

Utilities Department on-site initial disaster emergency response drill evaluation report (5)

公用工程部现场初期灾变应急处置演练评估通报（五）

一、Wastewater Unit 水处理区域

At 9:33 on September 8, 2022, the emergency drill evaluation team of the Ministry of Public Works, without notifying the team, conducted a spot check on the initial disaster emergency response drill for the sewage treatment posts of the fourth shift of water treatment. The drill items were set as: The on-site emergency response to the abnormal alarm of the fixed hydrogen sulfide gas alarm device (number GT91-033) on the north side of the oil-containing DAF on the second floor of the pretreatment frame.

2022年9月8日9时33分，公用工程部应急演练考评小组在未通知班组的情况下，对水处理四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：预处理框架二层含油 DAF 北侧固定式硫化氢气体报警仪（位号 GT91-033）异常报警的现场应急处置。



内操接到演练指令，启动应急程序，报告班长



内操通过监控检查现场情况，并向现场反馈



班长接到中控汇报后，立即通知现场人员开始应急并用英文告知文莱员工



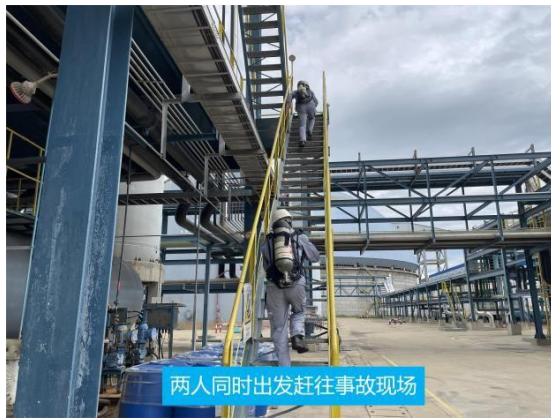
外操迅速赶到外操间，开始应急



外操两人开始穿戴空呼



外操相互配合



两人同时出发赶往事故现场



现场检查硫化氢气体检测仪GT91-033无异常
汇报班长



外操用四合一对周边环境再次进行检查确认正常，汇报班长
班长判断为探测器故障，通知中控警报解除，并联系仪表到现场将检查



演练结束，现场进行演练讲评

Review 演练点评:

1. In this drill, after receiving the drill instruction, Xiao Siyu, the main operator of the fourth class of water treatment, started the team-level emergency response procedure as soon as possible, and used the walkie-talkie to report the scene situation to the deputy squad leader Zhao Xueren. Zhao Xueren made arrangements immediately after receiving the report. The on-site personnel were recalled to the external operation room to start an emergency, check the wind direction, and arrange the panel operators Sun Hong and Li Tongzhi to come to the scene to check the situation. In case of emergencies on the spot, the employees of the Chinese side were arranged to evacuate the foreign workers. It took 4 minutes and 40 seconds from the time of receiving the alarm to the end of the emergency. The drill team was relatively proficient in the disposal steps, with a compact rhythm and reasonable personnel arrangements.

本次演练，水处理四班内主操肖思雨接到演练指令后，第一时间启动班组级应急响应程序，使用对讲机向副班长赵学仁报告现场情况，赵学仁接到报告后立即做出安排，将现场人员召回外操间开始应急，查看风向，并安排外操孙宏、李同志背空呼到现场检查情况，两名外操迅速佩戴空呼后双人赶赴事故现场进行确认；用英文告知文方员工现场突发情况，并安排文方员工对外劳进行疏散。从接警到应急结束，用时 4 分钟 40 秒，本次演练班组对处置步骤较为熟练，节奏紧凑，人员安排较合理。

In the summary of the disposal process, the external operators can cooperate with each other, correctly wear the air call and carry the four-in-one portable alarm device to the scene, and after arriving at the scene, accurately find the alarm device number. And after the second confirmation by the four-in-one detector, report the on-site situation to the squad leader. After the squad leader analyzes the current situation, it is confirmed that the detector alarm is abnormal. After communicating with the internal operator, the alarm is lifted,

and the instrument is arranged to go to the scene to check the detector.

在处置过程汇总，外操人员能够相互合作，正确佩戴空呼和携带四合一便携式报警仪赶赴现场，到达现场后，准确找出报警仪位号。并通过四合一检测仪二次确认后，将现场情况报告班长，经班长对现状分析后，确认为检测仪异常报警，随即与内操沟通后，警报解除，并安排仪表到现场对探测仪进行检查。

2. Problems during exercise practise 演练过程存在以下问题：

2.1 Control panel 中控内操

- (1) The monitoring and retrieval of express delivery is relatively slow, and further familiarization is required;
监控调取速递易较慢，需进一步熟悉；
- (2) Failure to report to the fire brigade and process management
未向消防队及工艺专业汇报；

2.2 Problems existing in field operation 现场外操存在的问题：

- (1) The wind direction was not announced in Chinese on the walkie-talkie after on-site observation
现场观察风向后未在对讲机中用中文公布；
- (2) The address of the evacuated personnel should be an open outdoor place, and it is not suitable to stay indoors for a long time
疏散人员地址应为空旷的室外场所，不宜在室内长期逗留；

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) Familiar with various monitoring and monitoring positions on the site, in case of emergencies, they can accurately call the monitoring and understand the situation at the first time
熟悉现场各个监控监测位置，在遇到突发情况时，能准确调取监控，第一时间了解现场情况；
- (2) The personnel should do a good job of division of labor, and reasonably use multiple channels to report (walkie-talkie, fixed telephone, mobile phone, etc.);
人员做好分工，汇报时合理利用多渠道进行汇报（对讲机、固定电话、手机等）；
- (3) Strengthen communication, any on-site situation should be announced on the walkie-talkie, so that all parties can understand the actual situation on the spot at the first time;
加强沟通，有任何现场情况应在对讲机中进行公示，让各方第一时间了解现场实际情况；
- (4) If there is any gas alarm, the first thing to be excluded from the evacuation area is the confined space and semi-closed space, and the personnel should be evacuated to the open space in the upwind direction to avoid the occurrence of this accident;
有任何气体报警是，疏散地首先排除的就是密闭空间及半密闭空间，应当将人员疏散到上风向的空旷场所，避免此生事故发生；

Observations 观察员设置：

Onsite observer 现场观察员 余部长、吕应强

Field operator observer 外操间观察员 张浩然、于亚鹏、张云波

Panel observer 中控观察员 邓文涛、Michelle

二、Air separation unit 空分空压区域

At 10:10 on September 8, 2022, the emergency drill evaluation team of the Ministry of Public Works conducted a pre-drill of the initial disaster emergency response for the fourth shift of air separation and air compressor without notifying the team. Alarm (bit number L03M14) cable disconnection false alarm emergency response.

2022年9月8日10时10分，公用工程部应急演练考评小组在未通知班组的情况下，对空分空压四班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L03M14）线缆脱开误报警应急处置。





Review 演练点评：

1. In this exercise, Zhang Feipeng, the squad leader of the fourth shift of the air separation, heard the fire alarm sound in the corridor outside the air separation operation room. After checking that the alarm terminal displayed a manual fire alarm at the southeast door of the compressor building of the air separation and air compressor plant (L03M14), Use the walkie-talkie to assemble the team members and start the team-level emergency response procedure as soon as possible. Zhang Feipeng immediately returned to the foreign operation room and Liu Zhenhui, the foreign assistant operator, quickly put on an air call, and then the two rushed to the fire alarm scene to confirm, and arranged another Brunei foreign assistant operator Noris to set up a warning area and evacuate other people on the scene. It took 1 minute and 57 seconds from the moment the hand signal was pressed to the time when the personnel arrived at the scene for disposal. After entering the compressor workshop, look for the wrong alarm point (L03M13) is not found until the 5-minute countdown ends, and the exercise is declared over.

本次演练，空分四班班长张飞鹏听到空分外操间走廊出现火灾报警声音，查看报警终端显示为空分空压装置压缩机厂房东门口处（L03M14）手动火灾报警后，第一时间使用对讲机集结班组人员并启动班组级应急响应程序。张飞鹏立即返回外操间和外副操刘振辉迅速佩戴空呼后双人赶赴火警报警现场进行确认，安排另外 1 名文莱籍外副操 Noris 到现场拉设警戒区域和疏散现场其他人员，从按下手报开始至人员到达现场处置用时 1 分 57 秒，进入压缩机厂房后找错报警点（L03M13），直至倒计时 5 分钟结束还未找到正确的报警点，宣布演

习结束。

During the disposal process, the external operators could not accurately find the location of the fire alarm point after arriving at the scene, nor did they arrange the evacuation of the on-site operators, and the personnel were relatively nervous during the exercise.

在处置过程中，外操人员到达现场后不能准确找出火警点位置，也没有安排对现场作业人员进行疏散，演习中人员比较紧张。

2. There are the following problems in the exercise process

演练过程存在以下问题：

2.1 Central control panel 中控内操：

- (1) It is slow for the internal operator to retrieve the monitoring screen after receiving the fire alarm information;;
内操接到火警信息后调取监控画面较慢；
- (2) Central control reports in advance the safety and professional fire alarm removal without confirmation on the spot;
中控在现场未确认的情况下提前汇报安全专业火警解除；

2.2 Field operator 现场外操：

- (1) After the foreign operator arrived at the scene, the wind direction at that time was not clear;
外操到达现场后未明确当时风向；
- (2) During the exercise, the route selected for entering the compressor workshop is incorrect;
演练过程中进入压缩机厂房选择路线不对；
- (3) The external operator did not accurately find the alarm point; 外操未准确找到报警点；
- (4) Unskilled wearing of air calls and irregular movements;
空呼佩戴不熟练、动作要领不规范；
- (5) No personnel evacuation arrangements and reports were made at the scene.
现场未进行人员疏散安排及汇报。

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 team members should be clarified to overcome their own tension
班组人员职责分工应予以明确，克服自身紧张问题；
- (2) The team should be proficient in each alarm distribution point of the air separation plant;
班组要熟练掌握空分装置各个报警分布点；
- (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 on-site wind direction on the walkie-talkie;
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) Teams use the night shift to practice air-calling and wear, requiring 45 seconds for men to pass, 35 seconds for excellent; 60 seconds for women qualified;
班组利用夜班勤练空呼佩戴，要求男 45 秒合格，优秀是 35 秒；女 60

秒合格；

- (5) Teams use night shifts or sub-shifts to strengthen various emergency drills, and practice makes perfect.

班组利用夜班或副班，加强各种应急演练，熟能生巧。

Observation 观察员设置：

Onsite observer 现场观察员：

余部长、温建成、于亚鹏

Field handover observer 外操间观察员：

张浩然、张云波

Panel observer 中控观察员：

邓文涛、Michelle

公用工程部

2022 年 9 月 8 日