Waterline Technologies, Inc.

BULK CHEMICAL DELIVERY SPECIFICATIONS

The following specifications have been created for the safety of the delivery drivers and the customer's employees. These specifications shall be incorporated into all Waterline delivery locations. Please contact Waterline Technologies for exact specification of products to upgrade bulk chemical deliveries to these requirements.

Updated 11/2015

Bulk Delivery Protocol and Hazard Assessment

Waterline's foremost concern is for the safety of our customers, employees and the environment. Waterline has developed specific requirements for the safe delivery of bulk materials to our customer's facilities. These requirements have been established to ensure and maintain the safety of all personnel involved in the delivery process.

Waterline is communicating these safety requirements to strengthen the partnership with our customers by increasing the awareness of our expectations upon arrival at your facility.

Waterline's staff would like to discuss with you the delivery process at your facility. Waterline's staff will perform an assessment that will ensure compliance with basic safety regulations as detailed further in this pamphlet.

A Hazard Assessment Shall Include:

1. Assess the delivery process; truck parking, length of hose needed, location of emergency eyewash, PPE, cam-lock fittings.
2. Discuss spill plan and notification.
3. Customer Haz Matt Training Plan or Procedure
4. Customer SDS (Safety Data Sheet)
5. Customer Spill Procedure – Approved Spill Kit
6. Customer Safety Sign and Warnings
7. Waterline Spill Procedure and Driver Training
8. Your Expectations

Waterline and Customer shall discuss a spill procedure. If a spill takes place what protocol other than what is described takes place. If there are customer specific guidelines to follow please let us know ASAP.

CAL/OSHA requires that all employers train their employees when any employee may come into contact with hazardous materials. This training must include:

1. Notification to the Fire Department where your haz mat is stored.
2. Train your employees on all chemicals
3. MSDS Safety Stations

4. Customer Spill Procedure
5. Safety and Warning Signs

Bulk Chemical Requirements And Specifications

November 2015

It is the intention of Waterline Technologies/PSOC to handle all bulk chemical deliveries in a safe and efficient manner. With numerous regulations and company procedures we shall insure the safety of the company, the employee and the customer.

The purpose of this set of safety procedures is to provide a guide to follow in every aspect of the delivery function.

These requirements and specifications are required for Waterline Technologies to deliver bulk chemicals for either Sodium Hypochlorite or Hydrochloric Acid.

It is the intention of these specifications and requirements to completely remove chemical handling by facility operators. All chemical deliveries shall be handled by delivering company into tanks with locking connection devices, level indicating devices and fume suppression systems.

The California Fire Code Section 8003 requires all bulk storage vessels over 55 gallons to be stored in an approved containment area or contained by a double walled vessel. The outside vessel shall contain 110% of the liquid. An approved area for storage other than a double walled vessel is an area with sloping liquid-tight floors with dikes to contain any spilled liquid. This sloping floor must connect to an approved collection system.

All tanks must have a proper label affixed to each tank stating it use directions. This label should come from your chemical supplier stating use directions, storage and handling requirements. Each brand, each manufacture are unique and therefore should never be mixed. Only the label from your CURRENT supplier should be affixed to your tanks.

While chlorine and acid products are effective, the misuse of these products is hazardous to humans. Chlorine and acid exposure irritates the senses and in some cases, causes a burning sensation the eyes, nose and skin. Not handling these products carefully will create a liability for your agency. It is very important to train your personnel in the handling of these chemicals and to regularly monitor the use of all chemicals in the workplace.

All chemical tanks shall have signs indicating chemicals stored. Signs shall be located on each tank and the access door into chemical storage room. Signs shall designate name of chemical and chemical antidote. The 10” x 14” vinyl sign stating DANGER – CHEMICAL NAME shall be affixed to each tank. The 10” x 14” vinyl sign stating chemical antidote shall be affixed to each tank. A metal sign stating DANGER – CHEMICAL NAME must be affixed to each door leading into each chemical storage room. A NFPA diamond sign must be placed on the building as described by your local fire code that displays proper numbers in each category for the worst of all chemicals stored in the building, not just liquid chemical storage.

CHEMICAL STORAGE TANKS HAVE A LIFE OF 5-7 YEARS. PLEASE INSPECT YOUR TANKS OFTEN FOR LEAKS.

Sodium Hypochlorite Tank Requirements

Sodium Hypochlorite shall be delivered into double-walled, properly signed storage tank. Sodium Hypochlorite tanks shall have locking filling device (2" male camlock with cap) to insure only liquid sodium hypochlorite is loaded into tank. Fill device is unique to sodium hypochlorite.

Tanks shall be properly covered. Level indicators shall be installed to properly gauge inner tank levels. Seismic Zone 4 restraint systems shall be installed and must be certified with current engineered documents.

All chemical feed pump connections and tubing shall be double enclosed to prevent damage and possible leakage. Tubing systems shall drain back to storage tank.

Chemical safety warning signs must include:

- Danger – Sodium Hypochlorite
- Sodium Hypochlorite Antidote Sign
- Manufacture/Supplier current label

NFPA Diamond Sign to be installed per Fire Department regulations – typically on outside of building. This sign not to be used for employee warning.

Hydrochloric Acid Tank Requirements

Hydrochloric Acid shall be delivered into double-walled, properly signed storage tank. Hydrochloric acid tanks shall have locking fill devices (1 ½" Female Camlock with plug) to insure only hydrochloric acid is loaded into tank. Fill device is unique to hydrochloric acid.

Hydrochloric Acid tanks for the delivery of bulk acid shall be equipped with acid fume suppression systems. All bulk acid tanks shall be 100% contained to direct acid fumes into fume suppression tank.

Level indicators shall be installed to properly gauge inner tank levels. Seismic Zone 4 restraint systems shall be installed and must be certified with current engineered documents.

All chemical feed pump connections and tubing shall be double enclosed to prevent damage and possible leakage. Tubing systems shall drain back to storage tank.

Chemical safety warning signs must include:

- Danger – Hydrochloric Acid
- Hydrochloric Acid Antidote Sign
- Manufacture/Supplier current label

NFPA Diamond Sign to be installed per Fire Department regulations – typically on outside of building. This sign not to be used for employee warning.

Delivery Truck Requirements and Delivery Considerations

The size and weight of the delivery truck has to be considered when designing a bulk chemical system. The bulk delivery truck must have access within 20' of the chemical storage tank. Truck access must have a width of 10-12 feet and a driveway capable of a truck weight of 45,000 pounds.

Each delivery location will have unique requirements. For the most part delivery trucks are able to get within a few feet of the chemical tank. Requirements for additional equipment will be required when delivery hose is greater than twenty (20) feet or the driver cannot see the tank or the truck while pumping product.

A remote fill and alarm system may be required. Remote fill box shall be designed of PVC/ABS material in a lockable cabinet.

Remote fill stations may be installed where the truck cannot get within 20' of the fill point. Remote fill station is designed with signals to warn the drivers when the tanks are full. These systems may be designed as follows:

1. Each tank shall have remote level sensor. This liquid level sensor is tank mounted to send a signal to a remote mounted control box.
2. Level sensors shall emit signal to fill station via alarm and strobe. An audio alarm as well as a flashing strobe light is required.
3. Each tank must be connected with PVC directly from fill box to tank And sloped to drain liquid towards tank when filling is complete.

Typical delivery truck. Bulk liquid is pumped from truck to customer's tank via air driven pump. Each delivery is measured and totaled with on-board scale.

Chemical Delivery Bid Specifications

Chemicals shall be delivered with appropriate equipment to locations indicated by the customer. Company shall have a minimum of 5 years experience in chemical delivery and are using trucks approved for said deliveries. Company shall have on file current Hazardous Material License, US and California DOT License, California BIT Terminal Location Number and enrolled in California Hiway Patrol Pull Notice Program for its drivers. Driver's names and pictures with employee information must be submitted. Proof of current 90-day truck inspection must be provided.

Insurance requirements as a minimum shall include:
Vehicle Insurance with limits set by customer.
Product Liability Insurance
Worker Comp Insurance

The frequency of deliveries shall be required to maintain a minimum level of ¼ full in each tank. Chemicals shall be delivered in a safe and efficient manner and will prevent employees from contact of said chemicals.

The chemicals included under this scope of services are:

a) Sodium Hypochlorite at 12.5% solution
b) Hydrochloric Acid (trade name: Muriatic Acid) at 31% solution.

Company shall use unique fittings for Muriatic Acid and Sodium Hypochlorite chemical transfers to prevent dispensing chemicals into wrong tank. These fittings shall be of locking type. Under no circumstance will the delivery of chemicals be allowed in tanks without locking fill connections. All chemicals shall be pumped from storage tanks via approved dispensing equipment. No chemicals to be hand poured

Company shall monitor and report any discrepancies of the chemical storage tanks at the delivery locations for:

c) Integrity of double-walled tanks and secondary containments.
d) Integrity of all tank connected fittings.
e) Proper operation of level indicators.
f) Proper operation of vent lines and/or acid fume suppression tanks.
g) All tanks labeled in accordance with all regulatory requirements including but not limited to the requirements of the OSHA Hazard Communication Standard (Cal OSHA, Title 9, 5194)

Company shall provide standby emergency chemical delivery service. Response time will be such that the chemical deliveries are completed by 9am the day after an emergency request is made.

Company shall provide current Material Safety Data sheets for hazardous materials brought on property.

Environmental Compliance:

h) Company shall not discharge any material to City, County, State storm drain systems or waterways.
i) Chemicals shall not be vented in an uncontrolled manner at any time. (Acid fume-suppression optional)
j) Materials shall not be discharged into City, County, State sanitary sewer system without prior written consent.
k) Company shall supply Spill Response Plan that will protect storm drains and waterways in the event of an incident.

Safety Compliance:

i) Company to submit Material Safety Data Sheets for materials delivered.
ii) Delivery Personnel Safety Training Requirements:
    1) Delivery personnel should be trained in accordance with all applicable regulatory requirements including but not limited to the following:
    2) Cal OSHA Title 8, 5192, HAZWOPER
    3) Cal OSHA Title 8, 5144, Respiratory Protection
    4) Cal OSHA Title 8, 5194, Hazard Communication.

5) D.O.T. 49 CFR, Hazardous Materials / Transportation

Written Delivery Procedures:
Company shall submit written delivery procedures that must include the following:

j) Safety procedures
k) Personal protective equipment requirements including PPE during delivery.
l) Chemical spill procedures.
m) A listing of the safety and spill control equipment available on each vehicle.
n) A description of truck size, **(no tractor trailers)** load, size, gross weight, hose lengths, truck type.
o) Description of measurement method used in the field to verify delivery amounts.

Scheduled Chemical Deliveries:

p) Customer may choose to oversee any delivery made.
q) Company will be required to provide a delivery schedule in advance of deliveries. All schedule changes will be coordinated with point of contact prior to implementation.
r) Company shall provide a written receipt at each delivery location.

Safety Training Requirements

Hazardous waste operations and Emergency response plan.

The emergency response policy of the company shall comply with local, State, Federal and site-specific plans as required by these agencies. This policy shall be designed to identify, evaluate, and control safety hazards, and provide for the emergency response for hazardous waste operations.

Structure

1. Notify the dispatcher via radio of any spilled chemical and receive instructions.
2. If site safety officer is present notify the proper personnel based upon site procedures.
3. If spill is beyond the capacity of the site and the driver notify and call 911. Chemtrec at 800-767-0310
4. Contact site Hazardous Materials Response Team, if required.
5. Contact local fire department or dial 911 with radio/cell phone, if

required.

6. Never leave the site of spill; be helpful to all responding agencies.

Clean-up Activities

1. Upon notice of a spilled chemical, consult with Dispatcher or site safety personnel as to proper procedure to remove spilled chemical. Insure proper chemical identification to all personnel.
2. Use Personal Protective Equipment to ensure personal safety prior to any hazardous material containment. Use gloves, apron, bib and goggles.
3. Approach chemical spill from the up-wind location.
4. Use chemical absorbing material to remove and dispose of spilled chemical. Never allow spilled chemical in any drains, basins or waterways.
5. Contact Hazardous Waste Disposal Company for proper disposal of Spilled chemicals.
6. Report to Dispatcher with Hazardous Material Incident Report to filed with company General Manager.
7. Consult medical staff if any effects from chemical contact with the employee.
8. Upon completion review the entire spill response to insure proper Procedures have been followed. If any up-grades are needed they need to be proposed at this time.

At all times maintain the safety of the employee and the customer. Insure the ability of the employee and his control of the situation.

On-Scene Guidelines

While most accidents and incidents involving hazardous materials can be prevented, chances are they still can and will occur. And if they do, your job at the scene is to keep people far away and communicate the hazards to emergency personnel. The best way to do this is:

Check to see that all persons involved are ok.

Take the shipping papers and emergency response information with you.

Keep people away from the scene.

Warn others of the dangers.

Contact your dispatcher for help.

Respiratory Protection Guides

All respiratory protective equipment has use limitations. The type of personal protective equipment we select is dependent upon the type of work performed. PPE equipment has been selected based upon OSHA Standard 1910.120 App C and D, conditions for PPE and discussion of the levels of protection rated A-D.

Waterline has chosen levels of protection rating C and D. Chemicals we delivers are not extremely hazardous and require minimum levels or protection. Our drivers shall have PPE available at all time during pump process.

When chemical deliveries are being made a PPE should be readily available if a chemical spill or incident occurs. This means that the safety mask shall **ONLY BE WORN when a chemical spill or release occurs.**
PSOC delivery drivers will be issued an 3M #7018S. This mask is rated for 10-PPM chlorine and shall only be used for small spill clean-ups. This mask is not a long-term chemical environment life-sustaining mask.
Mask must be available at all times during pumping process for lead driver and second man assistant. Both employees are to follow the same procedure. Hanging around the neck, attached to a belt case are the only approved methods.

PPE Equipment Provided Driver and Assistant
Chemical Resistant Jacket
Hard Hat with Face Shield
Chemical Splash Proof Goggles
Chemical Resistant Safety Gloves
Boots and or Steel Toe Shoes
Company Uniform

Each employee issued the 3M masks will be trained twice a year performing the following:

- Issuing of the mask
- Training for its use
- Conducting respirator face piece fit tests
- Conducting face piece seal fit checks
- Inspecting respirators
- Cleaning and sanitizing respirators
- Maintaining and repairing respirators
- Storing respirators
- Respirator limitations

- Medical surveillance

A record of each employee respirator test shall be filed in the employee-training file.

Safety Procedures

Upon employment each new employee/driver shall receive and acknowledge the company “Code of Safe Practices”, “Safety Information Form”, and be checked by the company Medical Center with the DMV/Drug Testing qualifications. Under no circumstances will the company allow a driver to begin work without the company safety policy understood.

Personal Protective Equipment will be provided and maintained for the employee.

New driver/employee will receive and sign the Concord Medical Group tile 49 CFR requirements relating to drug and alcohol testing. (See attached)

Driver’s qualifications will be checked and verified by the enforcing agency prior to any work started.

Checks as follows:

California Hiway Patrol Commercial Drivers License
California Hazardous Endorsement
California Commercial Medical Examination
Concord Medical Group Drug and Alcohol Testing
Personal Protective Gear Fitting and Operational Use
Emergency Response / Spill Training

DOT TANKER ENDORSEMENT AND DOT TOTE EXEMPTION STATUS MUST BE PROVIDED.

REGULATIONS REGARDING DELIVERY OF CLASS 8 HAZARDOUS MATERIALS MUST HAVE EXEMPTION STATUS AND DOCUMENTATION IN THE VEHICLE AT ALL TIMES.

ONLY IBC PORTABLE TOTES ALLOWED BY EXEMPTION DOT-E 11537 WILL BE ALLOWED TO DISCHARGE MATERIALS WHILE ONBOARD A MOTORIZED VEHICLE.

TANKERS, IBC TOTES, DRUMS, CARBOYS, CASES MUST HAVE LIKE NEW LABELS DESCRIBING HAZARDOUS CLASSES, UN IDENTIFICATION, CHEMICAL NAME.

California Code of Regulations, Title 22, Section 65529 has been recently amended to require labels on all bulk Sodium Hypochlorite and Hydrochloric Acid. An approved label must be affixed to each tank that clearly states use directions.

Food and Agricultural Code, Division 7, Chapter 2, Section12973; the use of any pesticide shall not conflict with labeling registered pursuant to this chapter.

Delivery Driver Guideline

It is the intention of this instruction to provide a guide for the delivery of bulk chemicals. At all times PSOC requires safe and efficient procedures in the operation of the tankers and related equipment associated with the delivery.

1. Insure truck is properly loaded and all chemicals are secured and ready for transport.
2. All on-board safety equipment is checked and ready for use.
3. Paperwork is properly checked and signed.
4. Determine safest route to customer.
5. Determine customer specific regulations.
6. Contact PSOC Emergency Response Team if needed to assist delivery. (Can be required by some customers that we provide a spotter to oversee delivery operation)
7. Upon arrival at location insure truck is properly parked and secured.
8. Set safety cones around the work area to insure customer safety.
9. Put on Safety equipment, face shield, rubber gloves.
10. Insure all hose connections are tight and insure hoses are secure.
11. Set truck safety air brake switch - is in the pump position, which will lockout the truck from moving.
12. If truck engine is required insure noise and emissions will not affect the customer location.
13. Prior to pumping chemical insure that the hose is properly connected to the proper tank being filled. Chlorine tanks are a PSOC male connection and acid is a PSOC female connection. All hoses not in use shall have plugs and caps to prevent any chemical leakage.
14. Under no circumstances will a bulk delivery be made without the driver's ability to see the truck and the tank with the same pair of eyes. This will require a spotter/PSOC Emergency Response Team member.
15. Determine the proper amount of chemical to be pumped into the customer tank.
16. Pump Chemical.
17. Upon completion insure all chemical is removed from hoses.
18. Drain hoses back to PSOC truck or into customer tank.
19. Cap and plug hoses and pump to prevent leakage.
20. Roll hoses back onto truck.
21. Insure no chemical spill has occurred.
22. Sign off paper work and travel to the next location.
23. Contact Dispatcher when delivery is complete.
24. Contact customer if required to leave the site.
25. Insure paperwork has been left with the proper office or field personnel.

Submittals

Material Safety Data Sheets
Upon customer request WTI will provide copies of all MSDS sheets for all chemicals provided to the customer. Hard Copy, electronic file or fax.

Regulatory training program components including certificates of completion for delivery personnel.

Title 8, 5192, HAZWOPER – Leaks, Spill, Accident Training
Title 8, 5144, Respiratory Protection – PPE Training
Title 8, 5194, Hazard Communication – Site Risk Assessment
DOT 49 CFR, Hazardous Material Notification / Placarding – DOT Classifications, Proper Placarding

Regulatory Federal DOT Training

Hazardous Materials Transportation / Operations Security / Risk Assessment

Hazardous Materials Security Plan (Site Specific)

Drug and Alcohol Awareness / Training – Supervisor

CAL OSHA Injury and Illness Prevention Program
Company Policy towards Injury and accidents.
Safety Procedures
PPE during delivery
Chemical Spill Response Procedures
Listing of safety and spill control equipment on Trucks

Truck Description – Pump Method to Measure product shipped

20 Foot Flatbed Tank Truck - 45,000 GVW - Dual Axle Freightliner

Trucks are leased from Penske Commercial Truck – 90 Day Safety Inspections

2,200 max Sodium Hypochlorite Gallons
550 max Hydrochloric Acid Gallons

Total Loaded Weight 45,000 lbs.

Truck Description – Pump Method to Measure product shipped

26 Foot Flatbed Tank Truck - 52,000 GVW - Dual Axle International

Trucks are leased from Penske Commercial Truck – 90 Day Safety Inspections

2,000 max Sodium Hypochlorite Gallons
550 max Hydrochloric Acid Gallons

Total Loaded Weight 52,000 lbs.

Pumping Method and Measurement

Each style truck is equipped with a PTO that provides power/air to drive a diaphragm pump. Each pump is designed to move material specified. Connections to each type of chemical tank are designed to eliminate cross connection.

The Vulcan measurement device is used to calculate amount shipped. Each truck bed has scales that weighs the entire load. Customer is billed using a calculation based upon the unloaded

weight. The insures an accurate charge. This weight is displayed in the truck cab.

Actual Bid Specifications:

The (agency name) is soliciting bids from qualified contractors for an ANNUAL CONTRACT FOR POOL CHEMICALS. Contractor shall furnish and use, at its own expense, all materials, tools, labor, equipment and transportation to provide the services specified herein. During the duration of the contract, the contractor, supplier of pool chemicals, shall meet the following requirements:

- Sodium Hypochlorite (bleach), 12.5% must be National Sanitary Foundation (NSF) rated/approved. Hydrochloric Acid must be 31% straight solution.
- Contractor must have EPA Registered Pesticide Bulk Repacking agreement with producer of Sodium Hypochlorite. A product label must be provided with EPA establishment number. A sample of the label, copy of repackaging agreement and proof of compliance to FIFRA section 3.
- No gas operated pumps. Only permanently mounted air pumps with a pressure relief valve shall be used. Measuring devise to be an electronic scale system, permanently mounted, to accurately measure delivered chemical. No exceptions.
- No metal fittings of any kind shall be used to off load the liquid chemicals.
- Contractor to submit Material Safety Data Sheets for delivered materials.
- Delivery Personnel Safety Training Requirements:

  Delivery personnel should be trained in accordance with all applicable regulatory requirements including but not limited to the following:
  - Cal OSHA Title 8, 5192, HAZWOPER
  - Cal OSHA Title 8, 5144, Respiratory Protection
  - Cal OSHA Title 8, 5194, Hazard Communication
  - DOT 49 CFR Subpart H, Hazardous Materials / Transportation / Site Security Plan
- Contractor shall submit regulatory training program including certificates of completion. DOT Required HazMatt and Site/Cargo Assessment Training is required and shall provide documented training.

- Contractor shall submit written Cal OSHA Injury and Illness Prevention Program (IIPP)
- Contractor shall submit written documentation on their training and certification program for all hazardous material employees. Refer to DOT CFR 49 171.8
- Contractor shall submit written delivery procedures which must include:
    - Safety Procedures
    - Personal protective equipment requirements including minimum PPE during delivery.
    - Chemical spill response procedures
    - Listing of safety and spill control equipment available on each truck.
- Contractor shall deliver all materials relating to this contract to locations specified by the district. Delivery personnel must be provided and utilize necessary personal protective equipment (PPE), tools, equipment necessary to make delivery.
- If IBC's are used for delivery contractor shall provide proof of listing of company name on current DOT exemption
- Contractor to provide proof of Cal-DOT truck service records; proof of last BIT Inspection, Drivers listed on Pull Notice Program, Drivers listed in Drug Testing Program, One year's proof of truck 90 PM Inspections.
- PPE equipment shall include, and not limited to, chemical suit, gloves, chemical resistant boots, goggles and face shield.
- Contractor to maintain bulk chemical tanks at least ¼ full. Weekly deliveries are desired by district.