ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT FOR TREATMENT WORKS TREATING DOMESTIC SEWAGE AS BIOSOLIDS FOR LAND APPLICATION (BIOSOLIDS GENERAL PERMIT) AZGP2013-001

RESPONSE TO COMMENTS (A.A.C. R18-9-A908(E)(2)) December 24, 2013

Administrative Record

On December 16, 2010, the Arizona Department of Environmental Quality (ADEQ or Department) proposed several new Arizona Pollutant Discharge Elimination System (AZPDES) general permits as potential alternatives to individual AZPDES permits for eligible classes of facilities with point source discharges to Waters of the United States or otherwise subject to the federal Clean Water Act and associated regulations (40 CFR 122) and ARS § 49-255 *et seq.* Treatment works treating domestic sewage (TWTDS) are subject to the standards for sewage sludge use and disposal in 40 CFR 503 and in Title 18, Chapter 9, Articles 9 and 10 of the Arizona Administrative Code. On February 10, 2011, the Department presented the initial draft of the Biosolids General Permit, for stakeholder review and discussion. The Department held two additional informal stakeholder meetings to review and discuss the revised drafts of the Biosolids General Permit on February 24, 2011, and November 8, 2012.

The Fact Sheet (the supporting document that describes the permit's scope and rationale for coverage) sets forth the basis for permit conditions to be applied statewide through issuance of the new AZPDES Biosolids General Permit.

On January 4, 2013, the public notice for the Biosolids General Permit (AZGP2013-001) was published in the Arizona Administrative Register. The Public Comment period closed on February 4, 2013.

Comments were received on the public noticed draft permit from the Grand Canyon Chapter of the Sierra Club (Sierra Club).

In addition to changes to the permit made in response to the comments from the Sierra Club, ADEQ made minor changes to the final permit and fact sheet for purposes of clarification of monitoring and reporting requirements and to the name used for the certificate of authorization. Finally, several minor corrections were made to the permit, fact sheet and appendices pertaining to formatting, punctuation, spelling and cross-references.

General

The references to "Approval to Prepare Biosolids (APB)" were changed throughout the permit and fact sheet to "certificate of authorization" to be consistent with the terminology in most of the other ADEQ general permits.

Part IV.G.1.f was revised to clarify that the results of all biosolids testing and details about the pathogen and vector control treatment processes must be submitted to the ADEQ Biosolids Coordinator for the first two years of EQ biosolids preparation, not the first two years of permit coverage.

Part IV.I.2.c was revised to clarify sampling frequencies following storage.

Part V.B.3 was revised to clarify the reporting requirements for field testing results.

Grand Canyon Chapter of the Sierra Club (Sierra Club) Comments

Comment 1: General permit vs. Individual AZPDES permit coverage

The Sierra Club opposes the ADEQ proposal to use a general AZPDES permit to regulate wastewater treatment plants or TWTDS that treat and prepare biosolids for land application. Wastewater treatment plants and TWTDS that treat and prepare biosolids for land application are more appropriately regulated under individual AZPDES permits. An individual AZPDES permit is preferable to a general permit because an individual AZPDES permit can be specifically tailored for the individual wastewater treatment plant or TWTDS treating or preparing biosolids for land application. Individual AZPDES permits are preferable to general permits because effluent limitations, monitoring and reporting requirements, and special conditions can be tailored to better control the discharge of pollutants to receiving waters or to land application sites to protect public health and the environment.

General permits are typically used to regulate multiple facilities within a specific facility category. A general permit is cost-effective and efficient when there are a large number of facilities in the category that will be covered by a single general permit. That is not the case here. ADEQ states in the fact sheet that the agency estimates that only fifteen wastewater treatment plants or TWTDS fall into the category of facilities that would be regulated under the biosolids general permit [See Fact Sheet, p. 2 of 6]. Fifteen is not a large number that justifies ADEQ's proposed use of a general permit.

Sierra Club does not think that the proposed biosolids general permit meets the statutory criteria for issuing a general permit prescribed in A.A.C. R18-9-C901. Under A.A.C. R18-9-C901, ADEQ may issue general permits for categories of facilities located within a common geographic area, that meet the following criteria:

1. *Involve the same or substantially similar types of operations;*
2. *Require the same permit limitations, operating conditions, or standards;*
3. *Require the same or similar monitoring; and*
4. *Are more appropriately controlled under a general permit than under an individual permit.*

In our view, several of these conditions are not met for the proposed category of POTWs and TWTDS that treat and prepare biosolids for land application.

First, ADEQ may issue general permits for regulated facilities located in a "common geographic area." ADEQ has not identified a common geographic area in the proposed biosolids general permit other than to say that the proposed general permit covers "the preparation of biosolids for land application in Arizona except for Indian Country as defined in 18 U.S.C. 1151."[See Public Notice]. The only way that ADEQ can satisfy the "common geographic area" requirement is if ADEQ broadly interprets "common geographic area" to mean the entire state of Arizona. The requirement in R18-9-C901 for ADEQ to issue general permits to categories of facilities "in a common geographic area" is rendered essentially meaningless if the phrase,"common geographic area," means every area within Arizona borders.

Second, all POTWs and TWTDS are not created equal and while they are all POTWs or TWTDS, they cannot be described as having "the same or substantially similar types of operations." POTWs and TWTDS vary in size and design capacity; the types of wastewater treatment technologies employed to treat wastewater and biosolids; whether they accept sewage sludge from off-site generators; the amount, type, and quality of sewage sludge produced; and the quantity and quality of influent coming into individual POTWs or TWTDS. ADEQ is attempting to use a one size fits all" approach to regulating POTWs and TWTDS that may differ in important ways. ADEQ asserts in the Fact Sheet that "TWTDS have similar treatment processes, similar pollutants, and the same monitoring requirements based on the treatment processes." [See Fact Sheet at p. 2 of 6].

Third, because POTWS and TWTDS are so variable, they do not require the same permit limitations and cannot be regulated under the same operating conditions.

Fourth, all POTWs and TWTDS do not require the same or similar types of monitoring.

Finally, POTWs and TWTDS that treat and prepare biosolids for land application are more appropriately controlled under an individual permit. As ADEQ states in the Fact Sheet on P. 2 of 6 for AZPDES General Permit AZPG2012-001 (Biosolids GP), "[a] general permit is a cost-effective and efficient means for ADEQ to authorize activities from a large number of similar facilities or sites, while ensuring consistency in permit conditions for similar activities." [emphasis added]. In the case of the draft biosolids general permit, ADEQ will not be regulating a large number of similar facilities or sites. ADEQ estimates that approximately fifteen POTWs or TWTDS fall into the category of facilities to be regulated under the proposed biosolids general permit. It is not clear how ADEQ defines or interprets a "large" number of facilities, but fifteen facilities does not qualify

Response 1:

ADEQ disagrees. First, the "common geographic area" for this general permit is the same as that for other existing AZPDES general permits (the Multi-sector General Permit, Construction General Permit, and De Minimis General Permit, Minor WWTP General Permit, and Infrequent Discharger General Permit), which is the state of Arizona. A.A.C. R18-9-C901.A requires that the geographic area correspond to "existing geographic or political boundaries...", and the state of Arizona is consistent with this requirement. Second, although WWTPs can and do utilize different technologies, the basic principles are the same, and the treatment systems must all meet certain minimum requirements. Although TWTDS can and do utilize different treatment methods, the methods must all achieve the same pathogen and vector attraction reduction appropriate to the use. The sewage sludge generated by WWTPs from municipal and domestic sources is expected to be of similar quality; if a WWTP has industrial users, it must have a pretreatment program to prevent toxic pollutants from entering the plant. Therefore, these are the same or substantially similar operations. Third, all biosolids must meet the same treatment standards and pollutant ceiling concentrations prior to land application. Therefore, the facilities require the same or similar monitoring. Finally, ADEQ has issued individual permits to several TWTDS, and the conditions in those permits are essentially the same as those in this permit; the biosolids conditions in the individual permits for discharges from WWTPs are also similar to those in this general permit. Compliance with the biosolids rules is most effectively ensured through compliance inspections, and the biosolids monitoring results are submitted in annual reports instead of Discharge Monitoring Reports. Therefore, TWTDS can be very effectively controlled under a general permit.

No changes were made to the final permit in response to this comment.

Comment 2: ADEQ's proposed use of general permits to regulate POTWs and TWTDS is inconsistent with the regulatory approach described in ADEQ's Biosolids / Sewage Sludge Management Program description (September 2003).

The Program Description for the Arizona Pollutant Discharge Elimination System Biosolids / Sewage Sludge Management Program (September, 2003) [hereafter "the Program Description"] states that the Water Quality Division will regulate publicly-owned treatment works (POTWs) and other TWTDS through conditions in AZPDES permits, and where necessary, issue sludge-only permits. ADEQ further states in the Program Description that it would call in applications for individual AZPDES permits for TWTDS that were not already covered by an individual AZPDES permit and begin processing those individual AZPDES permit applications within two years of EPA approval of the Biosolids/ Sewage Sludge Management program [See "Permitting for Biosolids Facilities" at p. 3 of the Program Description]. ADEQ indicated the agency's preference for regulating POTWS and TWTDS through individual AZPDES permits, not general permits:

> *The Department will call in applications for AZPDES permits for TWTDS that does not already have an individual discharge permit when the Department determines under R18-9-1003(G) that the site restrictions and management practices specified in A.A.C. R18-9-1007, R18-9-1008, or R18-9-1009 or other requirements in ADEQ's biosolids rule will not protect public health or the environment due to case-specific circumstances. If an individual permit is needed, the Department will notify the registrant of the requirement and require an application in accordance with A.A.C. R18-9-A902(C) and R18-9-B901 [See "Permitting for Biosolids Facilities" at p. 3 of the Program Description].*

ADEQ also states in the Program Description that it has discretion "to choose to develop a general permit for some biosolids management practices"[emphasis added] and that it would do so in accordance with A.A.C.

R18-9-C901 through A.A.C. R18-9-C903. It is clear that ADEQ's preferred regulatory approach was to issue individual AZPDES for POTWs and TWTDS that treat and prepare biosolids for land application. The Program Description indicates a more limited role for the use of general permits, stating they may be appropriate for the regulation of "some biosolids management practices." Presumably, ADEQ meant that general permits are appropriate to regulate biosolids management practices at land application sites. In a reversal of the individual AZPDES permitting approach described in the Program Description, ADEQ now proposes to develop a general permit to regulate POTWs and TWTDS that treat and prepare biosolids for land application. Instead of requiring or calling in applications for individual AZPDES permits for POTWs and TWTDS, ADEQ proposes to use a general permit. We think that ADEQ's regulatory approach described in the Program Description document is the better approach. All wastewater treatment plants that treat or prepare biosolids for land application should be regulated under individual AZPDES permits

ADEQ's reversal reflects a disturbing tendency to regulate major discharging facilities under general permits rather than individual AZPDES permits. The Sierra Club understands the resource constraints under which ADEQ must operate, but the existence of resource constraints does not absolve the agency of its duty and responsibility to protect public health and the environment and regulate the discharge of pollutants through effective implementation and enforcement of the AZPDES permit program. The use of general permits may allow ADEQ to allocate limited AZPDES permit program resources to get needed permits "out the door" in a timely fashion and to meet licensing timeframe requirements. However, the lack of adequate AZPDES program resources cannot be an excuse for issuance of "sham" general permits that rely too much on self-execution, self-monitoring, and self-reporting with little or no ADEQ oversight or a credible enforcement mechanism. The biosolids general permit may be administratively convenient and it may reduce ADEQ permit writers' workloads by approximately fifteen permits, but a general permit is clearly a less effective way to protect the environment and public health from exposure to pollutants associated with the land application of biosolids.

Response 2:

ADEQ disagrees. The Program Description referred to an individual permit because a general permit did not exist and was not anticipated at that time. In addition, the primary reason ADEQ is issuing a general permit for TWTDs treating domestic sewage as biosolids for land application is precisely because the cost of issuing individual permits, both to the Department and the regulated community, cannot be justified by any environmental or health benefit that may be gained from issuing individual permits for these facilities. The monitoring and other requirements in this general permit will be exactly the same as in an individual permit. ADEQ will review all the information submitted in the Notice of Intent (NOI) in the same way and with the same scrutiny as is currently done with an application for an individual permit. Permittees having coverage under this permit are required to submit the annual reports including all metals and pathogen monitoring results from the processed biosolids just as permittees with individual permits do. They will be subject to inspections just as permittees with individual permits are. They are also subject to compliance actions if violations of any permit limits or other requirements are found. The general permit does not provide any exemptions from compliance with State and Federal rules and regulations, including biosolids land application requirements. See Appendix D, Standard Conditions, Section 3, Duty to Comply. If the Department determines that a facility is not operating in a manner appropriate for coverage under the general permit, the Department has discretion to revoke the authorization and request an individual permit, or to revoke coverage entirely. The cost savings for ADEQ will be from the reduced amount of paperwork and administrative work, and the permittees will benefit from reduced flat fees paid annually instead of the unpredictable hourly fees paid for individual permit issuance.

No changes were made to the final permit in response to this comment.

Comment 3: The indefinite term of the Biosolids General Permit

Sierra Club notes that the fact sheet states that a general biosolids permit will be issued for a five-year term. We agree that the biosolids general permit should have a 5-year term, similar to the 5-year terms prescrtibed [sic] for individual AZPDES permits.

Part II of the General Permit addresses application for coverage under the permit using Notices of Intent (NOI), modifications of coverage under the biosolids general permit, termination of coverage, transfers of

coverage, continuation, and alternative permits. We note with concern, that there are no terms or conditions addressing renewal of coverage under the biosolids general permit. POTWs and TWTDS regulated under the proposed biosolids general permit should be required to submit a Notice of Intent (NOI) prior to the date of expiration of the general permit to renew coverage under the general permit for another five-year term. Establishing a standardized renewal process will create a procedural mechanism that ADEQ can use to review POTW and TWTDS compliance with biosolids general permit terms and conditions and applicable sewage sludge standards. Establishing a renewal process will provide a mechanism for making necessary modifications to general permit terms or conditions, establish special conditions, or issue a revised Authorization to Prepare Biosolids (APB) to the permittee.

Response 3:

Under the Code of Federal Regulations at 40 CFR 122.46(a), the effective term of an AZPDES permit cannot exceed 5 years. The 5-year term of any general permit, including this permit, will be explicit from the issuance and expiration dates shown on the front signature page of the permit. This permit and the authorization to discharge under this permit may be administratively continued, just as the individual permits can be administratively continued, if the renewal application is submitted in a timely fashion. The term of a general permit and the term of coverage under the general permit are linked, and to separate them so that coverage would terminate and then be renewed just prior to the expiration date of the permit would be unworkable.

When the permit is reissued, Section 1 of Appendix D, Standard Conditions, Duty to Reapply, requires the permittee to file an NOI within the timeframe specified in the new general permit and obtain a new authorization. The reissuance automatically terminates the continued general permit, but coverage under it would remain in effect until the time specified in the renewed permit for submittal of NOI. This is consistent with the requirements under A.A.C. R18-9-C903, General Permit Duration, Reissuance, and Continuation and A.R.S 49-255.01.M.

ADEQ tracks the expiration dates and renewals of individual permits and expects to do the same with general permits and the associated authorizations which will expire when the new general permit is issued. EPA tracks ADEQ's backlog of expired permits. Sierra Club is correct that the permit does not include any requirement for ADEQ to reissue the permit within a specified timeframe. The renewal of a general permit can, and often does, take a significant amount of time, just as some individual permits do. .

No changes were made to the final permit in response to this comment. The Fact Sheet was revised to be consistent with A.R.S 49-255.01.M.

Comment 4: Administrative continuation of the biosolids general permit

Our concern is that without a renewal process, ADEQ will not review POTW and TWTDS facility compliance once an APB is issued under the proposed biosolids general permit. In the absence of a renewal requirement, there will be no permitting mechanism under which ADEQ can schedule a periodic review of a facility's performance under the biosolids general permit. Our concern is heightened by provisions for administrative continuation of the general biosolids permit found in Part II, Section F of the draft permit. ADEQ states in the Fact Sheet that if a biosolids general permit is not reissued, replaced, revoked, or terminated prior to its expiration date, ADEQ may "administratively extend coverage for existing activities in accordance with A.A.C. R18-9-C903A." In other words, once a POTW or TWTDS is given authorization to treat and prepare biosolids under the proposed general biosolids permit, it is likely that the initial APB will be administratively continued far beyond the initial 5-year term of the general permit. The continuation provision makes it much more likely that original APB to treat and prepare biosolids will be administratively extended indefinitely. The five-year term of the biosolids general permit and expiration dates are rendered meaningless by the proposed continuation provisions. For all practical purposes, the expiration date on the front page of the biosolids general permits means nothing because ADEQ has already signaled its intent to administratively continue the biosolids general permit. A POTW or TWTDS will continue to treat and prepare biosolids under the original authorization until ADEQ takes affirmative action to reissue or replace the general permit, deny coverage, or make a formal permit decision not to "reissue" the general biosolids permit. Our guess is that ADEQ won't take any affirmative action until a facility operator stops paying annual fees.

Response 4:

The facility's performance will be monitored through routine compliance inspections and ADEQ reviews of the annual reports in exactly the same manner that compliance for TWTDSs with individual AZPDES permits is currently tracked. The permit requirements, including the submittal of the annual reports, continue to apply as long as the permit remains in effect. When the general permit is renewed, the permittees are required to submit a new NOI or obtain and individual permit.

No changes were made to the final permit in response to this comment.

Comment 5: Comments on Part IV. Biosolids Treatment, and Preparation Requirements: General Use or Disposal Requirements

Part IV, Section A of the proposed biosolids general permit is far too general and non-specific to be enforceable. The general permit is riddled with generic references to provisions of the Arizona Administrative Code or the Code of Federal Regulations with general admonitions for the permittee to comply with "applicable" provisions of the rules or statutes.

For example, the general permit states in Part IV, Section A, Paragraph 1: "All biosolids generated and/or prepared at the facility shall be used or disposed of in compliance with the applicable portions of 18 A.A.C. Chapter 9, Article 10...." [See p. 9 of Biosolids General Permit].

Section B contains a similar example of an unenforceable general permit condition:

> *"The permittee is responsible for ensuring that all biosolids produced or accepted at the facility are used or disposed of in accordance with 40 CFR 503 Subpart C, 257, 258 and 18 A.A.C Chapter 9, Article 10, as applicable, whether the permittee uses or disposes of the biosolids itself or treansfers them to another party for further treatment, use, or disposal. The permittee is responsible for informing any subsequent transporters, preparers, applicators, and disposers of the requirements that they must meet under 18 A.A.C. Chapter 9, Article 10." [See Biosolids General Permit AZGP2013-001, p. 9].*

The problem with this general permit language is that it does not provide adequate notice of the regulatory requirements that general permittees must meet. In both examples, cross-references to the federal and state administrative regulations are qualified by the words, "applicable" or "as applicable." Who makes the determination of which rule provisions are applicable? The Sierra Club respectfully submits that ADEQ has failed in its duty to inform general permittees of the requirements they must meet under the proposed general biosolids permit. At a minimum, ADEQ must identify, with reasonable specificity, the "applicable" provisions of 40 CFR 503, 40 CFR 257, 40 CFR 257 and 18 A.A.C. Chapter 9, Article 10 and incorporate those requirements as terms and conditions in the biosolids general permit. It is not sufficient to say to general permittees "comply with the applicable rules. ADEQ has a responsibility to translate applicable regulatory requirements into reasonably specific permit terms and conditions so POTWs and TWTDS have legally sufficient notice of those regulatory requirements.

Response 5:

The intent of this Section is simply to advise the permittees of the various other rules and regulations that may apply to the biosolids if they should choose to use or dispose of the biosolids in another manner other than land application, or if they transfer the biosolids to another party. This permit does not cover these other activities and therefore does not specify the requirements. The permittees are expected to know or find out what is applicable. This general permit only applies to TWTDs treating domestic sewage as biosolids for land application - the required operational, treatment, monitoring and reporting requirements specifically for land application are included in this permit.

No changes were made to the final permit in response to this comment.

Comment 6: Duty to mitigate

The "Duty to Mitigate" provision at Part IV, Section C is useless permit language because it is completely unenforceable. Part IV. Section C states:

> *"The permittee shall take all reasonable steps to prevent or minimize of any biosolids use or disposal which has a likelihood of adversely affecting human health or the environment." [See Biosolids General Permit AZGP2013-001, p. 9]*

Reasonable men and women may differ on what steps are reasonable, particularly when ADEQ is telling permittees to take steps to prevent or minimize biosolids use and disposal that has a "likelihood" of adverse effects on human health or the environment. The operators of POTWs and TWTDS, ADEQ compliance officers, and persons living next door to a POTW, TWTDS or land application site probably will have different understandings of what biosolids use and disposal practices have a likelihood of an adverse effect and what steps are reasonable to take to prevent or minimize adverse effects. ADEQ only damages its own credibility as a regulatory agency by including "do-nothing" provisions such as the Duty to Mitigate provision in the biosolids general permit.

Response 6:

This language is taken directly from 40 CFR 122.41(d) which A.A.C. R18-9-A905(A)(3)(a) incorporates by reference. This condition applies to and must be included in all AZPDES permits.

No changes were made to the final permit in response to this comment.

Comment 7. General biosolids monitoring requirements

7a. Biosolids "self-monitoring" frequency

The proposed language of Part IV, Section F (1) on p. 10 of the general permit relating to biosolids "self-monitoring" frequency is unnecessarily confusing and unclear. First, the section starts off with the qualifying phrase, "unless otherwise specified in this permit." This phrase confuses and weakens the mandatory minimum sampling requirements that follow in Section F (1). ADEQ can remove this qualifying phrase without doing harm to the monitoring requirements stated in Section F(1). Second, ADEQ refers to "self-monitoring events" which is a weaker and less clear expression of the monitoring requirement stated in Section F(1). ADEQ should simply state that the permittees "shall conduct monitoring" at the minimum monitoring frequencies stated in the biosolids monitoring frequency table.

Response 7a:

This language is taken from A.A.C. R18-9-1012. The qualifying phrase is referring to Section F.4, which requires more frequent sampling if the biosolids are stockpiled or accumulated on site prior to use. Therefore, removing the qualifying phrase would weaken or negate those other monitoring requirements.

No changes were made to the final permit in response to this comment.

Comment 7b: Sampling and Analysis Methods

ADEQ again shifts its responsibility for identifying acceptable analytical methods for testing biosolids to the permittee by using confusing and ambiguous cross-references and citations to the Code of Federal Regulations or the Arizona Administrative Code. ADEQ requires in Section F (2) that "the permittee shall ensure biosolids are testing [sic] using the methods in 40 CFR 503.8 as required in A.A.C. R18-9-1012(G)." It is ADEQ's duty to ensure that biosolids are analyzed using analytical methods that are acceptable to the agency, not the permittee's duty. ADEQ should prescribe what the acceptable analytical methods are in an

appendix to the general biosolids permit. Similarly, ADEQ should simply require that permittee's use licensed environmental laboratories

Response 7b:

The analytical requirements in the permit are as specified in A.A.C. R18-9-1012 (G). The rule allows the permittee to use any ADHS-certified method applicable to a parameter as long as the laboratory is licensed by ADHS for that method. Beyond that, ADEQ has no technical or regulatory reason to include specific analytical methods for the parameters that must be tested for compliance purposes in this permit. Analytical methods may change over time, and there may be more than one acceptable method available for a parameter.

No changes were made to the final permit in response to this comment; however, additional language from R18-9-1012(G) regarding analytical methods for wastewater and solid, liquid, and hazardous waste samples was added to Section F.2.

Comment 7c: Representative sampling

There are no criteria in the draft biosolids general permit for determining the number of samples required to ensure representative sampling of biosolids at a regulated facility. ADEQ states that representative sampling may require taking more samples or sampling more frequently than the minimum sampling frequency." [See Biosolids General Permit AZGP2013-001, p. 10]. Again, this general permit language is discretionary and not enforceable. A permittee has no requirements or criteria to guide the determination of how many samples will ensure representative sampling. What will ADEQ do if a permittee conducts monitoring at the minimum monitoring frequency and asserts that the minimum ensures representative sampling? As written, ADEQ will have to accept the permittee's determination of what is necessary to ensure representative sampling.

Response 7c:

The language is general because the number of samples necessary to ensure the sampling is representative depends on the treatment processes used at the facility. The number of samples to be collected is to be determined by the permittee based on the treatment processes and must be described in the On-site Management Plan, related SOPs, and QA Manual required by Parts IV.J and V.A. ADEQ reviews these plans and conducts inspections to ensure the appropriate number of samples is collected. The sampling requirements in this permit are also identical to the sampling requirements in the individual permits.

No changes were made to the final permit in response to this comment.

Comment 7d: Testing for hazardous waste determinations

The note at the beginning of Part IV of the biosolids general permit defines non-hazardous and hazardous sewage sludge. The note states that hazardous sewage sludge "must be disposed of in accordance with the Resource Conservation and Recovery Act (RCRA)" and that sludge with polychlorinated biphenyls (PCBs) in excess of 50 mg/kg must be disposed of in accordance with 40 CFR 761." [Biosolids General Permit, P. 9]. While the Sierra Club thinks this note suffers from the same lack of specificity as other provisions of the biosolids general permit related to treatment and preparation of biosolids because of the generic references to comply with RCRA and 40 CFR 761.

The biosolids general permit suffers from an another major implementation problem, i.e., the lack of specific requirements for a POTW or TWTDS to do initial sludge characterization before they start preparing and distributing biosolids for land application. Where does the draft general biosolids permit require sludge characterization testing to determine whether the biosolids are hazardous or non-hazardous or whether the sludge contains unacceptable levels of PCBs?

Section IV, Part F of the proposed permit states that the permittee shall test biosolids for purposes of hazardous waste determination at least annually as described in Appendix C. However, there is no

requirement to initially test and characterize sewage sludge as hazardous or non-hazardous. Section IV, Part F (5) should be amended to require an initial hazardous waste determination as a condition of ADEQ authorization under the biosolids general permit and at least annually thereafter.

ADEQ also notes that Appendix C: Testing for Hazardous Waste Determination does not include testing for PCBs. It is not clear how ADEQ will implement the requirement that facilities dispose of PCB-contaminated sludge "in accordance with 40 CFR 761" when there are no requirements in Appendix C or the monitoring sections of the permit to test for PCB levels in biosolids.

Response 7d:

PCBs are regulated by EPA as a toxic waste under the Toxic Substance Control Act (TSCA) or 40 CFR 761 and are not considered hazardous waste. ADEQ has no reason to expect that PCBs would be present in sewage sludge.

No changes were made to the final permit in response to this comment.

Comment 7e: Pretreatment Requirements

The pretreatment requirements section at Section (F)(6) highlights the difficulty of trying to regulate different types of POTWs and TWTDS under a general permit and not having an ability to tailor permit conditions under an individual AZPDES permit. Section F(6) starts out with the phrase: "If the facility is a WWTP that is required to implement a pretreatment plan under 40 CFR Part 403 or R18-9-A906, the permittee shall...." Again, this language inappropriately shifts ADEQ's duty to identify and regulate POTWs that have pretreatment programs and that are required to conduct full priority pollutant scans and quarterly sampling for pollutants of concern to the permittees. Who makes the determination under the general biosolids permit that an individual general permittee must comply with the testing requirements in Section F(6). It is not clear from the NOI requirements in Part III that persons who seeking authorization to prepare biosolids under the draft general permit are required to disclose that they have a pretreatment program (Part III, B (8) only includes a reference to "pretreatment standards."). Sierra Club suggests that, at a minimum, ADEQ 1) require applicants to disclose whether they have a pretreatment program in the NOI, and 2) remove the "if" in Section F(6). ADEQ should revise the first sentence of Section (F)(6) make the language mandatory, i.e., ..."A POTW or TWTDS that is required to implement a pretreatment program shall...."

Response 7e:

A requirement to provide information regarding a pretreatment program has been added to Part III.B.8:

In addition, the first sentence in Section (F)(6) has been revised as requested, and the language in this section is similar to that in the individual permits.

Comment 7f: Classification of Exceptional Quality Biosolids

The draft biosolids general permit does not clearly describe or prescribe requirements for classification of a biosolids as Exceptional Quality, Class A, or Class B biosolids. It would seem that permittees would have clear incentives to demonstrate that their biosolids are of Exceptional Quality because: 1) there are no restrictions on the sale of EQ biosolids for application to lawns and gardens, and 2) they can claim certain exemptions from certain management practices. Unfortunately, it is not clear how a permittee goes about obtaining a classification for the biosolids prepared at a POTW or TWTDS. In particular, the requirements that must be met before biosolids can be classified as Exceptional Quality (EQ) biosolids are very unclear. While Sierra Club was able to find permit terms and conditions that reference EQ biosolids (e.g., Section G(1)(e) and (f)], Sierra Club was unable to find a clear description of how to obtain an EQ classification of biosolids in the draft general permit. All we were able to find is the following language in Section G(1)(f):

> *"The permittee shall be able to demonstrate that all biosolids meet the definition of EQ biosolids in order to claim exemption from the management practices in R18-9-1007 and R18-9-1008. If claiming biosolids are EQ, during the first two years of*

this permit, the permittee shall submit the results of all biosolids testing and details about the pathogen and vector control treatment processes to the ADEQ Biosolids Coordinator." [See P. 13 of the General Permit].

ADEQ provides a definition of "Exceptional Quality Biosolids in Appendix B of the biosolids general permit [See p. 24]. EQ Biosolids are defined as biosolids that meet pollutant concentrations in R18-9-1005, Table 2; Class A pathogen reduction requirements in R18-9-1006, and one of the vector reduction requirements prescribed in R18-9-1010(A)(1) through R18-9-1010(A)(8).

Again, it is unclear when and how a permittee makes the EQ demonstration to the Biosolids Coordinator. The general permit states only that the permittee have the ability to demonstrate that biosolids meet the definition of EQ biosolids. While it may be legal nitpicking, the biosolids general permit should state that the permittee "shall demonstrate" not "shall be able to demonstrate" that biosolids meet the definition of EQ.

The specific testing requirements for making an EQ demonstration are not clear. How does a permittee make a demonstration that prepared biosolids meet the definition of EQ biosolids? What testing results need to be submitted to ADEQ? How many sample results? In what time frame? Are there continuing testing requirements after an initial EQ biosolids demonstration is made to maintain an EQ classification. The general biosolids permit does not say. Presumably, a POTW or TWTDS cannot apply , sell or give away EQ biosolids until the required EQ demonstration is made, but given the general nature of classification process as described in the draft general biosolids permit, is it is unlikely that a permittee would ever be able to secure an EQ biosolids classification from ADEQ.

Response 7f:

The language and the requirement is the same in the general permit and individual permit. At the time of the initial land application registration process, the applicant must indicate on the registration form which pathogen treatment alternative and vector treatment method option will be used. The applicant is then required to provide documentation to ADEQ to demonstrate which class of Biosolids (A / B / EQ) they intend to apply on the registered or newly registered site. The registration form may be found at http://www.azdeq.gov/environ/water/permits/download/registration.pdf

No changes were made to the final permit in response to this comment.

Comment 7g: Testing Requirements for Incoming Biosolids Received from Off-Site Generators

It is hard to reconcile the minimum monitoring frequencies prescribed in the minimum monitoring frequency table in Section G(1)(a) with testing requirements for incoming biosolids received from off-site generators prescribed in Section F (7). For small generators (i.e. zero to 290 metric tons), the minimum monitoring frequency for inorganic pollutants is only one sample per year. However, Section F (7)(a) requires that a permittee shall monitor or obtain monitoring results from each generator:

"...for all biosolids accepted for processing at the facility from that generator as specified in Table 1 of Section G.1.a below. The permittee shall not accept biosolids for processing that exceed any of the metals ceiling concentrations given in the table."

Does this mean that for small off-site generators (up to 270 metric tons) that monitor once a year, that a permittee can accept biosolids generated from that small off-site generator for an entire year until the next annual metals monitoring is performed? What happens if a small off-site generator fails to comply with one or more metals ceiling concentrations in the biosolids that are generated off-site. Does the latter scenario mean the permittee is prohibited from accepting biosolids from that small off-site generator for an entire year until the next metals monitoring tests are performed? ADEQ should clarify what happens when metals ceiling concentrations are not met by off-site generators. Does failing a metals ceiling concentration trigger additional monitoring by the off-site generator? What does the off-site generator do with the non-compliant biosolids? More importantly, what does a permittee do with an off-site generator whose incoming biosolids are determined to be hazardous?

Response 7g:

Testing is required for in-coming biosolids for several reasons, including 1) to ensure that the permittee is only accepting appropriate materials for processing, 2) to reduce the possibility that the final product will contain high levels of metals or hazardous materials, and 3) to assist in determining the source of any material that might cause the final product to fail the final testing required prior to distribution or use. The permit does allow a permittee to accept biosolids generated from a small off-site generator (up to 270 metric tons) for an entire year until the next annual metals monitoring is performed. If that generator also has an AZPDES permit, the permit requires that same frequency of testing. If the metals ceiling concentrations are not met in the in-coming biosolids, the permittee must either refuse them as required by Part IV.F.7.a or dispose of them properly as required by Part IV.G.1.c. Regardless of the testing requirements for the in-coming biosolids, the burden for meeting the metals ceiling concentrations in the final product is and always remains on the permittee.

No changes were made to the final permit in response to this comment.

Comment 7h: Pathogen Reduction Requirements

The complexity and discretion afforded permittees in implementing pathogen reduction requirements highlights the difficulty of trying to regulate POTWs and TWTDS under a general permit, instead of an individual AZPDES permit. As ADEQ knows, there are 12 alternatives for preparing Class A biosolids and 7 alternative ways to satisfy Class B pathogen reduction requirements. Under an individual AZPDES permitting approach, ADEQ could tailor biosolids permit conditions to the type of biosolids to be prepared at the facility (EQ, Class A or Class B), and prescribe the appropriate and specific permit terms and conditions for the pathogen reduction alternative to be used as indicated by a permittee in an individual permit application. With the general permitting approach, ADEQ must craft general permit conditions addressing all possible alternative pathogen reduction strategies. In our view, the draft biosolids general permit fails to regulate POTWs and TWTDS adequately because it does not contain enough specificity to ensure pathogen reduction.

Given the fact that the pathogen reduction requirements of the general permit are some of the most important permit conditions, ADEQ should provide greater specificity and detail in the permit to ensure that the permit actually accomplishes the goal of pathogen reduction to protect public health and the environment.

The proposed biosolids general permit does little more than say follow the requirements of A.A.C. R18-9-1006. The permit should do more than say "follow the rules." The biosolids permit should state explicitly whether the facility is authorized to produce EQ, Class A, or Class B biosolids. For Class A biosolids, the permit should state specifically whether the permittee will use fecal coliform densities or the density of Salmonella sp. bacteria to satisfy Class A pathogen reduction requirements and prescribe the criteria that must be met. For Class A bioasolids, the permit should require that the permittee identify the specific pathogen reduction alternative (1-12) that the POTW or TWTDS will use to satisfy Class A requirements. ADEQ can then craft more specific and enforceable permit terms and conditions based on the pathogen reduction option identified by the permittee. The same approach can be used if a permittee plans to prepare Class B biosolids. The permit should state specifically that the permittee is authorized to prepare Class B biosolids and the permittee should be required to identify which of the seven alternative Class B pathogen reduction options the POTW or TWTDS plans to use. ADEQ can then craft specific terms and conditions in a permit based on the Class B pathogen reduction althernative selected by the permittee.

The permit should specify microbiological monitoring requirements (i.e, fecal coliform, Salmonella, enteric virus, helminth ova) to ensure that pathogen reduction requirements are met. Monitoring frequencies, number of samples, analytical methods, monitoring events, ensuring representative sampling, and testing requirements prior to distribution, use, or disposal should be specified in the permit. A general permittee should have no discretion in how microbiological testing and monitoring requirements are implemented. ADEQ has a duty to prescribe these requirements with sufficient detail to ensure the protection of public health.

Response 7h:

The requirements in this general permit are no different than the requirements in an individual permit. Both types of permits allow the permittee to treat biosolids to meet different classes of quality as appropriate for the final use. Neither type of permit prescribes specific a pathogen reduction method or vector attraction reduction procedure. This allows the permittees flexibility to change the treatment methods or the final use of the product as necessary or appropriate. Compliance with the various acceptable treatment and use requirements is determined through the reporting and notification requirements in the permit as well as land application registration requirements and ADEQ compliance inspections.

No changes were made to the final permit in response to this comment.

Comment 7i: Vector attraction reduction requirements

The vector attraction reduction requirements prescribed at p. 14 have the same problem as the pathogen reduction provisions in the draft general permit. Instead of prescribing a specific and enforceable vector attraction reduction procedure in the draft biosolid general permit, ADEQ states only that "[t]he permitteee shall ensure that all biosolids generated and /or prepared at this facility meet the vector attraction reduction requirements established in A.A.C. R18-9-1010 when the biosolids are land-applied." Again, this is little more than saying that the permittee shall follow the requirements of R18-9-1010. The permit should specify which of the ten alternative vector attraction reduction requirements the permittee will employ and ADEQ should craft enforceable permit terms based on the vector attraction reduction option selected.

Response 7i:

See the response to Comment 7.h above.

No changes were made to the final permit in response to this comment.

Comment 8: On-site management plan

The biosolids general permit requires the permittee to develop and maintain an on-site management plan within 120 days of receiving authorization to treat and prepare biosolids under the general permit. In other words, ADEQ proposes to authorize treatment and preparation of biosolids at a facility ***prior to*** *the development of an on-site management plan. Sierra Club urges ADEQ to require the development of an on-site management plan as part of the information requirements of a NOI. It makes no sense to authorize preparation of biosolids at a facility before the facility has developed its on-site management plan. ADEQ should require preparation of the plan before an APB is issued.*

Response 8:

Permit coverage may be, and often must be, obtained under a general permit or individual permit before the applicant commences operation of the facility, and the permittees need time to prepare the plan once the process is fully developed. All the treatment and monitoring and reporting requirements apply regardless of whether or not the plan has been completed. The individual permits contain the same requirements.

No changes were made to the final permit in response to this comment.