



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
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International and  
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April 15, 2016

Dear Ceasar,

Attached please find the response of the government of the United States of America to Submission on Enforcement Matters 15-003 (Municipal Waste Water Drop Shafts), as requested by the Secretariat.

Sincerely,

A handwritten signature in black ink, appearing to read "Jane Nishida".

Jane Nishida

Acting Assistant Administrator

Office of International and Tribal Affairs and

Alternate Representative to the Council of the Commission for Environmental Protection

**Response of the United States of America to Submission on Enforcement Matters 15-003  
“Municipal Wastewater Drop Shafts”**

**I. Introduction**

This memorandum responds to a request from the Secretariat of the Commission for Environmental Cooperation (“CEC”) that the Government of the United States of America respond to a “Submission on Enforcement Matters 15-003” made on November 3, 2015 by Robert Schreiber, an individual (the “Submitter”). The submission contains assertions related to implementation of the Safe Drinking Water Act (SDWA) which is administered by the United States Environmental Protection Agency (EPA).

The Submitter filed this submission with the Secretariat of the CEC pursuant to Article 14(1) of the North American Agreement on Environmental Cooperation (NAAEC). He asserts that the United States is failing to effectively enforce its environmental law because it does not issue permits for specific conveyances, termed by the Submitter “municipal wastewater drop shafts,” (“drop shafts”) under the SDWA Underground Injection Control (UIC) program, nor has the United States withdrawn any state UIC program authorized by EPA to carry out the SDWA for failure to issue UIC permits for those drop shafts.

The phrase “drop shafts” refers to a pipe system that conveys fluid from one sewer to a lower sewer as it travels to a wastewater treatment plant (Submission at 2). They can be a part of combined sewer systems or separate sanitary sewer systems. However, use of drop shafts for conveyance to storage tunnels is more common in combined sewer systems, because storage tunnels are more common in combined sewer systems. The Submitter often refers to combined sewer systems (CSSs), hence, the discussion that follows focuses on CSSs. Although the United States response mainly discusses CSSs, the response is generally applicable to drop shafts in either type of sewer system because the analysis of whether SDWA and EPA’s UIC regulations apply to these drop shafts does not turn on whether they are part of a CSS or a separate sanitary sewer system.

Combined sewer systems collect rainwater runoff, domestic sewage, and industrial wastewater into one pipe. Under normal conditions, the CSS transports all of the wastewater it collects to a sewage treatment plant for treatment, then discharges the wastewater to a surface water body. The volume of wastewater can sometimes exceed the capacity of the CSS or treatment plant (*e.g.*, during heavy rainfall events or snowmelt). When this occurs, untreated stormwater and wastewater discharge directly to nearby streams, rivers, and other surface water bodies. These discharges, known as combined sewer overflows (CSOs), contain raw sewage and pollutants carried by stormwater.

One means of reducing CSOs is to construct storage tunnels as part of the CSS to provide additional capacity for wet weather flows in the sewer system. During wet weather, a portion of the flow is diverted from the conveyance system to those tunnels. The stored sewage/stormwater is temporarily detained in the tunnel and returned to the conveyance system to enable treatment of the raw sewage prior to discharge to waterways. Municipal wastewater drop shafts as referenced by the Submitter are one way in which CSS flows can be transferred from the collection system to the storage tunnel.

EPA’s interpretation is that conveyance of fluids via drop shafts does not meet the SDWA’s definition of underground injection and so permitting or enforcement would not be appropriate. Additionally, there

are alternative regulatory mechanisms available to provide requirements for ground water protection from the operation of these systems, such as long term CSO plans developed under Clean Water Act (CWA) regulations. Expanding the regulatory coverage of drop shafts under SDWA would not reduce environmental harm. Rather, expanded regulation potentially undermines the environmental compliance status of CSO conveyance tunnels nationwide and could potentially disrupt a practice of great environmental benefit.

## **II. Secretariat Determination in Accordance with Article 14(1) and 14(2) of the North American Agreement of Environmental Cooperation**

The CEC Secretariat, in a communication issued on January 21, 2016, concluded that the allegation in the submission met the criteria of Article 14(1) of the Agreement. After reviewing the allegation in light of the considerations of Article 14(2) of the NAAEC, the Secretariat asked the United States to respond to the allegation of failure to effectively enforce the UIC Program of the SDWA with respect to the construction and operation of municipal wastewater drop shafts. In responding to the submission, the Secretariat's determination also suggests that the United States provide additional information related to the Submission, including:

- (i) whether the United States is aware of any particular situation of potential or actual harm to underground sources of drinking water from the construction and/or operation of municipal wastewater drop shafts;
- (ii) whether the United States has ever exercised its enforcement authority under Section 1431 of the Safe Drinking Water Act with respect to a contaminant from any municipal wastewater drop shafts; and
- (iii) whether the EPA or any of the States has ever required monitoring of potential or actual exfiltration from municipal wastewater drop shafts, similar to that which was discussed in the EPA memorandum dated July 3, 2001.

## **III. Background**

### **A. Underground Injection Control Program**

With the realization in the mid-20<sup>th</sup> century that subsurface emplacement of large volumes of fluids could contaminate ground water, the states, Indian tribes, and the United States federal government began to develop both methods and programs to protect this vital water resource. The threat to ground water was demonstrated by several incidents related to under-regulated injection in the late 1960s and early 1970s which resulted in ground water contamination at sites in several states.

The SDWA authorizes EPA to protect the quality of drinking water in the United States, and Part C, 42 U.S.C. 300h - 300h-8, specifically mandates the regulation of underground injection of fluids through wells. As required by the SDWA, EPA established a regulatory program to prevent underground injection

which endangers drinking water sources, promulgated regulations containing minimum requirements for state underground injection control programs, and directed all states and tribes identified by EPA to submit UIC programs meeting those minimum requirements. 42 U.S.C. 300h-1 and 300j-11; see 40 C.F.R. 144.1. Once EPA approves a state's program as meeting the requirements of SDWA, the state has "primary enforcement authority" and is thereby responsible for implementing and enforcing the approved program. EPA, nonetheless, retains the ability to enforce the state's approved program. 42 U.S.C. 300h-2; 40 C.F.R. 147.1(e). For states and tribes without approved programs, EPA administers a federal UIC program. 40 C.F.R. 147.1(b), (d).

The purpose of EPA's UIC regulations and all EPA-approved state UIC programs is the protection of underground sources of drinking water ("USDWs") from "endangerment" as a result of underground injection. 42 U.S.C. 300h(b)(1). Under the SDWA, "underground injection" is defined as "the subsurface emplacement of fluids by well injection." 42 U.S.C. 300h(d)(1). The SDWA provides further that "[u]nderground injection endangers drinking water sources if such injection may result in the presence in underground water which supplies or can reasonably be expected to supply any public water system of any contaminant, and if the presence of such contaminant may result in such system's not complying with any national primary drinking water regulation or may otherwise adversely affect the health of persons." 42 U.S.C. 300h(d)(2).

EPA's regulations prevent endangerment by prohibiting injection activities that allow the movement of fluid containing contaminants into a USDW if the presence of the contaminants may cause a violation of drinking water standards or otherwise adversely affect the health of persons. 40 C.F.R. 144.12. A USDW is defined broadly in EPA's regulations to include an aquifer or its portion:

- (a) (1) which supplies any public water system; or
  - (2) which contains a sufficient quantity of ground water to supply a public water system and
    - (i) currently supplies drinking water for human consumption or
    - (ii) contains fewer than 10,000mg/l total dissolved solids; and
- (b) is not an exempted aquifer.

40 C.F.R. 144.3.

EPA's regulations establish six classes of injection wells within the UIC program. 40 C.F.R. 144.6. The requirements associated with each well class are based principally on factors related to their potential for endangering USDWs, such as the type of the activity. Class I wells are for the injection of hazardous, non-hazardous industrial, or municipal waste, and radioactive waste below the lowermost formation containing a USDW within one quarter mile of the wellbore. Class II wells are used to inject fluids brought to the surface in connection with natural gas storage operations or oil or natural gas production, for the enhanced recovery of oil and gas, and for the storage of hydrocarbons that are liquids at standard temperature and pressure. Class III wells are used for extraction of minerals, including mining of sulfur by the Frasch process, the *in situ* production of uranium or other metals from ore-bodies which have not been conventionally mined, and solution mining of salts or potash. Class IV wells were for injection of hazardous or radioactive wastes into or above USDWs, but were specifically prohibited by UIC regulations except if the injection is approved by EPA or a state pursuant to provisions

for the clean-up of releases under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) 42 U.S.C. 9601 *et seq.* or pursuant to the Resource Conservation and Recovery Act (RCRA) 42 U.S.C. 6901 *et seq.* Class VI wells are used for the geologic sequestration of carbon dioxide, which are not experimental in nature.

Class V is for “injection wells that are not included in Class I, II, III, IV, or VI.” 40 C.F.R. 144.6(e) and 144.80(e). Typically, Class V wells are shallow wells used to place a variety of fluids directly below the land surface. 40 C.F.R. 144.80(e). Some examples listed in EPA regulations include large capacity cesspools, certain septic systems wells, and drainage wells used to drain surface fluids, primarily stormwater runoff, into a subsurface formation. 40 C.F.R. 144.81.

With some exceptions, Class V injection activity is "authorized by rule." "Authorized by rule" means that an injection well must comply with all the requirements of the UIC Program but does not have to get an individual permit, as long as the owners or operators submit inventory information to their permitting authority and operate the wells in a way that does not endanger USDWs. 40 C.F.R. 144.84(a). If an operator fails to submit inventory information to the UIC Program Director, then the operator is prohibited from injecting until it complies with the inventory information requirement. 144.84(b)(4). Wells can be specifically required by the UIC Program Director to get a permit, in which case, rule authorization expires when an individual permit is issued, an operator fails to submit a permit application, or a primacy agency denies the permit. 144.84(b)(3).

The EPA developed the UIC regulations with extensive public interaction and input. After public notice that the Agency would initiate rulemaking to establish minimum federal injection well program requirements, the EPA first proposed minimum federal regulations in 1976. The rule was issued for public comment and input from commenters, including the states, which resulted in a re-proposal of the regulations to address public concerns in 1979. To further support the program, the Agency prepared the *Statement of Basis and Purpose for the UIC Program* (May, 1980; National UIC Program Docket Control Number D01079) to provide a general picture of the need, use, operation, and regulation of injection wells just prior to releasing the final UIC regulations.

The *Statement of Basis and Purpose* presents the rationale for the Agency in proposing specific regulatory controls for a variety of underground injection activities. This document discusses the categorization of injection wells, the major pathways which contaminants can take to enter underground sources of drinking water, and the regulations necessary to assure that movement of fluids resulting from well injection does not contaminate USDWs. The document is used to explain the evolution of the UIC regulations with respect to the “various well injection practices, the characteristics of substrata (or strata) into which fluids are injected, and the range of methods by which well injection is accomplished.”

## **B. Combined Sewer Systems**

Combined sewer systems were among the earliest sewer systems constructed in the United States and were built until the first part of the 20th century. There are nearly 860 municipalities across the United States with combined sewer systems. A CSS conveys domestic, commercial, and industrial wastewaters

and stormwater runoff through a single pipe system. CSSs were designed to collect and convey sewage and some volume of wet weather flow to a publicly owned treatment works (POTW) (or treatment plant) for treatment. These systems were also designed to discharge some of the combined wastewater and stormwater directly to streams, rivers, and other surface water bodies when the volume of flow in the system exceeds the capacity of the CSS or treatment plant (*e.g.*, during heavy rainfall events or snowmelt). These discharges, known as combined sewer overflows, contain raw sewage and pollutants carried by stormwater. CSOs are a priority surface water pollution concern for the communities with CSSs and for federal and state regulators.

### **C. Regulatory Controls for CSO Management**

Discharges from wastewater treatment plants, including POTWs that service CSSs, and CSOs are regulated under the Clean Water Act (CWA). The National Pollutant Discharge Elimination System (NPDES) permit program, under section 402 of the CWA, regulates the discharge of pollutants from “point sources” to “navigable waters.” NPDES permits issued for CSO and POTW discharges establish technology-based effluent limitations and any more stringent effluent limitations necessary to meet water quality standards. EPA's CSO Control Policy, published April 19, 1994 (59 FR 18688), provides the national framework for control of CSOs through the NPDES program. Since amendments to the CWA in 2000, under CWA section 402(q), NPDES permits and enforcement orders issued for discharges from a CSS are required to conform to the 1994 CSO Control Policy.

The 1994 CSO Control Policy sets forth a two-phase process for meeting the requirements of the CWA. First, there are Nine Minimum Controls that every NPDES permit issued to a CSS with CSOs must include. Among these are “proper operation and regular maintenance programs for the sewer system and CSOs” and “maximum use of the collection system for storage.” (59 FR at 18691). Second, “permittees with CSOs are responsible for developing and implementing long-term CSO control plans (LTCP) that will ultimately result in compliance with the requirements of the CWA,” which include attainment of water quality standards. *Id.* In developing an LTCP, the municipality or POTW operating the CSS is expected to evaluate a range of alternatives. An LTCP can be developed using the “presumption approach,” based on either a maximum number of overflow events or capture for treatment of a minimum percentage of volume of flows or mass of pollutants. Alternatively, an LTCP can be developed using the “demonstration approach” whereby the operator demonstrates that the program of controls does not preclude attainment of water quality standards.

One means of reducing CSOs is to construct storage tunnels as part of the CSS to provide additional capacity for wet weather flows in the sewer system. During wet weather, a portion of the flows is diverted from the conveyance system to those tunnels by gravity drainage or by pumping. The stored sewage/stormwater is temporarily detained in the tunnel and returned to the conveyance system for transport to the treatment plant once downstream conveyance and treatment capacity become available. Municipal wastewater drop shafts as referenced by the Submitter are one way in which separate or CSS flows can be transferred from the collection system to the storage tunnel.

Where contamination of ground water is of concern, nothing precludes consideration of ground water impacts when considering alternatives for long-term control measures. Further, under the CSO Control Policy, public participation is to be employed in LTCP development. 59 FR at 18692.

For example, during planning for construction of a CSO control tunnel in Washington, DC, EPA as well as members of the public expressed concerns about impacts to ground water and the City responded with descriptions of measures to control infiltration and exfiltration such as concrete lining and surface grouting to reduce permeability. The City also described how potential impacts to ground water were considered during the engineering phase of the tunnel (Combined Sewer System Long Term Control Plan, Final Report; July 2002).

As another example, the City of Indianapolis, Indiana cited a Ground Water Management Plan (GWMP) in their LTCP, which calls for construction of a storage tunnel for combined sewer flows. The GWMP evaluated short and long-term ground water impacts from construction and operation of the tunnel. The GWMP included components such as ground water modeling to evaluate potential impacts and alternatives and mitigation controls to be considered during construction and future operation of the tunnel. (City of Indianapolis, Long Term Control Plan; September 2006).

While requirements for municipal sewer systems to meet CWA provisions generally focus on discharges to surface waters, all NPDES permits must require proper operation and maintenance of “all facilities and systems of treatment and control (and related appurtenances).” 40 C.F.R. 122.41(e). As mentioned above, proper operation and maintenance of the CSS, which includes any storage capacity built into the system, is one of the Nine Minimum Controls that must be included in all CSS/CSO permits. In summary, although regulation under the CWA does not prescribe particular measures specifically in consideration of ground water impacts, both the requirement for proper operation and maintenance and development of an LTCP offer opportunities to incorporate site-specific ground water measures into CSO management. As such, we consider both the broad-based watershed approach advocated within the LTCPs and several of the stated elements of the LTCP as supportive of and providing a regulatory mechanism for maintenance of ground water resources. On January 7, 2003, EPA’s Office of Water issued a memo “Watershed-Based National Pollutant Discharge Elimination System (NPDES) Permitting Policy Statement.” The memo stated:

*“A watershed-based approach to point source permitting under the NPDES program may serve as one innovative tool for achieving new efficiencies and environmental results. EPA believes that watershed-based permitting can:*

- *realize other ancillary benefits beyond those that have been achieved under the Clean Water Act (e.g. facilitate program integration including integration of Clean Water Act and Safe Drinking Water Act programs).”*

Finally, we note that section 504 of the CWA provides authority for EPA to take legal action “upon receipt of evidence that a pollution source or combination of sources is presenting an imminent and substantial endangerment to the health of persons or to the welfare of persons where such endangerment is to the livelihood of such persons . . .” This provision could be available where evidence of ground water contamination from leakage from CSS storage tunnels or drop shafts presents an imminent and substantial endangerment to human health or welfare due to endangerment to livelihood.

#### **IV. The United States' Responses to the Submission and to the CEC Secretariat's Determination**

In its Determination, the CEC Secretariat asked the United States to respond to the Submitter's allegation and also suggested that other information related to the submission be provided. The United States' response to each individual item is provided below.

**Determination at 44:** *A response in regard to the Submitter's allegations concerning the alleged failure to effectively enforce the UIC Program of the SDWA with respect to the construction and operation of municipal wastewater drop shafts (Item 44, p. 9).*

##### **EPA response:**

The Submitter claims that "EPA has established a nationwide and persistent pattern of failing to enforce Part C of the SDWA when it fails to require UIC permits for the drop shafts which local governments use to emplace municipal wastewater (mixtures of domestic sewage, industrial and commercial wastewaters, often combined with stormwater or snowmelt) into subsurface tunnels." According to the Submitter, this "endangers public health, USDWs, and nullifies the monitoring requirements which provide the public and regulators with data to determine if USDWs are being contaminated." (Submission at 2). The Submitter claims that EPA is not effectively enforcing the SDWA because EPA is not requiring UIC permits for these drop shafts or withdrawing approval of state UIC programs for their failure to issue UIC permits for the drop shafts.

The Submitter's position is based on an assumption that the drop shafts are required to be regulated as "underground injection" wells under the SDWA and EPA implementing regulations. EPA disagrees with the assumption. The drop shafts are not underground injection wells under the SDWA or EPA's UIC regulations, and consequently, there has been no failure to effectively enforce the SDWA or EPA's regulations. SDWA defines "underground injection" as "the subsurface emplacement of fluids by well injection" and the UIC regulations define "well injection" as "the subsurface emplacement of fluids through a well." The purpose of the drop shafts discussed in the submission is to convey fluid from one sewer to a lower sewer as it travels to a wastewater treatment plant (Submission at 2). Similarly, as described by the Secretariat, a drop shaft is "a 'vertical conduit' used to connect two sewers located at different elevations" (Determination at 3, footnote 12).

EPA's longstanding interpretation of the SDWA and the UIC regulations is that these sewage systems – including both the tunnels and the drop shafts – are conveyance systems intended to transport sewage to a POTW.<sup>1</sup> They are not underground injection wells because they are not used for the emplacement of fluids below the surface of the ground. Therefore, they are not regulated as UIC wells under SDWA and the EPA's UIC regulations. The EPA has expressed this interpretation to the

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<sup>1</sup> The Submitter's request states that the EPA's previous responses have incorrectly considered the conveyance tunnels and drop shafts in the same regulatory interpretation. He acknowledges that the conveyance tunnels themselves do not constitute underground injection but asserts that the drop shafts on their own meet the definition of an underground injection well because the transfer of fluids through the drop shaft to the tunnel constitutes subsurface emplacement. (Submission at 4). The drop shafts transfer fluid into the tunnels; therefore, considering the drop shafts alone would not affect the EPA's view. No part of the sewage conveyance systems is intended to emplace fluids below the subsurface, but rather to convey fluids to a treatment plant and therefore the systems are not underground injection wells under SDWA and the EPA's UIC regulations.



Submitter several times in response to previous requests. The EPA stated in 2007 and 2010, that “tunnels that convey sewage to a POTW do not fall within the scope of [UIC regulatory] definitions because they are not intended to emplace fluids below the surface of the ground through a well, rather they are distribution systems intended to convey wastewater to POTWs from intake sites that collect both sewer flow and flow from a treatment plant during high usage times.” (Giattina, J. memo to Robert Schreiber, 2007; Giles, C. memo to Robert Schreiber, 2010)

While there is no explicit definition in SDWA or EPA regulations of the phrase “subsurface emplacement” it has been the EPA’s interpretation, based on regulations, previous EPA statements and past practice, that the term refers to the purposeful emplacement of fluids into a geologic formation. In contrast, the use of a drop shaft to convey fluids from one sewer to a lower sewer as they travel through a sewage system to a wastewater treatment plant does not involve the “emplacement” of fluids into a subsurface geologic formation.

The phrase “subsurface” refers to geologic formations. In the *Statement of Basis and Purpose for the UIC Program*, developed at the time of the creation of the UIC program, the EPA described the relevant factors of injection by referring to “the characteristics of substrata (or strata) into which fluids are injected” (May, 1980). Moreover, in all of the examples of Class V wells in the EPA’s UIC regulations the geologic formation itself is the target of the injection, and in some examples – including stormwater management – the regulation specifically identifies the “subsurface formation” as the injection endpoint (40 C.F.R. 144.81[1] through [16]). In drop shafts, however, both the upper sewer and the lower tunnel are constructed units designed to retain fluids, rather than release them to the surrounding formation.

Constructed sewage conveyance systems, as well as other constructed conveyance systems, such as natural gas distribution systems, are notably absent from the examples of Class V wells, even though there is the possibility of leakage. Given that both sewage conveyance systems and natural gas distribution systems are found in cities and towns across the United States, if the EPA had ever considered them to involve underground injection, they would have been included in the list of Class V wells in the UIC regulations.

Even if a constructed conveyance system has the potential to leak or, as described by the Submitter, “exfiltrate” to the subsurface, it does not mean the system constitutes “underground injection.” The mere possibility of leakage does not mandate that the EPA regulate the source of the potential leakage as “underground injection” even if that leakage has the potential to cause endangerment to an underground source of drinking water. The 1976 UIC proposed rule preamble states that the potential for endangerment is not a sufficient criterion for an activity to be classified as underground injection (41 FR at 36732). For example, leaking sewer mains are specifically identified as potential sources of contamination that are not covered as underground injection.

The Submitter cites *Legal Environmental Assistance Foundation, Inc. v. EPA 118 F. 3d 1467* (11th Cir. 1997) (“LEAF”), regarding the decision as to whether hydraulic fracturing should be regulated under the UIC program, for several propositions: that “subsurface emplacement of all fluids by well injection require[s] a permit,” that “subsurface emplacement of fluids includes temporary emplacement,” and that well injection must be regulated even if the primary use of the well is not

the subsurface emplacement of fluids.” Submission at 2 and 3. The activity at issue in LEAF-- hydraulic fracturing-- is not analogous to the conveyance of fluids the Submitter refers to. In the LEAF decision, the description of hydraulic fracturing (“forcing fluid into a crack in the ground”) is consistent with the EPA’s interpretation of subsurface emplacement. Therefore, the statements cited by the Submitter in the LEAF decision are not relevant to the discussion of whether or not fluids conveyed via drop shafts should be regulated as underground injection.

Also, in considering whether a statutory or regulatory interpretation could result in a failure by the United States to effectively enforce its environmental law, one must consider the degree of deference to which a U.S. government agency is entitled under U.S. domestic law. In the United States a regulatory agency is typically entitled to a high degree of deference when interpreting a statute it administers or a regulation it has issued to implement such as statute.

In the case of interpretation of a statute administered by the agency, the agency interpretation:

“ . . . is entitled to deference if it is a reasonable interpretation of the statute – not necessarily the only possible interpretation, nor even the interpretation deemed most reasonable by the courts.” *Chevron USA Inc. v. National Resources Defense Council*, 467 U.S. 837, 843-844 (1984).

U.S. courts will typically defer to an agency’s interpretation of its own regulation if “the interpretation is not plainly erroneous or inconsistent with the regulation.” *Auer v. Robbins*, 519 U.S. 452, 460 (1997).

Finally, if UIC regulations under SDWA were to be applied to CSS drop shafts, it would not result in the resolution sought by the submitter. If the drop shafts were to be regulated under the UIC program, they would be categorized as Class V wells. In most cases, Class V wells are authorized by rule. This means that they do not need a permit to operate and there are no specified requirements for monitoring or other construction or operational practices. Should the UIC Program Director determine that there is potential for endangerment, the regulations allow for a permit to be required which could, if the Director determined it were appropriate, include monitoring conditions. However, given the low likelihood of environmental harm coupled with the ubiquitous nature of sewage conveyance systems, it is unlikely that primacy agencies would expend limited resources on developing individual permits and site specific monitoring requirements.

**Determination at 45, (i):** *Whether the United States is aware of any particular situation of potential or actual harm to underground sources of drinking water from the construction and/or operation of municipal wastewater drop shafts (Item 45[i], p. 9).*

**EPA response:**

The EPA is aware of no situation of actual harm to USDWs from the operation of municipal wastewater drop shafts and no case of potential or actual harm to public health resulting from impacts from the operation of such shafts to a public water system.

The Submitter, in his November 3, 2015 petition, described one situation in Milwaukee that appears to represent potential harm to a ground water aquifer from a wastewater storage tunnel (Submission at 12), although the extent and source of the impact is uncertain. The petition

referenced an audit conducted by the Wisconsin Legislative Audit Bureau in 2002 on the CSO storage tunnel in the Milwaukee Metropolitan Sewerage District (MMSD). The audit (<http://legis.wisconsin.gov/lab/reports/02-12full.pdf>) found that 17.2% of samples collected from ground water monitoring wells associated with the tunnel were positive for total and fecal coliform. The full Wisconsin Legislative Audit Report indicates that both the Wisconsin Department of Natural Resources (WI DNR) and the MMSD agreed that filling the deep tunnel to a level greater than the maximum operating level allowed in the WI DNR wastewater discharge permit (#0036820) increases the chance of wastewater contaminating the ground water. The MMSD "has agreed to abide by" the permit's operating restriction and the MMSD and the WI DNR continue to monitor ground water quality around the tunnel (An Evaluation, Milwaukee Metropolitan Sewerage District, July 2002).

In his petition, the Submitter also referenced detection of coliform, fecal coliform, and E. coli in ground water samples collected from another well in proximity to the MMSD storage tunnel, at the Red Star Yeast Plant in 1999. The Submitter highlighted a court case ruling in favor of the Red Star Yeast Plant after the company filed suit against the MMSD claiming MMSD storage tunnels were responsible for contamination of the company well. The case Mr. Schreiber referred to was an appeal from the trial court's ruling in favor of MMSD on legal grounds. The appellate court made no factual findings that the MMSD tunnels caused contamination of the company's well. Rather it remanded the case to the trial court for fact finding, including "whether the operation of the Deep Tunnel is the source of the contamination of the Red Star well." *Lesaffre Yeast Corp. v. Milwaukee Metro. Sewerage Dist.*, 2003 WI App 89, P14, 2003 Wisc. App. LEXIS 219, \*8, 263 Wis. 2d 431, 662 N.W.2d 678 (Wis. Ct. App. 2003). The case was ultimately dropped and no court has ruled that the MMSD tunnel caused any harm to an underground source of drinking water. Further, we note that the events alleged in this case occurred prior to the audit and subsequent alignment of implemented practices with the operating restriction in MMSD's permit.

The Submitter, in his Allegations of Harm, discusses the mechanism for potential exfiltration and subsequent contamination but, beyond the example above in Milwaukee, does not report any situations in which harm has been identified.

**Determination at 45, (ii):** *Whether the United States has ever exercised its enforcement authority under Section 1431 of the Safe Drinking Water Act with respect to a contaminant from any municipal wastewater drop shafts.*

**EPA response:**

Authority granted under SDWA Section 1431, 42 U.S.C. Section 300(i), gives the EPA Administrator broad powers to take appropriate action to protect public health under certain circumstances. Section 1431 authorizes the EPA to "take such actions as [the Administrator] deems necessary in order to protect the health" of the public. While the EPA's authority includes enforcement-related mechanisms (such as compelling others -- by administrative or judicial order -- to take the necessary actions), section 1431 also authorizes the Administrator to act directly. Certain conditions apply: the Administrator must have (1) received "information" that (2) a contaminant (3) is present in or is likely to enter (4) a public water supply or groundwater supply (5) and that it may present (6) imminent and substantial endangerment to the health of persons and (7) state and local authorities have not acted to protect the health of such persons.

The Administrator may exercise this authority “notwithstanding any other provision” in SDWA. Therefore, this authority would be available to the EPA even for contamination caused by an activity not regulated under the UIC program, such as the constructed sewage conveyance systems at issue here. Moreover, whether the SDWA 1431 enforcement authority applies to municipal wastes contaminants in USDWs is not in question. Final Agency Guidance on the use of SDWA 1431 Authority (September 1991) expands on the key elements of conditions that must be met. The Agency guidance expands on the definition of endangerment indicating it can more readily be determined to be imminent where contaminants may pose acute human health threats. One example from the Final Agency Guidance includes the “injection of untreated sewage directly into an USDW that is used by a nearby water well.”

The Agency has demonstrated multiple times that its response authority under Section 1431 of SDWA can be used successfully in situations of imminent danger. No such situation has been raised for any contamination related to the construction or operation of any municipal wastewater drop shaft or CSO conveyance tunnel and so the EPA’s authority under this section has not been exercised in connection with them.

**Determination at 45 (iii)** *Whether the U.S. EPA or any of the States has ever required monitoring of potential or actual exfiltration from municipal wastewater drop shafts, similar to that which was discussed in the EPA memorandum dated July 3, 2001.*

**EPA response:**

The EPA memo of 2001 referenced a discussion of the types of actions that could be relevant to ground water protection, but did not include a specific recommendation for EPA regulatory action. Because the EPA is not directly responsible for this type of monitoring requirement, we do not have information about if and when these requirements may have been applied in this or other situations. However, as described in Section C of the Background, there are regulatory mechanisms that allow for this kind of requirement, including through the NPDES permitting process under the Clean Water Act.

## **V. Conclusions**

The EPA and the United States Department of Justice have replied to this concern from the Submitter multiple times over the last decade (see *e.g.*, EPA memos included in Submission). The United States government’s interpretation has been consistent and there is no new information to result in an alternative determination at this time. In previous communications, the EPA has responded to the Submitter’s concern by expressing that the municipal wastewater drop shaft he discusses does not constitute underground injection and as such is not regulated under SDWA. The EPA maintains the interpretation that neither drop shafts nor the associated tunnels fall within the scope of UIC regulatory definitions because neither are intended to emplace fluids below the surface of the ground through a well. Rather, they are intermediate conduits for conveyance of fluids from a sewer to a wastewater treatment plant during high usage times.

Further, even if UIC regulations under SDWA were to be applied in this situation, it would not result in the resolution sought by the Submitter. If the drop shafts were to be regulated under the UIC program, they would be categorized as Class V wells. In most cases, Class V wells are authorized by rule. This means that they do not need a permit to operate and there are no specified requirements for

monitoring or other construction or operational practices. Should the federal or state UIC Program Director determine that there is potential for endangerment, the regulations allow for a permit to be required which could, if the Director determined it were appropriate, include monitoring conditions. However, given the low likelihood of environmental harm coupled with the ubiquitous nature of sewage conveyance systems, it is unlikely that primacy agencies would expend limited resources on developing individual permits and site specific monitoring requirements.

Along these same lines, the NAAEC expressly recognizes in Article 45(1) that:

“A Party has not failed to “effectively enforce its environmental law . . . in a particular case where the action or inaction in question by agencies or officials of that Party . . . (b) results from *bona fide* decisions to allocate resources to enforcement in respect of other environmental matters determined to have higher priorities . . .”.

Not only would the additional regulation not increase environmental protection, new requirements could undermine the environmental compliance status of CSO conveyance tunnels nationwide. A policy shift could potentially jeopardize the significant public health and environmental benefits resulting from the construction and implementation of CSO conveyance tunnels.

Finally, there are already other regulatory structures that allow for ground water protection requirements should they be necessary. For example, in the situation in Milwaukee identified by the Submitter, when the possibility arose that exfiltration from the wastewater conveyance tunnels was resulting in transport of pathogens, permit conditions to reduce this concern were identified and implemented.

Therefore, the United States believes that the Secretariat should not request authorization from the Council to develop a factual record on the Submitter’s allegations of failure by the United States to effectively enforce its environmental law because preparation of a factual record on those allegations would not significantly advance the goals of the North American Agreement on Environmental Cooperation. The assertion that the United States is failing to effectively enforce the UIC program with respect to the construction and operation of municipal wastewater drop shafts is based on an interpretation of SDWA that has never been adopted by the EPA. If the EPA were to adopt an interpretation where all operators of sewage conveyance systems would be subject to the UIC requirements, it could significantly increase the number of reports that are submitted to primacy agencies, yet it would be unlikely to yield meaningful public health and environmental benefit, and potentially undermine the current public health and environmental benefits from CSO management.