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|  | | ISO FORM 4 |
|  | | **NEW WORK ITEM PROPOSAL (NP)** |
| **DATE OF CIRCULATION:** Click here to enter a date. | | **CLOSING DATE FOR VOTING:** Click here to enter a date. |
| **PROPOSER:**  ISO member body:  SAC  Committee, liaison or other:  Click or tap here to enter text. | | **REFERENCE NUMBER:** Click or tap here to enter text.  **WITHIN EXISTING COMMITTEE**  Document Number: TC282  Committee Secretariat: SAC  **PROPOSAL FOR A NEW PC** |
| A proposal for a new work item within the scope of an existing committee shall be submitted to the secretariat of that committee.  A proposal for a new project committee shall be submitted to the Central Secretariat, which will process the proposal in accordance with ISO/IEC Directives, Part 1,[Clause 2.3](https://www.iso.org/resources/publicly-available-resources.html?t=712usHn2eATZXjtj0c3FIJ16gvWZXP-_fykOV8H1WAolmA84oAGBwILzOVFUEc46&view=documents" \l "section-isodocuments-top).  Guidelines for proposing and justifying new work items or new fields of technical activity (Project Committee) are given in ISO/IEC Directives, Part 1, [Annex C](https://www.iso.org/resources/publicly-available-resources.html?t=712usHn2eATZXjtj0c3FIJ16gvWZXP-_fykOV8H1WAolmA84oAGBwILzOVFUEc46&view=documents#section-isodocuments-top).  **IMPORTANT NOTE:** Proposals without adequate justification and supporting information risk rejection or referral to the originator. | | |
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| **PROPOSAL**  (to be completed by the proposer, following discussion with committee leadership if appropriate) | | |
| English title | | |
| 再生水中全氟和多氟烷基物质的处理指南 | | |
| French title | | |
| Click or tap here to enter text.  (Please see ISO/IEC Directives, Part 1, [Annex C](https://www.iso.org/resources/publicly-available-resources.html?t=712usHn2eATZXjtj0c3FIJ16gvWZXP-_fykOV8H1WAolmA84oAGBwILzOVFUEc46&view=documents#section-isodocuments-top), Clause C.4.2).  In case of amendment, revision or a new part of an existing document, please include the reference number and current title | | |
| **SCOPE**  (Please see ISO/IEC Directives, Part 1, [Annex C](https://www.iso.org/resources/publicly-available-resources.html?t=712usHn2eATZXjtj0c3FIJ16gvWZXP-_fykOV8H1WAolmA84oAGBwILzOVFUEc46&view=documents#section-isodocuments-top), Clause C.4.3) | | |
| 本文件为再生水中全氟和多氟烷基化合物的处理提供指导，规定了再生水中全氟和多氟烷基化合物处理的总则、PFAS控制目标与技术分级、处理技术规范、监测分析与报告、技术验证与评估和管理要求。  本文件适用于再生水中全氟和多氟烷基化合物的处理。 | | |
| **PURPOSE AND JUSTIFICATION**  (Please see ISO/IEC Directives, Part 1, [Annex C](https://www.iso.org/resources/publicly-available-resources.html?t=712usHn2eATZXjtj0c3FIJ16gvWZXP-_fykOV8H1WAolmA84oAGBwILzOVFUEc46&view=documents#section-isodocuments-top) and additional guidance on justification statements in the brochure [Guidance on New Work](https://www.iso.org/publication/PUB100438.html)) | | |
| 水对维持人类生命、推动工业和农业发展以及保持生态平衡至关重要。然而，全球水资源供应正面临着巨大的压力。《2025年联合国世界水发展报告》显示，2000年至2021年，全球淡水取用量增加了14%，相当于年均增长约0.7%，并且全球四分之一人口所在的25个国家每年面临“极高”的水资源压力，大约有40亿人或者说全球一半的人口每年至少有一部分时间经历严重的水资源短缺。  为解决水资源短缺问题，许多国家和地区正在着重开发雨水、海水和再生水等非传统水源。与其他非传统水源相比，再生水具有成本低和水质水量稳定的特点，已成为国际公认的“城市第二水源”。再生水利用是破解水资源短缺和水环境污染问题的双赢途径，其应用场景涵盖生态补水、工业冷却、农业灌溉及市政杂用等多元领域。以色列、澳大利亚、美国加州等缺水国家和地区均将其作为解决水资源短缺问题的重要战略举措。再生水是联合国发展目标3（良好的健康与福祉）、目标6（清洁饮水和卫生设施）、目标9（工业、创新和基础设施）和目标11（可持续城市和社区）的重要支撑。  然而，再生水在利用过程中会面临一定的新兴污染物引发的潜在风险。引起这些风险的物质主要包括生物风险物质以及化学风险物质。全氟和多氟烷基化合物（PFAS）是一类包含4000余种人造有机化学物质的新兴污染物，其分子中含有全氟化碳结构，当前在水源水和饮用水中被频繁检出，世界各个国家和地区的地表水、地下水、污水处理厂出水和再生水中均检测到了不同浓度的PFAS，其浓度值涵盖0.1 ng/L-1000 mg/L。因PFAS具有持久性、难降解性和多种生物毒性，最终又可能通过水循环系统回到人体内，危害人类健康。因此处理再生水中的PFAS，降低再生水的潜在风险成为急需解决的重大问题。尽管如此，传统水处理技术对PFAS的处理效果有限，亟需建立覆盖“目标设定-技术分级-监测验证-责任管理”的全流程处理及管控体系，推动现有处理技术的升级改造—这也正是国内外技术创新和管理的热点。  目前国内外已发布的PFAS相关标准和法规，大多关注饮用水和水体中PFAS的浓度限值以及水中PFAS的测定方法，如ISO 21675、EN 17892，未见针对PFAS处理的ISO标准。为有效指导再生水中全氟和多氟烷基物质（PFAS）的处理及风险控制，规范从处理技术选择到运行管理的全流程要求，制定本文件。本文件规定了再生水中PFAS处理的总则、控制目标与技术分级、处理技术规范、监测分析与报告、技术验证与评估及管理要求，为实现PFAS高效处理及再生水风险控制提供系统性的技术指南。(Please use this field or attach an annex) | | |
| **PROPOSED PROJECT LEADER** (name and email address) | | |
| 黄辉（中国）, envhuang@nju.edu.cn | | |
| **PROPOSER** (including contact information of the proposer’s representative) | | |
| 肖寒 国家市场监督管理总局标准创新管理司司长 sac\_82261017@126.com | | |
|  | **The proposer confirms that this proposal has been drafted in compliance with ISO/IEC Directives, Part 1, Annex C** | |
| **PROJECT MANAGEMENT**  Preferred document   |  |  | | --- | --- | |  | International Standard | |  | Technical Specification | |  | Publicly Available Specification\* |   \* While a formal NP ballot is not required (no eForm04), the NP form may provide useful information for the committee P-members to consider when deciding to initiate a Publicly Available Specification.  Proposed Standard Development Track (SDT – to be discussed by the proposer with the committee manager or ISO/CS)  18 months  24 months  36 months  Proposed date for first meeting: 2024-12-10  Proposed TARGET dates for key milestones   * Circulation of 1st Working Draft (if any) to experts: 2025-09-01 * Committee Draft consultation (if any): 2026-02-01 * DIS submission\*: 2027-07-01 * Publication\*: 2028-07-01   \* Target Dates for DIS submission and Publication should be set a few weeks ahead of the limit dates automatically determined when selecting the SDT.  It is proposed that this DOCUMENT will be developed by:   |  |  | | --- | --- | |  | An existing Working Group, add title Click or tap here to enter text. | |  | A new Working Group Click or tap here to enter text.  *(Note that the establishment of a new Working Group requires approval by the parent committee by a resolution)* | |  | The TC/SC directly | |  | To be determined | |  | This proposal relates to a new ISO document | |  |  | |  | This proposal relates to the adoption, as an active project, of an item currently registered as a Preliminary Work Item | |  | This proposal relates to the re-establishment of a cancelled project as an active project | |  | Other: Click or tap here to enter text. |   Additional guidance on project management is available [here](https://connect.iso.org/display/standards/Project+management). | | |
| **PREPARATORY WORK**   |  |  | | --- | --- | |  | A draft is attached | |  | An existing document serving as the initial basis is attached | |  | An outline is attached | |  | Note: at minimum an outline of the proposed document is required |   The proposer is prepared to undertake the preparatory work required:  Yes  No  If a draft is attached to this proposal:  Please select from one of the following options:   |  |  | | --- | --- | |  | The draft document can be registered at Preparatory stage (WD – stage 20.00) | |  | The draft document can be registered at Committee stage (CD – stage 30.00) | |  | The draft document can be registered at enquiry stage (DIS – stage 40.00) | |  |  | |  | If the attached document is copyrighted or includes copyrighted content, the proposer confirms that copyright permission has been granted for ISO to use this content in compliance with [clause 2.13](https://www.iso.org/resources/publicly-available-resources.html?t=712usHn2eATZXjtj0c3FIJ16gvWZXP-_fykOV8H1WAolmA84oAGBwILzOVFUEc46&view=documents#section-isodocuments-top) of ISO/IEC Directives, Part 1 (see also the [Declaration on copyright](https://www.iso.org/declaration-for-participants-in-iso-activities.html)). | | | |
| **RELATION OF THE PROPOSAL TO EXISTING INTERNATIONAL STANDARDS AND ON-GOING STANDARDIZATION WORK**  To the best of your knowledge, has this or a similar proposal been submitted to another standards development organization or to another ISO committee?  Yes  No  If Yes, please specify which one(s) Click or tap here to enter text.  The proposer has checked whether the proposed scope of this new project overlaps with the scope of any existing ISO project  If an overlap or the potential for overlap is identified, the proposer and the leaders of the existing project have discussed on:   1. modification/restriction of the scope of the proposal to avoid overlapping, 2. potential modification/restriction of the scope of the existing project to avoid overlapping.   If agreement with parties responsible for existing project(s) has not been reached, please explain why the proposal should be approved Click or tap here to enter text.  Has a proposal on this subject already been submitted within an existing committee and rejected? If so, what were the reasons for rejection? Click or tap here to enter text.  This project may require possible joint/parallel work with  IEC (please specify the committee) Click or tap here to enter text.  CEN (please specify the committee) Click or tap here to enter text.  Other (please specify) Click or tap here to enter text. | | |
| **Please select any UN Sustainable Development Goals (SDGs) that this proposed project would support** (information about SDGs, is available at [www.iso.org/SDGs](http://www.iso.org/SDGs))  GOAL 1: No Poverty  GOAL 2: Zero Hunger  GOAL 3: Good Health and Well-being  GOAL 4: Quality Education  GOAL 5: Gender Equality  GOAL 6: Clean Water and Sanitation  GOAL 7: Affordable and Clean Energy  GOAL 8: Decent Work and Economic Growth  GOAL 9: Industry, Innovation and Infrastructure  GOAL 10: Reduced Inequality  GOAL 11: Sustainable Cities and Communities  GOAL 12: Responsible Consumption and Production  GOAL 13: Climate Action  GOAL 14: Life Below Water  GOAL 15: Life on Land  GOAL 16: Peace, Justice and strong institutions  N/A GOAL 17: Partnerships for the goals | | |
| **Identification and description of relevant affected stakeholder categories**  (Please see [ISO CONNECT](https://connect.iso.org/display/standards/Stakeholders+and+liaisons))   |  |  | | --- | --- | |  | Benefits/Impacts/Examples | | Industry and commerce – large industry | 推动高效安全水回用技术普及以及行业进步。 | | Industry and commerce – SMEs | 增加企业水回用的效益，提升企业的竞争力以及促进可持续发展。 | | Government | 提升再生水质量，构建韧性城市。 | | Consumers | 提供不同回用场景的高品质出水，提升居民健康水平。 | | Labour | 提高劳动生产率，增加社会效率。 | | Academic and research bodies | 促进再生水处理及回用技术与设备的研究与开发，促进行业技术进步。 | | Standards application businesses | 为全球再生水中PFAS处理提供规范指导，提高社会生产率。 | | Non-governmental organizations | 普及安全用水、节水和循环经济理念，促进人与自然和谐共生。 | | Other (please specify) | Click or tap here to enter text. | |  |  | | | |
| **Listing of countries where the subject of the proposal is important for their national commercial interests** (Please see ISO/IEC Directives, Part 1, [Annex C](https://www.iso.org/resources/publicly-available-resources.html?t=712usHn2eATZXjtj0c3FIJ16gvWZXP-_fykOV8H1WAolmA84oAGBwILzOVFUEc46&view=documents#section-isodocuments-top), Clause C.4.8)  中国、美国、以色列、新加坡、澳大利亚、尼日利亚、加拿大、日本、法国、葡萄牙、韩国、西班牙等 | | |
| **Listing of external international organizations or internal parties (other ISO and/or IEC committees) to be engaged in this work** (Please see ISO/IEC Directives, part 1, [Annex C](https://www.iso.org/resources/publicly-available-resources.html?t=712usHn2eATZXjtj0c3FIJ16gvWZXP-_fykOV8H1WAolmA84oAGBwILzOVFUEc46&view=documents#section-isodocuments-top), Clause C.4.9)  Click or tap here to enter text. | | |
| **Listing of relevant documents (such as standards and regulations) at international, regional and national level** (Please see ISO/IEC Directives, Part 1, [Annex C](https://www.iso.org/resources/publicly-available-resources.html?t=712usHn2eATZXjtj0c3FIJ16gvWZXP-_fykOV8H1WAolmA84oAGBwILzOVFUEc46&view=documents#section-isodocuments-top), Clause C.4.6)  [1] ISO 21675:2019 Water quality - Determination of perfluoroalkyl and polyfluoroalkyl substances (PFAS) in water — Method using solid phase extraction and liquid chromatography-tandem mass spectrometry (LC-MS/MS)  [2] ISO 4789:2023 Guidelines for wastewater treatment and reuse in thermal power plants  [3] ISO 9784 Guidelines for biological filtration of secondary effluent for water reuse  [4] ISO/FDIS 12370 Guidelines for treatment and reuse of fermentation-based pharmaceutical wastewater  [5] EN 17892:2024 Water quality - Determination of selected per- and polyfluoroalkyl substances in drinking water - Method using liquid chromatography/tandem-mass spectrometry (LC-MS/MS)  Water for Prosperity and Peace——2024 United Nations World Water Development Report  [6] Stockholm Convention on Persistent Organic Pollutants (POPs), REVISED IN 2017  [7] Xiaoya Fang, Lili Jin, Xiangzhou Sun, Hui Huang\*, Yanru Wang, Hongqiang Ren. A data-driven analysis to discover research hotspots and trends of technologies for PFAS removal[J]. Environmental Research, 2024, 251, 118678  [8] Yuanji Shi, Hongxin Mu, Jiaqian You, Chenglong Han, Huazai Cheng, Jinfeng Wang, Haidong Hu\*, Hongqiang Ren\*. Confined water-encapsulated activated carbon for capturing short-chain perfluoroalkyl and polyfluoroalkyl substances from drinking water[J]. Proceedings of the National Academy of Sciences of the United States of America, 2023, 120, e2219179120  [9] EPA (2012), *Emerging Contaminants –* Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA), Environmental Protection Agency, Washington DC  [10]. EPA(2023), Treatment of PFAS and other Emerging Contaminants, Environmental Protection Agency, Washington DC  [11] EPA(2020), Treatment of Emerging Contaminates and Sustainable Chemistry), Environmental Protection Agency, Washington DC  [12] National Health and Medical Research Council, *Guidance on Per and Polyfluoroalkyl substances (PFAS) in Recreational Water*, Australia, 2019 | | |
| **ADDITIONAL INFORMATION**  **Maintenance Agencies (MAs) and Registration Authorities (RAs)**   |  |  | | --- | --- | |  | This proposal requires the designation of a maintenance agency. If so, please identify the potential candidate: | |  | Click or tap here to enter text. | |  | This proposal requires the designation of a registration authority. If so, please identify the potential candidate | |  | Click or tap here to enter text. |   NOTE: Selection and appointment of the MA or RA are subject to the procedure outlined in ISO/IEC Directives, Part 1, [Annex G](https://www.iso.org/resources/publicly-available-resources.html?t=712usHn2eATZXjtj0c3FIJ16gvWZXP-_fykOV8H1WAolmA84oAGBwILzOVFUEc46&view=documents#section-isodocuments-top) and [Annex H](https://www.iso.org/resources/publicly-available-resources.html?t=712usHn2eATZXjtj0c3FIJ16gvWZXP-_fykOV8H1WAolmA84oAGBwILzOVFUEc46&view=documents#section-isodocuments-top).  **Known patented Items** (Please see ISO/IEC Directives, Part 1, [Clause 2.14](https://www.iso.org/resources/publicly-available-resources.html?t=712usHn2eATZXjtj0c3FIJ16gvWZXP-_fykOV8H1WAolmA84oAGBwILzOVFUEc46&view=documents#section-isodocuments-top))  Yes  No  If Yes, provide full information as an annex  **Is this proposal for an ISO management System Standard (MSS)?**  Yes  No  Note: If yes, this proposal must have an accompanying justification study. Please see the Consolidated Supplement to the ISO/IEC Directives, Part 1, [Annex SL](https://www.iso.org/resources/publicly-available-resources.html?t=712usHn2eATZXjtj0c3FIJ16gvWZXP-_fykOV8H1WAolmA84oAGBwILzOVFUEc46&view=documents#section-isodocuments-top) or [Annex JG](https://www.iso.org/resources/publicly-available-resources.html?t=712usHn2eATZXjtj0c3FIJ16gvWZXP-_fykOV8H1WAolmA84oAGBwILzOVFUEc46&view=documents#section-isodocuments-top) | | |