

## SECTION 6 - TECHNOLOGY SAFETY DATA SHEET

### TECHNOLOGY SAFETY DATA SHEET WHEELABRATOR Blastrac<sup>®</sup> Shot Blast Cleaning System

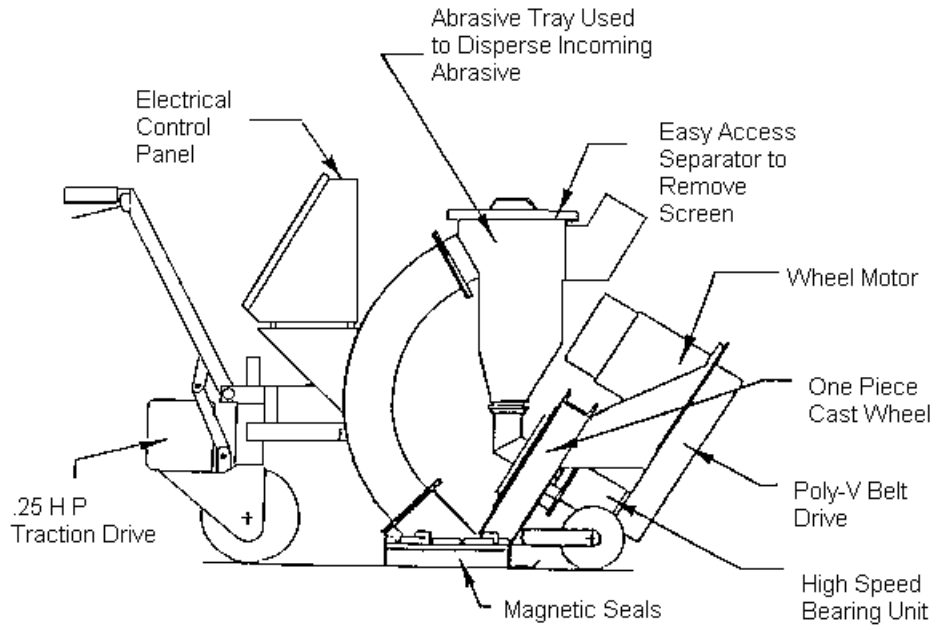
#### SECTION 1: TECHNOLOGY IDENTITY

Manufacturer's Name and Address:  The Wheelabrator Corporation Blastrac <sup>®</sup> Division 108 Pine Road Newnan, GA 30263	Emergency Contact: (770)251-6778  Information Contact: (770)251-6778  Date Prepared:
Other Names: Blastrac <sup>®</sup>	Signature of Preparer:  Operating Engineers National Hazmat Program 1293 Airport Road, Beaver, WV 25813, phone 304-253-8674, fax 304-253-7758  Under cooperative agreement DE-FC21- 95 MC 32260

#### SECTION 2: PROCESS DESCRIPTION

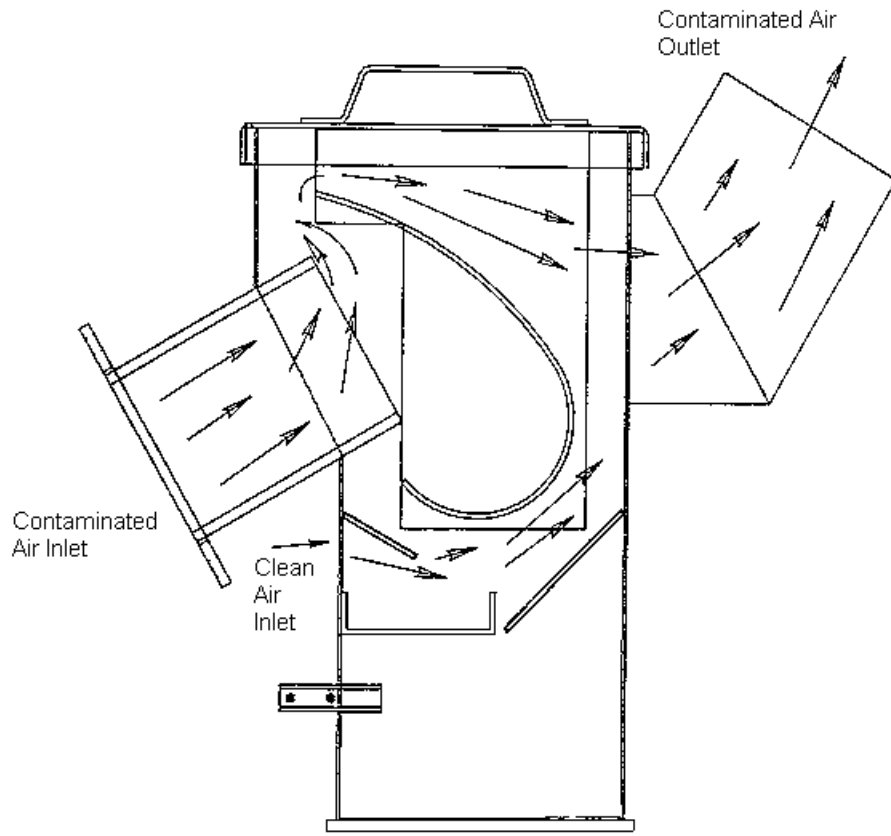
The Wheelabrator Blastrac<sup>®</sup> Model 1-15D coupled with Model 654-DC dust collection system was used during the testing demonstration. The Blastrac<sup>®</sup> is a surface preparation downblast machine for closed-cycle abrasive cleaning of horizontal surfaces. Surface and contaminant removal are accomplished by the impact of metallic abrasive thrown by controlled centrifugal force from a power driven bladed wheel. The thrown abrasive impacts the surface and rebounds upwardly into a rebound chamber, which then directs the abrasive into an airwash dust extractor. The dust extractor removes dust, scale, and other contaminants from the abrasive. The shot is then delivered by gravity to the storage hopper for reuse by the blast wheel. The Blastrac<sup>®</sup> is self-propelled by a variable speed electric drive system. The rate of speed the Blastrac<sup>®</sup> is traveling determines the depth of surface material removed.

### SECTION 3: PROCESS DIAGRAM



Model 1-15D

### SECTION 3: PROCESS DIAGRAM



SEPARATOR 1-15D AIRFLOW

## SECTION 4: CONTAMINANTS AND MEDIA

The technology has the potential to cause concrete dust and associated contaminants to become airborne. Specific contaminants need to be evaluated on a site-by-site, job-by-job basis to determine the potential for exposure.

## SECTION 5: ASSOCIATED SAFETY HAZARDS

Probability of Occurrence of Hazard:

- 1 Hazard may be present but not expected over background level
- 2 Some level of hazard above background level known to be present
- 3 High hazard potential
- 4 Potential for imminent danger to life and health

### A. ELECTRICAL (LOCKOUT/TAGOUT)

RISK RATING: 2

The shot blaster and associated equipment has the potential for electrical hazards. Assure proper grounding, use of ground fault circuit interrupters, and stress relievers on all equipment. Compliance with applicable electrical standards and codes and lockout/tagout procedures must be followed to assure the safety of personnel.

### B. FIRE AND EXPLOSION

RISK RATING: 1

Technology does not pose this hazard in and of itself but could not be used in an explosive environment due to the potential for sparking.

### C. CONFINED SPACE ENTRY

RISK RATING: 1

Not part of this technology unless the specific location where shot blast is being used is a confined space. In this case, confined space procedures would need to be followed.

### D. MECHANICAL HAZARD

RISK RATING: 3

Use of large equipment and hand tools may pose the following: pinch points, struck by, caught between, and fall from above hazards.

### E. PRESSURE HAZARDS

RISK RATING: N/A

Not part of this technology.

### F. TRIPPING AND FALLING

RISK RATING: 3

Electrical cords and vacuum hoses present potential tripping hazards.

### G. LADDERS AND PLATFORMS

RISK RATING: N/A

Not part of this technology.

H. MOVING VEHICLES	RISK RATING: 3
The presence of multiple pieces of mobile equipment (used to unload and load the technology) in relationship to a small area of operation may pose a significant danger. Sufficient warning devices such as horn, bells, lights, and back up alarms should be utilized. Personnel should be trained to work with and around moving equipment.	
I. BURIED UTILITIES, DRUMS, AND TANKS	RISK RATING: N/A
Not part of this technology.	
J. PROTRUDING OBJECTS	RISK RATING: N/A
Not part of this technology.	
K. GAS CYLINDERS	RISK RATING: N/A
Not part of this technology.	
L. TRENCHING AND EXCAVATIONS	RISK RATING: N/A
Not part of this technology.	
M. OVERHEAD LIFTS	RISK RATING: 3
Unloading and loading of technology may require overhead lifts or the use of a forklift. Proper precautions indicated.	
N. OVERHEAD HAZARDS	RISK RATING: 2
Would only be present if a crane were required to unload or load equipment.	

<b>SECTION 6: ASSOCIATED HEALTH HAZARDS</b>	
A. INHALATION HAZARD	RISK RATING: 3
The shot blast produces dust from the concrete and associated contamination. Specific hazards will be identified from the site characterization. Evaluation of total dust and/or respirable dust generated needs to be conducted. The shot may also present an inhalation hazard, especially as it becomes pulverized.	
B. SKIN ABSORPTION	RISK RATING: 1
This would be dependent on the contaminants at the site and would be identified by the site characterization.	
C. HEAT STRESS	RISK RATING: 4
Ambient conditions correlated with work rates, PPE, etc. must be considered.	
D. NOISE	RISK RATING: 3
The technology presents the potential for a noise hazard.	

E. NON-IONIZING RADIATION	RISK RATING: N/A
Not part of this technology.	
F. IONIZING RADIATION	RISK RATING: 1-4
None associated with this technology, but the contaminated concrete may present a significant radiation exposure. This will be identified by the site characterization.	
G. COLD STRESS	RISK RATING: 1
Technology does not produce a hazard, but ambient conditions need to be considered.	
H. ERGONOMIC HAZARDS	RISK RATING: 3
Poses ergonomic hazards associated with lifting, bending, twisting, stooping, and/or kneeling. These may cause injury/strain to the back, knees, hips, and/or legs.	
I. OTHER	RISK RATING: N/A
None noted.	

<b>SECTION 7: PHASE ANALYSIS</b>
A. CONSTRUCTION/START-UP
The set-up/start-up phase presents several hazards including pinch points, slips/trips/falls, struck by/caught between, muscular/back injury, and electrical hazards.
B. OPERATION
The operational phase presents several hazards including exposure to contaminant (airborne and from the surface), muscular/back injury, mechanical hazards, electrical hazards, and exposure to noise.
C. MAINTENANCE
The maintenance phase presents several hazards including pinch points, slips/trips/falls, struck by/caught between, muscular/back injury, electrical hazards, exposure to contaminants (airborne and from the surface), and accidental activation of moving parts.
D. DECOMMISSIONING
The decommissioning phase presents several hazards including exposure to the contaminant, pinch points, slips/trips/falls and muscular/back injury.

## **SECTION 8: HEALTH AND SAFETY PLAN REQUIRED ELEMENTS**

### **A. AIR MONITORING**

When concrete is blasted, total and respirable dust need to be monitored. Monitoring also needs to be done for specific concrete contaminants and may need to be conducted for specific constituents of the concrete such as silica. In addition, noise monitoring is essential.

### **B. WORKER TRAINING**

Training that would apply in this case may include but not be limited to: HAZWOPER (Hazardous Waste Operations and Emergency Response), HAZCOM (Hazard Communication), Respiratory Protection, Hearing Conservation, Ergonomics (proper lifting, bending, stooping, kneeling), specific training for equipment operation, CPR/First Aid/Emergency Response/Bloodborne Pathogens, Electrical Safety, Lockout/Tagout, Radiation Safety, Hand Signal Communication, Construction Safety (OSHA 500), and or General Industry Safety (OSHA 501)

### **C. EMERGENCY RESPONSE**

Emergency response planning for a site needs to assure adequate coverage for hazards described in the TSDS. Having at least one person per shift trained in CPR and first aid is recommended.

### **D. MEDICAL SURVEILLANCE**

Evaluation of personnel's general health with emphasis on the cardiovascular and respiratory system, back, and peripheral nervous system. Medical surveillance as specified by the OSHA standards needs to be conducted. Initial and annual audiograms.

### **E. INFORMATIONAL PROGRAM**

Workers must be trained in specific operation of equipment before use.

## **SECTION 9: COMMENTS AND SPECIAL CONSIDERATIONS**

Due to the noise produced, communication may become difficult. Personnel working in the area should be familiar with and use hand signals as necessary.

Only personnel who have been adequately trained in the operation of this technology should be permitted to operate and/or work with the equipment.