**规范化排污口定期检测采购项目需求**

1. **项目简述：**

本项目覆盖范围主要为广东以色列理工学院一期校区（北校区-科学实验楼及教学实验楼、食堂、发电机房）。

根据广东以色列理工学院（筹）一期校区（北校区）建设项目科研实验楼和教学实验楼的实验室竣工环境保护验收报告意见、规范化排污等相关要求，学校应保证环保设施正常运转，应委托具有检测资质单位对项目进行定期监测，确保污染物长期稳定达标排放。

根据废气排放要求，校内设置在实验楼、食堂、发电机房的23个废气监测点位，废气排放应满足广东省《大气污染物排放限值》（DB44/27-2001）第二时段二级标准的要求。

学校实验室废气收集项目采用活性炭吸附法，通过活性炭吸附装置使废气中的有害成分被吸收，从而达到净化的目的。其处理工艺为“集气罩+风管+活性炭吸附装置”。实验室废气引至天面高空排放。

食堂产生油烟设备的排风设置油烟净化设施。其油烟排放浓度及净化设备的最低去除效率不低于国家现行相关标准《饮食业油烟排放标准》GB18483-2001的规定；厨房排气设置三级除油处理，一级处理为排烟罩设置运水排油烟罩去除主要油烟中太油滴同时降低排气温度；二级处理在屋面排风机入口设置自动清洗式低温等离子油烟净化器分解未完全被处理油分子，三级在屋面排风机出口设置活性炭除味器，吸附游离油分子，使油烟油分子含量到达排风标准，油烟排放浓度不超过2.0mg每立方米。

发电机废气使用水喷淋除烟装置，柴油燃烧产生的黑烟，在发电机排气压力的作用下，从底部进入烟气净化器，净化后废气从废气吸收塔的出口达标排放，除烟设备能够有效的处理发电机排放尾气中的有害物质，并收集尾气中的黑烟颗粒，使尾气排放达到国家环保部门规定的排放标准。

1. **检测项目**

Surveillance for Off Gas 废气监测：

| **Environmental factors surveillance list 环境污染物监测目录** | | | |
| --- | --- | --- | --- |
| **Monitoring Area**  **监测范围** | **Monitoring Item**  **监测内容** | **Frequency**  **监测频率** | **Reference Value**  **参考标准值** |
| Exhaust gas collection system  实验尾气收集系统 | Total Volatile Organic Compound  总挥发性有机物  （TVOC） | Time/ 6 months  次/半年 | DB 44/27-2001  表2第二时段二级排放标准 |
| Non-methane total hydrocarbons  非甲烷总烃 |
| Sulfuric acid mist  硫酸雾 |
| Hydrogen chloride  氯化氢 |
| Carbon monoxide  一氧化碳 |
| Sulfur dioxide  二氧化硫 |
| Chromic acid mist  铬酸雾 |
| Particulates  颗粒物 |
| 食堂油烟处理系统 | Lampblack  油烟 |
| 柴油发电机废气排放口 | SO2、NOX、烟尘、CO |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. **废气装置参数及位置说明**   **教学实验室楼**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **序号** | **设备** | **对应风机** | **位置** | **对应房间** | **处理风量**  **cm3/h** | | 1 | 活性炭吸附箱 | EF-1 | PF-B1F-01 | 地下室 | 13000 | | 2 | 活性炭吸附箱 | EF-2 | PF-1F-01 | T102；T103；T105；T106（含小房间） | 15000 | | 3 | 活性炭吸附箱 | EF-3 | PF-1F-02 | T101(含小房间) | 15000 | | 4 | 活性炭吸附箱 | EF-4 | PF-2F-01 | T201；T202；T205；T206；T207 | 22000 | | 5 | 活性炭吸附箱 | EF-5 | PF-3F-01 | T301；T301-1；T301-2；T301-3；T301-4；T301-5；T301-6；T302；T302-2；T304；T305；T305-2；T305-3；T305-4；T305-5 | 25000 | | 6 | 活性炭吸附箱 | EF-6 | PF-4F-01 | T403-2；T403-1；T403 | 22000 | | 7 | 活性炭吸附箱 | EF-7 | PF-4F-02 | T401；T401-1；T401-2 | 30000 | | 8 | 活性炭吸附箱 | EF-8 | PF-5F-01 | T501-3；T502；T503；T503-1 | 8500 | | 9 | 活性炭吸附箱 | EF-9 | PF-5F-02 | T501 | 30000 |   **科研楼验室楼**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **序号** | **设备** | **对应风机** | **位置** | **对应房间** | **处理风量**  **cm3/h** | | 1 | 活性炭吸附箱 | EF-1 | PF-1F-01 | R302;R303;R304;R305;R306;R104;R101 | 15000 | | 2 | 活性炭吸附箱 | EFB-01 | PF-1F-02 | R107;RB08;RB09 | 8000 | | 3 | 活性炭吸附箱 | EF-2 | PF-4F-01 | R802;R803;R804;R805;R806(预留)；R702；R703;R704;R705;R706 | 17000 | | 4 | 活性炭吸附箱 | EF-3 | PF-3F-01 | R508储藏室;R509;R510;R511;R512（预留）;R407储藏室；R408;R409;R410;R411;R412(预留);R307储藏室;R308;R309;R310;R311;R312 | 28000 | | 5 | 活性炭吸附箱 | EF-4 | PF-6F-01 | R601;R602;R603;R604;R605;R606;R607-1;R607-2;R607-6;B607-7;R608;R609;R611 | 16000 | | 6 | 活性炭吸附箱 | EF-5 | PF-6F-02 | R607回风系统 | 5500 | | 7 | 活性炭吸附箱 | EF-6 | PF-7F-01 | R502;R503;R504;R505;R506;R507;R401;R402;R403;R404;R405;R406 | 21400 | | 8 | 活性炭吸附箱 | EF-7 | PF-7F-02 | R807储藏室；R808;R809;R810;R811;R813(预留);R707储藏间；R708；R709;R710;R711;R713(预留) | 20000 |   **食堂**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **序号** | **设备** | **对应风机** | **位置** | **对应房间** | **处理风量**  **cm3/h** | | 1 | 油烟处理系统 | FQ-281918 | 食堂天面 | |  | | 2 | 油烟处理系统 | FQ-281919 |  | | 3 | 油烟处理系统 | FQ-281920 |  | | 4 | 油烟处理系统 | FQ-281921 |  | | 5 | 油烟处理系统 | FQ-281922 |  |   **柴油发电机房**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **序号** | **设备** | **对应风机** | **位置** | **对应房间** | **处理风量**  **cm3/h** | | 1 | 柴油发电机 | FQ-281923 | 发电机房天面 | |  | |

1. **服务要求：**

* 提供每半年一次（2022年度共2次）实验室及公共设施废气排放设备的废气检测服务，对各个排放口废气排放情况进行监测，并比对排放标准，提供相关的检测效果总结和建议；
* 具体检测点位和取样需根据实际情况进行确定，但为确保检测效果的真实性，建议每个排放口检测点不应少于两个平行检测样。
* 每次取样需根据学校各个实验室的运行情况，选择合适的检测时段，确保取样的针对性和真实性，如对教学实验楼的尾气检测需选择在上课时段，以保证检测结果真实性；

1. **检测单位资质要求：**

* 具备国家认证认可的检验检测机构认证证书，例如：CMA（中国计量认证）检测报告等。
* 投标报价文件需附上认证证书复印件。

**附件：投标报价文件模板**

|  | **环境污染物监测目录** | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **监测范围** | **监测内容** | **监测点位（个）** | **检测周期（年）** | **检测频率**  **（次/年）** | **单次检测费用（元）** | **小计（元）** |
| 实验尾气收集系统 | 总挥发性有机物（TVOC） | 17 | 1 | 2 |  |  |
| 非甲烷总烃 |
| 硫酸雾 |
| 氯化氢 |
| 一氧化碳 |
| 二氧化硫 |
| 铬酸雾 |
| 颗粒物 |
| 食堂油烟处理系统 | 油烟 | 5 | 1 | 2 |  |  |
| 柴油发电机废气排放口 | SO2、NOX、烟尘、CO | 1 | 1 | 2 |  |  |
| 总价（元） | | | | |  |  |
| 备注：   * 价格需包含检测服务所涉及的一切费用（现场采样、分析、出具报告、税费等）。 * 以上三项检测费用按实结算。 | | | | | |  |