

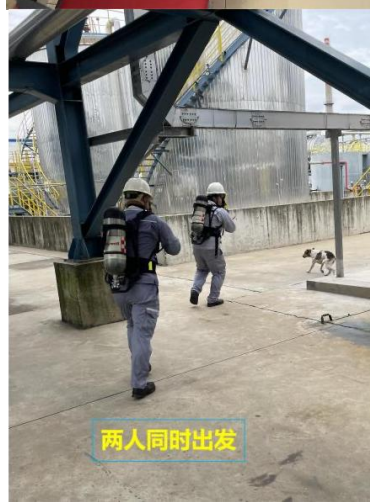
# Utilities Department on-site emergency response drill report

## 公用工程部现场初期灾变应急处置演练评估通报

### 一、Wastewater Unit水处理区域

At 14:29 on September 5, 2022, the emergency drill evaluation team of the Utilities Department, without notifying the team, conducted a spot check on the emergency response drill for the wastewater treatment posts of the shift three. The drill items are set as: The on-site emergency disposal of abnormal alarm of the fixed hydrogen sulfide gas alarm instrument (tag number 5152-T1001) at the oily sewage adjustment tank.

2022年9月5日14时29分，公用工程部应急演练考评小组在未通知班组的情况下，对水处理三班污水处理岗位进行了现场初期灾变应急处置演练抽查，演练项目设定为：含油污水调节罐处固定式硫化氢气体报警仪（位号5152-T1001）异常报警的现场应急处置。





#### Review 演练点评:

1. In this drill, after receiving the drill instruction, the team-level emergency response procedure was started immediately, and Jiang Ruibing used the walkie-talkie to report the on-site situation to the deputy squad leader. Jiang Ruibing immediately made arrangements after receiving the report. The main operator, He Yu, and the deputy operator, Zhang Ping, immediately stopped their work and returned to the operator's room. After quickly wearing the SBA, the two rushed to the scene of the accident to confirm, and arranged for two other deputy operators to set up vigilance on the scene.

It took a total of 3 minutes and 17 seconds from the time of receiving the instruction to the scene for disposal. This drill team is more proficient in emergency response procedures, and the personnel arrangement is more reasonable.

本次演练，水处理三班内操接到演练指令后，第一时间启动班组级应急响应程序，使用对讲机向副班长蒋瑞兵报告现场情况，蒋瑞兵接到报告后立即做出安排，安排外主操何宇、外副操张平立即停下手中工作回到外操间，迅速佩戴空呼后双人赶赴事故现场进行确认，安排另外 2 名外副操对现场拉设警戒区域和疏散现场其他人员，从接警到达现场处置用时共计 3 分 17 秒。本次演练班组对应急处置步骤较为熟练，人员安排较合理。

During the disposal process, the external operators can cooperate with each other, remind each other, wear the SBA correctly and rush to the scene with the four-in-one portable gas detector. An alarm device re-confirmed the on-site situation, the gas detection on site was normal, and there was no abnormality. After communicating the on-site situation with the central control, the alarm was lifted.

在处置过程中，外操人员能够相互协作，互相提醒，正确佩戴空呼和携带四合一便携式气体检测仪赶赴现场，到达现场后准确找出报警仪位号，通过随

身携带的两部四合一报警仪对现场情况再次确认，现场气体检测正常，无异常属报警仪误报，随即将现场情况与中控内操进行沟通后，警报解除。

**2. The following problems in the drilling process:**

演练过程存在以下问题：

**2.1 Central control and panel operation: 中中控内操**

- (1) The panel operator did not take the initiative to report to the safety professional;  
内操未主动向安全专业汇报；
- (2) No feedback to the site after the central control inspection and monitoring;  
中控检查监控后未向现场反馈；

**2.2 现场外操存在的问题：**

- (1) In the event of an emergency at the scene, after observing the wind direction, it is not clear what the wind direction belongs to;  
现场应急时，观察风向后没有做明确风向属于什么风向；
- (2) During the practice drill, Brunei employees were not arranged for a joint exercise.  
演练过程中未将文莱员工安排进来共同演练。

**3. In view of the problems existing in this exercise, improvement measures:**

针对本次演练存在的问题，改进措施：

- (1) The division of responsibilities of the team members should be clear, and the mutual information communication and reporting should be comprehensive;  
班组人员职责分工应予以明确，互相信息沟通汇报要全面；
- (2) During the exercise, panel and field operator should strengthen horizontal communication, and the squad leader should collect effective information to analyze and judge in a timely manner;  
演练过程中内外操要加强横向沟通，班长收集有效信息及时进行分析研判；

- (3) In the early stage of the emergency, the external operators who are assigned to set up alerts should observe the wind direction at the time and take the initiative to feedback the wind direction on the walkie-talkie;

在应急初期，分配拉设警戒的外操要第一时间观察当时的风向，并主动在对讲机中反馈现场风向；

- (4) During night shifts or sub-shifts, emergency drills are carried out many times, and Brunei employees are assigned to the best of their ability. The task requires the participation of all staff.

在夜班或副班时，多次进行应急演练，给文莱员工分配其力所能及的任务，要全员参与进来。

Observations 观察员设置：

Onsite observer 现场观察员

余 长、吕应强

Intermediate observer 外操间观察员

张浩然、于亚鹏

Panel observer 中控观察员

邓文涛

## 二、Air Separation Unit 空分区域

At 9:51 on September 5, 2022, the emergency drill evaluation team of the Utilities department conducted a preliminary on-site emergency response drill for the third team in the air separation and air compression area without prior notice. The drill items were: compressor Factory fire alarm manual (tag number L03M15) cable disconnection false alarm emergency response.

2022 年 9 月 5 日 9 时 51 分，公用工程部应急演练考评小组在未做通知的情况下，对空分空压区域三班组进行了现场初期灾变应急处置预演练，演练项目为：压缩机厂房火警手报（位号 L03M15）线缆脱开误报警应急处置。

9:51 Li Kaiqiang, the main operator outside the scene, heard the fire alarm message in the corridor outside the air separation operation room, and checked that the alarm terminal showed that it was a manual fire alarm at the northwest door of the compressor plant of the air separation and air compressor plant.

现场外主操李凯强听到空分外操间走廊出现火灾报警信息后，查看报警终端显示为空分空压装置压缩机厂房西北门门口处手动火灾报警。

9:52 Li Kaiqiang informed Gao Shuo, the deputy squad leader of the central control, that there was a fire alarm in the compressor plant on site, and asked the assistant operators Zhou Qiang and Zhou Ming, who were refueling the vacuum pump of the refrigeration station, to return to the outdoor operation room immediately and wear air respirators for on-site inspection and confirmation.

李凯强通过对讲机告知中控副班长高烁现场压缩机厂房发生火灾报警，同时要求正在给制冷站真空泵加油的外副操周强、周明立即返回外操间，佩戴空气呼吸器进行现场检查确认；

9:52 Gao Shuo reported to the fire brigade and the regional supervisor Gao Shuo reported to the fire brigade and the regional supervisor

9:53 Gao Shuo checked the scene through the central control camera



高烁通过中控摄像头查看现场情况；

9:55 Zhou Ming put on the SBA and arrived at site;

周明佩戴好空呼到达现场；

9:56 Zhou Qiang arrived at the scene wearing SBA. The drill was terminated because the time exceeded 5 minutes.

周强佩戴好空呼到达现场，因时间超过 5 分钟，演练终止。

1. Problems in the practise drilling process 演练过程存在以下问题：

1) Central control problems 中控存在问题：

(1) Gao Shuo, the deputy monitor of the central control, did not report the scheduling;

中控副班长高烁没有汇报调度；

(2) It takes a long time to find the live video through the camera, more than 30 seconds;

通过摄像头查找现场视频时间较长，超过 30 秒；

(3) The distribution of central control personnel is unreasonable, and the panel assistant operator did not participate in the emergency.

中控人员分配不合理，内副操没有参与应急。

2) Field operator problems 外操间存在问题：

(1) Li Kaiqiang did not clearly state the alarm tag number when reporting;

李凯强汇报时没有把报警点位号说清楚；

(2) One of the SBA tanks is not well connected with the hose and does not have the conditions for use;

其中一具空呼储气罐与软管没有连接好，不具备使用条件；

(3) The time of wearing the air call is too long (more than 3 minutes) and the essentials of wearing the air call are not standardized

外操佩戴空呼时间过长（超过 3 分钟）且佩戴空呼动作要领不规范；

(4) The emergency allocation of on-site personnel was unreasonable, and Brunei employees were not involved.

现场人员应急分配不合理，没有让文莱员工参与进来。

3) On site problem 现场存在问题：

(1) Field operator did not find the alarm point in time and accurately

外操没有及时准确找到报警点；

(2) The speed of arriving at the scene and the tense state are not good.

到达现场速度及紧张状态不佳。

2. Improvement measures 改进措施

① Team members should strengthen the practice of wearing the air call, male (within 45 seconds) and female (within 1 minute and 30 seconds);  
班组人员加强对空呼佩戴练习，男（45 秒内）女（1 分 30 秒内）；

② The team and management personnel should strengthen the daily inspection of fire fighting equipment to ensure that emergency equipment such as air calls are ready for use at any time;  
班组及管理人员加强消防器材日常检查，确保空呼等应急装备具备随时使用条件；

③ The squad leader should be comprehensive when reporting, and the emergency division of work between the squad and group should be clear;

班长进行汇报时要全面，班组应急分工要明确；

④ Teams use night shifts and sub-shifts to practice various emergency plans on a daily basis and master them proficiently; 班组日常利用夜班

及副班勤练各种应急预案，熟练掌握；

- ⑤ All team members must familiar with the location of various types of fire alarm

班组全员熟悉空分空压装置现场各类型火灾报警点位置；

- ⑥ The central control personnel should be proficient in finding the distribution location of each alarm point on site through surveillance video。

中控人员要熟练掌握通过监控视频查找现场各报警点分布位置。

Observations 观察员设置：

Onsite observer 现场观察员：

余部长、温建成、于亚鹏、邓文涛

Intermediate observer 外操间观察员：

张浩然

Panel observer 中控观察员：

张云波

公用工程部

2022 年 9 月 5 日