Beyond IIPP, JHA and BBS Tools

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February 2010

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Session Objectives

- Introduce JHA and BBS tools
- Discuss benefits and flexibility for use
- Facilitate a practical exercise to draft a JHA
- Address your questions and comments

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Job Hazard Analysis (JHA)

Job Task: Description of the overall job task

Job Steps	Loss Potential/Hazards	Control Measures
List each step of the job task Take nothing for granted, no matter how slight the job task may seem • OK to use bullet points	List potential hazards for each job step Consider people (employees and general public), property/equipment, and the environment • OK to use bullet points	List control measures required to mitigate loss potential/hazards of each job step Controls should include physical conditions and safe work methods • OK to use bullet points

Name of Person's Completing and Date of JHA:

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Job Hazard Analysis (JHA)

Job Task: Engineers must enter below grade air-intake vaults to perform PM of drain sumps including removal of leaves and debris accumulating at the drain.

Job Steps	Loss Potential/Hazards	Control Measures
Grade level access to the vault	• Trip/fall over above grade ventilation pipe	• Increase visibility for avoidance by either painting or placing tape around pipe diameter. Either method should utilize "people safety" contrasting colors of either yellow or orange
Open vault hatch	• Strain reaching for hatch lock • Pinched fingers opening/clearing lock jams • Strain pulling hatch open • Damage to hatch as it falls onto grade slab • Fall through open hatch (15-foot exposure) • Strain reaching for vault ladder extension	<u>Existing Conditions</u> • Provide knee pads • Body positioning -minimize reaching -walk around hatch • Ergonomically retrofit hatch handle • Install hatch hinge • Install hatch lift assisting piston • Install AG "ladder returns" <u>Redesign Hatch Opening</u> • Retrofit hatch on rollers to eliminate lifting hatch • Replace hatch with lighter weight (i.e. reinforced aluminum) cover
Ascent into/descent out of vault	• Fall down ladder -employees -tools/equipment • Passerby's (i.e. landscapers and	• Enforce 3-point contact • Secure tools within tool belt • Attention to foot

	curious personnel) can fall into open hatch • Strains carrying objects	wear (laces, soles) • Install slip resistant tape onto ladder steps or serrate • Post AG exclusion zone around hatch opening • Hoist system for tools/equipment objects transfer • Employee training as to one person at a time using ladder <u>Redesign Hatch Opening</u> • Removal of fixed in place ladder and install stairway to significantly reduce falls exposure)
Work within the vault	• Trips/slips/falls -drain pipes -inadequate lighting -accumulated leaves	• Increase visibility for avoidance of pipes by either painting/taping • Install additional lighting (by hatch opening and at invert where vault direction changes • Scheduled PM for leaves removal
PM of the sump drain	• Strain and laceration loss potential reaching into drain	• Install a CIP dyke with side screens to prevent leaves draining into sump • Enforce use of PPE
Leaving the vault	• Same as ascent/descent into vault • Same as opening vault hatch	• Same as ascent/descent into vault • Same as opening vault hatch

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OBSERVATION WORKSHEET

Employee Name: *Observation Date:*

Location: *Observer Name:*

Observation Items	TS Ref	OK	Not OK	Discussion
Personal Protective Equipment				
Hand Protection	1.1			
Eye & Face Protection	1.2			
Foot Protection	1.3			
Body Position				
Lifting/Lowering/Pulling/Pushing	2.1			
Walking – Eyes on Path	2.2			
Eyes On Work	2.3			
Pinch Points/Sharp Objects	2.4			
Tools				
Tool Use/Selection	3.1			
Tool Condition	3.2			
Work Planning				
Pre-Job Inspection	4.1			
Tailgate Safety Meeting	4.2			
Working Environment				
Walking/Working Surface	5.1			
Housekeeping	5.2			
Safety Procedures				
Emergency Preparedness	6.1			
Safety Reporting Requirements	6.2			

Additional Comments/Observations:

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BBS Observation Worksheet
Definition of Reference Items

Observation Item	TS Ref. Number	Definition
Hand Protection	1.1	Use of work gloves when needed and glove condition
Eye and Face Protection	1.2	Safety glasses when using power tools, performing overhead work, etc
Foot Protection	1.3	Appropriate footwear, good traction, and laces tied
Lift/Lower/Push and Pull	2.1	Positions self close to work, sizes up the object (weight/balance) prior to lifting, limits amount/weight of objects to be lifted, lifts with legs and keeps back straight, keeps object close to body, turns body by moving feet and not twisting body, and gets help lifting heavy/awkward objects.
Walking-Eyes on Path	2.2	Does not overload carts, looks where going, pushes rather than pulls carts.. Uses caution around cords, wet floors, walking down stairs, and around corners. "look where you step and step where you look"
Eyes on Work	2.3	Avoids being distracted and looking away from work task involved in. Moves feet with work rather than twisting body. Walks rather than throws items into dumpsters.
Pinch Points/Sharp Objects	2.4	Protects self against sharp objects by wearing gloves, hammers down/removes nails from debris, proper handling of blades
Tool Use/Selection	3.1	Uses the right tools/equipment for the job, uses ladders and work platforms properly
Tool Condition	3.2	Electrical cords free of splices, with ground plug in place. Carts/barrels free of cracks, wheels free rolling. Keeps "point of operation" and handles of non-power tools in good condition
Pre-Work Inspection	4.1	Hazards brought to attention of supervisor
Tailgate Safety Meeting	4.2	Date and subject(s) of last meeting employee attended. Discuss with employee what learned from meeting
Walking/Working Surface	5.1	Takes extra care in areas not well lit, aware of elevation changes (floor protrusions, openings, and unprotected perimeters). Uses care placing and working from ladders and work platforms.
Housekeeping	5.2	Keeps work area free of clutter that can pose trip hazards or blocking evacuation routes.
Emergency Preparedness	6.1	Knows alarm systems, where to exit, and crew meeting point.
Safety Reporting Requirements	6.2	Reports to supervisor of any injury (no matter how minor) or damage to property/equipment damage. Reports out of service any defective equipment. Assists supervisor in completing accident related paperwork.