

Tennessee Valley Authority
Regulatory Submittal for Kingston Fossil Plant

Documents submitted:

Sevenson Work Package for Phase 2– Demobilization of desanding equipment, tanks and pumps

Sevenson Work Package for Phase 3– Demobilization of Filter Presses (canopy, plates, frames, stands)

Date Submitted:

05/25/2010

Submitted to whom

Leo Francendese

Concurrence

Received Not Applicable

TVA

Steve McCracken
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Tim Russ *(Signature)*

Received

Not Applicable

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Approvals

TVA

Kathryn Nash

Date

5/26/10

EPA

Leo Francendese

Date

5/26/10

Sevenson Work Package

Contractor: Sevenson Environmental		Location: Kingston Fossil Plant
Work Package No:	WP-	Date:
Work Package Desc: Phase 3 - Demobilization of Filter Presses (canopy, plates, frames, stands)		
Note 1		Perform daily (minimum) pre-job briefings with crew. Each employee will have a pre-job briefing before each assignment, detailing the scope of the assigned task, the possible hazards, and steps to mitigate the identified hazards. Should the employee's daily assigned task be changed, a subsequent pre-job briefing will be given. Document briefings with signatures, and file in this Work Package. Once job has completed, perform post job briefing to discuss lessons learned from work execution or incidents.
Note2		Anytime the work package is found to have a change in the plan or a deficient area of instruction, the Foreman/Supervisor will stop work and assess the situation. If the foreman/Supervisor determines that the required change or revised area of instruction can be safely mitigated then a new pre-job briefing will be performed outlining the step change and requirements to allow work to safely continue. The Foreman/Supervisor will document the change and supply the documented change to appropriate personnel so that the master file can be updated. If the determination is made that the change is too significant to allow work to continue safely, work will be stopped and the matter referred to senior level management and engineering for resolution. There will be no exceptions.
Note3		This step text is arranged in sequence but is not intended for strict compliance. The Site Supervisor and/or Foreman may change the sequence in which the work is performed, providing the sequence change has no negative impact on job safety or work quality.
Step No.	Initial & Date As Steps Are Completed	Work Description:
1		Conduct Pre-Job Briefing and review step text. Note that when referring to 'Filter Presses' there are three parts: 1) Press Stand - the base on the ground that includes the conveyor, 2) Press Frame - head, tail and side bars that sits on the frame and holds plates, 3) Press Plates - sit in the press frame and are covered with cloths.
2		SPAs included in this work package refer to this phase of work <u>only</u> . If personnel are added to the work crew while in progress stop and review SPAs with them for this package.
3		Every employee has the authority and duty to stop work if they feel a situation is unsafe!
4		Check presses to be sure they are in the open position and all lines have been flushed.
5		Verify vendor representative from Aggreko has already disconnected generators from the press system. With generators disconnected there will be no need for electrical lock out/tag out of system components during decon/demob.
6		Remove cloths from plates and dispose in dumpster provided on site. Use TVA approved cutting device and Kevlar gloves if necessary.
7		Disconnect all hoses, air lines and other connections to the presses.
8		Using pressure washers, wash down all plates, frames and appurtenances. Use proper PPE including faceshields, tyvek and gloves. Press stands will be washed down in step 13.
9		Begin demobilization by removing the canopy and frame covering the presses using a crane and qualified rigger. If canvas cover can be re-used clean with pressure washer and let dry before folding up and placing on pallet.
10		STOP for load calculations and Lift Plan review. Take Two and assess the work area for levelness and hazards, clear the area of non-essential personnel and be sure the area between the lift and the truck to be loaded is clear of obstructions. Inspect lifting equipment including shackles, slings, chains, wire rope, etc. and be sure tag lines are in place. No personnel are to be on the truck bed while loading. Refer to TSP 802 Check sheet for Mobile Cranes and Lift Plan included in this package. Check sheet must be used <u>each time</u> the crane is moved and used.

Sevenson Work Package

Step No.	Initial & Date As Steps Are Completed	Work Description:
11		Using crane and qualified rigger/rigging equipment to remove press plates from frame. 5-6 plates can be lifted at one time by running nylon strap through center hole of plates. Perform final cleaning if necessary and load plates onto pallet or racks. 25 plates can be stacked per pallet. Wrap pallets tightly with black shrink wrap, covering plates entirely.
12		With plates removed, begin disassembly of press from press stands and perform final cleaning if necessary. When safety rails are no longer in place fall protection devices must be used when working on elevated surfaces. Contact SES Safety personnel to inspect equipment for cleanliness and sign off on a decon certificate. Notify Jacobs CM that equipment is ready for inspection prior to it leaving site, Jacobs will arrange any inspections by TVA or Coast Guard as needed.
13		STOP for load calculations and Lift Plan review. Take Two and assess the work area for levelness and hazards, clear the area of non-essential personnel and be sure the area between the lift and the truck to be loaded is clear of obstructions. Inspect lifting equipment including shackles, slings, chains, wire rope, etc. and be sure tag lines are in place. No personnel are to be on the truck bed while loading. Refer to TSP 802 Check sheet for Mobile Cranes and Lift Plan included in this package. Check sheet must be used <u>each time</u> the crane is moved and used.
14		All press frames will be removed before moving on to press stands. Using a crane and qualified riggers, lift press frames from stands and load onto trucks for demob. Rigging points are located on the four corners of each piece. Remove all press frames, re-setting the crane as necessary, before moving on to removing press stands.
15		When truck is loaded, allow driver to inspect load and tie down appropriately before moving the truck.
16		With press frames removed, perform final cleaning of press stands using pressure washers. Contact SES Safety personnel to inspect equipment for cleanliness and sign off on a decon certificate. Notify Jacobs CM that equipment is ready for inspection prior to it leaving site, Jacobs will arrange any inspections by TVA or Coast Guard as needed.
17		STOP for load calculations and Lift Plan review. Take Two and assess the work area for levelness and hazards, clear the area of non-essential personnel and be sure the area between the lift and the truck to be loaded is clear of obstructions. Inspect lifting equipment including shackles, slings, chains, wire rope, etc. and be sure tag lines are in place. No personnel are to be on the truck bed while loading. Refer to TSP 802 Check sheet for Mobile Cranes and Lift Plan included in this package. Check sheet must be used <u>each time</u> the crane is moved and used.
18		Using a crane and qualified riggers, lift press stands from pad and load onto trucks for demob. Rigging points are located on the four corners of each piece.
19		When truck is loaded, allow driver to inspect load and tie down appropriately before moving the truck.
20		With the pad cleared of equipment and materials, perform a final washing of the asphalt and a final grading of any areas disturbed during work.
21		
22		
23		

Fossil Development and Construction CONTRACTOR SAFETY PRE-JOB BRIEF

Turn into Site Manager/Safety Department at end of day or completion of the work task.



The PJB shall be completed daily for each task. Post this PJB in a conspicuous location throughout the length of the task. Each crew member involved with the task shall sign this PJB at the beginning of shift.

Plant/Site: _____

Contractor: _____

Foreman: _____

Employee / Conducting PJB Name

Date: _____

Location of Task: _____

Task Description: _____

Does the task require special training? **Yes No**

If yes, what type? _____

General Information

1. Should Safety Professional be involved in the planning of this job? **Yes No**

Job Safety Analysis

1. What are the hazards associated with the job? Be PARTICULARLY careful about:

Hazard Corrections: _____

2. Has job task specific JSA been completed / reviewed with all crew members for this task? **Yes No**

3. Has the Two Minute Rule been observed before starting this job specific task? **Yes No**

Rigging

1. Has the rigging plan been discussed and all paper work been completed? **Yes No N/A**

Note: Complete Appendix (A) when using chain falls and com-a-longs **Yes No**

2. Has rigging equipment been inspected? **Yes No**

3. Person In-Charge of rigging

4. Signal Person **N/A**

5. Person In-Charge / Signal person directed to wear a yellow safety vest during all rigging task. **Yes N/A**

6. Cranes/Overhead power lines & associated electrical hazards evaluated (guy wires, poles, structures).

Yes No N/A

7. Low clearance Electrical Hazards have been identified and flagged, (guy wires, conductors, etc.)

Yes No N/A

Rigging Requirements Verified By:

Signature _____

Tools and Equipment

Has the required user inspection been completed on all tools, ladders, electrical cords, and safety equipment? **Yes No**

Scaffolds / Ladders

Have all scaffolds/ladders been inspected and all scaffold tags been signed? **Yes No N/A**

Emergency Equipment

Identify below the location of the nearest extinguisher and communication source and your assembly area.

Housekeeping

Is housekeeping safe & acceptable in the work area?

Yes No

Location: _____

Fall Protection

Have areas been identified as requiring fall protection systems? (I.e. static lines, barricades, hole covers, etc.)

Yes No

Have they been installed? **Yes No**

Asbestos

Have all areas that may present an asbestos exposure hazard while executing task been identified including known asbestos containing material and potentially asbestos containing material? **Yes No N/A**

Fire Protection

Are flammable / combustible materials stored, separated, inspected, and secured per procedure? **Yes No**

Personal Protective Equipment Required

1. Hard Hat.....**Yes No**

2. Fall Protection.....**Yes No**

3. Eye / Face.....**Yes No**

4. Respirator.....**Yes No**

5. Foot.....**Yes No**

6. Hand.....**Yes No**

7. Hearing.....**Yes No**

8. Knee Pads.....**Yes No**

9. Tyveks.....**Yes No**

APPENDIX (A)

RIGGING ACTIVITIES THAT REQUIRE ADDITIONAL PLANNING AND APPROVAL WHEN USING CHAIN FALLS AND COM-A-LONGS

- 1. Is the lift/hoist in a position that is beyond 15 degrees of vertical/plumb? Yes No
- 2. Is there multiple lift points? Yes No
- 3. Is the lift height greater than 20 feet? Yes No
- 4. Does component weigh greater than 80 percent of the rigging equipment capacity? Yes No
- 5. Is there any special rigging equipment (powered hoist, etc.)? Yes No
- 6. Is the material being lifted within two (2) feet of the hoisting device? Yes No
- 7. Is this a field rework/modification, specifically removing, modifying or taking out of service a component previously installed under new construction? Yes No

* Rigging Specialist must sign: Rigging Specialist: _____

* TVA Review/Sign-off: TVA Review _____ N/A

CHECK LIST ITEMS TO CHECK WHEN USING CHAIN FALLS AND COM-A-LONGS

- 8. Is weight rigging/pick known? Yes No
- 9. Do you have the proper device, rigging, and attachments? Yes No
- 10. Do you have proper head room / clearance for the rigging? Yes No
- 11. Do you have the mandated use of shackles in place for connecting multiple rigging points? Yes No
- 12. What degree angle (never use slings under 30 degree)? Yes No
- 13. Softeners required? Yes No
- 14. Latches, hooks are all in place and working? Yes No
- 15. Levers / chains free moving? Yes No
- 16. Barricaded area around work? Yes No
- 17. Is structure adequate to handle the intended load? Yes No
- 18. Is load centered over lifting device? Yes No
- 19. Will more then one device be used? Yes No
- 20. Shackle required for securing slings to lifting device? Yes No
- 21. Is there a potential of material, rigging and/or damaging load intended to be lifted? Yes No
- 22. Need to keep clear of load, when lifted, can you work device without getting under load? Yes No
- 23. Have you thought out a plan and reviewed with crew? Yes No
- 24. Will there be hot work going on around the device, slings or work area? Yes No
- 25. Have device been checked prior to lift? Yes No
- 26. Lifting, hoisting and/or restraining of material that employs the use of a lifting/hoisting device other than a crane? Yes No
- 27. Have all items been reviewed and discussed with the crew? Yes No

TVA TAKE TWO

Two Minute Hazard Identification

Filled out by: _____ Date: _____

WO Number (If applicable): _____

- Orient your thinking to the task at hand.
- Consider any abnormal conditions that might influence the task.
- Look for any potential hazards to personnel or hindrances to the task.

Explanation of task:

What are the hazards involved with the particular task or in the immediate area?

What am I going to do to mitigate those hazards?

Do I feel that this task can be performed safely?

- Yes. I feel that I can safely perform this task.
- No. I am unsure that all hazards are recognized and mitigated, and I request additional support.

Name of employee(s) assigned this task
Foreman/Supervisor concurrence that risks have been controlled if "No" was checked above.

Reminders

- Complete a "Take Two" card for every assigned job.
- Any employee has the right to stop a job and ask for help to control the risks.
- Submit the completed card with the work package upon completion of the job



Daily Equipment Inspection

DATE/DAY: _____

OPERATOR: _____

EQUIPMENT AND #: _____

SHIFT: _____

CHECK ITEM	OK	Needs Work	N/A	COMMENTS
FLUID LEVELS:				
Oil **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hydraulic **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transmission **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Radiator **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Grease Fittings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fluid Leaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SAFETY CHECKS:				
Fire Extinguishers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Seat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Seat Belts **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Warning Devices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
House keeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Broken Glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Body Damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Controls and Levers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Brakes **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mirrors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Windshield Wipers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Steering **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Horn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tires	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tracks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Guards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Instruments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Exhaust Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hydraulic Lines & Cylinders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boom or Mast	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Level Indicators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Have any repairs or alterations been made to this equipment that affect load limits or equipment operations? Yes No

SIGN OFF:		** DO NOT OPERATE EQUIPMENT IF THESE ITEMS NEED WORK
Operators Initials		
Machine Hours		

Load and Capacity Calculations (Page 2 of 4)			
C. Capacities of the (Main) Crane			
Make & Model of Crane			
2. Counter Weight Size:		Type of Boom:	
3. Lifting Arrangement			
a. Max. Radius During Lift		Ft.	
b. Length of Boom		Ft.	
c. Angle of Boom at Pick		Deg.	
d. Angle of Boom at Set		Deg.	
Rated Capacity Under Most Severe Conditions			
1. Over Rear		Lbs.	
2. Over Front		Lbs.	
3. Over Side		Lbs.	
f. Rated Capacity for Lift Radius, Crane Configuration, and Orientation (over front, side or....)			Lbs.
4. Jib			
a. Is the Jib to be used	Yes	No	
b. Length of Jib		Ft.	
c. Jib Angle		Deg.	
d. Rated Jib Capacity for Lift Radius, Crane Configuration, and Orientation (over front, side, or...)			Lbs.
5. Load Line/Fall Cable			
a. Is Main Block to be used?	Yes	No	
b. Number of Parts of Cable			
c. Size of Cable		Ø inches	
d. Maximum Capacity for Lift Radius, Crane Configuration, and Orientation (over front, side, or)			Lbs.
D. Percent of Cranes Capacity (>85% requires High Hazard Lift Approvals)			
		$\frac{\text{Total Lifted Weight} \times 100}{\text{Rated Capacity}} =$	%
E. Size of Slings			
1. Sling Selection			
a. Type of Arrangement		(Spreader, Vertical Slings, etc.)	
b. Number of Slings to Hook	Ø	Capacity	Lbs.
c. Sling Size		Ø	
d. Sling Length		Ft.	
e. Sling Capacity (At angle used)		Lbs.	
f. Number of Slings to Load		#	
g. Total Rigging capacity (e x f)			Lbs.
Comments:			
Sketch of rigging arrangement available	Yes	No	See Page ()
End of Standard Lift Plan Paperwork (

Figure 3: Pre-Lift Checklist

	Yes	No
1. Crane operator meets company qualification requirements?	<input type="checkbox"/>	<input type="checkbox"/>
2. Lift calculations and rigging plan completed?	<input type="checkbox"/>	<input type="checkbox"/>
3. Are lift equipment swing & travel requirements & clearances known?	<input type="checkbox"/>	<input type="checkbox"/>
4. Are all required approvals/permits signed?	<input type="checkbox"/>	<input type="checkbox"/>
5. Crane inspections up to date (Annual/Monthly/Daily)?	<input type="checkbox"/>	<input type="checkbox"/>
6. Weather conditions and wind speed acceptable?	<input type="checkbox"/>	<input type="checkbox"/>
7. Has the stability of the ground been assured by soil bearing analysis?	<input type="checkbox"/>	<input type="checkbox"/>
8. Location and size of underground facilities are known?	<input type="checkbox"/>	<input type="checkbox"/>
9. Matting and/or outrigger pads inspected and approved?	<input type="checkbox"/>	<input type="checkbox"/>
10. Electrical equipment and power lines at required distance?	<input type="checkbox"/>	<input type="checkbox"/>
11. Rigging Inspected for defects?	<input type="checkbox"/>	<input type="checkbox"/>
12. Engineered lifting lugs fabricated and installed correctly?	<input type="checkbox"/>	<input type="checkbox"/>
13. Connecting/disconnecting means been developed?	<input type="checkbox"/>	<input type="checkbox"/>
14. Have the safety precautions been reviewed?	<input type="checkbox"/>	<input type="checkbox"/>
15. Is survey equipment required?	<input type="checkbox"/>	<input type="checkbox"/>
16. Lift Hold Point of \geq _____ lbs communicated to crew?	<input type="checkbox"/>	<input type="checkbox"/>
17. Signal person(s) assigned?	<input type="checkbox"/>	<input type="checkbox"/>
18. Safe Plan of Action (SPA) Completed?	<input type="checkbox"/>	<input type="checkbox"/>
19. Pre-Lift Meeting/Task Safety Awareness Meeting (TSA) held?	<input type="checkbox"/>	<input type="checkbox"/>
20. Hoist area & load path cleared of non-essential personnel?	<input type="checkbox"/>	<input type="checkbox"/>
21. Crane set up per the lift plan (radius, configuration, etc)?	<input type="checkbox"/>	<input type="checkbox"/>
22. Rigging equipment and tag line(s) installed per plan?	<input type="checkbox"/>	<input type="checkbox"/>
Completed By Signature:	Name Printed:	Date:

Sevenson Environmental
TVA HARRIMAN FLY ASH REMOVAL
Safe Plan Of Action

Project No. 1026

Job/Task DE-Mobilization of Process Pad

Work Area: Process Pad

Date: _____

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources
Remove Press tarp frames	Crane/ Heavy Equipment	Trained Operator	TVA trained crane operator and rigger, Lift Plans
Tarp Frames Use Of Ladders	Fall from Ladder/ Uneven Grading	Ladder safety review/ Inspect Ladders Prior to use.	Review Ladder Safety
Un-Bolting of Frames	Working at elevations	100% Tie Off	
Lifting Frames with crane	Overhead Loads, Struck by, Rigging	Tag Lines on all suspended loads. Trained crane operator. Communication between workers and crane. Determine 'Drop zone' and clear the area. Inspect all rigging prior to use and review Lift Plan.	TVA Trained rigger
Man Lift / Heavy Equipment	Working at Elevations	Trained Operators, Level work surface	Awareness
		Full Body Harness when entering man lift. Worker to be tied off in Man Lift at all times	Experienced Operator PPE – Body harness and lanyard
	Tools falling from man lift	No work performed under lift	Awareness
		Not involved in operation stay clear of work area	Caution Tape off work area
	Control load	Tag lines used on all picks	
	Wind speed	Check wind speed on internet.	Computer

Hand Tools	Cuts Scrapes	Hand safety Proper PPE/ leather work gloves	Gloves
	Slips trips and falls	Take your time/ House Keeping	House keeping
	Pinch Points	Wear proper PPE, leather gloves. Keep hands from moving equipment and inspect guards.	PPE, awareness
Material Handling/Trucking	Unstable loads, untied loads	Driver is responsible for inspecting load is stable and tied down correctly. Do not move truck until load is secured.	Driver inspection.
<u>Any additional Hazards or safety practices not identified above?</u>			

Team Members' Signatures

The signature of the supervisor confirms the completion of the hazard assessment and Safe Plan of Action by the crew

Supervisors Signature: _____ Date _____

Contractor Responsible Person _____ Date: _____

Instructions: 1. Write name of job or task in space provided. 2. Conduct walk-through survey of work area. 3. Write the steps of the task in a safe sequence. 4. List all possible hazards involved in each step and reaction to change. 5. In the Safe Plan column, state actions that will be taken to prevent the hazards or injury from reaction to change. 6. In Resources column, list equipment, tools, etc. needed to do the job. 8. Ask each team member, who helped develop and will use this SPA, to sign in spaces provided. 9. Review the SPA at the end of the task for improvements. stop when conditions change, the job changes, or a deficiency in the plan is discovered, and the current SPA will be modified or a new SPA created.

Review checklist while completing front page of SPA. Check all that apply.

A new SPA is required if the job scope or work conditions change.

Required Permits	Hazards	Safe Plan
<input type="checkbox"/> Confined Space	<input type="checkbox"/> Overhead Utilities	<input type="checkbox"/> Power de-energization required <input type="checkbox"/> Insulation blankets required <input type="checkbox"/> Wire watcher required
<input type="checkbox"/> Critical Lift		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone marked
<input type="checkbox"/> Hot Work	<input type="checkbox"/> Crane or other	<input type="checkbox"/> Signalman assigned <input type="checkbox"/> Tag lines in use <input type="checkbox"/> Area around crane barricaded
<input type="checkbox"/> Lock Out/Tag Out/Try	<input type="checkbox"/> Lifting Equipment	<input type="checkbox"/> Lifting equipment inspected <input type="checkbox"/> Personnel protected from overhead load
<input type="checkbox"/> Soil Disturbance (Over 2")	<input type="checkbox"/> Underground Utilities	<input type="checkbox"/> Reviewed as-builts <input type="checkbox"/> Subsurface surveys <input type="checkbox"/> Received dig permit
<input type="checkbox"/> Utility Clearance		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone Marked
Required PPE		
<input type="checkbox"/> Hard Hat, Class C	<input type="checkbox"/> Electrical	<input type="checkbox"/> Lock Out/Tag Out/Try Out <input type="checkbox"/> Permit required? <input type="checkbox"/> Confirm that equipment is de-energized
<input type="checkbox"/> Hard Hat, Class E (<i>Elect. Protect</i>)	<input type="checkbox"/> Excavations	<input type="checkbox"/> Reviewed electrical safety procedures
<input type="checkbox"/> Ear Plugs/Ear Muffs		<input type="checkbox"/> Permits <input type="checkbox"/> Inspected prior to entering <input type="checkbox"/> Proper sloping/shoring
Eye Protection:	<input type="checkbox"/> Fire Hazard	<input type="checkbox"/> Barricades provided <input type="checkbox"/> Access/egress provided <input type="checkbox"/> Protection from accumulated water
<input type="checkbox"/> Safety Glasses		<input type="checkbox"/> Hot Work Permit <input type="checkbox"/> Fire Extinguishers <input type="checkbox"/> Fire watch
<input type="checkbox"/> Face Shield	<input type="checkbox"/> Vehicular Traffic or Heavy Equipment	<input type="checkbox"/> Adjacent area protected <input type="checkbox"/> Unnecessary flammable material removed
<input type="checkbox"/> Chemical Goggles		<input type="checkbox"/> Traffic Barricades <input type="checkbox"/> Cones <input type="checkbox"/> Signs <input type="checkbox"/> Flagmen <input type="checkbox"/> Lane closure
<input type="checkbox"/> Welding Hood	<input type="checkbox"/> Noise >85 dB	<input type="checkbox"/> Communication with equipment operator
Hand Protection:	<input type="checkbox"/> Hand & Power Tools:	Hearing protection is required: <input type="checkbox"/> Ear plugs <input type="checkbox"/> Ear Muffs <input type="checkbox"/> Both
<input type="checkbox"/> Cut Resistant Gloves		<input type="checkbox"/> Inspect general cond. <input type="checkbox"/> GFCI in use <input type="checkbox"/> Identified PPE required for each tool
<input type="checkbox"/> Welders Gloves	<input type="checkbox"/> Hand Hazards	<input type="checkbox"/> Reviewed safety requirements in operators manual(s) <input type="checkbox"/> Guarding OK
<input type="checkbox"/> Nitrile Gloves		List sharp tools, material, equipment: _____
<input type="checkbox"/> Surgical Gloves	<input type="checkbox"/> Manual Lifting	<input type="checkbox"/> PPE gloves, etc. <input type="checkbox"/> Protected sharp edges as necessary
<input type="checkbox"/> Rubber Gloves		<input type="checkbox"/> Reviewed proper lifting tech. <input type="checkbox"/> Identified material requiring lifting equipment
<input type="checkbox"/> Elect. Insulated Gloves	<input type="checkbox"/> Ladders	<input type="checkbox"/> Hand protection required <input type="checkbox"/> Back support belts
<input type="checkbox"/> Arm Sleeves		<input type="checkbox"/> Inspect general cond. before use <input type="checkbox"/> Ladder inspected with in last quarter
Foot Protection:	<input type="checkbox"/> Scaffolds	<input type="checkbox"/> Ladder tied off or held <input type="checkbox"/> Proper angle and placement <input type="checkbox"/> Reviewed ladder safety
<input type="checkbox"/> Sturdy Work Boots		<input type="checkbox"/> Inspect general condition before use <input type="checkbox"/> Tags in place <input type="checkbox"/> Properly secured
<input type="checkbox"/> Safety Toe Boots	<input type="checkbox"/> Slips, Trips Falls	<input type="checkbox"/> Toe boards used <input type="checkbox"/> Footings adequate <input type="checkbox"/> Materials properly stored on scaffold
<input type="checkbox"/> Rubber Boots		<input type="checkbox"/> Inspect for trip hazards <input type="checkbox"/> Hazards marked <input type="checkbox"/> Tools & material properly stored
<input type="checkbox"/> Rubber Boot Covers	<input type="checkbox"/> Pinch Points	<input type="checkbox"/> Extension cords properly secured <input type="checkbox"/> Work zone free of debris
<input type="checkbox"/> Dielectric Footwear		List potential pinch points: _____
Respiratory Protection:	<input type="checkbox"/> Working w/ Chemicals	<input type="checkbox"/> Working near operating equipment <input type="checkbox"/> Hand/Body positioning
<input type="checkbox"/> Dust Mask		<input type="checkbox"/> List specific chemicals involved and list hazards and precaution on front side.
<input type="checkbox"/> Air Purifying Respirator	<input type="checkbox"/> Asbestos or Lead Paint Potential	<input type="checkbox"/> Reviewed MSDS <input type="checkbox"/> Exposure Monitoring required <input type="checkbox"/> Have proper containers and labels.
<input type="checkbox"/> Supplied Air Respirator		<input type="checkbox"/> Identified proper PPE (respirators, clothing, gloves, etc.)
<input type="checkbox"/> SCBA	<input type="checkbox"/> Heat Stress Potential	<input type="checkbox"/> Areas to be worked may contain asbestos or lead paint <input type="checkbox"/> Asbestos controls incorporated
<input type="checkbox"/> Emergency Escape Respirator		<input type="checkbox"/> Lead based point controls in place <input type="checkbox"/> Exposure monitoring conducted.
Special Clothing:	<input type="checkbox"/> Cold Stress Potential	<input type="checkbox"/> Heat stress monitoring (>85°) <input type="checkbox"/> Liquids available <input type="checkbox"/> Cool down periods
<input type="checkbox"/> Tyvek ®		<input type="checkbox"/> Sun Screen <input type="checkbox"/> Reviewed Heat Stress symptoms
<input type="checkbox"/> Poly Coated Tyvek ®	<input type="checkbox"/> Environmental	<input type="checkbox"/> Proper clothing (i.e., gloves, coat, coveralls) <input type="checkbox"/> Wind chill <32°
<input type="checkbox"/> Fire Resistant Coveralls		<input type="checkbox"/> Reviewed Cold Stress symptoms <input type="checkbox"/> Warm up periods
<input type="checkbox"/> Rain Suit	<input type="checkbox"/> Natural or Site Hazards	<input type="checkbox"/> Air emissions <input type="checkbox"/> Water discharge <input type="checkbox"/> Hazardous wastes <input type="checkbox"/> Other wastes
<input type="checkbox"/> Safety Vest		<input type="checkbox"/> Pollution prevention <input type="checkbox"/> Waste minimization
Fall Protection:	<input type="checkbox"/> Adjacent Work/Processes	<input type="checkbox"/> Weather <input type="checkbox"/> Terrain <input type="checkbox"/> Adjacent operations or processes <input type="checkbox"/> Biological hazards
<input type="checkbox"/> Harness		<input type="checkbox"/> Animals/reptiles/insects hazards
<input type="checkbox"/> Double Lanyard Required	<input type="checkbox"/> Barricades/covers	<input type="checkbox"/> Notified them of our presents <input type="checkbox"/> Other workers adjacent, above, or below.
<input type="checkbox"/> Anchorage Point Available		<input type="checkbox"/> Coordinated with adjacent supervisor/customer/operator <input type="checkbox"/> Need barriers between.
<input type="checkbox"/> Additional Anchorage Connector Needed e.g. Cross Arm Strap, etc.		<input type="checkbox"/> Caution barricade tape required <input type="checkbox"/> Danger barricade tape required <input type="checkbox"/> Rigid railing required
<input type="checkbox"/> Retractable Device Needed		<input type="checkbox"/> Covers over opening <input type="checkbox"/> Warning signs required
<input type="checkbox"/> Horizontal Life Line System Req'd.		
<input type="checkbox"/> Fall Clearance Distance Adequate		
<input type="checkbox"/> Fall Rescue/Retrieval Plan Set Up		
		Additional Information:

SEVENSON ENVIRONMENTAL
TVA HARRIMAN FLY ASH REMOVAL
Safe Plan Of Action

Project No. 1026

Job/Task Working at Elevations Work Area Process Pad Date _____

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources
During the De-Mob of the process Pad it will be necessary to work at elevations 4 feet and above.	Falls From Elevations	Workers who will be working at elevations 4 feet or higher will be required to wear fall protection and be tied off	Pre-Job briefing
Dismantling hand rails	Falls from elevations, Trip Hazards	Workers need to be provided with and instructed as to what they can tie off to	Pre-Job briefing
	Hand Rails removed from work surfaces	Use barrier tape or chains to mark areas where hazard exists and define temporary boundaries.	Awareness, hazard identification
Removing Frame for tarp on presses	Falls From Elevations Trip Hazards, Slips	Tie Off Needs to be established and worker awareness as to the proper spots to connect	Pre-Job briefing
		Review with workers the different types of lanyards, Retractable and their applications. (Am I using the right tool for the job?)	Supervision and Safety
Ladder Use	Falls From Elevations Trip Hazards, Slips	Workers need to inspect there ladders prior to use, if defective Tag out of Service notify supervisor or foreman	Ladder Safety and awareness; Safety meeting
		Worker needs to be familiar with the proper ladder for the work he or she is undertaking. Do Not use A Step Ladder in the un-open position. Extension Ladders need to extend 3 Feet above the landing point and be tied off.	

		Worker ascending or descending needs to maintain three points of contact. Hands free of tools or parts	
<u>Any additional Hazards or safety practices not identified above?</u>			

Team Members' Signatures

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

The signature of the supervisor confirms the completion of the hazard assessment and Safe Plan of Action by the crew.

Supervisors Signature: _____ Date _____

Instructions: 1. Write name of job or task in space provided. 2. Conduct walk-through survey of work area. 3. Write the steps of the task in a safe sequence. 4. List all possible hazards involved in each step and reaction to change. 5. In the Safe Plan column, state actions that will be taken to prevent the hazards or injury from reaction to change. 6. In Resources column, list equipment, tools, etc. needed to do the job. 8. Ask each team member, who helped develop and will use this SPA, to sign in spaces provided. 9. Review the SPA at the end of the task for improvements. Work shall stop when conditions change, the job changes, or a deficiency in the plan is discovered, and the current SPA will be modified or a new SPA created.

Review checklist while completing front page of SPA. Check all that apply.

A new SPA is required if the job scope or work conditions change.

Required Permits	Hazards	Safe Plan
<input type="checkbox"/> Confined Space	<input type="checkbox"/> Overhead Utilities	<input type="checkbox"/> Power de-energization required <input type="checkbox"/> Insulation blankets required <input type="checkbox"/> Wire watcher required
<input type="checkbox"/> Critical Lift		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone marked
<input type="checkbox"/> Hot Work	<input type="checkbox"/> Crane or other Lifting Equipment	<input type="checkbox"/> Signalman assigned <input type="checkbox"/> Tag lines in use <input type="checkbox"/> Area around crane barricaded
<input type="checkbox"/> Lock Out/Tag Out		<input type="checkbox"/> Lifting equipment inspected <input type="checkbox"/> Personnel protected from overhead load
<input type="checkbox"/> Soil Disturbance (Over 12")	<input type="checkbox"/> Underground Utilities	<input type="checkbox"/> Reviewed as-builts <input type="checkbox"/> Subsurface surveys <input type="checkbox"/> Received dig permit
<input type="checkbox"/> Utility Clearance		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone Marked
Required PPE		
<input type="checkbox"/> Hard Hat, Class C	<input type="checkbox"/> Electrical	<input type="checkbox"/> Lock Out/Tag Out/Try Out <input type="checkbox"/> Permit required? <input type="checkbox"/> Confirm that equipment is de-energized
<input type="checkbox"/> Hard Hat, Class E (Elect. Protect)	<input type="checkbox"/> Excavations	<input type="checkbox"/> Reviewed electrical safety procedures
<input type="checkbox"/> Ear Plugs/Ear Muffs		<input type="checkbox"/> Permits <input type="checkbox"/> Inspected prior to entering <input type="checkbox"/> Proper sloping/shoring
Eye Protection:	<input type="checkbox"/> Fire Hazard	<input type="checkbox"/> Barricades provided <input type="checkbox"/> Access/egress provided <input type="checkbox"/> Protection from accumulated water
<input type="checkbox"/> Safety Glasses		<input type="checkbox"/> Hot Work Permit <input type="checkbox"/> Fire Extinguishers <input type="checkbox"/> Fire watch
<input type="checkbox"/> Face Shield	<input type="checkbox"/> Vehicular Traffic or Heavy Equipment	<input type="checkbox"/> Adjacent area protected <input type="checkbox"/> Unnecessary flammable material removed
<input type="checkbox"/> Chemical Goggles		<input type="checkbox"/> Traffic Barricades <input type="checkbox"/> Cones <input type="checkbox"/> Signs <input type="checkbox"/> Flagmen <input type="checkbox"/> Lane closure
<input type="checkbox"/> Welding Hood	<input type="checkbox"/> Noise >85 dB	<input type="checkbox"/> Communication with equipment operator
Hand Protection:	<input type="checkbox"/> Hand & Power Tools:	Hearing protection is required: <input type="checkbox"/> Ear plugs <input type="checkbox"/> Ear Muffs <input type="checkbox"/> Both
<input type="checkbox"/> Cut Resistant Gloves		<input type="checkbox"/> Inspect general cond. <input type="checkbox"/> GFCI in use <input type="checkbox"/> Identified PPE required for each tool
<input type="checkbox"/> Welders Gloves	<input type="checkbox"/> Hand Hazards	<input type="checkbox"/> Reviewed safety requirements in operators manual(s) <input type="checkbox"/> Guarding OK
<input type="checkbox"/> Nitrile Gloves		List sharp tools, material, equipment: _____
<input type="checkbox"/> Surgical Gloves	<input type="checkbox"/> Manual Lifting	<input type="checkbox"/> PPE gloves, etc. <input type="checkbox"/> Protected sharp edges as necessary
<input type="checkbox"/> Rubber Gloves		<input type="checkbox"/> Reviewed proper lifting tech. <input type="checkbox"/> Identified material requiring lifting equipment
<input type="checkbox"/> Elect. Insulated Gloves	<input type="checkbox"/> Ladders	<input type="checkbox"/> Hand protection required <input type="checkbox"/> Back support belts
<input type="checkbox"/> Arm Sleeves		<input type="checkbox"/> Inspect general cond. before use <input type="checkbox"/> Ladder inspected with in last quarter
Foot Protection:	<input type="checkbox"/> Scaffolds	<input type="checkbox"/> Ladder tied off or held <input type="checkbox"/> Proper angle and placement <input type="checkbox"/> Reviewed ladder safety
<input type="checkbox"/> Sturdy Work Boots		<input type="checkbox"/> Inspect general condition before use <input type="checkbox"/> Tags in place <input type="checkbox"/> Properly secured
<input type="checkbox"/> Safety Toe Boots	<input type="checkbox"/> Slips, Trips Falls	<input type="checkbox"/> Toe boards used <input type="checkbox"/> Footings adequate <input type="checkbox"/> Materials properly stored on scaffold
<input type="checkbox"/> Rubber Boots		<input type="checkbox"/> Inspect for trip hazards <input type="checkbox"/> Hazards marked <input type="checkbox"/> Tools & material properly stored
<input type="checkbox"/> Rubber Boot Covers	<input type="checkbox"/> Pinch Points	<input type="checkbox"/> Extension cords properly secured <input type="checkbox"/> Work zone free of debris
<input type="checkbox"/> Dielectric Footwear		List potential pinch points: _____
Respiratory Protection:	<input type="checkbox"/> Working w/ Chemicals	<input type="checkbox"/> Working near operating equipment <input type="checkbox"/> Hand/Body positioning
<input type="checkbox"/> Dust Mask		<input type="checkbox"/> List specific chemicals involved and list hazards and precaution on front side.
<input type="checkbox"/> Air Purifying Respirator	<input type="checkbox"/> Asbestos or Lead Paint Potential	<input type="checkbox"/> Reviewed MSDS <input type="checkbox"/> Exposure Monitoring required <input type="checkbox"/> Have proper containers and labels.
<input type="checkbox"/> Supplied Air Respirator		<input type="checkbox"/> Identified proper PPE (respirators, clothing, gloves, etc.)
<input type="checkbox"/> SCBA	<input type="checkbox"/> Heat Stress Potential	<input type="checkbox"/> Areas to be worked may contain asbestos or lead paint <input type="checkbox"/> Asbestos controls incorporated
<input type="checkbox"/> Emergency Escape Respirator		<input type="checkbox"/> Lead based point controls in place <input type="checkbox"/> Exposure monitoring conducted.
Special Clothing:	<input type="checkbox"/> Cold Stress Potential	<input type="checkbox"/> Heat stress monitoring (>85°) <input type="checkbox"/> Liquids available <input type="checkbox"/> Cool down periods
<input type="checkbox"/> Tyvek ®		<input type="checkbox"/> Sun Screen <input type="checkbox"/> Reviewed Heat Stress symptoms
<input type="checkbox"/> Poly Coated Tyvek ®	<input type="checkbox"/> Environmental	<input type="checkbox"/> Proper clothing (i.e.. gloves, coat, coveralls) <input type="checkbox"/> Wind chill <32°
<input type="checkbox"/> Fire Resistant Coveralls		<input type="checkbox"/> Reviewed Cold Stress symptoms <input type="checkbox"/> Warm up periods
<input type="checkbox"/> Rain Suit	<input type="checkbox"/> Natural or Site Hazards	<input type="checkbox"/> Air emissions <input type="checkbox"/> Water discharge <input type="checkbox"/> Hazardous wastes <input type="checkbox"/> Other wastes
<input type="checkbox"/> Safety Vest		<input type="checkbox"/> Pollution prevention <input type="checkbox"/> Waste minimization
Fall Protection:	<input type="checkbox"/> Adjacent Work/Processes	<input type="checkbox"/> Weather <input type="checkbox"/> Terrain <input type="checkbox"/> Adjacent operations or processes <input type="checkbox"/> Biological hazards
<input type="checkbox"/> Harness		<input type="checkbox"/> Animals/reptiles/insects hazards
<input type="checkbox"/> Double Lanyard Required	<input type="checkbox"/> Barricades/covers	<input type="checkbox"/> Notified them of our presents <input type="checkbox"/> Other workers adjacent, above, or below.
<input type="checkbox"/> Anchorage Point Available		<input type="checkbox"/> Coordinated with adjacent supervisor/customer/operator <input type="checkbox"/> Need barriers between.
<input type="checkbox"/> Additional Anchorage Connector Needed e.g. Cross Arm Strap, etc.		<input type="checkbox"/> Caution barricade tape required <input type="checkbox"/> Danger barricade tape required <input type="checkbox"/> Rigid railing required
<input type="checkbox"/> Retractable Device Needed		<input type="checkbox"/> Covers over opening <input type="checkbox"/> Warning signs required
<input type="checkbox"/> Horizontal Life Line System Req'd.		Additional Information:
<input type="checkbox"/> Fall Clearance Distance Adequate		
<input type="checkbox"/> Fall Rescue/Retrieval Plan Set Up		

Sevenson Environmental Services Inc.

TVA Harriman Fly Ash Removal

Safe Plan Of Action

Project No. 1026

Job/Task Mobile Pressure Washer

Work Area Process Pad

Date _____

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources
General Operation	Injury to people	Keep bystanders a safe distance away from work area. Cone off work area	Awareness
	Cuts	Do NOT Spray directly at glass or fragile objects	
	Hearing Loss	Wear hearing protection	Earplugs, Ear Muffs
	Eye Injury	Wear Eye Protection – Safety glasses <u>and</u> face shield required	Safety Glasses and Face Shield
	Chemical Exposure	Read MSDS sheet of chemical (if using a chemical)	MSDS, Review at Pre-Job briefing
Refueling Operations	Burns, carbon monoxide poisoning	DO NOT fill gas when engine is running, hot or near open flame. Make sure engine is off and cooled before refueling.	Awareness
		DO NOT run engine in enclosed area	
		DO NOT touch or come in contact with hot muffler, cylinders, cooling fans, or hot exhaust gases	
		DO NOT operate near open flames, flammable vapors or gases	
Transporting Equipment	Fuel Leaks	When transporting shut-off fuel valve (put in the OFF position)	
Misc. Safety		Inspect equipment for damage to hoses, fittings, etc...	
		Inspect oil level, fuel and or water leaks	
		Operate on level surfaces	

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources
		NEVER start washer without adequate water supply	
		Never leave pressurized unit unattended. ALWAYS shut-off the unit and relieve trapped pressure before leaving.	
		DO NOT run the unit for more than 3 minutes with the spray gun in the closed position	
		Clean up spilled fuel or oil immediately to avoid falls	
		NEVER squeeze the spray gun trigger unless you are securely braced.	
		NEVER attempt to use power washer on or near electrical outlets, fuse boxes, transformers, high voltage wires, etc...	
Wearing Proper PPE			Hearing Protection, safety glasses and face shield Boots, Tyvek
<u>Any additional Hazards or safety practices not identified above?</u>			

Team Members' Signatures

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

The signature of the supervisor confirms the completion of the hazard assessment and Safe Plan of Action by the crew.

Supervisors Signature: _____ Date _____

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Review checklist while completing front page of SPA. Check all that apply.

A new SPA is required if the job scope or work conditions change.

Required Permits	Hazards	Safe Plan
<input type="checkbox"/> Confined Space	<input type="checkbox"/> Overhead Utilities	<input type="checkbox"/> Power de-energization required <input type="checkbox"/> Insulation blankets required <input type="checkbox"/> Wire watcher required
<input type="checkbox"/> Critical Lift		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone marked
<input type="checkbox"/> Hot Work	<input type="checkbox"/> Crane or other Lifting Equipment	<input type="checkbox"/> Signalman assigned <input type="checkbox"/> Tag lines in use <input type="checkbox"/> Area around crane barricaded
<input type="checkbox"/> Lock Out/Tag Out		<input type="checkbox"/> Lifting equipment inspected <input type="checkbox"/> Personnel protected from overhead load
<input type="checkbox"/> Soil Disturbance (Over 12")	<input type="checkbox"/> Underground Utilities	<input type="checkbox"/> Reviewed as-builts <input type="checkbox"/> Subsurface surveys <input type="checkbox"/> Received dig permit
<input type="checkbox"/> Utility Clearance		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone Marked
Required PPE		
<input type="checkbox"/> Hard Hat, Class C	<input type="checkbox"/> Electrical	<input type="checkbox"/> Lock Out/Tag Out/Try Out <input type="checkbox"/> Permit required? <input type="checkbox"/> Confirm that equipment is de-energized
<input type="checkbox"/> Hard Hat, Class E (Elect. Protect)	<input type="checkbox"/> Excavations	<input type="checkbox"/> Reviewed electrical safety procedures
<input type="checkbox"/> Ear Plugs/Ear Muffs		<input type="checkbox"/> Permits <input type="checkbox"/> Inspected prior to entering <input type="checkbox"/> Proper sloping/shoring
Eye Protection:	<input type="checkbox"/> Fire Hazard	<input type="checkbox"/> Barricades provided <input type="checkbox"/> Access/egress provided <input type="checkbox"/> Protection from accumulated water
<input type="checkbox"/> Safety Glasses		<input type="checkbox"/> Hot Work Permit <input type="checkbox"/> Fire Extinguishers <input type="checkbox"/> Fire watch
<input type="checkbox"/> Face Shield	<input type="checkbox"/> Vehicular Traffic or Heavy Equipment	<input type="checkbox"/> Adjacent area protected <input type="checkbox"/> Unnecessary flammable material removed
<input type="checkbox"/> Chemical Goggles		<input type="checkbox"/> Traffic Barricades <input type="checkbox"/> Cones <input type="checkbox"/> Signs <input type="checkbox"/> Flagmen <input type="checkbox"/> Lane closure
<input type="checkbox"/> Welding Hood	<input type="checkbox"/> Noise >85 dB	<input type="checkbox"/> Communication with equipment operator
Hand Protection:	<input type="checkbox"/> Hand & Power Tools:	Hearing protection is required: <input type="checkbox"/> Ear plugs <input type="checkbox"/> Ear Muffs <input type="checkbox"/> Both
<input type="checkbox"/> Cut Resistant Gloves		<input type="checkbox"/> Inspect general cond. <input type="checkbox"/> GFCI in use <input type="checkbox"/> Identified PPE required for each tool
<input type="checkbox"/> Welders Gloves	<input type="checkbox"/> Hand Hazards	<input type="checkbox"/> Reviewed safety requirements in operators manual(s) <input type="checkbox"/> Guarding OK
<input type="checkbox"/> Nitrile Gloves		List sharp tools, material, equipment: _____
<input type="checkbox"/> Surgical Gloves	<input type="checkbox"/> Manual Lifting	<input type="checkbox"/> PPE gloves, etc. <input type="checkbox"/> Protected sharp edges as necessary
<input type="checkbox"/> Rubber Gloves		<input type="checkbox"/> Reviewed proper lifting tech. <input type="checkbox"/> Identified material requiring lifting equipment
<input type="checkbox"/> Elect. Insulated Gloves	<input type="checkbox"/> Ladders	<input type="checkbox"/> Hand protection required <input type="checkbox"/> Back support belts
<input type="checkbox"/> Arm Sleeves		<input type="checkbox"/> Inspect general cond. before use <input type="checkbox"/> Ladder inspected with in last quarter
Foot Protection:	<input type="checkbox"/> Scaffolds	<input type="checkbox"/> Ladder tied off or held <input type="checkbox"/> Proper angle and placement <input type="checkbox"/> Reviewed ladder safety
<input type="checkbox"/> Sturdy Work Boots		<input type="checkbox"/> Inspect general condition before use <input type="checkbox"/> Tags in place <input type="checkbox"/> Properly secured
<input type="checkbox"/> Safety Toe Boots	<input type="checkbox"/> Slips, Trips Falls	<input type="checkbox"/> Toe boards used <input type="checkbox"/> Footings adequate <input type="checkbox"/> Materials properly stored on scaffold
<input type="checkbox"/> Rubber Boots		<input type="checkbox"/> Inspect for trip hazards <input type="checkbox"/> Hazards marked <input type="checkbox"/> Tools & material properly stored
<input type="checkbox"/> Rubber Boot Covers	<input type="checkbox"/> Pinch Points	<input type="checkbox"/> Extension cords properly secured <input type="checkbox"/> Work zone free of debris
<input type="checkbox"/> Dielectric Footwear		List potential pinch points: _____
Respiratory Protection:	<input type="checkbox"/> Working w/ Chemicals	<input type="checkbox"/> Working near operating equipment <input type="checkbox"/> Hand/Body positioning
<input type="checkbox"/> Dust Mask		<input type="checkbox"/> List specific chemicals involved and list hazards and precaution on front side.
<input type="checkbox"/> Air Purifying Respirator	<input type="checkbox"/> Asbestos or Lead Paint Potential	<input type="checkbox"/> Reviewed MSDS <input type="checkbox"/> Exposure Monitoring required <input type="checkbox"/> Have proper containers and labels.
<input type="checkbox"/> Supplied Air Respirator		<input type="checkbox"/> Identified proper PPE (respirators, clothing, gloves, etc.)
<input type="checkbox"/> SCBA	<input type="checkbox"/> Heat Stress Potential	<input type="checkbox"/> Areas to be worked may contain asbestos or lead paint <input type="checkbox"/> Asbestos controls incorporated
<input type="checkbox"/> Emergency Escape Respirator		<input type="checkbox"/> Lead based point controls in place <input type="checkbox"/> Exposure monitoring conducted.
Special Clothing:	<input type="checkbox"/> Cold Stress Potential	<input type="checkbox"/> Heat stress monitoring (>85°) <input type="checkbox"/> Liquids available <input type="checkbox"/> Cool down periods
<input type="checkbox"/> Tyvek ®		<input type="checkbox"/> Sun Screen <input type="checkbox"/> Reviewed Heat Stress symptoms
<input type="checkbox"/> Poly Coated Tyvek ®	<input type="checkbox"/> Environmental	<input type="checkbox"/> Proper clothing (i.e.. gloves, coat, coveralls) <input type="checkbox"/> Wind chill <32°
<input type="checkbox"/> Fire Resistant Coveralls		<input type="checkbox"/> Reviewed Cold Stress symptoms <input type="checkbox"/> Warm up periods
<input type="checkbox"/> Rain Suit	<input type="checkbox"/> Natural or Site Hazards	<input type="checkbox"/> Air emissions <input type="checkbox"/> Water discharge <input type="checkbox"/> Hazardous wastes <input type="checkbox"/> Other wastes
<input type="checkbox"/> Safety Vest		<input type="checkbox"/> Pollution prevention <input type="checkbox"/> Waste minimization
Fall Protection:	<input type="checkbox"/> Adjacent Work/Processes	<input type="checkbox"/> Weather <input type="checkbox"/> Terrain <input type="checkbox"/> Adjacent operations or processes <input type="checkbox"/> Biological hazards
<input type="checkbox"/> Harness		<input type="checkbox"/> Animals/reptiles/insects hazards
<input type="checkbox"/> Double Lanyard Required	<input type="checkbox"/> Barricades/covers	<input type="checkbox"/> Notified them of our presents <input type="checkbox"/> Other workers adjacent, above, or below.
<input type="checkbox"/> Anchorage Point Available		<input type="checkbox"/> Coordinated with adjacent supervisor/customer/operator <input type="checkbox"/> Need barriers between.
<input type="checkbox"/> Additional Anchorage Connector Needed e.g. Cross Arm Strap, etc.		<input type="checkbox"/> Caution barricade tape required <input type="checkbox"/> Danger barricade tape required <input type="checkbox"/> Rigid railing required
<input type="checkbox"/> Retractable Device Needed		<input type="checkbox"/> Covers over opening <input type="checkbox"/> Warning signs required
<input type="checkbox"/> Horizontal Life Line System Req'd.		Additional Information:
<input type="checkbox"/> Fall Clearance Distance Adequate		
<input type="checkbox"/> Fall Rescue/Retrieval Plan Set Up		

Sevenson Environmental Services Inc.
TVA Kingston Ash Release Response Site
Safe Plan Of Action

Project No. 1026

Job/Task: Filter Press/Conveyor Wash Down Area: Filter Press Date: _____

Steps of Task (in a safe order)	Hazard/Reaction to Change (What's going to hurt you?)	Safe Plan (What are YOU doing to prevent an injury?)	Resources (Tools, Equipment, Manuals, Etc.)
Work Environment	Slips – water, cake on floor. Trips – open floor trench, hoses, debris Low overhead – Presses and drag outs. Dim lighted areas – under presses. Noise Spills & Splashes – Adjacent Operations	Continuous Housekeeping, maintain proper footing and hose management Situation recognition Hearing protection Exclusion zones and Modified D PPE Additional PPE – Face Shield Situation recognition	Personnel awareness Brooms, shovels, squeegees. Ear plugs, or muffs. Tyvek, boot coverings, nitrile gloves, hardhat, safety glasses, safety-boots. Face shield
Washing with hoses	Communication Breakdown Pressurized lines	Good visual and verbal contact with adjacent operations. De-pressurize water lines prior to breakdown using valves. Inspect hose connections.	Use locking hose connectors
Shoveling / squeegee cake, water and debris	Communication Breakdown Over exertion	Good visual and verbal contact with adjacent operations. Proper lifting techniques	Shovel, squeegee.
Power washing filter presses	Communication Breakdown Pressurized lines Faulty equipment Cuts and punctures Fire	<u>Review Mobile Pressure Washer SPA included in this package.</u> Good visual and verbal contact with adjacent operations. Inspect power washer levels and for defects. Do not wash hands, boots, co-workers with power washer. Do not spray electrical panels, boxes, outlets, cords, lights. Only fuel power washer when it is cooled.	Power Washer

Review Dewatering Equipment checklist while completing front page of SPA. Check all that apply.

A new SPA is required if the job scope or work conditions change.

Required Permits	Hazards	Safe Plan
<input type="checkbox"/> Confined Space	<input type="checkbox"/> Overhead Utilities	<input type="checkbox"/> Power de-energization required <input type="checkbox"/> Insulation blankets required <input type="checkbox"/> Wire watcher required
<input type="checkbox"/> Critical Lift		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone marked
<input type="checkbox"/> Hot Work	<input type="checkbox"/> Crane or other Lifting Equipment	<input type="checkbox"/> Signalman assigned <input type="checkbox"/> Tag lines in use <input type="checkbox"/> Area around crane barricaded
<input type="checkbox"/> Lock Out/Tag Out/Try		<input type="checkbox"/> Lifting equipment inspected <input type="checkbox"/> Personnel protected from overhead load
<input type="checkbox"/> Soil Disturbance (Over 2")	<input type="checkbox"/> Underground Utilities	<input type="checkbox"/> Reviewed as-builts <input type="checkbox"/> Subsurface surveys <input type="checkbox"/> Received dig permit
<input type="checkbox"/> Utility Clearance		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone Marked
Required PPE		
<input type="checkbox"/> Hard Hat, Class C	<input type="checkbox"/> Electrical	<input type="checkbox"/> Lock Out/Tag Out/Try Out <input type="checkbox"/> Permit required? <input type="checkbox"/> Confirm that equipment is de-energized
<input type="checkbox"/> Hard Hat, Class E (<i>Elect. Protect</i>)	<input type="checkbox"/> Excavations	<input type="checkbox"/> Reviewed electrical safety procedures
<input type="checkbox"/> Ear Plugs/Ear Muffs		<input type="checkbox"/> Permits <input type="checkbox"/> Inspected prior to entering <input type="checkbox"/> Proper sloping/shoring
Eye Protection:	<input type="checkbox"/> Fire Hazard	<input type="checkbox"/> Barricades provided <input type="checkbox"/> Access/egress provided <input type="checkbox"/> Protection from accumulated water
<input type="checkbox"/> Safety Glasses		<input type="checkbox"/> Hot Work Permit <input type="checkbox"/> Fire Extinguishers <input type="checkbox"/> Fire watch
<input type="checkbox"/> Face Shield	<input type="checkbox"/> Vehicular Traffic or Heavy Equipment	<input type="checkbox"/> Adjacent area protected <input type="checkbox"/> Unnecessary flammable material removed
<input type="checkbox"/> Chemical Goggles		<input type="checkbox"/> Traffic Barricades <input type="checkbox"/> Cones <input type="checkbox"/> Signs <input type="checkbox"/> Flagmen <input type="checkbox"/> Lane closure
<input type="checkbox"/> Welding Hood	<input type="checkbox"/> Noise >85 dB	<input type="checkbox"/> Communication with equipment operator
Hand Protection:	<input type="checkbox"/> Hand & Power Tools:	Hearing protection is required: <input type="checkbox"/> Ear plugs <input type="checkbox"/> Ear Muffs <input type="checkbox"/> Both
<input type="checkbox"/> Cut Resistant Gloves		<input type="checkbox"/> Inspect general cond. <input type="checkbox"/> GFCI in use <input type="checkbox"/> Identified PPE required for each tool
<input type="checkbox"/> Welders Gloves	<input type="checkbox"/> Hand Hazards	<input type="checkbox"/> Reviewed safety requirements in operators manual(s) <input type="checkbox"/> Guarding OK
<input type="checkbox"/> Nitrile Gloves		List sharp tools, material, equipment: _____
<input type="checkbox"/> Surgical Gloves	<input type="checkbox"/> Manual Lifting	<input type="checkbox"/> PPE gloves, etc. <input type="checkbox"/> Protected sharp edges as necessary
<input type="checkbox"/> Rubber Gloves		<input type="checkbox"/> Reviewed proper lifting tech. <input type="checkbox"/> Identified material requiring lifting equipment
<input type="checkbox"/> Elect. Insulated Gloves	<input type="checkbox"/> Ladders	<input type="checkbox"/> Hand protection required <input type="checkbox"/> Back support belts
<input type="checkbox"/> Arm Sleeves		<input type="checkbox"/> Inspect general cond. before use <input type="checkbox"/> Ladder inspected with in last quarter
Foot Protection:	<input type="checkbox"/> Scaffolds	<input type="checkbox"/> Ladder tied off or held <input type="checkbox"/> Proper angle and placement <input type="checkbox"/> Reviewed ladder safety
<input type="checkbox"/> Sturdy Work Boots		<input type="checkbox"/> Inspect general condition before use <input type="checkbox"/> Tags in place <input type="checkbox"/> Properly secured
<input type="checkbox"/> Safety Toe Boots	<input type="checkbox"/> Slips, Trips Falls	<input type="checkbox"/> Toe boards used <input type="checkbox"/> Footings adequate <input type="checkbox"/> Materials properly stored on scaffold
<input type="checkbox"/> Rubber Boots		<input type="checkbox"/> Inspect for trip hazards <input type="checkbox"/> Hazards marked <input type="checkbox"/> Tools & material properly stored
<input type="checkbox"/> Rubber Boot Covers	<input type="checkbox"/> Pinch Points	<input type="checkbox"/> Extension cords properly secured <input type="checkbox"/> Work zone free of debris
<input type="checkbox"/> Dielectric Footwear		List potential pinch points: _____
Respiratory Protection:	<input type="checkbox"/> Working w/ Chemicals	<input type="checkbox"/> Working near operating equipment <input type="checkbox"/> Hand/Body positioning
<input type="checkbox"/> Dust Mask		<input type="checkbox"/> List specific chemicals involved and list hazards and precaution on front side.
<input type="checkbox"/> Air Purifying Respirator	<input type="checkbox"/> Asbestos or Lead Paint Potential	<input type="checkbox"/> Reviewed MSDS <input type="checkbox"/> Exposure Monitoring required <input type="checkbox"/> Have proper containers and labels.
<input type="checkbox"/> Supplied Air Respirator		<input type="checkbox"/> Identified proper PPE (respirators, clothing, gloves, etc.)
<input type="checkbox"/> SCBA	<input type="checkbox"/> Heat Stress Potential	<input type="checkbox"/> Areas to be worked may contain asbestos or lead paint <input type="checkbox"/> Asbestos controls incorporated
<input type="checkbox"/> Emergency Escape Respirator		<input type="checkbox"/> Lead based point controls in place <input type="checkbox"/> Exposure monitoring conducted.
Special Clothing:	<input type="checkbox"/> Cold Stress Potential	<input type="checkbox"/> Heat stress monitoring (>85°) <input type="checkbox"/> Liquids available <input type="checkbox"/> Cool down periods
<input type="checkbox"/> Tyvek ®		<input type="checkbox"/> Sun Screen <input type="checkbox"/> Reviewed Heat Stress symptoms
<input type="checkbox"/> Poly Coated Tyvek ®	<input type="checkbox"/> Environmental	<input type="checkbox"/> Proper clothing (i.e., gloves, coat, coveralls) <input type="checkbox"/> Wind chill <32°
<input type="checkbox"/> Fire Resistant Coveralls		<input type="checkbox"/> Reviewed Cold Stress symptoms <input type="checkbox"/> Warm up periods
<input type="checkbox"/> Rain Suit	<input type="checkbox"/> Natural or Site Hazards	<input type="checkbox"/> Air emissions <input type="checkbox"/> Water discharge <input type="checkbox"/> Hazardous wastes <input type="checkbox"/> Other wastes
<input type="checkbox"/> Safety Vest		<input type="checkbox"/> Pollution prevention <input type="checkbox"/> Waste minimization
Fall Protection:	<input type="checkbox"/> Adjacent Work/Processes	<input type="checkbox"/> Weather <input type="checkbox"/> Terrain <input type="checkbox"/> Adjacent operations or processes <input type="checkbox"/> Biological hazards
<input type="checkbox"/> Harness		<input type="checkbox"/> Animals/reptiles/insects hazards
<input type="checkbox"/> Double Lanyard Required	<input type="checkbox"/> Barricades/covers	<input type="checkbox"/> Notified them of our presents <input type="checkbox"/> Other workers adjacent, above, or below.
<input type="checkbox"/> Anchorage Point Available		<input type="checkbox"/> Coordinated with adjacent supervisor/customer/operator <input type="checkbox"/> Need barriers between.
<input type="checkbox"/> Additional Anchorage Connector Needed e.g. Cross Arm Strap, etc.		<input type="checkbox"/> Caution barricade tape required <input type="checkbox"/> Danger barricade tape required <input type="checkbox"/> Rigid railing required
<input type="checkbox"/> Retractable Device Needed		<input type="checkbox"/> Covers over opening <input type="checkbox"/> Warning signs required
<input type="checkbox"/> Horizontal Life Line System Req'd.		
<input type="checkbox"/> Fall Clearance Distance Adequate		
<input type="checkbox"/> Fall Rescue/Retrieval Plan Set Up		
	Additional Information:	

Sevenson Environmental
TVA HARRIMAN FLY ASH REMOVAL
Safe Plan Of Action

Project No. 1026

Job/Task: DE-Mobilization of Filter Presses

Work Area: Process Pad

Date: _____

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources
Remove Press tarp frames	Crane/ Heavy Equipment	Trained Operator	TVA trained crane operator and rigger
Tarp Frames Use Of Ladders	Fall from Ladder/ Uneven Grading	Ladder safety review/ Inspect Ladders Prior to use.	Review Ladder Safety
Un-Bolting of Frames	Working at elevations	100% Tie Off	
Lifting Frames with crane	Overhead Loads, Struck by, Rigging	Tag Lines on all suspended loads. Trained crane operator. Communication between workers and crane. Determine 'Drop zone' and clear the area. Inspect all rigging prior to use and review Lift Plan.	TVA Trained rigger, Planning
Removal of cloths from press plates	Pinch Points Slips, Trips, Falls Crush Hazards Hand Injuries	Ensure that when working in between plates all electrical systems have been removed and tried. Cat-walks are clear of debris to stand on while removing cloths. Side cutters (pliers) will be used to remove zip ties from cloths. TVA approved cutting device and Kevlar hand protection will be used if there is a problem removing the cloth.	LOTO and Try System Housekeeping prior to work Proper PPE TVA Approved Cutting Device
De-Coning of Press Plates	Eye Injuries Contact with Fly Ash Fuel or Oil Spills Pressure Washer	Workers will have safety glasses on along with face shields while pressure washing the plates. Tyvek will also be worn to prevent any contact with Fly Ash. Fuel containers will be stored far enough away from pressure washers while in use. Spill Kits will be in place	Proper PPE (Safety Glasses, Face Shields, Tyvek, Leather Gloves) Spill Kit

		as needed for the use of gas and oil.	
Man Lift / Heavy Equipment	Working at Elevations	Trained Operators	
		Full Body Harness when entering man lift. Worker to be tied off in Man Lift at all times	Experienced Operator
	Tools falling from man lift	No work performed under lift	
		Not involved in operation stay clear of work area	Caution Tape off work area
	Control load	Tag lines used on all picks	
	Wind speed	Check wind speed on internet.	Computer
Hand Tools	Cuts Scraps	Hand safety Proper PPE/ leather work gloves	Gloves
	Slips trips and falls	Take your time/ House Keeping	House keeping
Removing Press from Press Stand, and then Press and Stand onto flatbed	Heavy Equipment/Crane Crush Hazards Blind Spots Suspended Loads Faulty Rigging	All personnel NOT involved in set up of crane will STAY CLEAR of area. Eye Contact between crane operator and rigger/signal man at all times. NO ONE IS TO BE UNDER A SUSPENDED LOAD. Rigging will be inspected prior to use.	TVA Trained Crane Operator and Rigger Lift Plan – Submitted and then reviewed by Jacobs
	Driver unfamiliar to site Load Shift Improper Tie Down	Driver to have proper PPE on when out of the truck cab, if not the driver is to stay in the cab until it's time to tie the load down. Make sure that load is set evenly on the truck bed. Driver to inspect chains and ties to ensure they are adequate for the load that is to be hauled. An escort is needed to show driver on and off site.	Proper PPE (Hard Hat, Safety Glasses, Reflective Vest, Safety Toe Boots)
<u>Any additional Hazards or safety practices not identified above?</u>			

Review checklist while completing front page of SPA. Check all that apply.

A new SPA is required if the job scope or work conditions change.

Required Permits	Hazards	Safe Plan
<input type="checkbox"/> Confined Space	<input type="checkbox"/> Overhead Utilities	<input type="checkbox"/> Power de-energization required <input type="checkbox"/> Insulation blankets required <input type="checkbox"/> Wire watcher required
<input type="checkbox"/> Critical Lift		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone marked
<input type="checkbox"/> Hot Work	<input type="checkbox"/> Crane or other Lifting Equipment	<input type="checkbox"/> Signaller assigned <input type="checkbox"/> Tag lines in use <input type="checkbox"/> Area around crane barricaded
<input type="checkbox"/> Lock Out/Tag Out/Try		<input type="checkbox"/> Lifting equipment inspected <input type="checkbox"/> Personnel protected from overhead load
<input type="checkbox"/> Soil Disturbance (Over 2")	<input type="checkbox"/> Underground Utilities	<input type="checkbox"/> Reviewed as-builts <input type="checkbox"/> Subsurface surveys <input type="checkbox"/> Received dig permit
<input type="checkbox"/> Utility Clearance		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone Marked
Required PPE		
<input type="checkbox"/> Hard Hat, Class C	<input type="checkbox"/> Electrical	<input type="checkbox"/> Lock Out/Tag Out/Try Out <input type="checkbox"/> Permit required? <input type="checkbox"/> Confirm that equipment is de-energized
<input type="checkbox"/> Hard Hat, Class E (<i>Elect. Protect</i>)	<input type="checkbox"/> Excavations	<input type="checkbox"/> Reviewed electrical safety procedures
<input type="checkbox"/> Ear Plugs/Ear Muffs		<input type="checkbox"/> Permits <input type="checkbox"/> Inspected prior to entering <input type="checkbox"/> Proper sloping/shoring
Eye Protection:	<input type="checkbox"/> Fire Hazard	<input type="checkbox"/> Barricades provided <input type="checkbox"/> Access/egress provided <input type="checkbox"/> Protection from accumulated water
<input type="checkbox"/> Safety Glasses		<input type="checkbox"/> Hot Work Permit <input type="checkbox"/> Fire Extinguishers <input type="checkbox"/> Fire watch
<input type="checkbox"/> Face Shield	<input type="checkbox"/> Vehicular Traffic or Heavy Equipment	<input type="checkbox"/> Adjacent area protected <input type="checkbox"/> Unnecessary flammable material removed
<input type="checkbox"/> Chemical Goggles		<input type="checkbox"/> Traffic Barricades <input type="checkbox"/> Cones <input type="checkbox"/> Signs <input type="checkbox"/> Flagmen <input type="checkbox"/> Lane closure
<input type="checkbox"/> Welding Hood	<input type="checkbox"/> Noise >85 dB	<input type="checkbox"/> Communication with equipment operator
Hand Protection:	<input type="checkbox"/> Hand & Power Tools:	Hearing protection is required: <input type="checkbox"/> Ear plugs <input type="checkbox"/> Ear Muffs <input type="checkbox"/> Both
<input type="checkbox"/> Cut Resistant Gloves		<input type="checkbox"/> Inspect general cond. <input type="checkbox"/> GFCI in use <input type="checkbox"/> Identified PPE required for each tool
<input type="checkbox"/> Welders Gloves	<input type="checkbox"/> Hand Hazards	<input type="checkbox"/> Reviewed safety requirements in operators manual(s) <input type="checkbox"/> Guarding OK
<input type="checkbox"/> Nitrile Gloves		List sharp tools, material, equipment: _____
<input type="checkbox"/> Surgical Gloves	<input type="checkbox"/> Manual Lifting	<input type="checkbox"/> PPE gloves, etc. <input type="checkbox"/> Protected sharp edges as necessary
<input type="checkbox"/> Rubber Gloves		<input type="checkbox"/> Reviewed proper lifting tech. <input type="checkbox"/> Identified material requiring lifting equipment
<input type="checkbox"/> Elect. Insulated Gloves	<input type="checkbox"/> Ladders	<input type="checkbox"/> Hand protection required <input type="checkbox"/> Back support belts
<input type="checkbox"/> Arm Sleeves		<input type="checkbox"/> Inspect general cond. before use <input type="checkbox"/> Ladder inspected with in last quarter
Foot Protection:	<input type="checkbox"/> Scaffolds	<input type="checkbox"/> Ladder tied off or held <input type="checkbox"/> Proper angle and placement <input type="checkbox"/> Reviewed ladder safety
<input type="checkbox"/> Sturdy Work Boots		<input type="checkbox"/> Inspect general condition before use <input type="checkbox"/> Tags in place <input type="checkbox"/> Properly secured
<input type="checkbox"/> Safety Toe Boots	<input type="checkbox"/> Slips, Trips Falls	<input type="checkbox"/> Toe boards used <input type="checkbox"/> Footings adequate <input type="checkbox"/> Materials properly stored on scaffold
<input type="checkbox"/> Rubber Boots		<input type="checkbox"/> Inspect for trip hazards <input type="checkbox"/> Hazards marked <input type="checkbox"/> Tools & material properly stored
<input type="checkbox"/> Rubber Boot Covers	<input type="checkbox"/> Pinch Points	<input type="checkbox"/> Extension cords properly secured <input type="checkbox"/> Work zone free of debris
<input type="checkbox"/> Dielectric Footwear		List potential pinch points: _____
Respiratory Protection:	<input type="checkbox"/> Working w/ Chemicals	<input type="checkbox"/> Working near operating equipment <input type="checkbox"/> Hand/Body positioning
<input type="checkbox"/> Dust Mask		<input type="checkbox"/> List specific chemicals involved and list hazards and precaution on front side.
<input type="checkbox"/> Air Purifying Respirator	<input type="checkbox"/> Asbestos or Lead Paint Potential	<input type="checkbox"/> Reviewed MSDS <input type="checkbox"/> Exposure Monitoring required <input type="checkbox"/> Have proper containers and labels.
<input type="checkbox"/> Supplied Air Respirator		<input type="checkbox"/> Identified proper PPE (respirators, clothing, gloves, etc.)
<input type="checkbox"/> SCBA	<input type="checkbox"/> Heat Stress Potential	<input type="checkbox"/> Areas to be worked may contain asbestos or lead paint <input type="checkbox"/> Asbestos controls incorporated
<input type="checkbox"/> Emergency Escape Respirator		<input type="checkbox"/> Lead based point controls in place <input type="checkbox"/> Exposure monitoring conducted.
Special Clothing:	<input type="checkbox"/> Cold Stress Potential	<input type="checkbox"/> Heat stress monitoring (>85°) <input type="checkbox"/> Liquids available <input type="checkbox"/> Cool down periods
<input type="checkbox"/> Tyvek ®		<input type="checkbox"/> Sun Screen <input type="checkbox"/> Reviewed Heat Stress symptoms
<input type="checkbox"/> Poly Coated Tyvek ®	<input type="checkbox"/> Environmental	<input type="checkbox"/> Proper clothing (i.e., gloves, coat, coveralls) <input type="checkbox"/> Wind chill <32°
<input type="checkbox"/> Fire Resistant Coveralls		<input type="checkbox"/> Reviewed Cold Stress symptoms <input type="checkbox"/> Warm up periods
<input type="checkbox"/> Rain Suit	<input type="checkbox"/> Natural or Site Hazards	<input type="checkbox"/> Air emissions <input type="checkbox"/> Water discharge <input type="checkbox"/> Hazardous wastes <input type="checkbox"/> Other wastes
<input type="checkbox"/> Safety Vest		<input type="checkbox"/> Pollution prevention <input type="checkbox"/> Waste minimization
Fall Protection:	<input type="checkbox"/> Adjacent Work/Processes	<input type="checkbox"/> Weather <input type="checkbox"/> Terrain <input type="checkbox"/> Adjacent operations or processes <input type="checkbox"/> Biological hazards
<input type="checkbox"/> Harness		<input type="checkbox"/> Animals/reptiles/insects hazards
<input type="checkbox"/> Double Lanyard Required	<input type="checkbox"/> Barricades/covers	<input type="checkbox"/> Notified them of our presents <input type="checkbox"/> Other workers adjacent, above, or below.
<input type="checkbox"/> Anchorage Point Available		<input type="checkbox"/> Coordinated with adjacent supervisor/customer/operator <input type="checkbox"/> Need barriers between.
<input type="checkbox"/> Additional Anchorage Connector Needed e.g. Cross Arm Strap, etc.		<input type="checkbox"/> Caution barricade tape required <input type="checkbox"/> Danger barricade tape required <input type="checkbox"/> Rigid railing required
<input type="checkbox"/> Retractable Device Needed		<input type="checkbox"/> Covers over opening <input type="checkbox"/> Warning signs required
<input type="checkbox"/> Horizontal Life Line System Req'd.		
<input type="checkbox"/> Fall Clearance Distance Adequate		
<input type="checkbox"/> Fall Rescue/Retrieval Plan Set Up		
		Additional Information:

Sevenson Environmental Services, Inc.
TVA Kingston Ash Release Response Site
Safe Plan of Action

Project No. 1026

Job/Task Operating a Forklift

Work Area Process Pad

Date _____

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources
Pre-Operation Safety Check		TVA Training	Equipment check list (inspection)
Operating the forks	Struck by-Running into obstacles	Slow down for turns Make sure that you have enough overhead clearance. Keep forks low when travelling to improve field of view.	Operator awareness
Loading	Struck by-Load falling off forklift Damage to material by loading improperly-Struck against Overloading Pinching hands between the truck and other objects	Spread forks as wide as possible for transporting the load. Tilt the mast slightly forward and align the forks with the base of the load. Proceed slowly and insert the forks into the base of the load. Ensure that at least 2/3 rd the length of the fork enter the base of the load. Lift forks approximately 8 inches for the load to clear the floor/ground. Tilt mast back in preparation for traveling	
Transporting the load	Running into objects Collisions with other equipment	Be Alert Wear gloves to protect your hands Keep your arms and hands in the truck Keep the controls and your hands clean and dry Use a spotter if necessary	Operator awareness and communication, Spotter
Unloading	Injury to other personnel Damage to other equipment	Position the truck at the desired location. If stacking loads, adjust the height of the load as appropriate	

		Tilt the mast forward to place the forks parallel to the ground. Once the load is set, slowly back away from the load. When clear of the load, place the forks at the proper height for traveling	
Parking the Forklift	Running over and crushing the operator	Never leave the truck until you lower the lifting mechanism, put controls in neutral and set the brakes. Turn vehicle off when exiting. Never give rides or let anyone stand on the forks. Always administer the emergency brake.	
Material Handling/Trucking	Unstable loads, untied loads	Driver is responsible for inspecting load is stable and tied down correctly. Do not move truck until load is secured.	Driver inspection.
<u>Any additional Hazards or safety practices not identified above?</u>			

Team Members' Signatures

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

The signature of the supervisor confirms the completion of the hazard assessment and Safe Plan of Action by the crew.

Supervisors Signature: _____ Date _____

Instructions: 1. Write name of job or task in space provided. 2. Conduct walk-through survey of work area. 3. Write the steps of the task in a safe sequence. 4. List all possible hazards involved in each step and reaction to change. 5. In the Safe Plan column, state actions that will be taken to prevent the hazards or injury from reaction to change. 6. In Resources column, list equipment, tools, etc. needed to do the job. 8. Ask each team member, who helped develop and will use this SPA, to sign in spaces provided. 9. Review the SPA at the end of the task for improvements.

Work shall stop when conditions change, the job changes, or a deficiency in the plan is discovered, and the current SPA will be modified or a new SPA created.

Review checklist while completing front page of SPA. Check all that apply.

A new SPA is required if the job scope or work conditions change.

Required Permits	Hazards	Safe Plan
<input type="checkbox"/> Confined Space	<input type="checkbox"/> Overhead Utilities	<input type="checkbox"/> Power de-energization required <input type="checkbox"/> Insulation blankets required <input type="checkbox"/> Wire watcher required
<input type="checkbox"/> Critical Lift		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone marked
<input type="checkbox"/> Hot Work	<input type="checkbox"/> Crane or other Lifting Equipment	<input type="checkbox"/> Signalman assigned <input type="checkbox"/> Tag lines in use <input type="checkbox"/> Area around crane barricaded
<input type="checkbox"/> Lock Out/Tag Out		<input type="checkbox"/> Lifting equipment inspected <input type="checkbox"/> Personnel protected from overhead load
<input type="checkbox"/> Soil Disturbance (Over 12")	<input type="checkbox"/> Underground Utilities	<input type="checkbox"/> Reviewed as-builts <input type="checkbox"/> Subsurface surveys <input type="checkbox"/> Received dig permit
<input type="checkbox"/> Utility Clearance		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone Marked
Required PPE		
<input type="checkbox"/> Hard Hat, Class C	<input type="checkbox"/> Electrical	<input type="checkbox"/> Lock Out/Tag Out/Try Out <input type="checkbox"/> Permit required? <input type="checkbox"/> Confirm that equipment is de-energized
<input type="checkbox"/> Hard Hat, Class E (Elect. Protect)	<input type="checkbox"/> Excavations	<input type="checkbox"/> Reviewed electrical safety procedures
<input type="checkbox"/> Ear Plugs/Ear Muffs		<input type="checkbox"/> Permits <input type="checkbox"/> Inspected prior to entering <input type="checkbox"/> Proper sloping/shoring
Eye Protection:	<input type="checkbox"/> Fire Hazard	<input type="checkbox"/> Barricades provided <input type="checkbox"/> Access/egress provided <input type="checkbox"/> Protection from accumulated water
<input type="checkbox"/> Safety Glasses		<input type="checkbox"/> Hot Work Permit <input type="checkbox"/> Fire Extinguishers <input type="checkbox"/> Fire watch
<input type="checkbox"/> Face Shield	<input type="checkbox"/> Vehicular Traffic or Heavy Equipment	<input type="checkbox"/> Adjacent area protected <input type="checkbox"/> Unnecessary flammable material removed
<input type="checkbox"/> Chemical Goggles		<input type="checkbox"/> Traffic Barricades <input type="checkbox"/> Cones <input type="checkbox"/> Signs <input type="checkbox"/> Flagmen <input type="checkbox"/> Lane closure
<input type="checkbox"/> Welding Hood	<input type="checkbox"/> Noise >85 dB	<input type="checkbox"/> Communication with equipment operator
Hand Protection:	<input type="checkbox"/> Hand & Power Tools:	Hearing protection is required: <input type="checkbox"/> Ear plugs <input type="checkbox"/> Ear Muffs <input type="checkbox"/> Both
<input type="checkbox"/> Cut Resistant Gloves		<input type="checkbox"/> Inspect general cond. <input type="checkbox"/> GFCI in use <input type="checkbox"/> Identified PPE required for each tool
<input type="checkbox"/> Welders Gloves	<input type="checkbox"/> Hand Hazards	<input type="checkbox"/> Reviewed safety requirements in operators manual(s) <input type="checkbox"/> Guarding OK
<input type="checkbox"/> Nitrile Gloves		List sharp tools, material, equipment: _____
<input type="checkbox"/> Surgical Gloves	<input type="checkbox"/> Manual Lifting	<input type="checkbox"/> PPE gloves, etc. <input type="checkbox"/> Protected sharp edges as necessary
<input type="checkbox"/> Rubber Gloves		<input type="checkbox"/> Reviewed proper lifting tech. <input type="checkbox"/> Identified material requiring lifting equipment
<input type="checkbox"/> Elect. Insulated Gloves	<input type="checkbox"/> Ladders	<input type="checkbox"/> Hand protection required <input type="checkbox"/> Back support belts
<input type="checkbox"/> Arm Sleeves		<input type="checkbox"/> Inspect general cond. before use <input type="checkbox"/> Ladder inspected with in last quarter
Foot Protection:	<input type="checkbox"/> Scaffolds	<input type="checkbox"/> Ladder tied off or held <input type="checkbox"/> Proper angle and placement <input type="checkbox"/> Reviewed ladder safety
<input type="checkbox"/> Sturdy Work Boots		<input type="checkbox"/> Inspect general condition before use <input type="checkbox"/> Tags in place <input type="checkbox"/> Properly secured
<input type="checkbox"/> Safety Toe Boots	<input type="checkbox"/> Slips, Trips Falls	<input type="checkbox"/> Toe boards used <input type="checkbox"/> Footings adequate <input type="checkbox"/> Materials properly stored on scaffold
<input type="checkbox"/> Rubber Boots		<input type="checkbox"/> Inspect for trip hazards <input type="checkbox"/> Hazards marked <input type="checkbox"/> Tools & material properly stored
<input type="checkbox"/> Rubber Boot Covers	<input type="checkbox"/> Pinch Points	<input type="checkbox"/> Extension cords properly secured <input type="checkbox"/> Work zone free of debris
<input type="checkbox"/> Dielectric Footwear		List potential pinch points: _____
Respiratory Protection:	<input type="checkbox"/> Working w/ Chemicals	<input type="checkbox"/> Working near operating equipment <input type="checkbox"/> Hand/Body positioning
<input type="checkbox"/> Dust Mask		<input type="checkbox"/> List specific chemicals involved and list hazards and precaution on front side.
<input type="checkbox"/> Air Purifying Respirator	<input type="checkbox"/> Asbestos or Lead Paint Potential	<input type="checkbox"/> Reviewed MSDS <input type="checkbox"/> Exposure Monitoring required <input type="checkbox"/> Have proper containers and labels.
<input type="checkbox"/> Supplied Air Respirator		<input type="checkbox"/> Identified proper PPE (respirators, clothing, gloves, etc.)
<input type="checkbox"/> SCBA	<input type="checkbox"/> Heat Stress Potential	<input type="checkbox"/> Areas to be worked may contain asbestos or lead paint <input type="checkbox"/> Asbestos controls incorporated
<input type="checkbox"/> Emergency Escape Respirator		<input type="checkbox"/> Lead based point controls in place <input type="checkbox"/> Exposure monitoring conducted.
Special Clothing:	<input type="checkbox"/> Cold Stress Potential	<input type="checkbox"/> Heat stress monitoring (>85°) <input type="checkbox"/> Liquids available <input type="checkbox"/> Cool down periods
<input type="checkbox"/> Tyvek ®		<input type="checkbox"/> Sun Screen <input type="checkbox"/> Reviewed Heat Stress symptoms
<input type="checkbox"/> Poly Coated Tyvek ®	<input type="checkbox"/> Environmental	<input type="checkbox"/> Proper clothing (i.e.. gloves, coat, coveralls) <input type="checkbox"/> Wind chill <32°
<input type="checkbox"/> Fire Resistant Coveralls		<input type="checkbox"/> Reviewed Cold Stress symptoms <input type="checkbox"/> Warm up periods
<input type="checkbox"/> Rain Suit	<input type="checkbox"/> Natural or Site Hazards	<input type="checkbox"/> Air emissions <input type="checkbox"/> Water discharge <input type="checkbox"/> Hazardous wastes <input type="checkbox"/> Other wastes
<input type="checkbox"/> Safety Vest		<input type="checkbox"/> Pollution prevention <input type="checkbox"/> Waste minimization
Fall Protection:	<input type="checkbox"/> Adjacent Work/Processes	<input type="checkbox"/> Weather <input type="checkbox"/> Terrain <input type="checkbox"/> Adjacent operations or processes <input type="checkbox"/> Biological hazards
<input type="checkbox"/> Harness		<input type="checkbox"/> Animals/reptiles/insects hazards
<input type="checkbox"/> Double Lanyard Required	<input type="checkbox"/> Barricades/covers	<input type="checkbox"/> Notified them of our presents <input type="checkbox"/> Other workers adjacent, above, or below.
<input type="checkbox"/> Anchorage Point Available		<input type="checkbox"/> Coordinated with adjacent supervisor/customer/operator <input type="checkbox"/> Need barriers between.
<input type="checkbox"/> Additional Anchorage Connector Needed e.g. Cross Arm Strap, etc.		<input type="checkbox"/> Caution barricade tape required <input type="checkbox"/> Danger barricade tape required <input type="checkbox"/> Rigid railing required
<input type="checkbox"/> Retractable Device Needed		<input type="checkbox"/> Covers over opening <input type="checkbox"/> Warning signs required
<input type="checkbox"/> Horizontal Life Line System Req'd.		Additional Information:
<input type="checkbox"/> Fall Clearance Distance Adequate		
<input type="checkbox"/> Fall Rescue/Retrieval Plan Set Up		

Sevenson Environmental
TVA HARRIMAN FLY ASH REMOVAL
Safe Plan of Action

Project No. 1026

Job/Task: PHASE 2 Loading Equipment on Trucks Work Area: Process Pad Date _____

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources
Tractor trailer operator securing load	Driver not familiar with SES rules and PPE requirements Equipment Traffic	Educate and control the driver if he needs PPE supply him. Sevenson will stay with him at all times while out of his truck.	PPE, Trained personnel
Use of Loader or Fork Lift to set Equipment on trailer	Pinch Points, Crush Hazards Suspended loads	Trained Operator and Spotter to guide him No suspended loads should be flown over the cab of tractor. Tag Lines on all suspended loads. Leather work gloves for securing loads.	Spotter, PPE
Set Equipment on trailer	Lifting Injuries, Rigging, Pinch Points	Lift with your legs not with your backs, utilize heavy equipment whenever possible. Leather work gloves	Body positioning, planning
	Shifting Load	Tie down loads, use forklift to maneuver loads to ensure stability.	Trained personnel
Securing load on trailer	Pinch Points Crushing hazards, Elevated work on Flat Bed	Use of ladder for elevated work, inspect ladder for defects prior to use. Securing load with Chain Binders. Do not move truck until load is secure! Leather work gloves.	Trained personnel
Trailer loaded and ready to leave site.	Driver not familiar with Site rules or route to decon	One of Sevenson's workers will stay with him at all times and safely escort him to the truck decon area.	Teamster
Inspect Load	Heavy Equipment pinch points, Tipping Hazards	Trained Operator Spotter to guide him Awareness and Body Positioning	Spotter/Driver
<u>Any additional Hazards or safety practices not identified above?</u>			

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources

Team Members' Signatures

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Supervisors Signature: _____ **Date** _____

Instructions: 1. Write name of job or task in space provided. 2. Conduct walk-through survey of work area. 3. Write the steps of the task in a safe sequence. 4. List all possible hazards involved in each step and reaction to change. 5. In the Safe Plan column, state actions that will be taken to prevent the hazards or injury from reaction to change. 6. In Resources column, list equipment, tools, etc. needed to do the job. 8. Ask each team member, who helped develop and will use this SPA, to sign in spaces provided. 9. Review the SPA at the end of the task for improvements.

Work shall stop when conditions change, the job changes, or a deficiency in the plan is discovered, and the current SPA will be modified or a new SPA created.

Sevenson Work Package

Contractor: Sevenson Environmental		Location: Kingston Fossil Plant
Work Package No:	WP-	Date:
Work Package Desc: Phase 2 - Demobilization of Desanding equipment, tanks and pumps		
Note 1		Perform daily (minimum) pre-job briefings with crew. Each employee will have a pre-job briefing before each assignment, detailing the scope of the assigned task, the possible hazards, and steps to mitigate the identified hazards. Should the employee's daily assigned task be changed, a subsequent pre-job briefing will be given. Document briefings with signatures, and file in this Work Package. Once job has completed, perform post job briefing to discuss lessons learned from work execution or incidents.
Note2		Anytime the work package is found to have a change in the plan or a deficient area of instruction, the Foreman/Supervisor will stop work and assess the situation. If the foreman/Supervisor determines that the required change or revised area of instruction can be safely mitigated then a new pre-job briefing will be performed outlining the step change and requirements to allow work to safely continue. The Foreman/Supervisor will document the change and supply the documented change to appropriate personnel so that the master file can be updated. If the determination is made that the change is too significant to allow work to continue safely, work will be stopped and the matter referred to senior level management and engineering for resolution. There will be no exceptions.
Note3		This step text is arranged in sequence but is not intended for strict compliance. The Site Supervisor and/or Foreman may change the sequence in which the work is performed, providing the sequence change has no negative impact on job safety or work quality.
Step No.	Initial & Date As Steps Are Completed	Work Description:
1		Conduct Pre-Job Briefing and review step text. This Work Package covers decon and demob of: desanding equipment (including shaker units and v-bottom tank), mix tanks (center 12 tanks) and effluent tanks (2 tanks on ends of system) and fast feed pumps.
2		SPAs included in this work package refer to this phase 2 of work <u>only</u> . If personnel are added to the work crew while in progress stop and review SPAs for their specific tasks with them for this package.
3		Every employee has the authority and duty to stop work if they feel a situation is unsafe!
4		Visually inspect and verify vendor representative from Aggreko has already disconnected generators from the press system. With generators disconnected there will be no need for electrical lock out/tag out of system components during decon/demob.
5		Begin dismantling and decon of the shaker units. Remove screens, there are 3 screens in each unit. From work platform on tank, use a pressure washer and clean the shaker units and sides of the v-bottom tank. Pressure washer use requires, at a minimum, safety glasses, faceshields, gloves and tyvek. Railings will be the last thing to be removed before removing the desanding units from the v-bottom tank. When safety rails are no longer in place fall protection devices must be used when working on the desanding unit/v-bottom tank. To decon tank, install a 2" submersible pump at one end of the tank and wash the insides of the tank with a high pressure water hose while pumping the decon water to the rim ditch.
6		STOP for load calculations and Lift Plan review. Take Two and assess the work area for levelness and hazards, clear the area of non-essential personnel and be sure the area between the lift and the truck to be loaded is clear of obstructions. Inspect lifting equipment including shackles, slings, chains, wire rope, etc. and be sure tag lines are in place. No personnel are to be on the truck bed while loading. Refer to TSP 802 Check sheet for Mobile Cranes and Lift Plan included in this package. Check sheet must be used <u>each time</u> the crane is moved and used.
7		Using a crane, lift the desanding units from the v-bottom tank. Load directly onto truck or stage for later loading.
8		With desanding units removed, perform final cleaning on v-bottom tank, load onto truck and remove from site. Wash asphalt pad down - this area can now be used as a stable surface to decon other pieces of equipment removed from the tanks and pumps (pipe, hose, valves, etc.) and is already pitched to drain to the rim ditch.

Sevenson Work Package

Step No.	Initial & Date As Steps Are Completed	Work Description:
9		Unbolt and open hatches to mix tanks and visually inspect <i>from outside the tank</i> . Determine if tanks can be adequately decontaminated from outside the tank. It is expected that a high pressure water hose used from outside the tank will be sufficient for this task. If not, a confined space entry permit will need to be obtained and issued by a Health and Safety officer.
10		To decon tank, install a 2" submersible pump at one end of the tank and wash the insides of the tank with a high pressure water hose while pumping the decon water to the rim ditch. High pressure hoses and fitting will have a 150 psi working pressure and locked connections such as camlock or chicago fittings.
11		Wash out all hoses and connections to and from the tanks. Drain and wash out fast feed pumps and all outside surfaces of equipment. Wash all miscellaneous appurtences including valves, reducers, pipes etc. Direct all decon water to the Rim Ditch. When safety rails are no longer in place fall protection devices must be used when working on tanks and other elevated surfaces.
12		When cleaning is completed, notify SES Safety personnel to inspect and issue a certificate of decontamination for each major piece of equipment (each tank, shaker unit, pump) TVA and Jacobs representatives must also be notified and inspect equipment prior to leaving site.
13		Tanks on wheels (mix tanks and effluent tanks) will need to be lifted by crane and set on the fifth wheel of tractor. Qualified rigging personnel will rig the tanks and serve as a spotter when connecting tank to tractor. Allow truck drivers to inspect their load and make any tie downs prior to moving the truck out of the area.
14		Fast feed pumps, polyblend units and electrical panels have forklift handling holes to move and load directly onto a truck or stage them for later shipping.
15		When demobilizing hoses, electrical cords or wiring, coil and tie up, place on pallets to be moved instead of carrying by hand when necessary.
16		Pick up nuts/bolts/washers and stow in canisters/crates as flanges and connections are broken to limit slip and trip hazards.
17		With tanks and pumps removed, asphalt pad can be washed down to the rim ditch to allow greater flexibility and safer footing while demobilizing the filter presses.
18		
19		
20		
21		
22		
23		
24		

Fossil Development and Construction CONTRACTOR SAFETY PRE-JOB BRIEF

Turn into Site Manager/Safety Department at end of day or completion of the work task.



The PJB shall be completed daily for each task. Post this PJB in a conspicuous location throughout the length of the task. Each crew member involved with the task shall sign this PJB at the beginning of shift.

Plant/Site: _____

Contractor: _____

Foreman: _____

Employee / Conducting PJB Name

Date: _____

Location of Task: _____

Task Description: _____

Does the task require special training? **Yes No**

If yes, what type? _____

General Information

1. Should Safety Professional be involved in the planning of this job? **Yes No**

Job Safety Analysis

1. What are the hazards associated with the job? Be PARTICULARLY careful about:

Hazard Corrections: _____

2. Has job task specific JSA been completed / reviewed with all crew members for this task? **Yes No**

3. Has the Two Minute Rule been observed before starting this job specific task? **Yes No**

Rigging

1. Has the rigging plan been discussed and all paper work been completed? **Yes No N/A**

Note: Complete Appendix (A) when using chain falls and com-a-longs **Yes No**

2. Has rigging equipment been inspected? **Yes No**

3. Person In-Charge of rigging

4. Signal Person **N/A**

5. Person In-Charge / Signal person directed to wear a yellow safety vest during all rigging task. **Yes N/A**

6. Cranes/Overhead power lines & associated electrical hazards evaluated (guy wires, poles, structures). **Yes No N/A**

7. Low clearance Electrical Hazards have been identified and flagged, (guy wires, conductors, etc.) **Yes No N/A**

Rigging Requirements Verified By:

Signature _____

Tools and Equipment

Has the required user inspection been completed on all tools, ladders, electrical cords, and safety equipment? **Yes No**

Scaffolds / Ladders

Have all scaffolds/ladders been inspected and all scaffold tags been signed? **Yes No N/A**

Emergency Equipment

Identify below the location of the nearest extinguisher and communication source and your assembly area.

Housekeeping

Is housekeeping safe & acceptable in the work area?

Yes No

Location: _____

Fall Protection

Have areas been identified as requiring fall protection systems? (I.e. static lines, barricades, hole covers, etc.)

Yes No

Have they been installed? **Yes No**

Asbestos

Have all areas that may present an asbestos exposure hazard while executing task been identified including known asbestos containing material and potentially asbestos containing material? **Yes No N/A**

Fire Protection

Are flammable / combustible materials stored, separated, inspected, and secured per procedure? **Yes No**

Personal Protective Equipment Required

- 1. Hard Hat.....**Yes No**
- 2. Fall Protection.....**Yes No**
- 3. Eye / Face.....**Yes No**
- 4. Respirator.....**Yes No**
- 5. Foot.....**Yes No**
- 6. Hand.....**Yes No**
- 7. Hearing.....**Yes No**
- 8. Knee Pads.....**Yes No**
- 9. Tyveks.....**Yes No**

APPENDIX (A)

RIGGING ACTIVITIES THAT REQUIRE ADDITIONAL PLANNING AND APPROVAL WHEN USING CHAIN FALLS AND COM-A-LONGS

- 1. Is the lift/hoist in a position that is beyond 15 degrees of vertical/plumb? Yes No
- 2. Is there multiple lift points? Yes No
- 3. Is the lift height greater than 20 feet? Yes No
- 4. Does component weigh greater than 80 percent of the rigging equipment capacity? Yes No
- 5. Is there any special rigging equipment (powered hoist, etc.)? Yes No
- 6. Is the material being lifted within two (2) feet of the hoisting device? Yes No
- 7. Is this a field rework/modification, specifically removing, modifying or taking out of service a component previously installed under new construction? Yes No

* Rigging Specialist must sign: Rigging Specialist: _____

* TVA Review/Sign-off: TVA Review _____ N/A

CHECK LIST ITEMS TO CHECK WHEN USING CHAIN FALLS AND COM-A-LONGS

- 8. Is weight rigging/pick known? Yes No
- 9. Do you have the proper device, rigging, and attachments? Yes No
- 10. Do you have proper head room / clearance for the rigging? Yes No
- 11. Do you have the mandated use of shackles in place for connecting multiple rigging points? Yes No
- 12. What degree angle (never use slings under 30 degree)? Yes No
- 13. Softeners required? Yes No
- 14. Latches, hooks are all in place and working? Yes No
- 15. Levers / chains free moving? Yes No
- 16. Barricaded area around work? Yes No
- 17. Is structure adequate to handle the intended load? Yes No
- 18. Is load centered over lifting device? Yes No
- 19. Will more then one device be used? Yes No
- 20. Shackle required for securing slings to lifting device? Yes No
- 21. Is there a potential of material, rigging and/or damaging load intended to be lifted? Yes No
- 22. Need to keep clear of load, when lifted, can you work device without getting under load? Yes No
- 23. Have you thought out a plan and reviewed with crew? Yes No
- 24. Will there be hot work going on around the device, slings or work area? Yes No
- 25. Have device been checked prior to lift? Yes No
- 26. Lifting, hoisting and/or restraining of material that employs the use of a lifting/hoisting device other than a crane? Yes No
- 27. Have all items been reviewed and discussed with the crew? Yes No



Daily Equipment Inspection

DATE/DAY: _____

OPERATOR: _____

EQUIPMENT AND #: _____

SHIFT: _____

CHECK ITEM	OK	Needs Work	N/A	COMMENTS
FLUID LEVELS:				
Oil **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hydraulic **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transmission **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Radiator **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Grease Fittings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fluid Leaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SAFETY CHECKS:				
Fire Extinguishers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Seat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Seat Belts **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Warning Devices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
House keeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Broken Glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Body Damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Controls and Levers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Brakes **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mirrors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Windshield Wipers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Steering **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Horn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tires	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tracks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Guards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Instruments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Exhaust Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hydraulic Lines & Cylinders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boom or Mast	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Level Indicators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Have any repairs or alterations been made to this equipment that affect load limits or equipment operations? Yes No

SIGN OFF:		** DO NOT OPERATE EQUIPMENT IF THESE ITEMS NEED WORK
Operators Initials		
Machine Hours		

Load and Capacity Calculations (Page 2 of 4)			
C. Capacities of the (Main) Crane			
Make & Model of Crane			
2. Counter Weight Size:		Type of Boom:	
3. Lifting Arrangement			
a. Max. Radius During Lift		Ft.	
b. Length of Boom		Ft.	
c. Angle of Boom at Pick		Deg.	
d. Angle of Boom at Set		Deg.	
Rated Capacity Under Most Severe Conditions			
1. Over Rear		Lbs.	
2. Over Front		Lbs.	
3. Over Side		Lbs.	
f. Rated Capacity for Lift Radius, Crane Configuration, and Orientation (over front, side or....)			Lbs.
4. Jib			
a. Is the Jib to be used	Yes	No	
b. Length of Jib		Ft.	
c. Jib Angle		Deg.	
d. Rated Jib Capacity for Lift Radius, Crane Configuration, and Orientation (over front, side, or...)			Lbs.
5. Load Line/Fall Cable			
a. Is Main Block to be used?	Yes	No	
b. Number of Parts of Cable			
c. Size of Cable		Ø inches	
d. Maximum Capacity for Lift Radius, Crane Configuration, and Orientation (over front, side, or)			Lbs.
D. Percent of Cranes Capacity (>85% requires High Hazard Lift Approvals)			
		Total Lifted Weight X 100 =	
		Rated Capacity	%
E. Size of Slings			
1. Sling Selection			
a. Type of Arrangement			(Spreader, Vertical Slings, etc.)
b. Number of Slings to Hook	Ø	Capacity	Lbs.
c. Sling Size		Ø	
d. Sling Length		Ft.	
e. Sling Capacity (At angle used)		Lbs.	
f. Number of Slings to Load		#	
g. Total Rigging capacity (e x f)			Lbs.
Comments:			
Sketch of rigging arrangement available	Yes	No	See Page ()
End of Standard Lift Plan Paperwork (

Figure 3: Pre-Lift Checklist

	Yes	No
1. Crane operator meets company qualification requirements?	<input type="checkbox"/>	<input type="checkbox"/>
2. Lift calculations and rigging plan completed?	<input type="checkbox"/>	<input type="checkbox"/>
3. Are lift equipment swing & travel requirements & clearances known?	<input type="checkbox"/>	<input type="checkbox"/>
4. Are all required approvals/permits signed?	<input type="checkbox"/>	<input type="checkbox"/>
5. Crane inspections up to date (Annual/Monthly/Daily)?	<input type="checkbox"/>	<input type="checkbox"/>
6. Weather conditions and wind speed acceptable?	<input type="checkbox"/>	<input type="checkbox"/>
7. Has the stability of the ground been assured by soil bearing analysis?	<input type="checkbox"/>	<input type="checkbox"/>
8. Location and size of underground facilities are known?	<input type="checkbox"/>	<input type="checkbox"/>
9. Matting and/or outrigger pads inspected and approved?	<input type="checkbox"/>	<input type="checkbox"/>
10. Electrical equipment and power lines at required distance?	<input type="checkbox"/>	<input type="checkbox"/>
11. Rigging Inspected for defects?	<input type="checkbox"/>	<input type="checkbox"/>
12. Engineered lifting lugs fabricated and installed correctly?	<input type="checkbox"/>	<input type="checkbox"/>
13. Connecting/disconnecting means been developed?	<input type="checkbox"/>	<input type="checkbox"/>
14. Have the safety precautions been reviewed?	<input type="checkbox"/>	<input type="checkbox"/>
15. Is survey equipment required?	<input type="checkbox"/>	<input type="checkbox"/>
16. Lift Hold Point of \geq _____ lbs communicated to crew?	<input type="checkbox"/>	<input type="checkbox"/>
17. Signal person(s) assigned?	<input type="checkbox"/>	<input type="checkbox"/>
18. Safe Plan of Action (SPA) Completed?	<input type="checkbox"/>	<input type="checkbox"/>
19. Pre-Lift Meeting/Task Safety Awareness Meeting (TSA) held?	<input type="checkbox"/>	<input type="checkbox"/>
20. Hoist area & load path cleared of non-essential personnel?	<input type="checkbox"/>	<input type="checkbox"/>
21. Crane set up per the lift plan (radius, configuration, etc)?	<input type="checkbox"/>	<input type="checkbox"/>
22. Rigging equipment and tag line(s) installed per plan?	<input type="checkbox"/>	<input type="checkbox"/>
Completed By Signature: _____	Name Printed: _____	Date: _____

Sevenson Environmental Services Inc.
TVA Harriman Fly Ash Removal
Safe Plan Of Action

Project No: 1026

Job/Task: De-Conning Tanks

Work Area: Process Pad

Date: _____

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources
De-Conning Mix Tanks and Module Tank. (Top and Sides)	Slips, Trips, and Falls Working at elevations Contact with Fly Ash Pressure Washer – Fuel and Oil Spills and Fires	-Ensure that where worker is standing, is clear of debris and housekeeping is done properly. -Inspect for trip hazards, then mark. -Use walkways and stairways on tanks. While hand rails are still up workers need to keep a safe distance away from edges. -Workers will wear Tyvek to prevent any contact with Fly Ash. -Be sure to keep fuel or oil far enough away from the pressure washer while running to prevent a spill or fire.	Job Awareness Proper PPE (Safety Glasses, Face Shields) Fire Extinguisher Spill Kit
De-Conning Inside of tanks.	Tight Quarters – Opening of tank Contact with Fly Ash Pressure Washer – Fuel and Oil Spills and Fires	-NO ONE WILL NEED TO ENTER THE TANK. -Workers will stand outside of the tank by entrance hole to wash the side of the tanks out. -Workers will wear Tyvek to prevent any contact with Fly Ash. -Be sure to keep fuel or oil far enough away from the pressure washer while running to prevent a spill or fire.	Job Awareness Proper PPE (Safety Glasses, Face Shields) Fire Extinguisher Spill Kit
Removing Hand Rails from the top of the tanks.	Slips, Trips, and Falls Working at elevations Moving Equipment Man Lift – If used to set hand rails onto the ground.	-While removing the hand rails workers will be equipped with a personal fall restraint (harness, lanyard) to prevent worker from fall from top of tank to the ground. Workers will use correct Tie-Off points located on the top of the tanks.	Fall Protection (Harness, Lanyard) TVA Trained Man Lift Operator

		-Operator will complete an equipment checklist prior to running the Man Lift. -TVA Trained Man Lift Operator to lower the hand rails to the ground.	
Rigging Tanks to Trucks for transport off site.	Moving Equipment Struck By Crush Hazards Blind Spots	-A spotter will be provided to guide the truck driver to the tank. -Spotter and Driver will maintain eye contact at all times. -Driver will hook tank to truck for transport and be escorted off site.	Spotter with Flag Job Awareness Eye Contact
<u>Any additional Hazards or safety practices not identified above?</u>			

Team Members' Signatures

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

The signature of the supervisor confirms the completion of the hazard assessment and Safe Plan of Action by the crew.

Supervisors Signature: _____ Date _____

Instructions: 1. Write name of job or task in space provided. 2. Conduct walk-through survey of work area. 3. Write the steps of the task in a safe sequence. 4. List all possible hazards involved in each step and reaction to change. 5. In the Safe Plan column, state actions that will be taken to prevent the hazards or injury from reaction to change. 6. In Resources column, list equipment, tools, etc. needed to do the job. 8. Ask each team member, who helped develop and will use this SPA, to sign in spaces provided. 9. Review the SPA at the end of the task for improvements. Work shall stop when conditions change, the job changes, or a deficiency in the plan is discovered, and the current SPA will be modified or a new SPA created.

Review checklist while completing front page of SPA. Check all that apply.

A new SPA is required if the job scope or work conditions change.

Required Permits	Hazards	Safe Plan
<input type="checkbox"/> Confined Space	<input type="checkbox"/> Overhead Utilities	<input type="checkbox"/> Power de-energization required <input type="checkbox"/> Insulation blankets required <input type="checkbox"/> Wire watcher required
<input type="checkbox"/> Critical Lift		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone marked
<input type="checkbox"/> Hot Work	<input type="checkbox"/> Crane or other Lifting Equipment	<input type="checkbox"/> Signalman assigned <input type="checkbox"/> Tag lines in use <input type="checkbox"/> Area around crane barricaded
<input type="checkbox"/> Lock Out/Tag Out		<input type="checkbox"/> Lifting equipment inspected <input type="checkbox"/> Personnel protected from overhead load
<input type="checkbox"/> Soil Disturbance (Over 12")	<input type="checkbox"/> Underground Utilities	<input type="checkbox"/> Reviewed as-builts <input type="checkbox"/> Subsurface surveys <input type="checkbox"/> Received dig permit
<input type="checkbox"/> Utility Clearance		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone Marked
Required PPE	<input type="checkbox"/> Electrical	<input type="checkbox"/> Lock Out/Tag Out/Try Out <input type="checkbox"/> Permit required? <input type="checkbox"/> Confirm that equipment is de-energized
<input type="checkbox"/> Hard Hat, Class C		<input type="checkbox"/> Reviewed electrical safety procedures
<input type="checkbox"/> Hard Hat, Class E (Elect. Protect)	<input type="checkbox"/> Excavations	<input type="checkbox"/> Permits <input type="checkbox"/> Inspected prior to entering <input type="checkbox"/> Proper sloping/shoring
<input type="checkbox"/> Ear Plugs/Ear Muffs		<input type="checkbox"/> Barricades provided <input type="checkbox"/> Access/egress provided <input type="checkbox"/> Protection from accumulated water
Eye Protection:	<input type="checkbox"/> Fire Hazard	<input type="checkbox"/> Hot Work Permit <input type="checkbox"/> Fire Extinguishers <input type="checkbox"/> Fire watch
<input type="checkbox"/> Safety Glasses		<input type="checkbox"/> Adjacent area protected <input type="checkbox"/> Unnecessary flammable material removed
<input type="checkbox"/> Face Shield	<input type="checkbox"/> Vehicular Traffic or Heavy Equipment	<input type="checkbox"/> Traffic Barricades <input type="checkbox"/> Cones <input type="checkbox"/> Signs <input type="checkbox"/> Flagmen <input type="checkbox"/> Lane closure
<input type="checkbox"/> Chemical Goggles		<input type="checkbox"/> Communication with equipment operator
<input type="checkbox"/> Welding Hood	<input type="checkbox"/> Noise >85 dB	Hearing protection is required: <input type="checkbox"/> Ear plugs <input type="checkbox"/> Ear Muffs <input type="checkbox"/> Both
Hand Protection:	<input type="checkbox"/> Hand & Power Tools:	<input type="checkbox"/> Inspect general cond. <input type="checkbox"/> GFCI in use <input type="checkbox"/> Identified PPE required for each tool
<input type="checkbox"/> Cut Resistant Gloves		<input type="checkbox"/> Reviewed safety requirements in operators manual(s) <input type="checkbox"/> Guarding OK
<input type="checkbox"/> Welders Gloves	<input type="checkbox"/> Hand Hazards	List sharp tools, material, equipment: _____
<input type="checkbox"/> Nitrile Gloves		<input type="checkbox"/> PPE gloves, etc. <input type="checkbox"/> Protected sharp edges as necessary
<input type="checkbox"/> Surgical Gloves	<input type="checkbox"/> Manual Lifting	<input type="checkbox"/> Reviewed proper lifting tech. <input type="checkbox"/> Identified material requiring lifting equipment
<input type="checkbox"/> Rubber Gloves		<input type="checkbox"/> Hand protection required <input type="checkbox"/> Back support belts
<input type="checkbox"/> Elect. Insulated Gloves	<input type="checkbox"/> Ladders	<input type="checkbox"/> Inspect general cond. before use <input type="checkbox"/> Ladder inspected with in last quarter
<input type="checkbox"/> Arm Sleeves		<input type="checkbox"/> Ladder tied off or held <input type="checkbox"/> Proper angle and placement <input type="checkbox"/> Reviewed ladder safety
Foot Protection:	<input type="checkbox"/> Scaffolds	<input type="checkbox"/> Inspect general condition before use <input type="checkbox"/> Tags in place <input type="checkbox"/> Properly secured
<input type="checkbox"/> Sturdy Work Boots		<input type="checkbox"/> Toe boards used <input type="checkbox"/> Footings adequate <input type="checkbox"/> Materials properly stored on scaffold
<input type="checkbox"/> Safety Toe Boots	<input type="checkbox"/> Slips, Trips Falls	<input type="checkbox"/> Inspect for trip hazards <input type="checkbox"/> Hazards marked <input type="checkbox"/> Tools & material properly stored
<input type="checkbox"/> Rubber Boots		<input type="checkbox"/> Extension cords properly secured <input type="checkbox"/> Work zone free of debris
<input type="checkbox"/> Rubber Boot Covers	<input type="checkbox"/> Pinch Points	List potential pinch points: _____
<input type="checkbox"/> Dielectric Footwear		<input type="checkbox"/> Working near operating equipment <input type="checkbox"/> Hand/Body positioning
Respiratory Protection:	<input type="checkbox"/> Working w/ Chemicals	<input type="checkbox"/> List specific chemicals involved and list hazards and precaution on front side.
<input type="checkbox"/> Dust Mask		<input type="checkbox"/> Reviewed MSDS <input type="checkbox"/> Exposure Monitoring required <input type="checkbox"/> Have proper containers and labels.
<input type="checkbox"/> Air Purifying Respirator	<input type="checkbox"/> Asbestos or Lead Paint Potential	<input type="checkbox"/> Identified proper PPE (respirators, clothing, gloves, etc.)
<input type="checkbox"/> Supplied Air Respirator		<input type="checkbox"/> Areas to be worked may contain asbestos or lead paint <input type="checkbox"/> Asbestos controls incorporated
<input type="checkbox"/> SCBA	<input type="checkbox"/> Heat Stress Potential	<input type="checkbox"/> Lead based point controls in place <input type="checkbox"/> Exposure monitoring conducted.
<input type="checkbox"/> Emergency Escape Respirator		<input type="checkbox"/> Heat stress monitoring (>85°) <input type="checkbox"/> Liquids available <input type="checkbox"/> Cool down periods
Special Clothing:	<input type="checkbox"/> Cold Stress Potential	<input type="checkbox"/> Sun Screen <input type="checkbox"/> Reviewed Heat Stress symptoms
<input type="checkbox"/> Tyvek ®		<input type="checkbox"/> Proper clothing (i.e.. gloves, coat, coveralls) <input type="checkbox"/> Wind chill <32°
<input type="checkbox"/> Poly Coated Tyvek ®	<input type="checkbox"/> Environmental	<input type="checkbox"/> Reviewed Cold Stress symptoms <input type="checkbox"/> Warm up periods
<input type="checkbox"/> Fire Resistant Coveralls		<input type="checkbox"/> Air emissions <input type="checkbox"/> Water discharge <input type="checkbox"/> Hazardous wastes <input type="checkbox"/> Other wastes
<input type="checkbox"/> Rain Suit	<input type="checkbox"/> Natural or Site Hazards	<input type="checkbox"/> Pollution prevention <input type="checkbox"/> Waste minimization
<input type="checkbox"/> Safety Vest		<input type="checkbox"/> Weather <input type="checkbox"/> Terrain <input type="checkbox"/> Adjacent operations or processes <input type="checkbox"/> Biological hazards
Fall Protection:	<input type="checkbox"/> Adjacent Work/Processes	<input type="checkbox"/> Animals/reptiles/insects hazards
<input type="checkbox"/> Harness		<input type="checkbox"/> Notified them of our presents <input type="checkbox"/> Other workers adjacent, above, or below.
<input type="checkbox"/> Double Lanyard Required	<input type="checkbox"/> Barricades/covers	<input type="checkbox"/> Coordinated with adjacent supervisor/customer/operator <input type="checkbox"/> Need barriers between.
<input type="checkbox"/> Anchorage Point Available		<input type="checkbox"/> Caution barricade tape required <input type="checkbox"/> Danger barricade tape required <input type="checkbox"/> Rigid railing required
<input type="checkbox"/> Additional Anchorage Connector Needed e.g. Cross Arm Strap, etc.		<input type="checkbox"/> Covers over opening <input type="checkbox"/> Warning signs required
<input type="checkbox"/> Retractable Device Needed	Additional Information:	
<input type="checkbox"/> Horizontal Life Line System Req'd.		
<input type="checkbox"/> Fall Clearance Distance Adequate		
<input type="checkbox"/> Fall Rescue/Retrieval Plan Set Up		

SEVENSON ENVIRONMENTAL

TVA HARRIMAN FLY ASH REMOVAL

Safe Plan Of Action

Project No. 1026

Job/Task Working at Elevations

Work Area Process Pad

Date _____

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources
During the De-Mob of the process Pad it will be necessary to work at elevations 4 feet and above.	Falls From Elevations	Workers who will be working at elevations 4 feet or higher will be required to wear fall protection and be tied off	
Dismantling hand rails	Falls from elevations, Trip Hazards	Workers need to be provided with and instructed as to what they can tie off to	
Removing Frame for tarp on presses	Falls From Elevations Trip Hazards, Slips	Tie Off Needs to be established and worker awareness as to the proper spots to connect	
		Review with workers the different types of lanyards, Retractable and their applications. (Am I using the tool for the job)	Supervision and Safety
Ladder Use	Falls From Elevations Trip Hazards, Slips	Workers need to inspect there ladders prior to use, if defective Tag out of Service notify supervisor or foreman	Ladder Safety and awareness
		Worker needs to be familiar with the proper ladder for the work he or she is undertaking. Do Not use A Step Ladder in the un-open position. Extension Ladders need to extend 3 Feet above the landing point and be tied off.	
		Worker ascending or descending needs to maintain three points of contact. Hands free of tools or parts	

<u>Any additional Hazards or safety practices not identified above?</u>			

Team Members' Signatures

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
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The signature of the supervisor confirms the completion of the hazard assessment and Safe Plan of Action by the crew.

Supervisors Signature: _____ Date _____

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Work shall stop when conditions change, the job changes, or a deficiency in the plan is discovered, and the current SPA will be modified or a new SPA created.

Review checklist while completing front page of SPA. Check all that apply.

A new SPA is required if the job scope or work conditions change.

Required Permits	Hazards	Safe Plan
<input type="checkbox"/> Confined Space	<input type="checkbox"/> Overhead Utilities	<input type="checkbox"/> Power de-energization required <input type="checkbox"/> Insulation blankets required <input type="checkbox"/> Wire watcher required
<input type="checkbox"/> Critical Lift		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone marked
<input type="checkbox"/> Hot Work	<input type="checkbox"/> Crane or other Lifting Equipment	<input type="checkbox"/> Signalman assigned <input type="checkbox"/> Tag lines in use <input type="checkbox"/> Area around crane barricaded
<input type="checkbox"/> Lock Out/Tag Out		<input type="checkbox"/> Lifting equipment inspected <input type="checkbox"/> Personnel protected from overhead load
<input type="checkbox"/> Soil Disturbance (Over 12")	<input type="checkbox"/> Underground Utilities	<input type="checkbox"/> Reviewed as-builts <input type="checkbox"/> Subsurface surveys <input type="checkbox"/> Received dig permit
<input type="checkbox"/> Utility Clearance		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone Marked
Required PPE	<input type="checkbox"/> Electrical	<input type="checkbox"/> Lock Out/Tag Out/Try Out <input type="checkbox"/> Permit required? <input type="checkbox"/> Confirm that equipment is de-energized
<input type="checkbox"/> Hard Hat, Class C		<input type="checkbox"/> Reviewed electrical safety procedures
<input type="checkbox"/> Hard Hat, Class E (Elect. Protect)	<input type="checkbox"/> Excavations	<input type="checkbox"/> Permits <input type="checkbox"/> Inspected prior to entering <input type="checkbox"/> Proper sloping/shoring
<input type="checkbox"/> Ear Plugs/Ear Muffs		<input type="checkbox"/> Barricades provided <input type="checkbox"/> Access/egress provided <input type="checkbox"/> Protection from accumulated water
Eye Protection:	<input type="checkbox"/> Fire Hazard	<input type="checkbox"/> Hot Work Permit <input type="checkbox"/> Fire Extinguishers <input type="checkbox"/> Fire watch
<input type="checkbox"/> Safety Glasses		<input type="checkbox"/> Adjacent area protected <input type="checkbox"/> Unnecessary flammable material removed
<input type="checkbox"/> Face Shield	<input type="checkbox"/> Vehicular Traffic or Heavy Equipment	<input type="checkbox"/> Traffic Barricades <input type="checkbox"/> Cones <input type="checkbox"/> Signs <input type="checkbox"/> Flagmen <input type="checkbox"/> Lane closure
<input type="checkbox"/> Chemical Goggles		<input type="checkbox"/> Communication with equipment operator
<input type="checkbox"/> Welding Hood	<input type="checkbox"/> Noise >85 dB	Hearing protection is required: <input type="checkbox"/> Ear plugs <input type="checkbox"/> Ear Muffs <input type="checkbox"/> Both
Hand Protection:	<input type="checkbox"/> Hand & Power Tools:	<input type="checkbox"/> Inspect general cond. <input type="checkbox"/> GFCI in use <input type="checkbox"/> Identified PPE required for each tool
<input type="checkbox"/> Cut Resistant Gloves		<input type="checkbox"/> Reviewed safety requirements in operators manual(s) <input type="checkbox"/> Guarding OK
<input type="checkbox"/> Welders Gloves	<input type="checkbox"/> Hand Hazards	List sharp tools, material, equipment: _____
<input type="checkbox"/> Nitrile Gloves		<input type="checkbox"/> PPE gloves, etc. <input type="checkbox"/> Protected sharp edges as necessary
<input type="checkbox"/> Surgical Gloves	<input type="checkbox"/> Manual Lifting	<input type="checkbox"/> Reviewed proper lifting tech. <input type="checkbox"/> Identified material requiring lifting equipment
<input type="checkbox"/> Rubber Gloves		<input type="checkbox"/> Hand protection required <input type="checkbox"/> Back support belts
<input type="checkbox"/> Elect. Insulated Gloves	<input type="checkbox"/> Ladders	<input type="checkbox"/> Inspect general cond. before use <input type="checkbox"/> Ladder inspected with in last quarter
<input type="checkbox"/> Arm Sleeves		<input type="checkbox"/> Ladder tied off or held <input type="checkbox"/> Proper angle and placement <input type="checkbox"/> Reviewed ladder safety
Foot Protection:	<input type="checkbox"/> Scaffolds	<input type="checkbox"/> Inspect general condition before use <input type="checkbox"/> Tags in place <input type="checkbox"/> Properly secured
<input type="checkbox"/> Sturdy Work Boots		<input type="checkbox"/> Toe boards used <input type="checkbox"/> Footings adequate <input type="checkbox"/> Materials properly stored on scaffold
<input type="checkbox"/> Safety Toe Boots	<input type="checkbox"/> Slips, Trips Falls	<input type="checkbox"/> Inspect for trip hazards <input type="checkbox"/> Hazards marked <input type="checkbox"/> Tools & material properly stored
<input type="checkbox"/> Rubber Boots		<input type="checkbox"/> Extension cords properly secured <input type="checkbox"/> Work zone free of debris
<input type="checkbox"/> Rubber Boot Covers	<input type="checkbox"/> Pinch Points	List potential pinch points: _____
<input type="checkbox"/> Dielectric Footwear		<input type="checkbox"/> Working near operating equipment <input type="checkbox"/> Hand/Body positioning
Respiratory Protection:	<input type="checkbox"/> Working w/ Chemicals	<input type="checkbox"/> List specific chemicals involved and list hazards and precaution on front side.
<input type="checkbox"/> Dust Mask		<input type="checkbox"/> Reviewed MSDS <input type="checkbox"/> Exposure Monitoring required <input type="checkbox"/> Have proper containers and labels.
<input type="checkbox"/> Air Purifying Respirator	<input type="checkbox"/> Asbestos or Lead Paint Potential	<input type="checkbox"/> Identified proper PPE (respirators, clothing, gloves, etc.)
<input type="checkbox"/> Supplied Air Respirator		<input type="checkbox"/> Areas to be worked may contain asbestos or lead paint <input type="checkbox"/> Asbestos controls incorporated
<input type="checkbox"/> SCBA	<input type="checkbox"/> Heat Stress Potential	<input type="checkbox"/> Lead based point controls in place <input type="checkbox"/> Exposure monitoring conducted.
<input type="checkbox"/> Emergency Escape Respirator		<input type="checkbox"/> Heat stress monitoring (>85°) <input type="checkbox"/> Liquids available <input type="checkbox"/> Cool down periods
Special Clothing:	<input type="checkbox"/> Cold Stress Potential	<input type="checkbox"/> Sun Screen <input type="checkbox"/> Reviewed Heat Stress symptoms
<input type="checkbox"/> Tyvek ®		<input type="checkbox"/> Proper clothing (i.e.. gloves, coat, coveralls) <input type="checkbox"/> Wind chill <32°
<input type="checkbox"/> Poly Coated Tyvek ®	<input type="checkbox"/> Environmental	<input type="checkbox"/> Reviewed Cold Stress symptoms <input type="checkbox"/> Warm up periods
<input type="checkbox"/> Fire Resistant Coveralls		<input type="checkbox"/> Air emissions <input type="checkbox"/> Water discharge <input type="checkbox"/> Hazardous wastes <input type="checkbox"/> Other wastes
<input type="checkbox"/> Rain Suit	<input type="checkbox"/> Natural or Site Hazards	<input type="checkbox"/> Pollution prevention <input type="checkbox"/> Waste minimization
<input type="checkbox"/> Safety Vest		<input type="checkbox"/> Weather <input type="checkbox"/> Terrain <input type="checkbox"/> Adjacent operations or processes <input type="checkbox"/> Biological hazards
Fall Protection:	<input type="checkbox"/> Adjacent Work/Processes	<input type="checkbox"/> Animals/reptiles/insects hazards
<input type="checkbox"/> Harness		<input type="checkbox"/> Notified them of our presents <input type="checkbox"/> Other workers adjacent, above, or below.
<input type="checkbox"/> Double Lanyard Required	<input type="checkbox"/> Barricades/covers	<input type="checkbox"/> Coordinated with adjacent supervisor/customer/operator <input type="checkbox"/> Need barriers between.
<input type="checkbox"/> Anchorage Point Available		<input type="checkbox"/> Caution barricade tape required <input type="checkbox"/> Danger barricade tape required <input type="checkbox"/> Rigid railing required
<input type="checkbox"/> Additional Anchorage Connector Needed e.g. Cross Arm Strap, etc.		<input type="checkbox"/> Covers over opening <input type="checkbox"/> Warning signs required
<input type="checkbox"/> Retractable Device Needed	Additional Information:	
<input type="checkbox"/> Horizontal Life Line System Req'd.		
<input type="checkbox"/> Fall Clearance Distance Adequate		
<input type="checkbox"/> Fall Rescue/Retrieval Plan Set Up		

Sevenson Environmental Services Inc.
TVA Harriman Fly Ash Removal
Safe Plan Of Action

Project No. 1026 _____
 Job/Task Mobile Pressure Washer _____ Work Area Process Pad _____ Date _____

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources
General Operation	Injury to people	Keep bystanders a safe distance away from work area. Cone off work area	Awareness
	Cuts	Do NOT Spray directly at glass or fragile objects	
	Hearing Loss	Wear hearing protection	Earplugs, Ear Muffs
	Eye Injury	Wear Eye Protection – Safety glasses <u>and</u> face shield required	Safety Glasses and Face Shield
	Chemical Exposure	Read MSDS sheet of chemical (if using a chemical)	MSDS
Refueling Operations	Burns, carbon monoxide poisoning	DO NOT fill gas when engine is running, hot or near open flame. Make sure engine is off and cooled before refueling.	Awareness
		DO NOT run engine in enclosed area	
		DO NOT touch or come in contact with hot muffler, cylinders, cooling fans, or hot exhaust gases	
		DO NOT operate near open flames, flammable vapors or gases	
Transporting Equipment	Fuel Leaks	When transporting shut-off fuel valve (put in the OFF position)	
Misc. Safety		Inspect equipment for damage to hoses, fittings, etc...	
		Inspect oil level, fuel and or water leaks	
		Operate on level surfaces	

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources
		NEVER start washer without adequate water supply	
		Never leave pressurized unit unattended. ALWAYS shut-off the unit and relieve trapped pressure before leaving.	
		DO NOT run the unit for more than 3 minutes with the spray gun in the closed position	
		Clean up spilled fuel or oil immediately to avoid falls	
		NEVER squeeze the spray gun trigger unless you are securely braced.	
		NEVER attempt to use power washer on or near electrical outlets, fuse boxes, transformers, high voltage wires, etc...	
Wearing Proper PPE			Hearing Protection, safety glasses and face shield Boots, Tyvek
<u>Any additional Hazards or safety practices not identified above?</u>			

Team Members' Signatures

_____	_____	_____	_____
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Required Permits	Hazards	Safe Plan
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<input type="checkbox"/> Critical Lift		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone marked
<input type="checkbox"/> Hot Work	<input type="checkbox"/> Crane or other Lifting Equipment	<input type="checkbox"/> Signalman assigned <input type="checkbox"/> Tag lines in use <input type="checkbox"/> Area around crane barricaded
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<input type="checkbox"/> Soil Disturbance (Over 12")	<input type="checkbox"/> Underground Utilities	<input type="checkbox"/> Reviewed as-builts <input type="checkbox"/> Subsurface surveys <input type="checkbox"/> Received dig permit
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<input type="checkbox"/> Hard Hat, Class E (Elect. Protect)	<input type="checkbox"/> Excavations	<input type="checkbox"/> Permits <input type="checkbox"/> Inspected prior to entering <input type="checkbox"/> Proper sloping/shoring
<input type="checkbox"/> Ear Plugs/Ear Muffs		<input type="checkbox"/> Barricades provided <input type="checkbox"/> Access/egress provided <input type="checkbox"/> Protection from accumulated water
Eye Protection:	<input type="checkbox"/> Fire Hazard	<input type="checkbox"/> Hot Work Permit <input type="checkbox"/> Fire Extinguishers <input type="checkbox"/> Fire watch
<input type="checkbox"/> Safety Glasses		<input type="checkbox"/> Adjacent area protected <input type="checkbox"/> Unnecessary flammable material removed
<input type="checkbox"/> Face Shield	<input type="checkbox"/> Vehicular Traffic or Heavy Equipment	<input type="checkbox"/> Traffic Barricades <input type="checkbox"/> Cones <input type="checkbox"/> Signs <input type="checkbox"/> Flagmen <input type="checkbox"/> Lane closure
<input type="checkbox"/> Chemical Goggles		<input type="checkbox"/> Communication with equipment operator
<input type="checkbox"/> Welding Hood	<input type="checkbox"/> Noise >85 dB	Hearing protection is required: <input type="checkbox"/> Ear plugs <input type="checkbox"/> Ear Muffs <input type="checkbox"/> Both
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<input type="checkbox"/> Tyvek ®		<input type="checkbox"/> Proper clothing (i.e.. gloves, coat, coveralls) <input type="checkbox"/> Wind chill <32°
<input type="checkbox"/> Poly Coated Tyvek ®	<input type="checkbox"/> Environmental	<input type="checkbox"/> Reviewed Cold Stress symptoms <input type="checkbox"/> Warm up periods
<input type="checkbox"/> Fire Resistant Coveralls		<input type="checkbox"/> Air emissions <input type="checkbox"/> Water discharge <input type="checkbox"/> Hazardous wastes <input type="checkbox"/> Other wastes
<input type="checkbox"/> Rain Suit	<input type="checkbox"/> Natural or Site Hazards	<input type="checkbox"/> Pollution prevention <input type="checkbox"/> Waste minimization
<input type="checkbox"/> Safety Vest		<input type="checkbox"/> Weather <input type="checkbox"/> Terrain <input type="checkbox"/> Adjacent operations or processes <input type="checkbox"/> Biological hazards
Fall Protection:	<input type="checkbox"/> Adjacent Work/Processes	<input type="checkbox"/> Animals/reptiles/insects hazards
<input type="checkbox"/> Harness		<input type="checkbox"/> Notified them of our presents <input type="checkbox"/> Other workers adjacent, above, or below.
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<input type="checkbox"/> Anchorage Point Available		<input type="checkbox"/> Caution barricade tape required <input type="checkbox"/> Danger barricade tape required <input type="checkbox"/> Rigid railing required
<input type="checkbox"/> Additional Anchorage Connector Needed e.g. Cross Arm Strap, etc.		<input type="checkbox"/> Covers over opening <input type="checkbox"/> Warning signs required
<input type="checkbox"/> Retractable Device Needed	Additional Information:	
<input type="checkbox"/> Horizontal Life Line System Req'd.		
<input type="checkbox"/> Fall Clearance Distance Adequate		
<input type="checkbox"/> Fall Rescue/Retrieval Plan Set Up		

Sevenson Environmental
TVA HARRIMAN FLY ASH REMOVAL
Safe Plan of Action

Project No. 1026

Job/Task: De-Mob Mix Tanks & Pumps Work Area: Process Pad Date _____

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources
Decon of tanks and pumps	Use of pressure washers, Injection injuries. Gasoline, Fire explosion. Carbon Monoxide fumes Noise	Place Pressure washer in a downwind position to the work being performed, Fueling of pressure washer prior to start of work and check oil. Use a funnel while fueling place pressure washer in boot wash tub as secondary containment	
		Proper PPE Tyvec, Leather gloves, With Rubber over top Hearing Protection, Safety glasses and Full Face Shield. Worker awareness of surroundings and personnel in close proximity. Never use pressure washer to clean hands, feet or clothing.	Safety meeting on pressure washers and pressurized systems
(Top of Tanks)	Falls	Tanks are equipped with hand rails and should stay in place until decon is complete on top. Close all hatches in walking areas.	
Decon inside tanks	Confined Space, Limited Egress and Access,	SWS will handle any Confined Space Entries. Attendant briefed on his responsibilities Confined Space Sign in place, air Monitoring, Air Handling unit	SWS Sevenson does not anticipate any entry into tanks. Any additional cleaning will be performed with a hose and tank will be pumped out
Crane set-up and use	Tipping, lifting, overhead loads	Level area for crane set-up. Establish load drop zone and clear personnel. 2nd Party Verification – Crane operator and foreman to verify ready to lift. Complete and follow TSP 802.	Planning, Complete and follow TSP 802
Crane set-up	Crush Hazards, Pinch Points	Barricade swing radius of crane	TVA Trained Operator and Rigger
	Crane tipping	Level work area, Follow TSP 802	
Rigging Pumps, Hand Rails, Pipe, Hoses	Exceeding load rating per rigging. Damage Rigging,	Inspect rigging prior to use, defective rigging will be tagged out of s	TVA Trained Crane operator and Rigger will determine rigging to be used for equipment being lifted.

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources
Lifting Pumps	Overhead Loads, Pinch Points	Proper PPE while unbolting, rigging Workers need to wear leather work gloves and communicate with rigger all is clear prior to lift being made.	Communication between all crafts
	Slips Trips and Falls	Workers need to be aware while walking during these activities as to the hoses and piping still in place on the pad.	
Moving Mix Tanks via (Tractor Unit)	Crush Hazards, Pinch Points	Sevenson will utilize A spotter to back driver into position. Eye contact and communication between the two will be via hand signals and verbal	Sevenson will control drivers and if necessary provide the proper PPE in the event they need to exit their cab.
Final decon may be necessary once removed from pad	Environmental issues	All equipment will be inspected prior to leaving decon area	Prior to leaving site an Undetermined employee will certify clean
Material Handling/Trucking	Unstable loads, untied loads	Driver is responsible for inspecting load is stable and tied down correctly. Do not move truck until load is secured.	Driver inspection.
<u>Any additional Hazards or safety practices not identified above?</u>			

Team Members' Signatures

_____	_____	_____	_____
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The signature of the supervisor confirms the completion of the hazard assessment and Safe Plan of Action by the crew.

Supervisors Signature: _____ Date_____

Instructions: 1. Write name of job or task in space provided. 2. Conduct walk-through survey of work area. 3. Write the steps of the task in a safe sequence. 4. List all possible hazards involved in each step and reaction to change. 5. In the Safe Plan column, state actions that will be taken to prevent the hazards or injury from reaction to change. 6. In Resources column, list equipment, tools, etc. needed to do the job. 8. Ask each team member, who helped develop and will use this SPA, to sign in spaces provided. 9. Review the SPA at the end of the task for improvements.

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Sevenson Environmental
TVA HARRIMAN FLY ASH REMOVAL
Safe Plan Of Action

Project No. 1026

Job/Task De-Mobilize HDPE Pipe

Work Area: Process Pad

Date 04/20/10

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources
Decon of Pipe in place	Eye injuries use of gas powered pressure washers	PPE required Safety Glasses, Full Face Shield, Tyvec and Leather Gloves	Safety/ SPA
Unbolting of pipe	Pinch points, Pipe under tension Struck by	Communicate with each other. Awareness of work being performed	
Cutting pipe	Chainsaw, flying debris	Wear chaps, gloves, safety glasses and faceshield	PPE, planning
	Pipe tension	Make sure pipe is level. Body positioning; be on opposite side of bend when cutting.	
Rigging of Pipe	Defective rigging	Inspect rigging prior to use, Remove faulty rigging from service and tag out	Only trained Personnel in area
Picking Pipe with crane	Struck by suspended loads, Wind	Tag Lines on all suspended loads, Awareness of work being performed	
		One person to direct operator	
Use of fork lift to remove piping	Heavy Equipment, Pinch Points, Crush Hazards	TVA trained fork lift operator, Good Communication between operator and workers	TVA Trained operator
<u>Any additional Hazards or safety practices not identified above?</u>			

Team Members' Signatures

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Supervisors Signature: _____ Date _____

Contractors Responsible Party: _____ Date _____

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A new SPA is required if the job scope or work conditions change.

Required Permits	Hazards	Safe Plan
<input type="checkbox"/> Confined Space	<input type="checkbox"/> Overhead Utilities	<input type="checkbox"/> Power de-energization required <input type="checkbox"/> Insulation blankets required <input type="checkbox"/> Wire watcher required
<input type="checkbox"/> Critical Lift		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone marked
<input type="checkbox"/> Hot Work	<input type="checkbox"/> Crane or other	<input type="checkbox"/> Signalman assigned <input type="checkbox"/> Tag lines in use <input type="checkbox"/> Area around crane barricaded
<input type="checkbox"/> Lock Out/Tag Out/Try	<input type="checkbox"/> Lifting Equipment	<input type="checkbox"/> Lifting equipment inspected <input type="checkbox"/> Personnel protected from overhead load
<input type="checkbox"/> Soil Disturbance (Over 2")	<input type="checkbox"/> Underground Utilities	<input type="checkbox"/> Reviewed as-builts <input type="checkbox"/> Subsurface surveys <input type="checkbox"/> Received dig permit
<input type="checkbox"/> Utility Clearance		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone Marked
Required PPE		
<input type="checkbox"/> Hard Hat, Class C	<input type="checkbox"/> Electrical	<input type="checkbox"/> Lock Out/Tag Out/Try Out <input type="checkbox"/> Permit required? <input type="checkbox"/> Confirm that equipment is de-energized
<input type="checkbox"/> Hard Hat, Class E (<i>Elect. Protect</i>)	<input type="checkbox"/> Excavations	<input type="checkbox"/> Reviewed electrical safety procedures
<input type="checkbox"/> Ear Plugs/Ear Muffs		<input type="checkbox"/> Permits <input type="checkbox"/> Inspected prior to entering <input type="checkbox"/> Proper sloping/shoring
Eye Protection:	<input type="checkbox"/> Fire Hazard	<input type="checkbox"/> Barricades provided <input type="checkbox"/> Access/egress provided <input type="checkbox"/> Protection from accumulated water
<input type="checkbox"/> Safety Glasses		<input type="checkbox"/> Hot Work Permit <input type="checkbox"/> Fire Extinguishers <input type="checkbox"/> Fire watch
<input type="checkbox"/> Face Shield	<input type="checkbox"/> Vehicular Traffic or Heavy Equipment	<input type="checkbox"/> Adjacent area protected <input type="checkbox"/> Unnecessary flammable material removed
<input type="checkbox"/> Chemical Goggles		<input type="checkbox"/> Traffic Barricades <input type="checkbox"/> Cones <input type="checkbox"/> Signs <input type="checkbox"/> Flagmen <input type="checkbox"/> Lane closure
<input type="checkbox"/> Welding Hood	<input type="checkbox"/> Noise >85 dB	<input type="checkbox"/> Communication with equipment operator
Hand Protection:	<input type="checkbox"/> Hand & Power Tools:	Hearing protection is required: <input type="checkbox"/> Ear plugs <input type="checkbox"/> Ear Muffs <input type="checkbox"/> Both
<input type="checkbox"/> Cut Resistant Gloves		<input type="checkbox"/> Inspect general cond. <input type="checkbox"/> GFCI in use <input type="checkbox"/> Identified PPE required for each tool
<input type="checkbox"/> Welders Gloves	<input type="checkbox"/> Hand Hazards	<input type="checkbox"/> Reviewed safety requirements in operators manual(s) <input type="checkbox"/> Guarding OK
<input type="checkbox"/> Nitrile Gloves		List sharp tools, material, equipment: _____
<input type="checkbox"/> Surgical Gloves	<input type="checkbox"/> Manual Lifting	<input type="checkbox"/> PPE gloves, etc. <input type="checkbox"/> Protected sharp edges as necessary
<input type="checkbox"/> Rubber Gloves		<input type="checkbox"/> Reviewed proper lifting tech. <input type="checkbox"/> Identified material requiring lifting equipment
<input type="checkbox"/> Elect. Insulated Gloves	<input type="checkbox"/> Ladders	<input type="checkbox"/> Hand protection required <input type="checkbox"/> Back support belts
<input type="checkbox"/> Arm Sleeves		<input type="checkbox"/> Inspect general cond. before use <input type="checkbox"/> Ladder inspected with in last quarter
Foot Protection:	<input type="checkbox"/> Scaffolds	<input type="checkbox"/> Ladder tied off or held <input type="checkbox"/> Proper angle and placement <input type="checkbox"/> Reviewed ladder safety
<input type="checkbox"/> Sturdy Work Boots		<input type="checkbox"/> Inspect general condition before use <input type="checkbox"/> Tags in place <input type="checkbox"/> Properly secured
<input type="checkbox"/> Safety Toe Boots	<input type="checkbox"/> Slips, Trips Falls	<input type="checkbox"/> Toe boards used <input type="checkbox"/> Footings adequate <input type="checkbox"/> Materials properly stored on scaffold
<input type="checkbox"/> Rubber Boots		<input type="checkbox"/> Inspect for trip hazards <input type="checkbox"/> Hazards marked <input type="checkbox"/> Tools & material properly stored
<input type="checkbox"/> Rubber Boot Covers	<input type="checkbox"/> Pinch Points	<input type="checkbox"/> Extension cords properly secured <input type="checkbox"/> Work zone free of debris
<input type="checkbox"/> Dielectric Footwear		List potential pinch points: _____
Respiratory Protection:	<input type="checkbox"/> Working w/ Chemicals	<input type="checkbox"/> Working near operating equipment <input type="checkbox"/> Hand/Body positioning
<input type="checkbox"/> Dust Mask		<input type="checkbox"/> List specific chemicals involved and list hazards and precaution on front side.
<input type="checkbox"/> Air Purifying Respirator	<input type="checkbox"/> Asbestos or Lead Paint Potential	<input type="checkbox"/> Reviewed MSDS <input type="checkbox"/> Exposure Monitoring required <input type="checkbox"/> Have proper containers and labels.
<input type="checkbox"/> Supplied Air Respirator		<input type="checkbox"/> Identified proper PPE (respirators, clothing, gloves, etc.)
<input type="checkbox"/> SCBA	<input type="checkbox"/> Heat Stress Potential	<input type="checkbox"/> Areas to be worked may contain asbestos or lead paint <input type="checkbox"/> Asbestos controls incorporated
<input type="checkbox"/> Emergency Escape Respirator		<input type="checkbox"/> Lead based point controls in place <input type="checkbox"/> Exposure monitoring conducted.
Special Clothing:	<input type="checkbox"/> Cold Stress Potential	<input type="checkbox"/> Heat stress monitoring (>85°) <input type="checkbox"/> Liquids available <input type="checkbox"/> Cool down periods
<input type="checkbox"/> Tyvek ®		<input type="checkbox"/> Sun Screen <input type="checkbox"/> Reviewed Heat Stress symptoms
<input type="checkbox"/> Poly Coated Tyvek ®	<input type="checkbox"/> Environmental	<input type="checkbox"/> Proper clothing (i.e., gloves, coat, coveralls) <input type="checkbox"/> Wind chill <32°
<input type="checkbox"/> Fire Resistant Coveralls		<input type="checkbox"/> Reviewed Cold Stress symptoms <input type="checkbox"/> Warm up periods
<input type="checkbox"/> Rain Suit	<input type="checkbox"/> Natural or Site Hazards	<input type="checkbox"/> Air emissions <input type="checkbox"/> Water discharge <input type="checkbox"/> Hazardous wastes <input type="checkbox"/> Other wastes
<input type="checkbox"/> Safety Vest		<input type="checkbox"/> Pollution prevention <input type="checkbox"/> Waste minimization
Fall Protection:	<input type="checkbox"/> Adjacent Work/Processes	<input type="checkbox"/> Weather <input type="checkbox"/> Terrain <input type="checkbox"/> Adjacent operations or processes <input type="checkbox"/> Biological hazards
<input type="checkbox"/> Harness		<input type="checkbox"/> Animals/reptiles/insects hazards
<input type="checkbox"/> Double Lanyard Required	<input type="checkbox"/> Barricades/covers	<input type="checkbox"/> Notified them of our presents <input type="checkbox"/> Other workers adjacent, above, or below.
<input type="checkbox"/> Anchorage Point Available		<input type="checkbox"/> Coordinated with adjacent supervisor/customer/operator <input type="checkbox"/> Need barriers between.
<input type="checkbox"/> Additional Anchorage Connector Needed e.g. Cross Arm Strap, etc.		<input type="checkbox"/> Caution barricade tape required <input type="checkbox"/> Danger barricade tape required <input type="checkbox"/> Rigid railing required
<input type="checkbox"/> Retractable Device Needed		<input type="checkbox"/> Covers over opening <input type="checkbox"/> Warning signs required
<input type="checkbox"/> Horizontal Life Line System Req'd.		Additional Information:
<input type="checkbox"/> Fall Clearance Distance Adequate		
<input type="checkbox"/> Fall Rescue/Retrieval Plan Set Up		

Sevenson Environmental Services, Inc.
TVA Kingston Ash Release Response Site
Safe Plan of Action

Project No. 1026

Job/Task Operating a Forklift

Work Area Process Pad

Date _____

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources
Pre-Operation Safety Check			Equipment check list (inspection)
Operating the forks	Struck by-Running into obstacles	Slow down for turns Make sure that you have enough overhead clearance. Keep forks low when travelling to improve field of view.	Operator awareness
Loading	Struck by-Load falling off forklift Damage to material by loading improperly-Struck against Overloading Pinching hands between the truck and other objects	Spread forks as wide as possible for transporting the load. Tilt the mast slightly forward and align the forks with the base of the load. Proceed slowly and insert the forks into the base of the load. Ensure that at least 2/3 rd the length of the fork enter the base of the load. Lift forks approximately 8 inches for the load to clear the floor/ground. Tilt mast back in preparation for traveling	
Transporting the load	Running into objects Collisions with other equipment	Be Alert Wear gloves to protect your hands Keep your arms and hands in the truck Keep the controls and your hands clean and dry Use a spotter if necessary	Operator awareness and communication, Spotter
Unloading	Injury to other personnel Damage to other equipment	Position the truck at the desired location. If stacking loads, adjust the height of the load as appropriate	

		Tilt the mast forward to place the forks parallel to the ground. Once the load is set, slowly back away from the load. When clear of the load, place the forks at the proper height for traveling	
Parking the Forklift	Running over and crushing the operator	Never leave the truck until you lower the lifting mechanism, put controls in neutral and set the brakes. Turn vehicle off when exiting. Never give rides or let anyone stand on the forks. Always administer the emergency brake.	
Material Handling/Trucking	Unstable loads, untied loads	Driver is responsible for inspecting load is stable and tied down correctly. Do not move truck until load is secured.	Driver inspection.
<u>Any additional Hazards or safety practices not identified above?</u>			

Team Members' Signatures

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

The signature of the supervisor confirms the completion of the hazard assessment and Safe Plan of Action by the crew.

Supervisors Signature: _____ Date _____

Instructions: 1. Write name of job or task in space provided. 2. Conduct walk-through survey of work area. 3. Write the steps of the task in a safe sequence. 4. List all possible hazards involved in each step and reaction to change. 5. In the Safe Plan column, state actions that will be taken to prevent the hazards or injury from reaction to change. 6. In Resources column, list equipment, tools, etc. needed to do the job. 8. Ask each team member, who helped develop and will use this SPA, to sign in spaces provided. 9. Review the SPA at the end of the task for improvements.

Work shall stop when conditions change, the job changes, or a deficiency in the plan is discovered, and the current SPA will be modified or a new SPA created.

Review checklist while completing front page of SPA. Check all that apply.

A new SPA is required if the job scope or work conditions change.

Required Permits	Hazards	Safe Plan
<input type="checkbox"/> Confined Space	<input type="checkbox"/> Overhead Utilities	<input type="checkbox"/> Power de-energization required <input type="checkbox"/> Insulation blankets required <input type="checkbox"/> Wire watcher required
<input type="checkbox"/> Critical Lift		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone marked
<input type="checkbox"/> Hot Work	<input type="checkbox"/> Crane or other Lifting Equipment	<input type="checkbox"/> Signalman assigned <input type="checkbox"/> Tag lines in use <input type="checkbox"/> Area around crane barricaded
<input type="checkbox"/> Lock Out/Tag Out		<input type="checkbox"/> Lifting equipment inspected <input type="checkbox"/> Personnel protected from overhead load
<input type="checkbox"/> Soil Disturbance (Over 12")	<input type="checkbox"/> Underground Utilities	<input type="checkbox"/> Reviewed as-builts <input type="checkbox"/> Subsurface surveys <input type="checkbox"/> Received dig permit
<input type="checkbox"/> Utility Clearance		<input type="checkbox"/> Required clearance distance = _____ Ft. <input type="checkbox"/> Safe work zone Marked
Required PPE	<input type="checkbox"/> Electrical	<input type="checkbox"/> Lock Out/Tag Out/Try Out <input type="checkbox"/> Permit required? <input type="checkbox"/> Confirm that equipment is de-energized
<input type="checkbox"/> Hard Hat, Class C		<input type="checkbox"/> Reviewed electrical safety procedures
<input type="checkbox"/> Hard Hat, Class E (Elect. Protect)	<input type="checkbox"/> Excavations	<input type="checkbox"/> Permits <input type="checkbox"/> Inspected prior to entering <input type="checkbox"/> Proper sloping/shoring
<input type="checkbox"/> Ear Plugs/Ear Muffs		<input type="checkbox"/> Barricades provided <input type="checkbox"/> Access/egress provided <input type="checkbox"/> Protection from accumulated water
Eye Protection:	<input type="checkbox"/> Fire Hazard	<input type="checkbox"/> Hot Work Permit <input type="checkbox"/> Fire Extinguishers <input type="checkbox"/> Fire watch
<input type="checkbox"/> Safety Glasses		<input type="checkbox"/> Adjacent area protected <input type="checkbox"/> Unnecessary flammable material removed
<input type="checkbox"/> Face Shield	<input type="checkbox"/> Vehicular Traffic or Heavy Equipment	<input type="checkbox"/> Traffic Barricades <input type="checkbox"/> Cones <input type="checkbox"/> Signs <input type="checkbox"/> Flagmen <input type="checkbox"/> Lane closure
<input type="checkbox"/> Chemical Goggles		<input type="checkbox"/> Communication with equipment operator
<input type="checkbox"/> Welding Hood	<input type="checkbox"/> Noise >85 dB	Hearing protection is required: <input type="checkbox"/> Ear plugs <input type="checkbox"/> Ear Muffs <input type="checkbox"/> Both
Hand Protection:	<input type="checkbox"/> Hand & Power Tools:	<input type="checkbox"/> Inspect general cond. <input type="checkbox"/> GFCI in use <input type="checkbox"/> Identified PPE required for each tool
<input type="checkbox"/> Cut Resistant Gloves		<input type="checkbox"/> Reviewed safety requirements in operators manual(s) <input type="checkbox"/> Guarding OK
<input type="checkbox"/> Welders Gloves	<input type="checkbox"/> Hand Hazards	List sharp tools, material, equipment: _____
<input type="checkbox"/> Nitrile Gloves		<input type="checkbox"/> PPE gloves, etc. <input type="checkbox"/> Protected sharp edges as necessary
<input type="checkbox"/> Surgical Gloves	<input type="checkbox"/> Manual Lifting	<input type="checkbox"/> Reviewed proper lifting tech. <input type="checkbox"/> Identified material requiring lifting equipment
<input type="checkbox"/> Rubber Gloves		<input type="checkbox"/> Hand protection required <input type="checkbox"/> Back support belts
<input type="checkbox"/> Elect. Insulated Gloves	<input type="checkbox"/> Ladders	<input type="checkbox"/> Inspect general cond. before use <input type="checkbox"/> Ladder inspected with in last quarter
<input type="checkbox"/> Arm Sleeves		<input type="checkbox"/> Ladder tied off or held <input type="checkbox"/> Proper angle and placement <input type="checkbox"/> Reviewed ladder safety
Foot Protection:	<input type="checkbox"/> Scaffolds	<input type="checkbox"/> Inspect general condition before use <input type="checkbox"/> Tags in place <input type="checkbox"/> Properly secured
<input type="checkbox"/> Sturdy Work Boots		<input type="checkbox"/> Toe boards used <input type="checkbox"/> Footings adequate <input type="checkbox"/> Materials properly stored on scaffold
<input type="checkbox"/> Safety Toe Boots	<input type="checkbox"/> Slips, Trips Falls	<input type="checkbox"/> Inspect for trip hazards <input type="checkbox"/> Hazards marked <input type="checkbox"/> Tools & material properly stored
<input type="checkbox"/> Rubber Boots		<input type="checkbox"/> Extension cords properly secured <input type="checkbox"/> Work zone free of debris
<input type="checkbox"/> Rubber Boot Covers	<input type="checkbox"/> Pinch Points	List potential pinch points: _____
<input type="checkbox"/> Dielectric Footwear		<input type="checkbox"/> Working near operating equipment <input type="checkbox"/> Hand/Body positioning
Respiratory Protection:	<input type="checkbox"/> Working w/ Chemicals	<input type="checkbox"/> List specific chemicals involved and list hazards and precaution on front side.
<input type="checkbox"/> Dust Mask		<input type="checkbox"/> Reviewed MSDS <input type="checkbox"/> Exposure Monitoring required <input type="checkbox"/> Have proper containers and labels.
<input type="checkbox"/> Air Purifying Respirator	<input type="checkbox"/> Asbestos or Lead Paint Potential	<input type="checkbox"/> Identified proper PPE (respirators, clothing, gloves, etc.)
<input type="checkbox"/> Supplied Air Respirator		<input type="checkbox"/> Areas to be worked may contain asbestos or lead paint <input type="checkbox"/> Asbestos controls incorporated
<input type="checkbox"/> SCBA	<input type="checkbox"/> Heat Stress Potential	<input type="checkbox"/> Lead based point controls in place <input type="checkbox"/> Exposure monitoring conducted.
<input type="checkbox"/> Emergency Escape Respirator		<input type="checkbox"/> Heat stress monitoring (>85°) <input type="checkbox"/> Liquids available <input type="checkbox"/> Cool down periods
Special Clothing:	<input type="checkbox"/> Cold Stress Potential	<input type="checkbox"/> Sun Screen <input type="checkbox"/> Reviewed Heat Stress symptoms
<input type="checkbox"/> Tyvek ®		<input type="checkbox"/> Proper clothing (i.e.. gloves, coat, coveralls) <input type="checkbox"/> Wind chill <32°
<input type="checkbox"/> Poly Coated Tyvek ®	<input type="checkbox"/> Environmental	<input type="checkbox"/> Reviewed Cold Stress symptoms <input type="checkbox"/> Warm up periods
<input type="checkbox"/> Fire Resistant Coveralls		<input type="checkbox"/> Air emissions <input type="checkbox"/> Water discharge <input type="checkbox"/> Hazardous wastes <input type="checkbox"/> Other wastes
<input type="checkbox"/> Rain Suit	<input type="checkbox"/> Natural or Site Hazards	<input type="checkbox"/> Pollution prevention <input type="checkbox"/> Waste minimization
<input type="checkbox"/> Safety Vest		<input type="checkbox"/> Weather <input type="checkbox"/> Terrain <input type="checkbox"/> Adjacent operations or processes <input type="checkbox"/> Biological hazards
Fall Protection:	<input type="checkbox"/> Adjacent Work/Processes	<input type="checkbox"/> Animals/reptiles/insects hazards
<input type="checkbox"/> Harness		<input type="checkbox"/> Notified them of our presents <input type="checkbox"/> Other workers adjacent, above, or below.
<input type="checkbox"/> Double Lanyard Required	<input type="checkbox"/> Barricades/covers	<input type="checkbox"/> Coordinated with adjacent supervisor/customer/operator <input type="checkbox"/> Need barriers between.
<input type="checkbox"/> Anchorage Point Available		<input type="checkbox"/> Caution barricade tape required <input type="checkbox"/> Danger barricade tape required <input type="checkbox"/> Rigid railing required
<input type="checkbox"/> Additional Anchorage Connector Needed e.g. Cross Arm Strap, etc.		<input type="checkbox"/> Covers over opening <input type="checkbox"/> Warning signs required
<input type="checkbox"/> Retractable Device Needed	Additional Information:	
<input type="checkbox"/> Horizontal Life Line System Req'd.		
<input type="checkbox"/> Fall Clearance Distance Adequate		
<input type="checkbox"/> Fall Rescue/Retrieval Plan Set Up		

Sevenson Environmental
TVA HARRIMAN FLY ASH REMOVAL
Safe Plan of Action

Project No. 1026

Job/Task: PHASE 2 Loading Equipment on Trucks Work Area: Process Pad Date _____

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources
Tractor trailer operator securing load	Driver not familiar with SES rules and PPE requirements Equipment Traffic	Educate and control the driver if he needs PPE supply him. Sevenson will stay with him at all times while out of his truck.	PPE, Trained personnel
Use of Loader or Fork Lift to set Equipment on trailer	Pinch Points, Crush Hazards Suspended loads	Trained Operator and Spotter to guide him No suspended loads should be flown over the cab of tractor. Tag Lines on all suspended loads. Leather work gloves for securing loads.	Spotter, PPE
Set Equipment on trailer	Lifting Injuries, Rigging, Pinch Points	Lift with your legs not with your backs, utilize heavy equipment whenever possible. Leather work gloves	Body positioning, planning
	Shifting Load	Tie down loads, use forklift to maneuver loads to ensure stability.	Trained personnel
Securing load on trailer	Pinch Points Crushing hazards, Elevated work on Flat Bed	Use of ladder for elevated work, inspect ladder for defects prior to use. Securing load with Chain Binders. Do not move truck until load is secure! Leather work gloves.	Trained personnel
Trailer loaded and ready to leave site.	Driver not familiar with Site rules or route to decon	One of Sevenson's workers will stay with him at all times and safely escort him to the truck decon area.	Teamster
Inspect Load	Heavy Equipment pinch points, Tipping Hazards	Trained Operator Spotter to guide him Awareness and Body Positioning	Spotter/Driver
<u>Any additional Hazards or safety practices not identified above?</u>			

Steps of Task	Hazard/Reaction to Change	Safe Plan	Resources

Team Members' Signatures

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Supervisors Signature: _____ **Date** _____

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Work shall stop when conditions change, the job changes, or a deficiency in the plan is discovered, and the current SPA will be modified or a new SPA created.

cc:

- Anda Ray, TVA
- Barbara Scott, TDEC
- Leo Francendese, EPA
- Mike Scott, TVA
- Dennis Yankee, TVA
- Kathryn Nash, TVA
- Cynthia Anderson, TVA
- Steve McCracken, TVA
- EDM
- Julie Pfeffer, Jacobs
- Steve Richardson, Jacobs
- Michelle Cagley, TVA
- Greg Signer, TVA
- KIF Incident Document Control
- Katie Kline, TVA
- Gretchen Wahl, Jacobs
- Dannena Bowman, EPA
- Jeff Gary, Jacobs
- Robert Pullen, Jacobs