环境保护部环境保护对外合作中心

环外经函〔2016〕284号

关于举办第二届“环保技术国际智汇平台”百强环保技术评选的通知

各有关单位：

“环保技术国际智汇平台”（以下简称智汇平台）是环保部对外合作中心以互联网+环保技术，线上线下相结合的模式，以水气土污染防治、节能减排、清洁生产等领域为重点，为国内外企业、地方政府、产业园、环保从业人士打造污染防治技术综合服务平台，实现中国环境治理才智共享、促进国内外环保技术交流合作、推动环保技术和装备“引进来、走出去”及其产业化发展。2015年智汇平台成功举办了第一届“环保技术国际智汇平台”百强环保技术评选，筛选出部分国内外先进实用技术，授予了“百强技术”称号，并邀请相关企业免费参加了中德论坛、上海环博会技术路演及与地方省市排污企业的对接活动。

现邀请贵单位参加智汇平台于2016年8月至12月期间举办的第二届“环保技术国际智汇平台”百强环保技术评选。评选将面向国内外征集大气、水、土壤（含固废）等污染防治优秀技术，并组织权威专家对技术的先进性、实用性、经济性、

成熟度，以及企业的服务能力进行综合评审，侧重筛选工艺成熟并且可在市场广泛推广的实用技术。已被环保部、发改委、科技部等部委发布的鼓励推广环保技术目录、环境保护科学技术奖、国家重点环境保护实用技术及示范工程、中国字头行业协会和省级政府部门推荐的技术将直接进入第二轮专家评审。入选技术的企业将获得免费在智汇平台线上展示、优先向线下国内外合作基地推广、优先参加各类国内外技术对接活动、优先参加智汇平台组织的国际产业论坛和境外培训交流活动、优先获得金融资本支持。

现将技术评选具体方案通知如下：

一、技术征集时间：

2016 年 8 月 15 日至 10 月 30 日

二、报送方式：

请按照评选材料要求，由技术持有单位填写《智汇平台百强环保技术评选申请表》，编写技术报告和典型案例，于 2016 年 10 月 30 日前将纸质版申报材料（装订成册，一式四份）及参赛材料电子文件（光盘一份，将参赛材料压缩为一个文件，以“技术领域+技术名称+评选单位名称”命名，评选材料为 word 文档）直接送达或者邮寄至环境保护部环境保护对外合作中心。采用邮寄方式的，请在申请截至日期前以快递方式邮寄。请登录环保技术国际智汇平台网站下载有关附件（网址 http://www.3ipet.cn）。

有关评审过程及结果信息将在环保技术国际智汇平台网站

及微信公众号“环保智汇平台”发布。

三、联系方式：

环境保护部环境保护对外合作中心

环保技术国际交流合作部　费伟良　吴敏

电 话：010-82268791/8851

传 真：010-82200586

邮 箱：fei.weiliang@mepfeco.org.cn

邮寄地址：北京西城区后英房胡同5号616室，邮编100035

附件：1.智汇平台百强技术评选申请表

2.智汇平台百强环保技术评选情况说明

3.技术报告编写提纲

4.典型案例编写提纲

5.企业信息表

环境保护部环境保护对外合作中心

2016年8月9日

附件 1

环保技术国际智汇平台百强技术评选申请表

技术名称			
申报单位			
联 系 人		联系电话	
传　　真		E-mail	
邮寄地址及邮编			
技术领域	大气污染防治□ VOCs 排放控制技术□；脱硫脱硝除尘技术□；电力□；钢铁□；水泥□、石油化工□、建材□；有色金属冶炼□；移动源机动车尾气排放控制□；其他□ 水污染防治□ 城镇黑臭水体处理技术□；工业园区废水治理技术□；农村生活污水处理技术□；畜牧养殖污水处理技术□；污泥处置技术□；污水处理厂提标改造技术□；其他□ 土壤和地下水污染防治□ 固废处理处置技术□ 城市垃圾处理处置技术□；工业固废处理处置技术□；农业固废处理处置技术□；危险废物处理处置技术□；其他废物处理处置技术□；资源化利用技术□ 环境监测技术□ 重点污染源在线监测及仪器装备□；特征污染物监测及仪器装备□；空气、水质质量监测及仪器装备□；土壤监测及仪器装备□；环境监测预警及便携式检测仪器装备□；其他□		

技术原理	（限 500 字，指技术所利用的物理、化学、化工或生物学理论原理，需说明清晰）物化
工艺流程	（限 500 字，用文字说明应用该技术的工艺路线/工艺流程，说明各环节具体做法及效果；若放图示，在图下需详细说明图示流程细节）
控制的主要污染物	（选列该工艺针对的特征污染物）
主要技术指标（污染治理效果）	（列出针对某对象、在某条件下、应用该技术治理前后各主要污染物项目进口（或初始）、出口(或最终)浓度指标和去除率，以及工艺过程中能源和资源的回收利用率。注意：各主要污染物项目应与上一栏“控制的主要污染物”中项目一致；各主要污染物项目的浓度指标数据须与申报材料中监/检测报告一致；对应的治理技术须与“工艺路线”一致）
二次污染及其控制	（列出该技术应用中二次污染种类、数量及危害性，控制技术及效果，如污废水、固体废物等的产生及控制情况等）
主要工艺运行及控制参数	（列出主要工艺运行及控制参数名称及其取值范围）
主要经济指标	（列出单位投资成本、单位运行成本、单位污染物处理成本、单位产品回收成本等主要经济指标，其中运行成本可按实际情况细分，如细分为水耗、电耗、药耗、其他等）
适用范围和条件	地域：_____ 行业：_____ 适用范围：_____ （限 100 字，依据已有工程应用的情况填写，明确该技术适用的对象，包括行业、工艺等，还应说明技术应用时对环境、规模等的特殊要求，如“铝箔粗轧机常温油雾回收”）
技术可达到的污染物排放标准	（列出应用该技术可以达到的污染物排放标准和限值）

<table>
<tr><td>技术知识产权情况</td><td colspan="5">（说明该技术知识产权归属情况、授权使用情况、专利获取及应用情况）</td></tr>
<tr><td>技术鉴定情况</td><td colspan="5">（填写组织单位、鉴定时间和鉴定结论）</td></tr>
<tr><td>技术获奖情况</td><td colspan="5">（填写获奖时间、获奖等级和奖项名称）</td></tr>
<tr><td>推广情况</td><td colspan="5">（限 200 字）</td></tr>
<tr><td rowspan="6">主要用户名录[2]</td><td>单位名称</td><td>项目名称</td><td>项目运行时间和效果</td><td>联系人</td><td>联系电话</td></tr>
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<tr><td colspan="6">推荐单位意见:

（公章）
日期:　　年　　月　　日</td></tr>
<tr><td colspan="6">申报单位承诺:
申报材料内容属实、准确，技术知识产权明晰，如有知识产权纠纷，由本单位承担一切法律责任。
特此承诺。
（公章）
日期:　　年　　月　　日</td></tr>
</table>

填表说明：

1. “申报单位”应填写具有独立法人资格的单位全称；若是两个及以上单位联合研发，应将主要单位填写在前。
2. 若是两个及以上单位联合研发，应填写主要单位的法人代表。
3. 申报表右栏括号内文字为填写说明，填写时请先清除再填写。
4. 申报单位应如实填写并对填报内容的真实性负责，在“申报单位承诺”处加盖公章，公章须与申报单位名称一致，公章不得复印。
5. 申报单位制作好申报材料后应请推荐单位填写“推荐单位审查意见”并加盖公章，公章须与推荐单位名称一致，公章不得复印。
6. 申报材料若缺少关键材料或对技术内容介绍不清晰则不能进入评审程序，申报单位应严格按要求填写，保证填报内容的客观、准确、前后一致。
7. 请填写主要用户的信息，不低于3家。

附件 2

智汇平台百强环保技术评选情况说明

智汇平台百强环保技术指为服务水气土污染防治工作，由智汇平台评选出的，工艺成熟可靠并且可在市场广泛推广的污染防治技术、资源综合利用技术和环境监测技术。

一、 评选技术需具备下列条件：

（一）符合中国环境政策和技术政策；

（二）知识产权或专有技术权属明确；

（三）工艺成熟、技术先进、经济合理；

（四）具有 3 个规模化以上应用实例；

（五）技术适应性强，可广泛推广应用；

（六）属于成熟的工艺流程、工艺单元或设备/材料/药剂；

（七）已被环保部、发改委、科技部等部委发布的鼓励推广环保技术目录、环境保护科学技术奖、国家重点环境保护实用技术及示范工程、中国字头行业协会和省级政府部门推荐的技术将直接进入第二轮专家评审。

二、 申报要求：

（一）申报企业应具备的条件

1. 申报企业为该技术的持有单位，即专利证书或鉴定证书的完成单位。

2. 具有相应的研究、开发、设计、生产和推广能力。

3. 企业年度应税销售额不低于 2000 万人民币。

（二）申报材料

1. 《智汇平台百强环保技术评议申请表》（附件 1）;

2. 申请评选技术的《技术报告》（编写要求见附件 3）;

3. 技术工程应用的《典型案例》介绍（编写要求见附件 4）;

4. 典型案例相应的项目验收报告、验收监测报告或由具有资质的第三方机构出具的性能测试（评价）报告;

5. 企业信息表

6. 其他：法人营业执照、专利证书、获奖（或技术鉴定、评定、推荐）证书、资质证书等影印件。

三、 申报的重点领域

（一） 大气污染防治领域

1. VOCs 排放控制技术;

2. 脱硫脱硝除尘技术;

3. 电力、钢铁、水泥、石油化工、建材、有色金属冶炼等重点污染行业的污染控制技术;

4. 机动车、船舶等移动源排气污染控制。

（二） 水污染防治领域

1. 城镇黑臭水体处理技术;

2. 工业园区废水治理技术;

3. 农村生活污水处理技术;

4. 畜牧养殖污水处理技术;

5. 污泥处置技术;

6. 污水处理厂提标改造技术。

（三） 土壤和地下水污染防治

（四） 固废处理处置技术

1. 城市垃圾处理处置技术；

2. 工业固废处理处置技术；

3. 农业固废处理处置技术；

4. 危险废物处理处置技术；

5. 其他废物处理处置技术；

6. 资源化利用技术。

（五） 环境监测技术

1. 重点污染源在线监测及仪器装备；

2. 特征污染物监测及仪器装备；

3. 空气、水质质量监测及仪器装备；

4. 土壤监测及仪器装备；

5. 环境监测预警及便携式检测仪器装备等。

四、 入选技术可以获得如下推广机会

（一）免费在智汇平台线上展示；

（二）优先向线下国内外合作基地推广；

（三）优先参加各类国内外技术对接活动；

（四）优先参加智汇平台组织的国际产业论坛和境外培训交流活动；

（五）优先获得金融资本支持。

欢迎关注微信公众号“环保智汇平台”，有关评审过程及结果信息将通过微信公众号发布。

环保技术国际智汇平台微信公众号二维码

附件 3

《技术报告》编写提纲

摘要（300 字内）

一、技术来源

二、国内外研究开发现状及技术比较

三、主要技术经济指标

包括主要设计技术性能参数，资源、环境效果指标，经济参数（投资、运行费用）等。

四、关键技术与创新点

五、应用推广情况及前景分析

附件 4

《典型案例》编写提纲

一、案例名称

二、项目概况

限 500 字，说明项目的处理对象、处理能力，建设、调试和正常运行时间等。

三、工艺简介

（一）工艺流程

限 500 字，简要介绍项目的工艺原理，工艺流程，关键工艺参数，特殊性能等；可附工艺图或设施照片。

（二）关键技术或设计特征

限 500 字，简要介绍项目采用的关键工艺技术、工艺布局特点、特殊设计或装置，采用的新材料、新系统等。

四、技术指标

限 500 字，介绍项目适用的主要污染物、去除效率、适用排放标准及达标情况、主要污染物的年消减量、主要副产品的产生量、关键设备/设施的运行维护参数（如：填料、催化剂等）、二次污染排放指标、节水节能量等。

五、投资费用

限 200 字，说明项目的投资基本构成，总投资费用，计算单位处理能力的投资费用。

六、运行费用

限 200 字，说明主要原料年消耗量和能耗，以及单位处理量的原料消耗量和能耗。计算项目年运行费用和单位处理能力的运行费用。如果项目实施可以带来副产品或明显节水节能效果，应用数据说明其经济效益。

七、用户意见

限 200 字，由用户提出技术评价，说明技术的特点、效果、存在的问题、推广意见等。

八、联系方式

技术信息咨询单位名称、联系人、电话、地址、邮编、电子邮箱。

（注：请参照 “参考范例”格式写法编写典型案例，案例数量不超过 2 个）

参考范例

一、案例名称

改良 UCT 工艺××××项目（××××污水处理厂）

二、项目概况

××××污水处理厂设计日处理水量×××m^3/d，污水来源于城镇生活、生产污水以及×××××工业园区的工业废水，××年××月开工建设，于××年××月完成调试并建成投产。本项目于××年××月××日获×××××××××奖。

三、工艺简介

（一）工艺流程

本项目是针对 UCT 工艺进行改良的技术，可达到脱氮除磷效果，工艺流程为：×××××—×××××—改良 UCT 分段进水生物反应池—二沉池—××××—×××××—出水。

本项目采用分段进水生物脱氮工艺，由 3 段缺氧/好氧顺序排列组成。原水分段进入各缺氧区，回流污泥回流到系统的首端。第一段的缺氧区利用进入该区污水 Q1 中的碳源对回流污泥中的 NO_x-N 进行反硝化，然后，混合液流入第一段的好氧区进行硝化反应；反应后的混合污水流入到第二段的缺氧区，利用进入该区污水 Q2 中的碳源进行反硝化，混合液再进入到第二段的好氧区进行硝化反应，以后各段以此类推。

（二）关键技术或设计特征

- 该工艺采用××××××××××进水方式并辅以过程控制，将原水中的碳源主要为反硝化和除磷利用，提高总氮、总磷去除率
- 建立××××××、××××××、××××××控制系统等，提高了自动控制水平。
- 采用了分段进水××××××技术、××××××技术和××××××等新技术，可以使出水稳定达标。
- 若外加碳源，可实现深度脱氮。

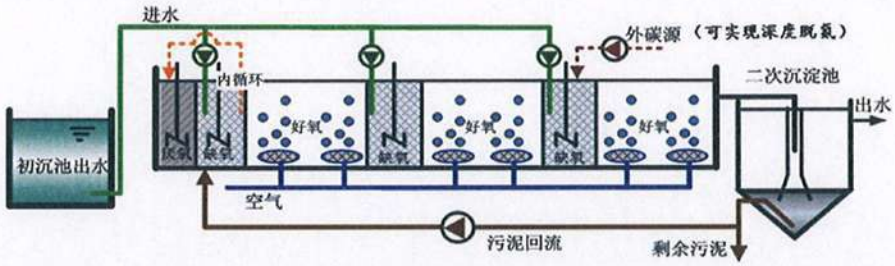

图 X-X 改良 UCT 技术工艺图（或设施照片）

四、技术指标

根据×××出具的验收报告，项目出水达到的 GB18918-2002《城镇污水处理厂污染物排放标准》一级 A 标准要求。以平均进水 TN 为××mg/L，TP≤××mg/L 计，该污水厂每年消减总氮排放××吨，减少总磷排放××吨。利用本工艺投加适量外碳源和混凝剂可实现深度脱氮除磷（TN≤×mg/L，NH_4^+-N≤×mg/L，TP≤×mg/L）。该技术有明显的节能效果，吨水电耗下降×%，年节电××Kwh。

五、投资费用

本项目总投资约××万元，其中设备投资××万元，基建投资××万元，其他投资××万元，吨水投资费用为××××元。主体设备寿命××年，投资回收年限××年。

六、运行费用

根据××年××月-××年××月实际运行情况，年处理污水××吨，年运行费用××万元，吨水运行费用为×元；利用本工艺投加适量外碳源和混凝剂实现深度处理，投加××（碳源）××吨，混凝剂××吨，年运行费用将增加××万元，吨水运行费用增加×元。

七、用户意见

该工程为我公司带来了显著的经济环境效益，是值得推广应用的示范工程。投运至今，各项技术指标优良，出水水质稳定达到设计要求，对××××××有很大的促进作用。希望对技术的××××进行改进，提高××××，进一步完善××××。

八、联系方式

技术咨询单位：××××××
联系人：××××××
电　话：××××××
地　址：××××××
邮　编：××××××
E-mail：××××××

附件 5

企业信息表

企业名称		法人代表	
地址		联系人	
联系电话		电子邮件	
注册资本		企业年度应税销售额	
是否上市公司（有无上市计划）			
企业信用等级评价			
主营业务			
企业财务状况	近三年的企业营业收入，营业利润		
企业市场竞争力	介绍企业市场竞争力，包括环保资质、研发能力、技术水平、主要业绩、近三年获最高科学技术奖励情况、获得荣誉、企业承接的代表性项目等）		

环境保护部环境保护对外合作中心

HuanWaiJingHan 〔2016〕

Notice for Commencing the Second 3iPET Top 100 Environmental Protection Technologies Contest

To whom it may concern:

The Integrated, Intelligent, and International Platform for Environmental Technology (3iPET) is a comprehensive platform established by the Foreign Economic Corporation Office (FECO) of the Ministry of Environmental Protection of China. By combining the Internet and environmental protection technologies, the platform provides both online and offline services to local governments, businesses, industrial parks and private organizations in China and other countries. Focused on air, water and soil pollution control, energy saving, emissions reduction and cleaner production, the platform is to realize sharing of information and technologies in environmental protection. In addition, the platform is to promote international exchanges and cooperation, and at the same time facilitate the "import and export" of environmental protection technologies and equipment. The platform is also designed to boost development of the environmental protection industry in China. Please see detailed introduction of the 3iPET on its website (http://www.3ipet.cn).

The first 3iPET Top 100 Environmental Protection Technologies Contest was successfully held in 2015, during which a number of advanced and applicable technologies were selected and given the title of "Top 100 Technologies for 3iPET". Meanwhile, the relevant businesses were organized to participate in international forums and technical roadshows, as well as contract negotiations with prospective local pollution control technology users.

Your company is hereby invited to participate in the Second 3iPET Top 100 Environmental Protection Technologies Contest, which will be held from August through December 2016. The Contest will identify and select excellent technologies globally in the fields of air, water, soil (including solid waste) pollution prevention and control. Domestic and foreign experts will be invited to evaluate

the participating technologies in terms of the progressiveness, usefulness, cost-effectiveness and maturity level. The companies possessing the selected technologies will be given free opportunity for 3iPET online display and priorities for offline recommendation to domestic and foreign cooperation partners. They will also be given priorities for attending various types of national or international technology negotiations, international industry forums and overseas training activities organized by the 3iPET, with financial support.

Method for participating in the Contest:

1. Period for submission of application:

August 15 – October 30, 2016

2. Method of submission:

The owner of the technology shall fill in the "Application Form for 3iPET Top 100 Environmental Technologies Contest" (see attachments) and compile the Technical Report and Typical Cases as required. The paper materials (in quadruplicate, bound in book form) and the electronic copy (one CD, including one compressed file named as "technical field + technology name + organization name") should be dispatched by courier or mailed (express mail) to FECO by October 30 2016. Relevant documents may be downloaded from the website of 3iPET (http://www.3ipet.cn).

The technology evaluation process and results will be released on the website and WeChat of 3iPET.

3. Contact details:

Foreign Economic Cooperation Office, Ministry of Environmental Protection of P.R.China

Department of Environmental Protection Technology International Cooperation

Contact: Fei Weiliang Tel.: 010-82268791 Fax: 010-82200586

Email: fei.weiliang@mepfeco.org.cn

Mail address: Room 616, No. 5 Houyingfanghutong, Xicheng Dist., Beijing, 100035, China

Attachments:

1. Application Form for 3iPET Top 100 Environmental Protection Tech Contest
2. Requirements of the 3iPET Top 100 Environmental Protection Tech Contest
3. Outline of Technical Report

4. Outline of Typical Cases

Foreign Economic Cooperation Office, MEP

August 9, 2016

Attachment 1

Application Form for 3iPET Top 100 Environmental Protection Technologies Contest

Name of technology			
Name of applicant [1]			
Legal person[2] & Title		Tel.	
Contact person & Title		Tel.	
Fax		E-mail	
Mail address & zip code			
Technical field	**(Air pollution prevention and control☐** VOCs, SOx, NOx and/or particulates emission reduction or control technologies in ☐ ; power generation ☐ ; steelmaking ☐ ; cement manufacturing ☐; petroleum & petrochemical industry ☐; building materials ☐; non-ferrous metal smelting ☐; mobile-source exhaust emission control ☐; surface coating, printing, etc. ☐ **Water pollution prevention and control☐** Urban black-and-odorous water treatment technology ☐; industrial park wastewater treatment technology ☐; rural household sewage treatment technology ☐; animal husbandry wastewater treatment technology ☐; sludge disposal technology ☐; transformation technology for sewage treatment plant ☐; etc. ☐ **Soil and groundwater pollution prevention and control☐** **Solid waste treatment and disposal technologies** ☐ Urban waste treatment and disposal technology ☐; industrial solid waste treatment and disposal technology ☐; agricultural solid waste treatment and disposal technology ☐; hazardous waste treatment and disposal technology ☐; other waste treatment and disposal technology ☐; resources recycling		

1

	technology ☐ **Environmental monitoring technology** ☐ On-line monitoring and instrumentation for key pollution sources ☐; typical pollutant monitoring instrumentation ☐; air and water quality monitoring and instrumentation ☐; soil monitoring and instrumentation ☐; environmental monitoring, early warning and portable detection instrumentation ☐; etc. ☐)
Technical principles	(In 500 words, give a clear description of the applicable physical, chemical or biological principles of the applicable technology.)
Technical process	(In 500 words, give a description of the technical route/process for applying this technology, including detailed description of each step and effects; diagrams (if any) should be accompanied with detailed illustration.)
Main pollutants to be controlled	(Give a list of the typical pollutants targeted for control.)
Technical indicators (pollution control effects)	(Give a list of the concentration indicators and removal rates of each major pollutant during their input (initial) and output (final) stages, as well as the recovery rate of energy and resources during the process. Note: the major pollutants must be consistent with the list of "main pollutants under control"; each major pollutant's concentration indicator must be consistent with the data in the detection/test report contained in the application; the corresponding treatment technologies must be consistent with the "technical route".)
Secondary pollution and control	(Give a list of the types and hazards of secondary pollution, as well as the, control technologies and effects, e.g., the generation and control of wastewater and solid waste due to the use of the technology.)
Main process operation and control parameters	(Give a list of the main process operation and control parameters, including the names and value ranges.)
Main economic indicators	(Give a list of the main economic indicators, including the unit investment costs, unit operating costs, unit pollutant treatment costs, unit product recovery costs, etc. The operational costs may be subdivided into water consumption, electricity consumption, drug consumption, etc.)

<table>
<tr><td>Applicable areas or ranges</td><td>Profession:_____
(In 100 words. Give a brief introduction based on the existing project's application of the technology, such as the applicable industries and processes, size and concentration ranges, as well as the special requirement on environment and scale, e.g., "Room-temperature oil mist recovery of aluminum foil roughing mill".)</td></tr>
<tr><td>Achievable emission standard</td><td>(List the emission standard and limit to be achieved by using the technology.)</td></tr>
<tr><td>Intellectual property right</td><td>(Describe the ownership and authorized use of the intellectual property, the patent approval and application, etc.)</td></tr>
<tr><td>Technical assessment report</td><td>(If any, fill in the assessment's organizing party, the date of assessment and the assessment results.)</td></tr>
<tr><td>Technical award</td><td>(If any, fill in the date of award winning, the name and grade of the award.)</td></tr>
<tr><td>Technology dissemination</td><td>(In 200 words.)</td></tr>
<tr><td>Major users[7]</td><td><table>
<tr><td>Company name</td><td>Project name</td><td>Project period and effects</td><td>Contact</td><td>Tel.</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td colspan="2">Verification result from the recommending organization:[5]

(seal)

Date:</td></tr>
<tr><td colspan="2">Declaration of the applicant:[4]

The information and application materials provided are true and accurate, with</td></tr>
</table>

valid intellectual property right. The company will assume full responsibility for any legal liabilities in case of any IPR dispute.

(seal)

Date:

Instructions for completing the form:

1. The full name of an organization that is a corporation or otherwise has the qualification of a legal person. The leading organization should be indicated first if the technology is jointly developed by two or more organizations.

2. The name of legal person or the responsible officer of the leading organization should be indicated if the technology is jointly developed by two or more organizations.

3. The words in the parentheses in the right columns are instructions only, which could be deleted before filling in the contents.

4. The applicant must fill in the contents truthfully and be responsible for the authenticity of such contents. The company's seal should be stamped (or authorized signature included) in the column of "Declaration of the Applicant", in the right spelling and no copies of the stamp shall be made.

5. The applicant, after filling in the form, should ask the recommending organization to fill in the verification result and stamp the organizational seal (or include its authorized signature), in the right spelling and no copies of the stamp shall be made.

6. The application material will not be admitted for evaluation if any key part is missing or if the technical part is not given clear description. The applicant must fill in the form as required to keep the contents objective, accurate and consistent.

7. The list of major users should contain the information of no less than 5 users.

Attachment 2

Requirements of 3iPET Top 100 Environmental Protection Technologies Contest

1. Eligibility requirements for the technologies to compete:

(1) Complying with Chinese environmental policies and technical policies;

(2) With clear ownership of intellectual property, or belonging to the applicant's proprietary technology;

(3) Belonging to mature process or advanced technology, with economic rationality;

(4) Having 3 or more large-scale application cases, each with continuous and normal operation over a year;

(5) Strong technical adaptability for wide-range applications;

(6) Belonging to mature process, process unit or equipments/materials/agents.

2. Materials to be submitted:

(1) Application Form for 3iPET Top 100 Environmental Protection Technologies Contest (Attachment 1);

(2) Technical Report on the technologies to participate in the contest (See Attachment 3 for compiling requirements);

(3) Description of Typical Case(s) of the technology application (See Attachment 4 for compiling requirements);

(4) Project acceptance report, acceptance monitoring report or performance test/assessment report issued by a competent third party for typical case(s);

(5) Others: business license of legal person, patent certificate, novelty assessment report, and award-winning certificate of the recommended technologies.

Participants in the contest, other stakeholders and the general public are welcomed to follow the progress of the technology assessment and evaluation process on the WeChat of 3iPET, where the results of the contest will be posted and publicized.

QR Code of WeChat Public Platform of 3iPET

Attachment 3

Outline of Technical Report

Summary (in 300 words):

1. Technical background

2. Research status of China and/or other countries

3. Main economic indicators

Including main parameters, resources, environmental impact indices, and economic indicators (investment and operating costs), etc.

4. Key technologies and innovations

5. Application and prospect analysis

Attachment 4

Outline of Typical Cases

1. Case name

2. Project overview

In 500 words, please provide an introduction to the pollution problems to be addressed, the capacity, construction, adjustment and operation time, etc.

3. Description of process technology

(1) Process

In 500 words, please give a brief introduction to the process and design principle, work flow, major process indicators, and special functions; process diagram or pictures of facilities may be attached.

(2) Key technological/design features

In 500 words, please give a brief description of the key process technologies, the process layout features, special design or facilities, and the use of new materials or new systems, etc.

4. Technical indicators

In 500 words, please give a brief introduction to the main pollutants, removal rate, applicable emission standards and information about meeting the standards, annual reduction volume for main pollutants, production of main by-products, operation and maintenance parameters of key equipment/facilities (e.g. fillings and catalysts), secondary emission indicators, water-saving and energy-saving volumes, etc.

5. Investment

In 200 words, please provide information on the investment, including the investment structure, the total investment, and investment per unit capacity, etc.

6. Operational costs

In 200 words, please give an introduction to the annual raw material consumption and energy consumption, as well as raw material consumption

and energy consumption for unit treatment capacity. Calculate the annual operational costs as well as operational costs for unit treatment capacity. Provide data to show economic benefits of the project if it can bring by-products or prominent water-saving or energy-saving effects.

7. Comment of users

In 200 words, please provide comments and feedback from end-users of the technology about its features and effects, existing problems, and suggestions for promotion of the technology, etc.

8. Contact details

Please provide name of the consulting organization, name of contact person, telephone number, address, zip code and e-mail of contact person for technical information and further inquiry.

(Note: please refer to the Sample of Typical Case; the number of cases shall be limited to two.)

Sample of Typical Case

1. Case name

Improved UCT process ×××× project (×××× sewage treatment plant).

2. Project overview

The ×××× sewage treatment has a daily treatment capacity of ×××m^3/d. The sewage is from urban domestic and production sewage and industrial wastewater from ××××× industrial park. The construction started in ×× (MM) ×× (YY) and was put into operation in ×× (MM) ×× (YY). The project won ×××××××× award on ×× (MM) ×× (DD), ×× (YY).

3. Process introduction

(1) Process

The project is mainly on the improved technology for UCT process for realizing the effects of denitrification and dephosphorization. The process is as follows: ××××× — ××××× — improved UCT subsection influent biological reaction tank — secondary settling tank — ××××× — ××××× — effluent outflow.

The project adopts the influent biological denitrification process, and consists of 3 subsections, each with anoxic/aerobic area connected in series. The original water flows into the anoxic area by subsection and the sludge returns to the end of the system. The anoxic area of the first subsection uses the carbon entering the sewage Q1 to perform denitrification on NOx-N of the sludge. Then the mixed liquid flows into the aerobic area to perform the nitrification process. The post-reaction mixed sewage flows into the anoxic area of the second subsection and utilizes the carbon entering the sewage Q2 to perform denitrification. The mixed liquid then enters into the aerobic area to perform the nitrification process. The following subsections could be described by such analogy.

(2) Key technological/design features

- The process adopts ×××××××××× influent method and process control to perform denitrification and dephosphorization, so as to increase the removal rates for total nitrogen and phosphorous.
- Having established ×××××, ××××× and ××××× control systems to enhance the automatic control.
- New technologies such as subsection influent ×××××, ××××× and ××××× are applied for stabilizing the water flow.

- Advanced denitrification may be realized if an extra carbon source is added.

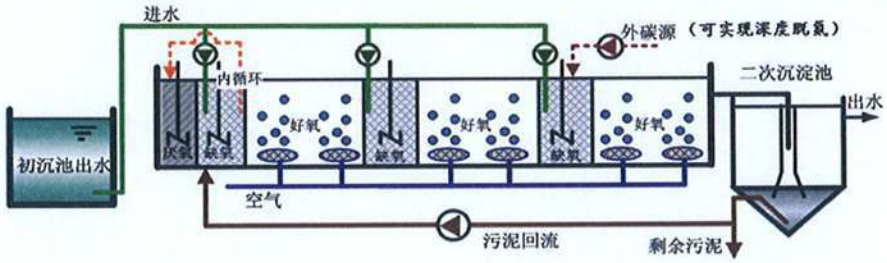

Fig. X-X Improved UCT Technical Process (or photos of facilities)

4. Technical indicators

According to the acceptance report released by ×××, the effluent of the project has met Class 1 A standard of *GB18918-2002 Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant*. Assuming average influent is TN=××mg/L and TP≦××mg/L, the sewage treatment plant reduces total nitrogen emission by ×× tons and total phosphorus by ×× tons a year. By adding extra proper carbon source and coagulant, advanced denitrification and phosphorus removal process may be realized (TN≦×mg/L, $NH4^{+}$-N≦×mg/L, TP≦×mg/L0). The technology has been proven prominent in energy saving, with power consumption reduced by ×% per ton and electricity consumption reduced by ×× Kwh per year.

5. Investment

The total investment for the project is about ×××× yuan, of which, equipment investment is ×××× yuan, infrastructure investment ×××× yuan, other investment ×××× yuan, and investment for per ton water operation is ×××× yuan. The life of main equipment is ×× years and the payback period is ×× years.

6. Operational costs

According to the actual operation from ×× (MM) ×× (YY) to ×× (MM) ×× (YY), the annual sewage treatment capacity is ×× tons, annual operation cost ×××× yuan, and per ton water operation cost ×××× yuan. The process is adopted to add proper external carbon source and coagulant to realize advanced treatment. The added carbon source was ×× tons and added coagulant was ×× tons. Thus the annual operation cost will be ×××× yuan higher and operational cost for per ton water operation will be ×××× yuan higher.

7. Comments of users

The project has brought prominent economic benefits to our company. It is a demonstration project deserving promotion and application. The project has shown excellent technical indicators and met the design requirements for effluent specifications/standards. It is of great significance to boost ××××××. The ×××× of the technology is expected to be renovated, so as to strengthen ×××× and further improve ××××.

8. Contact detail

Consulting organization: ××××××

Contact person: ××××××

Tel.: ××××××

Add.: ××××××

Zip code: ××××××

E-mail: ××××××

环境保护部环境保护对外合作中心

环外经函〔2016〕285号

关于请推荐参加“第二届环保技术国际智汇平台百强技术评选”的函

各有关单位：

2015 年智汇平台成功举办了第一届“环保技术国际智汇平台”百强环保技术评选，筛选出一部分国内外先进实用技术，授予了“百强技术”称号，并组织相关企业参加了国际论坛、技术路演及与地方省市排污企业的对接活动，促进了国内外环保技术交流合作、推动环保技术和装备“引进来、走出去”及其产业化发展。为此，智汇平台将于 2016 年 8 月-12 月举行第二届“环保技术国际智汇平台百强技术评选”，相关信息详见平台网站（http://www.3ipet.cn）。特邀请各合作伙伴按评选要求，推荐有关环保企业及技术参加第二届“环保技术国际智汇平台百强技术评选”，并在申请参赛表中为所推荐企业及技术出具推荐意见。申请材料提交截止日期为 2016 年 10 月 30 日。

感谢贵单位的支持与合作，请予以支持推荐为盼。

联系方式：

环境保护部环境保护对外合作中心

环保技术国际交流合作部　　费伟良　吴敏

电 话：010-82268791/8851

传 真：010-82200586

邮 箱：fei.weiliang@mepfeco.org.cn

附件：各有关单位名单

环境保护部环境保护对外合作中心

2016年8月9日

附件:

各有关单位名单

（排名不分先后）

1、 北京市环保局国际合作处（北京市环境保护科学研究院）；
2、 天津市环保局（天津市环科院）；
3、 上海市环保局国际合作处（上海市环境科学研究院）；
4、 重庆市环境保护局（重庆市环保产业协会）；
5、 河北省环保厅科技与对外合作处（河北省环保高新技术示范推广基地）；
6、 云南省环保厅国际合作处（云南省环境科学学会）；
7、 辽宁省环保厅国际合作处（辽宁省环境科学研究院）；
8、 黑龙江省环保厅污染防治处（黑龙江省环境保护对外合作中心）；
9、 湖南省规划财务与国际合作处（湖南省环境保护产业协会）；
10、 山东省环保厅科技处（山东省环保技术服务中心）；
11、 江苏环境经济技术国际合作中心（江苏省环境保护产业协会）；
12、 浙江省环保厅科技处（浙江省环保公共科技创新服务平台）；
13、 广西壮族自治区环保厅科技标准处（广西省环境保护对外合作交流中心）；
14、 陕西省环境保护厅科技标准处（陕西省环境科学研究院）；
15、 吉林省环保厅科技标准处（吉林省环保产业协会）；
16、 贵州省环保厅污防处（贵州省环境保护国际合作中心）；
17、 四川省环保厅宣教与对外合作处（四川省环境保护对外交流合作中心）；
18、 宁夏回族自治区环保厅生态与国际合作处；
19、 深圳市人居环境委规划处（深圳市环境保护产业协会）；
20、 浙江省宁波市污染防治处（宁波市环境保护科学研究设计院）；
21、 广东省广州市环保局污染防治处（广州市环境保护科学研究院）；
22、 山东省济南市环保局科技标准处（济南市环境保护科学研究院）；
23、 辽宁省沈阳市环保局国际合作处（沈阳市环境科学研究院）；

24、 辽宁省大连市环保局科技与环保产业处（大连市环境科学学会）；
25、 贵州省贵阳市环保局规划科技处（贵阳市环境信息中心、贵阳市生态环境科学研究院）；
26、 青海省西宁市环保局规划财务处（西宁市环境科学研究院）；
27、 中国环境科学研究院；
28、 中国环境规划院；
29、 环境保护部南京环境科学研究所；
30、 中国环境科学学会；
31、 中国环保产业协会；
32、 中华全国工商业联合会环境服务业商会；
33、 中国宜兴环保科技工业园；
34、 江苏盐城环保科技城；
35、 重庆大渡口工业园；
36、 西安高新区；
37、 宁夏盐池环保产业园；
38、 E20 环境产业俱乐部；
39、 宇墨咨询有限公司；
40、 第一环保网；
41、 泰达低碳经济促进中心

环境保护部环境保护对外合作中心

FECO Letter (2016)

Letter of Recommendation on Candidates for Participating in the "Second 3iPET Top 100 Environmental Protection Technologies Contest"

To all institutions it may concern:

The "First 3iPET Top 100 Environmental Protection Technologies Contest" was successfully organized in 2015 and screened some advanced and practical technologies from home and abroad that have been awarded with the title of "Top 100 Technologies for 3iPET". Relevant enterprises have been organized to participate in international forums, technical road-shows as well as networking activities with local sewage discharging enterprises, which has promoted exchanges and cooperation of environmental protection technologies in and abroad, the "import and export" of relevant environmental technologies and equipment, as well as the industrialized development of environmental industry. Hereby, the 3iPET platform will organize the "Second 3iPET Top 100 Environmental Protection Technologies Contest" from August to December 2016. For detailed information, please login our website (http://www.3ipet.cn). Our cooperative partners are invited to recommend relevant environmental protection enterprises and technologies to participate in the "Second 3iPET Top 100 Environmental Protection Technologies Contest", and give your recommendation opinions in the application form. The deadline for submitting application forms shall be October 30, 2016.

Thanks for your support and cooperation! We are looking forward to your recommendations.

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