

Comment and Response Document

General Permit Numbers WMGR119, WMGR121, and WMGR123

March 14, 2012

1. Comment:

Commentators recommended several typographical and grammatical changes. (7, 9)

Response:

Typographical and grammatical changes were made as appropriate.

2. Comment:

DEP should hold public meetings or hearings on the proposed modifications to WMGR123. To afford the general public adequate opportunity to comment on the proposed modifications, DEP should conduct at least two public meetings or hearings, one in north central, PA and one in southwest, PA. (10)

Response:

The DEP may conduct public hearings or meetings on a permit application when there is significant public interest or DEP deems a hearing to be appropriate. The DEP only received one suggestion during the 60-day public comment period that a public meeting and hearing should be held. The public comment period for this permit provided an opportunity for all interested to provide comments and is consistent with the development of other general permits. Based on the scope of comments received, DEP does not believe public hearings or meetings are necessary.

3. Comment:

DEP should require persons wishing to operate under proposed WMGR123 to apply for a Determination of Applicability, rather than merely register for coverage. Such a condition is necessary to prevent harm or a threat of harm to the health, safety, and welfare of the people and the environment. This would require notice in the PA Bulletin providing the opportunity for additional comments from the public. Because many facilities operate in rural and agricultural areas that lack zoning ordinances, the importance of public participation cannot be underestimated. (10)

Response:

Under the regulations, a public comment period is only required for a Determination of Applicability (DOA) when the application is for a general permit to beneficially use a material as a construction material.

Registrations are not less protective as the commentator suggests. Regardless of the type of submission, (Registration or DOA), both require the same information and materials to be submitted for review and approval by DEP. Submissions must demonstrate the ability to comply with the public health, safety and environmental requirements of the general permit.

The registration process requires applicants to provide notices to both the municipality and county of their intent to operate a facility. Applicants and municipalities are encouraged to work together during the initial phase of a project to ensure all parties are fully aware of the proposal and to discuss specific local concerns that may be beyond the scope or requirements of the DEP general permit.

Nine facilities have been reviewed and approved under the registration process in general permits WMGR119, WMGR121, and WMGR123, which have been merged as part of this action into the new WMGR123. Based on the experience with those previously issued permits, scope of registration requirements, DEP's comprehensive review, and requirements for municipal and county notice, DEP does not believe that converting the permit from a Registration to a DOA adds any significant value to the process.

4. Comment:

The commentator states that the regulations appear to consider all water and wastes generated from drilling, fracturing, or operating a well as residual waste. This definition appears to conflict with the O&G regulations. By declaring wastewater and other wastes on a drill site to be residual wastes rather than only once they leave a drill site (as defined in the oil and gas regulations), a discrepancy will exist if the O&G regulations are not brought into conformity with WMGR123. (11)

Response:

DEP disagrees. Waste generated from drilling, hydraulic fracturing, or operating an oil or gas well is residual waste whether or not it is on a well site. Generally, if the residual waste is on a well site, it is managed in accordance with the Oil and Gas Act and Chapter 78 regulations. If the residual waste is not a well site, it is managed in accordance with the Solid Waste Management Act and residual waste regulations.

5. Comment:

The commentator states that wastewater from hydraulic fracturing operations is scientifically proven to be volatile and harmful to human health and the environment. The instances of harm and reports of potential harm demonstrate that flowback and production fluids present an unreasonable risk of harm to children and adults, terrestrial and aquatic life, water and air quality, and soil composition. While we recognize the benefit and the Department's attempt to recycle and reuse wastewater and mitigate the consumptive effects of unconventional natural gas development on water resources, we remain unconvinced that the terms of the proposed WMGR123 sufficiently address the threats posed by wastewater. (12)

Response:

The general permit provides operational and management standards that are protective of human health and the environment, and reduces the demand on fresh water resources to support oil and gas well development and operations. DEP believes that the general permit will promote the goal of establishing and maintaining a closed loop process for the recycling and reuse of oil and gas liquid wastes, be a benefit to industry, and protect public health, safety and the environment.

6. Comment:

The commentator opposes the proposal to allow construction within 150' or 300' of wetlands and water bodies. It is suggested the Department take the initiative and require setbacks of 1000' between wastewater processing facilities and waterways and wetlands of the Commonwealth to best ensure no harm to the human communities or the natural environment. (12)

Response:

The general permit provides setback criteria consistent with the requirements of the residual waste regulations. Additionally, Condition C.22.e of the general permit has been modified to be consistent with 25 Pa. Code § 102.14 and requires a 150' setback from special protection waters.

7. Comment:

The commentator argues that produced water and drilling fluid being reused in the extraction of natural gas are not "wastes" even if minimal treatment of the water occurs between generation and reuse and therefore should not trigger permitting requirements under the SWMA. Produced water and drilling fluid are used as ingredients in an industrial process (well stimulation) or as effective substitutes for commercial products (hydraulic fracturing fluids), or are being returned to the original process from which they were generated (hydraulic fracturing operations) without first being reclaimed or land disposed. Therefore, they are recycled materials, not waste. (7)

Response:

DEP disagrees. Produced water and drilling fluids that undergo even minimal treatment are wastes when used or reused as an ingredient in an industrial process, as an effective substitute for a commercial product or returned to the original process from which they were generated. For a material to drop out of being managed as a waste, it must be able to be reused without any reclamation. A material is reclaimed if it is processed to recover a useable product, or if it is regenerated. Further, even if the recycling involves use, reuse or return to the original process, materials that are used in a manner constituting disposal or used to produce products that are applied to the land are wastes.

8. Comment:

The commentator believes that since the material should not be considered a waste, they should not be subject to regulation by the Bureau of Waste Management under the SWMA but rather the Bureau of Oil and Gas Management. If regulated under the Oil and Gas Act, the Department could consider policies that recognize properly managed produced water and drilling fluid, reused in natural gas extraction activities, is not "waste" and indicate those conditions the Department believes must be met to ensure the materials are being properly managed and reused. (7)

Response:

DEP disagrees. The definition of residual waste includes waste resulting from industrial operations, such as the development and production of an oil or gas well. Produced water and drilling fluids that undergo even minimal treatment are wastes when used or reused as an ingredient in an industrial process, as an effective substitute for a commercial product or returned to the original process from which they were generated.

9. Comment:

The commentator urges the Department to modify WMGR123 to make clear the permit coverage is limited to and required for tophole water, spent drilling fluids, and produced water when these materials are residual wastes by virtue of being discarded. (9)

Response:

DEP has modified the permit to allow operators to process the broad category of liquid wastes as defined in 25 Pa. Code § 287.1 of the residual waste regulations. This general category would include the specific wastes noted in the above comment.

10. Comment:

The draft permit requires that the Department determine that a material, including undiscarded produced water, is no longer a waste before a natural gas operator or producer may recycle produced water. This will reduce recycling of produced water because recycling produced water is time sensitive. The commentator believes that requiring a determination that a material is no longer a waste is outside the scope of the Department's regulatory authority regarding residual waste. (9)

Response:

The authority to de-waste materials is provided in 25 Pa. Code § 287.7. DEP believes that the general permit and de-wasting provisions will promote the goal of establishing and maintaining a closed loop process for the recycling and reuse of oil and gas liquid wastes, be a benefit to industry, and protect public health, safety and the environment.

11. Comment:

The commentator proposes that the Department issue interpretive guidance for managing produced water during recycling to ensure that produced water does not become waste by being spilled, leaked, discharged, or disposed. (9)

Response:

Waste that results from industrial operations, including the development and production of an oil or gas well, is residual waste. Produced water and drilling fluids that are reclaimed prior to use or reuse are wastes. When a product is spilled or released, it is an act of disposal. If the spill or release of the product contaminates soil and/or water, the contaminated soil and/or water is waste as defined in the residual waste regulations.

12. Comment:

The commentator expressed concern about storage of fracturing and/or flowback water in an aboveground stationary tank or open lined or unlined impoundment and noted opposition to WMGR123. (1)

Response:

Only processed water that meet the water quality criteria in Appendix A may be de-wasted and stored in an unlined impoundment or storage tank prior to use at an oil or gas well site. Processed water that does not meet the water quality criteria in Appendix A must be stored in accordance with the residual waste requirements found in 25 Pa. Code Chapter 299.

13. Comment:

The commentator suggested revisions to incorporate maximum flexibility for the industry, which in turn minimizes disposal and also reduces demands for fresh water sources for oil and gas operations. (3)

Response:

DEP believes that the general permit will promote the goal of establishing and maintaining a closed loop process for the recycling and reuse of oil and gas liquid wastes, be a benefit to industry, and protect public health, safety and the environment.

14. Comment:

The commentator recommends the Department consider a wider range of benefits to be gained from an expanded scope of the permit. (3)

Response:

DEP has expanded the scope of the wastes eligible for processing under the general permit. The revised permit promotes the goal of establishing and maintaining a closed loop process for the recycling and reuse of oil and gas liquid wastes and will be a benefit to industry, while protecting public health, safety and the environment.

15. Comment:

The permit should be revised to clarify that both treatment and processing are authorized. (3)

Response:

Under the Solid Waste Management Act, a person may not process residual waste without a permit from the DEP. "Processing" is defined as a method or technology used for the purpose of reducing the volume or bulk of municipal or residual waste or any method or technology used to convert part or all of such waste materials for off-site reuse. Processing also includes transfer facilities, composting facilities, and resource recovery facilities. The term "treatment" is only used in the context of the management of hazardous waste. Because this permit only addresses residual waste, inclusion of the word "treatment" is not appropriate or necessary.

16. Comment:

O&G regulations allow a single lined pond without ground water monitoring, level monitoring, alarms or overflow containment. Will the adoption of WMGR123 as drafted require on-site impoundments that will handle wastewater to conform to the same standards as a WMGR123 permitted operator? (11)

Under WMGR123, all tanks, loading and offloading areas are required to have secondary containment. Will this apply to drillers performing on-site treatment and transporting wastes? (11)

The commentator stated that his understanding is that operators bury drill cuttings on the pads so there is never analysis done as to what the cuttings contain, how much was generated or how/where they were disposed. Will drill cuttings be considered a residual waste on the drill site so as to prevent them from being buried? Will they be subject to testing and reporting for NORM and other contaminants the same way that WMGR123 waste is required to be tested? (11)

WMGR123 requires financial bonding in an amount sufficient to pay for the removal and proper management of the wastewater and other wastes at a facility. Will this requirement apply to drillers performing on-site treatment? (11)

Will reporting requirements apply to drill cuttings, wastewater and sludge produced on a drill site? Will drillers be required to report the transfer of water from drill site to drill site? (11)

If WMGR123 is to be effective in providing protections to the environment, the O&G regulations need to be brought into conformity with the requirements of WMGR123. The commentator states that many drillers have taken liberties with the Oil & Gas exemptions and have operated as if they were treating "on-site" but in reality were using several drill pads as an "area of exemption" from regulation and freely transporting and treating wastewater between the sites as if they were all in a single drill pad. (11)

Response:

Waste that results from industrial operations, including the development and production of an oil or gas well, is residual waste. WMGR123 applies to facilities and beneficial use activities that are regulated under the authority of the Solid Waste Management Act. This permit authorizes the operation of residual waste processing facilities, which includes transfer facilities and the beneficial use of oil and gas liquid waste to develop or fracture an oil or gas well. This permit does not change the regulations or standards for managing waste on an oil or gas well site, nor does it affect facilities regulated under the authority of the Oil and Gas Act.

17. Comment:

The title of the general permit should be revised to remove “hydraulic” and be written as “Processing & Beneficial Use of Gas Well Wastewater from Drilling, Completion and Extraction of Natural Gas.” (3, 4, 5)

Response:

The title of the general permit was changed from “Processing & Beneficial Use of Gas Well Wastewater from Hydraulic Fracture and Extraction of Natural Gas” to “Processing and Beneficial Use of Oil and Gas Liquid Waste” to more accurately reflect the scope of the permit.

The term “liquid waste” is defined in § 287.1 of the residual waste regulations as “Residual waste that contains free liquids as determined by Method 9095 (paint filter liquids test), as described in the EPA’s “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” (EPA Publications No. SW-846).”

18. Comment:

The proposed change to authorize “transfer” in A.1 is unclear. If the intention is to change the current requirements, for transportation of oil and gas wastewaters, a new requirement should be added for clarity. (3)

Response:

The definition of “processing” in the Solid Waste Management Act includes transfer facilities as processing facilities. The general permit has been revised for clarity as requested.

19. Comment:

The commentator suggested that treated water that does not conform to the limits in Appendix A may be used for other beneficial uses as long as it meets requirements for those reuses. A.1 should be revised to reflect this change. (4, 5)

The use of de-wasted water should not be limited. If the wastewater meets the proposed standards, there should be no restrictions regarding control, storage or use to allow for a broad range of reuses beyond fracturing a well. (3)

The use of oil and gas wastewater meeting the limits set forth in Appendix A should not be limited. The Department should remove the proposed restrictions on the control, storage, and use of processed oil and gas wastewater meeting the concentration limits in Appendix A that are currently proposed in C.23.b. (7)

Response:

The permit is specific and intentionally limited to the processing of oil and gas liquid waste for reuse at oil and gas well sites. Limiting the reuse to the oil and gas industry stimulates a closed loop approach to the management of the waste and provides the public and industry with a clear understanding of the scope of the permit and activities authorized thereunder.

20. Comment:

The commentator recommends the Department maintain its current position that processed water to be reused for drilling and stimulation conforms to industry gas well fracking fluid quality standards for which it is being used to be consistent with standards for beneficial use in other industries. (3)

Response:

It is not the intent of DEP to establish industry standards for reuse of processed waste materials for use within the oil and gas well industry. That determination should be made by the oil and gas industry and be specific to the particular use. In this permit DEP has established water quality standards for de-wasting processed waste water for purposes of storage prior to use in the development or hydraulic fracturing of an oil or gas well.

The commentator's reference for beneficial use in other industries is unclear.

21. Comment:

The commentator recommends that the definition of oil and gas wastewater in A.2 be clarified to encompass both drilling water generated during drilling and drilling fluids generated during hydraulic fracturing and extraction. (3)

The definition of oil and gas wastewater should be inclusive of all wastewaters generated in relation to oil and gas operations to maximize beneficial reuse and minimize discharge and disposal. The commentator proposed the addition of intermediate and/or lateral drilling water, cellar water, pipeline construction fluids, storm water runoff, completion fluids, water from secondary containment and other wastewaters generated. (3)

The definition of oil and gas wastewater should be revised to include: "pipeline construction water, freshwater pipeline sediment slurry, intermediate and/or lateral drilling water, tank cleanings, sand and sediment, storm water/runoff water, water that accumulates in secondary containment liners and impoundments, cement water, completions water, cellar/basement well water" ... "from conventional and." This would encourage reusing spent water instead of disposing or discharging into streams and using more fresh water. (4, 5)

The definition of oil and gas wastewater should be revised to include "gas compressor station condensate and hydrostatic testing fluids." These wastewaters are currently generated in significant quantities. By adding these to the definition, it would facilitate management of these types of wastewater via treatment at permitted facilities. (6)

Response:

The term "oil and gas wastewater" was changed to "oil and gas liquid waste" in the final permit 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.

22. Comment:

The commentator recommends that Section B should include: the approved permit be good for the whole state, but the operator must notify DEP of any changes in location and get approvals for any changes to the process that will affect quality or quantity of the water or solids. The permit should be with the operator and not the unit. Therefore, the operators must notify DEP of the location for each unit, but be able to use the same permit, if the same process is used at each individual location. (8)

The Department should confirm the intent of E.1 that suggests that, in the case of mobile processing facilities, it is the system and not the location that is being permitted. (7)

Response:

Each registration is reviewed to verify that the proposed operations are technically feasible and present no harm to public health safety and the environment, and to ensure the facility meets the specific siting conditions in the permit. The general permit requires the submission of specific-site plans, Pollution Prevention Control Plans, bonding based on site operations and site conditions, evidence of municipal and county notices and other information unique to the proposed site, for review and approval.

In situations where a mobile facility is proposed to be relocated, operators should prepare and submit a WMGR123 registration for the new site in advance of the anticipated relocation to ensure continuity of the proposed operation. DEP believes the registration review time will be reduced in these circumstances because DEP would have previously approved the technical and operational aspects of the mobile facility.

23. Comment:

DEP should require applicants for coverage under WMGR123 to satisfy all of the application and operating requirements applicable to residual waste transfer facilities pursuant to 25 Pa. Code, Chapter 293. The current requirements do not include all information required in 25 Pa. Code, Chapter 293. The general permit also does not require applicants to satisfy other requirements that DEP may impose under its discretion, such as groundwater and soil monitoring plans. (10)

Response:

General permits are structured to require information specific to the particular waste stream and operations being considered. If a concern about a specific aspect of a proposed project is identified during the review process, DEP will require the applicant to address those matters prior to making a permit decision.

Regarding soil and groundwater monitoring, due to the requirements for containment around tanks and unloading areas, the likelihood that spills will contaminate soil or groundwater at these facilities is minimal. Additionally, the processing authorized under the general permit does not involve the land application of waste. For these reasons, groundwater and soil monitoring is not required under this general permit. If a spill did occur that went beyond the containment area, DEP has the ability to require a site assessment, remediation and monitoring.

24. Comment:

Condition 4 should be revised to include "Processing and Transfers" maintained "by the Permittee." Include the words "processing and transfer" of oil and gas wastewater ... "by the Permittee" in the requirements for the RP plan. (4, 5)

Response:

The definition of "processing" in the Solid Waste Management Act includes transfer facilities as processing facilities. For clarity, DEP has amended the general permit as suggested by the commentators.

25. Comment:

The commentator believes the RP Plan in C.4 should not be required because the radiation contained in oil and gas wastes is considered NORM. The levels of NORM that are observed in oil and gas wastewater do not justify the imposition of an RP Action Plan and additional handling requirements at facilities covered by proposed WMGR123. The commentator continues by stating that solids generated by the filtration of oil and gas wastewater prior to reuse are not or do not contain TENORM, as nothing has been done to "technologically enhance" any NORM that may otherwise be present in the oil and gas wastewater. It is recommended that this condition be removed from the permit. (7)

Response:

The DEP disagrees. The development of gas reserves involves new technologies and creates new types and volumes of waste as compared to conventional oil and gas well development practices. As such, DEP believes that thorough characterization and monitoring of these waste streams should be required.

26. Comment:

In regards to C.4, the commentator recommends a characterization of incoming fluids be completed at the time of permitting and repermitting. The permittee should monitor radiation levels on all outgoing sludges to landfills. Monitoring of radiation levels of the treated water on a monthly basis should be satisfactory to verify radiation reduction. (8)

Response:

A waste characterization is required to be performed by the waste generator under the provisions of 25 Pa. Code § 287.54 (relating to chemical analysis of waste).

This permit requires operators to submit a radiation protection action plan for approval. The radiation protection action plan is required to be prepared in accordance with DEP's guidance related to radioactivity monitoring.

Additionally, all landfills within the Commonwealth are required to implement radiation protection action plans.

27. Comment:

The commentator states "the fact that waste materials are stored on a well site does not trigger storm water discharge permitting requirements" in C.5. (7)

Response:

All facilities must be compliant with the erosion and sedimentation control and storm water management requirements specified in 25 Pa. Code Chapter 102.

28. Comment:

Condition 6 should be revised to confirm that the restriction on the mixing of waste materials does not include mine drainage water, treated effluent from wastewater treatment plants or other sources identified in a water management plan approved by the Department, provided that such sources are utilized in accordance with the terms of the Department-approved water management plan. (7)

Response:

Mine drainage water is not managed as a waste; therefore, it can be mixed with processed waste water. As such, no clarifying language is necessary regarding those waters. Otherwise, DEP believes the language in Condition 6 is consistent with the recommendation.

29. Comment:

Condition 8 should be clarified to indicate what is considered a nuisance or harmful to public health. (8)

Response:

Nuisances and harms are site-specific determinations dependent on site-specific factors and receptors.

30. Comment:

The commentator believes that C.11 concerning weekly inspections of processing and storage areas is unnecessary and redundant and should be removed. (7)

Response:

DEP believes weekly inspections are appropriate to ensure the facility is operating within the terms of the general permit. This requirement has been renumbered as C.7.

31. Comment:

The commentator believes the Department should work to ensure consistency among its various programs with respect to operations at oil and gas well sites and related facilities with regards to C.14. This condition should indicate whether cross-program training will be provided. (7)

Response:

DEP does work to ensure consistency among its various programs. The training regarding the implementation and use of this permit will be provided as necessary. Condition C.14 has been renumbered as C.13.

32. Comment:

The commentator sees no need for additional testing as stated in C.14. For inspections, what is meant by "other tests"? (8)

Response:

The authority for additional testing and inspection is provided by the Solid Waste Management Act. The decision to require other tests would be based upon the specific site and circumstances and may include, for example, a soil analysis and/or water quality analysis. This condition has been renumbered and is now C.13.

33. Comment:

Condition 17 should be revised to include "and/or recycling facility" so it is not strictly limited to disposal facilities. (3, 4, 5)

Response:

DEP has modified the condition to allow other management options provided under the Solid Waste Management Act and is now Condition C.14.

34. Comment:

Condition 17 should be revised from "that is not beneficially used" to "that will be beneficially used." (8)

Response:

DEP has revised this condition, now Condition C.14, for clarity and consistency with the Solid Waste Management Act.

35. Comment:

Condition 18 should be revised to include "shall be subject to the SWMA and severally liable, without regard to fault, for violations of the act which occur during the contractor's or agent's involvement in the course of operations." (7)

Response:

In the final permit this is Condition C.16. This is a standard condition in general permits and pertains to the DEP's ability to take enforcement actions and issue, deny, modify or suspend a permit under the Solid Waste Management Act based upon an applicant's compliance history, which includes contractors and other agents of the applicant.

36. Comment:

Condition 20 should identify the applicable standards to the cleanup of a facility upon cessation of operations or relocation from a permitted well site. (7)

Response:

Condition 20 has been renumbered as Condition C.18 in the final permit. This condition pertains to the general demobilization and dismantling of the facility and restoration of the site. Applicable standards for site cleanup are provided in the residual waste regulations in 25 Pa. Code § 287.342 (relating to final closure certification). DEP believes this condition is clear and does not require further explanation.

37. Comment:

C.21 should include a time period for how long a general permit is authorized. General permits should be authorized for 5 years. (8)

Response:

DEP's Bureau of Waste Management typically issues new general permits for a maximum of ten years. When someone applies to operate under an existing general permit, it has the same expiration date as the original general permit.

38. Comment:

The proposed permit, at a minimum, should include larger setbacks between wetlands and waterways of the Commonwealth and antidegradation requirements consistent with departmental policy for high quality and exceptional value water resources. High quality and exceptional value waters and wetlands deserve at least 200' setbacks and all other waters listed under § 102.14 deserve a minimum of 150' setbacks. Also, without language in the permit specifically requiring water quality analysis of neighboring waters subject to 22.e, there will be no way of knowing whether a facility or site violates the terms of this section. (12)

Response:

The general permit includes setbacks from aquatic resources consistent with the residual waste and water quality management regulations. Condition 22.e has been renumbered as Condition C.20.e in the final permit. Exceptions to the 100' setback would only be approved if the storage and processing is conducted within a building or where the applicant could demonstrate there was no potential for surface water degradation.

39. Comment:

Condition 22.h does not appropriately account for adverse impacts to threatened and endangered species. The commentator believes it inappropriate to allow any placement of a wastewater site or processing facility in an area known to contain threatened or endangered species. This condition should also include candidate species, their habitats and historical and potential habitat of imperiled species. Lastly, who will determine the proof of adverse effect on threatened and endangered species? (12)

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 would require them to be resolved before the applicant would be authorized to operate under the general permit.

40. Comment:

The new dewatering standard proposed in C.23 would enable drillers to store processed water in large, centralized impoundments regulated under 25 Pa. Code § 91.35, which authorizes the Department to permit a wastewater impoundment if the operator demonstrates to the Department's satisfaction that the impoundment is structurally sound, impermeable, protected from unauthorized acts of third parties, and is maintained so that a freeboard of at least two feet remains at all times. In contrast, current impoundments for the storage of processed gas well wastewater have to conform with the full range of regulatory, not discretionary, standards and conditions applicable to residual waste impoundments under 25 Pa. Code § 299.141-145. The disparate treatment of on-site and off-site wastewater storage poses a direct threat to public safety and fails to adequately protect the Commonwealth's water resources. WMGR123 allows a loophole whereby processed oil and gas wastewater intended for beneficial use is given lesser scrutiny than the same wastewater destined for processing under current residual waste regulations. (12)

Response:

DEP disagrees that WMGR123 creates a loophole for industry. The DEP has determined that processed oil and gas liquid waste that meets the water quality standards in Appendix A does not create a threat of pollution to waters of the Commonwealth and can be de-wasted in accordance with 25 Pa. Code § 287.7.

DEP believes that the general permit will promote the goal of establishing and maintaining a closed loop process for the recycling and reuse of oil and gas liquid wastes, be a benefit to industry, and protect public health, safety and the environment.

41. Comment:

WMGR123 should be amended to include some type of standards and regulation of temporary water and wastewater transport lines used to transport wastewater retrieved post initial drilling until the well is capped, lines that transport fresh water from withdrawal location to mixing containers, or lines that transport wastewater from impoundment or container to other impoundments, containers, trucks, etc. (12)

Response:

The regulation of transport lines are beyond the intended scope of WMGR123.

42. Comment:

An additional condition for C.23 was proposed (C.23.c) to include storage of processed oil and gas wastewater (meeting the limits in Appendix A) at the facility in an impoundment or a facility designed to hold water prior to fracturing a well or discharge under a permit. (2, 4)

Response:

The final general permit has been modified to allow the storage of processed water meeting the limits of Appendix A at the processing facility. The permit does not de-waste processed liquid for discharge. The purpose of this permit is to encourage and facilitate a closed-loop system for recycling and reuse of oil and gas liquid waste.

43. Comment:

The commentator recommends that C.23.a be revised to encompass current practice, as authorized by the Department, of transporting the processed water to centralized impoundments for future use at a permitted well site to fracture a well. This allows flexibility for wastewater reuse with no increased risk to the environment. (3)

Response:

Condition C.23.a (now Condition C.21.a) of the general permit allows processed water to be stored at centralized impoundments and storage facilities that satisfy the requirements of the Oil and Gas Act.

44. Comment:

The Department must specify the limits/boundaries of a permitted "well site" and explain how waste management interprets and applies this term in C.23. (7)

Response:

Section 603a(d) of the Oil and Gas Act defines "well site" as "the areas occupied by all equipment or facilities necessary for or incidental to the drilling, production or plugging of a well." The waste program interprets and applies this term in consultation and consistent with the oil and gas program.

45. Comment:

Condition 23.b does not need to include "control of a drilling company." This requirement will present difficulty to third-party facilities. Condition 23.b should be revised to include under the control of "Permittee or" a drilling company. (3, 4, 5)

Response:

DEP has revised this condition, now Condition C.21.b. to allow storage in facilities owned or operated by the permittee or an operator of an oil or gas well. This will promote the goals of the permit to establish and maintain a closed-loop process for the recycling and reuse of oil and gas liquid waste in the development of oil and gas wells and other related facilities as identified in this general permit.

46. Comment:

DEP should not adopt the new de-wasting standard set forth in 23.b unless it establishes sufficient minimum standards for “de-wasting” impoundments and improves the criteria for compliance with the concentration limits in Appendix A. By making appropriate storage a condition of de-wasting, DEP would impose different requirements on transportation of processed wastewater to and from a storage facility. (10)

DEP should establish minimum standards for impoundments and facilities “specifically designed to hold water prior to use for fracturing a gas or oil well.” In particular, DEP should adopt adequate design, construction, and maintenance standards for those centralized impoundments that do not currently require permits when such impoundments are used to de-waste oil and gas wastewater. (10, 12)

Response:

An unexpected spill or leak of processed waste water meeting the water quality standards in Appendix A should not impact the surface or groundwater because the waste water would be rapidly attenuated or assimilated by the natural conditions at the site. Therefore, no special design requirements have been proposed.

DEP did not intend for the processed water meeting the levels in Appendix A to be transported as residual waste to the storage facility. This has been clarified by revising “is stored” to “will be stored” in Condition C.21.b.

47. Comment:

DEP should adopt more stringent requirements for WMGR123 permittees to demonstrate compliance with the de-wasting criteria set forth in 23.b. It is unclear as to why there are different analytical requirements and testing frequencies for different pollutants. (10)

Condition 24 should require the same sampling for all constituents listed in Appendix A. The commentator believes that ammonia, benzene, methanol, and toluene should also be analyzed daily along with strontium, barium, and TDS. These four chemicals are four of the most dangerous and persistently found chemicals in fracking cocktails. (12)

Response:

Elevated levels of strontium, barium and TDS are commonly found in natural gas wastewaters, and daily monitoring will provide the data necessary to determine whether the processed water meets and continues to meet the required standards in the permit. Monitoring for the remaining constituents is required on a weekly basis.

48. Comment:

The Department should clarify whether it intends for de-wasted wastewater to constitute "fresh water" or "wastewater" within the meaning of § 91.35. The commentator strongly suggests maintaining "wastewater." (12)

Response:

The water quality standards in Appendix A are not to designate the processed water as fresh water. The purpose of the de-wasting criteria is 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.

49. Comment:

There is no justification for sampling requirements in C.24 if the water is de-wasted. While an operator should demonstrate compliance with C.23.b through adequate testing data, this should be a function of the treatment, not the storage of the de-wasted water. (3)

The intent of the Department in imposing C.24 on de-wasted waters is unclear and the condition should be removed or significantly reduced to recognize the nature of the water that is being stored. (3)

Response:

The sampling requirements in the general permit apply to processing facilities to demonstrate the processed waters meet the criteria for de-wasting under Condition C.21.b. and are eligible for storage in a non-waste impoundment. Once stored in an impoundment, further testing of the water is not required unless specifically requested by DEP as part of an investigation or similar action.

50. Comment:

C.24 should provide that a permittee may not transfer custody of processed wastewater to any person without a certification from that person that the processed wastewater will either be beneficially used in accordance with 23.a or be managed as a residual waste until it has been stored under the control of a drilling company in an impoundment or facility that meets the minimum standards for such permitted well sites or wastewater impoundments to which wastewater will be transported. Permittees should be prohibited from transferring custody of processed wastewater without a certification. (10)

Response:

Since de-wasting under Condition C.23.a (now Condition C.21.a) occurs only when the processed water is actually used at a well site, any storage prior to use would have to satisfy the residual waste storage requirements. The recordkeeping requirements under Condition D.1.e will allow DEP to see where processed water is sent, when it was sent, and the quantity. Additional certification is unnecessary for recordkeeping purposes.

51. Comment:

The frequency of sampling/analysis required in C.24 for a proven process is burdensome and expensive. This section should be modified to indicate that after a required demonstration has been made and approved by the Department, the operator shall be required to re-demonstrate compliance to the Department on not more than an annual basis. (7)

Response:

Annual sampling is inadequate for the purpose of verifying that treated wastewater achieves Appendix A limits on an ongoing basis. DEP believes the sampling and analysis provisions in the general permit are appropriate and necessary to ensure that the processed oil and gas liquid waste continues to meet the de-wasting standards of Appendix A.

52. Comment:

Section C.24.d requires daily sample collection for various analyses. Does the processed water have to be held on-site until analysis is complete? This will result in millions of gallons of fluid that would have to be stored and bonded until they are qualified as "de-wasted." The industry will not use this permit if use is delayed until completion of analysis for approval. The commentator recommends that instead of daily sampling for strontium, barium, and TDS, that the daily sampling be limited to conductivity which could be used in conjunction with a limited monthly parameter list. (8)

In addition to the above comment, the commentator also recommends that complete analysis of all required parameters be submitted with the permit application and upon renewal of the permit. Monthly analysis of treated water should be limited to parameters listed below, including radiation analyses. Recommended parameters for limited monthly analysis by a certified lab should be TDS, TSS, chlorides, sulfates, oil and grease, and 1 or 2 metals (barium, zinc, or iron). (8)

Response:

After the initial testing indicates the water quality standards in Appendix A of the general permit are met, the de-wasted water does not need to be stored as residual waste. The ongoing sampling and analyses required in Condition C.23 does not prohibit processed water from being delivered to storage impoundments or other storage facilities prior to the receipt of the final testing results.

The ongoing testing and verification ensures the processed water continues to meet the requirements of Appendix A. If processed water does not meet Appendix A, it must be managed as a waste. Storage under the de-wasting provision is not permitted until the operator demonstrates compliance with Appendix A.

The parameters proposed in Appendix A were developed with full consideration of potential pollutants that may be found in oil and gas wastewater and in consideration of the distillation technology currently in use in this particular industry. DEP has confirmed with persons operating distillation units under the existing WMGR123 that the water quality standards under Appendix A are achievable.

53. Comment:

For C.24, the commentator believes that in order for this permit to be uniform statewide, data from similar treatment operations should be used to review/approve future operations. (8)

Response:

DEP agrees and will be monitoring the performance of the permitted facilities. Information and data from that monitoring effort will be useful in future permit actions.

54. Comment:

The requirements in section D seek to impose numerous reporting requirements designed for solid waste. Undiscarded produced water is not a waste and should not be subject to record keeping and reporting requirements as though it were. The proposed record keeping and reporting requirements should be limited to requiring such record keeping for waste. (9)

Response:

DEP disagrees. It is important for DEP and the industry to have complete and accurate records regarding these processing facilities. Those records are valuable in demonstrating compliance with the permit decisions and instilling public confidence in the effectiveness of the permit, the DEP and industry.

55. Comment:

Water withdrawal recordkeeping is the responsibility of the gas well operator under a water management plan and therefore should not be imposed in D.1.a. (7)

Response:

The requirement is specific to the wastewater processing facility operating under the authority of this general permit and is separate and independent from water management plan requirements.

56. Comment:

The Department should distinguish between continuous processing operations and batch treatment operations, indicating that it is appropriate for the former to log total effluent on a daily basis in D.1.d. (7)

Response:

DEP agrees. This section has been revised to clarify that facilities that operate on a batch basis must record volumes by batch, and facilities that operate on a continuous basis must record volumes produced on a daily basis.

57. Comment:

The Department should specifically identify the "other wastes" that need to be included in the volume calculation in D.1.f. (7)

Response:

"Other wastes" would include residues from processing operations, such as still bottoms and sludge, and are dependent on the type of process being used by the permittee. DEP cannot anticipate all processing residues that could be generated by processes not yet proposed, and therefore cannot specify other wastes as suggested.

58. Comment:

The commentators indicated that D.2 should be revised to say "maintained by the permittee and available upon request" when the processing facility is moved to another site within the five-year period. (7, 8)

The commentator recommended that the permittee identify the location of the records and not be required to maintain the records with the mobile equipment in the field for D.2. (8)

Response:

DEP agrees with these comments regarding recordkeeping and has amended the permit accordingly.

59. Comment:

The Commentator does not believe there is justification for the proposed limits listed in Appendix A and recommended revised limits for: benzene, bromide, cadmium, chloride, sulfate, aluminum, arsenic, barium, conductivity, iron, and pH. (8)

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. The parameters proposed 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 currently in use in this particular industry. DEP has confirmed with persons operating distillation units under the existing WMGR123 that the water quality standards under Appendix A are achievable.

60. Comment:

Since the purpose of categorizing the treated water as de-wasted is to promote reuse by the industry and therefore permit the de-wasted water to be stored in fresh water impoundments, why does it have to meet or exceed drinking water standards? (8)

The concentration limits in Appendix A are derived from drinking water standards. To attempt to hold recyclable material such as produced water to the same standard as drinking water is unreasonable. (9)

Response:

Drinking water standards were established specifically as public health-based standards. The parameters proposed 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 currently in use in this particular industry. DEP has confirmed with persons operating distillation units under the existing WMGR123 that the water quality standards under Appendix A are achievable.

61. Comment:

If the water will never be discharged to the surface or a stream, the commentator recommends dropping ammonia from the monitoring list in Appendix A. (8)

Response:

Ammonia is a common constituent in natural gas wastewater and is toxic to aquatic organisms. It is volatile and may be entrained with process water using the prevalent treatment technology. It is essential that it be controlled before the water can be de-wasted for purposes of storage prior to reuse at an oil or gas well site.

62. Comment:

The commentator believes the de-wasting standards are too restrictive as written. Appendix A is unreasonably stringent, including constituents that are not applicable to oil and gas wastewaters, and should be revised. Only relevant constituents and applicable technology-based standards (BATs in Chapter 95 or DW MCLs) should be required to de-waste the oil and gas wastewaters. (3)

Response:

The parameters proposed 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 currently in use in this particular industry. DEP has confirmed with persons operating distillation units under the existing WMGR123 that the water quality standards under Appendix A are achievable.

**General Permit Numbers WMGR119, WMGR121 and WMGR123
Commentators**

<u>Name</u>	<u>Company</u>	<u>Location</u>
1. Richard Ide	--	Tunkhannock
2. Barbara A. Res	Integrated Water Technologies	Little Falls, NJ
3. Joseph T. Leighton	Associated Petroleum Industries of PA	Harrisburg
4. Louis D. D'Amico	PA Independent Oil & Gas Ass'n	Wexford
5. Neil W. Hedrick	HydroRecovrey	Blossburg
6. Kent McManus & Dan Ertel	Arcadis Eureka Resources	Buffalo, NY
7. Stephanie Timmermeyer	Chesapeake Energy	Charleston, WV
8. Paul Hart	Hart Resource Technologies	Creekside
9. Kathryn Z. Klaber	Marcellus Shale Coalition	Canonsburg
10. Mark Szybist	PennFuture	Wilkes-Barre
11. Darrel Holupko	--	McMurray
12. Michael Helfrich & Guy Alexander	Lower Susquehanna Riverkeeper Stewards of the Lower Susquehanna	

