

# Benchmark Electronics – Slug Discharge to the Storm Drain System

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# Benchmark Electronics – Background

- Company performing metal fabrication by way of lasers, welding, brazing, machining, and detailing
- Located in North Concord on Pike Lane



# Benchmark Electronics – What

- Slug discharge of Cimcool Cimperial 1070B Metalworking Fluid (coolant)
  - Used as a cutting tool coolant in the company's C-N-C Machines
  - 100% soluble in water
  - pH = 8.6
  - Not defined as a hazardous waste under RCRA
  - Coolant is mixed with water to a working strength of 2%
- Approximately 810-gallons of 2% coolant spilled
  - Estimated 255-gallons of coolant entered the storm drain

# Benchmark Electronics – Location



Coolant  
exited  
building  
here

Storm Drain Location (about 130 feet from exit point)

# Benchmark Electronics – When/How

- At approximately 1:45 AM on 10/19/2010, employee started to fill a 55-gallon drum with coolant to top off the C-N-C machines
- Standard procedures were not followed:
  - New coolant was used instead of recycled coolant
    - New coolant only to be used to replenish coolant recycling system
    - Recycled coolant pump equipped with momentary switch to prevent overfilling
    - Water source to new coolant mixing & fill valve does not have a handle to prevent improper use of new coolant
  - Employee used pliers to turn on water source to new coolant mixing & fill valve
  - Once drum started to fill, employee walked away, forgot about the filling drum, and then went home at the end of their shift

# Benchmark Electronics – Response

- Coolant spill discovered at approximately 4:45 AM
- Immediately stopped source
- Covered impacted storm drain with mat
- Created dam upstream of storm drain with absorbent socks
- Vacuumed up coolant with coolant recovery systems
- Put down loose absorbent materials for residuals
- Provided notification of slug discharge

# Benchmark Electronics – Notifications

- CCCSD – Treatment plant, Source Control, Inspector
- Contra Costa Hazardous Materials Programs
- City of Concord Public Works
- California State Emergency Management Agency (OES)
  - Contra Costa Environmental Health and Code Compliance
  - California Department of Fish and Game
  - U.S. Coast Guard

# Benchmark Electronics – Cleanup

- City of Concord Public Works
  - Two sewer cleaning crews dispatched to vacuum residuals out of downstream storm drain and flush the impacted storm drain line
- Absorbent materials used to pick up all residuals
  - Several storage sheds and containers were relocated to clean residuals under them
- Clearwater Environmental picked up all used absorbent materials and waste coolant
- CCCSD verified impacted area completely cleaned up the day after the spill



# Benchmark Electronics – Enforcement

- CCCSD issued Notice of Violation to Benchmark Electronics for a prohibited discharge
- City of Concord decided in lieu of a formal fine to pursue cost recovery for CCCSD's time, as well as the time and equipment of two city cleaning crews
  - Decision based on the company's response to the slug discharge (e.g. cleanup, notifications, timeliness)

# Benchmark Electronics – Prevention

- Padlock installed on water source valve to new coolant mixing & fill valve
  - Only 2 controlled keys for the padlock
- Increased employee training
- Possibly installing an audible alarm to notify of coolant spill
- Possibly installing berms at exit points to coolant recycling room

# Benchmark Electronics – Slug Discharge

Questions?

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