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CONTRA COSTA
 HAZARDOUS
 MATERIALS PROGRAMS

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 ccchazmat@hdsd.cccounty.us
 www.cchealth.org/hazmat/

COMPLAINT, INCIDENT, AND NOTIFICATION REPORT FORM

Type (Circle One): C I N

CASE NUMBER: 180912 - 01

Received Date: 09/12/18 Received Time: 05:08 Received By: TAJ Lead: TAJ
 Incident Date: 09/12/18 Incident Time: Assigned to: Assigned Date:

COMPLAINANT / REPORTING PARTY:
 Name: Sheriff's Dispatch/MOFD Capt. Constanza RP is from Facility Anonymous
 Organization:
 Primary Phone Number: (925) 646-2441 Secondary Phone Number:
 Email:
 Address:
 City: State: Zip Code:

FACILITY / LOCATION OF INCIDENT:
 Name: Orinda Country Club CUPA Facility I.D.: 770912
 Phone Number:
 Address: 315 Camino Sobrante Unit:
 City: Orinda State: CA Zip Code: 94563
 Location Description: Country club

INITIAL INCIDENT DESCRIPTION:
 Accidental mixing of muriatic acid with sodium hypochlorite (bleach) by pool chemical delivery personnel, causing chlorine release

INCIDENT TYPE / DESCRIPTION: 0 1 2 3
 Community Warning System Level (Circle Highest Level): N/A 0 1 2 3

FACILITY	ISO / MCAR	TRANSPORTATION	MISCELLANEOUS
<input type="checkbox"/> Fire or Explosion	<input type="checkbox"/> Fatality (one or more)	<input type="checkbox"/> Tank Truck	<input type="checkbox"/> Storm Drain/Creek
<input type="checkbox"/> Spill or Release	<input type="checkbox"/> > 24 hrs. Hospital, 3 or more people	<input type="checkbox"/> Railroad	<input type="checkbox"/> Drug Lab
<input type="checkbox"/> Startup or Shutdown	<input type="checkbox"/> Flammable Vapor Cloud > 5,000 lbs.	<input type="checkbox"/> On Water	<input type="checkbox"/> Disposal/Abandonment
<input type="checkbox"/> Flaring		<input type="checkbox"/> Pipeline	<input type="checkbox"/> Odor Complaint
<input type="checkbox"/> Upset		<input type="checkbox"/> Fuel Tank	<input type="checkbox"/> Other:

Time Enroute to Scene: Time Arrived On Scene: Time Departed From Scene:

REFERRED TO OTHER AGENCY:



DTSC STATE FUNDING (if applicable):

CLU/ERER Number:

STORMWATER STATUS (if applicable): Actual Discharge Potential Discharge**AGENCIES ON SCENE OR NOTIFIED:**

<u>Agency Type</u>	<u>Agency</u>	<u>O/N</u>	<u>Contact Person</u>	<u>Phone Number</u>	<u>Case Number</u>
Fire Department					
Law Enforcement					
Air District					
State OES	State Warning Center	N		(800) 852-7550	18-6182

REPORT:

See attached report narrative.

Additional Required Items: Bill of Lading, Request for Invoice, and Site Safety Plan

Trisha A. Johnson 9/25/2018

Report Prepared by: _____



[EXTERNAL] Hazardous Materials Spill Report: Cal OES Control #:18-6182
Warning Center to: ccchazmat

09/12/2018 09:22 AM

Governor's Office of Emergency Services
Hazardous Materials Spill Report

DATE: 09/12/2018 | RECEIVED BY Cal OES: Sarah Murdock | Cal OES
CNTRL #:18-6182
TIME: 0910 | RECEIVED BY OSPR: | NRC#:

1.a. PERSON NOTIFYING Cal OES

1. NAME: Trisha Johnson | 2. AGENCY: Contra Costa County
Hazmat
3. PHONE #: 925-250-6569 | 4. EXT: | 5. PAGER #:

1.b. PERSON REPORTING SPILL (If different from above):

1. NAME: | 2. AGENCY:
3. PHONE #: | 4. EXT: | 5. PAGER #:

2. SUBSTANCE TYPE:

a. SUBSTANCE: / b.QTY: / Amount / Measure / c. TYPE / d. OTHER / e.
PIPELINE / f. Vessel Over => 300 tons

1. Chlorine / = / unk / Gal(s) / CHEMICAL / / No / No

2.

3.

g. DESCRIPTION: Caller states a mixture of muriatic acid and 150 gallons of bleach has caused an ongoing release of chlorine gas to the atmosphere. The pool is shut down. No evacuations at this time, patrons and employees are being kept away from the pool area. Fire Department is onscene. Removal of the chemicals from the tank are being coordinated.

h. CONTAINED: Contained | i. WATER INVOLVED: No
j. WATERWAY: | k. DRINKING WATER IMPACTED: No
l. KNOWN IMPACT: None

3.a. INCIDENT LOCATION: 315 Camino Sobrante

b. CITY: Orinda | c. COUNTY: Contra Costa County | d. ZIP:

4. INCIDENT DESCRIPTION:

a. DATE: 9/12/2018 | b. TIME(Military): 0500 | c. SITE: Other |
d. CAUSE: Human Error

e. INJURIES: No | f. FATALITY: No | g. EVACUATIONS: No | h.
CLEANUP BY: Responsible Party

e. INJURIES #: | f. FATALS #: | g. EVACS #:

5. SUSPECTED RESPONSIBLE PARTY:

a. NAME: | b. AGENCY: Hasa Pool Chemicals
c. PHONE#: | d. EXT:
e. MAIL ADDRESS:
f. CITY: | g. STATE: CA | h. ZIP:

6. NOTIFICATION INFORMATION:

a. ON SCENE: Fire Dept., Police Dept. | b. OTHER ON SCENE: Orinda
Public Works

c. OTHER NOTIFIED:

d. ADMIN. AGENCY: Contra Costa County Health Services Department

e. SEC. AGENCY:

f. ADDITIONAL COUNTY:

g. ADMIN. AGENCY:

h. NOTIFICATION LIST: DOG Unit: | RWQCB Unit: 2

AA/CUPA, DTSC, RWQCB, US EPA, USFWS, AIR RESOURCES BD, Co/E-Hlth

CONFIDENTIAL REMARKS:

Created by Warning Center on 9/12/2018 9:10:18 AM Last
Modified by Warning Center on 9/12/2018 9:21:00 AM

California State Warning Center
Governor's Office Emergency Services
Phone: (916) 845-8911
Warning.Center@oes.ca.gov

Link to Spill Report:

https://urldefense.proofpoint.com/v2/url?u=http-3A_w3.calema.ca.gov_operation_al_malhaz.nsf_SpillAllDocs_00274D8113F2D861882583060058D5A7-3F0penDocument&d=DwIBAg&c=RpR9LiQNIoGO8A8CMgA1NQ&r=S0jS0A081QNgB4a-k_X9SD1TTubB3usfrG7WkczC2Lg&m=EyFl81iob8f2TgYG5BVallbPM-QWQ63CjLO8UvjwoYY&s=xn6HobUNA3AGKgR3wsfLhbSGOQRioW4cyzcQRbPXWHU&e=



CONTRA COSTA
HEALTH SERVICES

INCIDENT REPORT
September 26, 2018

INCIDENT NO. 180912-01

INCIDENT DATE: September 12, 2018

LOCATION: Orinda Country Club
315 Camino Sobrante
Orinda, CA 94563
Site ID No. 770912

SUMMARY

At 05:08, CCHSHMP received a Contra Costa County Sheriff's Dispatch notification. Per Dispatch, Capt. Jared Constanza of Moraga-Orinda Fire Department (MOFD) requested a callback from County Haz Mat regarding a chlorine release at the Orinda Country Club (OCC) due to an accidental mixing of 15-20 gallons of muriatic acid to a 200-gallon sodium hypochlorite tank during a pool chemical delivery. Capt. Constanza and Haz Mat on-call lead Trisha Johnson discussed "next steps."

When the pool chemical delivery personnel realized their mistake, they donned respiratory protective gear (initially, report as N-95 respirators, but later determined to be dust masks), shut off the transfer at the pump, and called 9-1-1. MOFD sent an engine company to the scene. In addition to the two pool chemical delivery personnel, there may have been an additional 3-4 people in the area, assumed to be OCC personnel that had evacuated the scene. The evacuees did not request for medical assistance when asked by MOFD.

The initial thought for mitigation was to have the pool chemical delivery company bring an extra tote to remove the reacting mixture inside the sodium hypochlorite tank. With the lack of proper personal protective equipment (PPE) available to the pool chemical company personnel, and the continuing risk of further chlorine releases while mitigating, County Haz Mat made the decision to call out the team to respond to the incident.

Command

The Incident Command Post (ICP) was established approximately 200-300 feet uphill from the pool house with the chemical tanks at the club's parking lot. This demarcation was made as the initial isolation distance from the release when MOFD arrived on scene. There were strong chlorine odors experienced at the arrival of the engine company. The Incident Commander would be Capt. Constanza.

Site Access Control

Orinda Police Department initially had a police officer staged at El Ribero to restrict road and pedestrian access to the OCC parking lot. The police officer was replaced by city Public Works, and then eventually OCC personnel. County Haz Mat asked that the parking lot entrance be cordoned off to restrict vehicular traffic through the command post; however, they had an OCC employee, Walter, meter access by limiting patrons to pedestrian traffic, and vehicular traffic to essential delivery/postal vehicles. M. Hagen led site access control/scene security efforts for the Haz Mat Group.



Haz Mat Group Operations

During the course of the 12-hour operational period, the Haz Mat Group performed downwind community air monitoring and multiple entries into the exclusion zone to mitigate the release. The number of Haz Mat Team members on site went from the initial six (6) team members from September 11 to an additional six (6) team members for a total of twelve (12) team members on site.

The Haz Mat Group consisted of the following:

- Haz Mat Group Supervisor – Trisha Johnson
- Assistant Safety Officer (ASO) – Amanda Ackerman
- Technical Reference Specialist (Tech Ref) – Adam Springer/Amanda Ackerman
- Entry Team Leader – Karine Abramians
- Decon Team Leader – Melissa Hagen/Nick Umemoto; MOFD conducted gross decon for the first entry
- Site Access Control – Melissa Hagen
- Entry Team/Back-up Personnel – Ellen Dempsey, Maria Duazo, David LeCount, John Pham, Adam Springer, Daniel Vazquez, and Ian Williams
- Community air monitoring – Amanda Ackerman and Melissa Hagen

Community Air Monitoring. The question was posed to the Haz Mat Group regarding issuance of public protective actions for the community surrounding OCC. When HM1 arrived on scene, A. Ackerman and M. Hagen used chlorine badges to monitor the perimeter outside of OCC for the presence of chlorine. Per their assessment, an evacuation or a shelter-in-place were not warranted as the level of chlorine per the chlorine badge was non-existent or minimal that it did not pose adverse community impacts. There were more nuisance odors, as the detectable odor threshold for chlorine is 0.002 ppm. Later in the morning, M. Hagen was dispatched to the golf course to check on odors and chlorine. There were slight odors near the putting green. Access from the golf course to the pool was cordoned off with caution tape.

Entries. Haz Mat Group Supervisor, ASO, and Tech Ref discussed on whether the entry/back-up teams should wear Level A or B and SCBA. Level B was selected as appropriate as it was an outdoor release and that there was no continuous release of chlorine. Prior to each entry, pre-entry safety briefings were conducted. Decon was set up at the top of the hill near the ICP, which involved gross decon (deluge of water) followed by pH of the deconned personnel. MOFD had performed decon for the first entry. For subsequent entries,

The ultimate objective for the multiple entries described below was to transfer all reacted liquid mixture into the pool. The team conducted a total of five (5) entries:

1. Disconnecting Hoses/Submersible Pump

Objective(s): To disconnect hoses from truck to pump and pump to sodium hypochlorite tank and residual liquid in hoses; and placing a submersible pump into the sodium hypochlorite tank to transfer the reacting liquid mixture into the pool through approximately 150-200 feet of garden hose.

Personnel:

Entry – Vazquez and Williams

Back-up – Springer and Duazo (Entry Link)

Note(s): At one point, Entry Team chlorine badge hit 50 ppm (IDLH for chlorine is 10 ppm) near the pool house. Residual liquid in the hoses were also placed in the 55-gallon drums.

2. Verifying Submersible Pump Functioning/Chlorine at the Pool

Objective(s): Check on the status of the submersible pump, if it is moving liquid from tank to pool and to get chlorine readings at the pool.

Personnel: Springer, Vazquez, and Williams

Note(s): This was an unofficial "entry." It was observed that the pump was not working and had to be "reset" to restore proper functioning. While personnel wore chlorine badges, no PPE was worn. Williams was stung three (3) times by hornets while working on the hoses near the pool house. Alarms from the chlorine badges were heard by ASO; she reported this to Haz mat Group Supervisor.

3. Failure of Hoses to Pool/Transfer to Drums

Objective(s): Switch transfer from tank to pool to tank to 55-gallon drums; contents of filled 55-gallon drum would be taken to the pool.

Personnel:

Entry – LeCount, Dempsey

Back-up – Springer, Pham

Note(s): Numerous feet of hose had failed due to the corrosive nature of the muriatic acid and were replaced; one full 55-gallon drum was wheeled to the pool where contents were dumped. Chlorine readings had been up and down, but were steadily declining.

4. Filling of 2nd 55-gallon Drum

Objective(s): Ensure completed pumping of remaining liquid in sodium hypochlorite tank and dump contents of drum into pool.

Personnel:

Entry – LeCount, Springer

Back-up – Dempsey, Williams

Note(s): There were only 3 inches left of liquid inside the tank, which the pump could no longer pump out. Water was used to rinse the tank and remove the last of the 3 inches of the reacted mixture. The contents of the second drum was emptied into the pool.

5. Clearing Pool for Entry for CCEH to Check Pool Chemistry

Objective(s): Take readings at pool to assess if it is safe for CCEH to assess pool chemistry.

Personnel:

Entry – Williams

Back-up – Dempsey

Note(s): The team confirmed 0 ppm at the exclusion zone (pool house) and pool. CCEH was cleared to do their analysis at the pool. CCEH was accompanied by LeCount and Vazquez.

Refer to Attachment F for the ICS 208 forms and Briefing Notes from Entries #1 and #3.

Cause of Release

Haz Mat would learn later the alleged reason for the release is the accidental mixing of the muriatic acid into the sodium hypochlorite tank which had approximately 150-200 gallons inside; essentially human error. The pool chemical delivery personnel had correctly connected the hose from the pump to the sodium hypochlorite tank; however, it was the hose connected to the pump from the delivery truck that was erroneous in that it was connected to the muriatic acid tank. As the transfer began, the delivery personnel knew immediately the mistake that was made as the introduction of the muriatic acid into the sodium hypochlorite caused the resultant chlorine gas release. The two operators donned their dust masks and evacuated the area to call 9-1-1.

Post-Entry

Earlier in the day, Johnson requested from Assistant Director Steve Morioka the presence of a registered Environmental Health Specialist (REHS) from Contra Costa Environmental Health (CCEH) to check on the pool chemistry and determine a need to close the pool. REHS Muizz Mohammed arrived on scene at 11:17. CCEH was not able to do their analyses until County Haz Mat had ensured

that it was safe for CCEH to proceed. This occurred at 15:20. Per CCEH, the result of the pool chemistry tests (taken at numerous spots around the 287,000-gallon capacity pool) showed free chlorine at 2.5 ppm and pH 7. Though these results did not necessarily demonstrate cause for a pool closure, CCEH closed the pool due to the fact that the facility had no reserve sodium hypochlorite. The pool would be reopened when there is a sodium hypochlorite delivery for the pool system.

TIMELINE

Refer to Attachment C for the incident timeline.

ATTACHMENT(S)

- A. Incident Report Form #180912-01
- B. CalOES Report #18-6182
- C. Incident Timeline
- D. Tech Ref Notes: Stoichiometry for mixture of muriatic acid (HCl) and sodium hypochlorite (NaClO)
- E. PowerPoint Presentation on Orinda Country Club presented at 9/21/2018 Safety Summit (with permission to include in report from Amanda Ackerman); includes incident photographs and maps
- F. Site Safety and Control Plans (ICS 208 HM) and Pre-Entry Briefing Notes for Entries #1 and #3
- G. Invoice Request Form

**REPORT
PREPARED BY:**



Trisha A. Johnson, Hazardous Materials Specialist II
Contra Costa Health Services Hazardous Materials Programs (CCHSHMP)