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#### STATE OF NEW MEXICO BEFORE THE WATER QUALITY CONTROL COMMISSION

In the Matter of: PROPOSED NEW RULE 20.6.8 NMAC GROUND AND SURFACE WATER PROTECTION - SUPPLEMENTAL REQUIREMENTS FOR WATER REUSE

No. WQCC 23-84 (R)

#### JOINT NOTICE AND REQUEST TO PREVENT PLAIN ERROR

)

New Energy Economy, WildEarth Guardians, Samuel Sage, Daniel Tso and Mario Atencio ("Joint Movants") submit this Joint Notice to request that the Water Quality Control Commission ("Commission") adopt a rule in this proceeding that requires a permit for any use of produced water off the oilfield. The contemplated "Notice of Intent" process is not protective of human health and the environment pursuant to the Water Quality Act, NMSA 1978, §§ 74-6-1 to -17, and violates the Produced Water Act, NMSA 1978, § 70-13-4 (D). Under the Produced Water Act any use of produced water, whether treated or untreated, off the oilfield *requires* an entity to obtain a permit from the department of the environment and consequently, the implementation of a Notice of Intent will result in plain error. Additionally, because the NMED has testified that it cannot issue a discharge permit without scientific standards, and the department can't develop those standards without credible scientific data and because that evidence does not yet exist, as is required by statute<sup>1</sup> and legal precedent,<sup>2</sup> a rule that permits

<sup>&</sup>lt;sup>1</sup> Water Quality Act, NMSA 1978, §§ 74-6-4(D) (E) and (K).

<sup>&</sup>lt;sup>2</sup> N.M. Mining Assn. v. Water Quality Control Comm'n, 2007-NMCA-084, ¶ 12, 142 N.M. 200, 205 (citing Bokum Res. Corp. v. N.M. Water Quality Control Comm'n, 93 N.M. 546, 553, 603 P.2d 285, 292 (1979).

issuance of a discharge of "treated" produced water is contrary to law and will also result in plain error. As grounds for this request, Joint Movants state the following:

#### I. <u>The Notice of Intent process is not a permit.</u>

- During deliberations the Commission voted to adopt the Notice of Intent ("NOI") Process in the New Mexico Environment Department's ("NMED") proposed rule, which was marked as NMED Exhibit 175.
- The NOI process allows the use of produced water outside the oilfield when NMED determines that no discharge permit is required.<sup>3</sup>
- During deliberations, it appeared that the decision to adopt this NOI process was based on the assumption that the off-oilfield use of produced water authorized by NOIs would be permissible if there was no discharge of produced water.

#### II. <u>The Produced Water Act requires a permit for off-oilfield use of produced water.</u>

4. The plain language of the Produced Water Act requires a permit for any use of

produced water off-oilfield without consideration for whether that use will result in

a discharge or not. NMSA 1978, Section 70-13-4(D) provides:

"For uses regulated by the water quality control commission pursuant to the Water Quality Act, a person shall obtain a permit from the department of environment *before using* the produced water, the recycled or treated water or treated product or any byproduct of the produced water."

(Emphasis added).

5. The Water Quality Act provides that permits are subject to conditions of approval or denial, and that proper notice must be given to the public and governmental entities "whose water may be affected" by the issuance, renewal or modification of

<sup>&</sup>lt;sup>3</sup> NMED Ex. 175.

a permit.<sup>4</sup> The Water Quality Act further provides that there must be opportunity for a public hearing on permit applications.<sup>5</sup>

- 6. The NOI process does not satisfy the permit requirement in the Produced Water Act and the Water Quality Act. The NOI process does not provide conditions of approval or denial, require notice, or allow for public participation in the approval or denial process.<sup>6</sup>
- 7. Additionally, the fact the Commission voted to adopt a permit requirement for discharge of treated produced water to groundwater in this rulemaking further clarifies that the NOI process is not a permit. If the NOI was a permit, NMED's proposed rule would have called it a permit, and it would be subject to the permit requirements outlined in the Water Quality Act and under New Mexico Supreme Court rulings.
- 8. Therefore, by creating a process for off-oilfield use of produced water without requiring a permit, the adoption of the NOI process in NMED's proposed rule would be plainly contrary to the strict requirements of law.

<sup>&</sup>lt;sup>4</sup> NMSA 1978, § 74-6-5(E) and (F).

<sup>&</sup>lt;sup>5</sup> NMSA 1978, § 74-6-5(G).

<sup>&</sup>lt;sup>6</sup> See NMED Ex. 175; Even with the additional "notice" provision, Attachment A to Hearing Officer's Report at p. 38, ¶C (xii), that Sierra Club/Amigos Bravos suggested and the Commission voted to approve, an adjacent property owner may receive "actual notice" of the use of treated produced water but that neighbor has no opportunity to be heard to raise their objection. *Public Service Company of New Mexico v. New Mexico Public Regulation Commission*, 2019-NMSC-012, ¶¶ 62-65, citing *Albuquerque Bernalillo Cty. Water Util. Auth. v. N.M. Pub. Regulation Comm'n*, 2010-NMSC-013, ¶21, 148 N.M. 21 (quoting *Jones v. N.M. State Racing Comm'n*, 1983-NMSC-089, ¶ 6, 100 N.M. 434) ("It is well settled that the fundamental requirements of due process in an administrative context are reasonable notice and opportunity to be heard and present any claim or defense.").

#### III. <u>Allowing discharge permits to groundwater is contrary to science and record</u> <u>evidence.</u>

- A. There are no scientific standards that have been established or can be established because there is no complete characterization of Permian Basin produced water
  - 9. NMED's testimony was that the science has not reached a point at which

protective regulations could feasibly be developed because without a complete

characterization of Permian Basin produced water no standards can be set.7 Mr.

Hightower agreed that NMED does not yet have the scientific evidence to establish

standards for the discharge of produced water.<sup>8</sup> NMOGA Expert, Rick McCurdy

also testified that the data is not yet available to allow discharge to surface and

#### groundwater:

- Q. (Ms. Fox) So let me see if I get your testimony correct and you can tell me if I don't. It was my understanding from your testimony yesterday that you believe that these studies demonstrate that treated produced water can be safely discharged to surface and groundwater in New Mexico; is that correct or is that an overstatement?
- A. (Mr. McCurdy) I believe that would be an overstatement. My personal belief is yes, we can get to that status, but I do not have the data to back up that belief as just yet.
- Q. The research is more in the preliminary stage of being able to make that conclusion, the research that you provided?
- A. I believe, perhaps some of the papers that I reference in here would indicate that we were moving in that direction and we're in the preliminary stage. I do believe we're getting near the finish line now. ... I would like to be able to say

<sup>&</sup>lt;sup>7</sup> WQCC 23-84, TR., 5/16/2024, (Fullam), at 119-121. (At 120: There are no standards.") (At 84-85, Kamat: there are unknown chemicals in treated produced water that we may not have standards for. ... we don't have a complete characterization of produced water, to perform a complete antidegradation analysis based on the water quality standards.") WQCC 23-84, TR., 5/16/2024, (Fullam), at 197. (Dodd: "We don't know the degree of risk that produced water, whether treated or untreated, poses to health, welfare and the environments? Ms. Fullam: That would be correct.")

<sup>&</sup>lt;sup>8</sup> WQCC 23-84, TR., 5/17/2024, (Hightower) at 293-294. ("Q. And I think we've established that the Consortium has at this point not provided NMED with the data that would be necessary for us to develop standards for the discharge of produced water. Would you agree? A. I would agree. I would agree.")

there were no unknowns in the water. When? Will it be a year from now, will it be two years from now, I can't say, but I think we're getting near that point.<sup>9</sup>

(Emphasis supplied.)

World-renowned produced water expert and Duke University Distinguished Professor Dr. Avner Vengosh<sup>10</sup> testified as to the dangers of permitting a waste stream to expose humans and the environment without first establishing standards that address the problem of treated produced water reuse. <sup>11</sup> "[W]ithout the specification of treatment and standards, this Rule is not scientifically-based; and without credible scientific data to base a regulation on, any reuse application will cause undue risk, will adversely impact human health and the environment, and will cause impairment to waterways and be destructive to property."<sup>12</sup>

This was emphasized again, by Sierra Club and Amigos Bravos's expert, Dr. Christopher Lewis, who testified that without sufficient toxicological data we cannot determine the risk to human health and the environment and therefore cannot create the standards for safe reuse:

- Q. (Mr. Dodd) And so, of the substances that we know are in produced water, there are over a thousand chemicals present that have not been sufficiently studied to know how much risk they pose to health, welfare and the environment?
- A. (Christopher Lewis, Ph.D.) That's correct.
- Q. We don't know the dose of which each of these over a thousand chemicals would pose undue risk of harm to health, welfare, and the environment?
- A. Correct.

<sup>&</sup>lt;sup>9</sup> WQCC 23-84, TR., 8/9/2024, (McCurdy), at 50-51.

<sup>&</sup>lt;sup>10</sup> Dr. Vengosh has published 180 scientific papers in leading international journals, including 34 scientific papers directly addressing the potential impact of oil produced water on the environment. (*See* NEE Exhibit 6, Rebuttal Testimony of Avner Vengosh, Exhibit AV -2)

<sup>&</sup>lt;sup>11</sup> Rebuttal technical testimony of Dr. Avner Vengosh, May 6, 2024, *passim*; WQCC 23-84, TR., 8/7/2024 (Vengosh) at 103-104.

<sup>&</sup>lt;sup>12</sup> Id., at 5-6; See also, WQCC 23-84, TR., 8-7-2024 (Vengosh) at 41-47 and 192-194.

- Q. And so until we know how dangerous these chemicals are to plants, animals, and humans, we cannot fully evaluate the risk posed to health, welfare and the environment by treated or untreated produced water, correct?
- A. That's correct.
- Q. As the science stands, we do not have sufficient toxicological data as to over a thousand chemicals that we know can be present in produced water?
- A. Correct.
- Q. And so because we do not have this information, because the science doesn't exist yet, your opinion is that both treated and untreated produced water are dangerous to plants, animal and human health and safety?
- A. They pose a risk to plant, animal and human health and safety?
- Q. And you say that they pose a risk because we don't have the data.
- A. Yes. Sorry. Let me amend that, they may pose a risk.
- Q. Because we don't have the data?
- A. Because we don't have the data, yes.
- Q. In order to determine what the risk is, we have to base it on existing data, correct?
- A. Existing studies on whether or not those contaminants are hazardous or not, yes.
- Q. Based on your review of the literature and all of the testimony in this case, you are unaware of any existing scientific methods and processes that would make produced water safe for reuse, correct?
- A. That's that's true yes.<sup>13</sup>

## **B.** Discharge of treated produced water, for which no standards exist, is dangerous in the extreme and not protective of human health and the environment.

10. According to Dr. Vengosh,

Without any specification of the treatment methods and the capacity to remove all organic, inorganic, and radioactive materials from oil produced water, the new Reuse Rule is inadequate and cannot be used for recycling and reusing oil produced water in New Mexico. Numerous studies, including my own research (see Exhibit AV-2), have shown that oil produced water contains elevated levels of toxic organic chemicals, salts, metals, and contaminants such as ammonium and radium nuclides, which are extremely toxic for the ecological systems and human health. In addition to the direct contamination of water resources impacted by spills or even discharge of treated oil produced water, high concentrations of radioactive elements such as radium nuclides in oil produced water poses risks for the accumulation of the radioactive elements on the soil (in the case of using oil wastewater for irrigation) or streams (in cases of disposal of treated oil wastewater). It has been shown that disposal of treated oil wastewater to streams and rivers has caused high levels of radioactivity in the sediments in the outfall sites. Given the high level of salinity and elevated levels of other contaminates in oil produced water specifically from

<sup>&</sup>lt;sup>13</sup> WQCC 23-84, TR., 5/15/2024 (Christopher Lewis, Ph.D.) at 163-165.

the Permian Basin, reuse of untreated or inadequately treated oil wastewater in New Mexico is clearly impossible and would cause a major environmental damage.

Yet, the Reuse Rule includes ambiguous language of the "appropriate treatment" for possible reuse of oil produced water, without specification of the treatment methods and without including comprehensive management plans for addressing the waste that would be generated from the treatment systems. In a best-case scenario, where desalination technology such as reverse osmosis and other treatment methods would be utilized to remediate oil produced water, it would generate highly saline and radioactive wastewater that would require special management and removal. The absence of clear indications of the treatment technologies and the water quality standards as conditions for the ability to reuse, implementation of the new Reuse Rule could generate numerous environmental issues, which would require high economic cost for future remediation.<sup>14</sup>

[P]roduced water contain a large range of toxic organic and inorganic chemicals including NORMs. Many of these chemical components are not included in water quality standards that were designed to address primarily marginal waters from domestic wastewater. Therefore, following the water quality standards alone would not address the risks induce from oil produce water and would cause severe environmental and human health impacts upon implementation of this new ruling.<sup>15</sup> [P]ublic health and the environment could be put at extreme risk if one measures "treated" produced water against domestic water quality standards. Water quality standards test for fecal matter and pH and bio-chemical oxygen, etc., but this evaluation frequently does not call for measurements of radionuclides or volatile organic compounds that occur in produced water. ... "Produced water" is waste generated from hydraulic fracturing process and involves hypersaline brines that cannot be characterized or confused with natural water or even domestic wastewater. Produced water is laden with a wide range of highly toxic organic compounds, dissolved mineral salts, and naturally-occurring radioactive material (NORM). This Commission must be guided by science not by self-serving statements that have no basis in scientific scholarship.<sup>16</sup>

NMED's expert, Lei Hu, PhD articulated the dangers of Permian Basin produced water:

[C]omprehensive characterization of Permian Basin-produced water is scant; there is limited data or information regarding the presence of NORM in Permian Basin - produced water: Radium-226 and 228, uranium-234 and 238, thorium-228 and 230, Polonium. Results show total radium, radium-226 and radium-228 has a mean level of 469.3 picocuries per liter. The concentrations of radioactive material is almost 100 times the water supply criterion in the State's standards for interstate and

<sup>&</sup>lt;sup>14</sup> Rebuttal technical testimony of Dr. Avner Vengosh, May 6, 2024, at 3-4.

<sup>&</sup>lt;sup>15</sup> *Id.*, at 6.

 $<sup>^{16}</sup>$  Id  $_{\rm ss}$  at 7.

intrastate surface waters codified at 20.6.4 NMAC. B-T-E-X, which includes benzene, toluene and xylene has been detected in abundance in Permian Basin produced water. When the concentration is beyond the safe limits determined by science, exposure to radiation, BTEX and VOCs will pose a risk to human health.<sup>17</sup>

## i) The impact of direct discharge, even of "treated" produced water would cause irreparable harm.

11. New Energy Economy expert Norm Gaume, PE., testified about the lack of any

"treatment" standards and the resulting irreparable harm that would be caused, if

discharge was authorized:

Unequivocally, I agree with the Environment Department's intention to prohibit produced water discharge[.] ... The Environment Department has admitted that there are no peer-reviewed scientific studies to monitor the inevitable discharge of treated or untreated produced water due to unpermitted reuse off the oilfield. Forbidding discharge, but allowing reuse without permits or regulations as the law requires, is not only logistically inconsistent, it threatens public health and welfare and the environment.

Adequate Ground and Surface Water Quality regulations to protect the public health of New Mexicans and our environment require no discharge or reuse of treated or untreated fluid oil and gas waste, without exception, unless and until the scientific research and feasibility assessments described in the professional peer reviewed expert report entitled "Groundwater Protection Council, Produced Water Report" ... until that report's protocols have been followed. ...

The Groundwater Protection Council is a national group of state water quality protection regulators, like the Environment Department and the Oil Conservation Division Class II disposal well regulators. The Groundwater Protection Council in 2019 published its rigorous framework for the orderly, planned creation of science-based evidence for each particular case, such as off-oil-field reuse of Permian Basin produced water. It was written to inform produced water regulators that protect human health and the environment. It is excellent and wholly applicable to structure a real program of Permian Basin fracking waste reuse research to guide regulators such -- to guide you, as regulators. ...

My most important concerns can be summarized as follows:

1. Commissioner Brancard schooled me in the law: any oil and gas fluid waste use, outside the oil field requires a permit. The Rule fails to meet statutory guidelines because the Legislature required a permit for any off oilfield use of

<sup>&</sup>lt;sup>17</sup> WQCC 23-84, TR., 5/16/2024, (Hu), at 250-253.

produced water. The plain language of the statute is clear and it was written to protect human health and the environment.

2. The Rule inappropriately conflates highly different classes of wastewaters under a single Rule without substantive content. NMED's rule and testimony lumps reuse of municipal wastewater with reuse of fluid oil and gas waste. Proper regulation would not muddle them....

3. The Water Quality Act requires that we cannot short circuit scientific research and data that meets the standards of science by allowing disposal by reuse[.] ... Despite NMED's and NMOGA's admission that fluid oil and gas waste contains radioactivity, PFAS, carcinogenic chemicals, and other extremely and highly toxic compounds[.] [Y]ou've heard the evidence, there is no known treatment at scale that addresses this level of combinations of dangerous toxicity. ...

You, Water Quality Control Commission members are the protectors, the regulators. You stand in between public health and safety of New Mexico and protection of the environment and the oil and gas burgeoning waste problem. The oceans of waste oil and gas is creating, four million barrels a day, is their problem. You cannot allow them to dispose of it by spreading this toxic stuff all over New Mexico, without the science to say it's safe. And it's not.

It is my professional opinion that [the possibility of discharge of treated produced water to groundwater] could cause irreparable harm to New Mexican's public health, safety, and welfare, including potentially fatal radiation exposures to treatment plant workers and the risk of public exposure to highly toxic fracking additives and carcinogenic oil and gas compounds that the Environment department's technical experts testified about.

My surrebuttal, which is New Energy Economy Exhibit 18, contains [] our revised rule, which is necessary to protect human health, animal, and environment risks. It prohibits discharge, prohibits state and federal permitting regarding discharge and reuse, prohibits reuse, and only authorizes those pilot projects and laboratory-scale projects that pass regulatory muster. And that means during the permitting process, for pilot projects and laboratory-scale projects, after careful review, and only if the regulatory body determines that the benefits of research outweigh the risks can the Environment department issue such a research permit. ...

You have heard plenty of evidence that the fracking waste is highly toxic, carcinogenic and causes severe negative health impacts, like birth and genetic defects. When this so-called "Water Reuse" Rule results in produced water being released, and it will, if the Water Quality Control Commission fails to prohibit the discharge and reuse of liquid oil and gas waste, then New Mexicans will experience irreparable harm.<sup>18</sup>

<sup>&</sup>lt;sup>18</sup> WQCC 23-84, TR., 8/5/2024, (Gaume), at 137-143.

C. A rule that authorizes the environment department to issue permits for discharge permits for treated produced water to groundwater puts NMED in an impossible position.

12. There was no NMED witness who testified that discharge of treated produced

water is safe. Every NMED witness testified in favor of no discharge because there

is no credible scientific proof that discharge will not pose a threat to public health

and the environment.<sup>19</sup> If the proposed rule authorizes a permit process, for which

<sup>&</sup>lt;sup>19</sup> NMED Bates Labeled Exhibits, NMED Exhibit 2, Written Direct Testimony Fullam, at 43 ("Because effective treatment methodologies are inherently dependent on the source water characteristics, unlike with domestic wastewaters, the types of methodologies to attain a consistent effluent quality for treated produced water are highly variable and site-specific. ... The Department does not have the data necessary to fully evaluate the characterization of raw produced water, appropriate treatment methodologies, potential effluent quality, safe handling practices, or safe disposal practices of the waste streams."); NMED Exhibit 3, Written Direct Testimony Herman, at 85 ("the Department has not been provided with the necessary research and data and therefore has not considered the possibility of a discharge permitting process associated with treated produced water."); NMED Bates Labeled Exhibits, NMED Exhibit 4, Written Direct Testimony Murphy, at 111-112 ("The limited availability of produced water quality data and the even more sparse information on treated produced water increases the uncertainty to a level that presently makes development of regulations for the discharge of treated produced water infeasible. Without defensible, scientific evidence that produced water treatment is reliably safe and treatment technologies are effective at removing all known and unknown constituents, the Department is left with only one option which is to develop and propose a regulation that is restrictive and does not allow for the discharge of treated produced water in any manner. Until such time as there is meaningful, scientific proof that a use, application, or discharge will not pose a threat to the public, the restrictive nature of the proposed regulation is the only method of oversight that is supported by the Department." (Emphasis supplied.); NMED Bates Labeled Exhibits, NMED Exhibit 5, Written Direct Testimony Hu, at 143-144 ("In examining the characteristics of PW, it is clear that PW is not uniform. Rather, it encompasses a wide range of compositions, from simple to highly complex, including various organic and inorganic chemicals, both dissolved and in particulate form. The complexity is compounded by variances in water quality influenced by geographic location, reservoir type, geological history, type of hydrocarbon produced, well age. and extraction methodologies. Given the significant variability in PW characteristics across and within different regions, conducting higher resolution region-specific studies is imperative for characterizing PW. These studies are essential for obtaining a comprehensive understanding of the unique properties of PW in each area and for effectively assessing associated environmental risks associated with treatment and disposal of the treated produced water and its secondary waste streams. ... To date, there is still a lack of robust data concerning the characterization of raw and treated PW, treatment methodologies, effluent quality, and the management of

the department has affirmatively testified that no guidelines or safeguards can be adopted, because there is no science to undergird their implementation, then the NMED will be in the precarious position of either having to grant permits for which no scientific basis exists and no permit process has been articulated thereby risking human health and poisoning the water we depend on for our survival *or* defy the Commission's mandate because it cannot safely comply with an unscientific rule that will cause undue permanent harm.

13. The peer-reviewed laboratory results state that New Mexico has taken the very "first step" to assessing the toxicity and risk to human health and the environment: "to properly assess risk, having an *a priori* understanding of the ecotoxicity effects of PW [produced water] to different organisms is necessary for both risk management and in helping to define the most toxic components and necessary treatment strategies prior to PW [produced water] discharge and reuse."<sup>20</sup> (Emphasis supplied.)

treatment waste streams. Given the variability and unknowns, the Department has determined that allowing the discharge of treated or untreated produced water into the environment is premature and cannot currently be done in a way that complies with the Water Quality Act. Currently, there exists a notable deficit in defensible and reliable data to underpin the development of a mature treatment chain to attain a consistent and protective water quality for discharges of PW in New Mexico.") (Emphasis supplied.); NMED Bates Labeled Exhibits, NMED Exhibit 6, Written Direct Testimony Lucas Kamat at 157 ("At this time the Department has not been provided the necessary research and data to propose produced water effluent quality standards. Therefore, the Department is not proposing to certify or certify with conditions an NPDES permit associated with a produced water discharge.") <sup>20</sup> Xu, P., Zhang, Y., Jiang, W., Hu, L., and Xu, X., 2022. *Characterization of Produced Water in the Permian Basin for Potential Beneficial Use*, Available at: https://tinyurl.com/yc57swkx.

#### IV. <u>Cherry-picking a "limit" of "2000 barrels" from NEE's proposed rule,</u> without the other safeguards, is contrary to science and record evidence.

14. It is correct, that New Energy Economy, The Center for Biological Diversity, WildEarth Guardians, Samuel Sage, Daniel Tso and Mario Atencio proposed a limit of 2000 barrels a day for a permitted *non-discharge* pilot project with strict guidelines that would be protective if the NMED approved and enforced them, including testing and monitoring, before and regularly after,<sup>21</sup> and is consistent with the permitted pilot project authorizations in Texas,<sup>22</sup> but to pluck out one fact, divorced from all the associated safeguards designed and needed to protect human health, our waterways, land, plants, air and animals is disingenuous, lawless and unscientific.

## V. Failure to protect public health and the environment with a rule that neither comports with the law or adheres to record evidence constitutes reversible error.

15. "Proceedings adopting water quality standards are subject to judicial review." N.M. Mining Assn. v. Water Quality Control Comm'n, 2007-NMCA-084 ¶12, 142 N.M.
200, 205 (citing Bokum Res. Corp. v. N.M. Water Quality Control Comm'n, 93 N.M. 546, 553, 603 P.2d 285, 292 (1979) (holding that proceedings adopting water quality standards are subject to the same judicial review as agency "rules")).

<sup>&</sup>lt;sup>21</sup> See, Exhibit A, proposed rule of New Energy Economy, 20.6.8.400 C, D, and E with the attached New Mexico Produced Water Research Consortium list of 411 contaminants (NEE Exhibit 35) that shall be tested for.

<sup>&</sup>lt;sup>22</sup> New Energy Economy's Closing Brief at 21-25; *See also*, WQCC 23-84, TR., 8-8-2024 (McCurdy) at110-111, 168, 244-261.

- 16. WQCC decisions adopting water quality standards may be set aside if they are
  "found to be: (1) arbitrary, capricious or an abuse of discretion; (2) not supported
  by substantial evidence in the record; or (3) otherwise not in accordance with
  law."<sup>23</sup>
- 17. As explained above, any use of produced water off-oilfield requires applicants to obtain a permit. Therefore, allowing off-oilfield use of produced water under the NOI process violates the Produced Water Act and is "not in accordance with law."<sup>24</sup>
- 18. Also explained above, because there is no substantial evidence in the record upon which the proposed rule is based—no produced water treatment standards <u>and</u> no guidelines for the issuance of permits—a rule authorizing treated produced water to be discharged is arbitrary and capricious.
- 19. In conclusion, the law requires a permit for any use of produced water outside the oil field.<sup>25</sup> In its recent deliberations, the Commission voted to adopt a process for off-oilfield use of produced water without a permit. Because the NOI process sidesteps the legal requirement for issuance of a permit prior to using produced water off the oilfield, it is contrary to law. Adoption of regulations that are contrary to law constitutes reversible error.

<sup>&</sup>lt;sup>23</sup> NMSA 1978, § 74-6-7(B) (1993); see also N.M. Mining Assn. v. Water Quality Control

*Comm'n*, 2007-NMCA-084, ¶ 12.

<sup>&</sup>lt;sup>24</sup> *Id* ; NMSA 1978 §70-13-4(D).

<sup>&</sup>lt;sup>25</sup> NMSA 1978 §70-13-4(D).

20. New Energy Economy sought the position of the parties and states that: NMED, NMOGA, Select Water Systems, and Nick Maxwell oppose. Center for Biological Diversity does not oppose.

WHEREFORE, in order to prevent plain error, Joint Movants respectfully request this Commission resume deliberations and adopt regulations that require issuance of a permit prior to any off-oilfield use of produced water in accordance with the Produced Water Act and prohibit permits for treated produced water discharge.<sup>26</sup>

DATED: April 25, 2025

Respectfully submitted,

**EW/ENERGY ECONOMY** 

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#### STATE OF NEW MEXICO BEFORE THE WATER QUALITY CONTROL COMMISSION

IN THE MATTER OF PROPOSED NEW RULE 20.6.8 NMAC – Ground and Surface Water Protection – Supplemental Requirements For Water Reuse

No. WQCC 23 - 84 (R)

### NEW MEXICO ENVIRONMENT DEPARTMENT, WATER PROTECTION DIVISION,

Petitioner.

#### **Certificate of Service**

I hereby certify that on April 25, 2025, a copy of the foregoing Notice and Request was emailed to the persons listed below.

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### **Exhibit** A

# TITLE 20 ENVIRONMENTAL PROTECTION CHAPTER 6 WATER QUALITY PART 8 GROUND AND SURFACE WATER PROTECTION – PRODUCED WATER

20.6.8.1 ISSUING AGENCY: Water Quality Control Commission. [20.6.8.1 NMAC - N, mm-dd-yy]

20.6.8.2SCOPE: All persons subject to the Water Quality Act, NMSA 1978, Sections 74-6-1 through74-6-17, and the Produced Water Act, NMSA 1978, Sections 70-13-1 through 70-13-5.[20.6.7.2 NMAC - N, mm-dd-yy]

**20.6.8.3 STATUTORY AUTHORITY:** Standards and regulations are adopted by the commission under the authority of the Water Quality Act, NMSA 1978, Sections 74-6-1 through 74-6-17 and the Produced Water Act, NMSA 1978, Subsection B of Section 70-13-3 and Subsection D of Section 70-13-4. [20.6.8.3 NMAC - N, mm/dd/yy]

**20.6.8.4 DURATION:** Permanent. [20.6.8.4 NMAC - N, mm-dd-yy]

**20.6.8.5 EFFECTIVE DATE:** Month Day, Year, unless a later date is cited at the end of a section. [20.6.8.5 NMAC - N, mm-dd-yy]

**20.6.8.6 OBJECTIVE:** The objective of 20.6.8 NMAC is to regulate the use of produced water subject to the jurisdiction of the Water Quality Control Commission under NMSA 1978, §§ 70-13-3(B). [20.6.8.6 NMAC - N, mm-dd-yy]

**20.6.8.7 DEFINITIONS:** The following terms as used in this part shall have the following meanings: terms defined in the Water Quality Act, but not defined in this part, will have the meaning given in the act.

- A. Terms beginning with numerals or the letter "A," and abbreviations for units. [RESERVED]B. Terms beginning with the letter "B".
  - (1) **"Bench-scale project"** means a small project or study conducted in an accredited laboratory.
- C. Terms beginning with the letter "C". [RESERVED]
- D. Terms beginning with the letter "D".
  - (1) "Department" means the New Mexico environment department.
  - (2) "Discharge permit" means a discharge plan approved by the department;
  - (3) "Discharge plan" means a produced water treatment or reuse off oilfield plan which shall be designed and stamped by a professional engineer with the intent and specific provisions to preclude any discharge and shall include a description of any operational, monitoring, contingency, and closure requirements and conditions for any unintentional discharge of effluent or leachate which may move directly or indirectly into ground water;
  - (4) "Discharge site" as defined in 20.6.2 NMAC.
  - (5) "Disposal" as defined in 20.6.2 NMAC.
- E. Terms beginning with the letter "E". [RESERVED]
- F. Terms beginning with the letter "F". [RESERVED]
- G. Terms beginning with the letter "G".
  - (1) "Ground water" as defined in 20.6.2 NMAC.
- H. Terms beginning with the letter "H".

(1) "Hydraulic fracturing" means an unconventional oil and gas production technique that fractures a rock formation that stimulates the flow of natural gas or oil, increasing the volumes that can be recovered. Fractures are created by pumping large quantities of fluids at high pressure down a wellbore and into the target rock formation. Hydraulic fracturing fluid, also referred to as fracking fluid, commonly consists of water, proppant, and chemical additives that open and enlarge fractures that can extend several hundred feet away from the wellbore.

I. Terms beginning with the letter "l".

(1) "Injection" as defined in 20.6.2 NMAC

- J. Terms beginning with the letter "J". [RESERVED]
- K. Terms beginning with the letter "K". [RESERVED]
- L. Terms beginning with the letter "L". [RESERVED]
- M. Terms beginning with the letter "M". [RESERVED]
- N. Terms beginning with the letter "N". [RESERVED]
- O. Terms beginning with the letter "O". [RESERVED]
- P. Terms beginning with the letter "P".
  - (1) "Person" as defined in 20.6.2 NMAC.

(2) "Pilot project" means a representative engineering scale model or prototype system that is beyond the bench-scale and tested in a non-laboratory environment. A pilot project represents an increase in the technological scale than otherwise achievable in a laboratory and often involves larger quantities of materials over longer periods of time. Pilot projects shall have a daily produced water capacity equal to or less than 2,000 barrels per day.

(3) "Produced water" means a fluid oil and gas waste resulting from drilling for or the production of oil and gas, and includes formation water (the water that occurs naturally within the pores of rock), flowback water (the fluid returned after the hydraulic fracturing process is completed), and any chemicals added downhole during drilling, production, or maintenance processes during the life cycle of an oil or gas well. Produced water includes known and unknown toxic pollutants, as defined in 20.6.2 NMAC and radionuclides, water contaminants, and water pollutants.

- Q. Terms beginning with the letter "Q". [RESERVED]
- R. Terms beginning with the letter "R". [RESERVED]
- S. Terms beginning with the letter "S".
  - (1) "State" means the state of New Mexico.
  - (2) "Surface water" means a "surface water(s) of the state" as defined in 20.6.4 NMAC.
- T. Terms beginning with the letter "T". [RESERVED]
- U. Terms beginning with the letter "U". [RESERVED]
- V. Terms beginning with the letter "V". [RESERVED]
- W. Terms beginning with the letter "W".

(1) **"Water contaminant"** means any substance that, if discharged, reused, or spilled, could alter the physical, chemical, biological or radiological qualities of water. "Water contaminant" does not mean source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, but may include all other radioactive materials, including but not limited to radium and accelerator-produced isotopes.

(2) "Water pollutant" means a water contaminant in such quantity and of such duration as may with reasonable probability injure human health, animal or plant life or property, or to unreasonably interfere with the public welfare or the use of property.

(3) "Water pollution" as defined in 20.6.2 NMAC.

X. Terms beginning with the letters "X" through "Z". [RESERVED] [20.6.8.7 NMAC – N, mm-dd-yy]

**20.6.8.8 – 20.6.8.99** [RESERVED] [20.6.8.8-20.6.8.99 NMAC – N, mm-dd-yy]

**20.6.8.100 GENERAL PROVISIONS:** Unless otherwise required by this Part, all persons are subject to the state's Ground and Surface Water Protection Regulations (20.6.2 NMAC). This includes, but is not limited to, regulations relating to spills, notices of intent, permitting, fees, penalties, compliance orders, and abatement. [20.6.8.100 NMAC – N, mm-dd-yy]

**20.6.8.101 - 20.6.8.199** [RESERVED] [20.6.8.101-20.6.8.199 NMAC - N, mm-dd-yy]

**20.6.8.200** [RESERVED] [20.6.8.200 NMAC – N, mm-dd-yy]

**20.6.8.201** [RESERVED] [20.6.8.20] – N, mm-dd-vy]

20.6.8.202-299 [RESERVED] 20.6.8 NMAC [20.6.8.202-20.6.8.299 NMAC - N, mm-dd-yy]

20.6.8.300 [RESERVED] [20.6.8.300 NMAC - N, mm-dd-yy]

20.6.8.301-399 [RESERVED] [20.6.8.301-20.6.8.399 NMAC - N. mm-dd-yv]

20.6.8.400 PROHIBITION OF DISCHARGE, DISPOSAL, AND REUSE OF PRODUCED WATER: As provided in the Produced Water Act, Subsection B of Section 70-13-3, NMSA 1978, the following provisions apply to the discharge, disposal, and reuse of produced water for activities unrelated to the exploration, drilling, production, treatment, or refinement of oil or gas.

General requirements. Α.

Treated or untreated produced water discharge, disposal, and reuse: No person shall (1)discharge, dispose of, or reuse treated or untreated produced water for activities unrelated to the exploration, drilling. production, treatment or refinement of oil or gas.

The department shall deny any application for a groundwater or surface water discharge (2)permit for any form of produced water or byproduct thereof.

The department shall deny certification of any federal permit proposing to discharge, (3)dispose of, or reuse treated or untreated produced water.

Use of produced water for research purposes: Produced water may only be handled, (4)transported, stored, treated, or used for activities unrelated to the exploration, drilling, production, treatment or refinement of oil or gas for bona fide research purposes within the context of a bench-scale project or pilot project. Any handling, transport, storage, recycling, treatment, or use of produced water off of the oil field for research purposes may only be conducted upon the issuance of a permit from the Department.

Β. Authorized applications for research purposes.

Bench-scale projects and pilot projects: Bench scale projects and pilot projects involving (1)the handling, transport, storage, recycling, treatment, or use of produced water off of the oil field may be permitted, if authorized by a permit, as required by subsection C. С.

Permits required for bench scale or pilot projects.

As established by the Produced Water Act, see NMSA 1978, § 70-13-4(D), a (1)permit from the Department is required prior to any use of produced water, whether treated or untreated, in bench scale or pilot projects.

No person may use produced water, whether treated or untreated, without first (2) obtaining a permit from the Department.

(3)No permit shall allow the discharge of produced water, whether treated or untreated, recycled or any treated product or any byproduct of the produced water.

#### D. **Issuance** of permits.

(1)Any person desiring to conduct a bench-scale project using produced water shall submit a Produced Water Bench-Scale Research Permit Application to the Department.

(a) A Produced Water Bench-Scale Research Permit Application shall (a) include a research plan and a description of the objectives; (b) identify the accredited laboratory at which the research will be conducted (c) disclose all known or knowable chemical constituents within the produced water; and (d) explain how it is designed to provide information specific to untreated produced water quality, treatment technologies, treated produced water quality, treatment volumes, and toxicity studies.

Upon receiving a Produced Water Bench Scale Research Permit Application, the (b) Department shall grant a Produced Water Bench-Scale Research Permit, so long as it determines that the proposed research is bona fide research that will be conducted in an accredited laboratory and that no produced water will be discharged by the proposed research.

All Produced Water Bench-Scale Research Permits shall require the applicant to (a) (c) disclose all data and results of the research to the Department within 90 days of the testing, and (b) dispose of moduced water and any materials that come into contact with untreated produced water or treated produced water, including soils, plant material, treatment equipment, and containment area materials in accordance with the provisions of 20.6.8.400(E) NMAC.

(2)Any person desiring to conduct a pilot project using produced water shall submit a

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Produced Water Pilot Project Research Permit Application to the Department.

(a) A Produced Water Pilot Project Research Permit Application shall (a) include a research plan and a description of the objectives; (b) identify the volume of produced water to be treated and location of the proposed pilot project; (c) explain how it is designed to provide information specific to untreated produced water quality, treatment technologies, treated produced water quality, treatment volumes, and toxicity studies; (d) set forth the written procedures that will be followed to prevent releases onto the ground, directly or indirectly into ground or surface water; (e) provide a schematic of the treatment process; (f) provide a description of the treatment process and methodologies; (g) provide a full characterization of the source fluids with specificity, including levels; (h) disclose how the applicant proposes to dispose of all residual concentrated waste; and (i) identify any and all risks posed by the proposed handling, storage, transportation, and use of produced water and all procedures that will be followed to minimize such risks.

(b) Upon receiving a Produced Water Pilot Project Research Permit Application, the department shall conduct review of the application to determine whether it contains all required information.

(c) If the Produced Water Pilot Project Research Permit Application contains all required information, the department shall require the applicant to provide public notice in the methods and manners required in 20.6.2.3108 NMAC. All information regarding the application, the technical review, and the determination is to be provided on the Department's website in both English and Spanish.

(d) The department shall evaluate the application based on information contained in the department's administrative record. The department may request from the applicant, either before or after the issuance of any public notice, additional information necessary for the evaluation of the application. The administrative record shall consist of the application, all additional information required by the department, all information submitted by the applicant or the general public, all public comment, all other information considered by the department, and any other pertinent information.

(c) The department shall conduct a technical review and evaluate a Produced Water Pilot Project Research Permit Application. After providing at least ninety days for public comment, the department shall approve, approve with conditions, limitations, or modifications, or disapprove the application based on the administrative record. The department shall notify the applicant of the action taken and the reasons for such action. Notice shall be given by mail or email to persons who gave public comment and by publication on the department's website.

(f) The department shall only grant a permit, after public notice and comment, if it determines that the benefits of the proposed research outweigh the risks posed to health, safety, and environment by the proposed handling, storage, transportation, and use of produced water. This evaluation must consider the volume of produced water involved in the proposed research, the locations of the proposed handling, storage, transportation, and use of produced water, the proposed activities involved in the research, the character and history of the applicant, and any prior regulatory non-compliance by the applicant.

(g) The department shall develop and promulgate a schedule of analytes that have been scientifically observed in produced water and shall set forth a testing methodology that shall be employed to test for such analytes in both the untreated and treated produced water in any pilot project. Pilot projects operating at a volume of 500 barrels per day or less shall be required to perform such testing no less than once per week. Pilot projects operating at a volume of greater than 500 barrels per day but less than 2,000 barrels a day shall be required to perform such testing no less than four times per week.

Any Produced Water Pilot Project Research Permit shall: (a) require the applicant (d) to conduct the testing prescribed by the Department pursuant to subsection (g) above; (b) have a duration of one year. with the ability to extend the duration an additional year if the project is meeting all regulatory requirements; (c) require, at a minimum, quarterly monitoring by the Department, including land sampling and analysis; (d) require the procurement of sufficient financial security and assurance to ensure that remediation is performed in the event of contamination; (e) require certification by a professional engineer prior to operation; (f) require the applicant to maintain a repository of all scientific data generated during the research; (g) submit to the Department all research results within 90 days of completion; (h) permit the Department to inspect the project upon request; (i) permit the Department to review all scientific data generated during the research upon request; (j) dispose of produced water and any materials that come into contact with untreated produced water or treated produced water, including soils, plant material, treatment equipment, and containment area materials in accordance with the provisions of 20.6.8.400(E) NMAC: (k) construct the research project in such a manner as to ensure that no discharges of produced water occur throughout the entire duration of the project and allow the department to inspect and verify that the project is not resulting in the discharge of produced water; (1) require that all untreated and treated produced water shall be handled. transported, stored, used, and disposed of in accordance with all other applicable local, state, and federal regulations

(5) Any permit issued pursuant to this subsection shall be subject to revocation if the applicant fails to comply with the requirements of the permit.

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 Persons intending to conduct a bench-scale project or pilot project shall satisfy the Department's financial assurance requirements to ensure that any damages caused by the applicant are remediated.
 E. Final Disposition of Treated Produced Water. Untreated Produced Water. Treatment

Final Disposition of Treated Produced Water, Untreated Produced Water, Treatment Byproducts, and Components of Bench Scale and Pilot Projects

(1) All disposal of untreated produced water following a bench scale or pilot project shall use one of the following methods in accordance with the relative permit: discharge to a produced water disposal well permitted pursuant to the oil conservation commission's regulations for oil and gas injection at 19.15.26 NMAC, delivery to a surface waste management facility permitted pursuant to the oil conservation commission's regulations for oil and gas surface waste management facilities (19.15.36 NMAC), or disposal in a permanent pit permitted pursuant to the oil conservation commission's regulations for oil and gas pits, closed-loop systems, below-grade tanks and sumps at 19.15.17 NMAC.

(2) All disposal of treated produced water, any treatment byproducts, or components of a bench scale or pilot project using untreated or treated produced water, must characterize the waste and adhere to all local, state, and federal regulations for non-exempt, potentially hazardous waste, as applicable.

[20.6.8.400 NMAC - N, mm-dd-yy]

Category	Analyte	Method Options*
Metals/Elemente	Aluminum	SW 846 6010 or 6020 latest version
Metals/Flements	Actimony	SW-846 6010 or 6020 latest version
metala Lienenta	Paramony	011-040 0010 01 0020 121631 46131011
Metals/Elements	Arsenic	SW-846 6010 pr 6020 latest version
Metals/Elements	Barium	SW-846 6010 or 6020 latest version
Metals/Elements	Beryllium	SW-846 6010 or 6020 latest version
Metals/Elements	Boron	SW-846 6010 or 6020 latest version
Metals/Elements	Cadmium	SW-846 6010 or 6020 latest version
Metals/Elements	Calcium	SW-846 6010 or 6020 latest version
Metals/Elements	Chromium	SW-846 6010 or 6020 latest version
Metals/Elements	Cobalt	SW-846 6010 or 6020 latest version
Metals/Elements	Copper	SW-846 6010 or 6020 latest version
Metals/Elements	Gold	SW-846 6010 or 6020 latest version
Metals/Elements	Iron	SW-846 6010 or 6020 latest version
Metals/Elements	Lead	SW-846 6010 or 6020 latest version
Metals/Elements	Lithium	SW-846 6010 or 6020 latest version
Metals/Elements	Magnesium	SW-846 6010 or 6020 latest version
Metals/Elements	Manganese	SW-846 6010 or 6020 latest version
Metals/Elements	Molybdenum	SW-846 6010 or 6020 latest version
Metals/Elements	Nickel	SW-846 6010 or 6020 latest version
Metals/Elements	Phosphorus	SW-846 6010 or 6020 latest version
Metals/Elements	Potassium	SW-846 6010 or 6020 latest version
Metals/Elements	Selenium	SW-846 6010 or 6020 latest version
Metals/Elements	Silver	SW-846 6010 or 6020 latest version
Metals/Elements	Sodium	SW-846 6010 or 6020 latest version
Metals/Elements	Strontium	SW-846 6010 or 6020 latest version
Metals/Elements	Thallium	SW-846 6010 or 6020 latest version
Metals/Elements	Tin	SW-846 6010 or 6020 latest version
Metals/Elements	Titanium	SW-846 6010 or 6020 latest version
Metals/Elements	Uranium (total)	SW-846 6010 or 6020 latest version
Metals/Elements	Vanadium	SW-846 6010 or 6020 latest version
Metals/Elements	Zinc	SW-846 6010 or 6020 latest version
Metals/Elements	Zirconium	SW-846 6010 or 6020 latest version
Metals/Elements	Mercury	SW-846 7470 latest version
Metals-SPME HPLC	Tributyllin	SW 846- 8323 or 6710
Metals/Elements - speciated	Hexavalent Chromium	SM 3500-CR B - CR(VI): SW-846 7199

\*Method options are suggested published and commerically available procedures with SW-846 methods given first priority. This is not an exhaustive list as there are ASTM methods that are also applicable. The ullimate methods that are also applicable. The ullimate method required or used may depend upon the permit and purpose (e.g. CWA, SDWA). Non-standard methods such as HRMS (e.g. Q-ToF, MALDI-ToF-MS, and 2-dimensional chromatography are not considered at this stage).

SM = Standard Methods for the Examination of Water

and Wastewater SW-846 = US EPA Hazardous Waste Test Methods under RCRA

Categories
Metals/Elements
Metals/Elements - speciated
Anions
Wet Chemistry, Other
Radionuclides
Organic - VOC
Organic - VOC - TPH
Organic - SVOC - General
Organic - SVOC - TPH
Organic - SVOC - Explosives
Organic - SVOC - Agent Breakdown Products
Organic - SVOC - Pesticides/Herbicides
Organic - SVOC - PCBs
Organic - SVOC - PAHs
Organic - SVOC - Organic Acids
Organic - SVOC - Dioxins

Toxicity Testing

Refrence Eurofins Quote # 24024191 for lists, limits and EDD.

Blue Cells are routine monitoring indicators

Anions	Bromide	EPA 300.0/300.1; SW-846 9056A
Anions	Chloride	EPA 300.0/300.1; SW-846 9056A
Anions	Fluoride	EPA 300.0/300.1; SW-846 9056A
Anions	Sulfate	EPA 300.0/300.1: SW-846 9056A
Anions	Nitrate Nilrogen	EPA 300.0/300.1; SW-846 9056A
Anions	Nitrite Nitrogen	EPA 300.0/300.1; SW-846 9056A
Anions	Phosphate	EPA 300.0/300.1; SW-846 9056A
Anions	Bicarbonates (HO3~)	EPA 300.0/300.1; SW-846 9056A
Anions	lodine	EPA 300.0/300.1; SW-846 9056A
Anion-HPLC Specially	Perchlorate	EPA 6850
Vet Chemistry, Other	Oil and Grease or TPH	EPA 1664
Net Chemistry, Other	Ammonia Nitrogen	4500
Net Chemistry, Other	Total Organic Carbon	5310
Vet Chemistry, Other	Total Organic Halogens	SE-846 9020B
Net Chemistry, Other	Total Dissolved Solids	SM2540C - TDS
Net Chemistry, Other	Total Suspended Solids	SM2540B - TSS
Wet Chemistry, Other	Specific Gravity	Field
Wet Chemistry, Other	M. B. A. S.	SM5540C - Methylene blue active substances - anionic surfactants
Net Chemistry, Other	Turbidity	Field
Net Chemistry, Other	Alkalinity, total and bicarbonate	SM2320B or equivalent
Vet Chemistry, Other	COD	SM5220C, D, ASTM D1252B, EPA
Wet Chemistry, Other	nH	Field
Net Chemistry, Other	ORP	Field
Net Chemistry Other	Ashestos	FPA 100 1 100 2
Net Chemistry Other	Cvanide, total recoverable	4500-CN
Radionuclides	Radium-226	EPA 903.0 - radium - alpha emitting isotopes; SW-846 9315; Gamma Spec EPA 901.1
Radionuclides	Radium-228	E904.0 - radium; SW-846 9320; Gamma Spec ERA 901 1
Radionuclides	Gross Ainha/Beta	EPA 900 0/9310 EPA 600/00-02
Radionuclides	U 235, 236, 238	To be determined
Radionuclides	Strontium 90	To be determined
Radionuclides	Tritium	EPA 906.0
Urganic - VUC	1,1.1,2-Tetrachloroethane	SW-846 8260 latest version
Urganic - VUC	1.1,1-Trichloroethane	SW-846 B260 latest version
Jiganic - VOC	1.1.2.2-Tetrachloroethane	SW-846 8260 latest version
Drganic - VOC	Freon 113	SW-846 8260 latest version
Urganic - VOC	1,1,2-Trichloroethane	SW-846 8260 latest version
Urganic - VOC	1,1-Dichloroethane	SW-846 8260 latest version
Organic - VOC	1.1-Dichloroethene	SW-846 8260 latest version

Organic - VOC Organic - VOC Organic - VOC Organic - VOC Organic - VOC	1.2-Dichlorobenzene 1.3-Dichlorobenzene 1.4-Dichlorobenzene	SW-846 8260 latest version SW-846 8260 latest version SW-846 8260 latest version
Organic - VOC Organic - VOC Organic - VOC Organic - VOC	1,3-Dichlorobenzene 1,4-Dichlorobenzene	SW-846 8260 latest version SW-846 8260 latest version
Organic - VOC Organic - VOC Organic - VOC	1.4-Dichlorobenzene	SW-846 8260 latest version
Organic - VOC Organic - VOC	1.2.2 Techlomhanzona	
Organic - VOC	11,2,3*1101000012010	SW-846 8260 latest version
	1,2,3-Trichloropropane	SW-846 8260 latest version
Omanic - VOC	1.2.4-Trichlorobenzene	SW-846 8260 latest version
Organic - VOC	1.2.4-Trimethylbenzene	SW-846 8260 latest version
Organic - VOC	1.2-Dibromo 3-chloropropane	SW-846 8260 latest version
Organic - VOC	1.2-Dibromoethane	SW-846 8260 latest version
Organic - VOC	1.2-Dichloroethane	SW-846 8260 latest version
Organic - VOC	1.2-Dichloropropane	SW-846 8260 latest version
Organic - VOC	1.3.5-Trimethylbenzene	SW-846 8260 latest version
Organic - VOC	1 3-Dichloropmpage	SW-846 8260 latest version
Organic - VOC	2.2-Dichloropropane	SW-846 8260 latest version
Omanic - VOC	2-Butanone	SW-846 8260 latest version
Omanic - VOC	2-Chlomethyl Vinyl Ether	SW-846 8260 latest version
Omanic - VOC	2-Chlorotokiene	SW/846 8260 latest version
Omanic - VOC	2-Hexanone	SW-846 8260 latest version
Omanic - VOC	2.Nitropmpane	SW/846 8260 latest version
Omanic - VOC	2.Pmpapol	SW-946 9260 latest version
Organic - VOC	d Chlomtohiono	SW-040 0200 latest version
Organic - VOC	4-Methyl-2-pentanope	SW-846 8260 latest version
Omanic - VOC	Applana	SW-040 0200 latest version
Omanie VOC	Acetonitale	SW-846 8260 latest version
Organic - VOC	Acetonitrie	SW-846 8260 latest version
Organic - VOC	Acroent	SW-846 8260 latest version
Organic - VOC	Allylichter	SW-846 8260 latest version
Organic - VOC	Aliyi Unionde	SW-846 8260 latest version
Organic - VOC	Benzene	SVV-846 8260 latest version
Organic - VOC	Bromobenzene	SW-846 8260 latest version
Organic - VOC	Bromochloromethane	SW-846 8260 latest version
Urganic - VOC	Bromodichloromethane	SW-846 8260 latest version
Organic - VOC	Bromoform	SW-846 8260 latest version
Organic - VOC	Bromomethane	SW-846 8260 latest version
Organic - VOC	Carbon Disulfide	SW-846 8260 latest version
Organic - VOC	Carbon Tetrachloride	SW-846 8260 latest version
Organic - VOC	Chlorobenzene	SW-846 8260 latest version
Organic - VOC	Chloroethane	SW-846 8260 latest version
Organic - VOC	Chloroform	SW-846 8260 latest version
Organic - VOC	Chloromethane	SW-846 8260 latest version
Organic - VOC	2-Chloro-1,3-butadiene	SW-846 8260 latest version
Organic - VOC	cis-1,2-Dichloroethene	SW-846 8260 latest version
Organic - VOC	cis-1,3-Dichloropropene	SW-846 8260 latest version
Organic - VOC	Cyclohexane	SW-846 8260 latest version
Organic - VOC	Dibromochloromethane	SW-846 8260 latest version
Organic - VOC	Dichlorodifluoromethane	SW-846 8260 latest version
Organic - VOC	Ethyl Acetate	SW-846 8260 latest version
Omanic - VOC	Ethyl ether	SW-846 8260 latest version

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Organic - VOC	Ethyl Methacrylate	SW-846 8260 latest version
Organic - VOC	Ethylbenzene	SW-846 8260 latest version
Organic - VOC	n-Heptane	SW-846 8260 latest version
Organic - VOC	n-Hexane	SW-846 8260 latest version
Organic - VOC	Methyl lodide	SW-846 8260 latest version
Organic - VOC	Isobutyl Alcohol	SW-846 8260 latest version
Organic - VOC	Isopropyl acetate	SW-846 8260 latest version
Organic - VOC	Isopropylbenzene	SW-846 8260 latest version
Organic - VOC	m+p-Xylene	SW-846 8260 latest version
Organic - VOC	Methacrylonitrile	SW-846 8260 latest version
Organic - VOC	Methyl Acetate	SW-846 8260 latest version
Organic - VOC	Methyl Methacrylate	SW-846 8260 latest version
Organic - VOC	Methyl Tertiary Butyl Ether	SW-846 8260 latest version
Organic - VOC	Methylcyclohexane	SW-846 8260 latest version
Organic - VOC	Dibromomethane	SW-846 8260 latest version
Organic - VOC	Methylene Chloride	SW-846 8260 latest version
Omanic - VOC	n-Butylbenzene	SW-846 8260 latest version
Organic - VOC	n-Prouvlbenzene	SW-846 8260 latest version
Organic - VOC	o-Xvlene	SW-846 8260 latest version
Organic - VOC	Pentachlomethane	SW-846 8260 latest version
Organic - VOC	p-Isopropylloluene	SW-846 8260 latest version
Organic - VOC	Propionitrile	SW-846 8260 latest version
Organic - VOC	sec-Butylbenzene	SW-846 8260 latest version
Organic - VOC	Styrene	SW-846 8260 latest version
Organic - VOC	t-Butyl alcohol	SW-846 8260 latest version
Organic - VOC	tert-Butvibenzene	SW-846 8260 latest version
Organic - VOC	Tetrachloroethene	SW-846 8260 latest version
Organic - VOC	Tetrahydrofuran	SW-846 8260 latest version
Organic - VOC	Toluene	SW-846 8260 latest version
Organic - VOC	Total VOC TICs	SW-846 8260 latest version
Organic - VOC	trans-1,2-Dichloroethene	SW-846 8260 latest version
Organic - VOC	trans-1,3-Dichloropropene	SW-846 8260 latest version
Organic - VOC	trans-1,4-Dichloro-2-butene	SW-846 8260 latest version
Organic - VOC	Trichloroethene	SW-846 8260 latest version
Organic - VOC	Trichlorofluoromethane	SW-846 8260 latest version
Organic - VOC	Vinvl Acetate	SW-846 8260 latest version
Organic - VOC	Vinyl Chloride	SW-846 8260 latest version
Organic - VOC	Xylene (Total)	SW-846 8260 latest version
Organic - VOC - TPH	TPH by GC/FID water C6-C10	SW-846 8015 latest version
Organic - SVOC - TPH	TPH by GC/FID water C10-C28	SW-846 8015 latest version
Organic - SVOC - TPH	TPH by GC/FID water C28-C40	SW-846 8015, modified, latest version
Organic - SVOC - TPH	n-Decane	SW-846 8015 latest version
Organic - SVOC - TPH	n-Docosane	SW-846 8015 latest version
Organic - SVOC - TPH	n-Eicosane	SW-846 8015 latest version
Organic - SVOC - TPH	n-Hexadecane	SW-846 8015 latest version
Organic - SVOC - TPH	n-Tetradecane	SW-846 8015 latest version
Organic - SVOC - TPH	n-Octadecane	SW-846 8015 latest version
	The second se	

Organia SVOC Canaral	1.11 Dunhanud	CW 946 9270 Intent version
Organic - SVUC - General	I I -Biphenyl	SVV-646 8270 latest version
Urganic - SVUC - General	1.2.4.5-Tetrachlorobenzene	SW-846 8270 latest version
Organic - SVOC - General	1.2.4-Trichlorobenzene	SW-846 8270 latest version
Organic - SVOC - General	11,2-Dichlorobenzene	SW-846 8270 latest version
Organic - SVOC - General	1,2-Diphenylhydrazine	SW-846 8270 latest version
Organic - SVOC - General	1,3.5-Trinitrobenzene	SW-846 8270 latest version
Organic - SVOC - General	1.3-Dichlorobenzene	SW-846 8270 latest version
Organic - SVOC - General	1.3-Dinitrobenzene	SW-846 8270 latest version
Organic - SVOC - General	1.4-Dichlorobenzene	SW-846 8270 latest version
Organic - SVOC - General	1,4-Dioxane	SW-846 8270 latest version
Organic - SVOC - General	1,4-Naphthoquinone	SW-846 8270 latest version
Organic - SVOC - General	1-Chloronaphthalene	SW-846 8270 latest version
Organic - SVOC - General	1-Methylnaphthalene	SW-846 8270 latest version
Organic - SVOC - General	1-Naphthylamine	SW-846 8270 latest version
Organic - SVOC - General	2.2'-oxybis(1-Chloropropane)	SW-846 8270 latest version
Organic - SVOC - General	2,3,4.6-Tetrachlorophenol	SW-846 8270 latest version
Organic - SVOC - General	2,4,5-Trichlorophenol	SW-846 8270 latest version
Organic - SVOC - General	2,4,6-Trichlorophenol	SW-846 8270 latest version
Organic - SVOC - General	2,4-Dichlorophenol	SW-846 8270 latest version
Organic - SVOC - General	2.4-Dimethylphenol	SW-846 8270 latest version
Organic - SVOC - General	2.4-Dinitrophenol	SW-846 8270 latest version
Organic - SVOC - General	2.4-Dinitrotoluene	SW-846 8270 latest version
Organic - SVOC - General	2,6-Dichlorophenol	SW-846 8270 latest version
Organic - SVOC - General	2,6-Dinitrotoluene	SW-846 8270 latest version
Organic - SVOC - General	2-Acetylaminofluorene	SW-846 8270 latest version
Organic - SVOC - General	2-Butoxyethanol	SW-846 8270 latest version
Organic - SVOC - General	2-Chloronaphthalene	SW-846 8270 latest version
Organic - SVOC - General	2-Chlorophenol	SW-846 8270 latest version
Organic - SVOC - General	2-Methylnaphthalene	SW-846 8270 latest version
Organic - SVOC - General	2-Methylphenol	SW-846 8270 latest version
Organic - SVOC - General	2-Naphthylamine	SW-846 8270 latest version
Organic - SVOC - General	2-Nitroaniline	SW-846 8270 latest version
Organic - SVOC - General	2-Nitrophenol	SW-846 8270 latest version
Organic - SVOC - General	2-Picoline	SW-846 8270 latest version
Organic - SVOC - General	o-Toluidine	SW-846 8270 latest version
Organic - SVOC - General	3,3'-Dichlorobenzidine	SW-846 8270 latest version
Organic - SVOC - General	3,3'-Dimethylbenzidine	SW-846 8270 latest version
Organic - SVOC - General	3-Methylcholanthrene	SW-846 8270 latest version
Organic - SVOC - General	3-Nitroaniline	SW-846 8270 latest version
Organic - SVOC - General	4.6-Dinitro-2-methylphenol	SW-846 8270 latest version
Organic - SVOC - General	4-Aminobiphenyl	SW-846 8270 latest version
Organic - SVOC - General	4-Bromophenyl-phenylether	SW-846 8270 latest version
Organic - SVOC - General	4-Chloro-3-methylphenol	SW-846 8270 latest version
Organic - SVOC - General	4-Chloroaniline	SW-846 8270 latest version
Organic - SVOC - General	4-Chiorophenyl-phenylether	SW-846 8270 latest version
Organic - SVOC - General	4-Methylphenol	SW-846 8270 latest version

Organic - SVOC - General	4-Nitroaniline	SW-846 8270 latest version	1
Organic - SVOC - General	4-Nitrophenol	SW-846 8270 latest version	
Organic - SVOC - General	4-Nitroquinoline-1-oxide	SW-846 8270 latest version	
Organic - SVOC - General	5-Nitro-o-toluidine	SW-846 8270 latest version	
Organic - SVOC - General	6-Methylchrysene	SW-846 8270 latest version	
Organic - SVOC - General	7.12-Dimethylbenz[a]anthracene	SW-846 8270 latest version	
Organic - SVOC - PAH	Acenaphthene	SW-846 8270 latest version	=.
Organic - SVOC - PAH	Acenaphthylene	SW-846 8270 latest version	
Organic - SVOC - General	Acetophenone	SW-846 8270 latest version	
Organic - SVOC - General	Acrylamide	SW-846 8270 latest version	
Organic - SVOC - General	a-methyistyrene	SW-846 8270 latest version	
Organic - SVOC - General	Anitine	SW-846 8270 latest version	
Organic - SVOC - PAH	Anthracene	SW-846 8270 latest version	
Organic - SVOC - General	Aramite	SW-846 8270 latest version	
Organic - SVOC - General	Atrazine	SW-846 8270 latest version	
Organic - SVOC - General	Benzaklehyde	SW-846 8270 latest version	
Organic - SVOC - General	Benzidine	SW-846 8270 latest version	T.
Organic - SVOC - PAH	Benzo(b)fluoranthene	SW-846 8270 latest version	
Organic - SVOC - PAH	Benzo(a)anthracene	SW-846 8270 latest version	
Organic - SVOC - PAH	Benzo(a)pyrene	SW-846 8270 latest version	
Organic - SVOC - PAH	Benzo(g,h,i)perylene	SW-846 8270 latest version	
Organic - SVOC - PAH	Benzo(k)fluoranthene	SW-846 8270 latest version	
Organic - SVOC - General	Benzoic acid	SW-846 8270 latest version	
Organic - SVOC - General	Benzyl alcohol	SW-846 8270 latest version	
Organic - SVOC - General	bis(2-Chloroethoxy)methane	SW-846 8270 latest version	
Organic - SVOC - General	bis(2-Chloroethyl)ether	SW-846 8270 latest version	
Organic - SVOC - General	bis(2-Chloroisopropyl)ether	SW-846 8270 latest version	-
Organic - SVOC - General	bis(2-Ethylhexyl)phthalate	SW-846 8270 latest version	
Organic - SVOC - General	Butylbenzylphthalate	SW-846 8270 latest version	
Organic - SVOC - General	Caprolactam	SW-846 8270 latest version	
Organic - SVOC - General	Carbazole	SW-846 8270 latest version	
Organic - SVOC - General	Chlorobenzilate	SW-846 8270 latest version	
Organic - SVOC - PAH	Chrysene	SW-846 8270 latest version	
Organic - SVOC - General	Diallate trans/cis	SW-846 8270 latest version	
Organic - SVOC - PAH	Dibenz(a,h)anthracene	SW-846 8270 latest version	
Organic - SVOC - General	Dibenz(a,h)acridine	SW-846 8270 latest version	
Organic - SVOC - General	Dibenz(a,j)acridine	SW-846 8270 latest version	
Organic - SVOC - General	Dibenzofuran	SW-846 8270 latest version	
Organic - SVOC - General	Diethylphthalate	SW-846 8270 latest version	
Organic - SVOC - General	Dimethoate	SW-846 8270 latest version	
Organic - SVOC - General	Dimethylphthalate	SW-846 8270 latest version	
Organic - SVOC - General	p-Dimethylaminoazobenzene	SW-846 8270 latest version	
Organic - SVOC - General	Di-n-butylphthalate	SW-846 8270 latest version	1
Organic - SVOC - General	Di-n-octylphthalate	SW-846 8270 latest version	
Organic - SVOC - General	Dinoseb	SW-846 8270 latest version	
Organic - SVOC - General	Diphenyl ether	SW-846 8270 latest version	1
Organic - SVOC - General	Disulfoton	SW-846 8270 latest version	J

Organic - SVOC - General	Ethyl methanesulfonate	SW-846 8270 latest version
Organic - SVOC - General	Famphur	SW-846 8270 latest version
Organic - SVOC - General	Fluoranthene	SW-846 8270 latest version
Organic - SVOC - PAH	Fluorene	SW-846 8270 latest version
Organic - SVOC - General	Hexachlombenzene	SW-846 8270 latest version
Organic - SVOC - General	Hexachiorobutadiene	SW-846 8270 latest version
Organic - SVOC - General	pronamide	SW-846 8270 latest version
Organic - SVOC - General	Hexachloroethane	SW-846 8270 latest version
Organic - SVOC - General	Hexachloropropene	SW-846 8270 latest version
Organic - SVOC - PAH	Indene	SW-846 8270 latest version
Organic - SVOC - PAH	Indeno(1.2,3-cd)pyrene	SW-846 8270 latest version
Organic - SVOC - General	Isodrin	SW-846 8270 latest version
Organic - SVOC - General	Isophorone	SW-846 8270 latest version
Organic - SVOC - General	Isosafrole	SW-846 8270 latest version
Organic - SVOC - General	Methapyrilene	SW-846 8270 latest version
Organic - SVOC - General	Methyl methanesulfonate	SW-846 8270 latest version
Organic - SVOC - General	Methyl parathion	SW-846 8270 latest version
Organic - SVOC - PAH	Naphthalene	SW-846 8270 latest version
Organic - SVOC - General	Nitrobenzene	SW-846 8270 latest version
Organic - SVOC - General	N-Nitrosodiethylamine	SW-846 8270 latest version
Organic - SVOC - General	N-Nitrosodimethylamine	SW-846 8270 latest version
Organic - SVOC - General	N-Nitrosodi-n-butylamine	SW-846 8270 latest version
Organic - SVOC - General	N-Nitroso-di-n-propylamme	SW-846 8270 latest version
Organic - SVOC - General	N-Nitrosodiphenylamine	SW-846 8270 latest version
Organic - SVOC - General	N-Nitrosomethylethylamine	SW-846 8270 latest version
Organic - SVOC - General	N-Nitrosomorpholine	SW-846 8270 latest version
Organic - SVOC - General	N-Nitrosopiperidine	SW-846 8270 latest version
Organic - SVOC - General	N-Nitrosopyrrolidine	SW-846 8270 latest version
Organic - SVOC - General	0,0.0-Triethylphosphorothioate	SW-846 8270 latest version
Organic - SVOC - General	Parathion	SW-846 8270 latest version
Organic - SVOC - General	Pentachlorobenzene	SW-846 8270 latest version
Organic - SVOC - General	Pentachloronitrobenzene	SW-846 8270 latest version
Organic - SVOC - General	Pentachlorophenol	SW-846 8270 latest version
Organic - SVOC - General	Phenacelin	SW-846 8270 latest version
Organic - SVOC - PAH	Phenanthrene	SW-846 8270 latest version
Organic - SVOC - General	Phenol	SW-846 8270 latest version
Organic - SVOC - General	p-Phenylenediamine	SW-846 8270 latest version
Organic - SVOC - General	Phorate	SW-846 8270 latest version
Organic - SVOC - General	Pronamide	SW-646 8270 latest version
Organic - SVOC - PAH	Pyrene	SW-846 8270 latest version
Organic - SVOC - General	Pynuine	SW-846 6270 latest version
Organic - SVOL - General	Quinoline	SW-846 8270 latest version
Organic - SVOC - General	Salfole	
Organic - SVOC - General	retraeuryioitniopyrophosphate	SW-646 6270 latest version
Organic - SVOC - General	1,2.3 4-retranyoronaphinalene	SWY-846 8270 latest version
Organic - SVOC - General	Responsible	Diviological delatest version
Lorganic - SVUC - General	рендененны	1 3 VV-646 6270 latest version

Organic - SVOC - General	2,3-Dichloroaniline	To be determined
Organic - SVOC - General	a-Terpineo!	To be determined
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Organic - SVOC - Organic Acids	Isopropanol	SW-846 8015 latest version
Organic - SVOC - Organic Acids	Acetic Acid	SW-846 8015 latest version
Organic - SVOC - Organic Acids	Butyric Acid	SW-846 8015 latest version
Organic - SVOC - Organic Acids	Citric Acid	SW-846 8015 latest version
Organic - SVOC - Organic Acids	Ethanol	SW-846 8015 latest version
Organic - SVOC - Organic Acids	Formic Acid	SW-846 8015 latest version
Organic - SVOC - Organic Acids	Isobutyric acid	SW-846 8015 latest version
Organic - SVOC - Organic Acids	Lactic acid	SW-846 8015 latest version
Organic - SVOC - Organic Acids	Methanol	SW-846 8015 latest version
Organic - SVOC - Organic Acids	Oxalic Acid	SW-846 8015 latest version
Organic - SVOC - Organic Acids	Propionic Acid	SW-846 8015 latest version
Organic - SVOC - Organic Acids	Pyruvic Acid	SW-846 8015 latest version
Organic - SVOC - Organic Acids	Quinic Acid	SW-846 8015 latest version
Organic - SVOC - Organic Acids	Succinic Acid	SW-846 8015 latest version
Organic - SVOC - Organic Acids	Tartaric Acid	SW-846 8015 latest version

Organic - SVOC - Carbonyl Compounds	Acetakdehyde	SW-846 8315 latest version
Organic - SVOC - Carbonyl Compounds	Formaldehyde	SW-846 8315 latest version
Organic - SVOC - Carbonyl Compounds	Glutaraldehyde	SW-846 8315 latest version
Organic - SVOC - General	2-Methoxyethanol	
		SW-846 8321 (HPLC), latest version -
		solvent extractable nonvolatile organics
Organic - SVOC - General	Diethylene glycol	
		SW-846 8321 (HPLC), latest version -
		solvent extractable nonvolatile organics
Organic - SVOC - General	Ethylene glycol	
		SW-846 8321 (HPLC), latest version -
		solvent extractable nonvolatile organics
Organic - SVOC - General	Propylene glycol	
		SW-846 8321 (HPLC), latest version -
		solvent extractable nonvolatile organics
Organic - SVOC - General	Tetraethylene glycol	· · · · · · · · · · · · · · · · · · ·
		SW-846 8321 (HPLC), latest version -
		solvent extractable nonvolatile organics
Organic - SVOC - General	Triethylene glycol	
		SW-846 8321 (HPLC), latest version -
		solvent extractable nonvolatile organics
		· · · · · · · · · · · · · · · · · · ·
Organic - SVOC -	Bisphenol-A	To be determined
Organic - SVOC -	p-Nonylphenol (Technical mixture)	To be determined
Organic - SVOC -	Nonylphenol Diethoxylate (Technical	
	(muxture)	To be determined

Organic - SVOC -	Nonylphenol Monoethoxylate	1
	(Technical mixture)	To be determined
Organic - SVOC -	para-tert-Octylphenol	To be determined
Organic - SVOC - PFAS	PFOS. PFOA. PFHxS	EPA 537.1 Modified
	D. K. K. A. A.	
Organic - SVOC - Explosives	Dinitrobenzene 1,3-	SW-846 8095 latest version
Organic - SVOC - Explosives	Dinitrotoluene 2,4-	SW-846 8095 latest version
Organic - SVOC - Explosives	Dipitrotoluono 2 Amino 4 6	SW-846 8095 latest version
Omanic - SVOC - Explosives	Dinitrololuene, 4-Amino-2.6-	SW-846 8095 latest version
Organic - SVOC - Explosives	Hexahydro-1 3 5-tripitro-1 3 5-tripzine	SW-846 8095 latest version
	(RDX)	
Organic - SVOC - Explosives	Nitroglycerin	SW-846 8095 latest version
Organic - SVOC - Explosives	Nitrotoluene. m-	SW-846 8095 latest version
Organic - SVOC - Explosives	Nitrotoluene, o-	SW-846 8095 latest version
Organic - SVOC - Explosives	Nitrotoluene, p-	SW-846 8095 latest version
Organic - SVOC - Explosives	Octahydro-1,3.5,7-tetranitro-1,3,5,7-	SW-846 8095 latest version
	tetra (HMX)	
Organic - SVOC - Explosives	PETN	SW-846 8095 latest version
Organic - SVOC - Explosives	Tetryl (Trinitrophenylmethylnitramine)	SW-846 8095 latest version
Organic - SVOC - Explosives	Trinitrobenzene, 1.3.5-	SW-846 8095 latest version
Organic - SVOC - Explosives	Trinitrotoluene. 2,4,6-	SW-846 8095 latest version
	1	
Organic - SVOC - Agent Breakdown Products	Disopropyl methylphosphonate	EPA Method 538
Omanic - SVOC - Agent Breakdown Products		EDA Mathed 529
Omanic - SVOC - Agent Breakdown Products	MPA	EPA Method 539
Organic - SVOC - Agent Breakdown Products	Thioglycol	EPA Method 538
Organic - SVOC - Polychlorinated biphenyls (PCBs	Arociors	SW-846 8082 latest version
Organic - SVOC - Polychlorinated biphenyls (PCBs)	WHO list of congeners	EPA 1668B
Organic - SVOC - Pesticides/Herbicides	4,4-DDD	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	4,4-DDE	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	4,4-DDT	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	Aldrin	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	Alpha-BHC	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	b-BHC	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	Chlordane	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	d-BHC	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	Dieldrin	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	Endosulfan 1	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	Endosulfan 2	SW-846 8081 latest version

WHO = World Health Organization 2,3.7,8 substituted congeners

Organic - SVOC - Pesticides/Herbicides	Endosulfan sulfate	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	Endrin	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	Endrin Aldehyde	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	Endrin Keytone	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	gamma-BHC (Lindane)	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	Heptachlor	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	Heptachlor Epoxide	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	Methoxychlor	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	Toxaphene	SW-846 8081 latest version
Organic - SVOC - Pesticides/Herbicides	Glyphosate	To be determined
Organic - SVOC - Pesticides/Herbicides	Prometon	To be determined
Organic - SVOC - Pesticides/Herbicides	Carbaryl	SW-846 8270 (TIC)
Organic - SVOC - Pesticides/Herbicides	Cloropyrifos	SW-846 8141
Organic - SVOC - Pesticides/Herbicides	Demeton	SW-846 8141
Organic - SVOC - Pesticides/Herbicides	Diazinon	SW-846 8141
Organic - SVOC - Pesticides/Herbicides	2,4-dichlorophenoxyacetic acid	SW-846 8151
Organic - SVOC - Pesticides/Herbicides	Azinophos-methylo (Guthion)	SW-846 8141
Organic - SVOC - Pesticides/Herbicides	Malathion	SW-846 8141
Organic - SVOC - Pesticides/Herbicides	Mirex	SW-846 8081
Organic - SVOC - Dioxins	2,3,7,8-TCDD	EPA 1613B