



Bureau of Waste Management

PROCESSING AND BENEFICIAL USE OF OIL AND GAS LIQUID WASTE

GENERAL PERMIT WMGR123

Comment and Response Document

1/4/2021

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COMMENTS AND RESPONSES

1/4/2021

General:

1. **Comment:** I want to thank the Department for working with industry in developing regulations that aid the industry to recycle and reuse its wastewater. We look forward to working with the Department to further provide flexibility in permitting to continue to protect the environment while maximizing the uses of treated produced water. (1)

Response: The Department of Environmental Protection (DEP) appreciates and acknowledges the comment.

2. **Comment:** When does the permit expire? Finally, neither the Draft General Permit WMGR123 itself nor the public notice in the Pennsylvania Bulletin state what the term of this permit will be – will it have a 10 year term? Commenters request a five-year term for this permit. (10)

Response: WMGR123 will continue to have a 10-year permit term, and the renewed WMGR123 will expire on January 4, 2031.

3. **Comment:** Require operators to notify residents and communities within a ‘zone of potential impact’ directly. A shrinking minority of the public gets information from print newspapers or public bulletins. To ensure that all residents within a ‘zone of potential impact’ receive notification of an opportunity to participate in the permitting process for a proposed facility, targeted communication strategy is required (e.g. direct mail). (7)

Response: Pennsylvania’s residual waste regulations set forth requirements for public involvement when a person or municipality requests coverage under a general permit for the beneficial use of waste. WMGR123 requires applicants to submit a Determination of Applicability (DOA) prior to processing or beneficially using oil and gas liquid waste pursuant to the terms and conditions of WMGR123. The DOA includes submission of a robust application in which operating plans, facility maps, documentation of insurance, bonding calculations, and other records documenting the proposed facility’s compliance with the residual waste regulations are submitted for DEP’s review and approval. In accordance with 25 Pa. Code § 287.642 (relating to determination of applicability), DEP publishes a notice in the *Pennsylvania Bulletin* for administratively complete applications that provides instructions for interested persons or municipalities to submit comments, recommend revisions to, or advocate approval or disapproval of the application. Interested persons may also request that DEP hold a public meeting or public hearing on a DOA under a general permit. The *Pennsylvania Bulletin* can be accessed electronically anywhere there is internet access, or for smart

phone users, where a cellular signal exists, and citizens can sign up to receive emails that notify them when an application is pending in their county location.

In addition, 25 Pa. Code § 287.641(g) (relating to inclusion in a general permit) states that a person or municipality that applies to DEP for a DOA under a general permit, shall submit a copy of the application to the host municipality and the appropriate county, county planning agency and county health department, if one exists, at the same time that the person or municipality files the DOA with DEP. The host county, municipality, or applicable county planning agency and county health department can also opt to provide information regarding the application to individuals within their respective jurisdictions.

DEP believes that the current public involvement process for DOAs under a general permit, as required by regulation, provides sufficient notice to residents located near a proposed facility. In addition, this process is consistent with how all general permits requiring DOAs are managed. Providing a direct mailing to all residents within a “zone of potential impact” is unrealistic due to DEP’s limited staff and the significant time and resources that would be required to prepare and distribute such a mailing in addition to the public participation procedures already required by the residual waste regulations. Therefore, the permit has not been modified as suggested by the commenter.

4. **Comment:** Broaden opportunity for public participation to adjacent municipalities as well as residents and communities along transportation routes. Facilities permitted under WMGR123 General Permits involve heavy industrial truck traffic, noise, and the transportation of toxic and radioactive materials that poses potential environmental and public health risks. By excluding parts of the public who bear potential impacts, simply because they do not reside in the same municipality as the sited facility, is unfair, exclusionary and inequitable. (7)

Response: DEP has revised WMGR123 to require applicants to submit DOA applications when applying for coverage under WMGR123 instead of Registrations. DOAs require a 60-day public comment period and afford the public the opportunity to provide input on a facility proposing to operate under WMGR123. Anyone who wishes to provide input on the proposed operation, not just individuals who reside in the same municipality as the proposed facility, may take advantage of the 60-day public comment period. The *Pennsylvania Bulletin* can be accessed electronically anywhere there is internet access, or for smart phone users, where a cellular signal exists, and citizens can sign up to receive emails that notify them when an application is pending in a designated county. Users of the *Pennsylvania Bulletin’s* email notification system can designate the county in which they reside, adjacent counties, or other counties of interest to the user.

5. **Comment:** The quantities of liquid waste covered by Draft General Permit WMGR123, which allows for the processing and beneficial use of oil and gas liquid waste potentially containing all of these and/or other toxic pollutants, is vast. For example, in the last decade alone (2008-2018), shale gas

drilling used over 25 billion gallons of water in the Susquehanna River basin. The natural gas industry in 2018 consumed water at an average of 24.3 million gallons per day, which constituted the third largest use of water in the basin, even higher than agriculture. All of that water, as well as all of the toxic chemicals added to it in the oil and gas processes that result in the production of wastewater, is in the Chesapeake Bay watershed.

When WMGR123 was last renewed in 2012, WMGR123 actually combined what had previously been three separate general permits, WMGR119, WMGR121, and WMGR123 into a new consolidated WMGR123.¹⁶ Despite some changes in the draft WMGR123 permit, the permit does not go far enough to protect health and the environment from the potential health and environmental dangers from this type of waste given the large quantity of liquid waste produced by this industry or given the large range and quantities of pollutants common to oil and gas liquid waste.

The amount of secret chemical use in oil and gas wells is likely much greater than publicly disclosed because of regulatory exemptions that don't require reports or readily accessible records of all chemicals used in drilling and fracking. For instance, no drilling chemicals (drilling precedes fracking in the oil and gas extraction process) used in either conventional or unconventional wells are required by Pennsylvania to be disclosed at all, so these occurrences could not be included in the report, even though, according to US Environmental Protection Agency (EPA) records, it is known that some drilling chemicals have been kept secret from the public at the federal level, and some are known to be linked to adverse health effects. (8, 9, 10)

Response: Regardless of whether this general permit is available in Pennsylvania, oil and gas exploration and production using hydraulic fracturing would still occur in Pennsylvania through the utilization of fresh, non-waste-derived chemicals (as opposed to constituents contained in the oil and gas liquid waste authorized under WMGR123) and freshwater withdrawals. The purpose of this general permit is to encourage the reuse of oil and gas liquid waste generated on oil and gas well sites and associated activities (such as compressor stations) through a closed loop process that allows for the return of processed liquid waste to well sites for reuse, minimizing freshwater withdrawals as noted by the commenters and reducing impacts to Pennsylvania's water resources with no greater threat of environmental harm than the use of the fresh hydraulic fracturing fluid that it replaces. Comments received regarding chemical disclosure regulations are outside the scope of this permit.

Description and Definitions:

- 6. Comment:** Based on the definition of "waste" and "beneficial use" in the Residual Waste Regulations in Chapter 287, Sec. 287.1, (ii)(A), PIOGA continues to assert that produced water ("material") is not a waste so long as operators beneficially reuse the material in their hydraulic

fracturing processes as a make up for the fluids necessary to fracture wells. Once an operator makes the determination that part or all their material is scheduled for disposal, only then should that material be classified as “waste.” (2)

Response: The definition of waste in 25 Pa. Code § 287.1 (relating to definitions) states that discarded materials include contaminated water. The definition goes on to provide in subparagraph (ii) that materials are not waste when recycled when they can be shown to be recycled by being used or reused as ingredients in an industrial process to make a product or employed in a particular function or application as an effective substitute for a commercial product, provided the materials are not being reclaimed. However, subparagraph (iii) provides a list of materials that are wastes, even if the recycling involves use, reuse or return to the original process. This includes materials used to produce fuel, as stated in item (B) of subparagraph (iii). Therefore, produced fluid is waste unless it meets the de-wasting criteria contained in Condition C.1.b. of WMGR123.

7. **Comment:** There is absolutely no beneficial use of oil and gas waste. It is a toxic slurry of chemicals and radiation. This type of waste should not be allowed to exist in our environment. It is the mission of the DEP to protect Pennsylvania's air, land and water from pollution and to provide for the health and safety of its citizen through a cleaner environment. The DEP is egregiously lacking in carry out its mission. The decisions being made by DEP are costing people their lives in western PA and throughout the state. Our homes are now basically superfund sites with radiation and chemicals in the water we drink, the air we breathe, and the soil we use to grow food. Additionally, Appendix A listing the maximum concentrations of various constituents absolutely does not indicate any protections for our water from pollution. Thereby, creating conditions that are completely contrary to the health and safety of the citizens. Many of the constituent limit levels seem incredibly high including Gross Alpha, Gross Beta, Benzene, Lead, Methanol, Radium 226, and Radium 228. Many of these constituents are known carcinogens. No level is safe. The DEP should be keeping them out of our water ways, not allowing them into our waterways. The DEP knows there are better and safer decisions to be made. I am begging you, PLEASE, BE BETTER, DO BETTER! Fracking, its waste products, and its infrastructure must be banned from our communities and our state. It is the only way to actually protect our air, land and water and the only way to provide for the health and safety of the citizen of Pennsylvania. Clean water, air and land is absolutely vital to our existence. Please treat it as such and actually protect it with all the power the agency possesses. (6)

Response: Comments relating to the elimination of hydraulic fracturing as an industry in Pennsylvania, and its related infrastructure, are beyond the scope of WMGR123. The purpose of this general permit is to encourage the reuse of oil and gas liquid waste generated on oil and gas well sites and associated activities (such as compressor stations) through a closed loop process that allows the return of oil and gas liquid waste to well sites for reuse, minimizing fresh water withdrawals and reducing impacts to Pennsylvania's water resources. As a result, the reuse of oil and gas liquid waste in hydraulic fracturing operations provides a legitimate beneficial use and has been demonstrated to do so since WMGR123 was established in 2012.

Processing and Beneficial Use of Oil and Gas Liquid Waste

The standards in Appendix A are based on a combination of drinking water MCLs (Maximum Contaminant Levels), surface water quality criteria, and typical values for rivers and streams observed at WQN (Water Quality Network) sampling stations. The values can be applied only to treated oil and gas liquid waste and show that the treated oil and gas liquid waste has no potential for contamination of groundwater, drinking water supplies, and river and streams. Water meeting the Appendix A criteria may be stored in freshwater impoundments as per the conditions of the general permit.

8. **Comment:** Rather than utilizing the definition of Processing as defined in Sec. 287.1, the Department created a new definition:

Processing - A method or technology used for the purpose of reducing the volume or bulk of oil and gas liquid waste, or a method or technology used to convert the oil and gas liquid waste for beneficial use. The term includes the transfer or storage of oil and gas liquid wastes.

To be consistent, the Department should use the definition established in Sec. 287.1, which has been approved through the regulatory review process (emphasis added):

Processing—

(i) The term includes one or more of the following:

*(A) A method or technology used for the purpose of **reducing the volume** or bulk of municipal or residual waste or a method or technology used to convert **part or all of** the waste materials **for offsite reuse**.*

(B) Transfer facilities, composting facilities and resource recovery facilities.

Creating a new “processing” definition in a regulatory document that is not subject to the regulatory review process to replace one that has been, and which restricts options for our industry that are available under the IRRC-approved definition is simply unlawful. If the Department does not want to use the established definition verbatim, then PIOGA and, in part, MSC suggest the following changes to the new definition so it is consistent with the established definition:

*“Processing - A method or technology used for the purpose of reducing the volume or bulk of oil and gas liquid waste, or a method or technology used to convert **part or all of** the oil and gas liquid waste for beneficial use **for offsite or onsite reuse**. The term includes the transfer or storage of oil and gas liquid wastes **associated with the WMGR123 permitted activities.**”*

Adding “part or all of” and “for offsite or onsite use” to the definition is consistent with the options available under the Department’s regulations to other generators of waste for their material for processing, which includes “reducing of volume” so that “part of” of the waste can still be beneficially used in some capacity. (2, 5)

Response: The Solid Waste Management Act (SWMA, Act of Jul. 7, 1980, P.L. 380, No. 97) Article I, Section 104.18 states that “the department shall establish waste regulations to effectuate the beneficial use of municipal and residual waste, including regulations for the issuance of general permits for any category of beneficial use or processing of municipal waste or residual waste on a regional or Statewide basis in accordance with the regulations adopted by the Environmental Quality Board.” Further, 25 Pa. Code §§ 287.611 and 287.631 (relating to authorization for a general permit and contents of general permits, respectively) clearly state that DEP will include a set of terms and conditions governing the beneficial use or processing of residual waste covered by the general permit as are necessary to assure compliance with the act, Article IX and the environmental protection acts, including provisions for the protection of groundwater. The definition of processing referenced by the commenters in WMGR123 is preceded by that the phrase, “for the **purposes of this general permit**, the terms identified in this paragraph are defined as follows.” Therefore, DEP believes that the applicability of the definition is clear and that DEP possesses the authority to establish an alternate definition in the general permit.

DEP believes that the definition of “processing” in the renewed version of WMGR123 promotes the goal of establishing and maintaining a closed loop process for the recycling and reuse of oil and gas liquid wastes and protects public health, safety and the environment. The term is specific to the WMGR123 permit as authorized by 25 Pa. Code § 287.631(a)(4) (relating to contents of general permits). The scope of WMGR123 is to ensure that oil and gas liquid waste processed in accordance with the general permit are beneficially used to develop or hydraulically fracture an oil and gas well. Revising the definition of “processing” in the manner suggested, specifically by adding the phrases, “part or all of,” and, “for offsite or onsite reuse,” could be misconstrued as authorizing 1) the processing of oil and gas liquid waste for other beneficial uses beyond that expressly identified in Section A of WMGR123, or 2) the processing of oil and gas liquid waste prior to disposal.

Likewise, inclusion of the phrase, “associated with the WMGR123 permitted activities,” could be misconstrued to mean that coverage under WMGR123 is not needed if oil and gas liquid waste is being transferred or stored prior to beneficial use without an existing authorization under WMGR123. Therefore, the language suggested by the commenters has not been incorporated into renewed WMGR123.

DEP will consider, through the permit application process established in the residual waste regulations, other forms of beneficial use for processed oil and gas liquid waste, which may ultimately result in the development of new general permits.

9. **Comment:** The Department proposes a new definition (“Transfer”) that is not in Sec. 287.1 but, as with the new “processing” definition, omits an option for our industry that is available under the Department’s regulations. For the same reasons as stated above for “processing,” PIOGA recommends that the Department use the definition of “Transfer Facility” as defined in Sec. 287.1 instead of the new “Transfer” definition:

*Transfer facility—A facility which receives and processes or temporarily stores municipal or residual waste at a location other than the generation site, and which facilitates the transportation or transfer of municipal or residual waste to a processing **or disposal facility**. The term includes a facility that uses a method or technology to convert part or all of the waste materials for offsite reuse. The term does not include a collection or processing center that is only for source separated recyclable materials, including clear glass, colored glass, aluminum, steel and bimetallic cans, high-grade office paper, newsprint, corrugated paper and plastics. (Emphasis added).*

The established definition provides that a transfer station may receive material for either “processing or disposal.” By making the above change, a WMGR123 permittee would be able to use the General Permit to transfer material for processing or disposal the same as other industries.

If the Department does not want to use the established “Transfer facility” definition verbatim, then PIOGA and MSC suggest the following changes to the new “Transfer” definition so it is consistent with the established “Transfer facility” definition:

*“Transfer - Receiving and processing, or temporarily storing, oil and gas liquid waste at a location other than the site where the oil and gas liquid waste was generated, and **which facilitates** the transportation of oil and gas liquid waste to a processing facility, a DEP permitted well pad, or permitted impoundment, or other facility designed to hold liquids for the development or hydraulic fracture of an oil or gas well or **disposal facility**. The term includes a facility that uses a method or technology to convert part or all of the waste materials for beneficial use.” (2, 5)*

Response: DEP has revised the definition to include the phrase, “which facilitates,” as proposed by the commenters but will not include “disposal facility.” Authorizing the processing of waste prior to disposal is contrary to Pennsylvania’s regulations governing the beneficial use of waste, which allows DEP to develop and issue general permits to authorize the processing of wastes prior to beneficial use or the beneficial use of waste. Waste disposal or processing of waste prior to disposal requires a person to obtain an individual permit under the residual waste regulations.

10. **Comment:** Certain proposed definitions in Draft General Permit WMGR123 are circular. Draft General Permit WMGR123’s definitions include that storage is defined as “containment of waste on a temporary basis . . . ,” and transfer includes “temporarily storing” oil and gas liquid waste. If

“storage” already includes the term “temporary,” what does “temporarily storing” mean for the purposes of inclusion in the definition of “transfer”? (10)

Response: The phrase, “temporarily storing,” in the definition of “transfer” does not apply to operations employing a method or technology used for the purpose of reducing the volume or bulk of oil and gas liquid waste, or a method or technology used to convert the oil and gas liquid waste for beneficial use. It applies to operations that are just storing oil and gas liquid waste prior to beneficial use. The use of “temporary” correlates to the one-year timeframe that oil and gas liquid waste may be stored before it is deemed to be disposed. The definition of “transfer” in renewed WMGR123 has been revised for clarity as follows:

“Transfer - Receiving and processing, ~~or temporarily storing or storage of~~, oil and gas liquid waste at a location other than the site where the oil and gas liquid waste was generated, and which facilitates the transportation of oil and gas liquid waste to a processing facility, a DEP-permitted well pad, or permitted impoundment or other facility designed to hold liquids for the development or hydraulic fracture of an oil or gas well. The term includes a facility that uses a method or technology to convert part or all of the waste materials for beneficial use.”

- 11. Comment:** Storage must be defined as 90 days or fewer. The draft WMGR123 permit builds into the definitions that “storage” includes containment for one year or less, and that it shall be presumed that containment of waste in excess of one year constitutes disposal (although adding that this presumption “can be overcome with clear and convincing evidence to the contrary”). One year is entirely too long before the material would be considered a waste. The Resource Conservation and Recovery Act permits “storage” of up to 90 days or less without a waste disposal permit for its hazardous waste program (for very small and large quantity generators) or 180 days or less for non-hazardous waste and for small quantity generators. See 40 C.F.R. §§ 262.16(b), 262.17(a), 262.34(a)(1)(ii). Storage of oil and gas liquid wastes, with the large list of pollutants including many toxic and radioactive pollutant that such waste can contain, should similarly define storage as up to 90 days and require a waste disposal permit beyond that point.

Other commenters assert that allowing permittees to store oil and gas liquid waste up to one year is excessive because of the dangerous constituents it contains, and the added allowance of an extension to the storage time creates a potentially never-ending retention of wastewater under the permit since there is no end date or maximum period specified. The commenters also express concern that these provisions add unnecessary risk because the “units” or impoundments are not designed as long-term storage facilities. Additionally, commenters cite that the permit is not clear that the waste will definitely be reused, and the proposed definition of storage sets up a loophole that would allow the wastewater to be stored for up to a year or longer and then simply disposed of as waste.

The problem of long term storage is compounded by the lack of strict regulation of the stored waste's ultimate fate, which is allowed to remain on the site in what is considered a "temporary storage" unit or impoundment even if the fluids are too toxic to reuse in fracking. Under Condition C.3.d., "If the results of any future sampling taken to satisfy this condition fail to meet the concentration limits in Appendix A, the permittee must immediately notify the DEP and manage the processed oil and gas liquid waste as a residual waste."

Remarkably, the operator does not have to remove the waste if the fluids do not meet Appendix A requirements but apparently may allow them to stay on site for a year or for the life of the General Permit. It is entirely possible that processing does not accomplish the reduction of regulated constituents to DEP's requirements and a "bad batch" can stay on site for a year and may be extended even longer if permitted by DEP. This provision in the General Permit can be used as a loophole where waste is kept on site because it is a convenient storage location until disposal is economic or available. The storage of fluids for reuse at a well site for fracking was never meant to be a de facto wastewater storage location yet there is nothing in the General Permit to preclude this. (8, 9, 10)

Response: The proposed definition of "storage" in WMGR123 aligns with the definition of storage found in 25 Pa. Code § 287.1. (relating to definitions). Storing waste material for longer than one-year is disposal, and represents the same timeframe that is used in all other general permits as the length of time a waste material is stored before it's presumed to be disposed due to inability to beneficially use the waste. Exceeding the one-year storage timeframe without a justification, such as providing evidence that the oil and gas liquid waste will be beneficially used, is a violation of the terms and conditions of WMGR123. Oil and gas liquid waste stored for up to one year, unless it meets the de-wasting criteria in Condition C.1., is residual waste and must be managed as such. Oil and gas liquid waste stored for longer than one year is disposal and does not represent the difference between a waste and non-waste material.

General permit WMGR123 authorizes the processing of oil and gas liquid waste prior to beneficial use and the beneficial use of oil and gas liquid waste. An operator's application for and approval of its coverage under WMGR123 indicates its intent to beneficially use the oil and gas liquid waste since no other activity is authorized by the general permit. DEP disagrees that disposing of oil and gas liquid waste that has been processed under WMGR123 or storing liquid waste for longer than one year creates a loophole as the commenter describes.

The water quality standards in Appendix A were developed to allow the storage of processed water prior to use at an oil or gas well in a facility that does not need to meet the residual waste storage requirements, and therefore, the processed water would not impact the surface or groundwater. If oil and gas liquid waste does not meet the Appendix A standards, it may still be beneficially used under WMGR123, however, the de-wasting provision in Condition C.1. of the revised WMGR123

would no longer apply and the oil and gas liquid waste would need to be managed as a residual waste. Please also see DEP's responses to Comments #8 and #45.

- 12. Comment:** PIOGA and MSC recommend making the following revisions that better align with definitions in Chapter 78a re "Oil and gas operations" as well as oil and gas pipelines:

"Oil and gas liquid waste – The term includes liquid wastes generated from the drilling, development and operation of oil and gas wells and pipeline facilities oil and gas operations as defined in 25 Pa. Code § 78a.1. The term includes contaminated water from well sites, the development of transmission pipelines oil and gas operations and the facility operating under this general permit, provided the generating facility has satisfied all other permitting requirements that may apply to contaminated water. The term does not include condensate from oil and gas ~~transmission~~ pipeline compressor stations that exhibits a characteristic of hazardous waste under 40 CFR Part 261, Subpart C, as incorporated by reference at 25 Pa. Code § 261a.1." (2, 5)

Response: DEP agrees with the proposed revisions and has incorporated them as proposed. DEP would also like to state that the intent of the reference to the definition of "oil and gas operations" as defined in 25 Pa. Code § 78a.1 is not to preclude the processing and beneficial use of oil and gas liquid waste from conventional operations.

- 13. Comment:** "Oil and gas liquid waste" is too broadly defined. Oil and gas liquid waste is not clearly defined and would benefit from some specific examples of what is and is not included. For example, the broad definition could include fracking flowback and sludge. Is that correct? Would this definition also include liquid waste from oil and gas truck and engine operations or spills? Additional clarity is needed. (10)

Response: DEP's intent is to allow any liquid waste from an oil or gas well site to be processed and recovered for reuse. With the exception of compressor station condensate that exhibits characteristics of hazardous waste, the term includes contaminated water from well sites, transmission pipeline construction and operation, and facilities operating under this general permit to be processed under this general permit, provided the generator of the water is in compliance with all other permits that may apply to the management of the contaminated water. DEP does not believe any further revision to the definition of "oil and gas liquid waste" is necessary.

Determination of Applicability Requirements:

- 14. Comment:** This section requires the Determination of Applicability to be submitted "on forms provided by DEP" but does not specify exactly which forms those are. PIOGA and MSC recommend that the PA DEP specify which forms are required; for example, are they the same forms as listed in

Section F for permit renewals, or different forms? If different, then those forms should be clearly identified and, if they are currently in Draft form, they should be made available for review and comment. (2, 5)

Response: Including specific forms as part of the general permit conditions is not consistent with the standard format used for general permits and may preclude DEP staff from determining whether more, or fewer, documents need to be provided based upon the proposed operation. Therefore, a list of forms was not included in the renewed WMGR123. Instead, a checklist including all of the forms required for a prospective applicant's Determination of Applicability will be provided to the applicant upon reaching out to the appropriate DEP Regional Office or in response to a pre-application meeting.

- 15. Comment:** The Commission recommends the Department include a provision in the General Permit requiring the applicant to coordinate with the Commission concerning potential impacts to threatened and endangered species. We recommend the Department refer applicants to complete coordination using the Pennsylvania Conservation Explorer online tool to complete this coordination to avoid, minimize and/or mitigate impacts to these protected species and their habitat. (4)

Response: Prior to issuance of coverage under a general permit, applicants must submit proof that a Pennsylvania Natural Diversity Inventory (PNDI) Project Planning Environmental Review was conducted. If any issues are identified during that review, DEP requires them to be resolved before the applicant is authorized to operate under the general permit.

- 16. Comment:** The last sentence of Section B prohibits activities from commencing until approved, in writing, by PA DEP, but there is no timeframe specified within which the Department must respond with an approval (or denial). PIOGA and MSC recommend that either a timeframe should be specified, or language added that the registration is deemed approved if no response is received within a specified timeframe, such as the Permit Decision Guarantee. (2, 5)

Response: DEP's Bureau of Waste Management (BWM) has internal standard operating procedures that describe how staff will conduct administrative reviews and technical reviews of general permit application materials, including DOAs. The procedures describe BWM's process for management of general permit applications in accordance with DEP's Policy for Implementing the Permit Review Process and Permit Decision Guarantee, Document No. 021-2100-001, and Policy for Permit Coordination, Document No. 021-2000-301. The permit review timeline for DOAs that is included in the Permit Decision Guarantee is 86 business days.

Including language that would deem a DOA to be automatically approved after 86 business days could create a situation where DEP has not sufficiently evaluated an application nor made a determination as to whether the proposed operation complies with Article I Section 27 of the Pennsylvania Constitution and the requirements under 25 Pa. Code § 287.611(a) (relating to

authorization for a general permit). Therefore, the commenters' recommendation of adding a specified timeframe or automatic approval was not incorporated.

- 17. Comment:** The requirements for the Form X (Radiation Protection Action Plan) to be submitted are neither sufficiently clear nor sufficiently comprehensive. The Form X must cover material arriving by any and all modes of transportation.

Material delivered via pipeline to a residual waste facility covered by a WMGR123 permit is deeply problematic. In the case of material delivered by trucking, if the radioactivity is too high, the truckload can be refused, and its load can be prevented from being stored in the facility. This is what is supposed to happen, as covered by existing regulations.

However: what is the mechanism for "refusing" material arriving by pipeline if it is too radioactive to be allowed to be stored? Does the operator contemplate reversing the flow of the pipeline and storing it at the well pad from which it originated? If this is what is supposed to happen then:

- The originating well pad must have a WMGR123 permit of its own
- In evaluating the WMGR123 permit for the centralized facility, DEP must also evaluate the Radiation Protection Action Plan for the originating well pad, and must determine whether "refusing" material delivered via pipeline at the central facility by reversing the flow of the pipeline can in fact be safely accomplished.

Short of consideration for "refusing" material arriving via pipeline, DEP must simply prohibit pipeline connections to WMGR123-permitted facilities which transport residual waste material to the facility.

Admittedly, a Radiation Protection Action Plan for a facility with inbound wastewater pipeline delivery is almost guaranteed to be extremely complex. In order to be evaluated properly, the combination of well pads, wastewater pipelines, and central facility should be considered as a single system and be evaluated together under a single permit. If the DEP is not willing to do this, a WMGR123 permit must as an operating condition completely prohibit connections to inbound wastewater pipelines. (3)

Response: A Form X, or Radiation Protection Action Plan (RPAP), must contain methods by which a facility will detect the presence of radioactivity, identify the type of radioactivity present, measure the radiation emitted, and determine the actions needed to protect workers, the public and the environment from any radiation contained in the waste it receives. The RPAP also must include procedures for the monitoring of areas where waste is stored at the facility. Further, any generator of waste material must know the chemical and physical characteristics of the waste prior to transportation, including the radiological characteristics of the waste transported within Pennsylvania or United States Department of Transportation (US DOT) jurisdiction (i.e., determining

whether the waste must comply with US DOT Class 7 Hazardous Material regulations). For instances where a permittee is accepting oil and gas liquid waste via pipeline, the generator of the oil and gas liquid waste must evaluate the expected concentrations of Ra-226 plus Ra-228 to determine the applicability of any federal regulations found in Title 49 of the Code of Federal Regulations. Procedures for the acceptance or rejection of liquid waste accepted via pipeline must be addressed in the permittee's RPAP, which is reviewed and approved prior to the facility's ability to accept waste under WMGR123. As to the commenter's assertion that a rejection procedure is unrealistic for pipeline transportation of liquid waste, DEP would require an evaluation of the waste's radioactivity to occur and a determination made as to the applicability of 49 CFR prior to introduction of the waste into the pipeline and prior to transmission of said waste to the permittee.

The only instances where WMGR123 permittees receive oil and gas liquid waste via pipelines are those in which the WMGR123 permittee and the generator of the oil and gas liquid waste are the same entity. As a result, the generator can determine whether the oil and gas liquid waste can be accepted by the WMGR123 facility before it is pumped from the well site, so rejection of oil and gas liquid waste conveyed to the WMGR123 facility via pipeline is unlikely to occur. Should a WMGR123 facility determine that oil and gas liquid waste delivered via pipeline exhibits radiological properties that are so high that the facility does not want to process it, the generator would be responsible for arranging for the oil and gas liquid waste to be returned to the point of generation, delivered to an alternative facility that is permitted to accept it, or disposed of. The generator would need to contact DEP's Bureau of Radiation Protection to obtain a DOT exemption before a vehicle would leave the site. Returning rejected oil and gas liquid waste to the generator via pipeline is not feasible for any WMGR123 permittees that currently utilize pipelines as a means of receiving oil and gas liquid waste.

Generators of oil and gas liquid waste, including generators that received their rejected oil and gas liquid waste, would not be required to obtain coverage under WMGR123 as the generator would not be processing or transferring as the terms are defined in the revised WMGR123. Any oil and gas liquid waste that is processed or stored at a well pad *other than* the well pad from which it originated or the well pad that it will be beneficially used on must process or store in accordance with an authorization issued under WMGR123. Otherwise, the processing and storage would be managed under the provisions of the Oil and Gas Act, §§ 58 Pa.C.S.A. § § 2301—3504.

Operating Conditions:

- 18. Comment:** For consistency with the terminology in the introductory paragraph of C.1.b., the use of the term "facility" in subparagraphs b.i. and b.ii. should be changed to "unit." Condition C.1.b. deals with de-wasted materials (i.e. no longer considered a waste), but the term "facility," as defined in Condition 2 (which refers to the definition at § 287.1) means a facility where "waste" is managed,

and since de-wasted material in Condition C.1.b. is no longer a “waste,” different terminology should be used, as shown below:

“b. The processed oil and gas liquid waste meets the concentration limits in Appendix A of this general permit and, will be stored in an impoundment or other unit designed to hold water to develop or hydraulically fracture an oil or gas well. The impoundment or other unit must be owned or operated by the permittee or the owner or operator of an oil or gas well. Transportation shall be done in accordance with the following:

- i. Processed oil and gas liquid waste meeting the requirements of Condition C.1.b is not a residual waste when transported to the impoundment or other **unit facility**.*
- ii. If processed oil and gas liquid waste meeting the requirements of Condition C.1.b will be transported in a vehicle that previously contained residual waste, the vehicle must be decontaminated prior to transporting the processed oil and gas liquid waste to the impoundment or other **unit facility**.” (2, 5)*

Response: DEP agrees with and has incorporated the proposed changes.

19. Comment: Condition C.2. requires that a minimum amount of testing should be done over a certain time prior to “the initial storage and dewatering.” It is inferred that this step is a trial or pilot project of either the technology or process at a facility to meet the limits in Appendix A. If there is no pre-existing facility prior to receiving the permit to operate, a potential permittee must be able to store the water in some manner while conducting the tests. The Department should specify how this can be done under this permit. (2)

Response: The permittee must include sufficient information in the permit application to demonstrate that oil and gas liquid waste will be stored in a manner that complies with the residual waste storage requirements in 25 Pa. Code, Chapter 299. Oil and gas liquid waste must also be stored in accordance with 25 Pa. Code, Chapter 299 during the time that a permittee would be determining whether the waste complies with the Appendix A limits. A permittee can generate and collect the data needed for a de-wasting determination to be made after the facility is actively accepting and treating oil and gas liquid waste to meet the standards contained in Appendix A.

20. Comment: Condition C.2. requires that a minimum amount of testing should be done over a certain time prior to “the initial storage and dewatering.” It is inferred that this step is a trial or pilot project of either the technology or process at a facility to meet the limits in Appendix A. If there is no pre-existing facility prior to receiving the permit to operate, a potential permittee must be able to store the water in some manner while conducting the tests. The Department should specify how this can be done under this permit.

For an existing facility that wants to try new equipment and already has a WMGR123, the process needs to be consistent and fair across programs. For example, if I have new evaporation technology, I could do a trial at an oil and gas well with little paperwork (such as an OG-71). However, if I wanted to try that same piece of equipment at a WMGR123 facility, I would need to do a full permit modification and resubmit almost all of the paperwork that is required when first applying for a WMGR123. We understand that the Department needs to know what equipment is being tried, and for how long, but how that is done must be guided by reason and common sense. For many years the Department's practice was to allow a WMGR123 facility to obtain a letter of approval to try or test equipment to see how it works and before committing to purchase, but in recent years the Department has made a policy change requiring a full permit modification. This is a classic example of regulatory overkill. There is no way that requirement fits the situation, but what it does do is work against companies' trying to obtain the most effective treatments at reasonable cost. The Department should return to its past practice or explain how this new policy promotes the objectives of the Solid Waste Management Act and other applicable statutes. (2)

Response: The "initial storage" in Condition C.2. refers to storage of the material subsequent to a demonstration that oil and gas liquid waste that has been de-wasted in accordance with Condition C.1. in the revised WMGR123. Before the de-wasted material can be stored in an impoundment or other unit that does not need to meet the residual waste storage requirements, the oil and gas liquid waste must be managed as a residual waste and stored in accordance with 25 Pa. Code, Chapter 299 (relating to storage and transportation of residual waste).

If, in response to the example provided by the commenter, a prospective permittee intends to demonstrate the validity of a new processing technology for oil and gas liquid waste at a permitted oil and gas well site, a permit under the Solid Waste Management Act may not be required provided a number of criteria are met. Language in 58 Pa.C.S. § 3273.1 (relating to relationship to solid waste and surface mining) states:

"(a) General rule.--The obligation to obtain a permit and post a bond under Articles III and V of the act of July 7, 1980 (P.L.380, No.97), known as the Solid Waste Management Act, and to provide public notice under section 1905-A(b)(1)(v) of the act of April 9, 1929 (P.L.177, No.175), known as The Administrative Code of 1929, for any pit, impoundment, method or facility employed for the disposal, processing or storage of residual wastes generated by the drilling of an oil or gas well or from the production of wells which is located on the well site, shall be considered to have been satisfied if the owner or operator of the well meets the following conditions:

(1) the well is permitted under the requirements of section 3211 (relating to well permits) or registered under section 3213 (relating to well registration and identification);

(2) the owner or operator has satisfied the financial security requirements of section 3225 (relating to bonding) by obtaining a surety or collateral bond for the well and well site; and

(3) the owner or operator maintains compliance with this chapter and applicable regulations of the Environmental Quality Board.”

Operations that propose to demonstrate the validity of a new processing technology for oil and gas liquid waste at a site that is not exempted from permitting under the Solid Waste Management Act must first apply for and obtain a permit for the activity from the Department under 25 Pa. Code, Article IX in accordance with 25 Pa Code § 287.101(a) (relating to general requirements for permit). In order to comply with 25 Pa. Code, § 287.101(a), the demonstration operation must obtain a permit from the DEP’s BWM. One way to accomplish this is through the modification of an existing permit, in this case, an operator’s existing authorization to operate under WMGR123. Further, the requirements in 25 Pa Code, § 287.631(a)(iv) state that each general permit shall include:

“A requirement that the activities conducted under the authorization of a general permit shall be conducted in accordance with the permittee’s application. Except to the extent that a general permit states otherwise, the permittee shall operate as described within the permit application.”

In order to comply with 25 Pa. Code, §§ 287.101(a) and 287.631(a)(iv), the coverage issued to the permittee under WMGR123 must be modified to include the demonstration activity, which may involve updates to some of the permit application documents that were submitted with the permittee’s original DOA.

An alternative mechanism that can be utilized to comply with 25 Pa. Code, § 287.101(a) would be to obtain an individual demonstration facility permit in accordance with 25 Pa. Code, Chapter 287, Subchapter G (relating to demonstration facilities).

- 21. Comment:** Since Condition C.3. addresses “continuing” to store material in accordance with Condition C.1.b., meaning that the material has been demonstrated to meet the Appendix A concentration limits, and at this point has also met the demonstration required by Condition C.2., PIOGA and MSC recommend that the material should be referred to as “de-wasted material” in Condition C.3. rather than as “waste,” as shown below:

“To continue storing de-wasted material ~~processed oil and gas well liquid waste~~ in accordance with Condition C.1.b, the permittee shall demonstrate that the de-wasted material ~~oil and gas liquid waste~~ continues to meet the limits in Appendix A by:” (2, 5)

Response: DEP agrees with the proposed revisions and has incorporated them into the renewed WMGR123.

- 22. Comment:** The allowance to request a reduction in the frequency of sampling and analysis under Condition C.4. should not be limited to permittees that process waste from only one generator. PIOGA and MSC suggest that regardless of the number of generators sending waste to the facility, the ability to request a reduction in sampling and analysis frequency should be available as long as

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the specified consistency in achieving the Appendix A limits has been demonstrated. Furthermore, a facility should be able to request the reduction in frequency of sampling. Also, given the cost and burden of requiring daily sampling and analysis for Strontium, Barium, and TDS, the time-frame specified in C.4., subparagraphs a.i., a.ii., and b.i. should be reduced from one year to three months. The changes recommended for Condition C.4. are shown below:

"4. Permittees processing oil and gas liquid waste ~~from only one generator~~ may request a reduction in the required frequency of sampling and analysis, and a reduction in the number of parameters, for processed oil and gas liquid waste stored in accordance with condition C.1.b. by submitting an application to the appropriate Department regional office (see attached list) for a permit modification to the permittee's coverage under this general permit.

a. A reduced sampling and analysis frequency may be requested if the following criteria are met:

i. Analysis of representative samples of the processed oil and gas wastewater has been conducted in accordance with this general permit for a three month ~~one-year~~ period; and

ii. The permittee has demonstrated that the constituent limits in Appendix A have been satisfied for a three month ~~one-year~~ period.

b. A reduced parameter list may be requested if the following criteria are met:

i. The permittee has demonstrated that the parameter(s) in Appendix A that is sought for removal from ongoing sampling and analysis requirements has not been detected in analytical results for at least three months ~~one-year~~.

ii. If the reduction in parameters is approved, the permittee must sample and analyze for the removed parameter(s) on a quarterly basis to demonstrate that the reduction can continue.

iii. If the results of the quarterly sampling and analysis performed to satisfy this condition show a detection of a parameter that was removed from ongoing sampling and analysis requirements, then the permittee must immediately notify DEP and reinstate the detected parameter(s) into sampling and analysis required by Condition C.3. until the permittee demonstrates to DEP's satisfaction that the detection was an anomaly, or the parameter is no longer being detected." (2, 5)

Response: DEP has removed the proposed Condition C.4. from renewed WMGR123. If an existing permittee or other interested party wishes to pursue a modification to WMGR123 that would allow

for a reduced sampling frequency or parameter list, an application should be submitted to DEP that provides an adequate demonstration to substantiate a reduced sampling frequency and reduced parameter list. The demonstration should include an assessment of any potential threat of harm to the health and safety of the public and the environment that may result from a reduction in analytical testing, such as variability of the physical and chemical properties of each source of oil and gas liquid waste over time.

- 23. Comment:** Permittees processing and storing oil and gas liquid waste must not be permitted to reduce sampling frequency or reduce the number of parameters sampled. The Draft General Permit WMGR123 also should not allow for a permittee to request or receive a reduction in the required frequency of sampling or the number of parameters required to be sampled. The daily and weekly sampling and analysis requirements in Condition C.3. are important to ensure the variability in waste samples is accurately accounted for and any changes to constituent concentrations are quickly identified. Weakening these requirements by taking samples less frequently based on only one year of satisfactory data (see Condition C.4.a.ii.) is not protective of health or the environment, as that year of data may not be representative of the following years.

For example, the liquid waste processed and stored by a permittee will differ depending on the processes occurring at the wells producing the waste: i.e., whether the wells are in the process of drilling, hydraulic fracturing, production, or redevelopment. To take just one of these processes, different fracking fluids may be used at different times for a variety of reasons. Table 1, *supra*, lists various additives and examples of chemicals used for various reasons throughout the hydraulic fracturing process. As such, the concentrations and types of chemicals in the waste are not proven to be historically uniform over time.

One year of data in which levels of a parameter are below the standard in Appendix A may not be indicative of different chemicals used or other changes that may alter pollution concentrations in later years. As such, one year in which data for a parameter do not exceed the Appendix A limit must not be permitted to form the basis for a “reduced parameter list,” which is another way of saying eliminating parameters from the list of pollutants required to be sampled and analyzed. Commenters request that DEP remove the provisions of Draft Permit WMGR123 that would allow for any reductions in sampling frequency or parameters sampled. (8, 9, 10)

Response: DEP has removed the proposed conditions in the renewed WMGR123. Please also see DEP’s response to comment #22.

- 24. Comment:** General Permit condition C.11. requires permitted facilities to maintain a DEP approved Radiation Protection Action Plan (RPAP) to address materials containing technologically enhanced naturally occurring radioactive material (TENORM) at the facility. A review of the RPAP requirements shows that the specific plan for a site can have varying requirements and facilities that process and store radioactive materials can be required to monitor doses of workers. TENORM materials could

be required to be immediately removed or handled in a special manner. But it is even possible that the Plan will allow the facility to receive from DEP a blanket waiver of TENORM. As stated by DEP on page 9 of its guidance for developing a RPAP, "A facility may submit, in their proposed Action Plan, to obtain a blanket approval for disposal of such small quantities of waste with TENORM." Delaware Riverkeeper Network considers these uncertainties as to what is required in the Radiation Protection Action Plan to be too great to provide the protection needed from TENORM and that the General Permit requirements must be strengthened to prevent release. (8, 9).

Response: The language regarding "blanket approvals" that exists in the current version of DEP's Radioactivity at Solid Waste Processing and Disposal Facilities (250-3100-001) technical guidance document (TGD) that the commenters reference is no longer being implemented in the same manner that the TGD describes. Draft revisions to the TGD were noticed in the *Pennsylvania Bulletin* on October 18, 2019. The revised TGD would no longer include the language referenced by the commenters. The basis for the "blanket approvals" was to authorize facilities, primarily landfills, to accept TENORM-containing waste material in small enough amounts that the annual dose to any member of the general public would not exceed the NRC recommended limit of 100 mrem per year. In 2015, DEP revised its TENORM disposal protocols to address trends identified in DEP's tracking efforts indicating an uptick in the amount of TENORM-containing wastes generated by oil and gas activities that were being disposed of in Pennsylvania landfills. Since then, all TENORM-containing waste that is more than 10 $\mu\text{R/hr}$ above background is required to be entered into a tracking spreadsheet that calculates whether the load can be accepted by the landfill, or whether the load would jeopardize the landfill's ability to limit the annual dose to a member of the general public and must be rejected. This spreadsheet is completed by the landfill operators and reported monthly to DEP. This existing procedure for the disposal of TENORM-containing waste accounts for varying radiological properties of oil and gas wastes that can be exhibited over time, by type, by source, by process, and by generator. DEP evaluates its protocol for disposal of TENORM-containing waste annually to ensure that it continues to function as intended and identify any changes that may be needed.

- 25. Comment:** Maintaining documents in accordance with Condition C.11. at a remote facility that has periods of inactivity due to operation needs is not practical. Some of these remote facilities do not have offices located at them as they may only have tanks and a load/unload system. Therefore, PIOGA and MSC request the following changes, which would allow remote access to documentation:

*"A copy of the Department approved Radiation Protection Action Plan (RPAP), for the facility must be maintained **while the facility is permitted and may be located off premises so long as it is made available for review to DEP staff either at the physical office it is located or electronically within 24 hours of request.** ~~maintained by the permittee at the facility at all times.~~ The RPAP must address the management of oil and gas liquid waste and solids generated that contain technologically enhanced naturally occurring radioactive material (TENORM), and be implemented during all phases of operations at the facility." (2, 5)*

Response: DEP has considered the proposed revisions, and similar revisions have been made to the recordkeeping requirements in other general permits. DEP has added the following language to Condition C.9.:

“A physical copy of the RPAP shall be maintained on-site or, if there is not an office or building located on-site where the records can be maintained, at the permittee’s office for five (5) years. Permittees must ensure that an RPAP be immediately accessible at the facility at any point while the facility is permitted. A copy of the RPAP, a physical or an electronic copy, shall be provided to DEP upon request.”

26. Comment: In Condition C.14., the citation to the Oil and Gas Act is out of date and should be updated and revised accordingly, as shown below:

“14. Nothing in this general permit shall be construed to supersede, amend, or authorize a violation of any of the provisions of any valid and applicable law, ordinance, or regulations, providing that said local law, ordinance, or regulation is not preempted by the Solid Waste Management Act (SWMA), 35 P.S. §§ 6018.101 – 6018.1003; Municipal Waste Planning, Recycling and Waste Reduction Act, 53 P.S. §§ 4000.101 – 4000.1904; Air Pollution Control Act, 35 P.S. §§ 4001 – 4005; Waste Transportation Safety Act, 27 Pa. C.S. §§ 6201 – 6209; Oil and Gas Act, §§ 58 Pa.C.S.A. § § 2301—3504 ~~P.S. 601.101—601.605~~; Radiation Protection Act, 35 P.S. §§ 7110.101 – 7110.703 and the Clean Streams Law, 35 PS. §§ 691.1 – 691.1001.” (2, 5)

Response: The requested revision has been made to Condition C.14., which has been renumbered to Condition C.12., in the renewed WMGR123.

27. Comment: WMGR123 must not allow “residual waste” to be stored in tanks whose design amounts to nothing more than above-ground impoundments.

Oil & Gas Residual Wastewater impoundments have over the years proved to be an extreme environmental hazard that has caused serious pollution and harmed the health of nearby residents. Among the problems that have occurred are:

- Defective liners have caused leaks of toxic material.
- Impoundments have been intentionally designed to allow equipment to force-evaporate the residual waste, causing air pollution. These issues have caused not only successful civil litigation, but even criminal charges brought by the Attorney General of Pennsylvania.

Residual Waste must be stored in fully enclosed tanks.

Another commenter cites another problem caused by reuse of the wastewater as the resulting concentration of certain contaminants. The wastewater produced by fracking that is regulated under the General Permit will be held in “temporary” storage units that may not be designed to hold the potentially corrosive and/or concentrated materials found in this waste stream. Impoundments that hold the stored fluids use plastic liners that may not have the required strength to hold these potent fluids for a year or more, as allowed in the General Permit.

There is no requirement limiting the size of these units, which are being built in enormous sizes today, increasing the potential adverse impacts should a unit break. There, likewise, is no size or capacity limit on impoundments.

There is no requirement to prevent all vapors and emissions from the storage vessels to be treated and filtered to remove all contaminants, including methane, except to reference current DEP air regulations that address fugitive emissions of a select group if certain volume thresholds are met. As stated in the General Permit at Condition C.13., the capture of emissions in the state regulations is: “(relating to prohibition of certain fugitive emissions and fugitive particulate matter)”.

Construction specifications that prevent leaks and subsequent water and soil contamination must be required with adequate inspection and maintenance routines but these are not prescribed in the General Permit. (3, 8, 9)

Response: Oil and gas liquid waste is able to be stored in fully enclosed or open-top tanks under WMGR123 provided the tanks comply with the requirements in revised Condition C.23., which references 25 Pa. Code, Chapter 299 (relating to storage and transportation of residual waste).

Tanks used to store residual waste, in accordance with 25 Pa. Code, § 299.122 (relating to storage tanks) must be designed, constructed, and tested for tightness in accordance with an appropriate current code of practice developed by a nationally recognized association, with a stable foundation that minimizes corrosion of the tank bottom and exceeds design specifications of the tank manufacturer. Tank connections through which waste flows must be equipped with a valve that meets or exceeds current codes of practice and controls the flow of waste. Exterior surfaces of tanks and piping must be protected by a suitable coating that prevents corrosion and deterioration. Tanks must also be installed with a gauge or monitoring device which accurately indicates the level or volume in the tank and is visible to an individual transferring waste into the tank, and an operable high-level alarm and automatic high-level cut-off device, or a high-level alarm and a manned operator shutdown procedure. Containment structures and areas must be compatible with the stored waste, and must be designed, maintained and constructed in accordance with sound engineering practices that adhere to nationally recognized codes of practice and in compliance with applicable state and federal requirements. Secondary containment under the tank bottom and around underground piping must be designed to direct any releases to a monitoring point. Permeability of the secondary containment shall be less than 1×10^{-7} cm/sec at anticipated

hydrostatic head. Tanks must also have emergency containment areas that can contain releases from overfills, leaks and spills, and can contain 110% of the capacity of the largest tank in the containment area. The emergency containment must be less than 1×10^{-6} cm/sec at anticipated hydrostatic head and be of sufficient thickness to prevent the released waste from penetrating the containment structure for a minimum of 72 hours and until the release can be detected and recovered. Further, tank systems must provide a method of leak detection capable of detecting a release. The leak detection method shall be monitored at least monthly and shall be installed, calibrated, operated, and maintained in accordance with industry practices and manufacturer's specifications.

In accordance with Condition C.11. in the revised WMGR123, permittees shall comply with the fugitive emissions regulations under 25 Pa. Code, Chapter 123 (relating to standards for contaminants) issued under the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, 35 P.S. §4005, and shall comply with all the applicable provisions of 25 Pa. Code §§123.1 and 123.2 (relating to prohibition of certain fugitive emissions and fugitive particulate matter). To further clarify the requirements regarding the utilization of open-top tanks, DEP has added the following condition to the general permit (Condition C.27. in the revised WMGR123):

"Permittees are not authorized to use open-top storage tank(s) or any other air contamination source(s) under the terms of this general permit unless the facility demonstrates that the open top tank(s) or source(s) are in compliance with 25 Pa. Code, Subpart C, Article III, pertaining to air emissions."

With all of the aforementioned regulatory requirements for tanks utilized under the authority granted in WMGR123 to store oil and gas liquid waste that serve to be protective of human health and the environment, requiring oil and gas liquid waste to be stored in fully enclosed tanks is not necessary.

Storage of oil and gas liquid waste in an impoundment is not an activity that is able to be authorized under WMGR123. New provisions in the Oil and Gas Regulations, including 25 Pa. Code, § 78a.59c. (relating to centralized impoundments), became effective on October 8, 2016, that require previously permitted centralized impoundments to close or obtain a residual waste oil and gas wastewater storage impoundment under Pennsylvania's residual waste regulations. An oil and gas wastewater storage impoundment permit under the residual waste regulations includes a water quality monitoring plan in accordance with 25 Pa. Code § 289.152, a liner system and leachate control plan in accordance with 25 Pa. Code § 289.412, and more stringent operating requirements in accordance with 25 Pa. Code § 299.144. These provisions are currently under appeal, and therefore, the implementation of said provisions have been stayed until the conclusion of the pending litigation.

Additionally, DEP has added Conditions C.24. and C.25. to the revised WMGR123. These two conditions contain requirements for notifying DEP of the commencement of construction, submitting construction certification reports, and the certification by a registered Pennsylvania professional engineer that construction activities associated with a WMGR123 operation were performed in accordance with the documents, statements, design, and plans submitted as part of the application as approved by DEP. These conditions are written as follows:

Condition C.24.: "Certification of the equipment installation at facilities permitted under this general permit shall be submitted to DEP by a professional engineer, registered in the Commonwealth of Pennsylvania, upon completion of construction. The permittee must notify DEP, in writing, within seventy-two (72) hours prior to commencing construction. The permittee shall submit one original and one copy of as-built drawings and the construction certification report document to DEP upon completion of the construction activity. Prior to any waste processing or transfer, DEP must approve the certification reports, in writing."

Condition C.25.: "A registered Pennsylvania professional engineer shall certify in writing on Form 37, provided by the Department, for each phase of the construction, under penalty of law respecting unsworn falsification to authority (18 Pa. C.S. Section 4904), indicating that he/she has personally examined the construction of said phase and it is constructed and prepared in accordance with the documents, statements, design, and plans submitted as part of the application as approved by DEP."

28. Comment: Where a WMGR123 permit covers storage of "residual waste" in multiple tanks, secondary containment must be able to handle failure of more than one tank at a time. Disasters happen. Secondary containment is supposed to be designed to handle various kinds of tank failure. A secondary containment design which can only handle failure of a single tank at a time is severely flawed. WMGR123 must not allow this kind of flawed design. (3)

Response: WMGR123 requires that the storage of oil and gas liquid waste be in accordance with Pennsylvania's residual waste regulations. In accordance with 25 Pa. Code § 299.122 (relating to storage tanks), aboveground tanks are required to have emergency containment structures, such as dike fields or curbing and containment collection systems, which contain releases from overfills, leaks and spills. Emergency containment areas, such as dike fields, shall be able to contain 110% of the capacity of the largest tank in the containment area, and tanks must utilize adequate controls, such as alarms and monitoring points, to ensure protection of human health and safety, and the protection of the environment. The residual waste storage regulations that govern storage tanks include sufficient preventative controls designed to prevent failure of storage tanks and accommodate accidental releases of wastes into the environment in the event of a tank failure. Therefore, the modification suggested by the commenter has not been included in the renewed WMGR123.

- 29. Comment:** The Commission supports the Department's decision to institute minimum setback distances for facilities located near aquatic resources of the Commonwealth which are outlined in Section C.7. a., b., e. & f. However, we recommend a minimum setback distance of at least 150' for all perennial streams to avoid impacts to riparian buffer zones which may act to attenuate spills of hazardous materials from these facilities. (4)

Response: WMGR123 does not authorize the processing, storage or transfer of hazardous waste, as that term is defined in 25 Pa. Code, § 287.1 (relating to definitions). The general permit includes setbacks from aquatic resources consistent with the residual waste and water quality management regulations and prohibits operation of a facility within 100' of a perennial stream and 150' of a high value or exceptional value water. Exceptions to these setbacks can only be approved if the actual storage and processing of waste does not occur within that distance, occurs within a building or where the applicant demonstrates that no adverse hydrologic or water quality impacts will result. Therefore, the setback from a perennial stream was not increased to 150' in renewed WMGR123 as suggested by the commenter.

- 30. Comment:** Delaware Riverkeeper Network objects to the addition of the emphasized language under C.7.f.: "Within 150 feet of high quality or exceptional value waters, as defined in 25 Pa. Code § 93.1., unless the storage and processing will not occur within that distance and no adverse hydrologic or water quality impacts will result." This provision to allow a waiver of the 150-foot buffer for High Quality and Exceptional Value streams would be a heavy blow to the clean waters of Pennsylvania, providing a pathway for degradation for streams and waterways that are supposed to be the most highly valued in the Commonwealth.

Other commenters state that setbacks are important and necessary provisions for the protection of the environment, health and safety, but believe that the distances must be increased. For example, the Draft Permit provides for a setback of 900 feet, measured horizontally from the property line, from a school building, park, or playground, but only provides for a 300-foot setback from an occupied dwelling (see Condition C.7.h., C.7.c.). Even then, the facility can be located closer than 300 feet of an occupied dwelling in certain scenarios, including with owner consent or if the operations are in an enclosed facility, the applicant demonstrates there is no zoning conflict, and they have provided the owners of dwellings within 300 feet away with notice.

If the goal of Condition C.7.h. is to ensure that oil and gas liquid wastes are not placed too close to areas where children are, it is illogical and dangerous to only require only a 300-foot setback from a property line without the written waiver from the owner consenting to the placement of a facility. This would mean that this type of facility would have to be 900 feet or more from a playground or school but could be placed 301 feet from the same child's home without any additional waivers or consent required. This does not provide an adequate degree of protection and the distance from an occupied dwelling in subsection C.7.c. should be increased to at least 900 feet. In addition, 900 feet should be the minimum setback from occupied dwellings in all instances with no exception; DEP

should revise the permit to remove the possibility that a waiver could be granted that would allow a facility to be located closer than 900 feet from an occupied dwelling.

Similarly, Draft General Permit WMGR123 requires setbacks of 300 feet from an exceptional value wetland (Condition C.7.b.), or a water source (Condition C.7.g.), but only requires a 100-foot setback from perennial streams. It also only requires a setback of 150 feet from “high quality exceptional value waters . . . unless the storage and processing will not occur within that distance and no adverse hydrologic or water quality impacts will result.” It is inconsistent to require double the distance to an exceptional value wetland than to an exceptional value water. Thus, the 150-foot setback in Condition C.7.f. should be increased at least to 300 feet, and there should be a minimum of 300 feet separation required from all water sources.

Even beyond that, the Draft General Permit does not explain or define how a permittee would prove that “no adverse hydrologic or water quality impacts will result,” when such a determination would have to be made, or whether and when DEP would have to concur with or approve that determination. Draft General Permit WMGR123 should be revised to include specific requirements for what data needs to be collected and submitted by a potential permittee and what conditions would or would not confirm whether “no adverse hydrologic or water quality impacts will result” when considering location near a high quality exceptional value water. (8, 9, 10)

Response: The general permit provides setback criteria consistent with the requirements of the residual waste regulations. Proposed Condition C.7.f., which has been renumbered to Condition C.5.f. in renewed WMGR123, is consistent with 25 Pa. Code § 102.14 (relating to riparian buffer requirements) and requires a 150’ setback from special protection waters. A waiver of the 150’ setback would only be authorized if the permittee can adequately demonstrate that there will not be any adverse hydrologic or water quality impacts that would prevent degradation of special protection waters.

31. Comment: Please amend this draft permit modification to include enforcement language and provisions to ensure DEP action and operator compliance on nuisance abatement. (7)

Response: The operating condition relating to nuisances appears in Condition C.9., of the proposed revisions to WMGR123, which were published in the *Pennsylvania Bulletin* on April 18, 2020, and appears in Condition C.7., of renewed WMGR123. Condition C.7., of renewed WMGR123 states:

“The processing, storage and transfer of the oil and gas liquid waste authorized by this permit, and any other wastes that are generated, shall not cause or allow conditions that are harmful to the environment, public health or safety, including but not limited to, odors, noise, or other public nuisances.”

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All permittees operating under WMGR123 are required to comply with this condition. DEP has the authority to take enforcement action against any permittees that violate this or any condition of the general permit. Most noise issues are managed by the municipality where the facility is located as there are generally local ordinances that address noise levels.

Anyone that wishes to apply and obtain coverage under WMGR123 must include information regarding the approach routes that vehicles will utilize to access the facility. Additionally, applicants must describe the impact the operations may have on local traffic and any measures that will be implemented to minimize the impact in order to satisfy Section E.11. (related to project information) of DEP's Form 20 (Application for a Municipal or Residual Waste General Permit). Depending upon the extent to which a proposed operation may impact local traffic, additional, more detailed information may be requested, which will further designate the approach route to the facility and evaluate conditions along that route.

The revised WMGR123 will require that applicants submit an application for a DOA, which requires a 60-day public comment period and affords the public the opportunity to provide input on a proposed operation under WMGR123. During the public comment period, anyone wishing to provide input regarding an operation's proposed hours of operation and approach routes for both DEP and the applicant to consider may do so.

- 32. Comment:** Require operators to conduct certified, third-party lab analysis of all wastewater prior to transport and carry those analyses in manifests that travel with the waste so the precise content is immediately known in the event of a spill or other incident. Additionally, require operators to submit all wastewater analyses to the department on a timely, routine basis and make those analyses accessible online to the general public. That way, any resident in the pathway of wastewater transport has access to critical health and safety information about wastewater constituents in the event of an incident where onboard manifests containing waste analyses are not accessible.

Despite the well-documented and broadly understood hazards of oil and gas wastewater, particularly waste from Marcellus Shale wells, waste characterization will only be required by this modified permit for waste that is processed; testing for stored waste will no longer be required. If adopted, this version of the WMGR123 permit will mean that the Sweden Valley Tank Farm near my family's homes, which stores but does not process wastewater, will no longer be subject to testing requirements.

It goes without saying that the radiological content of oil and gas waste should be public knowledge. Oil and gas wastewaters are highly toxic substances, and the DEP is 1) not requiring the industry make test results of its wastes part of the public record. Therefore, please amend the permit modification as requested. (7)

Response: The transportation of wastes to or from a facility authorized to process or beneficially use waste under a general permit is not expressly covered under the authorization granted to the facility that is issued coverage under a statewide waste general permit. Likewise, the coverage issued to a permittee under WMGR123 does not extend to entities that transport waste to or from the facility. However, all waste transportation activities, including wastes transported to or from a facility authorized under a statewide waste general permit issued pursuant to 25 Pa. Code, Chapter 287, Subchapter H (relating to beneficial use), must comply with Pennsylvania's residual waste regulations at 25 Pa. Code, Chapter 299 (relating to the storage and transportation of residual waste). Chapter 299 requires transporters of residual waste to maintain a daily operational record in the cab of each transportation vehicle that includes, at a minimum, information on the type and volume of residual waste being transported, the generator of the waste, the destination of the waste, and handling problems or emergency disposal activities. These records must be maintained by the transporter for five years and provided to DEP upon request.

DEP's Form 20 (Application for a Municipal or Residual Waste General Permit), which is submitted with each general permit application, requires chemical analysis of wastes to be performed in accordance with 25 Pa. Code, § 287.132 (relating to chemical analysis of waste) and submitted to DEP for review prior to an entity being authorized under WMGR123.

Further, according to 25 Pa. Code §§ 287.51(b) and 287.54(a)(1), a person or municipality that generates more than 2,200 pounds of residual waste per generating location in any single month in the previous year must perform a detailed analysis fully characterizing the physical and chemical composition of each type of waste it generates.

Section B.2. of the Form 26R (Chemical Analysis of Residual Waste Annual Report by the Generator) Instructions identifies the parameters that must be sampled and analyzed for in wastewaters produced by the drilling, completion, and production of a Marcellus Shale or other shale gas well. These parameters include gross alpha, gross beta, Radium-226, Radium-228, Uranium, and Thorium.

The results of the analysis are submitted to DEP as part of a 26R Form on an annual basis. WMGR123 also includes a condition that requires all records generated by a permittee in accordance with the general permit to be maintained by the permittee for a minimum of five years; be available at the facility; and be made available to DEP upon request. Additionally, DEP has added a condition to renewed WMGR123 that requires permittees to submit an annual report on the beneficial use activities conducted under WMGR123 by March 1 for the preceding calendar year. This report shall include:

- Names of the generators and locations where the oil and gas liquid waste is generated;
- The dates and volumes of oil and gas liquid waste received by the facility;

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- The dates and volumes of processed oil and gas liquid waste and wastes produced by the operation of the facility, if applicable;
- The dates, volumes, and locations, including the names of the facilities to which the processed oil and gas liquid waste is transported for beneficial use, disposal, storage, transfer or processing; and
- The maximum volume of all unprocessed and processed oil and gas liquid waste and other wastes that are managed at the facility each day.

Permittees that process or transfer solely their own oil and gas liquid waste are relieved from the requirement to provide information in the annual report that is otherwise provided to DEP in accordance with unconventional monthly Oil and Gas Reporting Electronic (OGRE) requirements, which is available on DEP's website. As with all general permits, records relating to the permitted operation and the wastes authorized for processing or beneficial use may be requested and made available to the public.

33. Comment: Delaware Riverkeeper Network also points out that the removal of decommissioned tanks, units, and other related storage and processing infrastructure must require sampling for radioactivity before reuse, recycling, or disposal, applying this comment to condition C.8. in the General Permit to prevent human health and environmental damage. Also under C.8., components of storage or processing units or systems that will continue to be used on the site must be sampled for radioactivity before being used for other purposes. (8, 9)

Response: In accordance with 25 Pa. Code § 287.132 (relating to chemical analysis of waste) for residual wastes being sent to a facility in Pennsylvania for processing or disposal, the facility accepting the residual waste must request approval from DEP to accept and process or dispose of new sources of residual waste. This request, which is initiated through the completion and submittal of a Form U (Request to Process or Dispose of a Residual Waste), requires that any waste known or suspected to have radioactivity above background levels must analyze the waste by using an EPA Gamma Specific Activity Analysis for Technically Enhanced Normally Occurring Radioactive Material (TENORM) isotopes including U-238, RA-226, RA-228, TH-232, and K-40 through a laboratory accredited or registered for accreditation under the Pennsylvania Environmental Laboratory Accreditation Act and in accordance with EPA's Method 901.1, dry weight analysis expressed in pCi/gr or approved equivalent. Additionally, gamma scans on the material taken from the side of the container and expressed in uR/hr or uRem/hr are also included along with quantities of the material expressed in tons.

Additionally, Radiation Protection Action Plans (RPAP) would address the frequency that the permittee would be monitoring tanks, units, or other related storage and processing infrastructure for radioactivity and the decommissioning activities necessary. Language in the proposed revisions

to the Draft Technical Guidance Document, “Radioactivity at Solid Waste Processing and Disposal Facilities (250-3100-001),” published for comment in October 2019, includes language that clarifies this RPAP component. This language, as proposed, states that surveying of fixed equipment, such as tanks and pipes, should initially be performed monthly. The survey schedule may be reduced to quarterly after one year. Surveys should be performed as close as practical to the item being surveyed but not exceeding 6 inches (15 cm).

- 34. Comment:** Pertaining to Condition C.20., Delaware Riverkeeper Network objects to the language added regarding stormwater discharges, which reads (emphasis added):

*“The permittee shall not cause or allow a point or non-point source discharge of any of the following: residual wastes; liquid waste; combined stormwater runoff and leachate, if generated; or runoff from the staging, processing, and storage areas where solid waste management activities are conducted; to the surface waters of the Commonwealth, unless permitted by DEP. **This does not include rainwater or stormwater that is collected in a containment area that has not been mixed with a residual waste.**” (8, 9)*

Response: Rainwater or stormwater that is collected in a containment area that has not been mixed with a residual waste is not a residual waste, as the term is defined in 25 Pa. Code § 287.1. (relating to definitions). Stormwater or rainwater runoff that contacts staging, processing and storage areas where solid waste management activities are conducted are residual wastes and must be managed as a waste. Stormwater or rainwater that is collected in a containment area that becomes a waste because it has been in contact with a residual waste are precluded from being discharged to surface waters in accordance with Condition C.20. of renewed WMGR123.

- 35. Comment:** Delaware Riverkeeper Network opposes the monthly-only inspections of the area where the General Permit activities occur if the operations are not currently active in processing and transfer – in other words where wastewater produced by fracking is stored. Condition C.24. states (emphasis added):

*“At a minimum, weekly inspections of all processing and storage areas are to be conducted to determine compliance with the terms and conditions of this general permit, and for evidence of failure. This includes the processing and storage areas for operations permitted under WMGR123 that are located on a well pad that is actively engaged in drilling, casing, cementing, hydraulic fracturing, or flowback operations. **For operations permitted under WMGR123 that are located on a well pad and are not actively engaged in drilling, casing, cementing, hydraulic fracturing or flowback operations, or WMGR123 operations that are not actively engaged in processing or transfer, a monthly inspection of all processing and storage areas is adequate.**”*

It makes no sense to not require “at a minimum, weekly inspections” of the area where wastewater produced by fracking is stored. For the reasons detailed above in this comment regarding the

potential toxicity and public safety issues of wastewater produced by fracking and the fact that polluted fluids that do not meet the standards set by DEP in Appendix A could be stored for a year or more on the site, it is essential that these areas are at a minimum inspected weekly. (8, 9)

Response: The reduction in required inspection frequency only applies to facilities authorized under WMGR123 that are located on a well pad and are not actively engaged in processing or transfer, including storage, of oil and gas liquid waste. This inspection frequency is consistent with the Oil and Gas regulations in 25 Pa. Code § 78a.57(i) (relating to control, storage and disposal of production fluids).

Condition C.24., in the proposed revised WMGR123, has been renumbered to Condition C.22., in renewed WMGR123 has been revised for clarity as follows:

“At a minimum, weekly inspections of all processing and storage areas are to be conducted to determine compliance with the terms and conditions of this general permit, and for evidence of failure. This includes the processing and storage areas for operations permitted under WMGR123 that are located on a well pad that is actively engaged in drilling, casing, cementing, hydraulic fracturing, or flowback operations. For operations permitted under WMGR123 that are located on a well pad ~~and are not actively engaged in drilling, casing, cementing, hydraulic fracturing or flowback operations, or WMGR123 operations that~~ and are not actively engaged in processing or transfer, a monthly inspection of all ~~processing and~~ storage areas is adequate.”

Recordkeeping Requirements:

36. Comment: In Condition D.1.a., the introductory sentence of Condition D.1 requires permittees to maintain certain listed “records of the processing or storage and beneficial use of oil and gas liquid waste.” However, the first subparagraph D.1.a. of Condition D.1. would require records of the volumes of the fresh surface water and other water sources withdrawn for use by the facility, which is unrelated to the records of oil and gas liquid waste managed at the facility. As such, PIOGA and MSC recommend that Condition D.1.a. should either be removed entirely from the permit or moved to a section separate from Condition D.1. dealing with records related to waste. (2, 5)

Response: DEP has created Condition D.2. in the renewed WMGR123 to address maintenance of records related to fresh surface water and other water source withdrawals.

37. Comment: Maintaining documents at a remote facility can be challenging. PIOGA and MSC recommend the following text modifications to Condition D.2., which would allow remote access to documentation.

“All records required in this general permit shall be maintained at the Permittee’s principal place of business and made available electronically on-site for a minimum of five years and

shall be made available to the Department upon request. Should a facility be no longer located at the site where the processing occurred, the records shall be maintained by the permittee for a minimum of five years and shall be made available to the Department DEP upon request. (2, 5)

Response: DEP has incorporated similar revisions to Condition D.3 of the renewed WMGR123 as were made to Condition C.9., which formerly appeared in Condition C.11. in the proposed revised WMGR123. The following language appears in Condition D.3 of renewed WMGR123 to address the commenters' concern:

*"All records required in this general permit shall be maintained **by the permittee** for a minimum of five years, shall be available at the facility **(either in hard copy or in an electronic format)**, and shall be made available to DEP upon request. Should a facility be no longer located at the site where the processing occurred, the records shall be maintained by the permittee for a minimum of five years and shall be made available to DEP upon request."*

These revisions would allow for a permittee to maintain documents at the permittee's principal place of business as long as the documents are available electronically at the facility and are able to be made available to DEP upon request.

Reporting Requirements:

38. Comment: There should be no need to "immediately" report any of the types of changes that are listed in Condition E.1., particularly since the notification must be made by certified mail and it's not possible to notify PA DEP immediately by mail. PIOGA and MSC recommend that the notification timeframe in this condition be changed from "immediately" to "within ten business days" as shown below:

*"1. Any person that operates under the provisions of this permit shall ~~immediately~~ notify DEP **within ten business days** via certified mail of any changes in: the company name, address, owners, operators, and/or responsible officials of the company, compliance status, and the status of any permit issued by DEP or the federal government under the environmental protection acts." (2, 5)*

Response: DEP has incorporated the requested timeframe in Condition E.1. of renewed WMGR123.

39. Comment: PIOGA and MSC recommend that WMGR123 permits related to operator-owned facilities that only treat/store their own oil and gas liquid waste should be exempt from the annual reporting requirement in Condition E.2. as they are required to report waste data to the Department monthly and in their annual 26R reports. (2, 5)

Response: The requirement to provide an annual operating report for permittees operating under a general permit is a standard general permit condition that is added into all new general permits and general permits undergoing renewal, provided the condition had not already been incorporated. The information required in WMGR123 is similar information that is required by permittees operating under other general permits, regardless of whether a permittee is processing or storing their own waste material. For this reason, Condition E.2. was not revised in the renewed WMGR123.

40. Comment: The MSC recommends adding a new condition under E.2. that states:

“Persons operating under the provisions of this general permit shall not exceed the maximum volumes of processed and unprocessed oil and gas liquid wastes or other wastes provided in their approved bonding calculations. In the event these volumes are exceeded the DEP shall be immediately notified.” (5)

Response: DEP has added the suggested condition to renewed WMGR123. The language proposed by the commenter has been added as Condition E.3. in renewed WMGR123.

41. Comment: PIOGA and MSC recommend that Condition E.2.e. should be removed. Providing the information required in conditions E.2.b, E.2.d and E.2.c should be all that is required. (2, 5)

Response: The information provided in the annual report in accordance with Condition E.2.e. is necessary for DEP to evaluate and determine whether the approved bond amount is sufficient. Further, Condition E.2.f. allows for DEP to utilize the annual operating report as a means of requesting updated bond calculation worksheets, if the information provided in accordance with E.2.e. indicates that a bond update is warranted. The addition of Condition E.3. to renewed WMGR123 requires that a permittee immediately notify DEP if the maximum volumes of processed and unprocessed oil and gas liquid waste or other wastes are exceeded. However, should a permittee fail to notify, DEP may not become aware of a need for an updated bond unless the information is provided as part of the annual report. Therefore, Condition E.2e., has been retained in renewed WMGR123. Please also refer to DEP’s response to Comment #40.

42. Comment: PIOGA and MSC recommend removing Condition E.2.f. as a reporting requirement, as updating the bond is not a reporting requirement. Updating bond calculations would be associated with a permit modification. (2, 5)

Response: Condition E.2.f. allows for DEP to utilize the annual operating report as a means of requesting updated bond calculation worksheets, if the information provided in accordance with E.2.e. indicates that a bond update is warranted. As a result, Condition E.2.f. has been retained in the renewed WMGR123.

- 43. Comment:** Oil and Gas operators that hold WMGR123 permits for their own facilities will come in conflict with what is required in Condition E.3. based on what is required in 25 Pa. Code § 78a.66 that was finalized in 2016. Below are specific provisions in 78a.66 that conflict with Condition E.3, specifically, notifying the Department through the appropriate emergency hotline, the timing, and the discharge event specifics:

78a.66(b)(ii) A spill or release of 5 gallons or more of a regulated substance over a 24-hour period that is not completely contained by secondary containment.

78a.66(2) In addition to meeting the notification requirements of § 91.33, the operator or other responsible party shall contact the appropriate regional Department office by telephone or call the Department's Statewide toll free number as soon as practicable, but no later than 2 hours after discovering the spill or release.

PIOGA and MSC recommend that the Department reference the Chapter 78a requirements for Oil and Gas operators that hold WMGR123 permits. Without clarification there would be confusion on what an oil and gas operator is required to follow given the conflict between WMGR123 permit condition and what is in regulation under Chapter 78a. (2, 5)

Response: The language in proposed Condition E.3. has been renumbered as Condition E.4. in renewed WMGR123. The language is a standard general permit condition that is added into all new general permits and general permits that are renewed, provided the condition had not already been incorporated. This condition is specific to the activities occurring in accordance with the authorization issued under WMGR123 and to oil and gas liquid waste. Ultimately, if a spill or discharge of oil and gas liquid waste associated with WMGR123 activities occurs, these requirements must be met. Therefore, the language has been retained in renewed WMGR123.

- 44. Comment:** Draft Permit WMGR123 fails to require submission to the agency of required monitoring data, making this data inaccessible to the public.

While Draft General Permit WMGR123 establishes requirements for sampling of all Appendix A constituents prior to initial storage (see Condition C.2.) and then requires ongoing daily and/or weekly sampling of all Appendix A constituents to continue storing processed oil and gas well liquid waste (Condition C.3.), the Draft Permit fails to require reporting of this ongoing sampling data to DEP unless requested. The final WMGR123 reporting requirements must mandate that all sampling and analytical results required by Conditions C.2 and C.3 be reported to DEP on a monthly basis. Without this requirement, this safety data would evade public review and prevent DEP from having the data in hand necessary to properly evaluate and ensure compliance and take timely and appropriate enforcement, when necessary.

As written, Draft General Permit WMGR123 would block the public from having access to required sampling data, as the public would not be able to request from the permittee the sampling data required by Condition C.3. and would only be able to access it if and after the DEP requested and obtained such data from the permittee. The draft permit requires a permittee to maintain records of “all sampling and analytical results required by Conditions C.2 – C.3” for five years, and requires that such files “shall be made available to DEP upon request.” However, the Reporting Requirements, which require submission only of an annual report, do not require any reporting of sampling results required to be collected by Conditions C.2 or C.3.

Because the permittee is NEVER required to otherwise submit this data to DEP, and because there is no provision stating that the data would be made available to the public upon request, the public has no way of obtaining that data unless DEP has asked for it, which is a subjective decision by the DEP. Moreover, the DEP has no way of determining compliance with permit conditions unless there is a site inspection or request by the Department for accumulated monitoring data. This prevents both the public and the regulating agency from timely evaluating compliance. All permittees approved for coverage under WMGR123 should be required to submit all data collected pursuant to Condition C.3. on at least a monthly basis so DEP could confirm the waste meets the required limits and so that this data would be available in the public files for the public to review either through an informal request or pursuant to the Right to Know Law. Without this data in hand, these permits in practicality are unenforceable. (10)

Response: In accordance with Condition C.2. of WMGR123, permittees utilizing the de-wasting criteria in Condition C.1.b. by meeting the concentration limits in Appendix A must, prior to the de-wasting of the processed oil and gas liquid waste, submit analytical data to the appropriate DEP Regional Office that demonstrates the oil and gas liquid waste meets the Appendix A limits and contains the following:

- A minimum of 14 consecutive daily flow proportional composite samples analyzed for strontium, barium and total dissolved solids (TDS).
- A minimum of 2 weekly flow proportional composite samples which are taken a minimum of 7 days apart analyzed for all constituents listed in Appendix A except ammonia, benzene, methanol and toluene.
- A minimum of 2 grab samples taken a minimum of 7 days apart analyzed for ammonia, benzene, methanol and toluene.

In accordance with Condition C.3., to continue storing de-wasted material in accordance with Condition C.1.b., permittees must continue to perform collection of samples and analysis on a daily and weekly basis depending on the constituents. Even though these ongoing sampling and analysis results are not required to be provided to DEP unless requested, permittees are required to

immediately notify DEP and manage the de-wasted material as a residual waste if any ongoing sampling and analysis shows an exceedance of one of the Appendix A limits.

Additionally, according to 25 Pa. Code § 287.51(b), a person or municipality that generates more than 2,200 pounds of residual waste per generating location in any single month in the previous year must comply with the requirements of § 287.54(a)(1). The Unconventional Oil and Gas Well regulations at 25 Pa. Code, § 78a.121. (relating to production reporting), require each operator of an unconventional well to submit a monthly production and status report for each well on an individual basis within 45 calendar days of the close of each monthly reporting period through DEP's OGRE database. Monthly production reports must include information on the amount and type of waste produced and the method of waste disposal or reuse, including the specific facility or well site where the waste was managed. This information is publicly available through DEP's website. Please also see DEP's response to Comment #29.

DEP believes that the analytical and reporting requirements are sufficient to protect human health and the environment and disagrees that the lack of monthly reporting makes the permit unenforceable. Therefore, monthly reporting of analytical data has not been included in the renewed WMGR123.

Appendix A:

45. Comment: The Department is not proposing any revisions to any of the parameter limits in Appendix A. PIOGA's and MSC's concern is that the list of constituents is excessive and the statutory authority for many of the limits is unclear. The constituents listed should be those that have established limits for aquatic life uses in a natural stream system, at the highest level for protection. Many of the constituents listed appear to be based on drinking water standards, which is inappropriate, unnecessary and untenable by industry without expensive and excessive treatment for oil and gas liquids that are meant to be beneficially re-used in the industrial process, not discharged into streams or distributed to consumers as drinking water.

The introduction to the list mentions that other limits are based on current levels in stream systems, but no background data is presented as proof of this claim and, even if the data is available within the Department, it has not been provided for review and the constituents may not have any limits established within Pennsylvania regulations for either drinking water or aquatic life uses. The small chance of a spill getting into a surface water from a WMGR123 facility should not be the basis for an overly stringent de-wasting requirement for storage and subsequent use. Many commercial products stored at facilities across a broad spectrum of industries contain constituents far above drinking water standards and aquatic life limits that if spilled, could cause damage, yet they are recognized as legitimate products, not waste. Processed oil and gas liquids prepared for beneficial

use should be treated no differently. Appendix A in its current form is more strict than the NPDES program that allows discharges to streams for other industries in Pennsylvania.

Furthermore, the Department allows only treated water that is de-wasted to be used downhole for hydraulic fracturing. This has effectively made treating to this standard useless, on the basis of the Department's policy decision that if this "de-wasted" water would be stored in a freshwater impoundment, all of the water in that impoundment could be used only for hydraulic fracturing and could not be used for anything else, such as dust suppression or hydroseeding. By making this decision based on policy rather than facts and science, the Department has virtually eliminated this as a treatment option.

PIOGA suggests that if the water meets the parameters in Appendix A and is truly "de-wasted" then that water should be able to be used for other purposes, such as make up water for compressor stations or other applications that require basically distilled water that is the same whether it comes from the industry or other sources. (2, 5)

Response: The water quality standards in Appendix A were developed to allow the storage of the processed water, prior to use at an oil or gas well, in a facility that does not need to meet the residual waste storage requirements and would not impact the surface or groundwater because the waste water would be rapidly attenuated or assimilated by the natural conditions at the site. Requiring less stringent standards in order to comply with a de-wasting provision in WMGR123 would mean that the site where the treated wastewater is stored would also need to have an associated permit, which is contradictory to the purpose of the de-wasting provision, and which operators can already do without needing to meet the Appendix A standards. The parameters in Appendix A were developed in full consideration of potential pollutants that may be found in oil and gas wastewater and in consideration of the distillation technology in use by the Oil and Gas Industry at the time this general permit was developed.

As the commenters' state, commercial products that do not meet the definition of a waste do not need to be managed in accordance with Pennsylvania's waste management regulations. If the "product" met the definition of a waste and was processed to meet a certain standard for beneficial use, there would need to be an associated permit to cover the processing activity as well as the beneficial use activity. If there was an associated de-wasting provision in the permit for this material, the waste would also need to be treated to a standard to ensure that the de-wasted material does not harm or present a threat of harm to public health, safety, welfare or the environment, and those standards would be based upon the characteristics of that waste stream. Requiring less stringent standards to be met in order to qualify for the de-wasting provision in WMGR123, such as the standards required in an individual NPDES permit, would inherently contradict the purpose of the de-wasting condition. NPDES permits take into account the quality of the waters where the oil and gas liquid waste would be stored or that would be receiving the discharged water after treatment and require a site-specific evaluation for each location. This

cannot be adequately regulated under a standard set of permit terms and conditions, and therefore, is beyond the scope of a general permit. DEP will consider, through the permit application process established in the residual waste regulations, other forms of beneficial use for processed oil and gas liquid waste, which may ultimately result in the development of new general permits.

- 46. Comment:** Draft General Permit WMGR123 fails to require sampling of additional parameters commonly used in oil and gas production and extraction activities, which must be added to Appendix A.

Despite the passage of 8 years since General Permit WMGR123 was last amended, the Draft General Permit does not add any additional pollutants to Appendix A, which is the list of pollutants for which oil and gas liquid waste must be sampled prior to and throughout authorization under the General Permit WMGR123. In fact, Appendix A is identical to the Appendix A in the 2012 WMGR123, with all parameters and limits being the same, despite the rapidity with which generation of fracking waste waters has increased during that time.

There are many additional pollutants in oil and gas waste water, including radioactive components such as what the industry calls “technologically enhanced naturally occurring radioactive materials” (“TENORMs”), beyond those included in Appendix A. Any radioactive or other constituents for which there is an applicable health or environmental safety threshold should be added to Appendix A. Given the huge number and great quantities of pollutants involved in oil and gas production and extraction and the prevalence of these pollutants in the liquid waste from these processes, additional pollutants need to be added to Appendix A to ensure that the liquid waste does not possess pollutants at higher levels than would be considered safe for health or the environment. (10)

Response: The water quality standards in Appendix A were developed in full consideration of potential pollutants that may be found in oil and gas wastewater and in consideration of the distillation technology in use at the time the WMGR123 was established.

According to 25 Pa. Code § 287.51(b), a person or municipality that generates more than 2,200 pounds of residual waste per generating location in any single month in the previous year must comply with the requirements of § 287.54(a)(1). Please also see DEP’s responses to Comments #29 and #42.

If there are additional parameters that can be adequately demonstrated as needing to be included in Appendix A of WMGR123, DEP will consider that information and subsequently modify the limits, if warranted.