Delta Engineering Ltd.

Carter Industries Limited

Giant Mine C-Shaft Head Frame Deconstruction Project

Daily Tailgate

Job #: 14-002 Site: Giant Mine Supervisor: CLELL CHANT Date: SEPT 20, 2015

Weather OVERCAST Temp: +7 Wind Speed: _____ Windchill: _____

PROPOSED SCOPE OF WORK (Type of work to be completed during day)

SCRUBBER HOUSE - CLEAN UP HAZMATS & NON HAZARDOUS WASTE.
CONVEYOR HOUSES - CLEAN UP HAZMATS & NON HAZARDOUS WASTE.

	☐ Falls from Heights	☐ Falling Objects	☑ Climbing Obstructions	☐ Tools	☑
Gravity	☐ Overhead Protection	☑ Barriers	☑ Toe Boards	☐ Signage	
Utilities	☐ Water	☐ Gas	☐ Power (over/under)	☐ Sewer	
Crane	☐ Tag Lines	☐ Signalman	☑ Swing Radius	☑ Rigging	☑
Motion	☐ Traffic Conditions	☐ Equip Stability	☑ Ground Conditions	☑ Load Movement	☑
Body Mechanics	☑ Slips/Trips	☑ Lifting Strains	☑ Repetitive Strains	☑ Twist/Bending	☑
Noise	☑ Chronic (>85dB)	☐ Peak (>115dB)	☐ Continuous (>65dB)	☑ Hearing Protection	☑
Testing	☐ Hydro-Test	☐ Pneumatic Test	☐ Stress Relieving	☐ X-Raying	
Procedures	☐ Safe Work Practice	☐ Isolations Required	☐ Emergency Response	☑ Signage	
Equipment	☑ Equip Inspection	☑ Site Conditions	☑ Suitability of Equip	☑ Barriers	
Confined Space II	☐ Lockout	☐ JHA Required	☐ Working at Heights	☑ Other	

PERSONAL PROTECTIVE EQUIPMENT

- ☑ Hard Hat (CSA Approved)
- ☑ Safety Boots (CSA Approved)
- ☑ Eye Protection (CSA Approved)
- ☑ Fall Arrest Harness — AS REQ'D
- ☑ Reflective Clothing
- ☑ Gloves
- ☑ Hearing Protection
- ☑ 1/2 Mask

✓ TYVEK SUITS

Incidents Reviewed / Action(s) To Be Taken:

Topic Discussion:

- SITE SAFETY OFFICER - SHAWN CARTER
- DAILY EQUIPMENT CHECK LISTS
- EXPANDED WORK AREA TO INCLUDE THERMAL SIPHON SITES.
- FIELD LEVEL HAZARD ASSESSMENTS
- SITE DAILY SAFETY INSPECTION
- FIRE EXTINGUISHER CHECKS.

Concerns:

What are we going to do today to improve safety?

GOOD HOUSE KEEPING AT WORK AREAS.

What are the Environmental Aspects?

WEATHER,

Inspections (Planned) Conducted (give details): Aerial work platform; fall protection check; hot work permits; confined space; working at heights; equipment pre-ops; critical lifts

EQUIPMENT CHECKS, FIRE EXTINGUISHERS

Safety Notices Discussed:

Attendee(s): No. In Crew ____________ Total No. Of Attendees ____________

Print	Company	Signature	
Bob Johnson	Delta		
Stanley Cook	Delta		
Darryl Cook	Delta		
Kurt Stewart	Delta		
Pascal Poirier	DEL		
Shawn Carter	CIL		
Claude Deschesnes	CMJ		
Gabriel Coursol	CMJ		
Louis Deschesnes	CMJ		
Danny Wallace	Parsons		
Sarah Preston	PARSONS		
Martin Rompré	CMJ		
Charles Auger	Nuna		

Project Manager ____________

Cam Crook
Site Superintendent

Date SEPT 20, 2015

HOT WORK PERMIT

DEFINITION - Hot Work is any process which because of its design or function can cause ignition of a gaseous or vaporous atmosphere due to direct or indirect contact.

PROCEDURE - A hot work permitting program will be required on all sites when sources may be introduced. The Site Safety/Competent person is responsible for all site Hot Work permitting. A copy of this permit must be posted at the area where Hot Work activities are occurring.

The Site Safety/Competent person has surveyed the site and found the following Hot Work condition(s) do or may exist at PG, and will require permitting.

CONDITION	YES	NO	N/A	CONDITION	YES	NO	N/A
Welding		X		Electrical Equipment, fixed			
Cutting	✓			Electrical equipment, portable			
Use of Power Tools	✓			Electrical Equipment, hand-held			
Space Heaters	✓			Others:			

PRE-WORK CHECKLIST **All items must be completed for permit to be valid**	YES	NO	N/A
Has the work area been inspected by the Site Safety/Competent person prior to Hot Work beginning?	✓		
Has a fire watch been established? Name: SHAWN CARTER	✓		
Is the fire extinguisher appropriate for the media?/ Readily accessible? Type: 20lb ANSUL X2	✓		
Is the work area clear of all trash and combustible debris?	✓		
Is the welding/cutting equipment properly grounded?	✓		
Are the flash arresters installed in each cutting/welding cylinder?	✓		
Has the area been monitored for combustible atmosphere, carbon monoxide, and oxygen deficiency?			✓
If not, why? - CLEAR OPEN AIR / +UR VENTILATION			
Will combustible gas indicators(s) (CGI) and carbon monoxide and oxygen meters be used constantly during Hot Work?		✓	
If not, why? NOT REQUIRED			
List additional personal protective equipment (PPE) worn: FACE SHIELDS, WELDING/CUTTING GOGGLES	✓		
Is welding or cutting on closed systems prohibited?	✓		
Are closed system cutting procedures established?			✓

HOT WORK TEAM SIGN-OFF

I/we have read and understand the terms of the above Hot Work Permit.

NAME (PLEASE PRINT CLEARLY)	SIGNATURE	DATE/TIME	
CLAUDE DESCHENES			

DATE 20/09/15 START TIME 08:00hrs PERMIT EXPIRATION TIME 19:00hrs
(There should be no more than 15 minutes elapse between permit issuance and the beginning of Hot Work)

CERTIFICATION OF CONTRACTOR SITE SAFETY/COMPETENT PERSON THAT HOT WORK MAY COMMENCE

A NEW HOT WORK PERMIT WILL BE REQUIRED at the beginning of each shift or whenever there is more than one (1) hour of no Hot Work procedure (i.e., lunch breaks, etc.).

*The above Hot Work activities at the identified location ended at (time):

CERTIFICATION OF SITE SAFETY/COMPETENT PERSON THAT THE HOT WORK AREA HAS BEEN SHUT DOWN AND THAT, UPON INSPECTION OF AT LEAST 30 MINUTES AFTER HOT WORK SHUT DOWN, THAT NO IGNITION POTENTIAL EXISTS:

SITE SAFETY/COMPETENT PERSON SIGNATURE: _____ TIME INSPECTED:

Date: 20/09/15 Project Name: GIANT

Description of Work: DEMOLITION

[redacted] Construction Ltd.

FIELD LEVEL HAZARD ASSESSMENT

Check off the hazards that apply to this task. List the item # on the other side and identify the plans to eliminate/control the risk.

ERGONOMIC HAZARDS

1	Repetitive motion	☑
2	Heavy lifting	☑
3	Awkward positions	☑
4	Over exertion	☑
5	Pinch points	☑
6	Body in line of fire	☐
7	Working above your head	☐

WORK AT HEIGHTS HAZARDS

8	Barricades, flagging, signs	☑
9	Hole (coverings in place)	☐
10	Falling items	☑
11	Powered platforms	☐
12	Others working overhead/below	☐
13	Fall (fall arrest/100% tie off)	☐
14	Tie point identified	☐
15	Ladders	☑

ACCESS/EGRESS HAZARDS

16	Aerial lift/man basket (inspected)	☐
17	Scaffold (inspected & tagged)	☐
18	Ladders (tied off)	☑
19	Slips/trips	☑
20	Hoisting (tools/equipment)	☐
21	Excavations / Trenching	☐
22	Confined Space	☐

PERSONAL LIMITATION HAZARDS

23	Working alone	☐
24	Violence	☐
25	First time performing task	☐
26	Confusing instructions	☐
27	Physical limitations	☐

HOT WORK HAZARDS

28	Welding/grinding	☑
29	Burn/Heat sources	☐
30	Compressed gases	☐
31	Leaks in hoses or bottles	☐
32	Noise (extreme)	☐
33	Combustible material in area	☐
34	Airborne particles	☑
35	Arc flash	☐

ENVIRONMENTAL HAZARDS

36	Spill potential	☑
37	Weather conditions	☑
38	Dust	☑
39	Ventilation	☑
40	Heat stress/cold exposure	☑
41	Other workers in area	☑
42	Lighting levels	☑
43	Housekeeping	☑
44	Ground conditions	☑

ELECTRICAL HAZARDS

45	Shock Hazard/GFI's	☐
46	Working on/near energized eq.	☐
47	Hot work/electrical permit req'd	☐
48	Electrical cords inspected	☐
49	Electrical tools inspected	☐
50	Explosive Hazard/Expl. Proof plugs	☐

HOISTING/RIGGING HAZARDS

51	Hoisting (tools equipment)	☑
52	Load limits (slings rating)	☑
53	Lifting points (damage/wear)	☐

UG HAZARDS

54	Cap lamp inspected	☐
55	Self-Rescuer inspected	☐
56	Tag in and out	☐
57	Ventilation fan on	☐
58	Back/rib screened	☐

REVIEWED AT TAILBOARD

Fire extinguisher location	☑
First aid room	☑
Safety shower/eyewash	☑
Muster point	☑
Emergency response plan	☑
Incident reporting	☑
Nearest phone location	☐
MSDS reviewed	☐

PROCEDURES/ PERMIT'S REQUIRED

	Req'd	In Place
Lockout	☐	☐
Confined Space	☐	☐
Fall Protection	☐	☐
Craning & Rigging	☐	☐
Hot Work	☐	☐
Excavation	☐	☐
JHA reviewed	☐	☐

Permit Number _____

ENSURE PPE REQUIREMENTS

Eye/head protection	☑
Hearing protection	☐
Limb and body protection	☑
Hand protection	☑
Foot protection	☑
Respirator	☑
Additional PPE required:	☐
2 TYVEK	☐
_____	☐

Tools/ PPE Inspected and in good order — Yes (☑) No (☐)

Mobile Equipment Inspected and in good order — Yes (☑) No (☐)

Revision 2 – September 1, 2015

FLHA QUALITY AUDIT

Is the FLHA current and valid for this task?
If not, what action was taken?

Y

Have all hazards been identified?
If no, what action was taken?

Y

Identified controls in place and being followed?
If no, what action was taken?

Y

Are all crew members signed on?
If no, what action was taken?

Y

AUDIT RATING
Excellent ☐ Coaching Applied ☐
Work Stopped ☐

Date: 20/09 **Time:** _____
Supervisor: (print below)

C DESCHESNES

Worker: (print below)

_____

CC.

All hazards requiring controls MUST be listed below along with their hazard number and how you plan to eliminate or control the hazards to safe levels

HAZARD #	PLANS TO ELIMINATE / CONTROL RISK
	FINAL CLEAN UP CONVOYOR #1
	REMOVE THE STRAP OPEN THE HOLE #2
	CLEAN UP CONVOYOR #2

WORKER NAME(s) (print below)	INITIAL
CLAUDE DESCHESNES	CD
LOUIS DESCHESNES	L.D.
GABRIEL COUTSOL	

JOB COMPLETION	Yes	No	N/A
A. Has the area been cleaned up?	☑	☐	☐
B. Has all flagging/tagging been removed	☐	☐	☐
C. Are there any hazards remaining?	☐	☐	☐
D. Were there any incidents or injuries?	☐	☑	

If yes to C or D above, explain:

Please return FLHA to foreman at the end of each shift.

Carter Industries Limited

Date: Sept 20, 15 Project Name: Giant Mine

Description of Work: Conveyor house (Prep for demo)

[redacted] Construction Ltd.

FIELD LEVEL HAZARD ASSESSMENT

Check off the hazards that apply to this task. List the item # on the other side and identify the plans to eliminate/control the risk.

ERGONOMIC HAZARDS

1	Repetitive motion	☑
2	Heavy lifting	☑
3	Awkward positions	☑
4	Over exertion	☐
5	Pinch points	☑
6	Body in line of fire	☐
7	Working above your head	☐

WORK AT HEIGHTS HAZARDS

8	Barricades, flagging, signs	☐
9	Hole (coverings in place)	☐
10	Falling items	☑
11	Powered platforms	☐
12	Others working overhead/below	☑
13	Fall (fall arrest/100% tie off)	☐
14	Tie point identified	☐
15	Ladders	☑

ACCESS/EGRESS HAZARDS

16	Aerial lift/man basket (inspected)	☐
17	Scaffold (inspected & tagged)	☐
18	Ladders (tied off)	☑
19	Slips/trips	☑
20	Hoisting (tools/equipment)	☐
21	Excavations / Trenching	☐
22	Confined Space	☐

PERSONAL LIMITATION HAZARDS

23	Working alone	☐
24	Violence	☐
25	First time performing task	☑
26	Confusing instructions	☑
27	Physical limitations	☑

HOT WORK HAZARDS

28	Welding/grinding	☐
29	Burn/Heat sources	☐
30	Compressed gases	☐
31	Leaks in hoses or bottles	☐
32	Noise (extreme)	☐
33	Combustible material in area	☐
34	Airborne particles	☐
35	Arc flash	☐

ENVIRONMENTAL HAZARDS

36	Spill potential	☑
37	Weather conditions	☑
38	Dust	☑
39	Ventilation	☑
40	Heat stress/cold exposure	☑
41	Other workers in area	☑
42	Lighting levels	☑
43	Housekeeping	☑
44	Ground conditions	☑

ELECTRICAL HAZARDS

45	Shock Hazard/GFI's	☐
46	Working on/near energized eq.	☐
47	Hot work/electrical permit req'd	☐
48	Electrical cords inspected	☑
49	Electrical tools inspected	☑
50	Explosive Hazard/Expl. Proof plugs	☐

HOISTING/RIGGING HAZARDS

51	Hoisting (tools equipment)	☐
52	Load limits (slings rating)	☑
53	Lifting points (damage/wear)	☑

UG HAZARDS

54	Cap lamp inspected	☐
55	Self-Rescuer inspected	☐
56	Tag in and out	☐
57	Ventilation fan on	☐
58	Back/rib screened	☐

REVIEWED AT TAILBOARD

Fire extinguisher location	☑
First aid room	☑
Safety shower/eyewash	☐
Muster point	☑
Emergency response plan	☑
Incident reporting	☑
Nearest phone location	☑
MSDS reviewed	☐

PROCEDURES/ PERMIT'S REQUIRED

	Req'd	In Place
Lockout	☐	☐
Confined Space	☐	☐
Fall Protection	☐	☐
Craning & Rigging	☐	☐
Hot Work	☐	☐
Excavation	☐	☐
JHA reviewed	☐	☐

Permit Number _____

ENSURE PPE REQUIREMENTS

Eye/head protection	☑
Hearing protection	☑
Limb and body protection	☑
Hand protection	☑
Foot protection	☑
Respirator	☑
Additional PPE required:	☐
_____	☐
_____	☐

Tools/ PPE	Yes	No
Inspected and in good order	☑	☐

Mobile Equipment Inspected and in good order

Yes ☑ No ☐

FLHA QUALITY AUDIT

Is the FLHA current and valid for this task?
If not, what action was taken?

YES

Have all hazards been identified?
If no, what action was taken?

YES

Identified controls in place and being followed?
If no, what action was taken?

YES

Are all crew members signed on?
If no, what action was taken?

YES

AUDIT RATING
Excellent ☐ Coaching Applied ☐
Work Stopped ☐

Date: Sept 28/15 **Time:** 7 pm

Supervisor: (print below)

Kurt Stewart

Worker: (print below)

CC.

All hazards requiring controls MUST be listed below along with their hazard number and how you plan to eliminate or control the hazards to safe levels

HAZARD #	PLANS TO ELIMINATE / CONTROL RISK
	Conveyor house - clean - remove hazardous material - prep for demo - clean around conveyor house

WORKER NAME(s) (print below)	INITIAL
Stanley Cook	SC
Daniel Cook	DC

JOB COMPLETION	Yes	No	N/A
A. Has the area been cleaned up?	☑	☐	☐
B. Has all flagging/tagging been removed	☐	☐	☑
C. Are there any hazards remaining?	☐	☑	☐
D. Were there any incidents or injuries?	☐	☑	

If yes to C or D above, explain:

Please return FLHA to foreman at the end of each shift.

[redacted]

Carter Industries Limited

Date: 20/09/2015 Project Name: C-Shaft - Head Frame Struct. Demol.

Description of Work: Air Quality monitoring

[redacted] Construction Ltd.

FIELD LEVEL HAZARD ASSESSMENT

Check off the hazards that apply to this task. List the item # on the other side and identify the plans to eliminate/control the risk.

ERGONOMIC HAZARDS

1	Repetitive motion	☐
2	Heavy lifting	☐
3	Awkward positions	☐
4	Over exertion	☐
5	Pinch points	☐
6	Body in line of fire	☐
7	Working above your head	☐

WORK AT HEIGHTS HAZARDS

8	Barricades, flagging, signs	☐
9	Hole (coverings in place)	☐
10	Falling items	☐
11	Powered platforms	☐
12	Others working overhead/below	☐
13	Fall (fall arrest/100% tie off)	☐
14	Tie point identified	☐
15	Ladders	☐

ACCESS/EGRESS HAZARDS

16	Aerial lift/man basket (inspected)	☐
17	Scaffold (inspected & tagged)	☐
18	Ladders (tied off)	☐
19	Slips/trips	☑
20	Hoisting (tools/equipment)	☐
21	Excavations / Trenching	☐
22	Confined Space	☐

PERSONAL LIMITATION HAZARDS

23	Working alone	☒
24	Violence	☐
25	First time performing task	☐
26	Confusing instructions	☐
27	Physical limitations	☐

HOT WORK HAZARDS

28	Welding/grinding	☐
29	Burn/Heat sources	☐
30	Compressed gases	☐
31	Leaks in hoses or bottles	☐
32	Noise (extreme)	☐
33	Combustible material in area	☐
34	Airborne particles	☑
35	Arc flash	☐

ENVIRONMENTAL HAZARDS

36	Spill potential	☐
37	Weather conditions	☒
38	Dust	☒
39	Ventilation	☐
40	Heat stress/cold exposure	☐
41	Other workers in area	☒
42	Lighting levels	☐
43	Housekeeping	☐
44	Ground conditions	☒

ELECTRICAL HAZARDS

45	Shock Hazard/GFI's	☐
46	Working on/near energized eq.	☐
47	Hot work/electrical permit req'd	☐
48	Electrical cords inspected	☐
49	Electrical tools inspected	☐
50	Explosive Hazard/Expl. Proof plugs	☐

HOISTING/RIGGING HAZARDS

51	Hoisting (tools equipment)	☐
52	Load limits (slings rating)	☐
53	Lifting points (damage/wear)	☐

UG HAZARDS

54	Cap lamp inspected	☐
55	Self-Rescuer inspected	☐
56	Tag in and out	☐
57	Ventilation fan on	☐
58	Back/rib screened	☐

REVIEWED AT TAILBOARD

Fire extinguisher location	☐
First aid room	☐
Safety shower/eyewash	☐
Muster point	☐
Emergency response plan	☐
Incident reporting	☐
Nearest phone location	☐
MSDS reviewed	☐

PROCEDURES/ PERMIT'S REQUIRED

	Req'd	In Place
Lockout	☐	☐
Confined Space	☐	☐
Fall Protection	☐	☐
Craning & Rigging	☐	☐
Hot Work	☐	☐
Excavation	☐	☐
JHA reviewed	☐	☐

Permit Number _____

ENSURE PPE REQUIREMENTS

Eye/head protection	☒
Hearing protection	☐
Limb and body protection	☐
Hand protection	☒
Foot protection	☐
Respirator	☒
Additional PPE required:	☒
Coveralls	☐
_____	☐

Tools/ PPE	Yes	No
Inspected and in good order	☐	☐

Mobile Equipment Inspected and in good order	Yes	No
	☐	☐

FLHA QUALITY AUDIT

Is the FLHA current and valid for this task?
If not, what action was taken?

Have all hazards been identified?
If no, what action was taken?

Identified controls in place and being followed?
If no, what action was taken?

Are all crew members signed on?
If no, what action was taken?

AUDIT RATING
Excellent ☐ Coaching Applied ☐
Work Stopped ☐

Date: SEPT 20/15 **Time:** ___________
Supervisor: (print below)
[signature]

Worker: (print below)
____

All hazards requiring controls MUST be listed below along with their hazard number and how you plan to eliminate or control the hazards to safe levels

HAZARD #	PLANS TO ELIMINATE / CONTROL RISK
19	Take easiest way. Inspect/watch where you walk.
23	Informe other workers before working alone to let them know where you are
34/35	Where respirator protection
37	Where proper clothes
~~38~~	
41	Informe the other workers of your presence
44	Inspect /look where you walk

WORKER NAME(s) (print below)	INITIAL
Pascal Poirier	P.P.

JOB COMPLETION	Yes	No	N/A
A. Has the area been cleaned up?	☐	☐	☒
B. Has all flagging/tagging been removed	☐	☐	☒
C. Are there any hazards remaining?	☐	☐	☒
D. Were there any incidents or injuries?	☐	☐	

If yes to C or D above, explain:

Please return FLHA to foreman at the end of each shift.

[redacted]

JOB SAFETY ANALYSIS (JSA)	
Project Name/Number:	C-Shaft Head Frame Structures Deconstruction - Giant Mine, NT
Date:	September 19, 2015
Prime Contractor Name:	Delta Engineering / Carter Industries Joint Venture
Sub-Contractor Name(s):	

Reference: Local OH&S Legislation and Enviro-Vac OH&S Program

Additional Documents Referenced:

- Mobilization and Demobilization of Equipment JSA

Task/Activity: VAC LOADER OPERATION AND USE

- Supervisor must be on site at all times.
- Daily tailgate and weekly safety meetings will be performed, JSA's reviewed and/or more developed.
- See daily tailgate/toolbox meetings for general site hazards. Review job scope prior to commencing work and approach Supervisor with questions if unsure of expectations.
- JSA's to be reviewed and amended when conditions/tasks change.
- Emergency Response Plan in place and reviewed.
- Nuna and Delta/Carter site orientation reviewed.
- Safety person on site.
- Note that this JSA should be used in conjunction with other JSAs and building specific risk assessments/work procedures as necessary

Sequence of Basic Job Steps	Potential Hazards	Safety Controls to Reduce or Eliminate Hazard
1. Mobilize Vac Loader to site	a. Mechanical issues b. Towing failure c. Maintenance	a. Pre-inspection before trip and as conditions change. b. See ***Mobilization/Demobilization of Equipment JSA*** c. Ensure all fluids are full and maintenance is up to date.
2. Setup Vac loader at site	a. Exhaust b. Fire/Explosion c. Overhead obstructions d. Pinch points e. Cuts/nicks f. Spills g. Hopper not secured	a. Ensure unit is placed so that the exhaust is not pulled in to the building via ventilation. If it is to be placed inside, air must be scrubbed. b. Vac loader to be grounded in place. Unit is fitted with explosion proof bags/fittings. Fire extinguisher to be mounted on unit and inspected monthly and maintained as necessary. Fire extinguishers to be used as escape only and the authorities called immediately. c. Be aware of overhead hazards/powerlines. Place the vac loader keeping in mind that the hopper must be raised. Allow a minimum of 20 ft height clearance. d. Keep hands or other body parts out of line of fire e. Wear minimum Kevlar Level 3 gloves f. Have spill kit at location. g. Ensure safety bar and pins are in place
3. Operating the Vac loader at unit	a. Noise b. Unskilled operator c. Pinch/crush points d. Emergency stop inaccessible e. Overfilling bags f. Adverse weather conditions g. Slips trips and falls	a. Workers to be wearing CSA approved hearing protection during operation of the unit. Double hearing protection with plugs and muffs to be used. b. Only workers who are experienced in the operation of the vac loader are to be permitted to use it. Newly trained workers are to be mentored by experienced workers. If there are questions, the supervisor or Project Manager should be contacted. c. Keep hand and body parts away from the moving parts of the unit and out of line of fire. d. Keep remote emergency shutoff system available at all times. There is also a manual emergency shutoff at the unit. The inline T design shuts off the hose pressure

		e. Do not fill meter bags too full. Change bag between dump cycles. f. Operator to be wearing clothing sufficient for the weather conditions (ie, rain, cold weather gear etc.) g. Be aware of any ground hazards – remove/mark where possible. Hoses/cords to be kept organized
4. Using the Vac loader to perform cleanup	a. High vacuum pressure (3500 cfm at 28"mercury) b. Bodily harm from pressure c. Other workers in proximity d. Clogging the unit e. Slips/trips/falls f. Cuts/nicks g. Poor communication with operator h. Emergency	a. Only point vacuum at items that are to be vacuumed, not loose equipment/debris that is not to be vacuumed up. b. Keep vac hose pointed away from body at all times. Do not use body parts/hands to check pressure. Never use your hand to remove something stuck on the end of the hose. c. Be aware of other workers proximity and space yourselves so that you aren't close enough that you could catch them with your hose d. Be careful not to vacuum up items that could clog the hoses, such as Tyvek suits, towels, large pieces of poly etc. If you do happen to vacuum up something that could potentially damage the unit, tell the supervisor immediately so it can be removed before it causes damage. e. See 3h f. See 2f g. Ensure that a method of communication is used, either hand signals in work areas where there can be visual connection or radio where there isn't. Radio communication to be tested with the unit operational to ensure the operator and users can effectively communicate over noise. If not possible, contact supervisor for alternate method of communication. h. Emergency stop with workers. If necessary, the hose can be cut to release as well. Communicate with operator immediately
5. Job Completion	a. Contaminated hoses b. Contaminated baghouse/filters needing changed c. Confined space d. Incomplete shutoff	a. Wearing Moderate risk PPE, seal the ends of the hoses. Water wash down to rinse interior of hoses b. Place vac loader inside a high-risk containment, open flip top lid and manhole on side and remove Filter bags and dispose as asbestos waste. c. Bag house/hopper is a confined space. Do not enter. Can

	e. Poor housekeeping f. Storage unsecured g. Spills	be opened and filters removed from the exterior. If you must enter the baghouse or hopper for any reason, contact supervisor as confined space entry procedures must be developed. d. Ensure that all operations (ie hopper dump etc) are complete prior to shutting down the unit. Ensure that all moving parts are stopped prior to removal of hoses or maintenance. e. Ensure work area is left free of debris and tidy f. Store the vac loader so that it is secured and cannot be made operational unintentionally. The keys to remain with the site supervisor when not in use. g. Use a spill try when fueling or filling fluids onsite.

Tools/Equipment:(List tools being used, and how they are being stored if relevant to safety at the site)
Vac Loader, Truck, vac hoses

Personal Protection Equipment:
Minimum requirements: Safety shoes, hard hat, visi-vest and gloves on person (and used as required)

☑ Hard-hat (CSA side-protection)	
☑ Gloves	☑ Safety Boots (Steel-toed CSA approved)
☑ Gloves (Industrial nitrile, gauntlet length)	☑ High Visibility Vest
☑ Eye Protection (CSA safety glasses)	☐ Respiratory Protection (PAPR)

Personal Protection Equipment:
Minimum requirements: Safety shoes, hard hat, visi-vest and gloves on person (and used as required)

☑ Hard-hat (CSA side-protection)	☑ Safety Boots (Steel-toed CSA approved)
☑ Gloves	☑ High Visibility Vest
☑ Gloves (Industrial nitrile, gauntlet length)	☐ Respiratory Protection (PAPR)
☑ Eye Protection (CSA safety glasses)	☐ Respiratory Protection (Full Face APR)
☐ Full body harness with fall restraint/arrest	☑ Respiratory Protection (1/2 face)
☐ Coveralls (Reflective – Fire-rated)	☐ Respiratory Protection (Airline)
☑ Coveralls (Tyvek)	
☑ Coveralls (TyChem)	

Outside Authorities:
(Any authorities who need to be advised, including the site operator)

Parsons

Disposal of Surplus or Contaminated Materials:
(Details including when, where, how, etc…?)

Waste to be handled by Delta Carter

Safety Process Information Regarding this JSA:	
Prepared By:	Clell Crook
Position:	Safety Advisor
Date:	September 19, 2015

Person(s) Carrying Out This Process On The Actual Work-Site:		
Name: Shawn Carter	Signed: Sept 20/15	Date: Sept 20/15
Name: Daryl Cook	Signed:	Date: Sept 20/15
Name: Stanley Cook	Signed:	Date: Sept 20/15
Name: Kurt Stewart	Signed:	Date: Sept 20/15
Verifed By:		
Name: CLELL CROOK	Signed:	Date: SEPT 20/2015

Note: For tasks/activities that extend beyond a single day, use the attached "DAILY RENEWAL" form for the review of JSA with current crew & weather

Danny Wallace Sept 20 2015