

Part VII.

Transfer Station Operations

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Part VII. Section A. Transfer Station Operations Training Curriculum Table

1.0 Section Summary

Training for transfer station employees covers a wide variety of training requirements. In addition to training required by a number of OSHA regulations applicable to all personnel, equipment operators and transfer vehicle drivers must also receive training consistent with their responsibilities.

Transfer trailer drivers must have a Class "A" Commercial Drivers License that represents sufficient training and expertise with respect to driving the vehicle. Additionally, they must receive training related to the overall operation of the transfer station. Likewise, equipment operators must be trained in the operation of their equipment as it is used in the transfer station. Ideally, they should have, or be working toward, operator certification. At a minimum, management should conduct an equipment proficiency evaluation when the employee is hired and annually thereafter.

Training in certain OSHA regulations is required for all employees. Subject areas are:

- Hazard Communication
- Bloodborne Pathogens
- Emergency Spill Response / Action Plan
- Control of Hazardous Energy (Lockout / Tagout)
- Confined Spaces
- Equipment Maintenance
- Ergonomics
- Fire Safety
- Hearing Conservation
- Personal Protective Equipment (PPE)
- Walking – Working Surfaces

Requirements for all these areas are covered in Part III of this manual. Subjects such as Electrical Safety, Confined Space Entry, Powered Industrial Truck Operations, and others are also addressed in Part III. Training in these and other areas depends largely on individual employee job / task assignments.

Periodic refresher training is required for many of OSHA's programs. Refresher training intervals normally range from one to three years. Modifying or adjusting the training to address new hazards or changes in formerly recognized hazards is required. This can happen when new equipment or procedures are incorporated into the workplace. Training may also have to be repeated if there is evidence that previously trained employees demonstrate a lack of understanding or are not complying with the training requirements. See Section 5.1 – Training Curriculum Table.

Transfer station management should conduct regular (at least monthly) safety training sessions. Such meetings can be used to discuss the results of facility inspections, employee behavior observations, traffic / customer issues, operational changes, etc.

2.0 Key Concepts

Employee training begins with a clear understanding of the work employees are to perform. Employees must also be aware of the regulations that apply to their operations and the requirements for employee training contained in those regulations.

A list of the applicable OSHA and USDOT regulations that can apply to transfer station operations is provided in Section 6.1. The table in Section 5.1 identifies the specific training required to comply with the referenced regulations. Training intervals (e.g., pre-placement, annual) are identified as footnotes to the table (See Section 5.2).

3.0 Overview of the Subject

Employee Safety and Health training is an essential component of every employer's operations.



Generally, there are five types of training:

1. Employee Orientation – All new and transferring employees must be made familiar with their new work location.
2. Job Qualification – All employees must meet certain minimal requirements to ensure they will be able to safely perform their assigned duties. In some cases this training must be provided after employment begins.
3. Hazard Recognition – All employees must be familiar with the potential hazards of their workplaces. Training should identify both the hazard and a method of avoiding or safely managing it. Regulatory compliance programs require that numerous training programs (e.g., Hazard Communication, PPE, Lockout / Tagout, Emergency Planning) be implemented.
4. Risk Reduction - Some employees will be identified as requiring special or supplemental training (e.g., Traffic Control, Safe Lifting) due to their task assignment or safety performance.
5. Follow-up – Training must be repeated periodically to maintain an employee's

knowledge of the requirements and to ensure the employee's knowledge is based on current job responsibilities and workplace conditions.

Parts III and IV of this manual also contain specific training requirements for accident prevention and regulatory compliance.

Documentation of completed employee training is essential. Training records for each employee should be stored either in a separate training file or in each employee's personnel file. Training records must be kept for a minimum of 30 years post termination for each employee.

4.0 Duties and Responsibilities

4.1 Employer

The employer must:

- Identify the compliance-based training that is required for each employee;
- Provide the required training before an employee is assigned to perform any regulated activity;
- Provide such other training and instruction as may be necessary to ensure the employee is able to perform his / her tasks in a safe and proficient manner;
- Ensure the employee has understood the training and is able to apply the necessary precautions or protective measures;
- Monitor conditions in the workplace to ensure the training previously provided to employees is adequate to address current workplace hazards and conditions;
- Provide employees with additional training where necessary to comply with related regulatory requirements and to maintain required skills and / or certifications; and

- Document all training in writing and maintain all training records as required by the applicable regulations.



4.2 Supervisors

Supervisors are responsible for ensuring that employees use and follow the safe work practices that have been provided in their training.



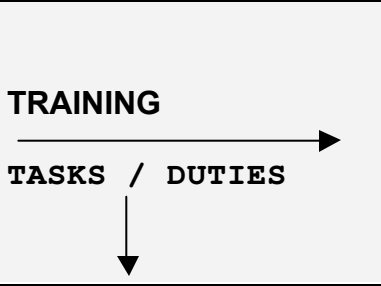
They are also responsible for monitoring conditions in the workplace that may require modification of that training.

4.3 Employee

The employee is responsible for using and following the training provided by his / her employer.

5.0 Recommended Practices

5.1 Training Curriculum Table

	(1)(3)	(1)(3)	(1)(3)	(1)(3)	(1)(2)	(1)(3)	(1)(3)	(1)	(1)(3)	(1)(3)	(1)	(1)(3)	(1)(3)	(1)(3)	(1)(3)	(1)(3)	(1)(2)	(1)
	SITE SAFETY ORIENTATION / WORK RULES	BASIC HAZCOM	WALKING -WORKING SURFACES	SPILL RESPONSE	BLOODBORNE PATHOGENS	ENERGY CONTROL (LOCKOUT / TAGOUT)	CONFINED SPACE	ERGONOMICS	HEAT / COLD	PPE	HEARING CONSERVATION	TRAFFIC CONTROL	PROCESS EQUIPMENT	POWERED INDUSTRIAL TRUCKS	ELECTRICAL SAFETY	EMERGENCY MANAGEMENT TRAINING	FIRE EXTINGUISHERS	SUBSTANCE ABUSE
SCALEHOUSE OPERATOR	X	X	X	R	R	AA	AA	X	AA	X	AA	X	AA	AA	AA	AA	X	X
SORTER	X	X	X	X	X	AA	AA	X	AA	X	AA	AA	X	AA	AA	AA	X	X
SPOTTER	X	X	X	R	R	AA	AA	X	AA	X	AA	X	AA	AA	AA	AA	X	X
POWERED INDUSTRIAL EQUIPMENT OPERATORS	X	X	X	R	R	X	AA	X	AA	X	AA	X	X	X	AA	AA	X	X
BALER / COMPACTOR PROCESS OPERATORS	X	X	X	R	X	X	X	X	AA	X	AA	AA	X	AA	AA	AA	X	X
SUPERVISOR	X	X	X	R	X	X	X	X	AA	X	AA	X	X	X	X	X	X	X
MAINTENANCE/SERVICE	X	X	X	R	AA	X	X	X	AA	X	AA	AA	X	X	X	AA	X	X
HOUSEKEEPING	X	X	X	R	R	R	R	X	AA	X	AA	AA	AA	AA	AA	AA	X	X
TRUCK DRIVERS	X	X	X	R	X	X	X	X	AA	X	AA	X	AA	AA	AA	AA	X	X
SPECIFIC TASKS / OTHER:																		
INCIPIENT FIRE RESPONDERS	X	X	X	X	X	X	X	AA	X	X	AA	X	AA	AA	AA	AA	X	X
CONFINED SPACE ENTRY TEAM	X	X	X	X	R	X	X	AA	X	X	AA	AA	AA	AA	AA	AA	X	X
SPILL RESPONSE TEAM	X	X	X	X	X	X	X	AA	X	X	AA	X	AA	AA	AA	AA	X	X
OFFICE PERSONNEL ENTERING TIPPING AREA	X	X	X	R	R	R	R	AA	AA	X	AA	AA	AA	AA	AA	AA	X	AA
CONTRACTORS	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
FIRST AID PROVIDER	X	X	X	X	X	AA	AA	AA	X	X	AA	AA	AA	AA	AA	X	X	X

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5.2 Footnotes For Training Curriculum Table

Legend: **X** = Mandatory Training **R** = Recognition / Awareness Training Only **AA** = As Appropriate, based on company's assessment of applicable training

Frequency Of Training: (1) At Initial Placement; (2) Annual Retraining; (3) Training repeated as necessary to maintain skills and/or certification;
(4) Retraining every 3 years.

6.0 Reference Materials

6.1 Regulations

- a) OSHA General Industry Regulations
 - 1) 29 CFR 1910.38 & .1200, Emergency Management
 - 2) 29 CFR 1910.1200 & .1020, Hazard Communication
 - 3) 29 CFR 1910.132-.138, Personal Protective Equipment
 - 4) 29 CFR 1910.157, Fire Extinguishers
 - 5) 29 CFR 1910.146, Confined Space Entry
 - 6) 29 CFR 1910.134, Respirator Use
 - 7) 29 CFR 1910.147, Lockout / Tagout
 - 8) 29 CFR 1910.1030, Bloodborne Pathogens
 - 9) 29 CFR 1910.178, Powered Industrial Trucks

- b) OSHA Construction Regulations
 - 1) 29 CFR 1926.101, Hearing Protection
 - 2) 29 CFR 1926.600, Equipment
 - 3) 29 CFR 1926.602, Material Handling Equipment
 - 4) 29 CFR 1926.96, Occupational Foot Protection

- c) USDOT Regulations
 - 1) 49 CFR 382, CMV Driver Alcohol and Drug Testing

6.2 Industry Standards

- a) ANSI Z245.1 - 1999, *Mobile Wastes and Recyclable Materials Collection, Transportation, and Compaction Equipment Safety Requirements*
- b) ANSI Z245.2 -1997, *Stationary Compactors - Safety Requirements*
- c) ANSI Z245.30 - 1999, *Waste Containers - Safety Requirements*
- d) ANSI Z245.41 - 1997, *Facilities for the Processing of Commingled Recyclable Materials - Safety Requirements*
- e) ANSI Z245.5 - 1997, *Baling Equipment - Safety Requirements*

6.3 Employer Provided Information (Mandatory)

- a) Emergency Fire and Evacuation Plan
- b) Emergency Spill Response Plan
- c) Medical Emergency Response Plan

- d) Hazard Communication Program
- e) Substance and Alcohol Abuse Program
- f) Confined Space Entry Program
- g) Respirator Program
- h) Lockout / Tagout Program
- i) Bloodborne Pathogens Program
- j) Forklift and Powered Industrial Truck Training Program
- k) Personal Protective Equipment Program

**6.4 Other Recommended Reference Material
(Not Mandatory)**

- a) Company Work and Safety Rules
- b) Heat Stress Management Program
- c) Back Injury Prevention Program
- d) OSHA Booklet 3108, *Training Requirements in OSHA Standards and Training Guidelines*

Part VII. Section B. Transfer Station Operations Personal Protective Equipment Table

1.0 Section Summary

Transfer station employees perform a wide variety of jobs and tasks. The very nature of their work, i.e., handling large volumes of waste materials presents considerable potential for exposure to hazardous substances / objects, vehicular traffic, possible toxic materials, etc.

Employers are required to evaluate the nature and degree of employee exposure to potentially hazardous activities and materials. Each employer must perform a Hazard Assessment to determine minimum requirements for personal protective equipment (PPE) to protect the employee in both routine and specialized jobs / tasks.

A detailed treatment of Personal Protective Equipment is given in Part III, Section N of this manual.

2.0 Key Concepts

Each employer is required to develop a written PPE program to include the Hazard Assessment, PPE requirements, and employee training.

The purpose of the Hazard Assessment is to ensure all workplace hazards have been identified and proper PPE is provided for each employee.

PPE is essential to protecting employees from recognized hazards that could result in

workplace injuries and illnesses. All PPE used by employees in the course of their work must be maintained in a sanitary and reliable condition. Provisions for maintenance and storage should be included in the company's written program.

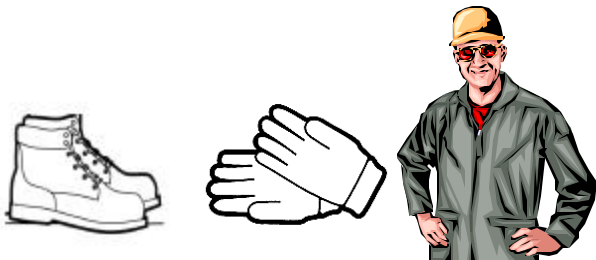
Transfer station employees typically wear gloves, safety glasses or goggles, safety shoes, high visibility vests or clothing, hard hats, and hearing protection.

To reduce the potential for injury, personal protective equipment should include:

- Sturdy slip-resistant work boots to prevent slipping on wet, dry, and often irregular surfaces;
- Sturdy hand protection to prevent cuts and abrasions when handling a variety of materials and equipment;
- Hardhats when working in areas where loads or materials may be suspended overhead;
- Protective clothing to prevent cuts and scrapes from direct contact with waste materials;
- Enhanced visibility garments when spotting vehicles, directing traffic, or when working in the tipping area; and
- Other PPE (e.g., respirators, chemical-resistant gloves, eye protection) to protect from exposure to additional hazards related to their specific work assignment.

3.0 Overview of the Subject

Personal protective equipment does not remove the hazard from the workplace. As a result, it becomes the last line of defense before the hazard reaches the employee. The first line of defense is to engineer the hazard out of the process through administrative or other workplace controls. Employers should not rely solely on PPE to provide protection against hazards. It must be used in conjunction with sound operational controls and procedures.



PPE is only as good as the consistency with which employees wear it. PPE effectiveness relies on the fit and use as well as maintenance and proper storage by the employees. PPE is effective only if it is properly selected based on the hazards present, and is worn in the way it was designed to be used.

Cleaning is particularly important for eye and face protective gear where dirty or fogged lenses could impair vision. Contaminated PPE that cannot be decontaminated should be disposed of in a manner that protects employees from hazards. Damaged or defective PPE must not be used and must be taken out of service, repaired, or disposed of immediately.

4.0 Duties and Responsibilities

4.1 Employers

Each employer should have a written PPE program. A critical part of the written program includes a hazard assessment whereby each job / task is evaluated for recognized hazards affecting employees. The hazard assessment must address potential hazards to the following body parts:

- Feet
- Hands / Arms
- Head
- Face
- Eyes
- Whole Body

NOTE: This Hazard Assessment must be certified with the identity of the workplace evaluated, the name and signature of the person certifying the evaluation, and the date(s) of the evaluation.

After identifying which body parts may be exposed to hazards, the employer must then determine the type(s) of PPE that will be used to protect the employee. This information (i.e., what PPE will be worn for each job / task) should be entered in a PPE matrix.



These PPE requirements must be communicated to all employees. Employees required to use PPE must be trained in the following:

- What PPE is required in their job / task;
- When PPE is required to be used;
- How to properly don, doff, adjust, and wear

- required PPE;
- The limitations of required PPE; and
 - The proper care, maintenance, storage, useful life, and disposal of required PPE.

This training must be documented showing subject(s) covered, date, attendee's signature, and name / signature of the person conducting the training.



4.2 Supervisors

Supervisors are responsible for implementing and enforcing the facility's PPE program. Exceptions to the PPE program should never be allowed for any employees – including managers, supervisors, drivers, office personnel and visitors. Violators should be dealt with according to facility rules and / or provisions of the written PPE program. Supervisors are responsible for removing defective PPE from the workplace and for replacing as needed.

4.3 Employees

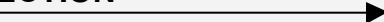

Employees are responsible for complying with all provisions of the PPE program. They must wear all PPE indicated in the Hazard Assessment and the PPE matrix. They are responsible for the proper use, care, maintenance, and storage of their PPE. Employees must report defective PPE to their supervisor and obtain replacement equipment if warranted.

4.4 Customers and Visitors

Facility rules should clearly indicate what type (if any) PPE is required for customers and visitors. Except for personal wear items such as gloves or work shoes, the facility should have on hand an ample supply of visitor safety glasses and hard hats if the facility rules require these items.

5.0 Recommended Practices

5.1 PPE Selection Table

PROTECTION  JOBS / TASKS 	WORK BOOTS	EYE / FACE PROTECTION	HEARING PROTECTION	HEAD PROTECTION	DUST MASK	RESPIRATOR	TRAFFIC SAFETY VEST / ENHANCED VISIBILITY CLOTHING	HAND PROTECTION	SEAT BELTS
SCALEHOUSE OPERATOR	AA	AA	AA (2)	AA	AA	AA	AA (3)	AA	
SORTER	X	X	AA (2)	AA	AA	AA	AA (3)	X	
SPOTTER	X	X	AA (2)	X	AA	AA	X	X	
POWERED INDUSTRIAL EQUIPMENT OPERATORS (e.g., FORK LIFTS / BOBCATS)	X	X	AA (2)	AA	AA	AA	AA (3)	X	X
BALER / COMPACTOR PROCESS OPERATORS	X	X	AA (2)	X	AA	AA	AA (3)	X	
SUPERVISOR	X	X	AA (2)	AA	AA	AA	AA (3)	AA	
MAINTENANCE / SERVICE	X	X	AA (2)	AA	AA	AA	AA (3)	AA	
HOUSEKEEPING	X	X	AA (2)	AA	AA	AA	AA (3)	X	
TRUCK DRIVERS	X	X	AA (2)	AA	AA	AA	AA (3)	AA	X
INCIPIENT FIRE RESPONDERS	X	X	AA (2)	AA	AA	AA	AA (3)	AA	
SPILL RESPONSE TEAM	X	X	AA (2)	AA	AA	AA	AA (3)	X	
OFFICE PERSONNEL ENTERING TIPPING AREA	(1)	X	AA (2)	AA	AA	AA	AA (3)	AA	
CONTRACTORS	(1)	X	AA (2)	AA	AA	AA	AA (3)	AA	
FIRST AID PROVIDER	X	AA	AA (2)	AA	AA	AA	AA (3)	X	
CUSTOMERS	(1)	AA	AA(2)	X	AA	AA	AA(3)	AA	AA

5.2 Footnotes for PPE Selection Table

X = Mandatory

AA = As Appropriate, based on the results of employer's hazard assessment for the use of PPE.

- (1) Closed toe, hard soled shoe
- (2) Hearing protection may be required when working around loud equipment and as required by the facilities Hearing Conservation Program.
- (3) Enhanced visibility clothing (vests, etc) should be worn when working around moving equipment and whenever light conditions are poor.

6.0 Reference Materials

6.1 Regulations

- a) OSHA General Industry Regulations
- a) 29 CFR 1910.132, Personal Protective Equipment
- b) 29 CFR 1910.133, Eye and Face Protection
- c) 29 CFR 1910.134, Respiratory Protection
- d) 29 CFR 1910.135, Head Protection
- e) 29 CFR 1910.136, Occupational Foot Protection
- f) 29 CFR 1910.137, Electrical Protective Devices
- g) 29 CFR 1910.138, Hand Protection
- h) 29 CFR 1910.95, Occupational Noise Exposure

6.2 Industry Standards

- a) ANSI / ISEA 107-1999, *High Visibility Safety Apparel*
- b) ANSI Z41-1991, *Personal Protection – Protective Footwear*
- c) ANSI Z87.1-1989, *Practice for Occupational and Educational Eye and Face Protection*
- d) ANSI Z89.1-1997, *Industrial Head Protection*
- e) ANSI Z88.2-1992, *Respiratory Protection*
- f) American Society for Testing and Materials (ASTM) D 120-87, *Specification for Rubber Insulating Gloves*
- g) ASTM F 496-93b, *Specification for In-Service Care of Insulating Gloves and Sleeves*

6.3 Employer Provided Information (Mandatory)

- a) Certificate of Hazard Assessment
- b) Written Respirator Program
- c) Written Personal Protective Equipment Program including training

6.4 Other Recommended Reference Material (Not Mandatory)

- a) OSHA Small Business Training Program, Section 7, Assessing the Need for Personal Protective Equipment (PPE)
- b) PPE manufacturer's literature and instructions
- c) *Respiratory Protection*, OSHA Publication 3079 (Revised 1998)

**Part VII. Section C.
Transfer Station Operations
Restricted Work Areas**

1.0 Section Summary

Transfer stations may be located within a city's commercial / industrial district or up to several miles from the city in sparsely populated, rural areas of the county.

Regardless of location, it is necessary to restrict access when the operation is closed. There is also a need to control access to the facility during business hours to only authorized customers and vendors. Access by visitors should be allowed only when properly authorized and/or approved.

Restricted work areas will typically include all parts of the facility where only authorized employees are allowed. Restricted areas include those in near proximity to heavy equipment, push pits, conveyors, compactors and transfer trailer loading, fuel storage, and maintenance areas.



2.0 Key Concepts

Perimeter fencing, entrance gates, signage, and the gate / scale house are important elements of ensuring restricted work areas are not violated by unauthorized persons. Clearly established rules and procedures for allowing non-customers and vendors are very important. Rules of conduct should also be established for customers and vendors that describe areas of the facility that are restricted.

3.0 Overview of the Subject

The transfer station may be privately owned and operated, but the fact that regular customers, members of the public hauling their own trash, visitors, and vendors patronize the facility makes the control over restricted work areas extremely important.

The principal concern related to restricted work areas is that of liability. This includes accidents or injuries to unauthorized persons. It also includes the possibility of injury to employees who may violate a restricted work area rule, even though they are covered by worker's compensation insurance.

A loss of this nature could conceivably shut down all or part of the operation, resulting in considerable loss of revenue and profits. Additionally, the insurance deductible would further impact financial resources.

Damage or fire loss to buildings and equipment that may be caused by vandals or other unauthorized persons is another concern.

4.0 Duties and Responsibilities

4.1 Employer

The employer / manager is responsible for establishing rules and procedures which describe the restricted work areas and affected / authorized personnel. Overall security of the site, including fences, gates, lighting, signage, and posting are the responsibility of the employer / manager. Visitors / vendors should be instructed to report to the facility manager or his / her designee after being authorized by the gate / scale house employee. Two-way radio or cell phone communication is strongly recommended for this purpose.

4.2 Supervisors

Supervisors are responsible to ensure all rules, procedures, and instructions regarding restricted work areas are followed by both employees and non-employees. Violations must be brought to the manager's attention and dealt with immediately.

4.3 Employees

Employees are responsible for observing all restricted work area rules and instructions. If any of these rules or instructions is unclear, employees should seek clarification from their supervisor. Employees should be encouraged to report any violation of the rules they observe. Gate / scale house employees must always be alert to persons seeking to enter the premises without proper authorization.

5.0 Recommended Practices

There are a number of recommended work and safety practices to be considered in the successful operation of a transfer station. The following recommended practices are not exhaustive, but are representative of the many areas that should be considered. Application of these practices will vary with the site size and location, amount of waste received, method of moving the material to and into the transfer vehicle, and many other factors.

5.1 Site and Customer Rules

Each facility should have an operating plan that includes specific policies and procedures for that site. The plan should be reviewed periodically. The policies and site-specific information should be posted at the scale house and distributed to anyone who uses the facility.

- a) The plan should include site and customer rules, for example:
 - Hours of operation
 - Public use permitted or not
 - Visitor / vendor admittance procedures
 - Types of waste accepted
 - Types of waste prohibited
 - Speed limits
 - Vehicle traffic plan
 - Step-by-step procedures for receiving, weighing, accepting, unloading, and loading waste



b) All visitors should be required to stop at the scale house and sign in and out on a visitors log. The checker, scale person, or office receptionist should verify proper access to anyone seeking entry to the site. At a minimum, the log should contain the following information:

- Date
- Person's name
- Company or organization they are representing
- Telephone number
- Purpose of visit
- Arrival and departure time
- Person they are seeing

Under no circumstances should visitors / vendors be allowed to access the site without authorization. If possible, they should always be in the presence of company personnel.

5.2 Gate / Scale House

The gate and / or scale house should be the first place a customer or visitor is required to stop.

The gate should have a prominent sign displaying:

- Facility / site name
- Site telephone number (24 hours)
- Site operating hours
- Permit number (if applicable)

The attendant at the gate / scale house record all visitors on the visitor's log. requirements should be allowed on the



should maintain control of who goes in and out of the facility and Only those customers and visitors who have met the site's premises or in the facility.

5.3 Security

It is extremely important to limit access to be there should have access. allowed. The facility should be locked during non-operating hours. It is strongly suggested that only one entrance and exit be used by the facility. "No Trespassing" signs should be posted every 150-200 feet around the entire perimeter of the facility. A phone number that is answered 24 hours a day with a list of emergency contacts should be posted in the event of fire, vandalism, or other emergency situation.

to the facility. Only those individuals who have a need or purpose Unauthorized entry onto the transfer station site should not be

The facility should have security features such as lighting and alarm systems as necessary. During facility operating hours, entry into and exit from the facility should be restricted to only those who have a need to be at the facility. Scale

house personnel should have a means to communicate directly to the tipping floor and main facility personnel. The scale house should have an outside phone line. Employees should be trained on security issues and emergency plans.

5.4 Transfer Building Areas

5.4.1 Tipping Floor

The entire tipping floor space should be considered a restricted work area. Drivers and helpers of commercial waste vehicles come and go whenever the station is open for business. The same is true for drivers of private cars or pick-ups. These people are allowed into this restricted work area because as customers, their business must be carried out on the tipping floor.

In virtually all cases, these people have no business anywhere else in the building. **Their business is restricted to the tipping floor.** They must not be allowed to approach an equipment operator while the machine is working. They should also be kept from walking behind the push walls or anywhere near the pit areas. Any need to discuss activities on the tipping floor should be directed to the spotter or supervisor and away from moving equipment.

Even though each customer may have been given a copy of the transfer station rules and procedures, the rules for the tipping floor should be reinforced through the use of signs. Such signs can be placed on the left and right interior walls. The signs and lettering should be large enough to be read from the center of the tipping floor. Each facility will want to stress its own rules for tipping floor conduct or procedures.

Signs reading "Restricted Area – Authorized Personnel Only" should be posted at the entrance to pedestrian walkways behind the push walls or leading to the control booth or anywhere near a pit / hopper.

5.4.2 Transfer Loading Area

Transfer loading areas are normally situated at the rear of the building and at a lower level. As such, there is generally limited or at least less accessibility. Nevertheless, customers and unaccompanied visitors probably have no business in this area. Vendors who may be performing maintenance or service on stationary compactors, conveyors, and other equipment should be accompanied in this area.

Again, signs indicating "Restricted Area – Authorized Personnel Only" should be posted at the entrance points leading to this area. Similar signs should be posted on support columns or walls in the immediate area where tractors, trailers, and stationary compactors are operating. No one should be permitted in this area except for drivers, equipment operators, mechanics, and clean-up personnel.

5.4.3 Maintenance and Fuel Areas

The maintenance shop and areas where fuel, oil, compressed gases, anti-freeze, etc., are stored must be designated as restricted work areas. While most employees will have access to these areas, visitors and vendors should be allowed access only when accompanied by a facility employee. It is doubtful customers would have any need to be in these areas and should not be allowed unless in the company of a facility employee.

Signs reading "Restricted Area – Authorized Personnel Only" should be posted and visible when approaching from any direction.

6.0 Reference Materials

6.1 Industry Standards

- a) ANSI Z245.2 - 1997, *Stationary Compactors - Safety Requirements*
- b) ANSI Z245.41 - 1997, *Facilities for the Processing of Commingled Recyclable Materials - Safety Requirements*

6.2 Employer Provided Information (Mandatory)

- a) Emergency Fire and Evacuation Plan
- b) Written Traffic Safety Requirements
- c) Written Rules and Procedures for Customers, Visitors, and Vendors

Part VII. Section D. Transfer Station Operations Facility Operations

1.0 Section Summary

Transfer stations are an important link in the collection, transportation, processing, and disposal of waste and recyclable materials. The smaller loads of the collection vehicles are unloaded at the transfer station where the waste from three or four collection vehicles is loaded into a trailer for transport to distant disposal facilities. Diverted recyclable material is transported to processing facilities. Tipping fees are generally determined by weighing the collection vehicle and charging a per ton fee which covers the cost of operating the transfer facility, transport and final disposal costs.

This section addresses general facility and tipping floor operation, as well as other related activities such as equipment operation and property protection.

Affected Operations:

- Transfer stations
- Waste collection
- Waste transportation
- Recyclables collection
- Recyclables transportation
- Maintenance
- Landfills

Affected Personnel:

- Facility manager
- Supervisors
- Equipment operators
- Mechanics
- Welders
- Drivers / helpers

- Laborers
- Other patrons / visitors / vendors

- Customer relations
- Fire prevention and control
- Personal protective equipment (PPE)
- First aid / CPR
- Other OSHA required training

2.0 Key Concepts

Transfer stations vary greatly in size— from one or two hundred tons per day (TPD) to several thousand TPD. Transfer stations are generally located on relatively small pieces of real estate. Smaller stations may have twenty or fewer collection vehicles depositing waste each day, while the larger stations may receive two hundred or more loads a day. These numbers do not include private vehicles such as cars, small trailers or pick-up trucks, provided the station is open to such customers.

Transfer stations should have specific rules governing the conduct of all customers and visitors. Non-employee personnel can present a considerable general liability exposure even under the best of circumstances. This includes exposure to the waste materials, which might include, while prohibited, toxic or otherwise hazardous substances. It also includes the hazards of customer vehicles while backing and unloading. Operation of transfer station equipment, such as crawlers or rubber-tired equipment with push blades or buckets and backhoes, present a potential hazard to all personnel on the tipping floors.

Employees must be thoroughly trained in all aspects of transfer station operations. (See Part VII, Section A) As a minimum, training should address the following areas:

- Heavy equipment operation and maintenance
- Flow control of waste on the tipping floor
- Traffic control – incoming and outgoing
- Dealing with peak / high volume times
- Identification of hazardous or unacceptable waste
- Loading of transfer vehicles

3.0 Overview of the Subject

As with any organization whose day-to-day success depends solely on its attractiveness to the customer, so too, transfer stations must be seen as a service center. Typically, customers will have one or more other options for disposal of their waste materials. Customers are attracted to a safe, smooth running and efficient operation. If they determine their personal and equipment safety is compromised, or if they are required to wait in line for extended periods of time, they will take their business elsewhere if they have that option. Tipping floor efficiency and cleanliness is often a determining factor in repeat business and customer loyalty.

Many transfer stations are located relatively close to population and business / industrial centers. This allows the customer to reduce travel time and increase productivity. This same customer does not expect to lose that valuable time by waiting in line for extended periods, nor to unload on a “dirty” tipping floor – one that is not scraped clean after each load is dumped.

Transfer stations are typically very busy places, especially during peak periods of mid-morning and late afternoon, and the busiest place at the transfer station is the tipping floor. The movement of heavy equipment in close proximity to site employees and customer personnel and equipment requires the optimum in safety awareness and conduct.

4.0 Duties and Responsibilities

4.1 Employer / Owner

The employer, and as applicable, the facility owner, must ensure there is adequate land and building space to carry out the transfer operations. The employer should ensure traffic patterns and approaches to the tipping floor are designed to facilitate the flow of traffic at all times – especially during peak unloading times. The building / tipping floor should be large enough to accommodate average to heavy volume without requiring customers to unload on the apron. A strict schedule for preventive maintenance must be established and followed so the necessary equipment is always available when needed. The employer is responsible for establishing appropriate employee training requirements and shift schedules. Documentation of training and equipment maintenance is also the responsibility of the employer.

4.2 Supervisors

Supervisors are responsible for day-to-day operations. Their duties include oversight of all equipment operations and maintenance, ensuring all employees have received the required training, traffic control, and customer compliance with facility rules. A significant portion of the supervisor's time will generally be devoted to tipping floor operations.

4.3 Employees

Employees must always take personal responsibility for their own actions and conduct. Attendance at safety and training meetings is not optional. They must satisfactorily complete all OSHA and equipment related training. Their conduct with respect to tipping floor rules and procedures is critical to the safety of customers and employees alike. Well-trained and conscientious employees also contribute to efficiency and productivity.

Equipment operators must have a thorough knowledge of the equipment they operate, including maintenance and servicing requirements. A pre-op and post-op check of the equipment should be performed before and after each shift.

5.0 Recommended Practices

There are a number of recommended work and safety practices to be considered in the successful operation of a transfer station. The following recommended practices are not exhaustive, but are representative of the many areas that should be considered. Application of these practices will vary with the site size and

location, amount of waste received, method of moving the material to and into the transfer vehicle and many other factors.

5.1 General Facility Controls

5.1.1 Site and Customer Rules

Each facility should have an operating plan that includes specific policies and procedures for that site. The plan should be reviewed periodically. The policies and site-specific information should be posted at the scale house and made available to anyone who uses the facility.

a) The plan should include site and customer rules, for example:

- Hours of operation
 - Public use permitted or not
 - Types of waste accepted
 - Types of waste prohibited
 - Speed limits
 - Vehicle traffic plan
-
- Step by step procedures for receiving, weighing, accepting, unloading, and loading waste including:
 - 1) All loads will be subject to periodic inspection before unloading and while on the tipping floor.
 - 2) Pull onto scale
 - 3) Receive load ticket
 - 4) Proceed to unloading area
 - 5) Only one person per vehicle is allowed in active unloading area
 - 6) Any person leaving cab of vehicle must wear hardhat and hard soled shoes
 - 7) Describe untarping procedures
 - 8) All drivers must secure roll-off doors in the open position before unloading

- 9) Open top trailers and trucks should be swept out on the tipping floor
 - 10) Procedures for cleaning out behind blade
 - 11) No smoking
 - 12) No scavenging or salvaging
- b) All visitors should be required to stop at the scale house and sign in and out on a visitors log. The checker, scale person, or office receptionist should verify proper access to anyone seeking entry to the site. As a minimum, the log should contain the following information:
- Date
 - Person's name
 - Company or organization they are representing
 - Telephone number
 - Purpose of visit
 - Arrival and departure time
 - Person they are seeing

Under no circumstances should visitors be allowed to access the site without company personnel accompanying them.

5.1.2 Gate / Scale House

The gate and/or scale house should be the first place a customer or visitor stops.



The gate should have a prominent sign displaying:

- Facility /site name
- Site telephone number (24 hours)
- Site operating hours
- Permit number (if applicable)

The attendant at the gate/scale house should maintain control of who goes in and out of the facility and record all visitors on the visitor's log. Only those customers and visitors who have met the site's requirements should be allowed on the premises or in the facility.

5.1.3 Security

It is extremely important to limit access to the facility. Only those individuals who have a need or purpose to be there should have access. Unauthorized entry to the site should not be allowed. The facility should be fenced on all sides and gates should be locked during non-operating hours. It is strongly suggested that only one entrance and exit be used by the facility. **No Trespassing** signs should be posted every 150-200 feet around the entire perimeter of the facility. A phone number that is answered 24 hours a day with a list of emergency contacts should be posted in the event of fire, vandalism, or other emergency situation.

The facility should have security features such as lighting and alarm systems as necessary. During facility operating hours, entry into and exit from the facility should be restricted to only those who have a need to be at the facility. Scale house personnel should have a means to communicate directly to the tipping floor and main facility personnel. The scale house should have an outside phone line. Employees should be trained on security issues and emergency plans.

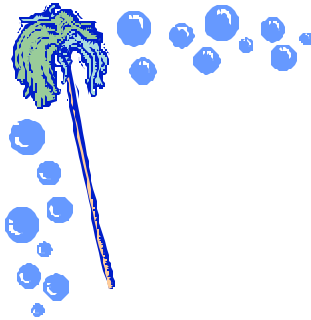
5.1.4 Scavenging or Salvaging

Once material has been received at the transfer station for disposal, it is considered to be the property of the transfer station. The removal of any received material without approval of the facility manager is considered to be scavenging. Scavenging should never be permitted at any transfer station.

5.1.5 Housekeeping: General Site and Public Roadways

One of the keys to safety at transfer stations is good housekeeping. This requires clear areas in front of controls and emergency stop buttons and frequent cleaning of each piece of equipment. Housekeeping duties should be performed at least on a daily basis, and more frequently if necessary. Work areas inside of operating equipment should be kept clean and free of items that could interfere with operating the equipment.

Any areas visible to the public from offsite should be continually maintained and free of trash. Maximum use of natural sight barriers, trees, shrubs, vegetation, and beams should be used to screen the activity areas of the station.



Regular cleaning of the grounds and tipping area should be required. Brushing or sweeping of the paved surfaces in order to remove litter or waste is preferred over washing in order to avoid generating wastewater.

Procedures should be established to prevent mud and other debris from tracking onto paved public streets. If necessary, a wheel wash can be used to wash outgoing vehicles' tires prior to exiting the site. Street sweepers or other mechanical equipment could also be used to clean access and exit roads in and around the facility.

On windy days customers should be informed not to roll back the tarp on their load before entering the tipping area.

In addition to cleaning, every transfer station should have a litter control program. The program should consist of a schedule and identified personnel for litter control duties.

Windblown litter should not be permitted to accumulate outside the property lines. Waste may also build up behind push walls and should be addressed in housekeeping procedures.

In summary, the following elements are essential to a good housekeeping program:

- Make sure aisles are clean and free of debris
- Ensure waste is removed from behind push walls
- Dispose of waste properly
- Ensure washrooms are well stocked and clean
- Pedestrian traffic areas should be well defined and free of debris
- Keep tipping floor as clean as possible to prevent slips, trips, and falls

5.1.6 Environmental Controls

a) Noise

Due to the variations in equipment, size, and volume of transfer stations, a noise survey or appropriate exposure data should be reviewed to determine if employees should be included in a Hearing Conservation Plan. The best approach to addressing noise issues is to purchase facility equipment with noise levels below 85 db A (decibels when measured on the A-scale of a standard sound level meter at slow response). If there is reason to believe noise levels may be at or above 85 db A, sound level measurements must be taken. Refer to Part III, Section L, Hearing Conservation.

b) Dust

Generally, dust exposures in transfer stations represent a nuisance and not a health hazard. However, only specific measurements can verify the levels present. It is recommended that a facility, which may have reason to be concerned about dust levels, have a dust evaluation performed. Facility management is responsible for managing dust to prevent it from becoming a health exposure, a nuisance to customers or the general public. Depending on the size and type

of facility and the waste stream, the procedures to minimize dust will vary.

In many cases, exhaust fans that discharge air away from prevailing winds may be sufficient. In more extreme circumstances, it may be necessary to use a water spray. In this event, employees should be encouraged to wear dust masks.

Facilities accepting construction and demolition (C&D) debris should consider using a permanently mounted spray system to wet C & D material to control dust on the tipping floor.

c) Lighting

Adequate lighting is necessary to help minimize employee error and accidents. Lighting can be provided in a number of ways, direct or indirect. It is the responsibility of the facility to ensure that lighting levels are sufficient and maintained to prevent eyestrain caused by insufficient lighting.

d) Heating and Ventilation

Most transfer station buildings are open in the front and positioned so the open side is opposite the direction of prevailing winds. Others may be constructed with doors that are generally open during operating hours and closed only at night. Large volume transfer stations, especially those in colder winter climates, may be enclosed except for entry and exit doors.

The difficulty of heating a large structure open on one side, or even closed buildings except for entry and exit, is one reason so few are heated. Most facilities with heaters utilize a radiant type. Employers should ensure that ignitable or flammable material is not stored in close proximity to such heaters.

e) Equipment and Vehicle Exhaust

Equipment and vehicles powered by diesel, gasoline or propane engines can produce hazardous exhaust emissions. Employee exposure to exhaust emissions should be minimized by:

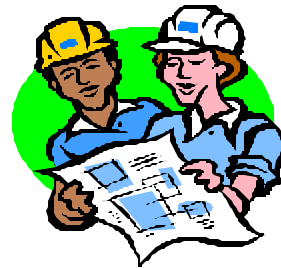
- Maintaining equipment in proper operating condition

- Using the correct fuel
- Ensuring building ventilation is adequate and properly maintained to sufficiently remove vehicle exhaust

f) Site Inspections

Site inspections are the key to identifying and controlling hazards in the work place. During an inspection, both conditions and employee / customer activities in the work place should be observed. General housekeeping should receive considerable attention in transfer stations. Employees, supervisors and managers should conduct ongoing inspections on a daily basis. Formal inspections are recommended on a monthly basis. The inspection should provide a thorough review of conditions and practices that have the potential to cause injury or damage. When hazards are identified, prompt corrective action must be taken to eliminate them.

5.1.7 Storm and Process Water Management



a) Storm water and waste water management

Storm and process water require proper management to prevent offsite contamination and to comply with federal, state and local regulations.

Appropriate measures should be taken to ensure that storm waters are segregated from process water. Storm water is defined as water runoff from precipitation or snowmelt. Process water is defined as water generated during processing / manufacturing, or water that comes in contact with raw material. Examples of process water include wastewater from washing vehicles and containers, maintenance shop wastewater, landfill leachate, and water that has contacted waste on the transfer station tipping floor.

Recommended practices to segregate storm waters from process waters are:

- Use spill and overflow protection when fueling vehicles
- Use dry cleanup methods on such spills
- Do not allow unattended fueling
- Install safe-guards to prevent vehicles' wash water from mixing with storm water
- Clean up leaks and spills immediately
- Do not allow process water and storm water to mix

- Sediment and erosion prevention procedures
- Employee training program
- Program for recording spills and other damages
- Non-storm water discharge certification

c) Sanitary Wastewater

Sanitary wastewater is defined as the liquid or water waste removed from the transfer station. The primary source of sanitary wastewater will be the restrooms, showers, processing equipment, and kitchen areas of a transfer station. Sanitary wastewater usually contains pathogenic microorganisms that dwell in the human intestinal tract. It also contains nutrients, which can stimulate the growth of aquatic plants and organic compounds that can produce malodorous gasses. Federal law prohibits the introduction of storm water into sanitary sewerage systems. Roof drains, yard drains and other surface water drains that manage only precipitation runoff should be routed to the surface water or storm drainage system.

All sanitary wastewater generated at the transfer station should be managed by one of the following methods:

- Direct connection to a municipal sewerage system
- Onsite treatment/disposal by septic system / absorption field
- Onsite treatment/disposal by package treatment plant system

5.1.8 Spill Control

- a) All employees should be trained to respond to spills or leaks from tanks, vehicles and equipment. Steps to take when there is a spill detected include:

b) Storm Water

Transfer stations may be required to obtain a storm water discharge permit from local authorities. The storm water discharge permit usually requires the facility to develop and implement a storm water pollution prevention plan (SWPPP). This plan includes procedures for inspection, training, management practices and sampling. A SWPPP Plan would include:

- Description of potential pollutant sources
- Personnel responsible for storm water compliance
- Identification and location of materials which may contribute to pollutants in storm water discharges
- Housekeeping actions and responsibilities
- Spill prevention and response procedures

- Stop processing
 - Halt vehicle movement
 - Secure the area
 - Notify the supervisor / manager
 - Properly clean up the affected area
 - Document the incident
 - Identify the source
- b) Clean-up / spill response equipment should be placed in designated areas and clearly marked. Equipment examples would be:
- Absorbent materials
 - Shovels
 - Brooms
 - Socks
 - PPE
- c) Facilities that have aboveground and/or underground storage tanks should have a plan to maintain and inspect tanks according to federal, state and local regulations. Designated employees should be trained to respond promptly and effectively to spills.

For aboveground tanks, the plan should include:

- An inspection schedule to detect leaks and spills;
- Verification of sound condition of containment structures and closed status of the drum valve;
- Label tanks with product name and potential health or safety hazards; and
- Ensure secondary containment structure holds at least 110 percent of the largest tank's capacity.

For underground tanks, the plan should include the following:

- Leak detection devices
- Leak detection records
- Documented action taken in response to alarms which indicate a spill, leak or overflow

- Required maintenance schedule on leak detection devices

5.1.9 Odor Control

Odors generated within the transfer station are caused by incoming waste being allowed to reside inside the building. To ensure that a minimum of objectionable odors occurs within the transfer station, any waste deposited on the tipping floor should be promptly loaded into transfer trailers, compactors or other transfer vehicles. If possible, the tipping floor should be cleared of waste at the end of each day's shift, and cleaned regularly. Any waste stored in transfer trailers or containers should be covered to minimize the migration of odors. If such waste is stored for more than 12 hours, it should be moved to a location 100-200 feet away from the facility.

5.1.10 Fire Prevention and Control

The potential for fire in a transfer station is always present. All employees, but especially gate attendants, spotters, supervisors, and equipment operators must be trained to recognize and respond to fire or the threat of fire. They should understand potential fire sources, prevention measures, and how to use fire suppression equipment. Every facility should have a fire / emergency alarm system. The alarm sequence should be designed to indicate in which part of the facility the fire/emergency has occurred.

a) Potential fire sources are:

- Chemicals
- Hot loads
- Electrical
- Smoking
- Heaters
- Flammables
- Combustibles
- Welding
- Decomposition
- Vehicles
- Facility equipment
- Arson

b) Fire prevention practices should include:

- No waste materials left on the tipping floor overnight
- No loaded trucks parked overnight in or near the facility
- Maximize the distance between trucks or trailers parked at the facility, especially if loaded
- Facility inspection for fire hazards
- Smoking prohibition policy
- Hot-work permits required for welding
- Proper storage of flammable / combustible liquids
- Using only approved permanent wiring

c) Maintaining Fire Suppression Equipment

Fire suppression equipment should be inspected on a regular basis. Records should be maintained indicating equipment inspected, date of inspection, and name of the person conducting the inspection. Such equipment includes:

- Portable fire extinguishers - weekly visual inspection, annual inspection, and certification by approved service company
- Hose stations - weekly visual inspection, annual inspection, and certification by an approved service company
- Automatic sprinkler systems - annual inspection and certification by an approved agency or service provider

d) Training



- Training should include instruction and demonstration of portable extinguishers and water hose systems. Each employee should be required to actually demonstrate proficiency in the use of all types.
- Training must also include awareness in how to detect possible sources of fire as listed in a) above.
- Fire extinguisher training must be conducted annually.
- Employees should understand procedures for moving hot loads away from the facility.

e) Pre-emergency Planning and Coordination With Local Fire Department.

It is extremely important the facility develop a pre-emergency planning and coordination plan.

Part III, Section K of this manual addresses fire safety and includes requirements for an Emergency Action Plan. Consult this section for details for developing the plan. Facility management should ensure the local fire department is fully aware of the plan and recognized fire hazards.

The facility's Emergency Action Plan should include at a minimum:

- What constitutes an emergency. (Fire, weather, etc.);
- Emergency evacuation plan;
- Emergency contact(s) and phone numbers;
- Personnel assignments;
- Evacuation routes from the facility or workplace;
- Location of emergency equipment, fire extinguishers, first aid kits, emergency eyewash/showers and spill response kits;
- Accounting for all employees after evacuation; and
- Listing of emergency action team

members and responsibilities

The plan should be prominently posted in the workplace. Emergency drills should be conducted at least annually (quarterly is recommended). Review the plan periodically as employee's duties or processes are changed. Update the plan at least annually.

f) Fire Control

Other methods and practices are recommended to further reduce the risk of fire such as those listed below:

- Remove all trash and debris from the tracks, engine compartment and belly pans of transfer station equipment.
- Check for fuel, oil, and hydraulic leaks.
- Have leaks repaired and clean up leakage immediately.
- Remove all oily rags, waste paper, and debris from cab interiors.

- Prohibit smoking near:
 - Fueling operations
 - Open batteries
 - Ether (starting fluid)
 - Petroleum products or explosive gases
 - Combustible materials
 - Tipping floor areas
 - Other volatile materials

- Be alert for frayed or broken electrical wiring. Repair at once.
- Check that all fire extinguishers are fully charged and are of the appropriate type. (Minimum of Class B rating for equipment.) Recommended is Class BC.
 - Class A - Ordinary combustible material. Identified by an "A" in a green triangle.

- Class B - Grease or flammable liquids. Identified by a "B" in a red square.
 - Class C – Electrical fires. Identified by a "C" in a blue circle.
 - Class D – Combustible metals. Identified by a "D" in a yellow star.
 - Multi-Class – Such as "BC" for both liquid and electrical fires.
-
- Use only non-flammable cleaning fluids.
 - Keep alert during waste handling for volatile materials that might cause a fire when compacted.

g) Hot Load Management

In the event a hot load arrives at the site, the facility plan should describe what actions are to be taken. The hot load should not be allowed near the tipping floor. Provisions should be made to accommodate at least a 40 cubic yard load in an area away from the tipping floor and other vehicles. Site management may want to construct a three-sided concrete bunker with a concrete floor where hot loads can be unloaded and extinguished. A standpipe with a high volume water hose should be available in the immediate vicinity to extinguish the fire. The bunker will facilitate clean-up with an end-loader once the fire is out.

5.1.11 Hazardous Substances

Operations at a transfer station create the potential for undetected hazardous materials to enter the facility in solid waste loads. It is the responsibility of every employee to be aware of questionable wastes and to ensure that proper recognition and identification of these wastes are made and appropriate action is taken. To safely handle these occurrences, each facility should maintain a hazardous materials management program that includes the following components:

a) Training

All transfer station operations employees should receive training to identify hazardous materials. In addition, those employees designated to respond to occurrences of hazardous material in the tipping area should have additional training to perform the specific duties required of them.

b) Plans / Procedures

The facility should have procedures for:

- Rejecting loads that contain hazardous materials;
- Responding to hazardous materials spills; and
- Contacting the appropriate public or private hazardous materials response agencies in the event of a spill or release.

c) Personal Protective Equipment

The facility should perform a hazard assessment of the required duties of spill responders and determine the necessary personal protective equipment required for use when responding to a spill or release. This equipment should be maintained and stored properly.

d) Spill Equipment

The facility should determine what types of potential spills could occur. After a determination is made, the type of equipment required to clean up the spill should be selected. The selected equipment should be maintained and stored properly.

5.1.12 Processing Equipment

Equipment addressed in this section includes machines used on the tipping floor, conveyors, stationary compactors, and transfer equipment.

a) Tipping Floor Equipment

Machines used on the tipping floor vary from facility to facility. Equipment will typically include wheel loaders, hydraulic excavators, skid steer loaders, forklifts, and others. The OSHA equipment and training requirements for Powered Industrial Trucks are addressed in Part III, Section O, of this manual. The following are recommended practices / guidelines for equipment used in the tipping area:

- Only trained and qualified operators may operate equipment. Employees who operate more than one type of equipment should be trained and qualified in each one.
- Equipment operator performance evaluations should be conducted at least once each year. All aspects of the employee's performance should be evaluated, documented and discussed with the employee. Shortcomings may require re-training or additional instruction.
- Operators should be required to complete a thorough pre-op check of all operating components and safety equipment prior to each shift. Defective parts or systems must be repaired before operating the equipment. A post-op report should indicate defects to be corrected before the next shift.



- Lockout / tagout procedures must be formally written for every piece of equipment used on the tipping floor. Employees performing maintenance on the equipment **must** adhere to lockout / tagout

- procedures. (See Part III, Section H – Control of Hazardous Energy.)
- A preventive maintenance program must be established and followed for all equipment.
 - Seat belts must be installed in all mobile equipment, be operable, and be used. (29 CFR 1926.602)
 - A roll over protection structure (ROPS) is required on all mobile equipment. (29 CFR 1926.1000)
 - A back up alarm is required on all equipment – a minimum 85-dBa alarm must sound whenever the machine is in reverse. (29 CFR 1926.602)
 - Strobe light – An amber strobe light should be required on all equipment used inside a transfer station. The light must be on whenever the machine is operating.
 - Horn must be working. (29 CFR 1926.602)
 - All gauges and alarms for oil, hydraulic, air pressure, and coolant temperature must be functioning and accurate.
 - Hand holds, ladder rungs must be intact – operator must be able to ascend into the cab or check fluid levels and be able to maintain a three point contact at all times (i.e. two hand holds and one foot hold). Missing steps, ladder rungs, or platforms must be repaired or replaced immediately.
 - Walking surfaces on tipping floor equipment must be kept free of slip, trip hazards. Smooth steps or walking surfaces should be made slip resistant. This may mean using extruded metal steps where appropriate, or placing adhesive safety treads on walking surfaces.
 - Portable fire extinguishers must be charged and certified. All equipment should have a 10 lb. Class ABC extinguisher at a minimum. It is also recommended that an additional 20 lb. extinguisher be mounted on the machine

- where it is accessible from ground level.
- Work lights on front and rear – two lights front and rear are highly recommended.
- Have CB or two-way radio for tipping floor communications.
- All window glass must be in good condition – cracked glass should be replaced as soon as possible. Broken window glass must be removed from the machine immediately.
- Windshield wipers, if so equipped, must be working properly.
- Service brakes on all vehicles must be in working order. If there is any malfunction, the unit must be removed from service and repaired before it is used again.
- Emergency brakes must be fully operational and adjusted as needed.

b) Conveyors

Conveyors used to move material from unloading pits or hoppers must have guards covering all pinch/nip/shear points that are within reach of an employee. Recommended practices include:



- A written lockout / tagout procedure applicable to conveyor servicing or maintenance is required. All employees must be trained in these procedures when performing maintenance, clearing jams, or performing any work requiring the temporary removal of guards or safety devices. (See Part III, Section H – Control of Hazardous Energy.)
- Prohibit employees from riding or climbing on, in, over, or under conveyors unless lockout / tagout is in place.
- A pre-op check should be made at the beginning of each shift, before the

conveyor is started. Defective equipment must be repaired before operations begin.

- A program of periodic and regular inspections must be in place to ensure all parts, components, and safeguards are in safe operating condition. Mechanical malfunctions affecting safe operation must be repaired before equipment is used.
- Areas around / near conveyors should be clearly posted as “**Restricted Area – Authorized Personnel Only**”.
- All controls and emergency stops must be clearly labeled. Affected employees must know how to operate them.
- Aisles and pedestrian passageways should be kept free of debris and clearly marked.
- Managers / supervisors must monitor employee operation of the equipment and correct any deficiencies noted.
- Records of all inspections and maintenance must be kept throughout the life of the equipment.

c) Stationary Compactors

In transfer stations where stationary compactors are used to compact the waste into receiving trailers or boxes, there are a number of issues to be considered. The primary reference document for installation, operator, and maintenance of stationary compactors is the *ANSI Z245.2-1997, Stationary Compactors – Safety Requirements*.

- The stationary compactor must be installed in accordance with all applicable codes and ordinances and manufacturer’s instructions.
- There must be a **written** lockout / tagout system using the manufacturer’s recommended procedures and supplemented to reflect any unique installation and control features. (See Part

III, Section H – Control of Hazardous Energy.

- All operating and maintenance personnel must be trained in every aspect of compactor operations, including lockout / tagout procedures. This training must be documented and retained in permanent training or personnel files.
- The compactor must be equipped with emergency stop controls. They must be easily accessed and their function understood by all employees.
- A program of periodic and regular inspections must be in place to ensure all parts, components, and safeguards are in a safe operating condition. Mechanical malfunctions affecting safe operation must be repaired before equipment is used.
- Records of all inspections and maintenance must be kept throughout the life of the equipment.
- Managers / Supervisors must monitor employee operations of the equipment and correct any deficiencies noted.
- Housekeeping must be a priority to minimize the potential for fire and injury to employees. Waste and other types of debris should not be allowed to accumulate on or around the compactor. Aisles and passageways must be kept free of debris and be clearly marked.
- All employees must be instructed in the lockout / tagout procedures. Under no circumstances may employees perform maintenance or service on stationary compactors unless all sources of energy and power have been locked out and residual energies (hydraulic pressures) relieved.
- Fire suppression equipment such as all purpose portable extinguishers and high pressure / high volume water must be conveniently located and readily accessible.
- All access covers and guards must be

- in place when the compactor is operated.
- The compactor area should be posted as **“Restricted Area – Authorized Personnel Only”**.
- All interlocks must be in working order. Interlocks should be tested for functionality as part of the regular inspection process. Defective interlocks must be repaired before the equipment is operated.

d) Transport Equipment



Tractors and trailers are the most common form of equipment used to transport waste from transfer stations. To a much lesser extent, roll-off boxes and trucks may also be used.

- Tractors, trailers, roll-off trucks, containers, and any other vehicles used as transfer vehicles must conform to the requirements of 49 CFR Part 393 – Parts and Accessories and applicable ANSI Z245 standards.
 - Drivers of such vehicles must possess a valid commercial driver’s license (CDL) per the requirements of 49 CFR Part 383–CDL Standards.
 - Drivers must be further qualified by meeting all the requirements of 49 CFR Part 391 – Qualifications of Drivers.
 - Drivers are prohibited from using drugs at
 - Inspection and maintenance must be recorded. Records must be retained during the life of the vehicle and for 18 months after the vehicle leaves the control of the company.
 - Annual inspections must be performed by a qualified individual or firm per 49 CFR 396.21.
 - Loads must be tightly covered when open trailers or roll-off boxes are used. End-gates or doors must have a positive locking mechanism and safety chain. Door hinges must swing freely. Trailers and roll-off boxes must have a positive means of securing the door in the open position when unloading.
- any time and alcohol within 4 hours of reporting for duty per 49 CFR Parts 392.4 and 392.5.
 - Drivers must wear seat belts as required in 49 CFR Part 392.16.
 - Drivers must conduct pre-trip vehicle (both tractor and trailer) and safety equipment checks per 49 CFR Parts 392.7 and 392.8
 - Drivers must ensure their load is safely and properly loaded (cargo securement) per 49 CFR Part 392.9.
 - Drivers operating interstate or more than 100 miles from their base location must maintain a driver’s log. At the company’s discretion, a driver may be relieved of keeping a driver’s log if he / she does not travel more than 100 miles from the reporting location, returns to the reporting location within 12 hours and does not travel across a state line per 49 CFR Part 395.
 - Drivers are required to perform a post-trip vehicle inspection and submit a report each time they operate a vehicle. A report must be completed for each trailer pulled as well per 49 CFR Parts 396.11 and 396.13.
 - The company is required to perform preventive maintenance and repairs per 49 CFR 396.3.

6.0 Reference Materials

6.1 Regulations

- a) OSHA General Industry Regulations

- i. 29 CFR 1910.38 and .1200, Emergency Management
- ii. 29 CFR 1910.1200 and .1020, Hazard Communication
- iii. 29 CFR 1910.132-138, Personal Protective Equipment
- iv. 29 CFR 1910.157, Fire Extinguishers
- v. 29 CFR 1910.146, Confined Space Entry
- vi. 29 CFR 1910.134, Respirator Use
- vii. 29 CFR 1910.147, Lockout / Tagout
- viii. 29 CFR 1910.1030, Bloodborne Pathogens
- ix. 29 CFR 1910.178, Powered Industrial Trucks

b) OSHA Construction Regulations

- a. 29 CFR 1926.101, Hearing Protection
- b. 29 CFR 1926.602, Material Handling Equipment
- c. 29 CFR 1926.96, Occupational Foot Protection

c) USDOT Regulations

- i. 49 CFR 382, CMV Driver Alcohol and Drug Testing
- ii. 49 CFR 383, Commercial Driver's License
- iii. 49 CFR 391, Qualifications of Drivers
- iv. 49 CFR 392, Driving of CMV's
- v. 49 CFR 393, Parts and Accessories
- vi. 49 CFR 395, Hours of Service
- vii. 49 CFR 396, Inspection, Repair, and Maintenance

6.2 Industry Standards

- a) ANSI Z245.1 - 1999, *Mobile Wastes and Recyclable Materials Collection, Transportation, and Compaction Equipment - Safety Requirements*
- b) ANSI Z245.2 - 1997, *Stationary Compactors - Safety Requirements*
- c) ANSI Z245.30 - 1999, *Waste Containers - Safety Requirements*
- d) ANSI Z245.41 - 1997, *Facilities for the Processing of Commingled Recyclable Materials - Safety Requirements*
- e) ANSI Z245.60 - 1999, *Waste Containers - Compatibility Dimensions*

6.3 Employer Provided Information (Mandatory)

- a) Emergency Fire and Evacuation Plan
- b) Emergency Spill Response Plan
- c) Medical Emergency Response Plan
- d) Hazard Communication Program
- e) Substance and Alcohol Abuse Program
- f) Confined Space Entry Program
- g) Lockout / Tagout Program

- h) Bloodborne Pathogens Program
- i) Forklift and Powered Industrial Truck Training Program
- j) Personal Protective Equipment Program

**6.4 Other Recommended Reference Material
 (Not Mandatory)**

- a) Company Work and Safety Rules
- b) Heat Stress Management Program
- c) Back Injury Prevention Program
- d) OSHA Booklet 3108, *Training Requirements in OSHA Standards and Training Guidelines*
- e) Manufacturer's Equipment Operating Manuals

**Part VII Section D Appendix 1.
 Sample Transfer Station Checklist**

FACILITY NAME:		LOCATION:				
The items below will be monitored and evaluated regularly. This report will be kept on hand. Discrepancies noted on the this checklist will be reported to the appropriate authority / supervisor for resolution and a record of that report will be maintained with the checklist.						
Item or Condition Examined:	Indicate whether condition is Satisfactory or Unsatisfactory (S or U)					
	Date	S/U	Initials	Date	S/U	Initials
Gate and Perimeter Fence						
Doors & Windows						
Walls						
Roof						
Water System						
Wash Down System						
Plumbing						
Lights						
Electrical Wiring						
Safety Rails						
Stairs and Rails						
Fire Extinguishers						
Grounds						

Roads Swept or Wet Down						
Blown Trash Picked Up						
Orderly						
Safety Equipment						
Dust Masks						
Goggles / Safety Glasses						
Gloves						
Coveralls						
Hardhats						
Hard Sole / Steel Toe Boots						
Odor / Vector Control						
Floor Free of Waste						
Floor Washed Down						
Trailer Area Picked Up / Cleaned						
Wastes Trapped Behind Push Walls Removed						
Comments:						

Part VII Section D Appendix 2. Sample Transfer Station Evaluation Form

Facility Name: _____

Location: _____

Manager: _____

Survey Date: _____

		Yes	No	NA
1.	Is the site entrance appearance acceptable?.....	_____	_____	_____
2.	Is the scale house attended at all times?.....	_____	_____	_____
3.	Are entrance signs in good condition?..... (facility name, permit number, tipping, hours, prohibitions, etc)	_____	_____	_____
4.	Are there maximum volume limits?..... If so, are they being met?.....	_____	_____	_____
5.	Are permits (solid waste, stormwater, tanks, etc.) on site and easily accessible?	_____	_____	_____
6.	Are permit conditions being followed?.....	_____	_____	_____
7.	Is there an Operations Plan?..... If so, is it being followed?.....	_____	_____	_____
8.	Is there written documentation to ensure that the permit conditions are being followed?.....	_____	_____	_____
9.	Was the last state inspection acceptable?.....	_____	_____	_____
10.	Is the site secure in accordance with any local or state regulations?.....	_____	_____	_____
11.	Is the site properly posted according to local or state regulations?.....	_____	_____	_____
12.	Are ditches and pipes conveying stormwater clear and working as designed? ...	_____	_____	_____
13.	Does any stormwater pond on the site appear well maintained?.....	_____	_____	_____
14.	Is blowing paper being controlled and routinely collected?.....	_____	_____	_____
15.	If leachate is being treated off site, are all necessary permits available? (i.e. hauler, treatment plant).....	_____	_____	_____
16.	Are all leachate tanks and pumps in good working order?.....	_____	_____	_____
17.	Are all required oil/water separators, sewer drains, etc. in place and working properly?.....	_____	_____	_____
18.	Is tap water potable?..... If not, are all spigots properly posted and is potable drinking water available? ...	_____	_____	_____
19.	If there is secondary containment for petroleum tanks, is the drain plug in or valve shut?.....	_____	_____	_____
20.	Is there a written spill control plan for the site?.....	_____	_____	_____
21.	Are all petroleum stained soils routinely removed and disposed of properly?	_____	_____	_____
22.	Is equipment wash water disposed of properly? (i.e., not on the ground)	_____	_____	_____
23.	Is garbage being stored on site overnight?.....	_____	_____	_____

	If so, is it allowed by permit?.....	_____	_____	_____
24.	Is the tipping floor cleaned every day?.....	_____	_____	_____
25.	Is a "special waste" program in place?.....	_____	_____	_____
	Is it being followed?.....	_____	_____	_____
26.	Are trained spotters inspecting the waste on the tipping floor to identify unauthorized waste?.....	_____	_____	_____
27.	Is unauthorized waste that has been removed being disposed of properly?	_____	_____	_____
28.	Are all required financial assurance documents current and accessible?	_____	_____	_____
29.	Is a written safety plan on site?.....	_____	_____	_____
30.	Are monthly safety meetings being held for all employees?.....	_____	_____	_____
31.	Are the safety meetings being documented?.....	_____	_____	_____
32.	Are safety inspections being conducted routinely?.....	_____	_____	_____
33.	Are hot load areas available and clear?.....	_____	_____	_____

Part VII. Section E.

Transfer Station Operations

Vehicular Traffic Management

1.0 Section Summary

Traffic flow and control at transfer stations is very important for both the company and its customers. This is especially true at peak traffic time – usually mid-morning and late afternoon. Interspersed with the larger waste collection vehicles, there are usually automobiles with trailers, pick-up trucks and other vehicles that have to be unloaded manually.

Some facilities have a special "drop-box" area where the public can deposit their trash. Such provisions generally include the use of a large open top roll-off box placed at a lower level behind a retaining wall. This keeps the two classes of customers separated and results in much greater efficiency and smoother operations on the tipping floor.

Traffic management is also important to ensure the safety of both employees and customers. This section addresses various practices, which when followed, should reduce the potential for vehicle accidents, property

damage and injuries.

2.0 Key Concepts

The overall site / facility operating plan should address traffic management from the time a vehicle leaves the public roadway to enter the property, until it leaves the property and once again enters the highway.

Appropriate directional signs should be used liberally to guide and direct customers especially those who are unfamiliar with the traffic flow or procedures at the site. Among the most important are speed limit signs – especially in areas where two-way traffic is necessary.

Site and customer rules mentioned in Section D should be developed as part of the site's operating plan. Such rules should be prepared as a handout to be provided to the customer by the gate / scale house attendant.

Traffic management is most important in the area approaching the transfer station and on

the tipping floor. Every effort must be made to minimize congestion in these areas. Tipping floor efficiency is critical to good traffic management.

3.0 Overview of the Subject

Traffic at transfer station sites need not be a hazardous experience, but it can be if all customers do not conform to specific traffic management rules of conduct and procedures.



One of the most violated rules is that of the speed limit, which for most sites is 15 mph. As difficult as it may be, customers – both regular and incidental – should be warned / cautioned if it appears they are exceeding the speed limit. Warnings will probably not be received very well by regular customer drivers. Uncomfortable as it may be, it may be necessary to contact the driver's supervisor or dispatcher if the driver is operating in what may be considered a reckless manner.

Other infractions must be dealt with as well, or in time, the traffic management rules will be of no value. In the final analysis, customers are attracted to and appreciate a safe, smooth-running, and efficient operation. They understand the need for site and facility rules.

4.0 Duties and Responsibilities

4.2 Employer

The employer is responsible for developing a traffic management plan that ensures a smooth and efficient traffic flow. It should be structured to accommodate peak unloading times. Contractual agreements with regular customers should incorporate site rules of conduct and procedures, especially those dealing with traffic control.

The employer must make certain all employees are trained in these rules and that they set an example by complying with them. Procedures for reporting customer infractions to management should be explained.

4.2 Supervisors

The responsibility for monitoring vehicular traffic management rests with the site supervisor(s). Observing customer, vendor, and visitor compliance with the site rules and procedures may at times require warnings or more serious action. Hourly employees should not be expected or required to enforce the rules.

4.3 Employees

Employees must always comply with site and facility rules and procedures. Under no circumstances should a customer be able to observe an employee violating or disregarding any traffic management rule.

4.4 Customers, Vendors, and Visitors

Use of the transfer station is a two-way street for the facility and the customer – one needs the other. Customers understand the need and benefit of good traffic flow. Vendors and visitors must conform to the rules to ensure a greater degree of safety for themselves and others.

5.0 Recommended Practices

5.1 Site and Customer Rules

The facility's operating plan should contain the rules and procedures for vehicular traffic management. The policies and site-specific information should be posted

at the scale house and distributed to anyone who uses the facility.



a) The plan should include site and customer rules, for example:

- Hours of operation
- Public use permitted or not
- Types of waste accepted
- Types of waste prohibited
- Speed limits
- Vehicle traffic plan
- Step by step procedures for receiving, weighing, accepting, and unloading waste including:

1. All loads will be subject to periodic inspection before unloading and while on the tipping floor.
2. Pull onto scale
3. Receive load ticket
4. Proceed to unloading area
5. Only one person per vehicle is allowed in active unloading area
6. Any person leaving cab of vehicle must wear hard hat and hard

5.2 Gate / Scale House

The gate and/or scale house should be the first place a customer or visitor stops.

7. Describe untarping procedures
8. All drivers must secure all container or truck doors in the open position before unloading
9. Open top trailers and trucks should be swept out at the landfill or on the tipping floor
10. Procedures for cleaning out behind push-out panel
11. No Smoking
12. No Scavenging or Salvaging

b) All visitors should be required to stop at the scale house and sign in and out on a visitors log. The checker, scale person, or office receptionist should verify proper access to everyone seeking entry to the site. At a minimum, the log should contain the following information:

- Date
- Person's name
- Company or organization they are representing
- Telephone number
- Purpose of visit
- Arrival and departure time
- Person they are seeing

Under no circumstances should visitors be allowed to access the site without company personnel accompanying them.



The gate should have a prominent sign

displaying:

- Facility/site name
- Site telephone number (24 hours)
- Site operating hours
- Permit number (if applicable)

The attendant at the gate/scale house should maintain control of who goes in and out of the facility and record all visitors on the visitor's log. Only those customers and visitors who have met the site's requirements should be allowed in the facility.

5.3 Scavenging or Salvaging

There is always the temptation by customers to retrieve something in the trash that they perceive to be of value (intrinsic or otherwise). In most cases, it will be the private citizen customers who are the most easily tempted.

The customer's personal safety is at risk with such behavior due to the movement of other vehicles and transfer station equipment. Allowing or not curtailing scavenging and salvaging is the surest way to bring gridlock to both the tipping floor and the approach area.

Once a material has been received at the transfer station for disposal, it is considered to be the property of the transfer station and the removal of any material without approval of the facility manager is considered to be scavenging. Scavenging should never be permitted at any transfer station.

5.4 Traffic Control



The control of traffic must begin at the entrance to the site. The entrance must be large enough to allow the largest vehicle to easily and safely negotiate it. In some cases it may be necessary to discuss with public authorities the benefits of installing traffic control devices or systems to allow for an orderly, safe flow of traffic into and out of the site. Such traffic control systems should also ensure a greater degree of safety for the motoring public traveling near the entrance to the site.

5.5 Spotters / Traffic Control Personnel

Depending on the amount of traffic, use of spotters or traffic control personnel may be necessary for the following reasons:

- a) Promote safe and orderly traffic flow into and out of the site, and into and out of the transfer building / area.
- b) Assign tipping area locations for incoming vehicles.
- c) Direct self-unloading general public vehicles to appropriate and safe unloading areas.
- d) Identify potentially hazardous or otherwise unacceptable incoming waste materials.
- e) Direct incoming and outgoing vehicles safely away from the mobile equipment working in the transfer station.
- f) Enforce the "no salvaging" policy.

If spotters or traffic control personnel are used, they should have extensive training regarding their responsibilities and the work practices to be followed. They, as well as all other personnel, should wear

appropriate personal protective equipment (PPE) according to their job assignments

(e.g., eye and ear protection, safety vests, hard hats, safety shoes, gloves). Consideration should be given to providing the spotter(s) with red flags at least 18 inches square or sign paddles.

NOTE: See training and PPE matrix in Sections A and B of this part.

5.5.1 Spotter Duties

Drivers, yard workers and crew helpers will frequently be called upon to act as a spotter for trucks as they back and navigate through tight spaces.

They should:

- a) Know and use standard hand signals when directing the traffic. (See hand signals).
- b) Understand the proper safety rules for backing a truck.
- c) Be in position to both see the immediate hazard area and be seen by the driver.
- d) Review with the driver the areas being watched by the spotter.
- e) Clear the area to the rear of the truck before backing.
- f) Make sure that all persons are off of riding steps and clear of the line of travel before signaling the maneuver to begin.



- g) If any person, vehicle or object enters the hazard area, immediately give the stop signal to the driver and warn persons away or move objects.
- h) Be certain the hazard area is clear *before* signaling the driver to resume the maneuver.
- i) Be aware of and avoid hazards, such as other vehicles or equipment that may approach from the spotter's backside.
- j) Avoid walking backward, and remain clear of the path of travel of the vehicle.
- k) If the spotter must change positions during the maneuver, signal the driver to stop, and move to the new position before the maneuver is continued.
- l) Be positioned so as to keep the hazard area (blind spot) in clear view and maintain visual contact with the driver (either direct line of sight or in the rear-view mirrors).

5.5.2 Hand Signals

All personnel involved in the movement of mobile refuse equipment are to be familiar with and utilize standard hand signals as follows:



Distance Left to Back – Hold hands apart and above the head with palms facing inward. When the distance is less than the hand spread (approximately 3 feet), bring hands together as distance decreases. When truck reaches proper position, rotate the right palm toward the driver. (See Stop)



Stop – Raise both hands above the shoulders with open palm facing the driver (emergency stop may be indicated by closing of the hands).



Move to the Right – Raise the right hand above the shoulder, and with the index finger of the left hand pointing to the right, make repeated motions to the right with the left hand.



Move to the Left – Raise the left hand above the shoulder, and with the index finger of the right hand extended to the left, make repeated motions to the left with the right hand.





Back – With the left hand raised above the head, and the palm of the hand turned inward, roll the arm in a circular motion (toward the body if behind the truck, away from the body if in front of the truck)

Go Forward – Raise the right hand above the shoulder and with the index finger pointed ahead, repeatedly move the hand in a forward motion.



5.6 Access Roads

The main entrance / exit roads should be all-weather in design and construction. Site roads should be designed and constructed to minimize interference with site drainage requirements. All roadways should be maintained in good working condition to ensure safe travel for both customers and transfer station vehicles. It is important to remember that for customers and visitors alike, their impressions of the facility begin when they enter the property. Provisions for sweeping of working access roads, as well as litter control, should be a public relations priority for the site.

5.7 Approach to Tipping Area

It is extremely important to provide an adequate paved or hard surface area for vehicles as they approach the tipping floor. If possible, consideration should be given to the following:

- a) Have all vehicles approach the tipping floor or area from the left (driver's) side. This allows the driver to have a clearer view of any vehicle already unloading. It enables the driver to better see the spotter and hear any necessary instructions. It is also easier for the driver to back to his / her left, especially when turning.
- b) Provide an area adjacent to the roadway about 200-300 feet from the tipping area for roll-off drivers to park while untaring.
- c) Require vehicles to exit the tipping area to the right (their left). This will avoid potential conflict with incoming vehicles.



5.8 Private Vehicles

If the transfer station is open to the general public, it is best to direct them to one side of the tipping floor. Pickups, cars and trailers generally have to be unloaded by hand and should not be allowed to block the area needed by the larger trucks. It is extremely important that operators of private vehicles be provided with clear instructions regarding their conduct when they check in at the gate or scale house. It is recommended this be in the form of a one-page instruction sheet.

If the facility provides a “drop-box” area for use by private vehicles, trailers, and pick-ups, directions to this area should be clearly marked. The “drop-box” should be located approximately 10 feet below the unloading area. The loading side of the box should be placed next to a concrete retaining wall. (Some facilities install a metal skirt about 3 feet wide and the length of the box to keep trash from falling between the box and the retaining wall.) Standard 42” high guardrails must be provided along the length of the retaining wall to prevent customers from falling into the box.

Signs warning customers to stay behind (and not climb on) the guardrails should be at both ends of the unloading area. Other signs should advise customers of prohibited materials, children under a certain age remaining in their vehicle, etc.

5.9 Signage

Traffic control signs should be liberally placed on all roadways to avoid any confusion by the customer. The area designated for roll-off drivers to manually or mechanically remove their tarps should be clearly marked. If wind velocity and direction is an issue, the facility manager or spotter may determine it is more practical to allow drivers to untarp their loads inside the building. This decision may slow down or hinder traffic on the tipping floor.

In facilities where it may be necessary to “hold” traffic until tipping floor space is available, drivers should be kept behind a stop line (with a stop sign) until signaled to proceed by the spotter. A stop sign must also be placed at the exit or just before entering the public roadway.



6.0 Reference Materials

6.1 Regulations

a) OSHA General Industry Regulations

- x. 29 CFR 1910.38 and .1200, Emergency Management
- xi. 29 CFR 1910.1200 and .1020, Hazard Communication
- xii. 29 CFR 1910.132-138, Personal Protective Equipment
- xiii. 29 CFR 1910.157, Fire Extinguishers
- xiv. 29 CFR 1910.178, Powered Industrial Trucks

b) OSHA Construction Regulations

- a. 29 CFR 1926.101, Hearing Protection
- b. 29 CFR 1926.602, Material Handling Equipment
- c. 29 CFR 1926.96, Occupational Foot Protection

6.2 Industry Standards

1. ANSI Z245.30 - 1999 *Waste Containers - Safety Requirements*
2. ANSI Z245.41 - 1997 *Facilities for the Processing of Commingled Recyclable Materials - Safety Requirements*
3. ANSI/ISEA 107-1999, *High Visibility Safety Apparel*

6.3 Employer Provided Information (Mandatory)

- a) Emergency Fire and Evacuation Plan
- b) Emergency Spill Response Plan
- c) Medical Emergency Response Plan
- d) Hazard Communication Program
- e) Forklift and Powered Industrial Truck Training Program
- f) Personal Protective Equipment Program
- g) Written Traffic Safety Requirements
- h) Written Rules and Procedures for Customers, Visitors and Vendors

6.4 Other Recommended Reference Material (Not Mandatory)

- a) Company Work and Safety Rules



- b) OSHA Booklet 3108, *Training Requirements in OSHA Standards and Training Guidelines*
- c) Manufacturer's Equipment Operating Manuals