestrian Safety Campaign 2010

- Coded signals to be used

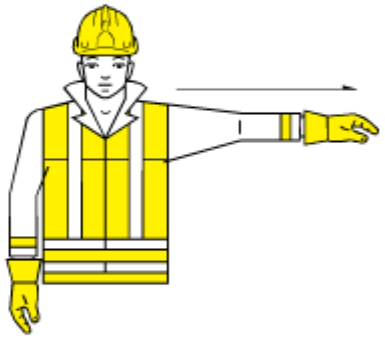
RIGHT
to the signalman

the right arm is extended more or less horizontally with the palm facing downwards and slowly makes small movements to the right.



LEFT
to the signalman

the left arm is extended more or less horizontally with the palm facing downwards and slowly makes small movements to the left.



HORIZONTAL DISTANCE

the hands indicate the relevant distance.



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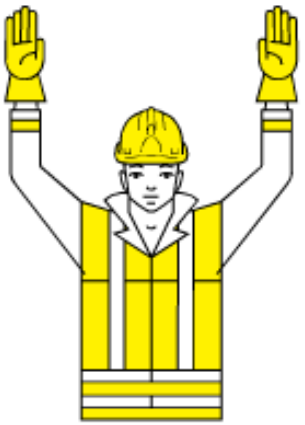
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- Coded signals to be used

DANGER Emergency stop	both arms point upwards with the palms facing forwards.
QUICK	all movements faster.
SLOW	all movements slower.



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- HSE Training Video



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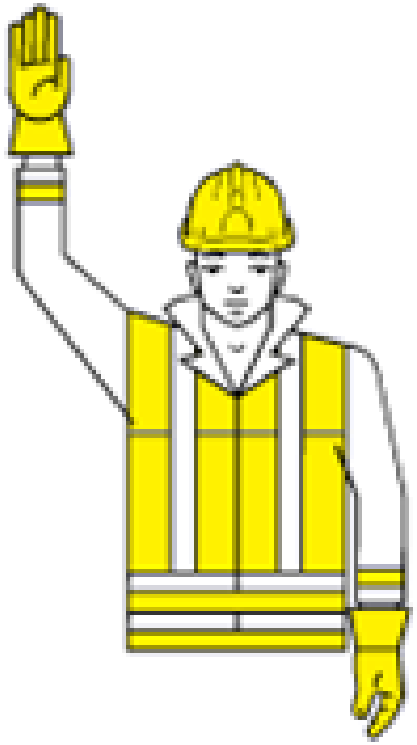
Banksman Training Course

Yield for Safety
Pedestrian Safety Campaign 2010

- Quiz



- What does this sign mean?



Stop

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Banksman Training Course

Yield for Safety
Pedestrian Safety Campaign 2010

- Quiz



- What does this sign mean?



Move Forwards

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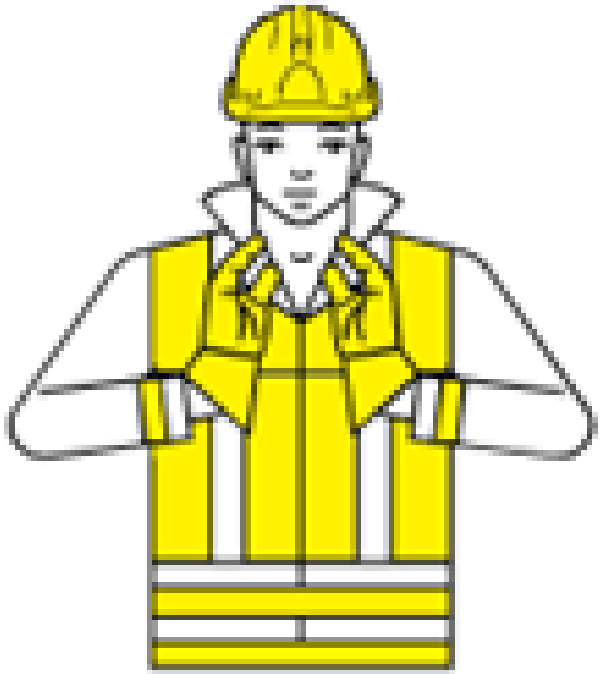
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Pedestrian Safety Campaign 2010

◆Quiz



▲What does this sign mean?



Horizontal Distance

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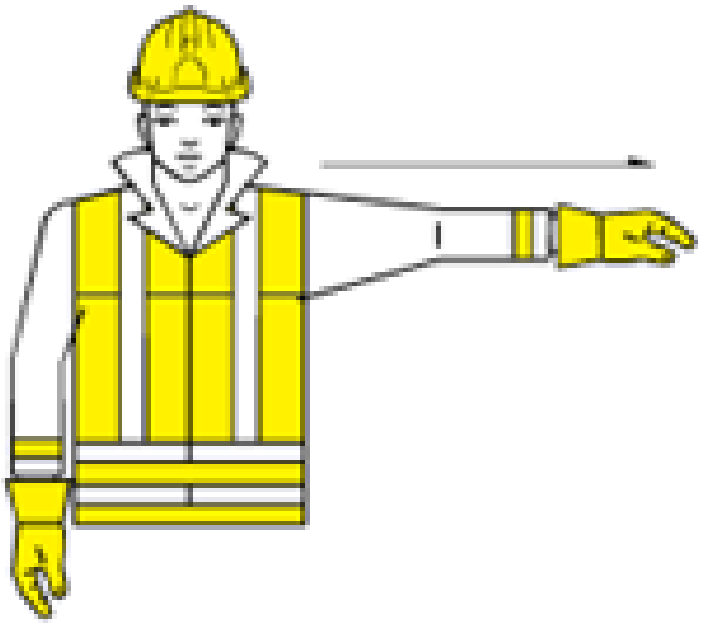
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Pedestrian Safety Campaign 2010

- Quiz



▲What does this sign mean?



Left

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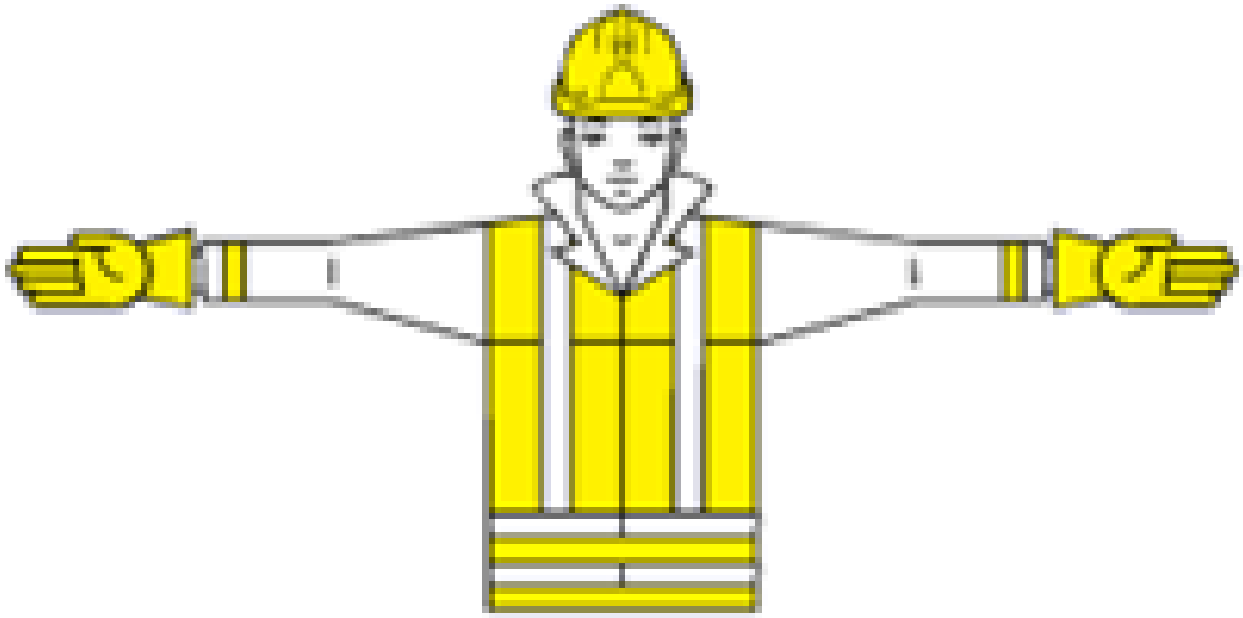
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- Quiz



- What does this sign mean?



Start

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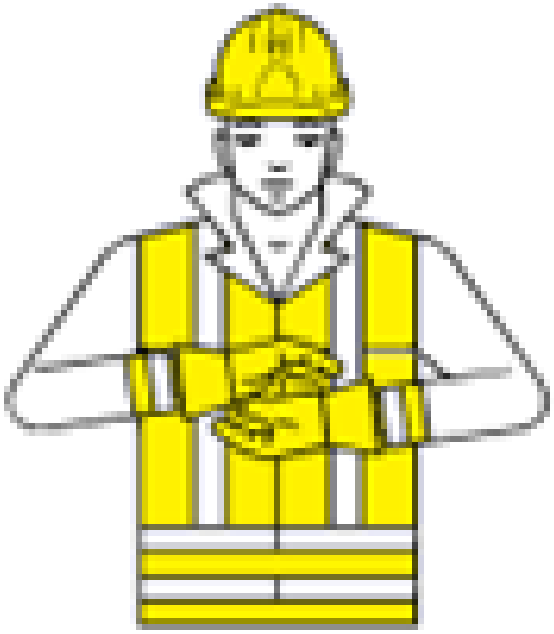
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- Quiz



▲What does this sign mean?



End

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- Questions & Answers



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Work Zone and Traffic Safety

When implementing a pedestrian and traffic safety program at your site, it's important to develop and use a site plan that provides traffic flow details. Be sure to use flaggers, traffic cones, and/or highway channeling devices to steer vehicles/mobile equipment away from workers. Enforce signs or message boards to warn approaching vehicles/mobile equipment of work area. Also, ensure that the work zone is well lit. Here are some additional ways you can implement a successful pedestrian safety campaign.

Traffic Control within the Work Area

- Develop and use a site plan that provides traffic flow details
- Limit access, barricade, or set up controlled access zones where the equipment will be used; for equipment that rotates and/or carries/dumps loads, create an access zone that extends beyond the maximum rotation/swing radius of the equipment and/or beyond the area where loads will be carried/dumped
- Establish/follow traffic control patterns (e.g., cones, barrels, barricades) in work areas
- Use spotters where visibility is limited
- Do not drive in reverse gear with an obstructed rear view unless the vehicle has an audible alarm or a signaler is used
- Ensure that spotters and heavy equipment operators have communications equipment or agree on and use hand signals
- Response and recovery workers and other pedestrians should make eye contact with heavy equipment operators before proceeding near equipment or operating areas
- Train response and recovery workers not to position themselves between mechanical equipment and a fixed object
- Provide barricades around excavations and structures such as debris reduction observation towers

Driver and Vehicle/Mobile Equipment Safety

- You can encounter pedestrians anytime and anywhere - even in places where they are not expected to be found
- Pedestrians can be very hard to see - especially in bad weather or at night, or circumstances contributing to poor visibility; you should also stay conscious of your vehicle's blind spots; keep a lookout and slow down if you can't see clearly
- When entering a crosswalk area, drive slowly and be prepared to stop
- Stop for pedestrians who are in a crosswalk or a congested work zone, even if it is not marked; when you stop for a pedestrian in a crosswalk, stop well back so that drivers in the other lanes can also see the pedestrian in time to stop
- Do not overtake and pass other vehicles stopped for pedestrians

On-Foot and Pedestrian Safety

- Be predictable; stay out of restricted zones; use sidewalks where provided
- Where no sidewalks are provided, walk facing road traffic

- Make it easy for drivers to see you - dress in light colors and wear retro-reflective material; it is wise to carry a flashlight in very dark areas
- Be wary; don't count on drivers/operators seeing you; watch out - make eye contact to *be sure they see you*; make sure that you have been seen by an approaching driver/operator
- Always cross at designated pedestrian crossings
- Obey your highway codes
- Never run across a road
- Check both directions when crossing roads
- Be aware of traffic directions when traveling internationally
- Do not use cell phones and audio equipment when crossing roads
- Always be aware of your surroundings

The A, B, C, D of Pedestrian Safety

A **Alert!** Be alert of pedestrian/equipment traffic

B **Beep!** Beep the horn when backing up and at blind spot turns

C **Contact!** Establish eye, verbal, or hand signal contact with operator/pedestrian

D **Distance!** Keep enough clearance distance between equipment/pedestrian

Let’s promote a transparent site campaign that will serve to enhance our high standards of “HSE Excellence.”



Supervisor's Toolbox Topic Meeting Report

Supervisor's Name	Date

Toolbox Meeting Notes

Supervisor's Signature	

Name	Personnel/ID No.	Comments/Concerns

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MOTORIZED HEAVY EQUIPMENT AND LIGHT VEHICLES

This page is provided for information only and is not part of the practice. Review of this summary does not relieve the reader of responsibility for the contents of the practice.

Revision Summary:

1. Added Defensive Driving as a recommended course for employees who drive a lot as part of their job.

2. Included an explanation regarding Forms 000.653.F0105 and .F0218:

   Note: *Forms used to document inspections (000.653.F0105 series) and performance evaluations (000.653.F0218 series) are specific to the machine. Both forms have a sub-letter designation for nearly every type of motorized construction heavy equipment. For example, .F0105"e" and .F0218"e" are used for backhoes and .F0105"g" and .F0218 "g" are used for dozers, etc.*

3. Performed minor edits.

For additional information, contact Dan Palmer at 509.376.4240.

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MOTORIZED HEAVY EQUIPMENT AND LIGHT VEHICLES

PURPOSE

This practice defines the requirements for the safe operation of motorized heavy equipment and light vehicles.

SCOPE

This practice includes the following major sections:

- General Requirements
- Inspections
- Heavy Equipment Operators
- Signal Persons
- Road Rules
- Standard Equipment
- Maintenance
- Training and Licensing

Note: *Refer to Practices 000.502.0100, Administrative Practice for Rigging; 000.502.1000, Cranes and Rigging — Operations (Site-Specific); and 000.653.3201, Cranes and Rigging — Introduction/Preuse.*

Note: *Refer to Practice 000.653.3203, Powered Industrial Trucks (Forklifts).*

Note: *Refer to Practice 000.653.3204, Aerial Lifts, Elevating Work Platforms, and Material/Personnel Hoists.*

APPLICATION

This practice applies to work activities and employees under the control of Fluor and its contractors.

DEFINITIONS

Competent Person — One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Heavy Equipment (types of) – Includes but is not limited to the following:

- Backhoes
- Dozers
- Front-end loaders

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MOTORIZED HEAVY EQUIPMENT AND LIGHT VEHICLES

- Road graders
- Excavators
- Scrapers (pans)
- Skid-steers
- Dump trucks
- Earth movers
- Trucks 2 tons GVW or greater
- Grad-alls
- Creter cranes
- Concrete pump trucks
- Vibrating compactors
- Water carts/trucks
- Rollers
- Service/re-fueling trucks
- Air tuggers

Light Vehicle – Includes but is not limited to the following:

- Automobiles
- Trucks less than 2 tons GVW
- "Mules"
- Motorized and electric carts (including "golf" carts)
- Motorized "georgia buggies"
- 4-wheelers and 3-wheelers

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MOTORIZED HEAVY EQUIPMENT AND LIGHT VEHICLES

1.0 GENERAL REQUIREMENTS

To operate/drive motorized heavy equipment or a light vehicle (hereafter referred to as equipment/vehicle), employees must, at a minimum:

- Have a valid state/country driver's license.
- Be designated by the Project Manager or his designee to drive (refer to Form 000.653.F0185, Application for Designated Driver).
- Be mentally alert and possess the physical ability to drive a motor vehicle safely.
- Display a responsible attitude.

All restrictions of the employee's state/country driver's license are automatically applicable to operating equipment/vehicles.

An employee must carry his/her state/country driver's license on his/her person while operating equipment/vehicle and must display it upon request to authorized persons:

- A copy of such license and endorsements must be maintained in the employee's personnel file (refer to Form 000.653.F0204, Driver's License Record).
- The HSE Representative must be advised of any change in the status of such license and endorsements (such as cancellation or suspension).
- The employee will not operate equipment/vehicles on or off the project/site after his/her state/country driver's license is suspended, revoked, or otherwise affected.
- An operator must have the appropriate endorsement for the type of equipment/vehicle being driven. Drivers of 4-wheel drive (4WD) vehicles must have undergone an approved 4WD course.

Operators and ground employees who may be working near machinery must be trained in, understand, and practice safe operation/maintenance procedures for equipment/vehicles.

Gasoline or diesel fuel will not be used for cleaning parts.

Firefighting and first-aid equipment must be conspicuously located near equipment/vehicle operations and readily accessible at all times.

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Employees are prohibited between machines and trailing equipment when maneuvering to connect them; the tongue or hitch of trailing equipment must be blocked to align it with the drawbar or hitch.

Equipment/vehicles or parts thereof that are suspended or held aloft must be substantially blocked to prevent falling or shifting before employees are permitted to work under or between them.

Employees on foot must not approach equipment/vehicle until the operator is signaled and acknowledges the location of the approaching employee(s).

Employees must not ride in or work from excavator or backhoe/loader buckets.

Employees must not stand under suspended loads or suspended machine components such as the boom, arm, or bucket.

No modifications or additions that affect the capacity or safe operation of equipment/vehicle will be made without the manufacturer's written approval. If the manufacturer will not approve modifications or changes, written approval from a registered profession engineer must be obtained. If such modifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals must be changed accordingly.

2.0 INSPECTIONS

2.1 General

Equipment/vehicles received for use (through purchase, contract obligations, or rental) must receive an initial inspection before placing into operation to verify that there are no mechanical defects or safety deficiencies; results are documented on Form 000.653.F0165, Pre-Mobilization Inspection Report — Construction Equipment and Light Vehicles. Refer to Attachment 02, Safety Device Requirements, for a list of minimum safety equipment/requirements.

If the equipment/vehicle warrants service or repair, it will be rejected (before unloading/use) and returned to the lessor or owner. The lessor/owner will be notified before such action and, if possible, be allowed to make necessary repairs at his/her own expense. Management/supervision and the HSE Representative will be part of this decision-making process. A photocopy of the inspection report, noting all deficiencies will be transmitted to the lessor/owner.

When the equipment/vehicle becomes damaged or in need of repair, a documented inspection is completed before the equipment/vehicle is returned for use. This inspection will include reviewing prior inspection forms to ensure corrective actions have been dispositioned.

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Before use on each shift, the operator will complete a walk-around inspection of the equipment/vehicle to verify that the unit is in an operable condition.

If a deficiency has the potential for causing bodily injury to the operator/driver or ground employees, the equipment/vehicle must be tagged with a Danger – Don't Use It – Unsafe Tag, Form 000.653.F0301 or equal, to avoid operation. The supervisor must be notified when the equipment/vehicle is tagged out of service.

Equipment/vehicles (except automobiles and "pickup" trucks) will receive a documented, daily pre-use inspection on the applicable form described below. Deficiencies will be fully explained in the Comments section of appropriate form. Corrective actions will also be noted on the form, before the equipment can be used in the field.

- **Inspection Report – Motorized Construction Heavy Equipment:** (Form 000.653.F0105)

  Note: *Forms used to document inspections (000.653.F0105 series) and performance evaluations (000.653.F0218 series) are specific to the machine. Both forms have a sub-letter designation for nearly every type of motorized construction heavy equipment. For example, .F0105"a" and .F0218"a" are used for forklifts; .F0105"e" and .F0218"e" are used for backhoes; .F0105"g" and .F0218 "g" are used for dozers, etc.*

- **Inspection Report – General Line Equipment:** (Form 000.653.F0107)

  Note: *Forms used to document inspections (000.653.F0107 series) are specific to the machine. This form has a sub-letter designation for each type of machine. For example, .F0107"b" is used for aerial lifts; .F0107"c" is used for scissor lifts, and .F0107"x" is used for welding machines.*

A monthly equipment/vehicle inspection will be performed by a Competent Person and documented using Form 000.653.F0108, Monthly Inspection Report – Construction Equipment and Light Vehicles.

2.2 Equipment/Vehicle Pre-Start/Walk-Around Inspection

Pre-start/walk-around inspections will be conducted as follows:

- Ensure the operator's manual is "on" the equipment/vehicle.
- Check for loose or worn parts and repair or replace immediately.

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- Check all fluid/coolant levels**. (Caution: Open the radiator cap only when the engine is cooled)**. Check the battery and electrolyte levels according to manufacturer's instructions.

- Inspect hydraulic line connectors and hoses for leaks before applying pressure to the system.

  Caution: Hydraulic fluid escaping under pressure can penetrate skin and cause serious bodily harm.

- Use paper or cardboard – not your hands – to search for leaks.

- Check tires for cuts, bulges, irregularities, abnormal wear, and proper inflation.

- Ensure the cab area is clean and free of debris and tools.

- Clean windshield, mirrors, and lights.

- Remove oil, grease or mud, and snow from grab holds, handrails, steps, pedals, and floor to prevent slips and falls.

- Remove or secure loose items such as tools, chains, or lunch boxes from the cab.

- Ensure the work area has been checked and marked, as appropriate, for underground cables, gas lines, and water mains.

- Know work area clearances; watch for overhead or underground objects, holes, drop-offs, and partially hidden obstacles and wires.

- Do not allow riders on the equipment/vehicle unless additional seat, seat belt, and rollover protection are provided.

- Enter/mount and exit equipment properly; no one is to ever get on or off equipment/vehicles that are in motion.

- Maintain a 3-point contact with the steps and handrails while getting on/into the machine; do not use the controls or steering wheel as a handhold.

- Do not operate the machine with wet, greasy, or muddy hands or shoes.

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2.3 Starting and Testing

Operators will perform the following start/test functions before operating equipment/vehicles:

- Exhaust fumes are dangerous – always have running equipment/vehicles in a well-ventilated area.
- Fasten seat belt before starting engine.
- Adjust the seat and mirrors before starting.
- Place controls in neutral and set the parking brake before starting engine.
- Start the engine only from the operator/driver's seat.
- Warn employees in the area that you are starting the engine
- Check all gauges, light, instruments, and warning devices to ensure that they are functioning properly and the readings are within normal range.
- Test steering right and left.
- Test brakes against ground speed to be certain there is no malfunction.
- Ensure all controls are operating properly.

3.0 EQUIPMENT/VEHICLE OPERATORS

Depending on site-specific requirements, personal protective equipment worn by drivers/operators may include the following:

- Boots or safety shoes
- Eye/face protection
- Long pants
- Hard hat
- Hearing protection
- Gloves
- Seat belts (mandatory on equipment/vehicles except those without rollover protection structures [ROPSs])

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MOTORIZED HEAVY EQUIPMENT AND LIGHT VEHICLES

3.1 Operation

If a machine is noticed to be deficient during operation, the operator/driver must cease operation and contact the immediate supervisor (refer to Section 2.1); do not operate until proper repairs have been made.

The following "general" rules apply to the operation of equipment/vehicles:

- The operator must be satisfied that no one will be endangered before moving the equipment/vehicle.
- If there is an obstructed view in the direction of movement, or the equipment is large enough or configured such that it allows someone to perform work on it and be unnoticed by the operation, it is prohibited to use the equipment/vehicle unless:

  The operator/driver sounds the horn with 1 blast, followed by a 5-second pause before starting the engine, **and**

  The operator/driver sounds the horn with 2 blasts followed by another 5-second pause before moving the equipment/vehicle from a stationary position, **or**

  The equipment/vehicle has a continuous movement signal alarm distinguishable from the surrounding noise level (for the designated direction of travel), **or**

  An observer is present
- Light vehicles with an obstructed rear view must be equipped with a rear signal alarm.
- In congested areas, isolated areas with a concentration of employees (such as concrete pours), or significant equipment/vehicle movement areas (such as in the vicinity of stockpiles), flaggers should be used to coordinate equipment/vehicle and pedestrian movement (refer to Practice 000.653.3211, Traffic Management).
- Keep employees outside the hydraulic excavator swing areas and clear of attachments when using the machines for hoisting materials.
- Carry implements close to the ground, approximately 15 inches) 40 centimeters) above ground level, or follow manufacturer's recommendations.
- Keep the bucket as close to the ground as possible when employees are attaching loads for hoisting.
- Stay a safe distance from the edge of cliffs, overhangs, and slide areas.

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- Stay a safe distance, especially with raised attachments, from energized power lines and equipment, electrical poles, and circuits and equipment including power, communications, and fire-alarm circuits (refer to Practice 000.653.3209, Working Near Overhead Power Lines.
- Electric equipment and lines must be considered energized until determined otherwise by testing or until grounded.
- If the equipment/vehicle begins to sideslip on a grade, immediately dispose of the load and turn the unit downhill.
- Be careful to avoid the condition that could lead to tipping when working on hills, banks, or slopes, and when crossing ditches, ridges, or other obstruction.
- Work up and down slopes, rather than sideways, whenever possible.
- Keep the equipment/vehicle under control and do not work it over its capacity.
- Know the pinch points and wrap points on the loader.
- Be sure hitch points and the towing devices are adequate.
- Connect trailing equipment to a drawbar or hitch only.
- Never straddle a cable, wire rope, or similar device, and do not allow other people to do so.
- Acquaint yourself with the controls before operating the equipment/vehicle.
- Drive at speeds compatible with working conditions, visibility, and terrain.
- Do not coast downhill; select a gear that will prevent excessive speed when going downhill.
- Do not park on a steep incline (greater than 25 degrees).
- Know the stopping distance for working speeds.
- Follow the manufacturer’s load capacity limits; identification plates are attached to all machines.
- If the equipment/vehicle is stuck, back it out or stop engine and get help.
- Do not make mechanical adjustments while the unit is in motion.

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MOTORIZED HEAVY EQUIPMENT AND LIGHT VEHICLES

- Always follow the manufacturer's recommendations for pulling or towing.
- During snow removal, be alert for obstructions covered by snow.

3.2 Refueling

- Fuel tanks on equipment/vehicles must not be filled while the engine is running, or while welding or other hot work is being done with 50 feet (15.2 meters).
- Smoking is not permitted during fueling operations.
- Ensure the fueling area is well-ventilated.
- Ground the funnel or fuel nozzle against the filler neck to avoid sparks when refueling.
- Know where the fire extinguisher is located.

3.3 Operating a Power Takeoff

- Shut off the engine and wait until the power takeoff (PTO) stops completely before getting off, disconnecting, or servicing the PTO unit.
- Wear snug-fitting clothing when operating the PTO (or any rotating equipment).
- When operating stationary PTO equipment, always apply the parking brake and block the rear wheels front and back to prevent unnecessary movement.
- PTO shields are mandatory on all PTO-driven equipment.

3.4 Parking of Heavy Equipment

The following rules apply to parking heavy equipment:

- Use parking ditches (swales) provided.
- Park only in designated areas.
- Lower attachments on equipment fitted with moveable attachments (such forks, buckets, blades, and rippers) before shutting down or getting off the machine.
- If on an incline, chock or wedge the wheels and turn wheels into the side of the bank or road.
- Where applicable, select neutral and apply the parking brake and slew brake.

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- If the engine will be idling for more than 5 minutes, idle the engine down, and then stop the engine.

Note: *No employee is allowed to sit or rest:*

– *Under heavy equipment*
– *Near or against any tire*
Directly in front of or behind heavy equipment

3.5 Equipment/Vehicle Breakdown

The following apply if equipment/vehicle becomes inoperable:

- If on a road, operate hazard warning lights (if fitted), and leave parking lights on if it is dark.
- Turn the front wheels into the side of the road; apply the parking brake and chock the wheels.
- Arrange for repair/removal of the equipment/vehicle as soon as practicable.
- Place road hazard markers 163 feet (49.7 meters) in front of and behind the equipment/vehicle as follows:

Two-Way Roads— One marker in the front at approximately 100 feet (30.5 meters), and markers to the rear at 10 feet (3.1 meters) and approximately 100 feet (30.5 meters).

Divided Roads — Markers to the rear at 10 feet (3.1 meters), approximately 100 feet (30.5 meters), and approximately 200 feet (61 meters).

Vision-Obscured Roads — One front marker at approximately 100 feet (30.5 meters) and rear markers at 10 feet (3.1 meters) and one not less than approximately 100 feet (30.5 meters) and no greater than 500 feet (152.4 meters).

3.6 Working Near Overhead Power Lines

Refer to Practice 000.653.3209, Working Near Overhead Power Lines.

4.0 SIGNAL PERSONS

- Only one employee can act as the signal person at any given time.

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- Before each work shift begins, review and confirm communications signals with the operator(s).

- The signal person is responsible to:

  – Keep the operator and the other employees in sight at all times.
  Keep employees on foot outside heavy equipment work areas (marked with rope, tape, or other barrier).

- Ensure employees who must be near heavy equipment are kept out of the equipment swing areas and clear of attachments when hoisting materials.

- Ensure heavy equipment or parts thereof that are suspended or held aloft are substantially blocked to prevent falling or shifting before employees are permitted to work under or between them.

- Ensure that all employees in the area are aware of established swing areas of the heavy equipment and blind spots associated with the unit before allowing an operator to work the machine.

5.0 ROAD RULES

All of the rules that apply to public road use generally apply to project/site roads and access ways. Variations to public road rules on project/site road and access ways will be posted in writing.

The speed limit on project/site roads and access ways is determined by the Project/Site Manager based on site-specific conditions. Typically, the speed limit is 38 mph (61.2 kilometers per hour) unless otherwise posted. Speed limit should be, at most, 20 mph (32.2 kilometers per hour) for unsurfaced areas. Employees exceeding set speed limits will be subject to disciplinary procedures, according to Human Resources policies.

A light vehicle must escort large earthmoving equipment on the site.

Unless a road sign specifically indicates otherwise, the following hierarchy of equipment/vehicles will exist; that is, equipment/vehicles lower on the list will give way to equipment/vehicles higher on the list:

- Emergency vehicles (when they indicate by sirens/lights that they are on emergency duty)

- Explosives vehicles

- Working graders / working water trucks

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- Loaded dump trucks and scrapers
- Empty dump trucks
- Excavators
- Other heavy vehicles (such as nonworking graders)
- Light vehicles

Passengers are not permitted on motorized heavy equipment unless they are a trainee and undergoing instruction with a licensed operator and are displaying an "Under Instruction" sign, or they are maintenance employees involved with road testing the unit.

Overtaking of traveling earthmoving equipment will not be permitted under any circumstances.

6.0 STANDARD EQUIPMENT

Equipment/vehicles will be equipped with the following items, where applicable:

- Operator's manual
- Log book
- Flashing amber lights
- Pre-start checklist record booklet or forms
- VHF or UHF radio compatible to operating frequencies
- In remote areas, a water container (5 gallon [18.9 liters] minimum)

A checklist for required safety devices is included as part of Attachment 02. No equipment/vehicle may be operated without fully functional safety devices.

The following types of motorized heavy equipment manufactured after June 30, 1969 must be equipped with rollover protective structures:

- Rubber-tired, self-propelled scrapers
- Rubber-tired, front-end loaders
- Rubber-tired dozers
- Wheel-type agricultural and industrial tractors
- Crawler tractors
- Crawler-type loaders
- Powered industrial trucks (forklifts)
- Motor graders, with or without attachments, used in construction work

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Note: *Exceptions to this requirement may only be approved by the Business Unit HSE Lead — and only on equipment operated outside of the United States and its territories.*

ROPSs must meet U.S. federal minimum requirements for performance.

Equipment/vehicles with ROPSs must also be equipped with seat restraints to be worn by the operator/driver while the unit is in operation.

7.0 MAINTENANCE

Equipment/vehicles must be maintained in accordance with the manufacturer's maintenance requirements; records of maintenance must be developed and retained.

8.0 TRAINING AND LICENSING

Operators of motorized heavy equipment must be trained, successfully pass an assessment, and be licensed for the equipment they will drive/operate, in accordance with Attachment 01, Motorized Heavy Equipment Operator Training and Licensing.

Refer to Practice 000.653.1001, Training and Orientation, regarding the recommendation of a Defensive Driving course for Fluor employees who drive a great deal (16 hours per month or more) as part of their position description.

9.0 RESOURCES

Global Standards	
Australian Government	Safety and Compensation Council; List of National Codes of Practice
	Safety and Compensation Council; List of National Standards
European Union	European Agency for Safety and Health at Work
United Kingdom	Construction Regulations 2007

10.0 REFERENCES

Document ID	**Document Title**
000.502.0100	Administrative Practice for Rigging
000.502.1000	Cranes and Rigging — Operations (Site-Specific)
000.653.1001	Training and Orientation

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Document ID	Document Title
000.653.3201	Cranes and Rigging — Introduction/Preuse
000.653.3203	Powered Industrial Trucks (Forklifts)
000.653.3204	Aerial Lifts, Elevating Work Platforms, and Material/Personnel Hoists
000.653.3209	Working Near Overhead Power Lines
000.653.3211	Traffic Management
Forms:	
000.653.F0105	Inspection Report – Motorized Construction Heavy Equipment:
000.653.F0107	Inspection Report – General Line Equipment:
000.653.F0108	Monthly Inspection Report – Construction Equipment and Light Vehicles
000.653.F0126	Equipment Operator's License
000.653.F0128	Equipment Operator Certification Record
000.653.F0165	Pre-Mobilization Inspection Report – Construction Equipment and Light Vehicles
000.653.F0185	Application for Designated Driver
000.653.F0204	Driver's License Record
000.653.F0218	Performance Evaluation – Construction Equipment Operator:
000.653.F0301	Danger – Don't Use It – Unsafe Tag

11.0 ATTACHMENTS

Attachment No.	Attachment Title
Attachment 01	Motorized Heavy Equipment Operator Training and Licensing
Attachment 02	Safety Device Requirements

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MOTORIZED HEAVY EQUIPMENT AND LIGHT VEHICLES

MOTORIZED HEAVY EQUIPMENT OPERATOR TRAINING AND LICENSING

1.0 GENERAL REQUIREMENTS

Where a nationally recognized license or certificate occurs, motorized heavy equipment operators will be required to provide evidence of training, qualifications/certifications, and proficiency. In addition, operators may also be required to attend additional training or successfully pass a skills test/performance evaluation before being assigned duties as a heavy equipment operator.

Where a nationally recognized license or certificate is not required, projects must comply with the following training and licensing process.

2.0 TRAINING AND EVALUATION

Each designated employee will successfully complete a training or retraining program conducted by a trainer knowledgeable and proficient on the operation of the type of equipment the employee is to operate before being assigned the work. The training program and trainer(s) must be approved by Project HSE.

Note: *Project HSE may grant documented credit (partial or full) for completion of training courses from recognized programs such as union apprenticeships.*

This training program will typically consist of both classroom instruction and on-the-job experience until satisfactory knowledge has been acquired and demonstrated. Training and retraining programs are required for the following groups:

- New operators
- Newly employed experienced operators
- Operators assigned to equipment on which they have no previous experience
- Annual refresher training for operators
- Hazard training for operators

2.1 Training Course Content

To develop a complete and efficient heavy equipment training program, it is necessary to know:

- All tasks that are being performed
- What activities each task entails
- The skills, knowledge, and abilities necessary to perform the activities/tasks
- Hazards that may be associated with the activities/tasks

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Instructional methods that correspond to the objectives of the course should be chosen. Where the objectives state that trainees should demonstrate recall of information, appropriate methods should include lecture, discussion, film, videotape or slide/tape presentation, and the use of self-teaching materials. Where the objectives state that the trainee will discriminate between objects or conditions or operate equipment, methods that include trainee practice should be chosen.

On-the-job training is an acceptable method of instruction under the following conditions:

- Trainers must follow a written outline in which each task is broken down into its component operations (activities). The trainees will be required to demonstrate safe performance of each activity before proceeding to the next.

- All health and safety standards must be observed: for example, the trainer may not ride beside a trainee operator on equipment that has no second seat.

Methods that promote maximum effectiveness in achieving the stated objectives should be used. A sufficient supply of materials, tools, and equipment should be provided; trainees must have adequate practice time in their use. Trainees should not be required to share materials designed for individual use such as programmed instruction workbooks, nor should more than one trainee at a time work at a simulator position.

Lecture, film, and videotape or slide/tape presentations should require trainee response such as oral reply to questions presented by a trainer, completion of written tests (used as training aids), or directed note taking. If a trainee will be expected to perform activities demonstrated to him/her, repeated demonstrations should be available. Where such demonstrations are presented on film, tape, or tape and slides, trainees should be able to review such presentations as many times as necessary.

Subject descriptions should refer to those given in this section for each course title, and the training should be appropriate to the specific project. For example, the training will include hazards that are common causes of accidents on the project/site.

In developing courses, the trainer should also include the following:

- Hazards that have resulted in accidents at the project
- Subjects that are less familiar to the operators
- Changes in law, technology, or safety procedures that have occurred during the year

Many of the activities/tasks can be listed from recall or from looking at job descriptions. Developing a complete list of activities/tasks should include talking with individuals now working on the job or watching them actually do the job. Talking to the supervisor, reviewing safety planning documents, and consulting established operating procedures, will help complete the list of activities/tasks.

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The next step will be to prepare an outline of the training procedures to be followed. A course outline should include the following:

- Subject title
- Title of the person conducting the training
- Materials needed to teach the course
- What the trainer will do
- What the trainee will do
- Procedures used to evaluate trainee performance

2.2 Step 1: Trainee Preparation

The operator trainee must be given instruction in:

- Machine terminology
- Safe operating procedures
- Pre- and postoperational maintenance checks
- Basic operating principles
- Machine controls and functions
- Machine components and attachments
- Operation and function of components and attachments
- Review of:
  - Manufacturer's operator manual
  - Occupational Safety and Health Act (OSHA) and/or in-country regulations (as applicable)
  - American National Standards Institute standards

  Client/site regulations

The trainee must be given a verbal interview or written examination on each type of equipment for which he/she has been designated. The trainee may not progress to the next step until the minimum passing score is achieved (typically, 80 percent).

2.3 Step 2: Practical Demonstration

The trainee will be assigned to an experienced, licensed operator who will provide practical maneuvering demonstrations.

Note: *The experienced, licensed operator may/may not be the "trainer."*

At this point, the trainee will actually perform basic equipment operations under the close supervision of the experienced operator. The trainee will be given demonstrations and the opportunity to practice operating each type of equipment for which he/she has been designated.

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2.4 Step 3: On-The-Job Performance Evaluation

After completing Steps 1 and 2, the trainee will be issued a trainee license. This will allow the trainee to operate designated equipment and perform productive work while under direct supervision of the experienced, licensed operator. Productive work will be assigned to minimize safety hazards to personnel and to reduce the risk of damage to property and equipment, yet increase the trainee's experience with the equipment.

Work assignments for on-the-job training, as well as the opportunity to practice operating each type of equipment, will be simple tasks with the equipment in a minimum exposure location to people and property and with no critical operations performed. Practical maneuvering to gain experience on an excavator, for example, would include operations such as the following:

- Rotating the platform or articulating section while operating the bucket, clam, and other apparatus/attachments

- Making small excavations in a minimum hazard area. These operations would not include excavations in or around:

  – Plant process areas
  Process piping or energized electrical lines

2.5 Performance Evaluation

The trainer will conduct a field performance evaluation to document the trainee's ability to perform required tasks safely and proficiently. Field performance evaluations must be completed in accordance with the relevant standards. Documentation will be on the applicable Form 000.653.F0218 (or equal), Performance Evaluation – Construction Equipment Operator. After successful completion of the field performance evaluation on each type of equipment, the trainee may be licensed.

Note: *Forms used to document inspections (000.653.F0105 series) and performance evaluations (000.653.F0218 series) are specific to the machine. Both forms have a sub-letter designation for nearly every type of motorized construction heavy equipment. For example, .F0105"a" and .F0218"a" are used for forklifts; .F0105"e" and .F0218"e" are used for backhoes; .F0105"g" and .F0218 "g" are used for dozers, etc.*

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3.0 LICENSING

After successful completion of the field performance evaluation(s) — and with approval of the trainer **and** the immediate supervisor — the Equipment Operator Certification Record (Form 000.653.F0128) will be completed for each type of heavy equipment for which he/she is to be licensed and retained on file at the project. The operator will be issued an Equipment Operator's License (Form 000.653.F0126, available *only* from Greenville Forms Management), which he/she is to retain on his/her person at all times while on the project/site. This license is valid for the issuing project/site only.

4.0 DOCUMENTS

All documents related to this process are retained on the project/site.

Note: *Only licenses for crane operators must be sent to Fluor Corporate HSE Training Department in Greenville, South Carolina.*

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MOTORIZED HEAVY EQUIPMENT AND LIGHT VEHICLES

SAFETY DEVICE REQUIREMENTS

Note: *The following are based on requirements of United States regulatory agencies (such as Occupational Safety and Health Act [OSHA], Mining Safety and Health Act [MSHA], and Department of Transportation [DOT]) and may require modifications to comply with applicable local and/or in-country regulatory agency requirements. However, such modifications may only be made if applicable local and/or in-country requirements are more stringent.*

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MOTORIZED HEAVY EQUIPMENT AND LIGHT VEHICLES

SAFETY DEVICE REQUIREMENTS*

EQUIPMENT CATEGORIES	5 BC RATING FIRE EXT.	20 BC RATING FIRE EXT.	HORN	REVERSE ALARM	ROPS	SEAT BELT	OVERHEAD PROTECTION	BOOM INDICATOR	CAPACITY CHART	OTHER
Automobile/Pickup Trucks			X			X				
Bus	X		X	X		X				
Compactor (Self-Propelled)			X	X	X	X				
Concrete Pump Truck			X	X		X				
Concrete Transit Truck			X	X		X				
Crawler Loader			X	X	X	x				
Creter Crane	X		X	X		x		X	X	
Dozer			X	X	X	X				
Excavator Truck MTD			X	X		Carrier			X	
Farm Tractor			X	X	X	X				
FIL – Backhoe			X	X	X	X				
Flat Bed Truck Dump			X	X		X				Dump Body Support

*Refer to Practice 000.653.3201 for crane requirements.

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MOTORIZED HEAVY EQUIPMENT AND LIGHT VEHICLES

SAFETY DEVICE REQUIREMENTS

The following definitions are in accordance with the current regulatory agency standards.	
Fire Extinguisher	Fire extinguishers must be provided on motorized heavy equipment working in an isolated area or in a hazardous environment. Fire extinguisher, when required, must have a rating not less than 5 BC in all operator stations or in the equipment cabs.
Horn	All equipment will be equipped with a horn, distinguishable from the surrounding noise level.
Reverse Alarm	Equipment having an obstructed view to the rear will be equipped with a reverse signal alarm audible above surrounding noise levels. The alarm must operate when the equipment direction control is placed in the reverse position.
Rollover Protective Structures	The design objective will be to minimize the likelihood of a complete overturn and thereby minimize the possibility of the operator being crushed as a result of a rollover or upset.
Seat Belt	Seat belts must meet the requirements of the Society of Automobile Engineers, J386, Operator Restraint System for Off-Road Work Machines.
Overhead Protection	"High-lift riders" must be equipped with overhead guards that meet the design and structural requirements as defined in 29 CFR 1910.178(e), safety guards for Powered Industrial Trucks.

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TRAFFIC MANAGEMENT

This page is provided for information only and is not part of the practice. Review of this summary does not relieve the reader of responsibility for the contents of the practice.

Revision Summary:

1. Renumbered practice – previously 000.653.8134.
2. Removed several sections pertaining to vehicle operation — these topics are covered in Practice 000.653.3200, Motorized Heavy Equipment and Light Vehicles.
3. Reorganized the topics into a logical flow.
4. Changed flagger training from optional (i.e., should) to required (i.e., will).
5. Inserted reference to the manual on Uniform Traffic Control (U.S. Department of Transportation) for road construction/maintenance.
6. Added international standards to Resources section.
7. Reformatted to corporate standards.
8. Performed general edits.

For additional information, contact Dan Palmer at 509.376.4240.

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TRAFFIC MANAGEMENT

PURPOSE

This practice defines the requirements for managing traffic in construction areas.

SCOPE

This practice includes the following major sections:

- General
- Project Roads
- Flagging
- Road Construction/Maintenance

APPLICATION

This practice applies to work activities and employees under the control of Fluor and its contractors.

DEFINITIONS

None.

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TRAFFIC MANAGEMENT

1.0 GENERAL

1.1 Identified Hazards

Identified hazards to employees traveling on infrastructure roads system include:

- General public interface
- Maintenance crews on infrastructure roads
- Vehicle speed
- Light vehicle operator training
- Communications
- Road conditions
- Track operations
- Standard equipment for light vehicles
- Signage
- Restricted areas and escort vehicles
- Operation machinery
- Blind crests and corners
- Excavations
- Vehicle safety standards
- Journey management
- Road rules
- Vehicle interaction
- Equipment and vehicle inspections
- Defective light vehicles
- Search and rescue and emergency access

1.2 Vehicle Operation

Employees operating a vehicle on any road within the boundary of facilities, including access roads, **must always drive to the conditions** regardless of the posted speed limit signs.

1.3 Signs

Signs must meet the following requirements:

- Give clear direction
- Be visible and not obscured
- Be maintained
- Be reviewed regularly for relevance
- Pictograms may be required where tourists' numbers are high
- Side roads will be signed (STOP and NO ENTRY)
- No red signs will be erected within 16 feet (5 meters) of any railway
- Flashing lights will be placed to warn drivers of any hazards present at night or in poor visibility

1.4 Work Near Operational Heavy Equipment

Spotters and other people working near heavy equipment must wear high-visibility vests or clothing and use the correct signage at all times.

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TRAFFIC MANAGEMENT

1.5 Work Near Roads

Where maintenance crews are working close to traffic, additional precautions will be taken to keep visibility and early warning at a maximum. These may include local watering of dust generating areas, wearing of high-visibility vests, and posting of additional traffic controllers at the extremities of the work environment.

2.0 PROJECT ROADS

2.1 Speed Limits

The speed limit for projects/sites will be limited to a maximum of 37 mph (59.6 kph).

Roads where potentially hazardous work is being undertaken (such as culverts where employees are close to the road), will have a speed limit of 12 mph (19.3 kph), and signs will be placed at least 50 feet (15.2 meters) before work area in both directions.

Additional methods for controlling speed will also be used. These include but may not be limited to:

- Audible speed alarms
- Radar guns

2.2 Traffic Management Plan

A Traffic Management Plan (TMP) will be created for the "green field" projects/sites.

Changes to the TMP will be communicated to affected parties.

2.3 Operational Machinery

In order to delineate the paths of the earth-moving machinery, a "Scraper and Mobile Equipment Circuit" or similar signs must be erected 300 feet (91.4 meters) before the circuits.

To minimize the potential of light vehicles entering the blind spots of heavy vehicles, all other equipment, light vehicles, and mobile equipment are to give way to heavy vehicles operating on any infrastructure road or facility.

2.4 Excavations

For excavations on roads, barriers will be put in place to prevent vehicle access to the trench.

The barriers will be of suitable height, and constructed of material to prevent the largest vehicle driving through.

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TRAFFIC MANAGEMENT

2.5 Restricted Areas and Escort Vehicles

A. Restricted Areas

Site personnel will be informed of restricted areas of the project. These areas are not to be accessed without authority from the Project/Site Manager.

The speed limit for the site will be limited to a maximum of 37 mph (59.6 kph). Local road rules apply to the roads.

B. Escort Vehicles

For large or nonroutine loads, an escort vehicle provided by the contractor should be used in front of and, when necessary, behind the vehicle or mobile equipment.

Other vehicles must be escorted at the Project/Site Manager's discretion.

Drivers entering the site must wear the correct personal protective equipment (PPE). Refer to Practice 000.653.3000, Personal Protective Equipment.

3.0 FLAGGING

The primary function of a flagger is to guide the flow of traffic (such as loaders, dozers, dump trucks, excavators, and automobiles) safely through or around work areas or where traffic lanes are intermittently blocked.

Trained flaggers will be assigned as follows:

- Flaggers must be trained (refer to Section 3.5) and equipped (refer to Section 3.2) to direct traffic.
- Flaggers will be required to wear an orange or lime green warning garment (vest) and a protective helmet and other required PPE at all times. At night, reflectorized garments will be required.

Flaggers will be used to control traffic flow through work areas at decreased speeds to reduce the hazards to employees working in the area.

3.1 Flaggers

Selection of capable personnel is essential.

Flaggers must wear an orange safety vest as an outer garment. Reflective apparel must be worn at night.

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TRAFFIC MANAGEMENT

The flagger must be clearly visible from a distance to permit appropriate response to the flagger's instructions by a vehicle operator. If at any point the flagger is not visible, all equipment moving through that area must shut down.

3.2 Hand Signaling Devices

Hand signaling devices (orange flags or signs of appropriate color/markings) must be used in controlling traffic through work areas.

Flags used for signaling purposes will be at least 18 inches (45.7 centimeters) square, made of a good grade of fluorescent orange material, and securely fastened to a staff approximately 3 feet (0.9 meter) in length.

Yellow flashing lights must be used during periods of darkness.

3.3 Flagger Stationing

It is important for the flagger to remain in full view of all vehicles and to avoid standing in congested areas. Under no circumstances will flaggers stand in the lane being used for moving traffic. Flaggers should stand adjacent to lanes where equipment is traveling.

3.4 Flagging Procedures

The following methods of flagging will be used:

- To stop traffic, the flagger will face approaching traffic and extend the flag horizontally across the traffic lane in a stationary position so that the full area of the flag hanging below the staff is visible. The free arm may be raised with the palm turned toward approaching traffic.

- When it is safe for the vehicle operator to proceed, the flagger will turn parallel to the traffic movement. When the flag is used, drop the arm with the flag to lower it from the view of the vehicle operator and motion traffic ahead with the free arm. The orange flag will not be used to signal traffic to proceed.

- To slow traffic with the flag, the flagger will give the stop signal and then change to the signal to proceed before the vehicle comes to a stop.

3.5 Training

Flaggers will be given instruction and training by experienced trainers to develop a clear understanding of their duties and responsibilities.

At a minimum, instruction and training will include the following:

- Communications

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- Attitude
- Safety equipment
- Tools
- Hand signals
- Location or positioning
- Action(s) for directing traffic
- Emergency procedures

Project/Site Management must approve and verify that appropriate training has been conducted for each flagger before their being used on public highways.

Note: *In some locations, (Washington State, for example), a specific training curriculum and/or certification as a "trained flagger" is required.*

4.0 ROAD CONSTRUCTION/MAINTENANCE

During construction or maintenance that causes a detour, restriction, or otherwise affects access to facilities or traffic on existing, plant, project, or public roads, supervisors will perform the following:

- At least 2 weeks before the start of an operation:

  Ensure that affected plant and site personnel are notified.

  Ensure that any required written plan has been submitted to the client and (as applicable) the agency having jurisdiction for review.

  Ensure that employees who are designing and setting up traffic control devices have been properly trained. (Fluor supervisors should consider requesting certification/documentation from contractors.)

- Specify and ensure proper and effective location(s) for temporary traffic control signs, devices, signals, and barricades in accordance with the U.S. Department of Transportation, Federal Highway Administration manual on Uniform Traffic Control Services for Streets and Highways (or similar in-country regulations if outside the U.S).

- Ensure that warning signs are erected facing in all directions when construction activities are adjacent to the roadway or intersection.

- Ensure that signs intended for hazard warning during hours of darkness are illuminated or have reflectors.

- Remove or cover any existing control devices that drivers should not obey while construction or maintenance activities are being performed.

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- Restore regular traffic control signs and devices and cover or remove temporary traffic control signs when the construction or maintenance is complete and before a roadway or area is restored to unrestricted use.

5.0 RESOURCES

Global Standards	
Australian Government	Safety and Compensation Council; List of National Codes of Practice
	Safety and Compensation Council; List of National Standards
European Union	European Agency for Safety and Health at Work
United Kingdom	Construction Regulations 2007

6.0 REFERENCES

Document ID	**Document Title**
000.653.3000	Personal Protective Equipment
Non-Fluor Document	
U.S DOT MUTCD	Manual on Uniform Traffic Control Devices

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Good Housekeeping at TiGer Tacona

Adopt a Floor

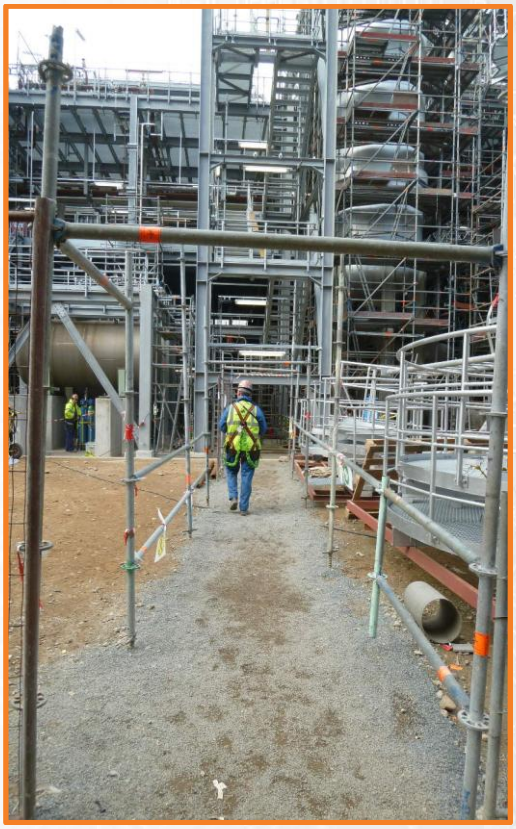
At the TiGer Tacona Project in Frankfurt, Germany, where the main focus is on the completion of the Polymerization and the Mechanical Completion (MC) of the Tank Farm, safety is a priority. HSE Management became increasingly aware that housekeeping at the project site was becoming a concern.

The "Adopt a Floor" Program emphasized the importance of keeping things "straight." When the site introduced the program, there were four main contractors onsite. The site based the program on whoever had the most work and the number of employees in the building. If one contractor was known for being the least responsible housekeeper (for instance, leaving cables on the floor or tools lying around), then that contractor would clean up that floor.

Contractors' supervisors all agreed on the plan. Incentive to participate in the program is recognition at the end of each month. The "cleanest" contractor receives the "Contractor of the Month" award.

Creating a safety program or initiative is relatively straightforward, but making it successful is always going to be the challenge. Getting the commitment of the contractor, craft, and management; providing them with guidance; and maintaining two-way communications with the employees help to provide a strong platform to build success. If contractors are successful, then we, not just as an HSE Team, but as a project team, will also be successful.





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HOUSEKEEPING

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Revision Summary:

1. New practice.

For additional information, contact Dan Palmer at 509.376.4240.

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HOUSEKEEPING

PURPOSE

This practice establishes the expectations and requirements for housekeeping.

SCOPE

This practice includes the following major sections:

- General Requirements
- Work Surfaces and Walkways
- Hoses and Cords
- Eating Facilities
- Offices and Storage Areas
- Emergency Access

APPLICATION

This practice applies to work activities and employees under the control of Fluor and its contractors.

DEFINITIONS

None.

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HOUSEKEEPING

1.0 GENERAL REQUIREMENTS

Each employee is responsible for keeping his/her work area organized and uncluttered – and to prevent trash, waste materials, and debris from accumulating. Those employees doing work in multiple areas are responsible for cleaning up after they complete that job.

Employees leaving the work area before a job is completed (to take a break or go to lunch, for example) must make sure that the area is left in a safe condition. This should include replacing barricades or safety chains, removing tools and other items from walkways, and generally making sure that the work area does not pose a risk to people who may enter the area while you are gone.

The supervisor assumes overall responsibility for housekeeping. The supervisor will periodically inspect each work are to ensure that the housekeeping expectations are being met.

Housekeeping must be maintained on a daily basis; cleaning and sweeping will be done in a manner that minimizes the contamination of the air with dust or particulate matter.

Work areas will be kept clean to the extent the nature of the work allows; the floor of every workroom will be maintained, as far as practicable, in a dry condition.

When it is necessary that items must span walking and working surfaces, proper methods of support and/or protection will be used. One method is to use plastic ties to support cords, and hoses along handrails (**never** use metal "ties"). Another method is to use cord covers for electrical cords.

Refer to Practice 000.653.3305, Manual Handling.

2.0 WORK SURFACES AND WALKWAYS

Floors, working surfaces, and passageways must be kept free from protruding nails, splinters, loose boards, and openings.

Employees will:

- Keep work surfaces orderly, free of tripping hazards, and free of other hazards that could result in injury.
- Provide safe access to and from the work area.
- Arrange materials in a stable manner so that they do not protrude into walking surfaces.
- Place materials stored above work surfaces back from edges or behind protective barriers to protect workers below.

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HOUSEKEEPING

- Clean up spills or mark the area with safety barricades until the spill can be cleaned up.
- Identify interior aisles, walkways, passageways, and floor surfaces for construction buildings, warehouses, or shops.

Note: *Walkways may be established by building layout, office cubicles or partitions, arrangement of equipment or material storage racks, welding curtains, painted stripes, or reflective or fluorescent striping materials.*

When mechanical handling equipment is in use, sufficient safe clearance must be allowed for aisles, at loading docks, through doorways, and wherever turns or passages are made.

3.0 HOSES AND CORDS

Hoses and electrical conductors that cross aisles or passageways must be covered or suspended overhead so that they pose no tripping hazard.

4.0 EATING FACILITIES

For areas in which food is stored or prepared, including lunch and break rooms, the requirements of Practice 000.653.2002, Eating and Sanitation Facilities, will be followed.

5.0 OFFICES AND STORAGE AREAS

For offices and administrative storage areas on the site, including temporary contractor trailers, the requirements of Practice 000.653.1002, Office Safety, will be followed.

6.0 EMERGENCY ACCESS

Exits, fire alarm boxes, fire extinguishing equipment, electrical disconnect panels, and other emergency equipment must be kept clear of obstructions at all times.

7.0 RESOURCES

Global Standards	
Australian Government	Safety and Compensation Council; List of National Codes of Practice
	Safety and Compensation Council; List of National Standards
European Union	European Agency for Safety and Health at Work
United Kingdom	Construction Regulations 2007

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HOUSEKEEPING

8.0 REFERENCES

Document ID	Document ID
000.653.1002	Office Safety
000.653.2002	Eating and Sanitation Facilities
000.653.3305	Manual Handling

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MANUAL HANDLING

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Revision Summary:

1. Added Attachment 01, Manual Handling of Loads (transferred from Practice 000.653.2001, Field Execution Health Management.

2. Added section regarding back pain (transferred from Practice 000.653.2001).

For additional information, contact Dan Palmer at 509.376.4240.

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MANUAL HANDLING

PURPOSE

This practice defines the requirements for identification, assessment, and control of risks arising from manual-handling tasks.

SCOPE

This practice includes the following major sections:

- General Requirements
- Risk Identification
- Risk Assessment
- Risk Control

APPLICATION

This practice applies to work activities and employees under the control of Fluor and its contractors.

DEFINITIONS

Manual Handling – Any activity requiring the use of force exerted by a person to lift, push, pull, carry, or otherwise move or restrain any animate or inanimate object.

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MANUAL HANDLING

1.0 GENERAL REQUIREMENTS

Manual handling is considered to have greater risk if any of the following characteristics are present:

- Repetitive or sustained application of force
- Repetitive or sustained awkward posture
- Repetitive or sustained movement
- Application of high force
- Exposure to sustained vibration
- Handling of unstable or unbalanced loads or loads that are difficult to grasp or hold

All tasks will be assessed for the risk of injury or harm from manual handling.

All employees will be trained in safe manual-handling techniques.

Compliance with applicable standards is required. However, a limit of 40 pounds (18.1 kilograms) per employee is recommended.

2.0 RISK IDENTIFICATION

The first stage in the risk assessment and control of manual-handling risks in the workplace is risk identification.

The 3 basic means of risk identification are:

- Analysis of injury statistics
- Consultation with employees
- General risk identification checklist

The Project/Site Manager must verify that any task involving hazardous manual handling is identified as follows:

- Before any task involving manual handling is undertaken for the first time in the workplace

- Before any alteration is made to objects used in a workplace or to systems of work that include a task involving manual handling, including a change in the place where that task is carried out

- If new or additional information about hazardous manual handling being associated with a task becomes available

- If an occurrence of a musculoskeletal disorder in a workplace is reported by, or on behalf of, an employee

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MANUAL HANDLING

2.1 Analysis of Injury Statistics

Indicators to consider during analysis of injury statistics include the following:

- In what area of the workplace the injury occurred
- The occupation or job/task of the injured employee
- The part of the body injured (such as back, neck, and shoulder)
- The nature of the injury (such as strain, sprain, laceration, and fracture)
- The type of incident (overexertion and physical stress in lifting and handling objects)

Consider the frequency and severity of injuries in relation to the numbers of employees and the hours worked.

2.2 Employee Involvement

Consultation with employees should take place as early as possible in the planning for the introduction of new or modified manual-handling tasks. In this way, changes that may arise can be more easily implemented.

Consultation among employees required to undertake the tasks and the relevant HSE Representatives for the work group must take place throughout the process (such as when identifying problem areas; when determining the approach and methods for addressing manual-handling problems that affect a HSE Representative's work group; when decisions are being taken on various control measures to reduce risk factors).

2.3 Risk Identification Checklist

The checklist should cover at least the following risk factors:

Posture and Layout

- What is the weight of the object?
- Is stooping involved where the hands pass below mid-thigh height?
- Is reaching above shoulder height involved?
- Is significant sideways twisting of the body involved?
- Is unbalanced or uneven lifting or carrying involved?
- Is an awkward grip involved?
- Is forward reaching (more than 12 inches [30.5 centimeters] away from the body) involved?

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Task and Object

- Is handling performed for more than 1 hour at a time?
- Is handling performed more than once every 5 minutes?
- Is there a long vertical distance of travel (more than 10 inches [25.4 centimeters])?
- What is the weight of the object?
- Does the object have sharp edges or contain hot/cold materials?
- Does it have unstable/unbalanced contents?
- Are slippery materials/objects handled?
- Is the object bulky or awkward (more than 2 feet [0.6 meter] in 2 directions)?
- Is the object an unusual shape (such as does it have handles)?
- Are there any forces applied to move the object, apart from lifting, such as pushing, pulling, and restraining/holding?

Workplace Conditions

- Is the task performed in a confined space?
- Is the workplace hot, cold, or poorly lit?
- Are the floor surfaces slippery or uneven?

Work Organization

- Is the work affected by the unavailability of people to do work within a deadline?
- Is the work frequency affected by bottlenecks or sudden changes or delays to the flow of materials?

Age, Skill, and Experience of Employee

Projects are advised to refer to any available regulatory checklists for details on this topic.

3.0 RISK ASSESSMENT

3.1 Risk Factors

Having identified the hazards associated with a manual-handling task, the risk to health and safety of the employee undertaking that task must then be assessed.

Each of the following risk factors should be assessed:

- Actions and movements involved
- Layout of the workplace
- Postural requirements
- Duration and frequency of activity
- Distance and time handled

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MANUAL HANDLING

- Force applied
- Range of weights handled
- Nature of the object handled
- Availability of mechanical aids
- Nature of load and condition of workplace
- Work organization
- Analysis of injury statistics
- Age
- Skill and experience of the employee carrying out the manual handling
- Size of the employee carrying out the manual handling task
- Environmental conditions including heat, cold, and vibration that act directly on the employee carrying out the task

The Project/Site Manager must verify that a risk assessment is reviewed and revised where necessary.

3.2 Back Pain

Work-related back pain is rarely caused by a single accident or injury, but by a series of repeated, cumulative injuries. Permanent disability can result if preventive action is not taken. During the risk assessment, special attention must be given to work-related back pain. Manual handling is a major source of work-related back pain.

A. Description

Work-related back pain can be localized and accompanied by discomfort, fatigue, and numbness of the muscles, tendons, or soft tissue. In severe cases, loss of function, limited movement, and loss of muscle control can occur.

Potential back strain situations include, but are not limited to:

- Exposure to handling loads (lifting, carrying, and pushing), repetitive handling work, static and awkward posture, twisting, bending, or stretching at the extreme range of movement
- Handling heavy, bulky, difficult to grasp, unpredictable, or difficult to handle (such as sharp, slippery) loads
- Scaffolding operations
- Commissioning and decommissioning (opening and shutting of valves and blinds)
- Erection and stripping of formwork

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Special attention is to be given to employees with a high-potential risk, including those who might be pregnant, employees reporting persistent back pain, and employees with a related health problem.

B. Preventive and Protective Measures

The following preventive or protective measures should be taken:

- Identify through risk assessment, the tasks/activities that could result in back pain – involve affected employees or outside experts in the evaluation of the risks.
- Take appropriate steps to eliminate or minimize the need for manual handling.
- Build flexibility into job design and encourage employees to take necessary rest breaks.
- Involve specialists, such as engineers and ergonomists, in the various stages of work activity design and development to minimize strain (such as selection of machinery, tools and equipment, and job rotation).

Basic rules for manual handling and lifting techniques are discussed in Attachment 01.

4.0 RISK CONTROL

If a manual-handling task has been assessed as a risk, then the Project/Site Manager and work supervisor must, if practicable, redesign the manual handling to remove the risk.

If removal of the risk is not practicable, the Project/Site Manager and the work supervisor must, if practicable, redesign the manual handling in order to reduce substantially the factors contributing to the risk.

If the task has been assessed as a risk and it is not practicable to redesign the manual handling to remove the risk or substantially reduce the factors contributing to the risk, then the Project/Site Manager and the work supervisor must provide mechanical aids (and training in their use) to assist the employee carrying out the task.

If all the above are not practicable, then the Project/Site Manager and the work supervisor must provide training in methods of manual handling appropriate for the intended work.

Control options include, but are not limited to, the following:

- **Modify Object –** The object being handled may be modified or repackaged into a bigger, smaller, or different size, shape, and/or weight.

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- **Modify Workplace Layout –** The layout of the plant, equipment, and furniture may be modified or rearranged. This may include increased attention to housekeeping and maintenance functions.
- **Rearrange Materials Flow –** The schedule or timing and path(s) of materials flow may be modified.
- **Different Actions or Movements –** With or without workplace modifications, a task may be done in a different way using different actions and movements.
- **Modify Task – Mechanical Assistance –** The risk of a task may be reduced by simple mechanical assistance provided by simple levers and minor rearrangements of equipment and plant.
- **Modify Task – Team Lifting –** The actions and movements required can be modified by the assistance of others (such as team lifting).
- **Mechanical Handling Equipment –** The provision of mechanical handling equipment can reduce the risk by reducing the force required.
- **Toolbox Meetings and Pre-Task Hazard Checklists –** Supervisors will discuss the potential hazards and control strategies of manual handling to eliminate and/or reduce the potential for injury.

The implementation of the "smart lift" program and/or a pre-shift bend/stretch/get limber program is strongly recommended.

5.0 RESOURCES

Global Standards	
Australian Government	Safety and Compensation Council; List of National Codes of Practice
	Safety and Compensation Council; List of National Standards
European Union	European Agency for Safety and Health at Work
United Kingdom	Construction Regulations 2007

6.0 ATTACHMENTS

Attachment No.	Attachment Title
Attachment 01	Manual Handling of Loads

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MANUAL HANDLING

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MANUAL HANDLING

MANUAL HANDLING OF LOADS

A manual handling operation is any transporting or supporting of a load, including the lifting, lowering, putting down, pushing, pulling, carrying, or moving by hand or by bodily force. Picking up and carrying a toolbox or a step ladder or even picking up a screwdriver or hammer, or a set of stocks, is manual handling, just as unloading and positioning a boiler might be. Anything from the extremely light to something requiring your maximum strength is included.

Manual handling accounts for a large number of accidents each year and many millions of "days off" are due to back and other injuries. Once someone's back has been weakened by injury it is often a recurring problem for the rest of that person's life.

Employees have a duty to make full and proper use of any information, tools, or services provided by an employer in connection with manual handling. This includes following advice and training given on lifting

An employer's duties can be summarized as – avoid the need for manual handling wherever possible; assess the risk; reduce the need for providing mechanical aids; and train employees in good manual handling techniques.

Basic Rules for Safe Manual Handling

- Think before lifting! Is it heavy (above 35 pounds [15.9 kilograms])? Is it large or awkward? Where is the center of gravity? Can you manage it alone?
- Use the strong muscles and bones of your legs, not the complex and vulnerable muscles in your back.
- Make sure you have a firm grip of the load and that you can sustain the grip for the duration of the lift. Wear industrial gloves to improve grip and protect hands from sharp edges.
- Make sure you know where you are going to put the load and that the way is clear of obstacles and not slippery. The load must not impede your forward view.
- If in doubt, get help! There is nothing macho about a slipped disc!

Lifting Technique

- Tuck chin in. This keeps back as straight as possible and therefore least vulnerable.
- Place feet as close to load as possible, about a hip-width apart, one foot slightly in front.
- Bend the knees and crouch down.
- Take a full grip, using palms, not fingertips.
- With elbows tucked in, straighten the legs, lifting smoothly.
- Carry the load forward at waist height.
- Change direction by turning on your feet, not by twisting the trunk.
- Put down in the same careful way and continue being careful as you straighten up.

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EATING AND SANITATION FACILITIES

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Revision Summary:

1. Renumbered practice – previously 000.653.8158.
2. Added international standards to Resources section.
3. Reformatted to corporate standards.
4. Performed general edits.

For additional information, contact Dan Palmer at 509.376.4240.

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EATING AND SANITATION FACILITIES

PURPOSE

This practice defines the minimum requirements for maintaining the sanitation of eating areas, restrooms, and other related facilities used by employees at a project/field site.

SCOPE

This practice includes the following major sections

- Eating Facilities
- Washing Facilities
- Drinking Water
- Toilet Facilities

APPLICATION

This practice applies to work activities and employees under the control of Fluor and its contractors.

DEFINITIONS

None.

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EATING AND SANITATION FACILITIES

1.0 EATING FACILITIES

The location of eating facilities will be identified at the start of any project/site. Eating facilities will be located in areas that will allow employees to eat without exposure to work activities, chemicals, fumes, or airborne contaminates from nearby process or operations activities.

Designated eating areas will be provided with suitable tables and chairs (or picnic tables) adequate for the number of employees that will be using the facility. The eating facility should, at a minimum, be covered to provide shade and protection from rain and snow. The shelter that is built over any designated eating area must be designed and built to withstand anticipated forces associated with poor weather conditions relative to the climate (such as snow loads, heavy rain, and wind).

Designated eating facilities must be kept clean and orderly at all times. Debris and food scraps will not be allowed to accumulate anywhere in or near the facility. An adequate number of waste receptacles will be provided, which will be of appropriate construction and equipped with snug-fitting lids for the purpose of minimizing the attraction of insects, mice, and other vermin. All waste receptacles will be emptied daily.

Vending machines and other electrical appliances must be installed according to all applicable electrical codes. Electrical installations and appliances must be sheltered from wet weather.

An adequate number of fire extinguishers will be provided in the immediate vicinity where electrical devices are in use and/or where smoking is allowed.

The use of torches, space heaters, and other heat-producing devices not intended for heating or cooking food will not be used for heating or cooking food.

2.0 WASHING FACILITIES

Where employees are engaging in the application of paints, coatings, etc., or in other operations involving substances that may be harmful to the employees, additional cleansing facilities must be provided in proximity of the work area and will be equipped to enable employees to remove such substances. These washing facilities may be equipped with ordinary soap and water, or with special compounds designed specifically for the removal of harmful chemicals and other contaminants from the skin.

Washing facilities for other employees should be appropriately provided throughout the site.

3.0 DRINKING WATER

An adequate supply of potable drinking water must be available in the work areas at all times.

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EATING AND SANITATION FACILITIES

Portable containers used to dispense drinking water will be equipped with a tap, faucet, or drinking fountain, and must be capable of being tightly closed and sealed. These containers must be designed, constructed, and serviced so that sanitary conditions are maintained. Employees will not be allowed to dip from any drinking water container.

Containers used to store or dispense drinking water will be clearly marked as to the nature of its contents and the date of the water, and must not be used for any other purpose.

Common/shared drinking cups are prohibited. Where single-service cups are supplied, a sanitary container for the unused cups and a receptacle for disposing of the used cups will be provided.

4.0 TOILET FACILITIES

Toilet facilities, whether portable or permanent, must be kept clean, maintained in good working order, and provided with an adequate supply of toilet paper.

Project/Site Management will provide sanitation services for all toilet facilities used by Fluor and contractor employees, to include cleaning and servicing on a scheduled basis that will prevent the facilities from becoming unsanitary and unusable.

Each portable toilet facility must include both a toilet seat and a urinal.

Toilets will be provided for employees according to the following:

Number of Employees	**Minimum Number of Facilities**
20 or fewer	1
20 or more	1 toilet seat and 1 urinal per 20 employees
200 or more	1 toilet seat and 1 urinal per 50 employees

Toilet facilities that have become inoperable due to water supply, plumbing problems, or full and cannot be used in a sanitary manner must be removed from service immediately.

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EATING AND SANITATION FACILITIES

5.0 RESOURCES

Global Standards	
Australian Government	Safety and Compensation Council; List of National Codes of Practice
	Safety and Compensation Council; List of National Standards
European Union	European Agency for Safety and Health at Work
United Kingdom	Construction Regulations 2007

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Revision Summary:

2011 Revisions

Changed the maximum weight one person will lift, carry, off-load, etc., from 70 pounds to 40 pounds to be consistent with:

- Other practices in the HSE Management System
- NIOSH recommendation

2010 Revisions

Replaced references to Attachment D with reference to Practice 000.653.1003, Contractor Selection and Alignment.

For additional information, contact Dan Palmer at 509.376.4240.

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PURPOSE

This practice provides the requirements and template for developing an office HSE manual. In order to turn this requirements document and template into a site- or location-specific office HSE manual, the following must be incorporated into this document

- Specify the office HSE Representative.
- Specify the person responsible for first-aid kit/supplies.
- Identify and post how to summon medical aid in an emergency.
- Identify and post how to summon aid in the event of a fire.
- Establish liaison with local emergency responders such as police/fire departments.
- Specify the floor warden teams for each floor.
- Specify the director of emergency evacuations.
- Specify the evacuation meeting area.

SCOPE

This practice includes the following major sections:

- Introduction
- Responsibilities
- Training, Education, and Communications
- First Aid and Medical Services
- Fire Emergencies
- Evacuation and Emergency Action Organization
- Bomb Threats
- Incident Reporting, Investigation, and Reports
- Office/Facility Inspections
- Job Safety Analysis Program
- Occupational Safety and Health Act
- Electrical Appliances
- Records and Logs
- Contractors
- Severe Weather
- Vehicles
- Security Advisory System
- Ergonomics
- Mail Handling (Incoming)
- Biological Exposure

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APPLICATION

This practice applies to work activities and employees under the control of Fluor and its contractors.

DEFINITIONS

None.

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OFFICE SAFETY

1.0 INTRODUCTION

1.1 Health, Safety, and Environmental (HSE)

HSE is a high priority of Fluor. It is the policy of Fluor to provide a working environment free of hazards in protecting the health and welfare of all our employees, client employees, contractors, visitors, the environment, and property. Our belief is that all injuries can and should be prevented. Because of this policy, Fluor has enjoyed a well-earned international reputation for outstanding HSE performance through the years.

This performance has been earned through comprehensive knowledge and understanding of the importance of a hazard-free work environment, an ability to translate that insight into day-to-day guidance and working rules, and through management commitment to HSE accomplishments second to none. The Fluor policy commitment to HSE issues is defined in United States (U.S.) Human Resources (HR) Policy HR-500, Health, Safety, and Environmental, and Attachment 01 to Practice 000.653.0000.

1.2 General

Real HSE performance begins and ends with each individual's awareness and attitude toward total commitment in maintaining an incident-free environment. The attainment of HSE goals is a pure measure of management's ability to manage. If management is able to engender discipline that relates to good HSE performance, then this discipline will enhance our ability to perform well in all other critical parameters such as cost, scheduling, and quality. Incident prevention is a primary responsibility of all levels of management. Each manager is directed to:

- Use maximum initiative in communication, training, motivation, and monitoring techniques to take every reasonable precaution to prevent incidents.

- Serve as a role model for HSE working practices.

Incidents are costly. They increase insurance and operating costs. In addition, the hidden uninsured expenses (such as damaged property, wages paid to an injured employee, training new help, and time spent investigating and reporting incidents) add to the insurance burden. Fluor is dedicated to providing a safe and healthful work environment designed to protect our employees, visitors, and property. Safe work practices are an integral and vital part of the successful performance of any job and a management responsibility that will be given priority at all times.

Direct responsibility for HSE of an operation rests with the supervisor of that operation. HSE records, attitudes, and performance are considered in evaluation of an employee's performance.

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Each employee is responsible for performing assigned duties, with primary concern to personal HSE, the safety of fellow employees, and the protection of property, equipment, and the environment.

Management will provide leadership, positive role modeling, and prompt corrective action for the elimination of unsafe acts, conditions, or equipment.

Potential HSE hazards should be brought to the attention of the supervisor responsible for the area and Facility Management and the HSE Representative.

Questions about HSE-related concerns should be addressed to the supervisor responsible for the area. As an alternate method of addressing HSE concerns, employees may call the Regional HSE Office.

1.3 HSE Committee

Fluor recognizes that its employees, clients, tenants, suppliers, contractors, and visitors have the right to work in a hazard-free environment.

The HSE committee is a method to engage employees and management in supporting first-line supervision in identifying and correcting unsafe conditions, coordinating the facility HSE process, and promoting HSE awareness in the facility with the objective of incident prevention.

The objectives of the HSE committee are to:

- Act in an advisory capacity.
- Cultivate an active interest in HSE issues and assist in reducing work injuries, work-related illnesses, and hazards.
- Consider measures for the training and education in and promotion of HSE management and make recommendations in relation to those measures.
- Propose and review the procedures relating to HSE that are to be carried out or complied with at the workplace.
- Review the circumstances surrounding recent work injuries and work-related illnesses and incidents at the workplace concerned, and make recommendations to office/facility management.
- Propose programs aimed at raising and maintaining interest in the workplace HSE program.
- Maintain records of meetings including any recommendations made.

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The HSE committee will meet at least quarterly (monthly is preferable) to review all facility incidents and industrial health complaints, evaluate potential hazards, conduct surveys, and promote the HSE program. The HSE committee will consist of the following:

- Chairman — Appointed by the General Manager
- Vice Chairman — HSE Team Member
- HSE Committee Members — May be from any department/project in the facility

Minutes of the HSE committee meetings will be kept and distributed to all members of the HSE committee and made available to all facility personnel.

The HSE committee will have an executive sponsor. Recommended actions by the HSE committee will be referred to the executive sponsor for coordination and approval by the Facility General Manager.

1.4 HSE Representative

The facility is designated a "site" for purposes of the HSE process with an assigned HSE Representative.

The HSE Representative will be responsible for the facility HSE process as defined by management and may perform the following duties:

- Prepare the agenda for HSE committee meetings.
- Provide/coordinate HSE training as required.
- Provide/coordinate new employee HSE orientations.
- Investigate and provide corrective action to HSE concerns.
- Provide HSE oversight inspection of facility contractors/subcontractors.
- Study and respond to HSE suggestions.
- Provide statistical reports as required.
- Inspect various facility areas on a random basis.
- Investigate incidents, report findings, and recommend corrective actions.
- Respond to emergency situations.
- Initiate and coordinate changes to the Office HSE Manual.
- Other duties as appointed by the Office General Manager.

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2.0 RESPONSIBILITIES

2.1 General HSE Responsibilities

It is the company's responsibility to establish and maintain an incident prevention program. The program will provide capable, responsible supervisors who will conduct regular inspections and will report violations of HSE practices or procedures to the responsible HSE Representative.

The company will establish and update HSE practices and procedures. A copy of these practices and procedures will be available to each employee. At the time of employment, new employees and employees new to the site will be given an HSE orientation.

Managers will, on a regular basis, discuss HSE and incident prevention methods with supervisors. Such discussions may be a part of regular staff meetings.

Supervisors will consider it a daily responsibility to stimulate and maintain employee interest in HSE. Some time each day should be devoted to personal contact to discuss HSE. Such discussions, intended to be informal and brief, can be accomplished in conjunction with other duties.

Other safety topics may also be discussed as deemed appropriate by the supervisors. Subject matter can vary widely. For example, statements of reference to housekeeping, incident experience, serious injury, off-the-job safety, vacation, and holiday safety can produce desired HSE awareness.

An HSE Representative will be appointed for each office location. (For HSE Representative responsibilities, refer to Section 1.4).

2.2 Supervisors

The responsibilities of the supervisor are as follows:

- Enforce the established HSE Program.
- Ensure the safe operation of equipment by employees.
- Inspect the work area to detect hazards and initiate necessary corrective action.
- Maintain thorough knowledge of HSE procedures contained in the Office HSE Manual and other HSE regulations that are applicable to the work being performed.
- Observe subordinates to verify that they comply with established HSE rules and practice safe work habits.

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- Attend and participate in regular HSE meetings as required by management.
- Prepare Incident Investigation Reports (Form 000.653.F0198) for all injuries and noninjury incidents; refer to Practice 000.653.1202, Incident Reporting and Investigation).
- Provide all new employees with a comprehensive HSE orientation.
- Develop a training program designed to include proper instruction for safe operation of equipment used in the employee work environment.
- Conduct independent audits to enforce conformance with established HSE programs and determine the effectiveness of individual elements of the programs.
- Establish communications with subcontractors and coordinate incident prevention activities for work in their assigned area.
- Review incident and investigative reports covering the supervisor's assigned area of activity. Provide instructions and guidance as needed to maintain flow of accurate, complete, and prompt reporting of all incidents.
- Establish written emergency procedures, if it is determined they are required by facility/office management for their area(s) of responsibility.
- Perform as a positive role model by demonstrating safe work practices and provide positive reinforcement and support to employees for HSE efforts.
- In the event of an injury requiring other than first-aid treatment, the supervisor will accompany the employee to the offsite healthcare provider (OHP).

2.3 Employees

All employees must be fully aware of the responsibilities that they must accept and carry out to achieve an incident-free working environment and to prevent health impairment. Real HSE performance begins and ends with each individual's awareness and attitude toward this vital aspect of our jobs.

Each employee is required to work in a manner consistent with company HSE policies and applicable federal, state, and local laws. Each employee is also required to work in a manner that will not cause self-injury or injury to fellow employees.

To achieve our HSE goals, each employee must increase his or her awareness of all hazards that may exist in their work environment.

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Each employee is responsible for the following:

- Make every effort to understand assigned job.
- Perform assigned duties in a safe manner.
- Use the appropriate personal protective equipment (PPE) provided.
- Exercise proper care and maintenance of company materials and tools.
- Be constantly alert to unsafe conditions and report such to an immediate supervisor.
- Refrain from practical jokes and horseplay.
- Report every injury, including minor injuries, to the supervisor immediately.
- The use of nonprescription drugs, narcotics, alcohol, or similar substances impairs an employee's ability to perform assigned responsibilities. Therefore, the use of such substances during working hours is permitted only under medical direction.

2.4 HSE Representative

The responsibilities of the HSE Representative are as follows:

- Advise/assist supervisors and managers in carrying out their HSE responsibilities.
- Conduct compliance inspections and audits.
- Serve on the safety committee.
- Review Incident Investigation Reports.
- Develop and submit reports on HSE performance.
- Review Job Safety Analyses (JSAs) and Safety Task Assignments (STAs).

3.0 TRAINING, EDUCATION, AND COMMUNICATIONS

3.1 New Employee Orientation

The new employee General HSE Orientation will be a part of the new employee program. Each new employee will be informed that compliance to HSE practices and procedures is a condition of employment. New employees will be instructed to report all injuries, no matter how minor, to their supervisor. At a minimum, the following topics will be covered:

- Standard Office HSE Orientation
- Orientation for all visitors
- HSE Leadership Training
- Fitness for Work Training
- Smart Lift Training

3.2 HSE Meetings

Managers will, on a regular basis, discuss HSE and incident prevention methods with supervisors. Such discussions may be a part of regular staff meetings.

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Each meeting of 5 people or more will begin with an attendee presenting a "safety topic."

3.3 Bulletin Boards, Posters, Safety Topics

HSE information and posters will be displayed on strategically located bulletin boards. Information posted may include incident prevention information, specific hazards, and HSE practices and procedures.

3.4 Special Reports

HSE reports may be publicized to promote the incident prevention program.

Progress reports regarding lost time incidents, number of days lost, frequency, history, and other general information may be distributed by the facility/office HSE Representative and/or Facility Management.

3.5 Films

HSE films are available through Corporate HSE. Presentation of information through this media emphasizes the actual HSE experience and is an excellent method in HSE education and training. Corporate HSE employees will assist, if requested, in the selection of the proper films for specific training sessions.

3.6 Training Equipment

The facility may have various forms of training equipment (such as video, slide projector, tapes, slides, and other forms of media equipment). Other training sources such as the fire and police departments, Red Cross, and American Heart Association may be available and can be coordinated through Facility Management/HSE Representative or Corporate HSE.

3.7 First-Aid Training

CPR and first-aid training can be coordinated locally or through Corporate HSE. The training consists of Red Cross- or American Heart Association-approved CPR/AED and basic first-aid training.

3.8 Supervisor Training

Supervisors are in an excellent position to promote the incident prevention program. It is important that the supervisor be provided assistance and training in the fundamentals and implementation of the HSE program. The following objectives of supervisor HSE training are to:

- Acquaint supervisors with the incident prevention practices and procedures.

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- Establish that the supervisor is the person who is primarily responsible for preventing incidents.

- Give supervisors an understanding of their HSE responsibilities and the responsibilities of others.

- Provide supervisors with information regarding incident causes and methods of prevention.

- Provide supervisors with knowledge and skills pertaining to HSE incident prevention. For example:

  Job instructions for HSE
  Supervising for HSE
  Incident investigation
  Job analysis for HSE
  Training aids – films, video cassettes, slides, posters, HSE program
  Fire prevention, extinguishing, and control
  – Types of PPE and specific instructions on proper use

Supervisor training must be regularly updated to maintain awareness and provide for the administration of the HSE program.

3.9 Fleet Vehicles

Employees operating company vehicles must have a valid driver's license. Drivers are required to notify their supervisor and local Facility/Office Management of any incidents involving fleet vehicles. Incidents will be investigated by the local HSE Representative and/or management in coordination with the supervisor.

3.10 Field or Plant Assignment/Visit and Supplier Shops

A course titled "Field Assignment Safety Guidelines" provides a general overview of a project/site safety program. The purpose of this course is to provide employees with a basic safety orientation for a field project visit, plant visit, supplier shop visit, or temporary field assignment. Safety is a condition of employment and safety rules must be followed.

This mandatory training class is available online. The following steps provide access to the online training:

- Go to www.fdnet.com.
- Click on Fluor Members Online.
- Click on Online Training for Members.
- Click on either U.S. Employees or Non-U.S. Employees.

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- Click on SkillSoft.
- Log in.
- Click on Catalog.
- Click on Field Assignment Safety Guidelines.
- Follow instructions to take the course.

Employees scheduled to go on a field visit or assignment will complete the course (approximately 1 - 2 hours) before such visit or assignment. Course completion is good for 2 years and then must be re-taken.

For information regarding this course, contact your Regional HSE Office.

3.11 HSE Awards and Recognition

The recognition of safe work-hour achievements within the facility is a very valuable process that encourages the development of safe working habits and furthers the enhancement of the HSE program.

Corporate HSE should be notified of any HSE achievement so that it can be recorded in company records.

An essential part of the HSE program is positive recognition of superior HSE performance. When there is an HSE achievement of significance, an awards ceremony and celebration of some type is encouraged at the specific location for employees, inviting Fluor Corporate management, client, and guests. When these HSE celebrations are well-planned and conducted properly, they convey the appreciation that is deserved by the employees.

Facility/Office Management is responsible for notifying Corporate HSE when a project achieves an HSE milestone. Corporate HSE, after obtaining required information from the project, will coordinate the award request for approval and processing.

Refer to Practice 000.653.1100, Awards Program, for additional information and details.

3.12 HSE Management System Requirements Document

Refer to Practice 000.653.1001, Training and Orientation, for additional information and details.

4.0 FIRST AID AND MEDICAL SERVICES

4.1 First Aid

Offices and facilities should maintain a basic first-aid kit commensurate to the number of employees in the office. A basic first-aid kit is one that is comprised of first-aid supplies

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that can be used and administered by persons with little or no medical training. Corporate HSE can provide guidance and information regarding basic first-aid kits.

Responsibility for first-aid kit(s) in an office or facility should be assigned to an individual of the office/facility. This is to keep the kit maintained, clean, and up to date.

First-aid kits are not to contain over-the-counter medications such as aspirin, cold pills, and like medications without the express approval of Corporate HSE and the Fluor Medical Director.

Where the eyes or body of any person may be exposed to corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body will be provided within 10 seconds travel for emergency use.

Refer to Practice 000.653.1201, Injury Management and Worker's Compensation, for additional information and details.

4.2 Medical Emergencies

Each office or facility will post on bulletin boards, telephones, or other prominent areas how employees are to summon emergency medical aid.

To report a medical emergency:

- Call the emergency number for your facility/office.
- Provide to the emergency dispatcher the following:

  Nature of the emergency
  Call back number (normally, the number you are calling from)
  Location of the emergency
  – Name of person reporting the emergency

- **Do not hang up — stay on the line.**

If the injury or emergency is life threatening (such as heart attack, difficulty breathing, and choking), try and determine if anyone in the immediate area knows CPR or has medical training. If yes, have such person render first aid until emergency response personnel arrive on location.

When an employee has a work-related injury after normal business hours, and is sent to an offsite healthcare facility for treatment, all original medical forms, bills, etc., must be given to Facility Management/HSE Representative on the first work day after the injury.

In accordance with confidentiality of medical information, no copies of the medical bills, treatment slips, or any paperwork related to the injury are to be forwarded to anyone other than the insurance provider and not retained by anyone for their files.

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Refer to Practice 000.653.1200, Emergency Preparedness (Medical, Fire, Chemical, Weather), for additional information and details.

4.3 Reporting Illness/Injury (Major and Minor)

It is the responsibility of each employee to report all work-related illnesses/injuries, including minor injuries, to his/her supervisor. It is the supervisor's responsibility to report all work-related illnesses/injuries, including minor injuries, to HSE and/or Facility Management.

The importance of reporting **all** injuries cannot be over emphasized. Once an injury has occurred, immediately notify HSE and/or Facility Management the same day and as close as practical to the time of the injury. HSE and/or Facility Management, depending on the severity of the injury, will coordinate with the supervisor with regard to any required reports.

Once an employee has been injured and such injury has been reported, the supervisor will continue to monitor the employee for the rest of the work shift. Immediately report to HSE and/or Facility Management any change in the employee, or any employee complaint of discomfort or pain as a result of the injury. If the employee does not report for his/her next scheduled work shift, **immediately** notify HSE and/or Facility Management. This includes the employee calling-in the next work shift after the injury and requesting time-off-with-pay (TOWP) for **any** reason.

Failure to promptly report work-related illnesses/injuries could result in disciplinary action.

Refer to Practice 000.653.1202, Incident Reporting and Investigation), for additional information and details.

4.4 Return-to-Work Notice

A Return-to-Work Notice (Form 000.653.F0112) is required when an employee returns to work from a loss time injury/illness.

4.5 Contractor/Subcontractor Employees Injury/Illness

Employees of a Fluor contractor or subcontractor who sustain a work-related injury or illness are the responsibility of the contractor/subcontractor.

Each contractor or subcontractor with employees who work on Fluor premises should have a responsible individual who is informed of his company's procedures for the handling of work-incurred injuries/illnesses. It is also the contractor's/subcontractor's responsibility to provide their employees with proper company identification, and to advise them of benefits available under the worker's compensation law or equivalent.

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In case of a work-incurred injury/illness, transportation of the contractor/subcontractor employee is the responsibility of the contractor/subcontractor. In the event contractor/subcontractor-furnished transportation is not available, Fluor HSE and/or Facility Management may arrange transportation to a medical facility if the injury is deemed to require attention by an OHP, or 911/or equivalent may be called for more severe cases.

No Fluor employee will sign any forms that may indicate responsibility for a contractor/subcontractor employee's medical care. To do so may result in liability to Fluor.

5.0 FIRE EMERGENCIES

5.1 General

Specific circumstances and individual judgment at the time of a fire may dictate modification or a change to planned procedures due to the size, location, and type of fire or smoke. This is common in any emergency situation. However, an immediate appraisal of each situation must be made, followed by rapid communication and responsible action.

5.2 Fire Classifications

- **Small** – Confined to one office or an isolated area. May be resolved with evacuation of immediate adjoining areas.

- **Local –** Confined to a small portion of a floor or office and does not pose danger to building occupants other than in the affected area. Evacuation is in order, but usually limited to the affected floor and one or two floors above and below the affected area as directed by Facility Management.

- **Major –** Not confined to a small area. Potentially poses danger to occupants of the entire building. General evacuation may be directed by Facility Management.

5.3 Fire Procedures

Facilities may be equipped with various detection and suppression equipment such as smoke detectors, heat detectors, manual alarm stations, fire extinguishers, and sprinkler system. When a fire-related emergency is detected within the facility, the following actions are initiated:

A. Fire Department Notification

If the fire is detected by an automated system, Facility Management and/or the fire department will be automatically notified by the alarm.

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-or-

If a fire is observed by an individual, call the emergency number for the facility, or pull a manual alarm station if facility is so equipped.

B. Occupant Notification

When an automated fire detection system detects a fire, it will automatically notify affected occupants, if the facility is equipped with audible and/or visual alarms.

-or-

If a facility is not equipped with an automated detection/notification system, follow facility procedures on occupant notification.

Refer to Section 6.0, Evacuation and Emergency Action Organization.

C. Fire Suppression Functions

Facilities with automated systems will initiate one or more of the following, depending upon the system and equipment installed:

- Doors that are electronically held open that will automatically close during an emergency. This aids in controlling and containing the fire and smoke. Card readers and magnetically locked doors in the affected area will automatically unlock, allowing free movement for evacuating personnel.
- Elevators will automatically descend to the first floor and can only be manually operated by fire personnel.
- Smoke evacuation fans will activate and clear any smoke accumulation in the exit stairwells.
- The sprinkler system will activate in areas where intense heat occurs.

D. Fire Extinguishers

Fire extinguishers are strategically located in a facility. Most fire extinguishers in facilities are multipurpose (class ABC-type) and contain a dry chemical. These extinguishers can be used on petroleum product fires such as gasoline and plastics, and on electrical fires without fear of causing an electrical shock. They can also be used on combustible product fires such as paper and wood. Be familiar with the type of fire extinguishers in the facility as they may be other than type ABC.

If a fire is successfully extinguished with a fire extinguisher, do not remain in the immediate area. Lack of oxygen and the accumulation of toxic gases could be hazardous.

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If feasible, move to an area where the location can still be observed, but also where adequate ventilation is available.

Report the fire, even if out, to Facility Management.

Fire extinguishers that have been used must be properly serviced before being returned to service.

5.4 Fire Prevention

Occupants should practice the following basic fire-prevention principles on a daily basis:

- Keep offices neat and free from trash and other flammable debris.
- Do not empty ashtrays into trash receptacles. Smoking is allowed only in designated smoking areas.
- Report all obstructions in stairwells and corridors to your supervisor or Facility Management.
- Know the location of all fire exits on your floor.

5.5 HSE Management System Requirements Document

Refer to Practice 000.653.3100, Fire Prevention and Protection, for additional information and details.

6.0 EVACUATION AND EMERGENCY ACTION ORGANIZATION

6.1 Purpose

Fluor Management is concerned about the HSE of each person in the complex. Fires, civil disturbances, severe weather conditions, and other emergencies should initiate a planned response rather than confusion. Confusion could cause unnecessary personal injury, loss of assets, and a slow recovery. After a disaster occurs, there is no time for planning and training.

Fluor Management recognizes the need for emergency planning. A permanent liaison has been established to communicate with local fire and police departments and civil defense officials. These public agencies are familiar with facility plans for responding to various emergencies.

The occupants of Fluor facilities must also recognize their role in responding to emergencies. A well-designed Emergency Action Organization is necessary in maintaining a safe environment.

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The following Emergency Action Organization is designed to provide a systematic and orderly response to any facility emergency.

6.2 General

The Emergency Action Organization responsibility descriptions primarily relate to fire responses. However, during an emergency, Facility Management may use the Emergency Action Team as the primary contact on each floor of every building. Detailed records must be maintained that list all Emergency Action Organization members.

Emergency Action Teams will be appointed for each floor in the facility to assist Fluor Management during emergencies in assigned areas.

The Emergency Action Teams and Fluor Facility Management will assist the Director of Emergency Evacuations in keeping the disaster plan current. Each team member will be assigned a specific area of responsibility for the plan and must be trained accordingly. Team members will meet at least once every quarter to review their responsibility and update the existing plan as necessary.

Minutes will be recorded at all meetings held. Recommendations or comments from these meetings should be submitted to the Director of Emergency Evacuations for review and subsequent action.

6.3 Responsibilities

Emergency Action Teams

Emergency Action Teams are a vital link between Facility Management and their assigned area during an emergency. They may be asked to respond to a variety of situations that affect the safety of occupants, and take whatever action necessary to prevent further injury or danger. These duties can include first aid; fire reporting; reporting damage; assisting, directing, and maintaining control of occupants during evacuation; and keeping Facility Management informed during any emergency.

An alternate team member will be selected in the event the primary member is away from his/her assigned area. The alternate team member will assume the primary member's role in the latter's absence, or assist if primary is present.

During an evacuation, the Emergency Action Teams will respond to their assigned areas and assist occupants to the stairwell as they evacuate the building in a timely and orderly fashion.

Floor Wardens will inform the Director of Emergency Evacuations, in advance, of the location of any physically impaired occupants. Special arrangements will be made to evacuate such individuals. Emergency Action Teams are responsible for evacuating physically impaired individuals according to the plan.

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When it appears that all persons have been evacuated from a floor, Team Members will conduct an inspection search. This search will confirm that all persons have been evacuated and will consist of visual inspections of offices, rest rooms, service centers, and other enclosed areas. Do not rely on voice response, as an individual may not hear you or may be lying unconscious somewhere in your assigned area. When the Floor Wardens determine their area has been evacuated, the Emergency Action Team will evacuate to a predesignated location.

Director of Emergency Evacuations

The Director of Emergency Evacuations will assume responsibility for the following:

- Be familiar with the written emergency action plan and its provision for building evacuation procedures.
- Assign a Floor Warden for each floor.
- Issue copies of this plan to Floor Wardens.
- Verify all Emergency Action Teams understand their responsibilities in various emergency situations.
- Train Emergency Action Teams in emergency rescue, fire size-up, and communication.
- Establish and implement a system of notification when team members are leaving and returning on business, sick leave, vacation, transfer, or termination. This will continually update the Director of Emergency Evacuations on the current status of Emergency Action Team members.
- Maintain appropriate fire prevention practices within the facility.
- Report to the fire department all reportable facility fires or fire alarms.
- Report to a predetermined location during any facility emergency so that the following is accomplished:
  - Determine the nature, location, and severity of any fire, civil disturbance, weather conditions, or any other emergency.
  - Communicate with Facility Management and Floor Wardens to provide any information regarding the need to evacuate, and the appropriate routes to be used.

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- Report to the local fire department chief any pertinent information regarding the facility and the fire floor.

- Make the decision to evacuate, other than the immediate area, in the absence of the fire department. Occupants and Emergency Actions Teams will be notified via the facility notification system.

The designated Director of Emergency Evacuations is:_____.

Floor Warden

The Floor Warden will assume responsibility for the following:

- Be familiar with the Emergency Action Plan.
- Report any fire and other emergency to the local emergency line.
- Know the specific assigned area of responsibility.
- Know the location of all exits on the assigned floor.
- Know how to operate the available fire alarm system and floor fire-fighting equipment.
- Direct the orderly evacuation of the floor when instructed by the Director of Emergency Evacuations in accordance with the following requirements:
  - All evacuations must be conducted in a calm and deliberate fashion.
  - Generally, only the stairways will be used during evacuations.
  - The Emergency Action Team will leave the floor only after confirming all other persons have been evacuated from the floor.
  - The Floor Warden will report to the Director of Emergency Evacuations upon completion of the evacuation.
- Verify that the following are performed regularly on the assigned floor:
  - Keep all aisles, corridors, and doorways free from obstructions.
  - Check all extinguishers to verify that they are ready for use and report any defect to the Director of Emergency Evacuations.

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  - Maintain a list of all temporarily or permanently, physically impaired persons on the floor. Make arrangements to assist them during an evacuation.

- Assign members to, and maintain, a Floor Emergency Action Team. delegating assignments or responsibilities to each team member.

- Train and motivate members of the Emergency Action Team in evacuating procedures.

- Delegate responsibilities to the Assistant Floor Warden while away from assigned area.

- Assemble the Floor Emergency Action Team quickly at a predetermined location when there is a signal for a drill or actual emergency.

- Maintain enough alternates on the Emergency Action Team to fully staff critical positions in the event of absent team members during a drill or actual emergency.

- Attend scheduled meetings with the Emergency Action Team:

  Meetings will include evacuation procedures or any change in procedures.
  - Practice drills are for the Emergency Action Team only.

- Schedule and conduct monthly meetings with the Floor Emergency Action Team to maintain emergency action readiness.

- Complete a monthly checklist report for the Director of Emergency Evacuations.

- Replace team members as necessary to keep the team complete.

Assistant Floor Warden

The Assistant Floor Warden will assume responsibility for the following:

- Assume all Floor Warden responsibilities in the absence of the Floor Warden.

- Performing emergency action duties that may be delegated by the Floor Warden when the Floor Warden is present.

- Assist in arranging special care for the evacuation of physically impaired persons on the floor. Physically impaired personnel, if required, will be **carried** down the stairs by **two trained** assistants or by the use of an emergency evacuation chair.

- Assist the Floor Warden and the Searchers in the floor “sweep” before the team evacuation.

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- Direct the evacuees to designated evacuation location until given notice by the Floor Warden to reenter the facility.

Exit Monitors

One Exit Monitor is required at each stairway exit on every floor. The monitor should be stationed inside the stairway to hold the door open and guide evacuees to the lobby level. The Exit Monitor should also be stationed to direct traffic and assist persons as necessary.

The Exit Monitor will assume responsibility for the following:

- Maintain clean and safe stairway exits on the designated floor.
- Control the stairway door on the designated floor.
- Direct pedestrian traffic to the appropriate exit.
- Keep pedestrian traffic moving calmly but steadily during evacuations.
- Direct personnel to remain to the right of the stairwell as they evacuate. Firefighters may be using the stairs.
- Direct personnel to merge in an orderly fashion with evacuees from floors above as they enter the stairwell.
- Direct personnel to the specific place in the designated evacuation area for the floor.
- Restrict access to the fire-safe stairway exits only. Exiting via elevators or escalators is prohibited.

Searchers (Male and Female)

Searchers will assume responsibility for the following:

- Conduct thorough searches for designated restrooms to alert persons who may not have heard the evacuation notice.
- Conduct a thorough and complete floor search for personnel.
- Respond to any additional instructions that may be given by the Floor Warden.
- Close all doors on the assigned floor after completion of a search of that office or area.

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- Assist the Floor Warden and the Assistant Floor Warden in a final floor sweep before exiting the floor as a team.

The designated Floor Warden teams are: _____

_____

_____

7.0 BOMB THREATS

7.1 Purpose

This section describes the requirements in handling threats to the office, such as bomb threat.

7.2 General

Usually, bomb threats are received through company switchboard operators (listed telephone number) when called by a nonemployee. Employee or former-employee bomb threats may be directed to a management member whose office number may or may not be published.

A hoax caller usually will not give a reason for the bomb, nor a specific location; however, no threatening telephone calls will be ignored.

A serious caller probably does not want people harmed, or the person would not have phoned in the warning. It is essential for the employee receiving the call to remain calm and obtain as much information as possible from the caller.

Switchboard operators, their reliefs, and secretaries should be familiar with telephone bomb threat procedures.

A decision to evacuate is the responsibility of the senior Fluor Manager present. If a decision to evacuate is made, the evacuation process is the responsibility of the Fluor Director of Emergency Evacuations.

7.3 Telephone Bomb Threat

Telephone bomb threats will be handled according to the requirements set forth in this section.

Telephone threats or warnings are liable to be received by anyone in the building. The most likely recipients of such calls are telephone operators, secretaries, and receptionists. Most bomb threat calls are very brief. The caller usually states his or her message in a few words and hangs up. However, whenever possible, every effort should be made to

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obtain detailed information from the caller. Refer to "Questions to Ask" found on the Bomb Threat Checklist (Form 000.653.F0174). Most important, **be sure the caller ends the call – not you.**

During the telephone bomb treat conversation:

- Stay **calm**.
- Keep the caller on the line as long as possible. Ask the caller to repeat the message. Record every word spoken by the person.
- If the caller does not indicate the location of the bomb or the time of possible detonation, you should ask for this information.
- Inform the caller that the building is occupied and that detonation of a bomb could result in death or serious injury to many innocent people.
- Pay particular attention to peculiar background noises such as motors running, background music, and any other noises that may give a clue to the location of the caller.
- Listen closely to the voice (male, female), voice quality (calm, excited), accents, and speech impediments.

When the caller terminates the call, the employee receiving the threat must immediately call their supervisor or Facility Management**.**

It is important that any person receiving a bomb threat be aware of the importance of communicating the threat information **only** to the proper personnel. Careless disclosure of a threat or warning can cause needless panic and create unnecessary difficulty and loss of time in responding to this type of an incident.

7.4 Written Bomb Threat

When a message or letter is recognized as a bomb threat, further unnecessary handling should be avoided. Save all materials, including any envelope or container. Every possible effort must be made to retain evidence such as fingerprints, handwriting or typewriting, paper, and postmarks.

Immediately notify Facility Management.

It is important that any person receiving a bomb threat be aware of the importance of communicating the threat information ONLY to the proper personnel. Careless disclosure of a threat or warning can cause needless panic and create unnecessary difficulty and loss of time in responding to this type of an incident.

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7.5 Letter Bombs

Hazardous mail devices may be constructed to fit within almost any familiar package or envelope. Such devices are usually made to detonate as the package or letter is opened. Your observation of any letter or package should raise your suspicions under the following circumstances:

- Postmarked from a country directing a terrorist campaign
- A sender's writing that features a foreign style
- Unbalanced contents or heavier on one side
- Is or seems excessively heavy for its volume
- Any feeling of springiness, but it does not bend or flex
- Protruding wires that become loose and penetrate the wrapping or envelope
- Wire or spring holes in its outer wrapping
- Grease marks on the wrapping paper
- A smell like almonds or another strange odor
- Sent without your request (generally not known to incoming mail handlers)
- Suspicious packaging such as tape around all edges instead of having a normal flap
- A stiffness that suggests stiff cardboard, metal, or plastic is inside
- Marked "personal," "confidential," "private," or "eyes-only."
- Misspelled words, particularly words in common business use
- Excess postage or postage from a foreign country (as an international corporation, the key here is too much postage)
- Hand printing, no return address, or addressed to a high-ranking company executive
- Poorly typed or written address
- Incorrect titles for people who work in the facility/office
- Addressed to a title, but no name
- Labeling such as "ANTHRAX" or "THIS IS A THREAT"
- Rattling or sloshing sound when handled
- A city, state, province, or country postmark does not match return address

Any one or combination of these characteristic circumstances should cause the recipient of such suspicious letter or package to:

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- Stop further handling of the letter or package immediately.
- Follow the notification procedures in Section 7.4, Written Bomb Threat.

7.6 Suspicious Objects and Packages

A suspicious object or package may be suspected for any of several reasons:

- The package is labeled "Bomb," "Danger," "Do Not Open," etc.
- The package resembles a bomb or is located in a place that does not fit the circumstances
- The package does not belong to the particular area, premises, or is out of place
- The origin of the package is questionable or cannot be readily determined
- The physical characteristics of the package are suspicious in size, shape, weight, or sound.

In the event a package or object is believed to be of a suspicious origin, do not touch it. Immediately follow the notification procedures in Section 7.4, Written Bomb Threat.

7.7 Evacuation

If management decides to evacuate, the Director of Emergency Evacuations will notify/activate the local emergency system. Emergency Action Teams will supervise a timely and orderly evacuation of employees and visitors from their designated areas.

Under no circumstances should Fluor employees attempt to neutralize, remove, or otherwise have contact with an actual or suspected device.

Suspicious objects should not be touched. Their location and description must be reported to Facility Management immediately.

Leave all light switches in the position they are at the time of the evacuation.

Emergency Action Teams will be given evacuation instructions by public address system, telephone, or bullhorn. Team members will maintain control in their designated areas. Refer to emergency evacuation routes for your area.

Structural damage may prohibit use of stairwells as exit routes. Team members will follow the emergency instructions explicitly in order to minimize injuries.

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DO NOT EVACUATE THE EMPLOYEES IN YOUR AREA UNTIL YOU ARE TOLD TO DO SO, UNLESS CONDITIONS DICTATE THAT EVACUATION IS THE ONLY ACTION POSSIBLE!

Do not use portable radios during a bomb threat evacuation.

8.0 INCIDENT REPORTING, INVESTIGATION, AND REPORTS

8.1 Purpose

This section describes the requirements for reporting an incident, investigation of an incident, and required incident/injury reports.

8.2 Responsibility

The supervisor is responsible for the HSE of their subordinates. In the event of an incident, the supervisor is responsible for prompt reporting of the incident, investigation of the incident, recommendations on how to prevent a similar incident, and timely completion and proper distribution of the Incident Investigation Report (Form 000.653.F0198) and associated reports.

The HSE Representative is responsible for completion and distribution of all OSHA, worker's compensation, or other required reports in a timely manner. **Work-related injuries/illnesses must be reported within 24 hours of the incident to Fluor's worker's compensation carrier or the Business Unit HSE Lead.** The HSE Representative will provide assistance to the supervisor, when requested, in completing required reports.

The employee is responsible for promptly reporting all incidents to his/her supervisor. The employee is responsible for completing designated incident reports in a timely manner and submitting such to the supervisor.

The supervisor is responsible for the investigation of all incidents. HSE's independent investigation will not take the place of the supervisor's investigation, but will serve as an independent analysis of the incident.

In the event an incident may or actually does result in a lost workday case, a Corporate HSE Manager may oversee the incident investigation process.

8.3 Incident Reporting

In the event of an incident:

- Call the emergency number for your facility/office.
- Provide to the emergency dispatcher the following:

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Nature of the emergency
Call-back number (normally this is the number you are calling from)
Location of the emergency
– Name of person reporting the emergency

- **DO NOT HANG UP — STAY ON THE LINE.**

If the injury or emergency is life threatening (such as a heart attack, difficulty breathing, and choking), try and determine if anyone in the immediate area knows CPR or has medical training. If yes, have the person render first aid until emergency response personnel arrive on location.

Protect the area of an incident from being disturbed. Conditions present at the time of the incident may provide valuable information during the incident investigation phase. If conditions at an incident scene must be altered for safety or other valid reasons before the incident investigation, keep detailed notes describing the alterations to the scene. Such notes may include a sketch of the incident scene depicting original location of changed or moved items.

The supervisor is responsible for reporting all incidents and injuries.

8.4 Incident Investigation

The basic purpose of an incident investigation is to prevent a recurrence of the incident. The objectives of an incident investigation are:

- Determination of root causes of incidents
- Correction of unsafe conditions
- Elimination of unsafe acts
- Improvement of work capability
- Improvement of supervision

The effectiveness of preventive action based on thorough incident investigation and reporting can be determined through in-depth analysis.

An incident investigation is to be made by the injured employee's supervisor.

The incident investigation phase begins as soon as the supervisor is made aware of the incident. While treatment of injuries and immediate HSE concerns created by the incident are the initial top priority, the supervisor should be carefully observing the incident scene for future reference.

Once the immediate needs caused by the incident have been satisfied, the supervisor should begin to investigate the incident in detail. Prompt incident investigation may reveal contributing factors to the incident that may not be present at a later date and time.

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The supervisor should determine if there were any witnesses to the incident. If yes, have the witnesses write a brief statement as to what they observed. It is important to identify witnesses promptly in order to record their observations while the events are fresh in their memory. Early identification of witnesses will also help preclude the witnesses from comparing notes and inadvertently filling in "gaps" of what they actually observed.

As soon as possible, taking into account any injuries and/or personal problems as a result of the incident, the supervisor should interview the persons involved in the incident. In conducting the interview, approach the interview in an objective manner. Do not prejudge the persons involved or indicate that the purpose of the interview is to fix blame for the incident. Such indications will only cause the persons involved in the incident to become defensive and possibly prevent important facts from being discovered. In many instances, the persons involved in an incident will provide exact details of why the incident occurred if they do not feel threatened.

Once the contributing factors to the incident have been determined, analyze such facts for future incident prevention. Determine what could have been done different that would have eliminated some or all of the contributing factors to the incident. Talk with the persons involved in the incident to determine what they believe could have been different so as to prevent a similar occurrence from happening again.

Remember, once an incident has happened, the damage is done. The important considerations after an incident are:

- Mitigate the impact to the persons involved in the incident.
- Mitigate the impact to Fluor as a result of the incident.
- Prevent a similar incident from ever happening again.

HSE may conduct an independent investigation of the incident. Such investigation is not designed to replace the supervisor's investigation, but to provide a second opinion with regards to the incident. HSE's investigation will follow the same requirements as the supervisor's investigation, and include talking with the supervisor for his/her opinion and input.

8.5 Rental Car Incidents

The following procedure should be followed in reporting incidents and/or damage to rental cars.

When an incident occurs, notify the local police immediately.

As soon as possible, and after the police have completed their report, notify the local car rental agency or the location where the car was rented. You may be required to complete an incident form for the rental agency.

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If the vehicle is damaged, but not involved in an incident, and if said damage occurs in a hotel/motel parking area, notify the hotel/motel management when the damage is discovered. You may be required to complete an accident form for the rental agency.

The same day or the next business day after the incident/damage, notify your supervisor.

The supervisor is responsible for overseeing that the incident is reported.

If personal loss (such as stolen luggage) occurs as a result of the incident/damage, you will want to notify your personal car insurance agent and/or your homeowner's agent in case the loss is covered under either of these policies. It is not normally covered under the car agency or Fluor insurance.

The purchase of supplemental insurance when renting a vehicle is prohibited by Fluor policy and will not be reimbursed. Should your incident/damage result in a cost to the company, that cost will be charged to the division/project to which the car rental voucher is charged.

8.6 Employee Accident Insurance

Fluor automatically provides blanket travel accident insurance for salaried employees traveling on company business. The amount of insurance coverage is specified within the Fluor Salaried Benefit Booklet. Any other additional insurance coverage is at the employee's option and expense.

8.7 Disciplinary Action

If any incident/injury warrants disciplinary action, the following should be considered:

- Any action should be viewed as assisting, counseling, and training.
- Active management participation, consistent with company policy and legal consideration, is essential.
- Prompt disciplinary action should be taken immediately by the employee's immediate supervisor, if facts warrant such action.

HSE reprimands and termination documentation records must be kept on file and must be retrievable for at least 3 years. Human Resources is responsible for maintaining such records.

Company Policy states: A special HSE file must be created in which copies of HSE reprimands and HSE-related termination documents are to be placed and stored for 3 years. Individual HSE reprimands and HSE terminations may be removed from the file and destroyed 3 years after issuance.

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8.8 Incident and Injury Reports

In the event of an incident or injury, one or more reports are required, depending on magnitude of the incident. This section lists the reports, when required, who is responsible for the report, distribution, and when the report is due.

A. ***Title:*** ***Incident Investigation Report (Form 000.653.F0198)***

Purpose: To be completed for all work-related injuries requiring employee's report of injury and all property loss incidents.

Responsibility: HSE Manager

Due: Within 5 business days after injury/incident.

Distribution: Office/Facility HSE
Senior Office/Facility Manager
Business Unit HSE Lead

B. ***Title:*** ***Employer's First Report of Injury or Illness (worker's compensation form – form will vary due to location)***

Purpose: To be completed for work-related injuries/illnesses requiring medical treatment.

Responsibility: HSE Representative

Due: Within 24 hours of notification of injury/illness.

Distribution: Worker's Compensation Insurance Carrier
Business Unit HSE Lead

C. ***Title:*** ***Return-to-Work Notice (Form 000.653.F0112)***

Purpose: To be completed when employee returns to work from a loss time injury.

Responsibility: Healthcare Provider/HSE representative

Due: Same day employee returns to work.

Distribution: Insurance Carrier
Supervisor
Business Unit HSE Lead

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D ***Title:*** ***Project/Office Incident Log (Form 000.653.F0193***

Purpose: Running log of all incidents (injury and noninjury).

Responsibility: HSE Representative

Due: Per direction of Regional HSE Lead

Distribution: Regional HSE Lead

E. ***Title:*** ***Monthly Incident Experience Report***

Purpose: To record safe work hours and incidents.

Responsibility: Facility Management/HSE Representative – submit data to Business Unit HSE Lead

Due: The first Wednesday after the close of the fiscal month.

Distribution:

F. ***Title:*** ***OSHA 300 Log (U.S.)***

Purpose: To record OSHA recordable injuries and illnesses.

Responsibility: Facility Management/HSE Representative

Due: Per occurrence

Distribution:

8.9 HSE Management System Requirements Document

Refer to Practices 000.653.1200, 000.653.1201, 000.653.1202, and 000.653.1203 (event/statistics-related practices) for additional information and details.

9.0 OFFICE/FACILITY INSPECTIONS

9.1 Purpose

This section describes the requirements for inspection of all areas of the facility. The supervisor is responsible for inspecting his/her area of responsibility to provide all employees with a safe and hazard-free work environment — this responsibility cannot be delegated.

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9.2 General

Regular inspections of a supervisor's area of responsibility are essential to a safe work environment. Regular inspections coupled with regular HSE meetings with employees will promote a hazard-free work environment.

In the event an HSE hazard is discovered, the supervisor must take positive action to correct the hazardous condition at the earliest possible time.

9.3 Office HSE Hazards

The following are examples of what to look for during an inspection of an office environment:

- Tripping hazards:

  Wires on floor in walkways
  Loose carpet and tile
  Open desk/file drawers
  Loose floor receptacle covers
  Walkway obstructions
  Slippery floor surfaces
  – Drawings/documents on floor

- Extension cords instead of power strips

- Small appliances:

  Not approved by Facility Management
  Timers not being used where required (such as on coffeemakers)
  – Equipment not in safe operating condition

- Housekeeping; personal and common areas to be kept in a clean and orderly manner

- Storage rooms and storage areas

- Stacking boxes in an unsafe manner

- Sprinkler clearance; stock level height minimum 18 inches (45.7 centimeters) from sprinkler

- Top-heavy file cabinets

- Heavy/large objects on top of file cabinets/bookcases

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- Restrooms not clean or sanitary
- Aisle minimum width of 44 inches (111.8 centimeters) without obstructions or potential obstructions (such as an open file drawer)
- Aisles with potential obstructions (such as a file cabinet or desk opening into an aisle)
- Fire exits clear of obstructions
- Fire extinguishers properly charged and inspection current
- Light fixtures have bulb guard securely in place
- Fire hazards (such as frayed wires)
- Ceiling tiles not securely in place and/or loose
- Exit lights working
- Electrical outlets not overloaded with multiple power strips

9.4 Office HSE Rules and Practices

In addition to the potential office HSE hazards identified in Section 9.3, verify employees are knowledgeable of and observe the following office HSE procedures:

- Aisles, Floors, and Passageways:

  Enter slowly.
  Keep to the right, particularly at corners.
  Remove hazardous projections.
  – Check drawer-opening clearances so as not to enter walk areas when open.

- Bookcases:

  Store nothing above the partition level.
  Check for stability.
  – Check for ease of accessibility.

- Chairs:

  Keep all legs on floor when in use.
  Inspect for structural weakness.
  Inspect for sharp edges, burrs, and splinters.
  Inspect for loose component parts.

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Check for unsafe casters.
– Do not use chairs as substitute for ladders.

- Desks and Tables:

  Inspect for sharp edges, burrs, and splinters.
  Inspect for broken glass on light tables.
  Inspect for damaged drawer slides.
  – Keep desk tops clean and orderly.

- Easels:

  Check for stability.
  – Check for sharp edges, burrs, and splinters.

- Office Machines/Equipment:

  Check condition of electrical cords and plugs.
  Check for appropriate ground connections.
  Check for proper guards.
  Check for stability.
  Disconnect power plug before unjamming, loading, unloading, or adjusting.
  Paper cutters must have the handle locked in the down position when not in use.
  – Properly lock latches on stands before setting down printers and other heavy equipment.

- Equipment – Power Tools:

  Check general condition.
  Check electrical connections.
  Check other connections (water, air, etc.).
  Install proper guards.
  Ensure proper posting of use restrictions.
  Check stability.
  Check electrical receptacle covers.
  – Check electrical inspection date.

- Exits:

  Remove obstructions on either side of exits.
  Check locking arrangement and emergency opening hardware.
  Make certain emergency instructions are posted.
  Maintain EXIT lights in working order.
  Inspect for obstructions in stairwells such as improperly stored material.
  – Have the proper number of exits for area and number of occupants – if in doubt, contact Facility Management.

- File Cabinets:

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Do not place heavy objects on top of cabinets.
Remove any items from above partition level.
Keep drawers closed when not in use.
Allow only one drawer open at a time.
– Do not lean, sit, or stand on open drawer.

- Fire Extinguishers/Equipment:

  Check charge is not low or high.
  Check inspection date – must be within 1 year.
  Check for proper type, typically ABC.
  Check for accessibility. Must have free and clear access with no impediments.
  Identify all extinguisher locations with a "Fire Extinguisher" sign.
  Fire extinguishers are located within 75 feet (22.9 meters) of travel from any interior location.
  Standpipe connections must have free and clear access with no obstructions.
  Sprinkler/standpipe risers must have free and clear access with no obstructions.
  – Sprinkler heads are not obstructed/blocked by suspended signs or other material.

- Material/Supplies:

  Check for improper use or storage of acids, caustics, or flammables.
  Check for proper ventilation of any stored chemicals.
  Check height and condition of stacked material for stability.
  Remove nails, wire, or sharp strapping from shipping containers.
  Receiving/loading dock areas are neat and clean.
  – Any chemical products not available for general household/office consumer use must have MSDS.

- Material Handling:

  Use legs, not back, when lifting.
  Material on carts/dollies are not overloaded or stacked to where vision blocked.
  Powered pallet jack operators must have Fluor operator's license.
  – Employees performing lifting activities have completed Fluor Smart Lift Program.

- Personal Offices/Work Areas:

  Drawers to desk and cabinets are not left open.
  Floor is not cluttered or is free of trip hazards.
  Computer screen is stable on a solid surface.
  – Housekeeping is at an acceptable standard.

- Housekeeping:

  Files, boxes, drawings, and other material are stored in a neat/orderly manner.
  – No trash or debris lying around.

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- Emergency Procedures:

  Floor evacuation routes are clearly posted on each floor.
  Floor Warden is identified for each floor.
  Location of first-aid station/area is identified.
  – Know how to summon emergency aid, medical, fire, security; emergency number is clearly posted.

- Personal Electrical Appliances:

  Coffeemakers are on noncombustible surface.
  Coffeemakers have automatic shutoff device or timer.
  – Any personal appliance is in accordance with office electrical appliance requirements.

9.5 Reporting an HSE Hazard

Report an unsafe condition or HSE hazard immediately to the supervisor responsible for the area. Supervisors have prime responsibility for their work areas. If a satisfactory answer is not received from the supervisor, notify the HSE Representative.

9.6 Oversight Inspection

Facility Management and/or the HSE Representative should inspect the facility on a regular basis. Such inspection is not designed to replace the supervisor's inspection responsibilities, but designed to provide HSE oversight of the facility.

9.7 Parking Lots

Parking lots are provided for the convenience of employees. The following rules of conduct are recommended to minimize inconvenience in their use.

Pedestrians should remember:

- Parking lot problems are generally the result of a breach of rules and regulations and not the physical layout of the lot. Therefore, pedestrians should use designated walkways.
- Always walk, never run.
- Stay alert for moving vehicles at all times.
- No matter who may have the right-of-way, cars outweigh pedestrians. In any incident, the pedestrian will suffer more damage than the car.

Drivers will:

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- Always enter and leave the parking lot along prescribed routes.
- Follow posted speed limits (10 mph [16.1 kph] maximum if not posted) and be alert for pedestrians. Pedestrians have the right of way.
- Pick up passengers only at designated points.
- Be courteous, avoid cutting in front of vehicles.
- Clear windows and tail lights of obstruction before using vehicle.

Fluor will not accept responsibility for injury, property damage, theft, or any other loss incurred in parking lots.

9.8 HSE Management System Requirements Document

Refer to Practice 000.653.1305, Inspections/Assessments and Audits, for additional information and detail.

10.0 JOB SAFETY ANALYSIS PROGRAM

10.1 General

Job Safety Analysis (JRA) (Form 000.653.F0100) is a basic formula for establishing the safe approach to performing a task. It consists of a written procedure designed to review job methods, identify hazards, and recommend safe job procedures. The 4 basic steps involved in developing a JSA are:

- **Select the Task**

  There may be many tasks qualifying for an immediate HSE analysis because of the potential hazards involved. Often, attitudes are developed toward identifying such hazards as “It hasn't happened yet, but when it does – watch out!” An example is jobs involving the lifting of heavy equipment.

  Due to the routine and repetitiveness of some work functions, the hazards inherent to the performance of that function recurs frequently. Therefore, employees performing these tasks have a high rate of exposure to the hazards. These tasks should be selected and studied on the basis of potential hazards or high incidence rates. The hazards should be identified and eliminated or reduced. This will result in reduced incident costs and increased efficiency.

  New tasks are created by changes of equipment and operations. Because the tasks are new, the safe and unsafe features of these tasks are not always clear. It is

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desirable to analyze these tasks immediately. It is not necessary to wait until an incident occurs before creating a JSA.

- **Break Down the Tasks**

  Some tasks are too complex and broad in scope to be analyzed in a single unit and should be broken down into component steps or elements. The breakdown should not contain more than 10 steps or elements, since more than 10 may complicate the analysis, and a simpler breakdown will allow each step or element to be dealt with as a separate analysis problem.

  Usually a JSA is conducted by the supervisor, the employee, or operator who normally does the task with the HSE Representative acting in an advisory capacity.

  When conducting a JSA, the employee performing the task should be asked to assist. He/she should be told about the analysis and shown a completed JSA. The employee should perform the task, one step at a time, while the supervisor lists each step in correct order. Action words such as "remove," "attach," and "lift" should be used to begin the description of each step. Keying on action words will emphasize HSE and keep the analysis simple. Each step should state what is done, not how. Number the steps in consecutive order under the heading, "Sequence of Basic Task Steps."

- **Identify the Potential Hazards**

  It will be necessary to identify the potential hazards before recommending safe work practices. Carefully consider each step or element while evaluating the following possibilities:

  – Is there danger of injurious contact with an object as the employee does the task?

  – Are pinch points exposed?

  – Can the employee slip, trip, or fall on the same level or from one level to another?

  – Is the environment hazardous such as does it contain flammable and/or toxic gas, vapor, mist, fumes, dust, heat, or radiation)?

  Identify and write the potential hazards for each step. Then number each potential hazard with the same number used in the first column of the "Sequence of Basic Task Steps."

- **Recommend Safe Work Practices**

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For each potential hazard, the supervisor must determine what the employee must do to avoid the hazard. This is called recommending safe work practices.

The supervisor can determine safe work practices by watching the employee, discussing precautions with the employees, and from his own experience. Once the safe work practices have been determined, they should be reviewed with the employee. In addition, check with other employee and supervisors doing similar tasks to develop the best and safest way of performing the task.

Provide specific recommendations for performing the task safely. Remember, do not use generalized precautionary statements (such as "be alert" or "be careful").

10.2 Review Safe Work Practices

Once safe work practices are established, they should be periodically reviewed to determine they are up to date. This review is called safe work practice analysis.

New equipment and methods require new or modified safe work practices. There will be a systematic means for reviewing existing safe work practices. A systematic appraisal of tasks after installation and use of a safe work practice may disclose a safer or more efficient method of performing the task.

HSE observations or injury experience point out changes in safe work practices that are necessary to eliminate an operation not previously recognized as being unsafe. In like manner, the combination or elimination of steps may be more apparent from the review of an established safe work practice than they were in its development. Appraisals are a source of suggestions for improved procedures even when conditions have not changed.

Since equipment, methods, and layout are subject to change, and each change however slight, may require the revision of a safe work practice, a continuing schedule of safe work practice appraisals must be maintained. It is not necessary for all safe work practices to be appraised in the same manner. There are two effective methods for conducting appraisals: on-the-job review and management review.

The review procedures are based upon a thorough review of the existing safe work practice with the intent of developing a better or safer way to do the job.

On-The-Job Review

An on-the-job review of an existing safe work practice is made by the supervisor and the employee actually performing the task. It must be a systematic check of the safe work practice by both the supervisor and the employee. It also opens discussions that frequently develop a combination or elimination of steps in the method of doing the task.

Management Review

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Management review in an appraisal is made by the supervisor or some other member of management. It involves essentially the same technique as on-the-task review; however, the appraisal is made without the participation of the employee.

Whether the review is made by the supervisor on the job or in the office, the goal of the review is to establish a better and more efficient way to do the job so that unnecessary steps are eliminated or combined, and employee exposure to injurious contact is reduced or eliminated.

10.3 HSE Management System Requirements Document

Refer to Practice 000.653.1304, Pre-Task Planning/Risk Analysis, for additional information and detail.

11.0 OCCUPATIONAL SAFETY AND HEALTH ACT

This section applies primarily to U.S. offices – although offices throughout the world are likely to be covered by a similar set of HSE requirements/statistics, such offices will replace this section with the applicable text.

11.1 Purpose

Congress enacted OSHA to require employers to provide a safe and healthful working environment.

11.2 Employer Responsibilities

Employers must provide a place of employment free from recognized hazards causing, or likely to cause, death or serious physical harm. The employer also has the duty of complying with safety and health standards promulgated under the Act.

11.3 Good Faith

OSHA places emphasis on the good faith of the employer. Good faith is based on the following 2 factors:

- Documented compliance with the Act by establishing a safety policy.
- An awareness of the Act, exhibited by the effectiveness of the employer's safety and health program and required recordkeeping.

11.4 Efforts to Comply

Emphasis is placed on the willingness of the employer to comply with OSHA rules and regulations. The Compliance Officer determines whether compliance efforts have been reasonable.

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Fluor will maintain and make available information regarding the following to the Compliance Officer upon request:

- Required OSHA records and postings
- Corporate HSE policy
- An HSE program including rules and regulations
- An effective HSE committee (with appropriate documentation)
- An efficient system for the reporting of occupationally-related injuries/illnesses
- Appropriate first-aid facilities
- Written and posted directions for reporting to the nearest healthcare facility
- Thorough incident investigation procedures
- Regularly scheduled inspections of premises and operations by management, by the HSE Representative, and the HSE committee
- A priority system set up for correction of violations or unsafe conditions as reported by the inspection teams
- A system of prompt response to recommendations for improving HSE
- An effective procedure for the investigation of employee complaints
- Minutes of HSE meetings

11.5 Posting of Notice

Fluor will post and maintain, in a conspicuous place, copies of the OSHA Notice, **"Safety and Health Protection on the Job"** (refer to Practice 000.653.1000, HSE General Requirements, Attachment 01 – HSE Information Poster).

11.6 OSHA Reports

Facility Management/HSE Representative will report incidents that result in 1 or more deaths, or the hospitalization of 5 or more employees within 48 hours of the incident.

The following records will be maintained by the designated HSE Representative:

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- A log of recordable occupational injuries and illnesses (the 300 log), other than minor injuries. Refer to Section 13.0, Records and Logs.

- Supplementary records of each occupational injury or illness (the OSHA 301 form, or equal). Facilities may use the Employer's First Report of Injury (a worker's compensation form) to satisfy this requirement. Refer to Section 8.0, Incident Reporting, Investigation, and Reports.

- Annual summary of occupational injuries and illnesses (OSHA 300 form) – must be posted by February 1 of each year (even if no injuries) and remain posted until at least May 1.

Refer to Practice 000.653.1202.

11.7 Inspections by Compliance Officers

Fluor will provide required documentation to OSHA Compliance Officers.

11.8 Identification

Upon arrival of a Compliance Officer, immediately notify the Business Unit HSE Lead and Facility Management/HSE Representative. The Compliance Officers will be required to present credentials to Fluor Representatives at the time of their arrival.

The Business Unit HSE Lead will be the primary Fluor Representative during any compliance visit or investigation.

11.9 Authorization

Compliance Officer(s) are authorized by OSHA to perform the following:

- Upon presentation of credentials, enter any work area without delay, at any reasonable time, and without advance notice.

- Inspect the place and conditions of employment, equipment, tools, machinery, devices, and the processes or methods being used.

- Check recordkeeping procedures and investigate incidents.

- Take photographs and collect samples or evidence.

- Confer privately with employees of their choice concerning conditions or procedures.

- Review their findings with designated management representatives.

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- May issue citations. Such notice will be submitted in written form following completion of the inspection.

- Reenter the jobsite to determine that correction of violations has been made within the time established.

11.10 Citation

Alleged violations will be described in a citation with references to applicable standards, rules, regulations, and provisions of the Act. These violations must be corrected on or before the date shown. A copy of the citation will be forwarded to the Corporate Legal Department as soon as possible. The Legal Department will coordinate the Corporation's response.

11.11 Posting of Citation

A copy of any citation(s) will be posted in a conspicuous place upon receipt at or near each place a violation referred to in the citation occurred. It must remain posted until all violations cited therein are corrected, or for 3 working days, whichever period is longer (working days meaning Monday through Friday, not including weekends and federal holidays).

11.12 Informal Conference

Fluor may request a meeting for informal discussion with the Area Director concerning results of the inspection (abatement, dates, citations, penalties). A request for an informal discussion cannot extend the 15-working day period allowed for filing the notice of contest. Therefore, a request for an informal discussion should be brought to the attention of the Area Director before the end of the 15 working days allowed for filing a notice of contest, preferably as soon as possible.

11.13 Abatement

An employee or representative of employees may file a notice (letter) to contest the reasonableness of the time stated in the citation for the abatement of the alleged violation(s).

Alleged violations that are not contested will be corrected within the abatement period specified in the citation. Failure to correct an alleged violation within the abatement period may result in further proposed penalties for each day the alleged violation has not been corrected. Timely correction of an alleged violation does not affect the initial proposed penalty.

Correction of alleged violations that have an abatement period of 30 days or less must be reported in writing to the Area Director promptly upon correction. Reports of correction will show specific corrective action of each alleged violation and the date of action. On

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alleged violations having an abatement date of more than 30 days, a written progress report must be submitted each 30 days. The progress report should detail what has been done, what remains to be done, and the time needed too fully abate each violation. When the alleged violation is fully abated, the Area Director should be advised.

11.14 Responsibilities and Notification Requirements

In order to retain and not lose certain rights by default and become liable for fines, Fluor will take the following steps whenever the facility is subjected to an OSHA inspection, fatality, or multiple hospitalization incidents:

- Immediately notify Facility Management/HSE Representative and the Business Unit HSE Lead.
- Prepare an accurate report of the date, time, and nature of inspection or incident. Provide photographs, statement of witnesses, and identity of the people involved.
- Confirm that the reference to, and description of, the alleged violation as it appears in the citation is precise and accurate. Compare the citation and narrative with the text of the standard/regulation.
- Take corrective action within the period of time required by the citation, and advise the OSHA Area Director in writing of the specific corrective action taken and the date of such action.
- Verify the posting requirement with respect to the citation is fulfilled (until all violations cited are corrected or for 3 working days, whichever period is longer).
- Prepare a comprehensive, detailed, and factual analysis of the alleged violation (identifying/including any incident(s) arising therefrom) in cooperation with our liability insurers, if appropriate. The results of this analysis will be carefully weighed against the requirements of the regulation in order to determine whether or not we have a basis for contesting the citation and/or penalty.
- Notify Facility Management, HSE Representative, and the Business Unit HSE Lead promptly of any fatality, multiple hospitalization incidents, or any serious injury regarding hospitalization in excess of 24 hours.
- Federal OSHA requires notification within 48 hours of any fatality or incident resulting in hospitalization of 5 or more employees. Jobsites in states with approved OSHA plans will report fatalities, serious injuries, and multiple hospitalization cases as required by the state plan.

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- Facility Management/HSE Representative will forward copies of citations, notices, legal items, and all correspondence pertaining to OSHA matters promptly and distribute as follows:

  1 Copy – Business Unit HSE Lead
  1 Copy – Legal Department

12.0 ELECTRICAL APPLIANCES

12.1 Purpose

This section describes the requirements for the use of personal electrical appliances (including departmental and project appliances) in the facility.

12.2 Approval

Specific approval is required for use of personal electrical devices that consume more than 50 watts.

Requests for use of any personal electrical device will be submitted over the supervisor's signature to Facility Management for approval. The request should include department/project, type of appliance, location of appliance, responsible person, and the supervisor's signature.

12.3 General Safety Requirements

All electrical items will be approved by an OSHA-approved nationally recognized testing laboratory such as UL, or FM. If not in U.S., the applicable standards agency will do the approval.

Working spaces, walkways, and similar locations will be kept clear of cords so as not to create a hazard to employee safety.

12.4 Specific Appliances/Devices

Under no circumstances will immersion-type water heaters, hot plates, "hot coils." or electric space heaters be permitted within the facility. When required due to HVAC constraints, construction, or repair activity, approved space heaters with full safety features may be approved by Facility Management.

Coffeemakers must have automatic shutoff features, either built in or external, and be on a circuit approved by Facility Management. They must be installed/used on a noncombustible surface.

Electrical extension cords are not permitted, but power strips are acceptable.

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12.5 Inspections

HSE inspections will be made periodically by Facility Management, the HSE Representative, and/or a representative. Violations of these requirements may result in a written HSE violation notice.

13.0 RECORDS AND LOGS

13.1 Purpose

This section identifies and designates responsibility for various records and logs maintained in the facility with regards to HSE.

13.2 Facility HSE Inspection Record

Responsibility:	Facility Management/HSE Representative
Frequency:	Per inspection
Purpose**:**	To record area of facility inspected

Refer to Section 8.8 for incident-related records/logs.

14.0 CONTRACTOR/SUBCONTRACTOR

14.1 Fluor and the Contractor/Subcontractor

Contractors/Subcontractors performing work at the facility will abide by OSHA and/or applicable codes and established HSE standards. Violations of such standards will be cause for termination of the contract/subcontractor.

The Contractor/Subcontractor Site HSE Requirements (Form S19) will be issued to all contractors/subcontractors. This form is also available from Greenville Forms Management (Forms.Management.GVL@fluor.com).

Refer to Practice 000.653.1003, Contractor Selection and Alignment, for details on contracts and HSE language.

14.2 First-Aid and Emergency Services for Contractors/Subcontractors

Refer to Section 4.5, Contractor/Subcontractor Employees Injury/Illness.

14.3 Experience Modification Rate

The Experience Modification Rate (EMR) and Contractor Selection Requirements of a contractor/subcontractor will be reviewed during the preaward evaluation period. A contractor's/subcontractor's EMR is a strong indication of the contractors/subcontractor's ability to manage all aspects of a contract, including HSE.

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15.0 SEVERE WEATHER

15.1 Purpose

This section describes the requirements regarding severe weather. Severe weather for the facility is defined as:

- Any weather condition that is a reasonable threat to the safety of employees either while at our facility or in transit to or from the facility
- Any weather condition that is a reasonable threat to cause physical damage to the facility

15.2 Responsibilities

Facility Management has the responsibility to obtain information concerning any weather condition that is a potential threat. Information may be obtained by monitoring the local weather service or other local information sources.

15.3 General

A hurricane/typhoon is one of the most violent weather conditions to be expected in a coastal region. As a result of a hurricane, winds blow with lethal velocity, the ocean develops an inundating surge, and as the hurricane moves ashore, tornadoes may descend from the advancing bands of thunder clouds.

Flooding in the area is another threat as a result of severe weather. Whether it is the result of a hurricane/typhoon or a storm, torrential rainfall can produce massive flooding.

15.4 Severe Weather Notification

Facility Management will make a determination whether or not the weather conditions are severe enough to close the facility.

Based upon information received, Facility Management will decide the following:

- Whether to keep employees informed of impending severe weather
- Whether to dismiss employees from work
- If dismissed, when employees are to return to work

15.5 Hurricanes/Typhoons

Terms commonly used during hurricane/typhoon season are:

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Tropical Disturbance – An area of disturbed weather that has the potential for storm development.

Tropical Depression – A closed, low-pressure circulation with winds up to 39 mph (62.8 kph).

Tropical Storm – A closed, low-pressure circulation at the surface with winds 39 to 73 mph (62.8 to 117.5 kph).

Hurricane/Typhoon – A closed, low-pressure circulation with winds greater than 74 mph (119.1 kph).

Gale Warning – When winds of 38 to 55 mph (61.2 to 88.5 kph) are expected.

Small Craft Advisory – Advises small craft operators to take precautions and not venture into the open water.

Hurricane/Typhoon Watch – Hurricane/typhoon may threaten the area within 24 hours.

Note: *This is for the center of the storm, unless specified to be the arrival of hurricane/typhoon force winds.*

Hurricane/Typhoon Warning – Hurricane/typhoon force winds or high tides and seas are probable, in the area, within 24 hours.

Recommended actions to follow during hurricane/typhoon threat:

Stay tuned to a local radio or television station for the latest local weather service and national hurricane center, as well as special instructions from the local governmental response agencies.

Check battery-powered equipment – your battery-operated radio could be your only source of information, and flashlights will be needed if utility services are interrupted.

Keep your car fueled should evacuation be necessary. Service stations may be inoperative after the storm strikes.

Store drinking water in clean bathtubs, jugs, bottles, and cooking utensils, as the town's water system may be contaminated or damaged by the storm.

Board up windows or protect them with storm shutters or tape. Danger to small windows is mainly from wind-driven debris. Larger windows may be broken by wind pressure. Although tape may not keep the window from breaking, it is an effective way of preventing flying glass.

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Secure outdoor objects that might be blown away. Garbage cans, garden tools, toys, signs, porch furniture, and a number of other harmless items become deadly missiles in hurricane/typhoon force winds.

Moor your boat securely before the storm arrives, or move it to a designated safe area.

Leave early from low-lying beach areas that may be swept by high tides or storm waves. Leave mobile homes for more substantial shelters as they are particularly vulnerable to overturning in strong winds.

Be aware that some areas may flood long before the arrival of the storm. Your escape may be further complicated by the fact that the density of population of some areas will make it impossible for a few roads to accommodate everyone within a short period of time. Don't get caught by the hurricane/typhoon while in your car or on an open coastal road.

If local government advises evacuation of your area, **do so immediately.** Keep your car radio on to listen for further instructions such as the location of emergency shelters.

To make these actions easier, an annual preparation for the hurricane/typhoon season should include checking to see that a supply of nonperishable food, first-aid kit, fire extinguisher, battery-powered radio, flashlights, and extra batteries are readily available.

Hurricane/Typhoon Categories/Classes

Category/ Class	Sustained Wind (MPH)	Storm Surge (FT)	Central Pressure (MB)	(IN)	Damage
1	74-95	4-5	>980	>28.91	Minimal
2	96-110	6-8	965-980	28.49-28.91	Moderate
3	111-130	9-12	945-964	27.89-28.48	Extensive
4	131-155	13-18	920-944	27.17-27.88	Extreme
5	>155	>18	<920	<27.17	Catastrophic

Hurricane/Typhoon Damage

Category/Class 1 – Primary damage to trees, shrubs, foliage, and unanchored mobile homes. Minor damage to piers and coastal structures. Signs damaged.

Category/Class 2 – Considerable damage to shrubs, trees, and foliage, with some trees blown down. Major damage to exposed mobile homes. Considerable damage to piers and coastal structures. Some coastal flooding.

Category/Class 3 – Foliage torn from trees and large trees blown down. Mobile homes destroyed. Many smaller piers and coastal structures destroyed. Some structural damage to small buildings. Serious coastal flooding. Large structures near coast damaged by storm surge.

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Category/Class 4 – Trees and shrubs blown down. Complete destruction of mobile homes. Destruction of roofs on many small residences. Major damage to lower floors of structures near coast from storm surge. Flooding common.

Category/Class 5 – Trees and shrubs blown down. Most signs blown down. Considerable roof damage and destruction to all types of buildings. Small buildings overturned or blown away. Some complete building failures. Major damage to lower floors of all structures less than 15 feet (4.6 meters) above sea level near the coast. Flooding common.

15.6 Flooding

Prepare a checklist of items you want to protect from floodwaters and measures that you need to take. Keep a battery-operated radio and a flashlight, both with extra batteries, available for use. Park your car nearby so that you can use your radio if electrical power is disrupted or to drive away if it is necessary to evacuate. Make sure that the car is filled with gasoline.

Stay tuned to radio, TV, and the local weather service (radio or local information source) for current information, further instructions, and evacuation routes. The local public emergency management can be contacted for up-to-date information and advisories.
Determine in advance who needs transportation in case of an evacuation. If you leave your home earlier than others, tell a neighbor.

Plan now where you will go if you must evacuate your home. Local relief groups/agencies may provide sheltering. Locations of shelters may be broadcast.

Do not drive or walk into water that is flowing across low-water crossings, bridges, or any other area. The road may be washed out.

Parents should caution children not to play in or near rising waters in rivers and creeks. Flash flooding can occur suddenly and carry children downstream.

15.7 Thunderstorm/Tornado

A severe thunderstorm should be watched very closely for the signs of a tornado.

A tornado watch means that conditions exist that are right for tornado formation.

A tornado warning means that a tornado has been sighted on the ground. Listen to radio, TV, or other monitoring devices for tornado advisories. The warning may or may not affect your local area.

Stay away from windows, doors, and outside walls. Protect your head! An interior room or closet is the best location.

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In schools, nursing homes, hospitals, factories, and shopping centers, go to predesigned shelter areas. Interior hallways on the lowest floor are usually best.

In high-rise buildings, go to interior small rooms or hallways.

In mobile homes or vehicles, leave and go to a sturdier structure. If there is no shelter nearby, lie flat in the nearest ditch, ravine, or culvert with your hands shielding your head. Leave as soon as tornado danger has passed to avoid the possible onslaught of flood waters that often accompany thunderstorms.

Do not open windows - it is not a change in pressure that does damage during a tornado, but the force of the wind. Stay clear of all windows.

For protection, go to a basement, underground shelter, bathtub, or inside a room or closet on the lowest level. The shelter should be in the home or yard and reachable in 2 to 3 minutes. **Be sure to take** a battery-operated radio, water, and a first-aid kit. The radio will advise when it is safe to come out, and will keep everyone informed. If hit or trapped, turn the volume up to maximum. Voices over the radio may keep one from going into shock if hurt, and a loud radio will attract rescue persons. Be sure to take extra batteries

Automobiles will not protect you!!

If you are caught outside, look for a funnel-shaped cloud with obvious rotational motion. As a tornado develops, it will produce a loud roar that grows louder as the funnel cloud touches the ground. When nearby, a tornado has a loud sound comparable to the combined roars of several locomotives.

If you see a tornado and it looks like it is not moving, it is heading straight at you. Take cover immediately.

To report a funnel cloud, call 911 or the local emergency number and report the following:

- Identify yourself and give your location
- Your telephone number
- Approximate location of tornado (direction from your location such as north, east, northwest, etc.)
- The direction of movement of the tornado
- Approximate size of the funnel cloud
- Approximate size of hail, in inches (if any)
- An estimate of the amount of rain in inches/hour

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15.8 Lightning

When a thunderstorm threatens, get inside a home, a large building, or an automobile and avoid contact with metal surfaces. Do not use the telephone except only in dire emergency situations.

If outside, do not stand underneath a natural lightning rod such as a tall isolated tree or a telephone pole on a hilltop, near a large radio antenna, or a metal tower. In open areas, go to a low place such as a ravine or valley.

Get off or away from open water, tractors, and other metal farm equipment or small metal vehicles such as motorcycles, bicycles and golf carts. Stay away from wire fences, clotheslines, metal pipes and rails. Put down golf clubs. If you are in a group in the open, spread out keeping several yards apart.

In a level field or prairie, if you feel your hair "stand on end," lightning may be about to strike your immediate area. Drop to your knees and bend forward putting your hands on your knees. This action may significantly reduce injury. **Do not lie flat on the ground.**

Persons struck by lightning receive a severe electrical shock and may be severely burned. They carry no electrical charge and can be handled safely and should be medically treated as soon as possible.

15.9 HSE Management System Requirements Document

Refer to Practice 000.653.1200 for additional information and details.

16.0 VEHICLES

16.1 Purpose

This section defines the requirements for the use of vehicles during the performance of task-related duties and functions.

16.2 General

Vehicular safety is an important aspect of the HSE program. Employees may spend a considerable amount of time in vehicles in the execution of assigned tasks. It is important for employees to execute a high level of safety responsibility when operating a vehicle either on or off the highway.

16.3 Fleet Vehicles

Fleet vehicles—whether Fluor owned, from a rental or lease agency, or provided by a client or contractor—must be in good working order. If a fleet vehicle is not in good

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working order, it is not to be used until such condition(s) have been repaired to normal operating condition.

When using a fleet vehicle, the driver will comply with the following:

- Possess a valid drivers license.
- Wear a seat belt (and shoulder harness if provided) while the vehicle is in motion.
- Be responsible for passenger safety. All passengers will wear seat belts (and shoulder harness if provided) during time the vehicle is in motion, and it is the responsibility of the driver to confirm such.
- Do not overload the vehicle. A vehicle will not transport persons in excess of the number of seats installed in the vehicle.
- Obey all applicable in-country, federal, state, and local laws when operating the vehicle.
- Obey all posted signs and warnings when driving on private property, sites, or plants.
- Turn off the engine when fueling the vehicle.
- Report any incident involving the vehicle and/or injury immediately, or as soon as reasonably possible to supervisor.

16.4 Personal Vehicles

Personnel who use their personal vehicle in the performance of company business or receive mileage reimbursement, will comply with the policies and procedures set forth in this section.

16.5 Safe Driving Tips

The following are some basic safe driving tips regardless of the type of vehicle you are driving (excerpted from Consumer Reports Online):

- **Find a good driving position.** Position the seat so you can just hang your wrist over the top of the steering wheel when you extend your arm. Adjust the head restraint so it's directly behind but not touching your head. Hold the steering wheel at about 3 and 9 o'clock so you can steer left or right quickly and precisely. If you drape your arm over the top of the wheel, the air bag can break your arm or push it into your face if it deploys.

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- **Go with the flow.** Keep up with traffic if conditions permit. A wide disparity in speeds is dangerous.
- **Be a loner.** Avoid clumps of cars on the highway so you're not involved in someone else's incident.
- **Keep track of traffic.** Look far down the road and keep your eyes moving to spot any problems before you reach them. Check mirrors frequently.
- **Think ahead.** Keep thinking of possible traffic emergencies and plan escape routes.
- **Don't be a left-lane hog.** The left lane is a passing lane, not a fast lane. Keep right except to pass. Don't try to block speeders – leave the policing to the police.
- **Signal.** Signal lane changes as well as turns.
- **Wait to turn left.** When stopped in traffic waiting to turn left, keep the wheels aimed straight ahead until the way is clear. If you wait with the wheels cut to the left, someone could hit you from behind and push you into incoming traffic.
- **Help merge.** If you're in the right lane of a multilane highway, help entering traffic merge safely and smoothly by temporarily moving over a lane if traffic permits.
- **Brake at the right time.** Slow down to a safe speed before entering a turn. Hard braking in mid-corner can upset the car's balance.
- **Try the ABS.** If your car has an antilock brake system, the pedal's vibration and rumbling noise could startle you the first time. Don't wait for an emergency. On a rainy day, find a deserted, slippery road or empty parking lot and hit the brakes hard enough to actuate the ABS, so you'll know what it feels like.
- **Don't use the phone while driving.** A recent study found that using a car phone while driving quadruples the risk of having an incident. The risk was the same for hands-off phones as it was for phones people hold to their ear. The use of cell phones is discouraged.
- **Protect your night vision.** Don't stare at approaching headlights. If you're being blinded, focus on the right shoulder of the road.
- **Rest.** Don't drive when sleepy. If your eyes tend to stay focused on one spot, that's a danger sign. Pull over as soon as you find a safe place and nap for a few minutes.

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16.6 Off-Road Use and Construction Vehicles

In the performance of company business, it may be necessary to operate or ride in a vehicle in areas other than on normal road surfaces. The use of vehicles off-road requires the operator and passenger(s) to employ additional safety procedures above that stipulated for vehicles operated on public and construction/site roads.

Vehicles operated off-road will comply with the following:

- Be suitable for the terrain. Normally, automobiles will not be used off-road.
- Be operated by a driver that is capable of handling the vehicle in the given terrain, and the driver must not exceed his/her operating skills of the vehicle.
- Yield the right-of-way to pedestrians.
- Comply with directions of all signs, warnings, and flagmen.
- Stay well clear of all operating equipment. The driver must remain alert for the possible pivoting, turning, or reversing of construction equipment.
- Do not enter into roped-off, barricaded, or posted areas where hazards may or actually exist.
- Do not drive over welding cables or hoses, power cables, air hoses, water lines, or similar type objects.
- When reversing the vehicle, use extreme caution to avoid personnel, equipment, or other obstacles. If required to reverse long distances, the driver should stop frequently and walk around the vehicle before continuing backwards. An observer stationed with clear vision of the rear path is recommended whenever a vehicle is backing.
- Do not push the vehicle if it becomes stuck. Stalled or stuck vehicles will be towed.
- Do not allow smoking in the vehicle.
- Do not operate a vehicle with a catalytic converter exhaust system in grass that is within 3 inches (7.6 centimeters) of the exhaust system.
- Park the vehicle as follows:
  - Park in designated parking areas if available. Avoid parking under or near power lines.

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– Parked vehicles will not hinder, restrict, or obstruct working construction equipment.

– Parked vehicles will have the parking brake set. Vehicles with manual transmissions will be left in gear. Vehicles with automatic transmissions will be left in park.

– Unattended, parked vehicles will not be left running. The engine must be turned off.

Passengers of off-road vehicles will comply with the following:

- Not ride on construction equipment unless such equipment has a specific passenger seat or riding area.

- Ride in the bed of a truck only if:

  No cargo is carried with the passengers.
  Persons are seated away from the tailgate.
  – Vehicle does not exceed 20 mph (32.2 kph)

Refer to Practice 000.653.3200, Motorized Heavy Equipment and Light Vehicles.

16.7 Fueling vehicles

Vehicles will be fueled as follows:

- Fuel will be the correct type and grade for the vehicle.
- Fuel nozzle will have an automatic shutoff device.
- Vehicle will be turned off before fueling.
- No smoking or open flames will be permitted within 50 feet (15.2 meters) of the fueling area.

16.8 HSE Management System Requirements Document

Refer to Practice 000.653.1004, Travel Safety, and the heavy equipment/transportation-related practices in the .32xx series.

17.0 SECURITY ADVISORY SYSTEM

17.1 General

This section describes the security plans and actions to be implemented for the facility in response to Fluor Corporate Security threat advisories. These procedures are for the protection and safety of persons in the facility. Management reserves the right to institute these procedures in whole or in part as deemed appropriate by management.

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17.2 Responsibilities

Facility Management is responsible for the establishment and implementation of the procedures herein. The Office Senior Management may delegate the following responsibilities, subject to review, as follows:

Facility Management

- Interview and support the selection of third party security services.
- Develop and implement the Office Security Plan.
- Serve as liaison with local law enforcement authorities.
- Verify that the third party security services provider meets office expectations.
- Coordinate third party security service personnel.
- Conduct audits of third party security providers and produce a written report.
- Report all security breaches immediately to the General Manager.

Third Party Security Supplier (if applicable)

- Provide qualified, uniformed security personnel 7 days a week, 24 hours a day upon request.
- Coordinate the activities of these personnel to support facility needs.
- Assist Facility Management in developing a relationship with local law enforcement authorities.
- Report any breaches of security immediately to Facility Management.
- Maintain control and auditable documentation of all personnel, equipment, and personal access to, or egress from, the office.

Contractors/Subcontractors

- Ensure employees under their direction at the office to obey all security rules and regulations.
- Secure tools, equipment, and materials.
- Report any losses of tools, equipment, materials, or other breaches of security to the Chief Security Supervisor as soon as they are discovered.
- Provide all employees under their direction to report to the facility with a picture identification (ID) badge visibly displayed on the employee.

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- Be observant of personal carry items to prevent employees from bringing alcohol, firearms, or illegal drugs to and from the facility.

17.3 Security Alert Levels

The following 5 Fluor security alert levels (color-coded) coincide with the U.S. Homeland Security Advisory System:

- **Low**: Color-code **Green**. Normal state. There is a **low** risk of terrorist attack or threat from external sources.
- **Guarded:** Color-code **Blue**. There is a **general** threat of terrorist attack or threat from external sources.
- **Elevated:** Color-code **Yellow**. There is a **significant** risk of terrorist attack or threat from external sources.
- **High:** Color-code **Orange**. There is a **high** risk of terrorist attack or threat from external sources.
- **Severe:** Color-code **Red**. There is a **severe** risk of terrorist attack or threat from external sources.

Corporate Security has the responsibility for issuing the current Fluor security alert level. Corporate Security may issue Fluor alert security levels on a global, country, state, region, or site basis.

Senior Facility Management will institute the appropriate measures outlined in this practice based upon the current security alert level issued by Corporate Security.

17.4 Access and Egress

All personnel (refer to Visitor Badges below) entering the facility will have a picture ID badge that will be worn in a readily visible position at all times.

- **Low/Green:** Stop, question, and assist anyone observed not displaying a picture ID badge.
- **Guarded/Blue:** In addition to Low requirements, spot-check accesses and/or facility areas on a random basis to confirm that personnel are displaying ID badges.
- **Elevated/Yellow:** In addition to Guarded requirements, spot-check daily 20 percent of facility personnel.
- **High/Orange**: In addition to Guarded requirements, spot-check daily 50 percent of facility personnel.

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- **Severe/Red:** In addition to Guarded requirements, check 100 percent of facility personnel entering the facility.

Facility Visitors

Visitor admission to the Facility will require sign-in / sign-out at the designated location.

Visitor Badges

All visitors will provide a government-issued picture ID such as a driver's license or passport, in order to obtain a visitor's badge. Fluor Management may vouch for the identity of the visitor in lieu of a government-issued picture ID. All visitors will display a visitor's badge worn in a readily visible position at all times when in the facility. There will be a record/log of the visitor's name, company, date, and whom they are visiting maintained at the designated sign-in locations.

All visitors must be escorted.

17.5 Facility Loading Dock Area (if applicable)

- **Low/Green:** Any vehicle not known to dock personnel should be questioned.
- **Guarded/Blue:** Any vehicle not known to dock personnel should be questioned.
- **Elevated/Yellow**: Any vehicle not known to dock personnel should be questioned.
- **High/Orange**: Any vehicle not known to dock personnel will be verified as having business at the dock. Dock area will not be left unattended when vehicles are present.
- **Severe/Red:** In addition to High requirements, all vehicles will be stopped at the inner loop circle and Dock Road and verified as having legitimate deliveries or business in the dock area. Once cleared, vehicles may proceed to dock or parking areas under line of sight supervision.

17.6 Random Search

Fluor reserves the right to search any person and/or the property of Fluor personnel, contractor/subcontractor employees, supplierss, and visitors when on facility property to the extent permitted under state and federal law. Refusing to submit to such a search may result in disciplinary action up to and including termination**.**

Facility Management and/or Security may conduct random searches of personal carry items as they enter/exit the facility. Personal carry items such as purses, briefcases, luggage, and laptop computers in a carrying case are exempt from requiring Property/Material Passes when exiting, but are still subject to search.

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Random search entering the facility (does not apply to exiting personnel):

- **Low/Green** No random search required.
- **Guarded/Blue** No random search required.
- **Elevated/Yellow** No random search required.
- **High/Orange** Random at 25 percent.
- **Severe/Red** Search 100 percent.

Vehicles that come into close proximity of the facility (includes company, delivery, and personal) (if under control of Facility Management) are subject to search:

- **Low/Green** No random search required.
- **Guarded/Blue** No random search required.
- **Elevated/Yellow** No random search required.
- **High/Orange** Random at 25 percent.
- **Severe/Red** Search 100 percent.

17.7 Parking (if applicable)

Vehicles will not be parked in such a manner as to slow down, hinder, or interfere with the free flow of traffic, or block or interfere with the use of fire hydrants or fire equipment. Vehicles will not be left unattended with the motor running.

Parking will be permitted in designated areas only. All vehicles on the property will be at the risk of the vehicle owner; Fluor does not accept responsibility for damage or theft to such vehicles.

- **Low/Green** Random check parking areas for unauthorized vehicles.
- **Guarded/Blue** Random check parking areas for unauthorized vehicles.
- **Elevated/Yellow** Random check parking areas for unauthorized vehicles.
- **High/Orange** Patrol frequently parking areas for unauthorized vehicles.
- **Severe/Red** In addition to High requirements, parking areas and roads that provide close access to the facility to be barricaded to prevent entry.

18.0 ERGOMONICS

18.1 Purpose

This section provides information and guidance to Fluor managers, supervisors, and employees in the area of ergonomics. The use of proper ergonomics will assist in achieving higher quality work, greater productivity, and, at the same time, reduce the potential for work-related injuries.

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18.2 Policy

Ergonomic principles will be used in planning and conducting tasks associated with Fluor's normal business operations.

18.3 Responsibilities

Managers

Managers and supervisors have the responsibility to identify tasks where potential ergonomic improvement is necessary. They need to instruct employees in the proper use of hand tools, power tools, lifting devices, and the proper adjustment of their workstations.

Employees

Employees are expected to identify to their manager or supervisor tasks that may need ergonomic evaluation. Employees are expected to use appropriate lift-assist devices and procedures when lifting, follow procedures and training provided in performing tasks, and use proper ergonomic methods at all times.

Facility Management

Facility Management/HSE will provide technical assistance to Fluor employees in the area of ergonomics.

Facility Management and/or HSE may review, before purchase, new equipment, tools, and furniture for ergonomic concepts and design functions.

Facility Management and/or HSE will review individual task assignments for unacceptable ergonomic stresses at the request of a manager, supervisor, or an employee.

Facility Management and/or HSE will research and identify ergonomically correct equipment or workstation components at the request of a manager, supervisor, or employee.

18.4 Lifting

Manual material handling and lifting activities will be performed in a manner that prevents musculoskeletal injuries.

Employees with medical restrictions or who are otherwise unable to safely lift a particular object will be accommodated with lifting aids.

Objects heavier than 40 pounds (18.1 kilograms) will not be lifted by an individual without using of lifting aids, or lifting with 2 or more persons.

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Drums of liquids or other materials will not be lifted without using drum carts, dollies, hoists, or other lifting aids.

Bags of sand, grout, or other materials should be ordered in quantities of 40 pounds (18.1 kilograms) or less per package.

Objects weighing more than 40 pounds (18.1 kilograms) will be loaded or unloaded from vehicles with the aid of hoists, lift gates, or by manual methods using 2 or more persons.

Manual material handling will meet other specifications contained in the NIOSH Lifting Guides.

When lifting, all employees should follow the steps contained in the Fluor Smart Lift Program. All employees are encouraged to complete this important program on how to lift safely.

- **Place your lift and test the load.** Before lifting, think about the item you are going to move and ask yourself, "Can I lift this alone?" "Is the path clear?" "Is it too awkward for one person?" Also, test the load to see approximately how heavy it is before lifting.
- **Ask for help.** If the load is too heavy or too awkward for you to lift, ask for assistance.
- **Get a firm footing.** Keep your feet apart for a stable base.
- **Bend your knees.** Don't bend at the waist. Keep the principles of leverage in mind.
- **Tighten your stomach muscles.** Abdominal muscles support your spine when you lift. Train muscle groups to work together.
- **Lift with your legs.** Let your powerful leg muscles do most of the work.
- **Keep the load close.** The closer the load is to your body, the less force it exerts on your back.
- **Keep your back straight.** Don't add the weight of your body to the load.

Refer to Practice 000.653.3305, Manual Handling, for additional information and details.

18.5 Office Workstation

Office workstations will be designed and used in a manner that optimizes personal ergonomics.

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Facility Management will maintain the design specifications for office workstations.

Individual disabilities, physical abilities and limitations, and size may be taken into consideration when designing and implementing an office workstation.

Furniture will be purchased, installed, and used in a manner that promotes a sound ergonomic environment.

Information will be provided to employees on personal ergonomics and how to adjust their workstations. Attachment 01, Computer Workstation Ergonomics, provides a detailed guideline on the proper methods to set up a workstation.

Employees experiencing pain or fatigue associated with keyboard use, prolonged sitting, or other activities will report this to their supervisor or Department Manager so that measures to reduce symptoms can be implemented. An assessment of the workstation may be performed to assist in identifying how the workstation can be adjusted to better fit the needs of the individual (refer to Form 000.653.F0200, Computer Workstation and Ergonomics Checklist).

Periods of 1 to 2-minute rest, breaks, or stretching are highly recommended 3 to 4 times for each 1 hour of computer activity as standard guidelines of safe computer use.

18.6 Ergonomics "Point of Contact" Plan

Employees should report any early symptoms of pain and discomfort to their manager, supervisor, or HSE Representative. The employee's manager or supervisor should be the point of contact when assistance from HSE is necessary.

The employee's workstation should be assessed as soon as possible. A job safety analysis (JSA) or safety task assignment (STA) should also be conducted by the manager or supervisor with the employee to develop a list of current job tasks, assigning a percentage of time spent on each activity. The JSA/STA can assist in determining potential areas of ergonomic improvement.

The HSE Representative will serve as the main ergonomics contact for the facility.

The HSE representative will communicate with the employee's manager or supervisor to discuss ergonomic issues. Together, they will conduct an interview with the employee in order to help determine the scope of the ergonomic issues. When performing the interview, asking the following questions will help in defining the issue:

- Did symptoms come on suddenly or has this been a chronic problem?
- Have you been doing any special tedious job tasks?
- Do you have pain at night?

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- Do you have pain while off the job?
- Has your workstation been assessed recently? Have you changed anything?
- Do you take stretching breaks every hour and vary your tasks?
- What do you think the problem could be caused by?
- What tasks do you perform at the office that you believe cause your symptoms to reappear?
- What can we do for you to make you more comfortable?
- What lifestyle/sporting activities are you involved in outside of the work environment?
- Do you take work home, if so, how often?
- How many hours do you use your home computer each week?

At the end of the interview, the manager, supervisor, and HSE Representative should outline a path forward. The path forward should be communicated to the employee and solicit employee comments and suggestions concerning the path forward. Each incident will be handled on a case-by-case basis.

If it is determined that a visit to an OHP is warranted, the HSE Representative will discuss the situation with the employee's manager. In conjunction with the employee, an appointment for the employee to visit the OHP will be established.

The HSE Representative will develop a medical evaluation letter to be forwarded to the OHP.

The HSE Representative will provide the employee with a Return-to-Work Notice. The manager, supervisor, or the HSE Representative should accompany the employee to the OHP.

After the OHP visit, the employee must report back to the office with the completed Return–to-Work Notice from the OHP. This must be immediately submitted to the HSE Representative.

All subsequent activities will follow procedures currently in place for medical care of work-related injuries.

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18.7 HSE Management System Requirements Document

Refer to Practice 000.653.2009, Ergonomics (currently under development).

19.0 MAIL HANDLING (INCOMING)

19.1 Purpose

This section describes the process for receiving, sorting, and distributing incoming mail to minimize the threat of an actual or hoax anthrax or other biological agent exposure in a Fluor facility. This section includes the following:

- Mailroom/initial mail receiving point
- Mail distribution – internal
- Mail recipient

19.2 General

The threat of a suspicious package or letter has been addressed in other procedures at Fluor facilities for a number of years. Many of those procedures, which are already in place, will be restated in this section to maintain consistency between all facilities/offices in their approach to the handling of incoming mail.

Since the terrorist activities that occurred in the U.S. on September 11, 2001, there has been a significant increase in biological threat activities globally. Such biological threats have used the mail system as the delivery vehicle and have used anthrax as the biological agent.

While the number of actual biological threats is very small, there have been a large number of hoax threats using harmless powders to intimidate or scare the intended letter or package recipient. By instituting the process contained herein, each Fluor office and facility can minimize their exposure to an actual or hoax threat.

19.3 Incoming Mail Initial Screening

Mailroom/Initial Mail Receiving Point

Each Fluor office or facility will screen all incoming mail/packages before any further internal distribution. This screening process should normally be accomplished by the person, group, or contractor designated to pickup and receive incoming mail.

Responsibilities

The Fluor manager responsible for personnel tasked for receiving incoming mail and packages will verify that each person associated with the incoming mail process is knowledgeable and understands the contents of the requirements outlined in this practice.

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Each person will be responsible to bring to the attention of management any area of this procedure that they may not understand.

General Policies Mailroom

The process concerning mailrooms also applies to initial mail receipt areas.

Access to the mailroom should be limited. Personnel not associated with the incoming mail process should not be in the mailroom. For facilities that do not have a designated mailroom, when incoming mail is being screened, limit personnel in the vicinity of the screening area.

Mailroom employees will not eat, drink, or smoke around incoming mail.

As an extra level of precaution, personnel initially handling and screening incoming mail should wear latex gloves until further notice.

After handling incoming mail, hands must be thoroughly washed with warm water (as warm as possible without causing discomfort) and soap. The use of a consumer-available antibacterial soap is preferable; however, any consumer-available soap will do an adequate job of removing any potential bacteria. The key factor in the hand-washing process is warm water.

Latex gloves will be made available and used by all handlers of incoming mail and general mailroom personnel. Latex gloves will be made available to all clerical, administrative, and support personnel on an as-requested basis. Employees with broken skin, cuts, or abrasions will be advised to wear latex gloves when opening or handling mail.

Prescreening

Incoming mail that has not been screened will be kept separate from screened and outgoing mail.

Incoming mail and packages will be screened by examining each letter or package for the following conditions:

- Postmarked from a country directing a terrorist campaign
- A sender's writing that features a foreign style
- Unbalanced contents or heavier on one side
- Is or seems excessively heavy for its volume
- Any feeling of springiness, but it does not bend or flex
- Protruding wires that become loose and penetrate the wrapping or envelope
- Wire or spring holes in its outer wrapping
- Grease marks on the wrapping paper

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- A smell like almonds or another strange odor
- Sent without your request (generally not known to incoming mail handlers)
- Suspicious packaging such as tape around all edges instead of a normal flap
- A stiffness that suggests stiff cardboard, metal, or plastic inside
- Marked "personal," "confidential," "private," or "eyes-only"
- Misspelled words, particularly words in common business use
- Excess postage or postage from a foreign country (as an international corporation, the key here is too much postage)
- Hand printing, no return address, or addressed to a high-ranking company executive
- Poorly typed or written address
- Incorrect titles for people who work in the facility or office
- Addressed to a title, but no name
- Labeling such as "ANTHRAX" or "THIS IS A THREAT"
- Rattling or sloshing sound when handled
- A city, state, province, or country postmark does not match return address

Note: *Some of the conditions to look for during the screening process have to do with foreign postmarks or mail and packages from a foreign country. Fluor, as a global company, routinely receives mail from foreign countries. While the foreign indications cannot be ignored, being familiar with foreign countries that normally send mail and packages to the facility will help in determining if that condition warrants the letter or package being determined as suspicious.*

If any of the previously listed conditions are observed, **stop**. Proceed immediately to **Suspicious Letter or Package** section below.

Once a letter or package has been initially screened, place it in an area separate from unscreened mail/packages.

Mail/packages that have been screened and not deemed suspicious are ready for normal internal distribution.

Suspicious Letter or Package

If a letter or package has been determined to be suspicious, do not panic.

Do not open the letter or package.

Do not shake or roughly handle the letter or package.

Place the letter package in a clear plastic bag (or other suitable container) and seal the bag. For letters, clear plastic freezer bags work well, and large clear trash bags can be used for larger packages.

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If you do not have any container available, then cover the envelope or package with anything available (such as clothing, paper, or upside down trashcan). Once the item is covered, **leave it that way**. Do not remove the cover.

Place the sealed letter or package (with shipping address viewable) in an area away from other mail/packages and activities. Maintain security by not allowing any unauthorized persons in the vicinity of the suspicious letter or package.

During the screening process, many letters or packages may be determined suspicious but not necessarily raise undue concern. For those letters or packages, contact the intended addressee and request that they come to the screening area to view the letter or package.

Without touching the letter or package, let the addressee view the letter/package. If the intended receiver can verify the sender of the letter or package, then it may be removed from the suspicious area and distributed.

If the intended receiver cannot verify the source of the letter or package, then continue to consider the letter or package as suspicious.

Once a suspicious letter or package has been identified, stop all activities in the area.

Evacuate personnel from the immediate area and maintain security of the area.

Contact the responsible manager or supervisor and the local HSE Representative.

Contact the Corporate Security Crisis Hotline toll-free at 1-866-852-4455, or collect from anywhere at 949-349-2282.

The responsible manager should promptly contact local law enforcement and tell them what has been received. Local law enforcement will provide instructions on how to proceed.

Each person who touched the suspicious letter or package must wash his/her hands for one minute.

Make a list of all persons that came into contact or touched the suspicious letter or package. This list will be needed by local law enforcement.

19.4 Mail Distribution – Internal

When a letter or package has been screened and not identified as suspicious, it is ready for distribution internally in the facility.

Whether a large or small distribution system, continued vigilance by mail handlers is important. Even though each letter and package may have been rigorously screened

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before being put into distribution, personnel continuing the screening process during distribution will add another layer of safety to the process.

Responsibilities

The Fluor manager responsible for personnel tasked for distributing internal mail/packages will verify that each person associated with the distribution process is knowledgeable and understands the contents of the requirements outlined in this document. Each person will be responsible to bring to the attention of management any area of this procedure that they may not understand.

Suspicious Letter or Package During Distribution

If, during the mail distribution process, a package is determined suspicious, **stop**.

Return immediately to the incoming mail screening area with the suspicious letter or package and follow the requirements under **Incoming Mail Initial Screening section**.

Mail Recipient

Mail recipients should be familiar with the requirements contained in this practice. Even though all incoming letters and packages may have been carefully screened, continued awareness by recipients is important.

If a mail recipient receives a letter or package that he/she determines is suspicious, notify Fluor Management.

20.0 BIOLOGICAL EXPOSURE PLAN

20.1 Purpose

This section provides a planned response to a biological exposure, whether actual or hoax, in a Fluor office or facility as a result of a terrorist action.

20.2 General

Since the terrorist activities that occurred in the U.S. on September 11, 2001, there has been a significant increase in biological threat activities globally. Such biological threats have used the mail system as the delivery vehicle and have used anthrax as the biological agent.

While the number of actual anthrax threats is very small, there have been a large number of hoax threats using harmless powders to intimidate or scare the intended letter or package recipient.

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Fluor has instituted rigorous incoming mail/packages screening procedures and requirements that are designed to eliminate/minimize the likelihood of an actual exposure incident in an office or facility.

In the unlikely event of an actual exposure incident, the single most important thing is **do not panic.**

There is a high probability that the incident involves a nontoxic powder being used as a hoax to frighten the intended letter/package recipient. Of the few actual exposure events that have occurred, the biological weapon has been anthrax. It is important to remember that if there is an anthrax exposure, **anthrax is a very treatable disease.**

20.3 Exposure Requirements

An exposure will most probably occur during the opening of a letter or package. Indication that there may be a biological hazard is the presence of a powder. Due to the large number of hoaxes, the powders being used range from white to off-white, fine consistency to small granules. Even though the encountered substance is probably a hoax, Fluor will treat the incident as an actual biological exposure until testing proves otherwise.

Once an individual has been exposed, the initial damage is done. Anything other than a planned, calm response will compound the problem and make resolution of the incident that much more difficult.

Exposed personnel are to remain in the immediate area of exposure until the following steps have been completed. Moving about before completing the following will only serve to spread the contamination and potentially contaminate other personnel. Taking the time to complete the following process **will not** increase the hazard of the exposure to the individuals involved:

- Tell all persons not exposed to evacuate the area immediately.
- Notify or have someone notify Fluor Management of the exposure incident.
- Without touching the powder, cover the released powder and letter/package with anything that may be handy such as clothes, paper, or a trashcan.
- If the powder is on your clothes, remove your outer garments. Leave the garments near or adjacent to the actual incident location. The removal of powder-contaminated garments minimizes the spread of the substance as you leave the area. It is understood that removal of outer garments invokes the issue of modesty, however, in this type of situation safety is the overriding factor.
- Leave the immediate area of the exposure.

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- If the exposure area is in a walled office with a door, close the door as you leave.
- If replacement outer garments have been made available and you are no longer in the immediate exposure area (20 feet [6.1 meters] or another office), don the replacement garments.
- Continue to avoid physical contact with other persons.
- Proceed to the nearest shower.
- Place your garments in a plastic bag and tie/seal the bag.
- Shower completely (head-to-toe) for at least 15 minutes with warm water (as warm as possible without causing discomfort) and soap. The use of a consumer-available antibacterial soap is preferable; however, any consumer-available soap will do an adequate job of removing any potential bacteria. The key factor in the showering process is **warm** water.
- If a shower is not immediately available, wash all possible exposed skin using the same criteria as showering. As soon as possible, shower as prescribed.

Once you have showered, you are no longer a threat to other personnel.

20.4 Fluor Management

While the persons that were exposed are completing their initial steps, Fluor Management will be accomplishing the following:

- Notify local law enforcement and emergency response crews.
- Notify the Fluor Security Crisis Hotline at (toll free) 1-866-852-4455 or (collect from anywhere in the world) 949-349-2282.
- Continue the evacuation of the immediate area to the point the incident area can be contained by hard walls and doors.
- Shut down air handlers in the affected area.
- Locate and provide clothing to the persons that had to remove outer garments. Do not hand them the garments. Set them down, out of the immediate area, and allow the individuals to retrieve and don the garments. Do whatever is possible to protect their modesty.
- Identify and make a list of the actual exposed persons and a second list of all persons evacuated from the area of containment.

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- Institute security procedures that prevent unauthorized entry into the contained area.
- Secure the garments, used to travel to the shower and bagged, in a protected area so as not to spread contamination.
- Provide garments to persons who have showered.
- Local law enforcement and/or emergency response crews will provide instructions on what to do until testing of the substance is complete. Testing and subsequent results can take up to 48 hours.
- If the test results show that the powder substance was nontoxic, then business can resume immediately.
- If test results show that it was a toxic exposure, local law enforcement will provide guidance on decontamination of the affected area and treatment of exposed personnel.

20.5 HSE Management System Requirements Document

Refer to Practices 000.653.2101, Bloodborne Pathogens, and 000.653.2103, Infectious Disease Control, for additional information and details.

21.0 RESOURCES

Global Standards	
Australian Government	Safety and Compensation Council; List of National Codes of Practice
	Safety and Compensation Council; List of National Standards
European Union	European Agency for Safety and Health at Work
United Kingdom	Construction Regulations 2007

22.0 REFERENCES

Document ID	**Document Title**
Forms:	
000.653.0000	Health, Safety, and Environmental Management System – Description

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Document ID	Document Title
000.653.1000	HSE General Requirements
000.653.1001	Training and Orientation
000.653.1003	Contractor Selection and Alignment
000.653.1004	Travel Safety
000.653.1100	Awards Program
000.653.1200	Emergency Preparedness (Medical, Fire, Chemical, Weather)
000.653.1201	Injury Management and Workers' Compensation
000.653.1202	Incident Reporting and Investigation
000.653.1203	MIER/MSISR/GIMS
000.653.1304	Pre-Task Planning/Risk Analysis
000.653.1305	Inspections/Assessments and Audits
000.653.2009	Ergonomics (under development)
000.653.2101	Bloodborne Pathogens
000.653.2103	Infectious Disease Control
000.653.3100	Fire Prevention and Protection
000.653.3200	Motorized Heavy Equipment and Light Vehicles
000.653.3305	Manual Handling
Forms:	
000.653.F0100	Job Safety Analysis
000.653.F0112	Return-to-Work Notice
000.653.F0174	Bomb Threat Checklist
000.653.F0193	Project Incident Log
000.653.F0198	Incident Investigation Report
000.653.F0200	Computer Workstation and Ergonomics Checklist
Other Fluor References:	
Policy HR-500	Health, Safety, and Environmental
SkillSoft Course	Field Assignment HSE Guidelines

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Document ID	Document Title
Non-Fluor Documents:	
OSHA 300 Logs	Recordkeeping Forms

23.0 ATTACHMENTS

Attachment No.	Attachment Title
Attachment 01	Computer Workstation Ergonomics

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COMPUTER WORKSTATION ERGONOMICS

Following are examples of problems computer workstation users may encounter, and suggested solutions for addressing those problems. A checklist is also available to help employers and employees identify, analyze, and control musculoskeletal disorder (MSD) hazards in computer workstation tasks.

A substantial number of computer-related injuries can be prevented with proper knowledge and training, but many employees are unaware of the ergonomic risk factors they face while performing their tasks. For example, the fingers of a typist may exert up to 25 tons of force each day!

Workstation

Chair

Keyboard & Mouse

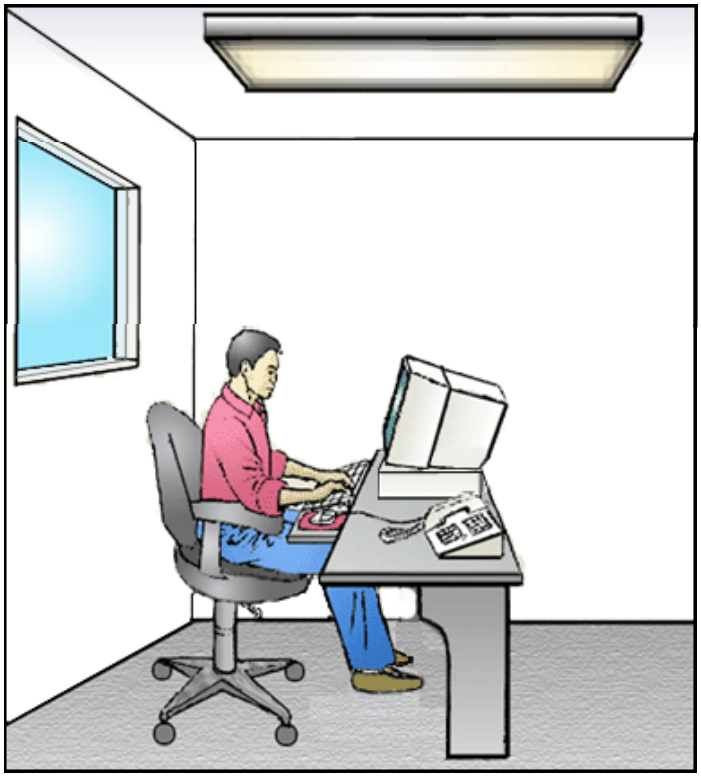
Monitor & Document

Environment

Lighting

Glare

Work Process



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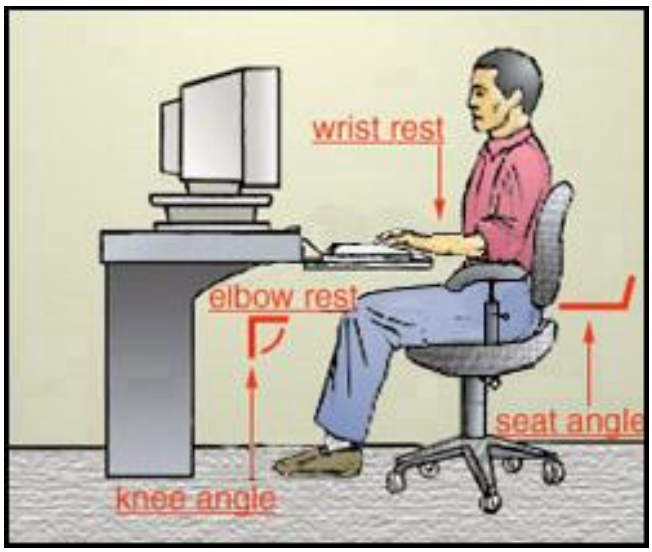
1.0 WORKSTATION

1.1 Chair

A properly designed and adjusted chair will provide appropriate support to the back, legs, buttocks, and arms. This support can reduce contact stress, over exertion and fatigue. It will also promote proper circulation to the extremities. The following items are critical to an employee who spends extended hours at the workstation.

The proper adjustment of the chair is related to the proper placement of the monitor**,** keyboard, mouse, and work surface.

- Seat Position
- Chair Height
- Armrest



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A. Seat Position

Potential Hazard

Improper size, shape or choice of materials for the seatpan and backrest may result in uneven weight distribution, contact stress, decreased circulation to the extremities, and awkward posture.

Possible Solutions

The seat and backrest of the chair should support a comfortable posture that allows frequent changing of the seating position (Figure 1).

The seatpan should accommodate the specific employee (not too big/small). It should be padded and have a rounded, "waterfall" edge (Figure 1). This will reduce contact stress to the back of the legs.



Figure 1: Adjustable chair and backrest. Seatpan with a rounded "waterfall" edge.

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B. Chair Height

Potential Hazard

Improper chair height.

Possible Solutions

Chairs should be height adjustable, especially in work areas where they are shared by a number of employees.

The chair height is correct when the entire sole of the foot can rest on the floor or a footrest (Figure 2), and the back of the knee is slightly higher than the seat of the chair (Figure 3). This position allows blood to circulate freely in the legs and feet.



Figure 2. Footrest



Figure 3. Knees slightly higher than the seat of the chair.

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C. Arm Rest

Potential Hazard

Armrests that are too high or too low can produce awkward postures, create contact stress to the elbow, provide inadequate support, and may prevent the operator from moving close enough to the workstation.

Possible Solutions

Adjustable armrests (Figure 4) can be lowered to fit under work surfaces. This allows the user to work from a comfortable distance.

The armrests should support both forearms while the employee performs tasks and should not interfere with movement.



Figure 4. Office chair with adjustable armrests.

1.2 Keyboard and Mouse

The proper position of the keyboard and mouse is essential in creating a comfortable workstation. Consideration of the following factors can help prevent MSDs such as carpal tunnel syndrome and tendonitis:

- Height and orientation

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- Placement
- Design and user



A. Height and Orientation

Potential Hazard

Improper height and angle of the keyboard, mouse, or working surface can cause employees to bend their wrists or lift their arms for extended periods.

Possible Solutions

The work surface may need to be raised or lowered to keep the operator's arms in a comfortable position. This can be achieved by installing an adjustable keyboard extender or tray (Figure 5), by providing an adjustable table/working surface, or by raising the chair and providing a footrest if needed.

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Figure 5. Keyboard tray.

Adjust the keyboard and/or chair height so the employee's elbows can hang comfortably at the side of the body, the shoulders are relaxed, and the wrist is not bent up or down or to either side during keyboard use (Figure 5).

The angle of the keyboard should also be considered when determining the preferred height. The preferred working position for most keyboard operators is with the forearms parallel to the floor and elbows at the sides; this allows the hands to move easily over the keyboard.

B. Placement

Potential Hazard

A keyboard or mouse that is not directly in front of or close to the body (Figure 6) forces the employee to repeatedly reach during use.



Figure 6. Mouse placed too far from the body.



Figure 7. Mouse placed close to the body.

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Possible Solutions

Make sure the keyboard is placed directly in front of the user.

The mouse should be positioned at the operator's side with his or her arm close to the body (Figure 7). A straight line should be maintained between the hand and the forearm. The upper arm should not be elevated or extended while using the mouse. The employee should not have to reach to use the mouse.

Consider using a mouse platform that rotates above the keyboard while maintaining about the same plane. This design (Figure 8) allows the mouse to be used above the 10-key pad, which gives the user a better wrist angle and reduces reach.

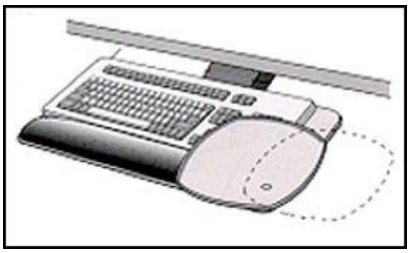


Figure 8. Rotating mouse platform.

C. Design and Use

Potential Hazard

Bending wrists sideways (Figure 9) or up and down (Figure 10) while keying.

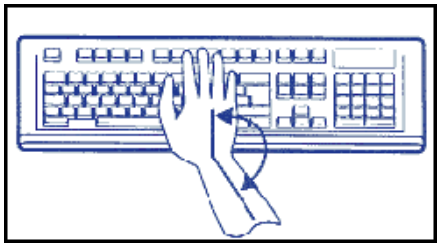


Figure 9. Hazardous side-bending of the wrist.

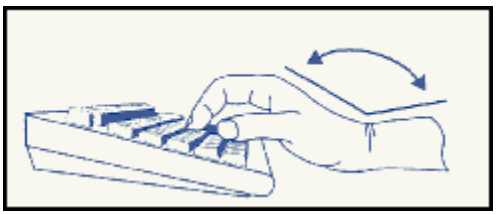


Figure 10. Bending the wrist.

Possible Solutions

Reduce bending of the wrists by moving the entire arm.

Do not use the feet provided on the back of most keyboards if this causes wrists to bend upwards (Figure 10). If the operator sits lower in relation to the keyboard, the keyboard feet may be used to maintain a neutral wrist (Figure 11).

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Wrists should be extended straight, not bent up or down. A mouse pad or wrist rest can be used to help maintain straight wrists. Wrist/palm rests (Fig. 11) should not be used while keying, but to rest the wrists between periods of keying.



Figure 11. Straight wrists with a wrist rest.

Consider using alternative pointing devices such as trackballs (Figure 12) or touch pads. Alternative keyboards (Figure 13, 14) may also be helpful in allowing the employee to maintain a neutral wrist position.



Figure 12. Trackball mouse.

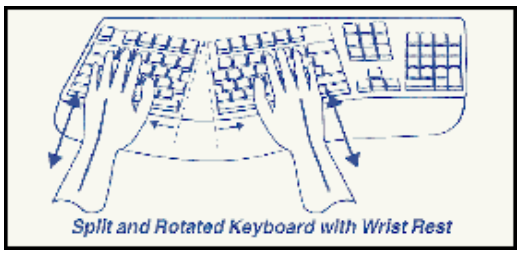


Figure 13. Alternative keyboard.

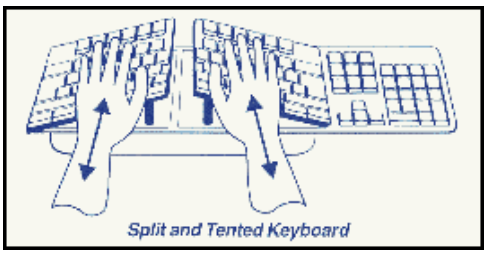


Figure 14. Alternative keyboard.

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1.3 Monitor and Document

Monitor and document placement is important in creating a comfortable workstation. Consider the following items in order to reduce awkward head and neck postures, fatigue, and/or headaches:

- Display
- Source Document Position



The monitor and document are related to the placement of the keyboard, mouse, and properly adjusted chair.

D. Display

Potential Hazard

A display screen that is too high, too low, or placed to the side of the user (Figure 15) may, over time, cause awkward postures and increased stress on the muscles of the neck, shoulders, and upper back.

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Figure 15. Display screen too low.

Possible Solutions

Keep monitor directly in front of user.

The topmost line of the screen should not be higher than the user's eyes.

Screens that swivel horizontally and tilt or elevate vertically enable the operator to select a comfortable viewing angle. (Figure 16).

Generally, placing the monitor on top o the computer will raise it too high.

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Figure 16. Comfortable viewing angle.

Potential Hazard

Tilting the head back to read through the bottom portion of bifocal lenses can stress the neck, back, and shoulders.

Possible Solution

Tilting of the head can be avoided by lowering the display or using single-lens glasses with a shorter focal length while viewing the monitor.

Potential Hazard

Viewing distances that are too long or too short can cause stress and eye strain.

Possible Solution

The preferred viewing distance is 18 to 24 inches (45.7 to 61 centimeters). If there is not enough table depth to accommodate this distance, install a keyboard extender or tray underneath the desk (Figure 17). The table depth should generally be at least 30 inches (76.2 centimeters) from the wall to properly accommodate monitors.

Pull tables and desks away from the wall and dividers to provide more space for monitors.

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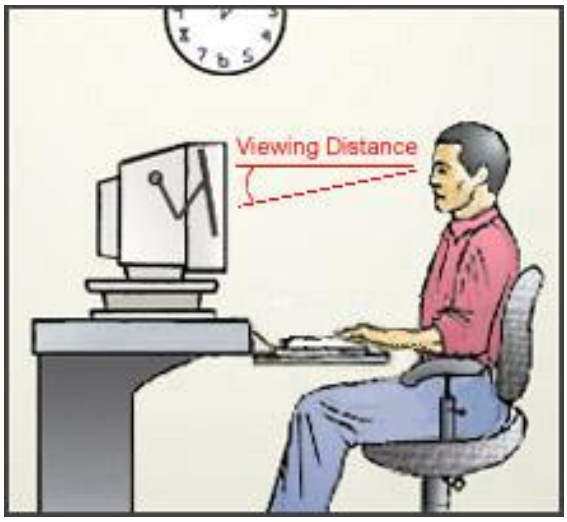


Figure 17. Preferred viewing distance.

Potential Hazard

Viewing the monitor for long periods of time can cause eye fatigue and dryness.

Possible Solution

Rest eyes periodically by focusing on an object at least 20 feet (6.1 meters) away.

Stop, look away, blink, and stretch at regular intervals.

Expand the employee's duties with other noncomputer tasks such as filing, phone work, or customer interaction to provide periods of rest for the eyes.

E. Source Document Position

Potential Hazard

Awkward posture or frequent movement of the head and neck to look from the monitor to a document.

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Possible Solution

The screen and document holder should be close enough together so the operator can look from one to the other without excessive movement of the head, neck, or back (Figure 18).



Figure 18. Screen and document holder are close together and same distance from the eye.

If writing needs to be performed, a document holder can be positioned directly beneath the monitor (Figure 19). This provides a sturdy writing surface and prevents frequent movement of the head, neck, or back.



Figure 19. In-line document holder that allows for writing.

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2.0 ENVIRONMENT

2.1 Lighting



Lighting that is not appropriate for computer work is a major factor in visual discomforts such as eyestrain, burning or itchy eyes, headaches, and blurred or double vision.

Lighting should be adequate for the operator to see the text and the screen, but not so bright as to cause glare or discomfort. For optimal comfort and performance, the following factors should be considered:

- Amount of light
- Contrast of light with environment

A. Amount of Light

Potential Hazard

Bright light on the display screen "washes out" images making it difficult for operators to clearly see the work.

Possible Solutions

Use light diffusers so that desk tasks (writing, reading papers) can be performed without direct brightness on the computer screen.

Place rows of lights parallel to the operator's line of sight.

Use operator-adjustable task/desk lighting.

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If diffusers or alternative lights are not available, removing the middle bulbs of 4-bulb fluorescent light fixtures can also reduce the brightness of the light.

Potential Hazard

Bright light in the operator's field of view (Figure 20).



Figure 20. Bright light entering from a window.

Possible Solutions

Use blinds or drapes on windows to eliminate bright light. Blinds should be adjusted during the day to allow light into the room, but not directly into the operator's field of view (Figure 21).

Lamps should have glare shields or shades, and the line of sight from the eye to the light should be at an angle greater than 30 degrees.

Reorient the workstation so that bright lights from open windows are not in the field of view (Figure 21).

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Figure 21. Blinds on the windows and the monitor placed at different angle.

Use indirect or shielded lighting where possible and avoid intense or uneven lighting in the field of vision (Figure 21).

B. Contrast of Light with Environment

Potential Hazard

High contrast between light and dark areas of the computer screen, horizontal work surface, and surrounding areas.

Possible Solutions

For computer work, well-distributed diffuse light is best. The advantages of diffuse lighting are two-fold: (1) there tend to be fewer hot spots, or glare surfaces, in the visual field; and (2) the contrasts created by the shape of objects tend to be softer.

Use light, matte colors, and finishes on walls and ceilings in order to better reflect indirect lighting and reduce dark shadows and contrast.

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2.2 Glare

Glare on the viewing screen may cause eyestrain, headaches, and fatigue. The employee may not be conscious of the irritation; however, over the course of a long day, it can cause problems. The following sources of light may cause glare:

- Direct
- Reflected



A. Direct

Potential Hazard

Direct light sources (such as windows or overhead lights) that cause a reflected light to show up on the monitor.

Possible Solutions

Orient workstations so that light sources do not reflect on the screen. Position task lighting (such as a desk lamp) so that the light does not reflect on the screen.

Use blinds or drapes on windows to help reduce glare.

Clean the monitor frequently. A layer of dust can contribute to glare.

Screen glare filters that attach directly to the surface of the monitor can reduce glare (Figure 23).

Use barriers or light diffusers on fixtures to reduce glare from overhead lighting.

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Generally, a large number of low-powered lamps, rather than a small number of high-powered lamps, will result in less glare.



Figure 23. Monitor with a glare screen.

B. Reflected

Potential Hazard

Reflected light from polished surfaces (such as keyboards) that may cause annoyance, discomfort, or loss of visual performance and visibility.

Possible Solutions

To limit reflection from walls and work surfaces around the screen, these areas should be painted a medium color and have a nonreflective finish. Workstations and lighting should be arranged to avoid reflected glare on the display screen or surrounding surfaces.

Tilt the monitor down slightly; this will prevent it from reflecting overhead light.

Use dark characters on a light background; they are less affected by reflections than are light characters on a dark.

2.3 Work Process

Even when the workstation design and environmental factors are at their best, an employee can suffer discomfort and injuries from factors related to the work process.

The following factors may increase the risk of health problems such as visual fatigue, headaches, repetitive strain injuries (carpal tunnel syndrome), and back pain:

- Prolonged and repetitive activities
- Inappropriate production requirements

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- Excessive overtime
- Inadequate medical awareness
- Inadequate training



A. Prolonged and Repetitive Activities

Potential Hazard

Computer work may appear to be easy and require little overall exertion of force. While this is true for the body in general, repetitive movements or prolonged awkward postures can lead to localized pain and injury. For example, a person using a mouse may move or activate a few small muscles and tendons of the hand hundreds or even thousands of times per hour. This can lead to localized fatigue, wear and tear, and injury to those small localized areas. Likewise, looking at the monitor for a prolonged period of time requires that the head be supported by only a few muscles of the neck and shoulder. These muscles may need to be activated for hours without significant rest, leading to fatigue and overuse. While work on the computer may appear to be a low-impact activity, the lack of motion and presence of high repetitions and awkward postures can lead to pain and serious injury if not recognized and dealt with.

Possible Solutions

Provide a workstation where employees can easily change their working postures. Changing the way one sits allows different muscles to provide support while others rest. Providing enough workspace so employees can change the hand with which they perform mouse tasks allows the tendons and muscles of the hand to rest.

High-repetition tasks or tasks that require long periods of static posture may require a different strategy for break periods. Taking very short rest breaks in addition to the standard industrial break schedule (about every 2 hours) can provide needed rest. Some

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companies have found that employees experience fewer MSDs when a 15 to 30 second break is taken every 10 to 20 minutes, or a 5-minute break is taken every hour. During these breaks, employees should be encouraged to stand, stretch, and move around a bit. This provides rest and allows the muscles enough time to recover.

Alternate task duties whenever possible, mixing noncomputer-related tasks into the workday. This encourages body movement and the use of different muscle groups.

B. Inappropriate Production Requirements

Potential Hazard

Employees may work through their break periods if production standards are set too high. Without these rest periods, the tissues of the body do not have time to rest and recover. Employees who consistently work through their breaks are at greater risk of MSDs, accidents, and performance of poor quality work due to operating at higher muscular fatigue levels.

Possible Solutions

A competent work-time consultant can survey work and an appropriate work rate. High work rates may benefit the company, in the short run, by reducing the number of employees hired. However, these benefits will be lost over time due to higher injury rates if work standards require rates that exceed the capabilities of employees.

Incorporate a work ramp-in period rate for new employees. Work rates set for experienced employees may be too high for those that are new to the work. It is common practice to allow a gradual ramp-up work rate for new employees that increases production over several weeks, or until employees can work at the same pace as experienced employees.

C. Excess Overtime

Potential Hazard

Working overtime, especially when the overtime is performed as an extension of the normal workday, may overstress the body's muscles and tissues by reducing rest and recuperation times.

Possible Solutions

Provide additional employees for peak periods. If overtime cannot be eliminated, reduce the overtime as much as possible to reduce the cumulative effects of stress.

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Limit overtime to off-days instead of tacking it onto the end of a shift. This will allow a period of recovery between shifts when muscles and other tissues can recover.

D. Inadequate Medical Awareness

Potential Hazard

Facilities that do not have a "medical management program" generally have less awareness of MSDs. In such facilities, symptoms may go untreated until they become disabling injuries. Injured employees are less likely to get timely and appropriate care, and restricted duty programs are less likely to be established or used.

Possible Solutions

Symptoms should be reported as soon as they start to develop. Early reporting can help address a potential problem early in the injury cycle before it becomes a serious and costly lost time injury.

Consult with a healthcare provider who has experience with work-related MSDs; this person can be a physician, a nurse, or any other healthcare professional that is familiar with causes of MSDs. Depending on the scope of the person's practice, they may treat injuries on site or provide a coordination role with a local healthcare facility.

A relationship should be developed with a local healthcare facility if an onsite healthcare professional is not an option. It is imperative that the healthcare professionals be familiar with the type of tasks the employees perform. This will assist in diagnosis and the return-to-work process after an injury. If a clinic is used, it is important to have a responsible person on site act as a liaison with the healthcare professional.

A return-to-work program should be developed with placement of injured employees into tasks consistent with their work restrictions. The challenge of such a plan is to develop and categorize tasks within a facility that are consistent with the work restrictions given by the healthcare professional. Care should be taken to develop a program in cooperation with the employee's union and the healthcare professionals.

E. Inadequate Training

Potential Hazard

Newly hired employees may not be adequately trained to recognize hazards or understand effective work practices to reduce these hazards.

Possible Solutions

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Provide general ergonomics training and work task-specific training at the time of new employee orientation. Explain risk factors and proper work practices to minimize these hazards.

Provide new employees with a mentor who can provide insight into the safest and most efficient method to do the task.

Explain the injury management process to new employees. It is important for employees to understand how to report an injury, and how the company prefers its employees to seek medical attention. This can expedite assistance, reduce costs, and improve lines of communication.

The information in this attachment has been adapted from the OSHA Web site at www.osha.gov.

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Toolbox Topic: Housekeeping Makes Your Job Easier!

Have you ever thought of ways to make your job easier? Perhaps you've wondered if someone could come up with better tools and equipment and simplified construction methods. However, there is another way too – one that not only makes a job easier, but safer… practicing good housekeeping.

Poor Housekeeping Causes Many Accidents

A nail in a scrapped two-by-four goes through a shoe and punctures a foot. A pile of trash catches fire. A cluttered walkway causes an employee to trip and fall. All of these accidents are caused by poor housekeeping.

Results Can Range from a Slight Cut to a Lost Life

Some poor housekeeping accidents do not amount to much – a small cut, a scuffed elbow, or a bruised leg. Others can have disastrous results involving the loss of life and property.

Once-A-Day or Once-A-Week Cleanup Is Not Enough

Housekeeping is a continuing process in which everyone must participate throughout the work day. Let's see how we can eliminate some of the most common housekeeping problems that can cause accidents on the job.

- **Nails.** Stepping on a nail can cause a serious injury. Pull all nails from scrap lumber and then throw the scrap in trash containers or pile it neatly where it will not be in the way.
- **Metal straps and bands.** How many times have you gotten tangled up in this stuff? After removing straps or bands, pick them up immediately and put them in a trash container. It is easy to trip on banding if it is left lying around on the job. This goes for other scrap, too.
- **Round scrap material.** Have you ever stepped on a pipe, bolt, dowel, conduit, or small piece of reinforcing steel? You probably twisted your ankle or lost your balance temporarily. Keep round scrap material out of the way. Put it in the trash or, if it is going to be used, store it in a safe location.
- **Extension cords.** These are another tripping hazard. If you must run an extension cord across the walkway, hang it from the ceiling where it will not cause anyone to trip. Hang it high enough so you will not hang the person who walks under it.
- **Food rubbish.** Lunch bags and other food rubbish not only cause trips and falls, but they cause fires also. Put them in trash cans after you have finished eating. Do not leave them around to clutter up the job or attract animals and insects. It is especially dangerous to leave bottles lying around. They are not only a tripping hazard, but they can break and cut someone.
- **Special containers.** Some items should be stored in separate trash containers. These include oily or solvent-soaked rags and empty cans that contain flammable liquids, such as paint, thinner, and glue. Remember to keep these trash containers covered.
- **Storage areas.** There are numerous storage areas throughout the job. Keep these neat. This not only is safer, but this enables you to find what you want more quickly and get it more easily.
- **Slipping hazards.** During the course of a job, it is almost impossible not to have grease or tar on the floors of a new building or on the jobsite. Naturally, someone can slip and be hurt, so you should clean up slipping hazards immediately. This also goes for ice during cold weather.

Safe housekeeping pays off. It is easier to work in a clean area than in a cluttered junk pile. Also, as we have been stressing, a clean job means a safer job. Good housekeeping is up to each one of us.

Don’t Forget Good Housekeeping

The handling, storage, and placing of materials at work directly impacts the safety of you and your coworkers. Careful consideration must be given to the volume of materials to be handled, the space needed for these materials, and the methods of handling and transportation.

Piling Materials

When piling materials, keep these points in mind:

- Height of pile. Hazards include toppling, nearby traffic, and interference with sprinkler systems.
- Strength of support. Allowable floor loads should be posted.
- Continued stability. Related to yard piling where uneven or moist ground may cause toppling.
- Location. Aisle traffic or machinery may make it necessary to limit the height or type of materials.
- Pipe or long stock. Racks aid handling, but projecting ends should be protected by railings or barriers.
- Mechanical aids. Employing manual methods instead of using stackers or hoists is a common fault.

Tool Housekeeping

Racks and holders should be provided for all hand tools, jigs, cutters, blades, and other parts. Tools frequently used at a bench or machine should be placed on racks.

Scrap and Waste Disposal

A suitable means of collecting and disposing of waste in a timely manner is recommended.

Marking Storage Space

Clearly marking aisles and spaces reserved for storage will solve a lot of problems in the workplace.

Leaks, Drips, and Spillage

Use oil pans, splash guards, and drip pans to keep oil off the floor. Proper means of oiling and good maintenance reduce dripping, and good construction reduces leaks.

Machinery and Equipment Layout

The provision of adequate space and the proper arrangement of various production units are vital to housekeeping.

Do not ignore the fact that housekeeping prevents injuries.

Management Assessment Participation

Purpose

Management assessment is a proactive practice designed to directly involve the site manager and the HSE lead on the project in an HSE assessment or walkabout. It brings exposure to Fluor's management in action and drives an actively caring attitude to the field.

Procedure

Each project will develop an audit practice that involves the site manager and the HSE lead. This, of course, is in addition to the other common auditing practices for the site. The site manager and HSE lead will perform two assessments per week. These assessments can be focused on the entire project or in specific areas. Scheduling of times and locations will vary by project. However, there must be documentation of audit findings and corrective actions if any are found.

Management Assessments will be collected and quantified by the HSE department on a weekly basis. The total amount of assessments turned in will then be inputted into the management assessment section of the key leading indicator tool Excel spreadsheet.

Goal

The goal is a minimum of two management assessments per week.

Supervisor Hazard Recognition Participation

Purpose

Supervisor hazard recognition is a proactive practice designed to directly involve the general foreman or similar levels of supervision and to include contractor supervision in auditing or assessing the project. It involves his/her foreman in an effort to recognize/assess for hazards, including unsafe acts or conditions throughout their work areas.

Procedure

Each project will develop a documented audit practice involving general foreman or comparable supervision as well as each subcontractor in assessing their first line supervisor(s) on a weekly basis. The Fluor HSE self-assessment form should be used to bring consistency for this practice. Audits will be conducted and turned in to the HSE office after completion. All open items must be closed out or assigned corrective actions by the general foreman or supervisor performing assessment.

Hazard recognition assessments will be collected and quantified by the HSE department on a weekly basis. The total amount of assessments turned in will then be inputted into the supervisor hazard recognition section of the key leading indicator tool Excel spreadsheet.

Goal

The goal is a minimum of 1 hazard recognition assessment by general foreman per 40 employees per week.

Safety Task Assignment (STA) Participation

Purpose

The STA program is a proactive tool used to provide quantification and insurance that pre-task planning is being conducted by first line supervision.

Procedure

STAs are completed for each job task assigned for the day on each project. This involves Fluor self-perform and subcontractor tasks. At the end of each day, all STAs that have been initiated will be closed out accordingly and turned in to the HSE department at a set location, date, and time by each respective first line supervisor.

STAs will be collected and quantified by the HSE department on a weekly basis. The total amount of STAs turned in will then be inputted into the STA section of the key leading indicator tool Excel spreadsheet.

STA quality will be continually checked by HSE to drive accuracy. STAs turned in each week should be reviewed for quality with a goal of 10 percent of the total turned in for each period.

Goal

The goal is one STA per foreman/first line supervisor per day. Typically, it is one first line supervisor per 10 workers.

Hazard Elimination Participation

Purpose

Hazard Elimination Program (H.EL.P) is designed to involve employees in identifying and eliminating unsafe acts and conditions and to reward or recognize them for their active participation. This program has proven to be an effective tool when combined with the “site specific” safety incentive program. The results will enhance employee participation to “HELP” in safety awareness and promote hazard elimination by employees to a level not normally achieved on construction projects. This program also prevents employee safety recommendations from “falling through the cracks” and not getting corrected in a timely manner.

Procedure

Each project will design/produce "HELP" cards (see attachment 1) and insure that they are strategically handed out to employees or placed throughout the project for employee access. When a hazard or near miss is observed and needs correction or attention, the employee is expected to take necessary actions such as correcting immediately (if possible) or securing the hazard to prevent any unwanted outcome and notifying the correct authority. The employee will then complete a “HELP” card and put in the designated drop box or turn in to his or her supervisor. The drop box will be checked each week and/or the supervisor will turn in the “HELP” cards each week.

Note: Drop boxes can be easily made and should be placed in strategic areas throughout the project site.

H.EL.P Cards will be collected and quantified by the HSE department on a weekly basis. The total amount of cards turned in will then be inputted into the Hazard Elimination section of the key leading indicator tool xls spreadsheet.

Goal

- **Minimum –** 1 Hazard Elimination Card per employee per week

Attachment 1: Example of a Project H.EL.P. Program

Example

Hazard Elimination or H.EL.P Card (attachment 1) is filled out by an employee who identified a potential hazard or near miss. Again, the card describes the hazard, near miss, elimination or correction of hazard or the temporary controls taken until the supervisor is notified. The completed card will be turned in to the Safety Manager who shall review the document and log it. The Site Safety Committee will then review the document. The Site Safety Committee will determine the level of severity of the hazard, Level 1, Level 2, or Level 3, and communicate findings to the management team and employees on the project.

- For **three** Level 1 hazards eliminated by an employee, one additional Chance Ticket will be awarded for the Grand Prize/Monthly Drawing. Level 1 = minor injury potential/property damage
- For **two** Level 2 hazards eliminated by an employee, one additional Chance ticket will be awarded for the Grand Prize/Monthly Drawing. Level 2 = moderate to serious injury potential/property damage
- For **one** Level 3 hazards eliminated by an employee, two additional Chance tickets will be awarded for the Grand Prize/Monthly Drawing. Level 3 = IDLH potential/catastrophic property damage

Hazard Elimination Cards must be tabulated weekly. Projects should review all trend analysis related to Hazard Elimination and take appropriate actions. Also, all near miss incidents reported must be reviewed, documented and used to prevent future occurrences on the project.

Note: The HELP card process may be modified to fit project or client needs. Some clients have an existing Hazard Elimination program that can be supplemented for this one. Modifications for upgrades on HELP forms and process can occur but no downgrading modifications will be accepted.

Attachment 1 (Sample)

Hazard Elimination Program (H.EL.P) Card

Front

Employee Name _____ **Date** _____

Description and Location of Hazard

_____
_____
_____

Near Miss Incident (Include time/location)

_____
_____
_____

Corrective Action Taken

_____
_____
_____

Supervisor Signature _____ **Date** _____

Back

If corrective action cannot be taken and condition warrants a work order, forms must be attached. (Please provide additional information as needed, i.e., drawings, equipment numbers, location, etc.)

Safety Committee

Approved for further consideration? Yes _____ No _____

Level One Hazard _____ Level Two Hazard _____ Level Three Hazard _____

Disapproved (return to originator with explanation)

_____
_____

Safety Manager Review

_____
_____

Signature _____ **Date** _____

Please compete grey shaded areas by 12:00 PM Tuesday for the prior week and email to william.walley@fluor.com

Project Name | Project Number

Number of employees on site 100 Week Ending July 2, 2010

Key Leading Indicators

Management Assessments by Week

The senior site and/or project manager along with the senior HSE manager shall conduct a team audit of the project or areas within the project a minimum of twice a week.

Hazard Elimination Observations by Week

Each employee on site shall identify a minimum of one hazard each week. Hazards should be corrected on the spot by the employee who identified the hazard when possible.

Supervisor Hazard Recognition Observations by Week

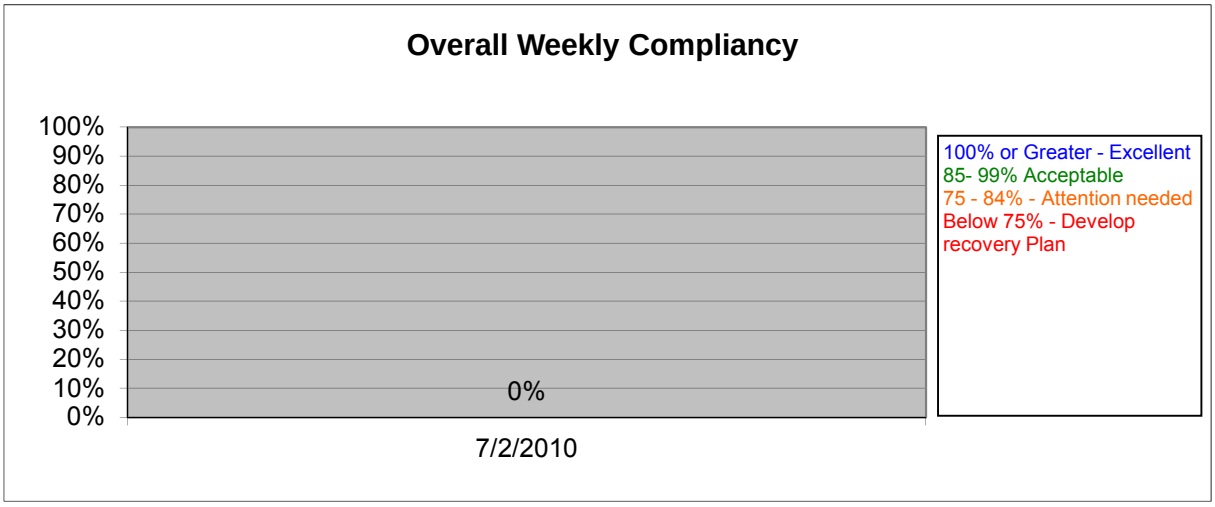
Weekly Audits conducted by general foreman utilizing Fluor's self assessment form or equivalent Audits should be conducted with each of the general Forman's front line supervision

STAs Completed by Week

Daily STA's shall be complete by each foreman for each task prior to the employees beginning the task. A minimum of 1 STA shall be completed by each foreman each day.

	Goal	Actual	% compliance
Management Assessments	2	0	0%
Hazard Elimination Observations	100	0	0%
Supervisor Hazard Recognition Observations	3	0	0%
Safety Task Assignments Completed	50	0	0%

Total Compliancy 0%



Manager
HSE Walkthrough Guide



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Introduction

Fluor's Corporate Health, Safety, & Environmental (HSE) team is pleased to provide you with this Manager's HSE Walkthrough Guide to help gauge your sites' HSE culture and performance.

Fluor's HSE culture is a way of life that has a positive influence at home and at work. Our employees sustain our HSE culture with shared beliefs, values, and practices. These character traits create a work environment that shapes our behavior.

Our HSE culture is "world-class", and we sustain this culture with a visible and uncompromised commitment to the protection of our greatest asset- our employees.

An HSE Walkthrough is an examination of the workplace to assess how the site maintains acceptable standards. Senior Managers can optimize their HSE visibility with an HSE Walkthrough. A manager's presence sends the message that Fluor values each employee's safety.



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Your Focus

During an HSE Walkthrough, you, as the Fluor manager, have an opportunity to establish the expectation for HSE performance, raise HSE visibility, and positively affect the work site's HSE culture. Your attention shows your employees what is important to you.

Here are a few ways to get a discussion about HSE started:

- Look for commendable and innovative HSE ideas
- Encourage dialogue about HSE challenges
- Look for ways to assist with HSE success
- Discuss actions to promote continual improvement
- Share best practices



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Ask HSE-Related Questions

Ask questions!

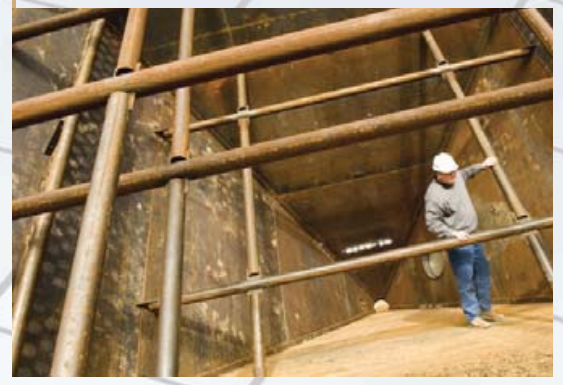
Asking strategic questions can prompt positive HSE action and motivate exceptional HSE performance. Asking good questions shows your interest in HSE. Anticipating your questions can prompt the site to take action.

Your questions:

- Lead to clarity
- Initiate dialog
- Prompt a response
- Encourage anticipation
- Show your interest
- Indicate your expectations
- Reveal the depth of your knowledge

Your employees' answers:

- Show the depth of the project's HSE maturity
- Demonstrate that the project knows your expectations



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Sample questions include:

- How does the project address trends and performance?
- How often do managers attend STA meetings?
- How often do managers attend HSE orientations and training?
- What was the project's corporate audit score?
- How often do managers and supervisors perform audits?
- Do employees have a means to report unsafe acts or conditions?
- Have supervisors attended HSE leadership training?
- Does the supervisor know how many first aid or recordable incidents the crew has had? Can the supervisor describe them?
- How many hours have they worked without an incident?
- How does the project measure a supervisor's safety performance?
- How do managers follow up on corrective action items?



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Manager HSE Walkthrough Overview

The following activities will help you assess the site's overall HSE culture.

- Review current performance vs. company goals
- Note if you were offered or given an orientation
- Conduct a field tour with the HSE professional and project manager
- Talk with employees about safety
- Wear the proper approved safety equipment
- Look at PPE utilization
- Look for supervisors in the work area
- Look at housekeeping, order, and material storage
- Look for displays, signs, and measurements
- Discuss safety with the client
- View work tasks being performed
- Note if meetings are started with a safety topic
- Observe client's adherence to safety rules
- Observe use of tools and equipment
- Get a feel of project morale
- Ask about disciplinary program

Sections 1 through 17 on the following pages identify specific items to assess during your HSE Walkthrough.



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1. Safety Signs

- Muster point and emergency evacuation signs displayed in appropriate areas?
- Site traffic signs displayed and comply with recognized standards?
- First aid treatment signs displayed in appropriate area?
- Heat stress signs and flags displayed in appropriate areas?
- Fire precautions signs displayed in appropriate area?
- Hazardous chemicals warning signs displayed in appropriate area?
- Safety task information signs displayed in appropriate area?
- Hand injury prevention signs displayed?
- Safety slogan signs with Fluor logos visible?



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2. PPE

- Workers are wearing approved and appropriate eye protection?
- Appropriate hand protection is worn?
- Project-required footwear is worn?
- Steel-toed boots, protective footwear for jack hammering, etc.
- Workers are wearing approved head protection?
- Respiratory protection is used when necessary?
- Workers are wearing full-body harnesses?
- Special situation PPE is available if needed?
- PPE is in satisfactory condition and fit for purpose?



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3. Housekeeping

- Cables and hoses run safely (clear of walkways)?
- Materials stored safely (in designated areas)?
- Hazardous materials are properly stored and labeled?
- Tools and equipment stored safely?
- Scaffolds clear of loose objects (no falling objects)?
- Area clear of combustible/flammable debris?
- Area clear of scrap (metal)?
- Trash and scrap metal are separated into proper containers?
- Oil drip trays in place and correctly sized?
- Stairs/ladder ways are free from obstructions?



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4. Rigging

- Lifting clamps, shackles, and slings inspected?
- All rigging equipment correctly color-coded?
- No visible damage or excessive wear on rigging equipment?
- Chain blocks inspected and are in good working order?
- Inspection tags visible and in date?
- Cranes have updated annual inspections?
- Riggers trained and certified?
- Fabric lifting straps in good condition (no visible damage)?
- Tag lines used to control load?
- There is good communication between the rigger and operator (visual or radio)?



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5. STA

- Does STA cover critical steps on work activity?
- Do foreman and supervisor participate in STA development?
- Have all task-related hazards been identified?
- Have all hazards been controlled?
- Has an STA toolbox talk been carried out?
- Is STA signed and dated?
- STA displayed at work area?
- Are all team members working to STA requirements?
- Has post safety task assignment section been completed correctly?
- Is the management team involved in morning STA talks?



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6. Confined Space

- Permit in place, signed, and visible at work area?
- STA in place, signed, and visible at work area?
- Emergency contingency plan documented and understood?
- Sign-in boards being used?
- Intrinsically safe lighting installed and sufficient for the task?
- Confined space entry safety standby person at access point?
- Entry point clean and clear of trip hazards?
- Is space properly ventilated?
- Have workers been through training?
- Do workers have appropriate knowledge of hazards in the confined space?



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7. Working at Height

- Full-body harness worn correctly (straps tightened)?
- No visible damage to harness or attachments?
- Body harness and lanyard correctly color-coded?
- 100 percent tie-off used where fall exposure exists?
- Guard/handrails not being used as anchor points?
- Exposure to dropped objects being strictly controlled?
- Housekeeping to a high standard?
- Tools and equipment secured to prevent falling?
- Sufficient warning signs and barricades in place?
- Open holes in grating sufficiently barricaded with signage?



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8. Energy Control

- Proper lockout/tagout system implemented?
- Have employees verified the zero energy state?
- Job safety analysis (JSA)/STA in place and being adhered to with no deviations?
- Energization notices are displayed?
- Appropriate electrical hot work PPE worn as necessary?
- Pressure testing area fully controlled?
- Electrical hot work permits used?
- Electrical work areas barricaded with signage?
- Have all sources of energy been considered?
  - Electrical
  - Pneumatic
  - Stored
  - Pressurized lines
  - Gravity
  - Hydraulic



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9. Scaffolding

- Safe access/egress to scaffold available?
- Ladders in good condition and secured?
- Ladders extend three feet beyond access platform?
- Is the scaffold foundation stable and level?
- Are base plates adequate and secure?
- Is a qualified scaffold person on site?
- Are scaffold planks cleated or secured?
- Are handrails, midrails, and toeboards installed?
- Is debris netting used where material can fall off?
- Are wheels locked on rolling scaffolds?
- Has scaffold been inspected and tagged?



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10. Offices, Warehouse, and Storage

- Correct type and size of extinguishers available in safe working order?
- Fire extinguishers tagged, charged, accessible, and properly mounted?
- Inspection date valid?
- All access/egress pathways are not obstructed?
- Are a sufficient number of escape doors clearly marked and operational?
- Personnel know location of escape doors?
- Fire wardens established and duties understood?
- Emergency alarm functional and audible?
- Sufficient number of smoke detectors installed and operational?
- General alarm bells are all in safe working condition?
- General housekeeping in good order?
- Evacuation drills regularly performed and recorded?
- Seats of suitable design with correct dimensions and back rest?
- Adequate space for easy movement and desk adjustment?
- Cables and furniture do not present any electrical or tripping hazards?



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- Adequate illumination with no glare or shadows?
- Proper maintenance of lighting?
- No carpet/carpet tiles or floor cover raised?
- Offices, furniture, and fittings kept clean and in order?
- Material stacks are not higher than three times the smallest side of its base?
- Is there level footing that is capable of sustaining the load of stacked material?
- Are suitable ladders used for access?
- Storage clearance for sprinkler system?
- Storage areas clean and free of foreign objects?
- Safe access to fire fighting equipment and electrical switch boxes?
- Materials stored on crosstied pallets?
- Oil drums choked with drum stoppers (wedges) parallel to the floor?
- Acid and alkalis in ventilated areas and away from combustibles?
- Oxidizing agents stored separately from flammable materials?



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11. Excavations

- Barricade being controlled/supervised by assigned person?
- Is the correct mechanical excavator being used (per permit)?
- Excavation checklist signed off by all listed parties?
- Excavation permit signed by all required parties?
- Are there suitable and sufficient safe access/egress arrangements?
- Was a toolbox/STA talk held prior to the start of the job?
- Has adequate shoring/benching/sloping been provided?
- Is water ingress being suitably managed?
- Is a competent person for excavation on site?
- Is there potential for a hazardous atmosphere?



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12. Barricades

- Supervisor enforcing solid barricade rules?
- Fall protection solid barricade with depth of six feet or greater?
- Barricade erected around hazards without gaps?
- Barricade visible and hard to miss?
- Barricade displays owner's name and phone number?
- Correct barrier tape being used for the task?
- Appropriate access around barricade provided?
- Open floor penetrations covered/barricaded?
- Are barricades maintained and taken down where work is complete?



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13. Vehicles

- Seat belts in good condition and fully functional?
- Lights and indicators fully functional?
- Horn and reversing alarm audible?
- Windshield washers and wipers fully functional?
- Good all-around cab visibility and functional rear view mirror?
- Tires in good condition and correctly inflated, including spare tire?
- Instructions in case of a road traffic incident available?
- First aid, toolkit, and warning triangle available?
- Vehicle and driver license valid?
- Emergency instructions available?
- Has driver attended a driver's safety course?



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14. Fire Precautions

- Correct type of extinguisher for the type of fire hazard?
- Extinguisher clearly visible, charged, and in good condition with current inspection?
- Have workers been trained to use a fire extinguisher?
- Do workers understand what actions should be taken in case of fire?
- Is a fire watch required or available?
- Is a hot work permit required for this particular job?
- Is a fire blanket required/available?
- Have all work areas adjacent and below been assessed?
- Instruction signs in appropriate languages posted?
- Is the work area free from combustibles?



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15. Cranes

- Operators have appropriate crane certification?
- Inside the cab is clean and tidy?
- Glass is free from cracks and operators' vision is not obstructed?
- Outrigger pads available?
- No visible hydraulic fluid leaks?
- Daily crane inspection completed and dated?
- Tag lines available?
- Crane lifting plan available where appropriate?
- Heavy lift supervisor present for critical lifts?
- Fully charged portable fire extinguisher available?
- Is safe working load sufficient for maximum load to be lifted?
- Is automatic load indicator working correctly?
- Tires (where fitted) in good condition and checked daily?
- Jib structure free from damage?
- Limit switches or cut-outs fully functional?
- Operator license and third-party certification available and valid?
- Does everyone on the rigging and lifting crew speak the same language?



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16 .Temporary Electrical

- Temporary electrical panels numbered, secure, and locked?
- Distribution board clearly identified with hazard warning signs?
- Electrical panel labeled with voltage size?
- Portable generators correctly grounded?
- Temporary panels protected from water ingress?
- Heavy duty cable used, in good condition, and free from damage?
- Cables routed to prevent trip hazard or other obstruction?
- Temporary panels do not have any missing breakers or exposed wiring?
- Access to electrical panels are kept clear for easy access?



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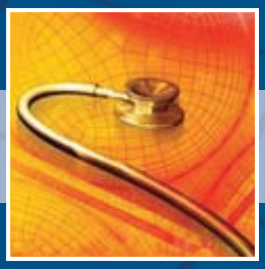
17. Highway Safety

- Traffic signs posted at required distance from work activities?
- Reflective clothing worn?
- Light duty vehicles are equipped with flashing beacons/ strobe lights and or project specific requirements?
- Backup alarms and lights on mobile construction equipment working?
- Flagmen are utilized when needed?
- Mobile construction equipment operating in a safe manner?
- Barricades maintained properly?
- Excavations are barricaded?
- Soil is placed two feet back from the excavation, and is sloped and shored properly?
- Has the general public's safety been considered?
- Supervisors enforcing safe work habits?



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H·S·E
communications





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Adopt - A - Crew Participation Review

Auditor Information **Date:** _____

Name: _____

Job TItle: _____

Assigned Adopt-A-Crew Member

Name: _____

Foreman Assigned to:

Name: _____

Answer by circling Y - Yes, N - No

1. The scheduled AAC member attended	Y	N
2. The AAC member was on time/stayed	Y	N
3. The AAC member greeted the crew	Y	N
4. The AAC member showed interest	Y	N
5. The AAC member provided input	Y	N
6. The AAC member's input was effective	Y	N

Comments: _____

_____

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Safety Task Assignment Review

Auditor Information **Date:** _____

Name: _____

Job Title: _____

Foreman: _____

STA Date: _____

Answer by circling Y, N, or NP

Y - Yes, N - No, NP - Not Present when conducted

1. Hand written by supervisor	Y	N	NP
2. Task location/description accurate	Y	N	
3. PPE documented is adeq.	Y	N	
4. Permits, tags, etc. documented is adeq.	Y	N	
5. Certifications documented is adeq.	Y	N	
6. Step 1 Gen. Task Assignment	Y	N	
7. Step 2 Potential Hazards	Y	N	NP
8. Step 3 Safe Work Habits	Y	N	NP
9. Post STA complete	Y	N	
10. Review by supervisor	Y	N	
11. Pre STA signed by all involved	Y	N	
12. Post STA signed by all involved	Y	N	
13. Crew paid attention during the mtg.	Y	N	

Comments: _____

_____

| | | |

PORT ARTHUR REFINERY DCP	DEEP CONVERSION PROJECT DCP	DCP – PPM-60-01 Revision: 05 Date: 22 July 2009
	DCP RISK RANKING MATRIX	

	ACTUAL (OR REASONABLE POTENTIAL) CONSEQUENCES				POSSIBILITY				
SEVERITY	**People**	**Property Damage**	**Environment**	**Downtime**	**1 HIGH Potential to Occur Frequently**	**2 MEDIUM Potential to Occur Occasionally**	**3 MODERATE Potential to Occur under Unusual Circumstances**	**4 LOW Could Occur within Petroleum/Construction Industry**	**5 NONE Theoretically Possible – Very few known occurrences within Petroleum/Construction Industry**
1 SERIOUS	**In Plant Fatality or Public Fatalities**	**Extensive Damage**	**Major Damage**	**Extensive ≥ 2 days**	**1**	**2**	**3**	**4**	**5**
2 HIGH	**Lost Time Injury or Public Injury or Public Impact**	**Significant Damage**	**Local Effect**	**1 to 2 days**	**2**	**4**	**5**	**7**	**8**
3 MEDIUM	**Medical Treatment**	**Moderate Damage**	**Minor Effect**	**4 to 24 hours**	**3**	**5**	**7**	**8**	**9**
4 LOW	**First Aid**	**Minor Damage**	**Slight Effect**	**< 4 hours**	**5**	**7**	**8**	**9**	**10**
5 NONE	**No Worker Injuries**	**No Damage**	**Zero Effect**	**Recoverable Operational Problem**	**7**	**8**	**9**	**10**	**10**

Intolerable Risk
High Potential (HI-PO)
1 - 2

Undesirable Risk *
Incident of Interest (I.O.I)
3 - 5

Tolerable Risk **
6 - 8

Negligible Risk **
9 - 10

*All Undesirable Risk issues / incidents will be reviewed for possible HI-PO inclusion.

This form is referenced in Procedure 000 653 8610.

CONSTRUCTION EQUIPMENT INCIDENT MATRIX

Date:

Area:

Damage Assessment and Evaluation

Rev.3 (011510)

INSTRUCTIONS

- **Complete incident description.**
- **Make sure Fluor and TOTAL Representatives are involved in rating.**
- **Circle the boxes that apply.**
- **Discipline is governed by the most severe box circled.**

CATEGORIES / DISCIPLINE	PERSONNEL / HEALTH IMPACTS	REFINERY / ENVIRONMENTAL IMPACTS	PROPERTY DAMAGE / DOLLAR AMOUNT
INSIGNIFICANT **Verbal Reprimand (Documented)**	No Injury	No Interruption.	No Damage Less than $150
MINOR **Written Reprimand**	First Aid	No damage requiring repair. Minor contact with refinery structure, piping, instrument, or electrical systems.	Less than $1,000
MODERATE **Written Reprimand (with suspension if Contractor's Policies allow it.)**	Medical Treatment	Refinery issue or inconvenience requiring follow-up.	Between $1,000 - $5,000
MAJOR **Removal from site**	DART Days away from work Days of restricted activity	Refinery production interference.	Between $5,000 - $10,000
CATASTROPHIC **Removal from site**	Multiple DART / Fatality	Refinery production interference.	Greater than $10,000

RECOMMENDED DISCIPLINARY ACTION (SEVERITY BASED)	
Verbal Reprimand	
Written Reprimand	
Written Reprimand (with 3 days suspension if available)	
Removal from site	

Incident Description (include damage / injuries / equipment / specific location)
Company: **Employee Name:**

HSE Representative _____

TOTAL HSE Representative _____

Construction Representative _____

TOTAL Const. Representative _____

Equipment Superintendent _____

HR Representative _____

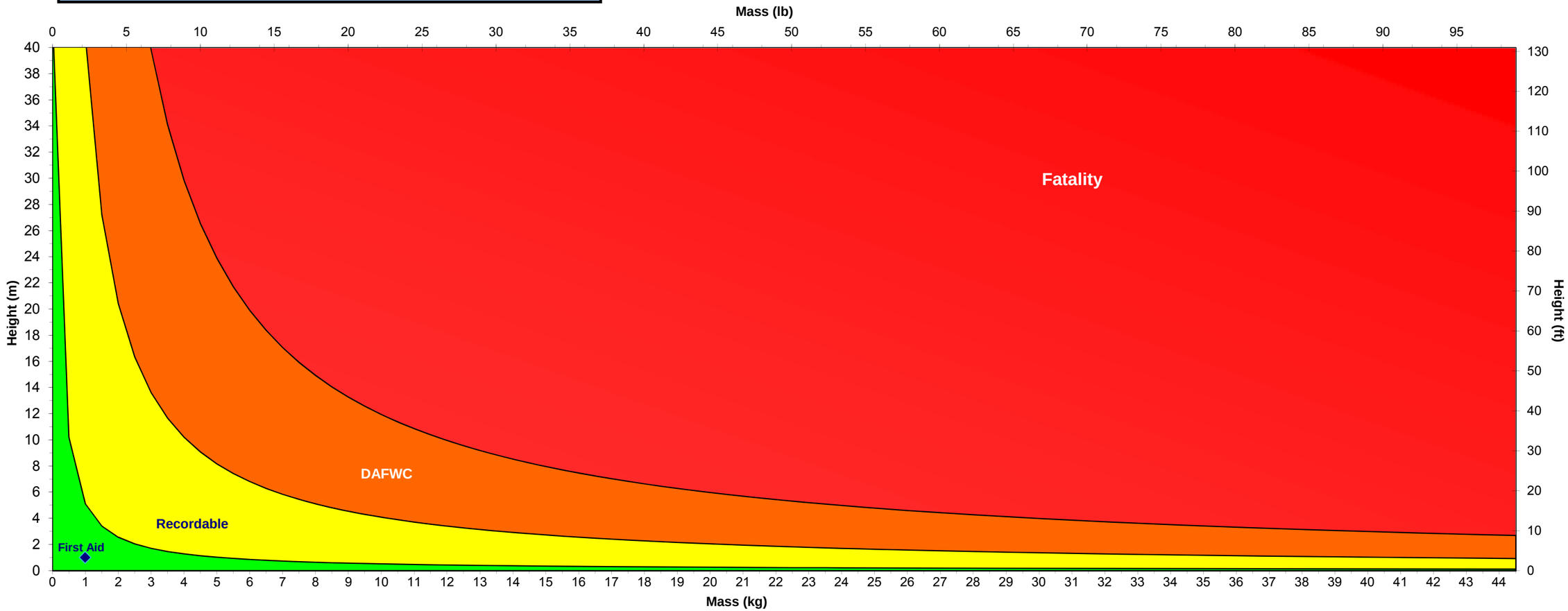
Outcome Calculator

Height	1	m
Mass	1	kg
Outcome	First Aid	

This program is based on physical laws relating mass and height (potential energy) to energy required for bodily injury.

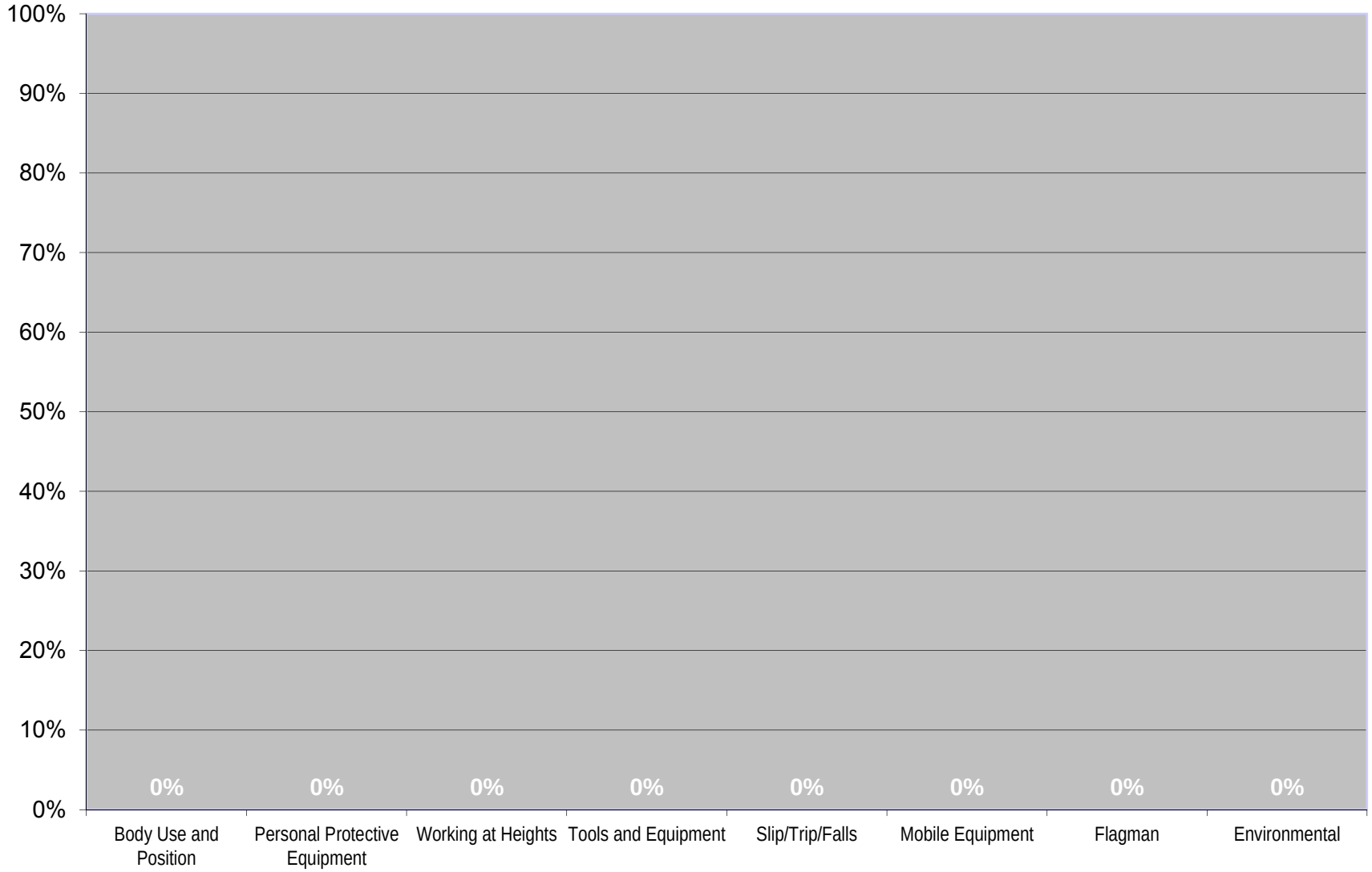
Assumptions for use:

1. All potential energy from a object initially at rest is transferred to kinetic energy when dropped.
2. The only acceleration is due to the force of gravity, which is assumed to be constant and essentially at sea level.
3. All energy is assumed to be absorbed by the individual and the PPE.
4. A fatality is the result of the total force required to break both the hard hat as well as the cranium.
5. A DAFWC is the energy required to break a bone in the shoulder or top of the foot.
6. A medical treatment case is the energy necessary to cause a laceration requiring sutures.
7. The energy levels less than that requiring medical treatment are assumed to fall into the first aid category at worst.
8. The dropped object is assumed to be blunt edged, and whereas shape might be assumed to be spherical, it really only makes a significant difference if the object has a thin flat edge or is shaped like a javelin.
9. The worker with a potential to be struck is 25 - 40 years of age, is a male and weighs approximately 80 kilograms.



Percent of Safe Observations/Behavior

August Cumulative Chart



Conoco Phillips
Employee Behavior Observations

Observers: Various CORE Projecet Management and Contract Employees

Time: Various am/pm Various

Project Name: CORE Project

Contractor: CORE Contractors

Specific Task: Various

Watch Your Hands

Items	Activity	Safe	Unsafe
1	Observations	#	#
1.1	Proper tools in use/used properly		
1.2	Guards/safety devices in place		
1.3	Gloves being used		
1.4	Appropriate gloves for specific task		
1.5	Avoiding/protected from pinch points		
1.6	Avoiding/protected from splinters		
1.7	Avoiding/protected from hot surfaces		
1.8	Avoiding/protected from sharp edges		
1.9	Body positioning/movement		
1.1	Hands positioned properly		
1.11	Cutting or pushing away from body		
1.12	Kept away from rotating parts		
1.13	Kept away from impact area		
1.14	Line of fire		
1.15	If a slip occurs, no nearby object		
1.16	Eyes/attention to task		
1.17	Pushing/pulling		
1.18	Repetitive motion		

1183 Safe Acts observed and 3 Unsafe Acts observed

1183
1565
2748

Conoco Phillps
Woodriver
Action Items/ Responsibilites

Items	Description if deficiency	Responsible
1.3	Carrying materials with out gloves	
1.5	Lots of piles and stacks of rebar about	
1.4	Using winch to stabilize barge in river	
	lots of tension cables, one person standing	
	close enough to cable that if it were to snap	
	he'd be struck. He was advised to move.	
	(Not hand issue but line of fire nonetheless)	
1.5		

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