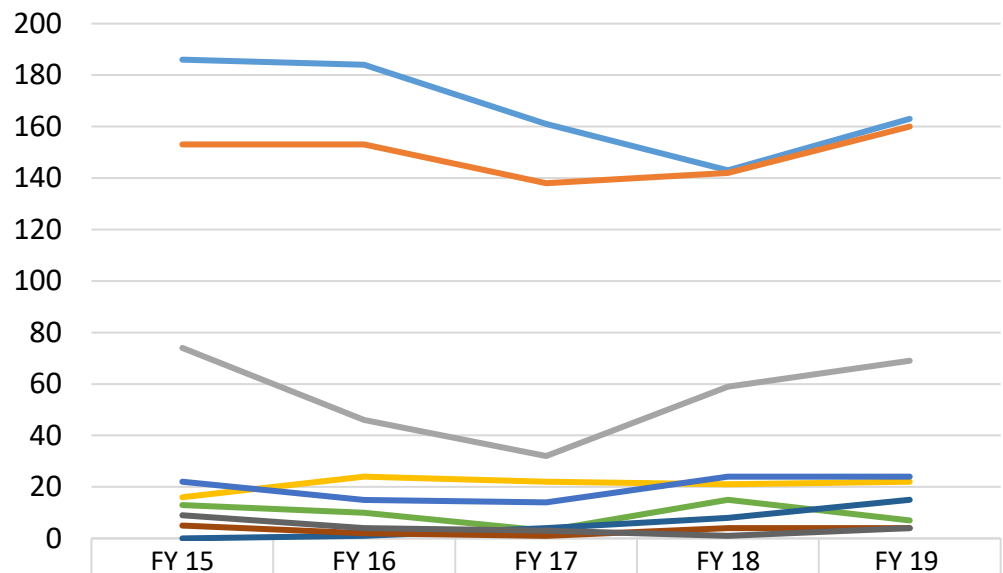


NAICS 325 Chemical Manufacturing

NAICS 325 encompasses a wide variety of chemical manufacturing operations from the making of petrochemicals to pharmaceuticals to paints and inks and photography chemicals. This flyer is an overall snapshot of the industry and the known incidents and areas that were cited by Federal OSHA in Fiscal Year (FY) 2019*.



NAICS 325 Federal OSHA Inspections FY 15 – FY 19*



	FY 15	FY 16	FY 17	FY 18	FY 19
Complaints	186	184	161	143	163
Referrals	153	153	138	142	160
Planned	74	46	32	59	69
Unprogrammed Related	16	24	22	21	22
Follow-Up	22	15	14	24	24
Fat/Cat	13	10	3	15	7
Monitoring	0	1	4	8	15
Programmed Related	5	2	1	4	4
Miscellaneous	9	4	3	1	4

- Complaints
- Referrals
- Planned
- Unprogrammed Related
- Follow-Up
- Fat/Cat
- Monitoring
- Programmed Related
- Miscellaneous

You can find OSHA Statistics and Data at: <https://www.osha.gov/data>

FY 19 Federal OSHA Most Frequently Cited Standards in NAICS 325

Standard	Cited	Description
1910.1200(h)(1)	36	Employers shall provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new chemical hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and safety data sheets.
1910.212(a)(1)	35	One or more methods of machine guarding shall be provided to protect the operator and other employees in the machine area from hazards such as those created by point of operation, ingoing nip points, rotating parts, flying chips and sparks. Examples of guarding methods are-barrier guards, two-hand tripping devices, electronic safety devices, etc.
1910.134(e)(1)	32	The employer shall provide a medical evaluation to determine the employee's ability to use a respirator, before the employee is fit tested or required to use the respirator in the workplace. The employer may discontinue an employee's medical evaluations when the employee is no longer required to use a respirator.
1910.1200(e)(1)	29	Employers shall develop, implement, and maintain at each workplace, a written hazard communication program which at least describes how the criteria specified in paragraphs (f), (g), and (h) of this section for labels and other forms of warning, safety data sheets, and employee information and training will be met, and which also includes the following...
1910.147(c)(4)(i)	26	Procedures shall be developed, documented and utilized for the control of potentially hazardous energy when employees are engaged in the activities covered by this section.
1910.134(c)(1)	22	In any workplace where respirators are necessary to protect the health of the employee or whenever respirators are required by the employer, the employer shall establish and implement a written respiratory protection program with worksite-specific procedures. The program shall be updated as necessary to reflect those changes in workplace conditions that affect respirator use...
1910.151(c)	18	Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.
1910.134(f)(2)	17	The employer shall ensure that an employee using a tight-fitting facepiece respirator is fit tested prior to initial use of the respirator, whenever a different respirator facepiece (size, style, model or make) is used, and at least annually thereafter.
1910.147(c)(6)(i)	17	The employer shall conduct a periodic inspection of the energy control procedure at least annually to ensure that the procedure and the requirements of this standard are being followed.
1910.132(a)	16	Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.
1910.147(c)(7)(i)	15	The employer shall provide training to ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees.

FY 19 Federal OSHA Most Frequently Cited PSM Standards in NAICS 325

Standard	Cited	Narrative
1910.119(j)(2)	12	The employer shall establish and implement written procedures to maintain the on-going integrity of process equipment.
1910.119(l)(1)	11	The employer shall establish and implement written procedures to manage changes (except for "replacements in kind") to process chemicals, technology, equipment, and procedures; and, changes to facilities that affect a covered process.
1910.119(j)(4)(i)	10	Inspections and tests shall be performed on process equipment.
1910.119(d)(3)(ii)	9	The employer shall document that equipment complies with recognized and generally accepted good engineering practices.
1910.119(d)(3)(i)(B)	8	Information pertaining to the equipment in the process shall include: Piping and instrument diagrams (P&ID's)
1910.119(d)(3)(i)(D)	8	Information pertaining to the equipment in the process shall include: Relief system design and design basis
1910.119(e)(3)(v)	6	The process hazard analysis shall address: Facility siting
1910.119(f)(4)	6	The employer shall develop and implement safe work practices to provide for the control of hazards during operations such as lockout/tagout; confined space entry; opening process equipment or piping; and control over entrance into a facility by maintenance, contractor, laboratory, or other support personnel. These safe work practices shall apply to employees and contractor employees.
1910.119(e)(1)	5	The employer shall perform an initial process hazard analysis (hazard evaluation) on processes covered by this standard. The process hazard analysis shall be appropriate to the complexity of the process and shall identify, evaluate, and control the hazards involved in the process. Employers shall determine and document the priority order for conducting process hazard analyses based on a rationale which includes such considerations as extent of the process hazards, number of potentially affected employees, age of the process, and operating history of the process. The process hazard analysis shall be conducted as soon as possible, but not later than the following schedule...
1910.119(e)(3)(i)	5	The process hazard analysis shall address: The hazards of the process
1910.119(f)(3)	5	The operating procedures shall be reviewed as often as necessary to assure that they reflect current operating practice, including changes that result from changes in process chemicals, technology, and equipment, and changes to facilities. The employer shall certify annually that these operating procedures are current and accurate.
1910.119(g)(1)(i)	5	Each employee presently involved in operating a process, and each employee before being involved in operating a newly assigned process, shall be trained in an overview of the process and in the operating procedures as specified in paragraph (f) of this section. The training shall include emphasis on the specific safety and health hazards, emergency operations including shutdown, and safe work practices applicable to the employee's job tasks.
1910.119(n)	5	Emergency planning and response. The employer shall establish and implement an emergency action plan for the entire plant in accordance with the provisions of 29 CFR 1910.38. In addition, the emergency action plan shall include procedures for handling small releases. Employers covered under this standard may also be subject to the hazardous waste and emergency response provisions contained in 29 CFR 1910.120 (a), (p) and (q).

FY 19 Estimated Fed OSHA Fatality Incidents Reported in NAICS 325 Narratives

Drowning

- Employee was driving to service an account. His truck stalled on a river crossing and he called 911 for assistance. Responders saw the employee trying to get out of his vehicle when the employee and his vehicle were swept away due to a water surge.

Explosion of vapors, gases, or liquids

- During the transfer of isobutylene an explosion and fire occurred which spread to a dry storage area. One employee was fatally injured and two other employees were airlifted to the hospital with thermal burns.

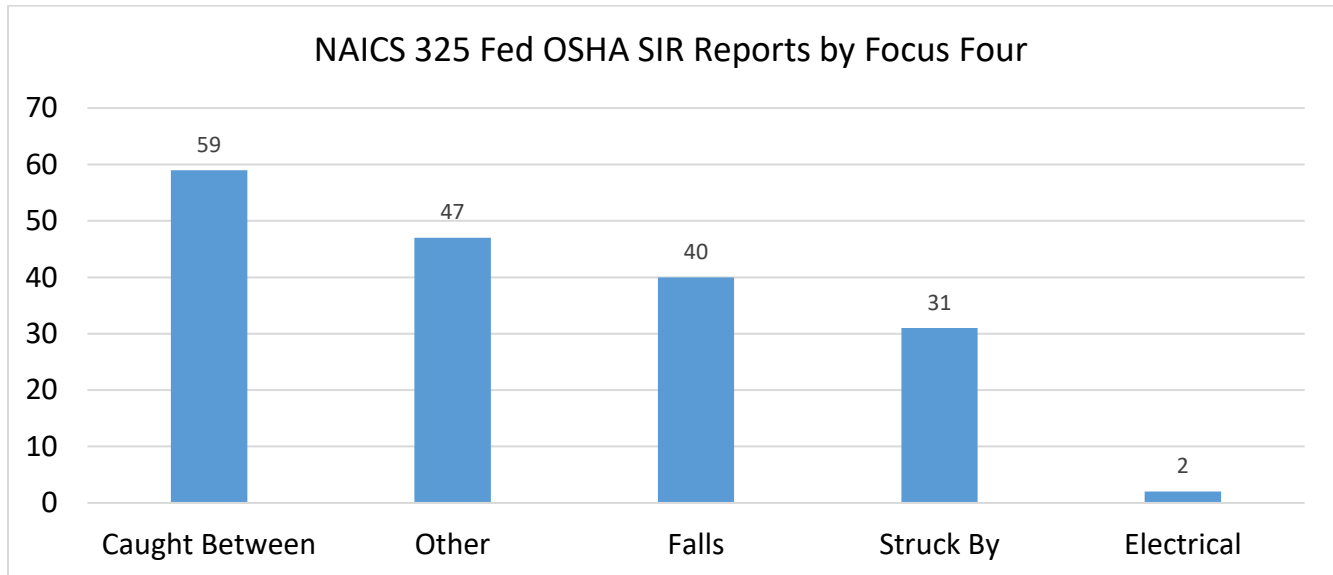
Falls lower level ladder

- The employee was found at the base of a ladder that was tipped over.

Struck by powered vehicle

- Two employees were working together in the shipping area loading a truck. One employee gave the truck driver an all clear sign and it is presumed the other employee was run over by the truck.

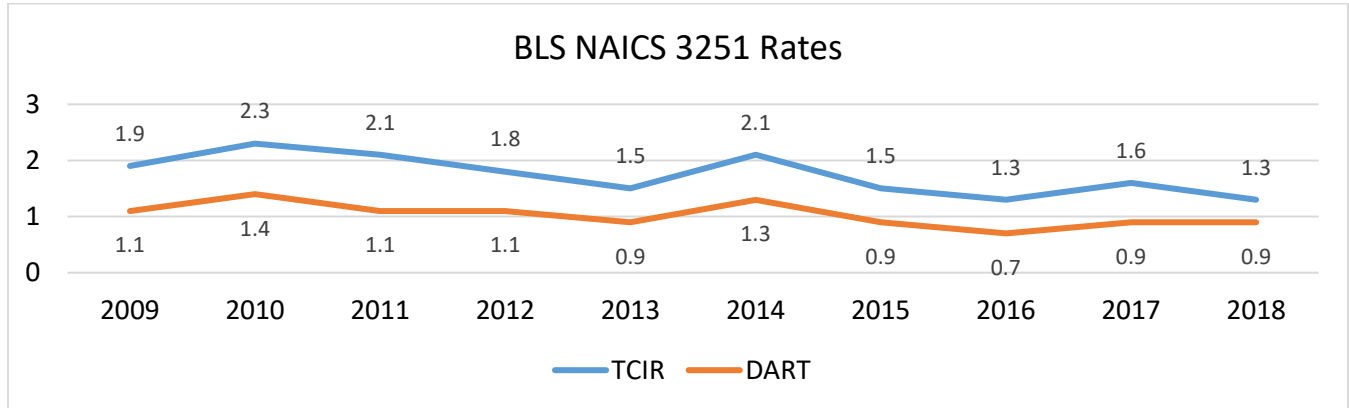
FY 19 Estimated Fed OSHA Serious Incident Reports (SIRs) Reported in NAICS 325



FY 19 Fed OSHA SIRs Reported by 4-Digit NAICS

NAICS	Description	SIRs
3251	Basic Chemical Manufacturing	57
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	34
3254	Pharmaceutical and Medicine Manufacturing	27
3255	Paint, Coating, and Adhesive Manufacturing	25
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	20
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	13
3259	Other Chemical Product and Preparation Manufacturing	3

NAICS 3251 Basic Chemical Manufacturing



FY 19 Fed OSHA Reported SIRs NAICS 3251

Body movement

- Employee aggravated a back condition while moving full drum from a scale to a pallet and was hospitalized.

Burns chemical

- Employee was exposed to HCl while transferring the chemical from one container to another when he removed the transfer line. The HCl sprayed the employee in the face causing burns and inhalation issues.
- Employee was using a 15' metal rod to clear aluminum chloride from a hopper into the reactor below. The aluminum chloride fell into the hopper and back pressure caused the aluminum chloride to explode up through the hopper and strike him in the upper chest and neck. He sustained third degree burns to his neck and upper chest.
- An employee disconnected a hose while the valve was open and the hose struck him and he got ammonium hydroxide on various parts of his body causing chemical burns.
- Employee was loading a truck and the bleeder valve was supposed to be closed and he opened the valve to load truck and was struck by hot and high ph chemical and received second degree burns in groin area.
- The employee was taking loose a hose from the rail car he was unloading and was splashed with 97% sulfuric acid causing chemical burns to his shoulder.
- Instrumentation technician was removing a temperature gauge from a piece of equipment when he was sprayed in the face with methoxypropylamine. He suffered chemical burns on his face and was hospitalized.
- Employee stepped over a pump and put his arm out to brace himself and came in contact with a valve that opened and sprayed sulfuric acid on him. He received chemical burns to his face/neck.

Burns hot liquids

- A process technician was doing his routine rounds checking equipment when hot condensate leaked onto him from a steam drum causing 1st and 2nd degree burns to his back and shoulder.
- A 400 degree liquid sprayed onto the employees' face, hand and chest while obtaining a sample from the sample port causing burns to his face, hand and chest.

Caught between moving objects or equipment

- Employee was checking a conveyor through an inspection port. He became off balanced and reached for support and instead placed left hand inside the inspection port. His hand was caught by part of the conveyor causing lacerations to top and bottom of hand.

- Employee partially amputated the tip of his left ring finger tip while dumping ashes from an ash dump box moved by a forklift. His finger was caught between the handle and ash box.

Caught between stationary and moving equipment or objects

- Employee was loading a truck and positioning a drum on a drum tipper apparatus by hand. The drum slipped through the straps and pinched the employee's hand causing a severe laceration of thumb.
- Employee connecting railcars had his right foot/ankle caught between railcar connection devices crushing it and resulting in surgical amputation.
- Employee unloading corn from dump-bin attached to skid-loader. He was standing at the back of dump-bin pushing upward to get it to dump contents. As he pushed up, his left hand was placed in between the fork and base of the dumpster. As he dumped the load, the base lifted up, shifted and came down onto the tip of his left finger. As he pulled his hand away, the fingertip and glove remained pinched under the dump-bin.

Caught between stationary equipment or objects

- Employee was wrapping product on a pallet on the pallet wrapping machine. He turned the machine off and he was at the bottom with the wrap. The pallet shifted and knocked the employee off balance. His thumb was pinched between the pallet and the machine and thumb tip amputated to the first knuckle.

Entangled in running equipment or machinery

- Employee was troubleshooting a pump that had a clog and stuck his finger into the pump and his finger tip was sheared off by the gears in the pump.
- Employee was operating a slab saw and her hand got caught in the blade and was severely damaged.
- Employee was operating a pelletizer machine. There was a blockage of plastic and the employee had his finger caught in the pelletizer feed causing an amputation to the middle finger.
- Employee was attempting to unclog salt that was damp from recent humid weather. The salt is added to process through 10" long pipe with rotary gate valve at end. His finger was caught in the rotary gate valve causing and amputation. Amputation
- Employee was clearing a jam in the machinery and lost the tip of his index finger.
- Employee was closing an access door at the bottom of a spray dryer and a rotary valve partially amputated three fingers on his left hand.
- An operator was monitoring the packing process and performing routine maintenance. His fingers were caught-in the seal side of the auto-packer equipment. He had only locked out the packing side of the equipment.
- Employees hand was caught in a roller mill while trying to clear it from being plugged. He suffered an amputation of two fingers and severe injury of two other fingers.
- Employee was conducting preventive maintenance and sustained an amputation to the right hand ring finger below the joint when it was pulled into the equipment/fly wheel.

Exposure to harmful substances

- An employee lifting a 5 gallon bucket of chemical was splashed in the face and upper body and was later hospitalized for decreased lung capacity due to an allergic reaction.
- Employee working at the control board was admitted for observation due to potential release and exposure to ethylene oxide.
- Three employees were exposed to a chlorine odor during the draining of a tank. One employee working in area replacing lines that had failed and was descending a stair case and was overcome by the chlorine vapors and was hospitalized.

- An employee suffered a heat related injury while walking throughout the unit checking valves and preparing the unit for start-up. He started feeling nauseous and fatigued and was taken to the hospital for a heat related injury.

Exposure to heat environmental

- The employee was overseeing a pipeline project. Dehydration
- Employee was working in the grease manufacturing area and became nauseated with cramping in legs and light headedness. He was taken to the hospital for dehydration.

Fall lower level moving vehicle

- Employee was riding on the end platform of a railcar and fell 4.5' to the ground breaking his ankle.
- Fall lower level nonmoving vehicle
- Employee was climbing down a ladder on the side of a tank truck when he lost his footing and fell to the ground approximately 7' fracturing both ankles.
- Employee stepped out of his truck to adjust a tarp and as he stepped out of his vehicle he slipped on the ice and fell to the ground breaking his left hip.

Fall lower level structure or equipment

- Employee was loading a tanker trailer and had walked across the gangway from the operator loading platform onto the tanker trailer that he was loading with liquid sodium aluminate. He did not notice that the gangway behind him had unlatched and raised up. He stepped backward and fell to the ground about 10' feet breaking his left forearm.
- Employee was standing on a trailer filling gas into a machine and tripped on the trailer falling to the ground hitting his head.
- Employee fell 28' from a second level platform to a lower level platform while tracing security camera conduit lines. While following the conduit line he did not look down to see that the swing gate was left open and he fell.
- Employee was climbing down from a portable man lift when the cage area he was holding onto collapsed and he fell about 6' to the floor.
- Employee fell off an 18' tank unit and hit the concrete floor fracturing his skull and five ribs.

Fall on same level

- Employee discarding trash in an outside dumpster slipped on the ice and fell fracturing his ribs.
- Employee was in the process of carrying a propane tank for a tow motor when he slipped and fell. The tank landed on his hand causing the finger bone to come through his skin.
- Employee slipped on the ice while walking toward the parking area resulting in a fractured right fibula and ankle.

Fall through surface

- Employee was walking from one floor to another to get his hose. While doing so he had to walk through the area where employees had stretched the hose through. When he was walking over a tank, the grating broke and he fell in the tank that had hot water and chemicals inside burning his left leg.

Fire

- Employee was blowing down acetylene bottles when the acetylene ignited burning his arms and legs.

- Employee was attempting to close valve and suffered burns when ethanol was ignited by welding sparks causing 2nd degree burns to both arms.
- Employee was closing an air hole with an insulation on a kiln when it surged and fire came out of the hole and burned the worker causing 3rd degree burns.

Insects, snakes, animals

- While changing clothes in the employee locker room an employee was bit by an insect (suspected spider) which became infected.

Struck by blade/knife/sharp object

- Employee was cutting a piece of block of ice. As he was cutting the ice with a band saw, the block jerked and drew the employee's hand into the saw amputating the tip of his left pinky finger tip.
- Employee was bagging material at the mixing station and attempted to clear a jam in the dust collector with a mallet using his right hand while bracing his body with left hand on the bottom edge of a rotary airlock resulting in amputation of the tip of the left middle finger.

Struck by falling object or equipment

- Employee was hit in the head with the side gate of his flatbed truck causing head trauma.
- Employee attempted to connect a rubber hose to a plastic tote that contained approximately 2,000 pounds of chemical resin. Another employee operating a forklift, lifted the chemical tote approximately 2' off the ground. As he went to connect the hose, the tote slipped off the forks of the forklift and struck the employee in the left lower leg causing him to fall to the ground. He was hospitalized and diagnosed with hematoma and cellulitis.
- Employee was cleaning out the palletizer machine when the noise dampening lid dropped on employee's right thumb after the shock absorber failed on the lid amputating his right thumb.

Struck by flying object

- Employee sustained crushing and fracture injuries when he put an adapter on a compressed gas cylinder and actuated it. The adapter failed during actuation and the cylinder struck the employee causing fracture injuries to the ribs and shoulder, and a head injury.

Struck by moving object or equipment

- An employee was attempting to hold a load-out hose when the valve opened releasing pressure striking his lower right leg breaking it.

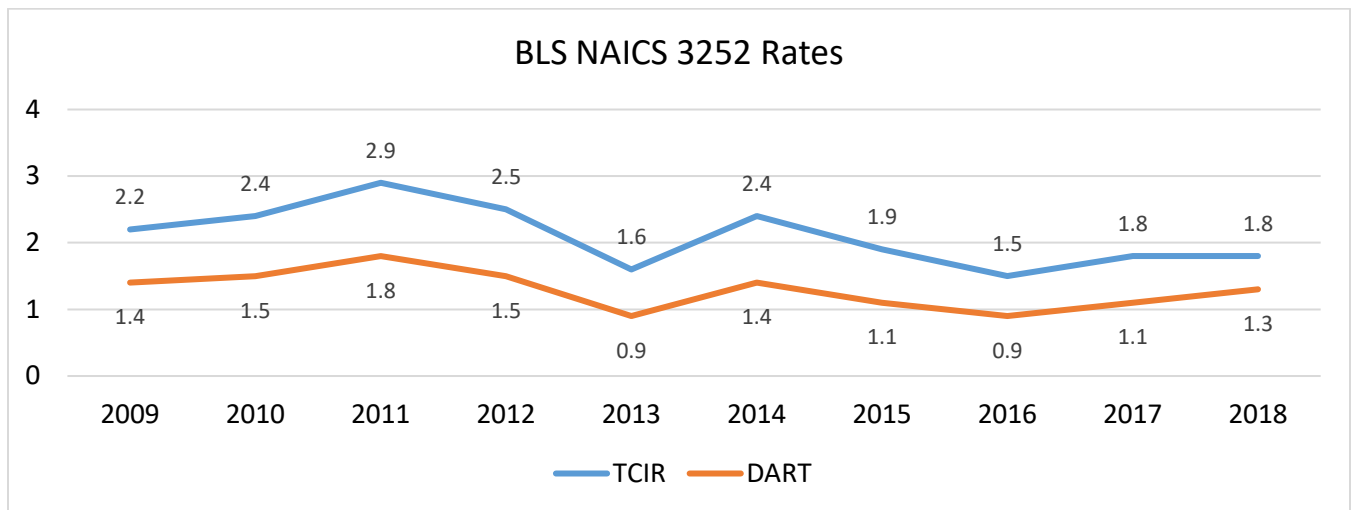
Struck by shifting load or equipment

- Employee was installing a piece of equipment which was being lifted by a mobile crane. The equipment shifted and struck the employee's hand injuring it.

Struck by swinging load or equipment

- Employee was stacking containers adjacent to the self-closing fire door. The door closed on his pinky finger which was resting on the wall near the door jamb causing an amputation injury.
- Employee using a hoist as part of the cleaning process of a reaction vessel. While moving the basket/screen that sits atop the vessel the hoist straps on the spreader bar were caught and sprang loose. He was struck in the face resulting in a laceration and a fracture of the maxillary and nasal spine bones.

NAICS 3252 Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing



FY 19 Fed OSHA Reported SIRs NAICS 3252

Body movement

- An employee lifted a box containing packaging materials from floor level to a cart at waist level. The box weighed 46 pounds. He experienced severe pain and taken to the hospital.
- An employee sustained a groin injury while attempting to close a leaking fire monitor using strenuous force.

Burns chemical

- Employee was off loading a trailer and disconnecting a hose. He lost control of the hose and the hose ripped his Tyvek suit. The chemical came in contact with his lower body causing third degree burns to the lower body.

Burns hot liquids

- Hot stretch bath - Employee was lowering product into hot water bath (95 degrees C) used to stretch fibers. There was a hole in his glove that caused hot water to get in and burn his left hand.
- Employee was assisting in the removal of monomer pump bowl when he was sprayed with hot monomer receiving 2nd degree burn to lower face.
- Employee was attempting to dislodge the blockage from a transfer line. The steam was shut off, but the pressure remained in the line. When the blockage was dislodged, resin (200 degrees Celsius) sprayed down into the drum and on his face and neck burning them.

Caught between stationary and moving equipment or objects

- Employee was handling a catalyst hoist and grabbed the pendant control to stop load from swinging. His finger was caught-in between the hoist and hand rail that resulted in a crushing injury to the tip (first joint) of the left pinky.
- Employee got his finger between the stamper head and base of a date code stamper. The employee was using a table top date code stamper to record information on cardboard packaging. The employee removed the plexi-glass face from the front of the stamp to move the date and got in the date stamp resulting in an amputation.

- Employee was adjusting a screw on an air puncher machine. The guard was removed, power not disconnected. While attempting to make a manual adjustment to the air puncher the machine was activated and pinched the tip of his 2nd finger amputating the tip.

Electric shock

- Employee was changing out a 277 VAC fluorescent light fixture to a new LED light fixture. As he was installing the wiring into the new light fixture he experienced a severe electrical shock holding him onto the circuit for several seconds before he could manage to free himself away from the electrical current. He suffered an electrical burn on the palm of his right hand and index and middle fingers and pain in the back and shoulder.

Entangled in running equipment or machinery

- An employee using a braider machine received an amputation.
- Employee was working on a plastic insertion machine and was hospitalized after the machine cycled on their right hand.
- Employee reached into a rotating roller on a laminator line to remove/loosen webbed product. The material caught the employee's finger causing an amputation to the left index finger to the 1st knuckle.
- Employee's hand was caught in 8" pelletizer while trying to clear out pellets. Employee removed two guards and did not lock out the machine. He reached his hand in to move two pellets and had his thumb, first finger and index finger amputated.
- Employee's hand was caught in a rubber calendar mill attempting to remove stuck rubber. He put the machine in reverse and stuck his hand in to remove the rubber. The machine has a very short reverse cycle, and as his hand was in the machine, it switched back to forward. His hand was caught between the rubber rollers causing an amputation.
- An employee suffered a hand injury when he slipped and fell while blowing down the conveyor and his hand was caught between two rollers.
- Employee was cleaning out the cyclone on a cryo line and opened the bottom chute of the cyclone located downstream of the mill take away and reach in to clear material. As he reach in, contact was made with the rotary air lock, amputating the middle, ring, and small finger of the right hand.
- Employee was conducting a product quality check and setup/start-up of a new machine and was injured when his left hand was caught between the conveyor roller and fibrillater amputating his left hand.

Exposure to harmful substances

- Employee was operating a fuel fired heater in an enclosed room when he passed out and struck his head. Possible CO overexposure.

Exposure to heat environmental

- Employee worked in a hot environment performing equipment cleanouts. He was hot and sweating prior to exiting the facility. While leaving exiting the facility after the shift ended he ran off the road and was found unresponsive and/or incoherent. He was hospitalized for a heat related illness.

Fall lower level ladder

- The employee had changed a gasket on top of the reactor and was descending on a fixed ladder from top of the reactor about 20' above the ground. At around 5' he slipped and fell off the ladder fracturing his L4 and compressing a disc.

Fall lower level nonmoving vehicle

- Employee was hospitalized after falling while exiting from a forklift.

Fall lower level stairs

- An employee fell down a set of stairs and was hospitalized for a dislocated shoulder and cracked ribs.

Fall lower level structure or equipment

- The employee was taking routine instrument readings from a boiler. The boiler is located inside a trailer. The boiler is equipped with blowdown piping that runs along the floor near the back end of the trailer. The back end of the trailer has a set of double doors that are normally closed but not barricaded. The doors are normally latched but the latch was not engaged. The employee took a step backwards, tripped over the blowdown piping, and fell backwards in the direction of the trailer double doors. He tried to grab something to catch himself from falling, but there was nothing to grab onto and he fell against the doors at the back end of the trailer, the doors swung open, and the employee fell out of the trailer. A 300-gallon plastic tote was outside the trailer beyond the doors and he landed on it fracturing two ribs and bruising his lung.

Fall on same level

- Employee was guiding irrigation piping onto spool and likely tripped and fell hitting their head on the equipment sustaining a concussion.

Struck by blade/knife/sharp object

- Employee was attempting to troubleshoot and repair a compressor blower in the rail yard and removed a filter using a wrench. He opened the doors and exposed the blower motor and pressed the emergency stop two times. He placed his left hand into the filter housing and his hand was exposed to the air intake shaft and his left hand middle finger tip came in contact with rotating rotors amputating the left middle finger tip.
- Temporary employee operating a band saw reached over the saw for a part and cut his left forearm.
- Employee was retrieving plastic film from the machine. When he pulled the film the cross blade lacerated/ amputated the tips of his left hand index and middle fingers.

Struck by falling object or equipment

- Employee was moving a torch cart when the cart fell, striking his leg, and pinning him on the concrete floor breaking his hip.
- Employee was assembling a mold and was holding the block with his left hand on the table and placing the mold on the top of the block with his right hand. The top section of the mold tipped over and crushed the employees left index finger on the table partially amputating it.
- A lid/grate came off the top of a portable cement mixer and struck the employees forehead causing a laceration just behind hairline.
- An employee was prepping a mold for the sand blaster and hooked the mold to a hoist. When he moved it, the mold broke the skid. The employee had his hand in the area and he suffered an amputation of the index finger on his left hand.

Struck by rolling object or equipment

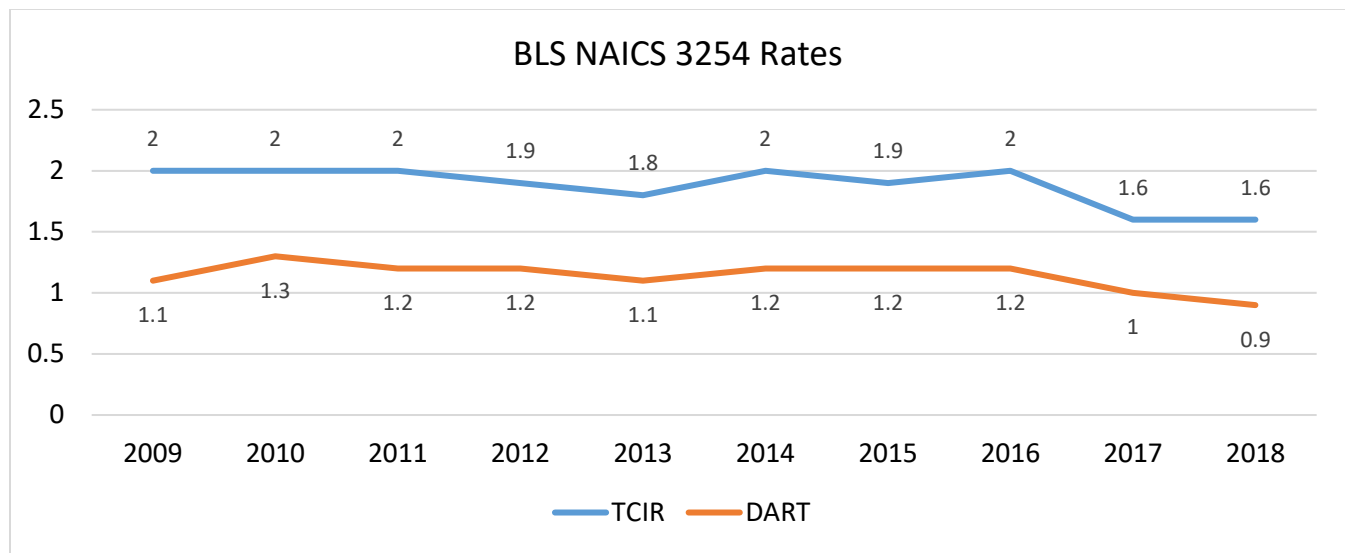
- Employee was attempting to remove a roll of finished film from the machine. He failed to follow proper procedures to remove the roll of film from the machine and used his thumb to release the air. When the air

was released the roll of plastic rolled back and pinched his thumb between the roll and the machine causing an open fracture to his right thumb.

Struck by tool

- Employee was using a ratchet to tighten banding to a cart when the ratchet slipped and came back and struck the employee on the left cheek and eye area. He sustained lacerations above and below the eye and fractures to facial bones and/or skull.

NAICS 3254 Pharmaceutical and Medicine Manufacturing



FY 19 Fed OSHA Reported SIRs NAICS 3254

Body movement

- Employee suffered a hernia while lifting a box of gloves.
- Employee was sitting at her desk. She stood up and misjudged where the overhead book shelf was and hit her head which caused a seizure from a pre-existing illness.
- Employee saw a 55-gallon drum of glycerin lying on the floor so he and another co-worker lifted it back in place. A few days later he was admitted to hospital due to an abdominal strain.

Burns hot liquids

- Shutting steam off to a fermentation vessel, a pH probe came out of the vessel fitting and water left through the port and flashed to water vapor at 109C causing burns to his torso and right arm.

Caught between moving objects or equipment

- Employee was working on a pump. He became unsure of which port on the pump was the outlet or inlet. The operator plugged the pump into the wall so that it was running without any of the hoses attached. He stuck his left index finger into the small hole where the hose would be attached in an attempt to determine whether the port was an inlet (suction) or outlet (air flowing out) and suffered a fingertip amputation.

Caught between stationary and moving equipment or objects

- Employee was installing a turret wheel on a tablet machine. While he was moving the machine into position he activated the machine and a punch came down on his right ring finger partially removing the nail.

- Employee was cleaning a hydraulic press in the blow-molding equipment. He received two fractures in the arm and five fractures in the hand and later the arm was amputated below the elbow.

Electric shock

- Employee was vacuuming and possibly received an electrical shock.

Entangled in running equipment or machinery

- The employee was cleaning parts of a tablet press when his right hand was caught between movable parts amputating part of his right middle fingertip.
- While adjusting a rotating table on a process line during a repair, the line mechanic caught the tip of his finger in the drive chain sprocket amputating it.
- Employee was cleaning the tablet compression machine and started to rotate the turrets and caught his fingers in the machine receiving an amputation to his right finger.
- Employee put his hand into the hopper of the screw feed and his hand got caught amputating the fingertip.
- Employee was in the process of disassembling a machine for cleaning and didn't turn the machine off. He had a towel and he placed the towel in the machine and it got sucked in along with the employee's hand. He sustained an amputation of the tip of the left index finger.
- Employee was greasing a chain on 5' blender when his hand was caught-in the chain and sprocket partially amputating three fingers on his right hand.

Fall lower level ladder

- A maintenance employee came in to perform preventative maintenance. While descending a 16' fixed ladder after replacing filters on a piece of equipment he slipped and fell about 6' off the ladder and received two fractures in his right arm and a spleen injury.
- Employee was climbing up an A-frame ladder and fell when the ladder slipped. Employee suffered a fracture back.
- Employee fell from a 3' step ladder while reaching outside the rails of the ladder to clean a machine and broke his ankle.
- Employee was using a portable ladder while changing ceiling tiles. As he was descending the ladder he lost his balance and fell to the floor suffering a laceration to the back of their head, several fractured ribs and a contusion to the right hip.

Fall lower level moving vehicle

- Electric pallet jack operator was injured when he jumped from the electric pallet jack after using the pallet jack plugging feature to change direction of the electric pallet jack from reverse to forward.

Fall lower level stairs

- Employee was walking from a building to the parking lot. He was walking up paver steps, and tripped, and fell up the steps suffering a fractured nose, laceration above the right eye, and pain in the left knee/neck/back.

Fall on same level

- Employee slipped on ice getting out of her car and sustained a fracture and torn ligament to her right foot.
- Employee was walking to his car after work and slipped on a patch of ice sustaining a dislocated ankle and two broken bones. Salt had been applied that morning to all walking surfaces.

Insects, snakes, animals

- Employee was bitten by a primate that she was working with which became infected.

Other/unknown

- Employer reported employee hospitalization.

Struck by

- A flight attendant was walking from a corporate aircraft to the operator's building when she walked into the wing of a small airplane lacerating her head next to the left eye resulting in five stitches and overnight hospitalization for observation. There was a designated pedestrian walking path, however, a nearby small aircraft was parked further down the asphalt and the tip of the right wing projected inside the walking path.

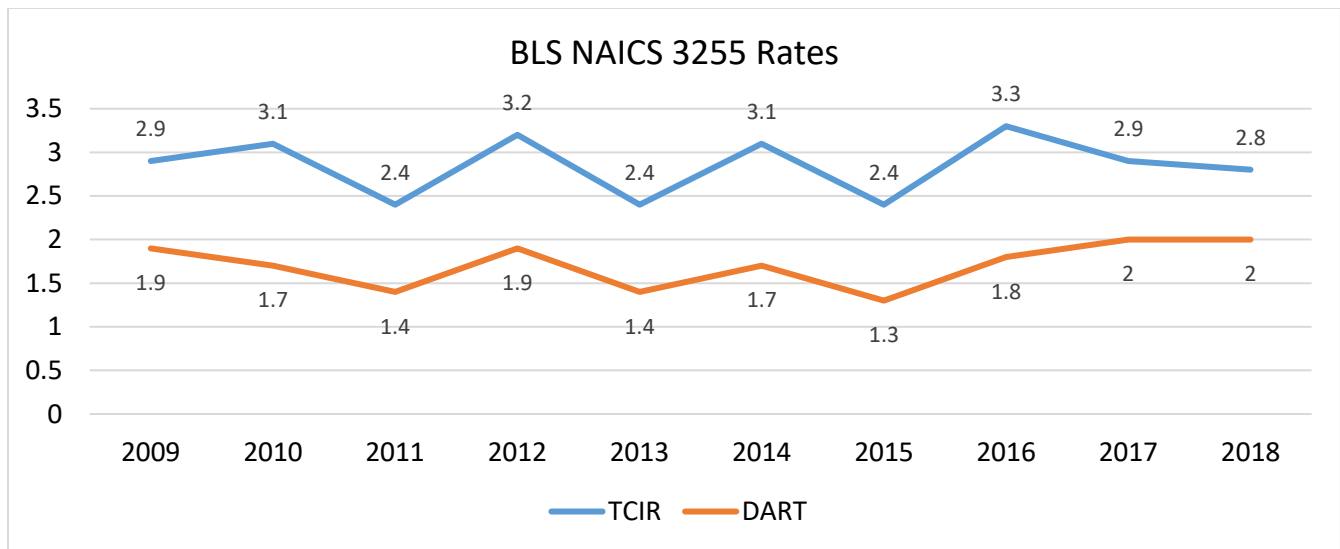
Struck by blade/knife/sharp object

- Employee was taking out the trash to the compactor when his right thumb contacted something sharp in the trash.

Struck by powered vehicle

- Employee was walking in the work place and their right foot was run over by a fork lift resulting in the amputating two toes.

NAICS 3255 Paint, Coating, and Adhesive Manufacturing



FY 19 Fed OSHA Reported SIRs NAICS 3255

Burns

- Employee was performing maintenance on a piece of equipment that was overheating. The equipment overheated and blew up burning his face, arm, hands, back of the neck, and hip.

Caught between

- Employee injured his right hand while attempting to clean out a key slot on a sifter shaft.

- A small batch line operator had her right first, second, and third fingers partially amputated.

Caught between stationary and moving equipment or objects

- Employee was training on an industrial truck and panicked, hitting a column and fracturing his left foot.
- An employee working on the case packer suffered a right pinky finger amputation when he activated a piston.

Entangled in running equipment or machinery

- Employee was performing maintenance adjusting tension on chain/belt. As employee removed lock out tag out (LOTO) he returned and energized machine to evaluate the machines proper operation. He rested his hand on top of the machine and his hand slipped into the unguarded chain area and caught his finger between the chain and sprocket. Employee received partial amputation to his left ring and middle finger.
- Employee suffered a finger crushing injury from an extruder auger.
- An employee was using an air nozzle to blow out a grinder was injured when the grinder energized and the shredding wheel pulled the nozzle and the employee's hand in towards the wheel amputating a finger.
- An employee was cleaning a slitter machine and a rag got caught on the rollers. He tried to release the rag and turned the speed up and his right hand got caught fracturing his thumb and degloving his hand.
- An employee was cleaning glue off of the pinch rollers that had a glue wrap up. He did not shut off or lock out the chopper. His left hand slipped and went into chopper and cut off the tips of his left middle and ring fingers.
- An employee was manually clearing a clog in a centrifuge machine which was shut down and locked down/tagged out. While clearing the clog he got his right middle and ring finger caught between the dryer mechanism and the centrifuge ripping the skin and meat off leaving the bone. The surgeon decided to remove the tip bone of the finger.

Exposure to harmful substances

- An employee was splashed in the face with caustic soda, resulting in some of the material getting in his eye.
- Employee was filling bags with dry paint and experienced difficulty breathing due to an allergic reaction.

Exposure to heat environmental

- Employee sweating profusely and came into the air-conditioned quality control lab to cool down. His supervisor came to him in the lab to discuss his situation and symptoms and he vomited then lost consciousness. The supervisor laid him on the floor and administered first aid while another supervisor called 911 and he was transported to local hospital for further evaluation and medical care for heat exhaustion.

Fall lower level ladder

- Employee was on a 12' A-frame ladder inspecting an air leak on a discharge pipe. As he was descending the ladder, he accidentally opened a release valve which released a powdered like substance onto his face. He lost his balance and he fell from the ladder to the ground breaking his ribs.

Fall lower level structure or equipment

- Employee was standing on a drum doing inventory in the finished goods warehouse and fell suffering 5 broken ribs, a collapsed left lung, a partially collapsed right lung.
- Employee fell into a ribbon blender resulting in a broken left leg.

Fall on same level

- Employee jumped over a fixture and fell receiving an open wound to their lower left leg.

Fall through surface

- Maintenance employee was preparing to replace a steel catwalk grate with a fiberglass grating. Employee was standing on the steel grate when the supporting bolts and/or grate gave way under his weight (300 lbs). Employee fell to the ground below and fractured his right ankle and heel. There was also a stack of steel grating weighing an approx. 630 pounds on the same working platform.

Fire

- Employee was filling a drum/tote on the production floor when an e-cigarette that was in his pocket caught on fire.

Infection

- Employee was using a nail gun to repair pallets and shot a nail into his knee. He was later hospitalized after the wound became infected.

Other/unknown

- No information

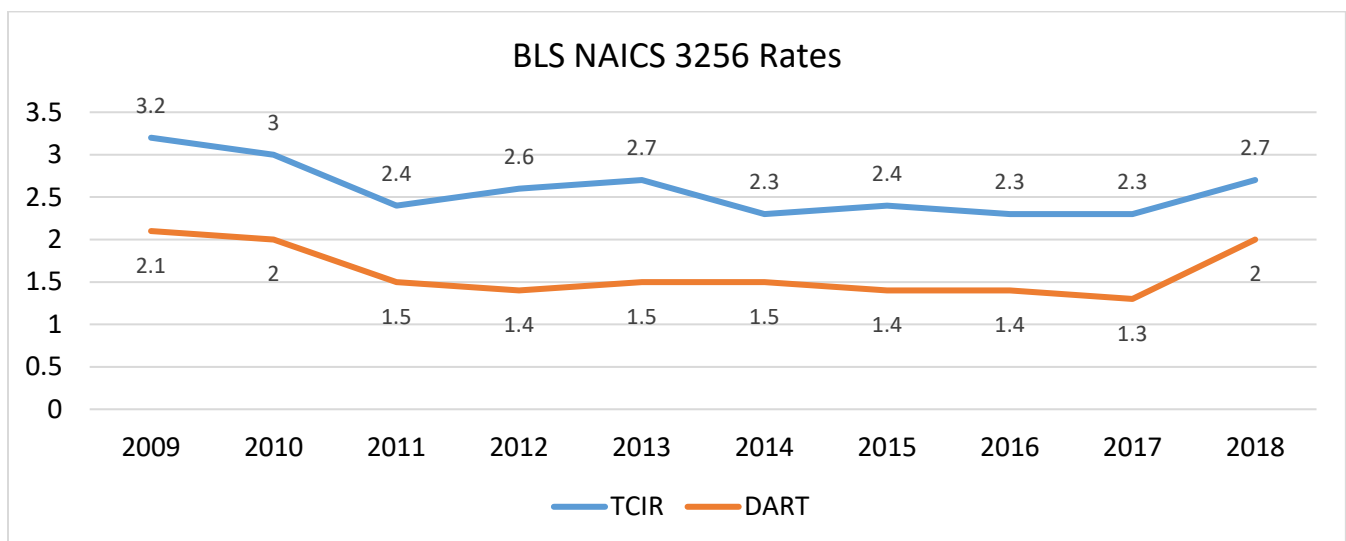
Struck by falling object or equipment

- Employee was maneuvering a large pump when a hose at the top of the pump hit the ceiling over causing the pump to tip over causing two fractures in his left ankle.
- Employee helping a forklift operator unload a metal bin filled with mill scale. As he was guiding the operator in, the load was lowered, and it slid off the forks and landed on his left index finger amputating the fingertip.

Struck by moving object or equipment

- Employee was kneeling down next to an empty tote when another employee operating a forklift came to lift up the tote and he was hit by the tote and injured.

NAICS 3256 Soap, Cleaning Compound, and Toilet Preparation Manufacturing



FY 19 Fed OSHA Reported SIRs NAICS 3256

Burns hot liquids

- Employee was filling a pot of hot glue and got his right hand in the glue causing burns.

Caught between

- An employee caught his wedding ring finger and wedding ring on a stationary J-Bolt on a hopper while climbing down a ladder causing a partial amputation of this finger.

Caught between stationary and moving equipment or objects

- Employee was changing a battery to a powered industrial truck and received a partial finger amputation when their finger got pinched between the lifting equipment and the battery.
- Employee was attempting to clear salt from an inductor. The system energized and caused a gate to close on his hand resulting in an amputation of the right ring finger to the nail.
- While trouble shooting a machine problem, a mechanic failed to lockout and place his right hand into a soap stamper. He accidentally brushed up against the actuator and caused the stamper to cycle, clamping down onto his right hand and wrist.
- The employee was using an industrial paper cutter to trim labels when he amputated the tip of his index finger on his left hand.
- Employee was driving a standup forklift and was coming down the main aisle to the break room for lunch. When he approached the area where empty forklifts are staged, he was traveling too fast and cut the corner to short. He stuck out his foot and it was smashed when he struck another parked forklift.

Entangled in running equipment or machinery

- On a packing line an employee opened a door to adjust a rail and his left hand was tangled in a chain and sprocket. Left hand injuries include index finger (tip amputated), middle finger (amputated to 2nd knuckle), ring finger (from tip to the nail bed amputation).
- Employee stuck his hand into the bottom gate of an industrial mixer screw conveyor which was clogged with product in an attempt to clean it out and get the material flowing again. The mixer/screw conveyor was running and its screw caught the employees left index finger resulting in the amputation to the first knuckle.
- Employee opened doors on a capping machine to make adjustments while it was running and his hand was inadvertently caught in the drive chain and sprocket injuring his right hand.
- An employee was operating the case packing machinery when her right index finger tip got caught in the machine and was amputated.
- Employee was repairing a discharge conveyor on the shrink wrap sealer. He attempted to catch the product coming off the conveyor when his fingers were caught between the conveyor and a metal bar under the conveyor amputating his left index finger.

Fall lower level stairs

- Employee was exiting the warehouse and slipped on some ice on the stairs injuring his back.

Fall on same level

- An employee was passing through the atrium area of the facility to another area when she tripped over a floor mat and fell to the floor. She experienced a concussion, wrist fracture, and possible vertebral compression.

- Employee was cleaning a pool cover and slipped and fell twice resulting in a back injury.
- Employee was standing at her work station doing spray bottle quality control when she turned around and fell fracturing her right leg.

Fire

- Employee cashed a petty check for the employer and was driving back to the employer's facility. He put the loose change in his pocket where he also had a back-up battery for a vapor pen. The battery reacted with the change causing the employees pants to catch on fire burning his leg and hands.

Injection

- Employee reached around a guard and the product injection needle injected product into her hand, wrist, and arm.

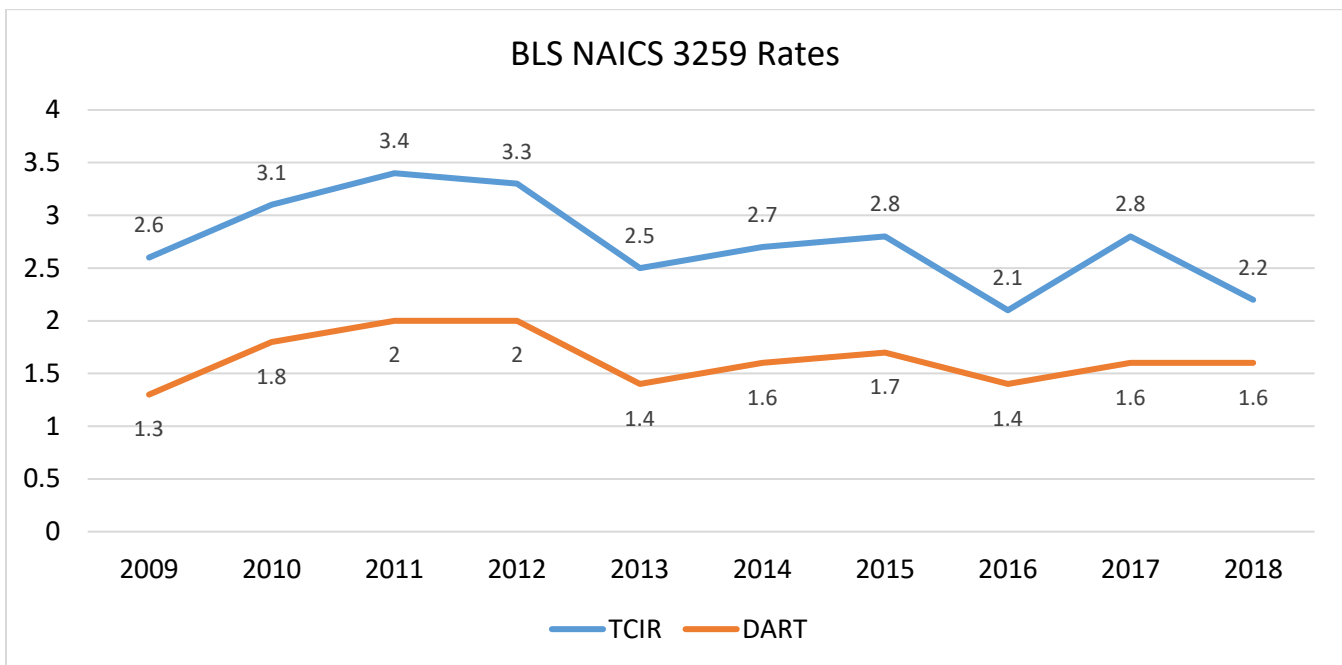
Struck by blade/knife/sharp object

- Employee was cleaning a double pouch sealant machine. His finger was caught in the blade and the tip of his finger was amputated.

Struck by falling object or equipment

- The two employees were operating a machine adjacent to storage totes stacked on each other. A storage tote fell approximately 16' striking the employees causing head and back injuries.

NAICS 3259 Other Chemical Product and Preparation Manufacturing



FY 19 Fed OSHA Reported SIRs NAICS 3259

Exposure to harmful substances

- A maintenance technician inhaled chlorine vapors when performing piping work on the wrong rail car and a chlorine gas release occurred.

Fall lower level ladder

- Employee was carrying a garden hose up a fixed ladder. The ladder had a swing gate located on the top. He grabbed the swing gate and it swung open causing him to lose balance and fall 8' - 10' the concrete floor fracturing his ankle.

Fire

- An employee was in the process of performing set-up procedure on the production equipment when some residual material ignited causing burns to his hands, back and forearm.

*Disclaimer: Preliminary information – Fatalities, catastrophes, and serious incidents are logged or recorded in various mediums and reports generated using various criteria. Late reporting, natural causes which may have generated an initial report, fatalities transferred to other jurisdictions and other many factors may affect the overall numbers over time. Reports and information generated from the Ois and the OSHA website may have different search criteria and parameters which may affect the results. The information is an “overview”, and is based on the information available. Fatalities/catastrophes and serious incidents under OSHA jurisdiction and may change over time as records are updated. Narratives are rewritten and edited and may not reflect the final results of an investigation. Motor vehicle incidents are not included. Workplace violence and sole proprietors are tracked separately (OSHA does not have jurisdiction over sole proprietors). The numbers and information are for accident prevention purposes and trending and is not intended to be a statistical study or evaluation. For questions contact OSHA Houston North, Jim Shelton, CAS, at shelton.james@dol.gov