

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Arthur A. Richards Junior High School Odor Incident - Removal Polrep
Initial Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region II

Subject: POLREP #1
Initial POLREP
Arthur A. Richards Junior High School Odor Incident
A29E
Fredricksted, VI
Latitude: 17.6915988 Longitude: -64.8802543

To: Shawna Hoppe, EPA

From: Carlos Huertas, OSC

Date: 11/19/2019

Reporting Period: 11/7/2019 - 11/15/2019

1. Introduction

1.1 Background

Site Number:	A29E	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Emergency
Response Lead:	EPA	Incident Category:	
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	11/4/2019	Start Date:	11/4/2019
Demob Date:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Emergency Response

1.1.2 Site Description

The Site consists of a Middle School (K-8) compound made up of approximately 45 prefabricated modular classrooms, cafeteria, administration building and gymnasium. This facility was erected in April 2019 to replace temporarily the original school structure impacted by Hurricanes Irma and Maria. School is occupied from Monday through Friday by approximately 500 people (students and staff).

1.1.2.1 Location

Arthur A. Richards Junior High School

20&21 Estate Stoney Ground Fredricksted, St. Croix USVI, VI 00840

1.1.2.2 Description of Threat

The Virgin Island Department of Planning and Natural Resources (DPNR) requested the assistance of the Environmental Protection Agency (EPA) Region 2 in determining the cause of an odor at the Arthur A. Richards Junior High School (AAA) in Frederiksted on the island of St. Croix. On October 31, 2019, the school was closed after several people, including students and staff, experienced nausea, headache, stomachache and vomiting. The Virgin Islands Department of Education (VIDE) decided not to reopen that school. According to VIDE, a blocked sewer line near one of the classrooms was repaired on October 26, 2019 after the closure of the faculty restroom.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA was tasked to perform air monitoring at and around the impacted classrooms and surrounding areas to potentially identify compounds and sources of those compounds impacting the students, faculty and support staff.

EPA Region 2 and EPA's Environmental Response Team (ERT) targeted screening and sampling of the rooms and areas based on documents received from the DPNR, the school nurse, other school officials, as well as, discussion in the field.

The EPA team was equipped with monitors that can detect volatile organic compounds (VOCs), and a variety of other compounds that included sulfur dioxide (SO₂), hydrogen sulfide (H₂S), amines (such as

trimethylamine (TMA)), carbon monoxide (CO), Lower Explosive Limit (LEL), oxygen, and mineral acids (such as hydrochloric acid (HCl)). The sensors/monitors were chosen based on the potential impact from the following sources: sewer gases, the on-Site wastewater treatment plant and associated lines/pipes, building materials, and odors described in documents provided to EPA.

EPA ERT and their contractor began monitoring on Tuesday, November 5, 2019. Air monitoring surveys were conducted in 15 rooms/classrooms, plus ambient locations around the complex, wastewater treatment plant, sewer/manholes, and under the modular buildings/skirting. On November 6th the team screened for TMA in one additional room, two storm sewer locations, room 237 (rescreen), and at ambient locations. The detailed air monitoring data for each room can be found ERT's Air monitoring Work Sheet.

The school classrooms are modular style structures with four single units combined as a group, each with its' own exterior door, window and HVAC unit. The classrooms are built tight, with minimal natural air flow, and are well insulated, which may contribute to odor issues being isolated and contained to individual classrooms. The lack of air flow (other than the HVAC and doors periodically opening) may also contribute to the persistence of the odors. It could not be determined if the HVAC systems drew outside air or recirculated indoor air at the time of monitoring. Many rooms had air fresheners (plug in, automated, aerosol were all documented), which may have masked other odors and also could account for low VOC detections on the photoionization detector (PID).

Room 222 had a present "fishy odor" at the time of monitoring, which was consistent with reports obtained by EPA. The HVAC unit in the unit has been replaced and there is the potential that wiring might account for the odor if the wiring or circuit breaker is not properly installed and/or if wires/wiring is burning or shorting out. EPA ERT is not qualified to inspect HVAC system, circuits or electrical wiring and did not attempt to do so. Room 222 is not in a location that sewer lines should impact the classroom, although no diagrams were available to confirm.

Although EPA was not directly looking for or testing for mold, no evidence of widespread mold or interior water intrusion was documented. The team viewed areas above the drop ceilings in most rooms to ensure odors were not from those areas and look for water/moisture.

Sewer lines from the structures are connected to an on-Site wastewater treatment plant and are believed to run from the restrooms to a common line centrally located between the grouped classrooms, to the plant. No "as-built" diagrams of the sewer lines were available for the new construction. It was also not known if the lines from the impacted school (original structure) could be impacting the new classrooms, for example, if they were broken or otherwise compromised. There is also the potential that a storm sewer could be tied into a wastewater line as there was a report that the wastewater plant had leaves and much more water volume after a rain event, although EPA has no way to confirm.

ERT performed a longer duration air monitoring event (approximately 24 hours) for TMA in rooms 222, 241, and 244, and H2S in Room 213 (where rotten egg smell was reported), plus sampling for VOCs using EPA TO-15. Additional sampling for formaldehydes, aldehydes and ketones using EPA TO-11A compounds was conducted as these compounds may be present in new construction materials. This data will be discussed on POLREP #2 or as soon it becomes available.

No widespread odors were detected outside of the classrooms and no off-Site source was identified nor determined to be a source during the EPA monitoring period.

2. Current Activities

2.1 Operations Section

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

None

2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

2.2 Planning Section

2.2.1 Anticipated Activities

EPA will validate the analytical data of the samples submitted for EPA TO-15 and EPA TO-11A .

2.2.1.1 Planned Response Activities

None

2.2.1.2 Next Steps

Data collected, by EPA, during the longer duration air monitoring event (approximately 24 hours) and sampling event will be discussed with DPNR.

2.2.2 Issues

None

2.3 Logistics Section

Not applicable

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff**2.5.1 Safety Officer**

OSC performed this task.

2.5.2 Liaison Officer

OSC performed this task.

2.5.3 Information Officer

OSC performed this task.

3. Participating Entities**3.1 Unified Command**

Not applicable

3.2 Cooperating Agencies

Virgin Islands Department of Planning and Natural Resources

Virgin Islands Department of Education

Virgin Islands Department of Health

Virgin Islands Department of Labor

United States Environmental Protection Agency

4. Personnel On Site

(1) EPA OSC

(1) EPA ERT

(2) ERT Contractors (SERAS)

5. Definition of Terms

EPA - United States Environmental Protection Agency

OSC - On-Scene Coordinator

ERT - Emergency Support Team

SERAS - Engineering, Response, & Analytical Services contract

6. Additional sources of information**6.1 Internet location of additional information/report**

Not applicable

6.2 Reporting Schedule

The next POLREP will be issue once the laboratory data is received.

7. Situational Reference Materials

Not applicable