# **ATTACHMENT 21**

## **EPA REGION I**

### NPDES PERMIT SLUDGE COMPLIANCE GUIDANCE

04 NOVEMBER 1999

#### 2. SURFACE DISPOSAL

This section applies to sewage sludge from the permittee's facility which is by surface disposed. The permittee should answer the following questions. The answer to these questions need to be evaluated to determine which permitting scenario for sewage sludge surface disposal applies. After the permitting scenario is determined, the permittee must comply with the directives contained in the chosen scenario. The permittee must also note the run-off from surface disposal units may be subject to stormwater regulations.

#### 2.1 Question Algorithm

The permittee should review and answer the following questions. The information gathered from answering these questions will aid the permittee in determine the appropriate surface disposal scenario which applies to the sludge generated at the permittee's wastewater treatment facility. The scenario selected will detail which specific Use or Disposal of Sewage Sludge, Part 503, regulations must be complied with for the land application method used by the permittee.

1. Is the facility regulated under 40 CFR §503?

If the facility disposes of its sludge at a municipal solid waste landfill (MSWLF), 40 CFR §503 regulations do not apply. However, the permittee still has some responsibilities. Permit language is in Scenario No.4.

The 40 CFR §503 regulations also do not apply in the case of storage of sewage sludge. An EPA rule of thumb is sludge stored on the land for longer than two years is defined as surface disposal. If a permittee claims storage, or treatment, the permittee's facility must be specifically equipped to support sewage sludge storage. Further, the permittee must ultimately have a clear, final disposition for the sewage sludge.

- 2. Does the following situations exist at a permittee's active sewage sludge disposal unit?
  - a. The unit is located within 60 meters (200 feet) of a fault that has had displacement in the Holocene time (10,000 years);
  - b. A unit located in a unstable area; or
  - c. A unit located in a wetland without a Section 402 or 404 permit.

If any of these situations exist, the active sewage sludge unit should have closed by March 22, 1994. If the active sewage sludge disposal unit is still operating, but one of the previous situations does apply to the unit, that unit must be closed.

- 3. Can the permittee's sewage sludge disposal unit demonstrate they are designed to withstand seismic impacts? If this demonstration cannot be made, the unit must close. This demonstration should be made prior to permit issuance.
- 4. Does the facility have a liner and leachate collection system?

The liner must have a hydraulic conductivity of  $1 \times 10^{-7}$  centimeters per second or less. If the liner does not meet the specified hydraulic conductivity, the sludge disposal unit is regulated as an **unlined** sewage sludge disposal site. There are no pollutant limitations for lined units.

5. What is the distance from the property boundary to the boundary of the active sewage sludge unit? Use the tables below to determine appropriate pollutant limitations for units without a liner or leachate collection on a dry weight basis.

§503.23 TABLE 1 Active Unit Boundary is 150 Meters or More From Property Boundary

Arsenic	73 mg/kg
Chromium	600 mg/kg
Nickel	420 mg/kg

#### §503.23 TABLE 2 Active Unit Boundary is Less Than 150 Meters From Property Boundary

Distance (meters)	Pollutant Concentrations (mg/kg)		
	Arsenic	Chromium	Nickel
0 <distance<25< td=""><td>30</td><td>200</td><td>210</td></distance<25<>	30	200	210
25 <distance<50< td=""><td>34</td><td>220</td><td>240</td></distance<50<>	34	220	240
50 <distance<75< td=""><td>39</td><td>260</td><td>270</td></distance<75<>	39	260	270
75 <distance<100< td=""><td>46</td><td>300</td><td>320</td></distance<100<>	46	300	320
100 <distance<125< td=""><td>53</td><td>360</td><td>390</td></distance<125<>	53	360	390
125 <distance<150< td=""><td>62</td><td>450</td><td>420</td></distance<150<>	62	450	420

6. Does the facility cover the sewage sludge placed in the unit daily?

This practice is considered to achieve both pathogen reduction and vector attraction reduction. If a facility covers the sludge, the permittee must monitor for methane gas.

#### 2.2. Scenario Determination

After the information is gathered and evaluated from the questions in the preceding section, the permittee can select the appropriate surface disposal scenario.

SCENARIO	LINED/UNLINED	DISTANCE TO UNIT BOUNDARY
No.1	Unlined	<150m
No.2	Unlined	0 to 150m
No.3	Lined	NA
No.4	Disposed in Municipal Solid Waste Land Fill	NA

Surface Disposal Scenari	o Selection Table
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#### 2.3. Scenarios

#### 2.3.1. Scenario No.1

Active sewage sludge unit without a liner and leachate collection system with active sewage sludge unit boundary 150 meters or more from the property boundary.

- 1. The permittee and the owner/operator of an active sewage sludge unit shall comply with the following requirements:
  - a. Sewage sludge shall not be placed in an active sewage sludge unit unless the requirement of 40 CFR Part 503, Subpart C are met.
  - b. An active sewage sludge unit located within 60 meters of a fault that has had displacement in Holocene time; located in an unstable area; or located in a wetland, except as provided in a permit issued pursuant to Section 402 or 404 of the Clean Water Act, shall close by March 22, 1994, unless, in the case of an active sewage sludge unit located within 60 meters of a fault that has displacement n Holocene time, otherwise specified by the permitting authority.

- i. The owner/operator of an active sewage sludge unit shall submit a written closure and post closure plan to EPA 180 days prior to the date an active sewage sludge unit closes.
- ii. The closure plan shall consider the elements outlined in Section 6.If an element is not applicable, the owner/operator shall state the reasons in the plan.
- c. The owner of a surface disposal site shall provide written notification to the subsequent owner of the site that sewage sludge was place on the site. The notice should include elements outlined in Section 7. A copy of the notification shall be submitted to the EPA.
- 2. Pollutant limitations
  - a. The maximum concentration of pollutants in the sewage sludge placed in an active sewage sludge unit shall not exceed the following:

Arsenic	73 mg/kg
Chromium	600 mg/kg
Nickel	420 mg/kg

- b. Sewage sludge with metals concentrations which exceed the limitations in Paragraph 2a. shall not be placed in a surface disposal unit.
- 3. The permittee and the owner/operator shall comply with the following management practices:
  - a. The sewage sludge shall not be placed on an active sewage sludge unit if it is likely to adversely affect a threatened or endangered species listed under Section 4 of the Endangered Species Act or its designated critical habitat.
  - b. The run-off from an active sewage sludge unit shall be collected and disposed in accordance with applicable stormwater regulations.
  - c. The run-off collection system for an active sewage sludge unit shall have the capacity to control run-off from a 24 hour 25 year storm event.

- d. i. When a daily cover is placed on an active sewage sludge unit, the concentration of methane gas in air in any structure within the surface disposal site shall not exceed 25 percent of the lower explosive limit, 1.25 percent by volume, for methane gas during the period that the sewage sludge unit is active.
  - ii The concentration of methane gas in air at the property line of the surface disposal site shall not exceed the lower explosive limit, 5 percent by volume, for methane gas during the period that the sewage sludge unit is active.
- e i When a final cover is placed on a sewage sludge unit at closure, and for three years after closure, the concentration of methane gas in air in any structure within the surface disposal site shall not exceed 25 percent by volume, for methane gas.
  - ii The concentration of methane gas in air at the property line of the surface disposal site shall not exceed the lower explosive limit, 5 percent by volume, for methane gas for three years after the sewage sludge unit closes.
- f. A food crop, a feed crop, or a fiber crop shall not be grown on an active sewage sludge unit. The owner/operator of the sewage sludge unit must demonstrate to EPA that public health and the environment are protected from reasonably anticipated adverse effects of pollutants in sewage sludge when crops are grown on a sewage sludge unit.
- g. Animals shall not be grazed on an active sewage sludge unit. The owner/operator of the sewage sludge unit must demonstrate to EPA that public health and the environment are protected from reasonably anticipated adverse effects of pollutants in sewage sludge when animals are grazed on a sewage sludge unit.
- h. Public access to a surface disposal site shall be restricted for the period that the surface disposal site contains an active sewage sludge unit and for three years after the last sewage sludge unit closes.
- i. i. Sewage sludge placed in an active sewage sludge unit shall not contaminate an aquifer.
  - The permittee shall demonstrate that sewage sludge place in an active sewage sludge unit does not contaminate an aquifer by either (1) submission of results of a groundwater monitoring program developed by a qualified groundwater scientist; or (2) submission of a certification by a

qualified groundwater scientist that the sewage sludge does not contaminate and aquifer.

- 4. The following conditions must be documented by the permittee and owner/operator:
  - a. An active sewage sludge unit shall not restrict the flow of a base flood.
  - b. If a surface disposal site is located in a seismic impact zone, an active sewage sludge unit shall be designated to withstand the maximum recorded horizontal ground level acceleration.
  - c. An active sewage sludge unit shall be located 60 meters or more from a fault that has displacement in Holocene time.
  - d. An active sewage sludge unit shall not be located in an unstable area.
  - e. An active sewage sludge unit shall not be located in a wetland.
- 5. If the active sewage sludge unit is not covered daily, the permittee shall meet either Class A or Class B pathogen reduction utilizing one of the methods in Section 4, and one of the vector attraction reduction requirements in Section 5.
- 6. The permittee shall monitor the sewage sludge for the pollutants in Paragraph 2, the pathogen density, and the vector attraction reduction requirements at the following frequency:

SEWAGE SLUDGE PRODUCED (metric tons per 365 day period)	SAMPLING FREQUENCY
0 <sludge(tons)<290< td=""><td>Once per year</td></sludge(tons)<290<>	Once per year
0≤Sludge(tons)<1500	Once per quarter (four times per year)
1500 <u></u> Sludge(tons)<15000	Once per 60 days (six times per year)
Sludge(tons)<15000	Once per Month (12 times per year)

7. When a daily cover is placed on an active sewage sludge unit, the air in the structures within a surface disposal site and at the property line of the surface disposal site shall be monitored continuously for methane gas during the time that the surface disposal site contains an active sewage sludge unit and for three years after the sewage sludge unit closes.

- 8. The permittee shall develop and retain the following information for five years:
  - a. The concentration for each pollutant listed in Paragraph 2a.
  - b. The following certification statement:

"I, certify, under penalty of law, that the information that will be used to determine compliance with the pathogen requirements in [insert \$503.32(a), \$503.32(b)(3) or \$503.32(b)(4) when one of those requirements is met] and the vector attraction reduction requirements in [insert one of the vector attraction reduction requirements in \$503.33(b)(1) through \$503.33(b)(8) when one of those requirements is met] was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including that possibility of fine or imprisonment."

- c. A description of how the pathogen requirements are met.
- d. When the permittee is responsible for the vector attraction reduction requirements, a description of how the vector attraction reduction requirements are met.
- 9. The owner/operator of the surface disposal site shall develop and retain the following information for five years:
- a. The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the management practices in §503.24 and the vector attraction reduction requirement in [insert one of the requirements in §503.33(b)(9) through (b)(11) if one of those requirements is met] was prepared under my direct supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

- b. A description of how the management practices in Paragraphs 3a through 3i are met.
- c. Documentation that the requirements in Paragraphs 4a through 4e are met.
- d. A description of how the vector attraction reduction requirements are met, if the owner/operator is responsible for vector attraction reduction requirements.

- 10. The permittee shall report the information in Paragraphs 7a through 7d annually on February 19. Reports shall be submitted to EPA at the address in the Monitoring and Reporting section of the permit.
- 11. All sewage sludge sampling and analysis procedures shall be in accordance with the procedures detailed in Section 7.
- 12. If the permittee is not the owner/operator of the surface disposal site, the permittee shall notify the owner/operator of the following:
  - a. The requirements in Paragraphs 1a through 1c;
  - b. The management practices in Paragraphs 3a through 3i;
  - c. The requirements in Paragraphs 4a through 4e;
  - d. The requirement in Paragraph 7; and
  - e. The record keeping requirements in Paragraph 9a through 9d.

#### 2.3.2. Scenario No.2

Active sewage sludge unit without a liner and leachate collection system located less than 150 meters from the property line. The permittee is directed to §503.33 TABLE 2, <u>Active Unit</u> <u>Boundary is Less Than 150 Meters From Property Boundary</u> in order to determine the maximum concentrations pollutants for the appropriate distant to the units boundary.

- 1. The permittee and the owner/operator of an active sewage sludge unit shall comply with following requirements:
  - i. Sewage sludge shall not be placed in an active sewage sludge unit unless the requirement of 40 CFR Part 503, Subpart C are met.
  - An active sewage sludge unit located within 60 meters of a fault that has had displacement in Holocene time; located in an unstable area; or located in a wetland, except as provided in a permit issued pursuant to Section 402 or 404 of the Clean Water Act, shall close by March 22, 1994, unless, in the case of an active sewage sludge unit located within 60 meters of a fault that has displacement in Holocene time, otherwise specified by the permitting authority.
  - i. The owner/operator of an active sewage sludge unit shall submit a written closure and post closure plan to EPA 180 days prior to the date an active sewage sludge unit closes.

- ii The closure plan shall consider the elements outlined in Section 6. If an element is not applicable, the owner/operator shall state the reasons in the plan.
- c. The owner of a surface disposal site shall provide written notification to the subsequent owner of the site that sewage sludge was place on the site. The notice should include elements outlined in Section 7. A copy of the notification shall be submitted to the EPA.
- 2. Pollutant limitations
  - a. The maximum concentration of pollutant in the sewage sludge placed in an active sewage sludge unit shall not exceed the following:

<b>Distance</b> (meters)	Pollutant concentrations (mg/kg)		
	Arsenic	Chromium	Nickel
0 <distance<25< td=""><td>30</td><td>200</td><td>210</td></distance<25<>	30	200	210
25 <distance<50< td=""><td>34</td><td>220</td><td>240</td></distance<50<>	34	220	240
50 <distance<75< td=""><td>39</td><td>260</td><td>270</td></distance<75<>	39	260	270
75 <distance<100< td=""><td>46</td><td>300</td><td>320</td></distance<100<>	46	300	320
100 <distance<125< td=""><td>53</td><td>360</td><td>390</td></distance<125<>	53	360	390
125 <distance<150< td=""><td>62</td><td>450</td><td>420</td></distance<150<>	62	450	420

§503.23 TABLE Active Unit Boundary is Less Than 150 Meters From Property Boundary

- b. Sewage sludge with metals concentrations which exceed the limitations in Paragraph 2a. shall not be placed in a surface disposal unit.
- 3. The permittee and the owner/operator shall comply with the following management practices:
  - a. The sewage sludge shall not be placed on an active sewage sludge unit if it is likely to adversely affect a threatened or endangered species listed under Section 4 of the Endangered Species Act or its designated critical habitat.
  - b. The run-off form an active sewage sludge unit shall be collected and disposed in accordance with applicable stormwater regulations.

- c. The run-off collection system for an active sewage sludge unit shall have the capacity to control run-off from a 24 hour 25 year storm event.
- d. i. When a daily cover is placed on an active sewage sludge unit, the concentration of methane gas in air in any structure within the surface disposal site shall not exceed 25 percent of the lower explosive limit, 1.25 percent by volume, for methane gas during the period that the sewage sludge unit is active.
  - 2. The concentration of methane gas in air at the property line of the surface disposal site shall not exceed the lower explosive limit, 5 percent by volume, for methane gas during the period that the sewage sludge unit is active.
- e. i. When a final cover is placed on a sewage sludge unit at closure, and for three years after closure, the concentration of methane gas in air in any structure within the surface disposal site shall not exceed 25 percent of the lower explosive limit, 1.25 percent by volume, for methane gas.
  - 2. The concentration of methane gas in air at the property line of the surface disposal site shall not exceed the lower explosive limit, 5 percent by volume, for methane gas for three years after the sewage sludge unit closes.
- f. A food crop, a feed crop or fiber crop shall not be grown on an active sewage sludge unit. The owner/operator of the sewage sludge unit must demonstrate to EPA that public health and the environment are protected from reasonably anticipated adverse effects of pollutants in sewage sludge when crops are grown on a sewage sludge unit.
- g. Animals shall not be grazed on an active sewage sludge unit. The owner/operator of the sewage sludge unit must demonstrate to EPA that public health and the environment are protected from reasonably anticipated adverse effects of pollutants in sewage sludge when animals are grazed on a sewage sludge unit.
- h. Public access to a surface disposal site shall be restricted for the period that the surface disposal site contains an active sewage sludge unit and for site contains an active sewage sludge unit and for three years after the last sewage unit closes.
- i. i. Sewage sludge placed in an active sewage sludge unit shall not contaminate an aquifer.

- 2. The permittee shall demonstrate the sewage sludge place in an active sewage sludge unit does not contaminate an aquifer by either (i) submission of results of a groundwater monitoring program developed by a qualified groundwater scientist; or (2) submission of certification by a qualified groundwater scientist that the sewage sludge does not contaminate an aquifer.
- 4. The following conditions must be documented by the permittee and owner/operator:
  - a. An active sewage sludge unit shall not restrict the flow of a base flood.
  - b. If a surface disposal site is located in seismic impact zone, an active sewage sludge unit shall be designed to withstand the maximum recorded horizontal ground level acceleration.
  - c. A active sewage sludge unit shall be located 60 meters or more from a fault that has displacement in Holocene time.
  - d. An active sewage sludge unit shall not be located in an unstable area.
  - e. An active sewage sludge unit shall not be located in a wetland.
- 5. If the active sewage sludge unit is not covered daily, the permittee shall meet either Class A or Class B pathogen reduction utilizing one of the methods in Section 4, and one of the vector attraction reduction requirements in Section 5.
- 6. The permittee shall monitor the sewage sludge for the pollutants in Paragraph 2, the pathogen density, and the vector attraction reduction requirements at the following frequency:

SEWAGE SLUDGE PRODUCED (metric tons per 365 day period)	SAMPLING FREQUENCY
0 <sludge(tons)<290< td=""><td>Once per Year</td></sludge(tons)<290<>	Once per Year
0 <sludge(tons)<1500< td=""><td>Once Per Quarter (four times per year)</td></sludge(tons)<1500<>	Once Per Quarter (four times per year)
1500 <u>&lt;</u> Sludge(tons)<15000	Once per 60 Days (six times per year)
Sludge(tons)≤15000	Once per Month (12 times per year)

#### **Sampling Frequency Table**

- 7. When a daily cover is placed on an active sewage sludge unit, the air in the structures within a surface disposal site and at the property line of the surface disposal site shall be monitored continuously for methane gas during the time that the surface disposal site contains an active sewage sludge unit and for three years after the sewage sludge unit closes.
- 8. The permittee shall develop and retain the following information for five years:
  - a. The following certification statement:

"I, certify, under penalty of law, that the information that will be used to determine compliance with the pathogen requirements in [insert §503.32(a), §503.32(b)(2), §503.32(b)(4) when one of those requirements is met] and the vector attraction reduction requirements in [insert one of the vector attraction reduction requirements in §503.33(b)(1) through §503.33(b)(8) when one of those requirements is met] was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine or imprisonment."

- b. A description of how the pathogen requirements are met.
- c. When the permittee is responsible for the vector attraction reduction requirements, description of how the vector attraction reduction requirements are met.
- 9. The owner/operator of the surface disposal site shall develop and retain the following information for five years:
  - a. The concentration of each pollutant listed in Paragraph 2a.
  - b. The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the management practices in §503.24 and the vector attraction reduction requirement in [insert one of the requirements in §503.33(b)(9) through (b)(11) if one of those requirements is met] was prepared under my direct supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

c. A description of how the management practices in Paragraphs 3a through 3i are met.

- d. Documentation that the requirements in Paragraphs 4a through 4e are met.
- e. A description of how the vector attraction reduction requirements are met, if the owner/operator is responsible for vector attraction reduction requirements.
- 10. The permittee shall report the information in Paragraphs 7a through 7d annually on February 19. Reports shall be submitted to EPA at the address in the Monitoring and Reporting section of the permit.
- 11. All sewage sludge sampling and analysis procedures shall be in accordance with the procedures detailed in Section 7.
- 12. If the permittee is not the owner/operator of the surface disposal site, the permittee shall notify the owner/operator of the following:
  - a. The requirements in Paragraphs 1a through 1c;
  - b. The management practices in Paragraphs 3a through 3i;
  - c. The requirements in Paragraphs 4a through 4e;
  - d. The requirement in Paragraph 7; and
  - e. The record keeping requirements in Paragraph 9a through 9e.

#### 2.3.3. Scenario No.3

This applies to an active sewage sludge unit with a liner and a leachate collection system.

- 1. The permittee and the owner/operator of an active sewage sludge unit shall comply with the following requirements:
  - a. Sewage sludge shall not be placed in an active sewage sludge unless the requirement of 40 CFR Part 503, Subpart C are met.
  - b. An active sewage sludge unit located within 60 meters of a fault that has had displacement in Holocene time; located in an unstable area; or located in a wetland, except as provided in a permit issued pursuant to Section 402 or 404 of the Clean Water Act, shall close by March 22, 1994, unless, in the case of an active sewage sludge unit located within 60 meters of fault that has displacement in Holocene time, otherwise specified by the permitting authority.
    - i. The owner/operator of an active sewage sludge unit shall submit a written closure and post closure plan to EPA 180 days prior to the

date an active sewage sludge unit closes.

- ii. The closure plan shall consider the elements outlined in Section 6. If an element is not applicable, the owner/operator shall state the reasons in the plan.
- c. The owner of a surface disposal site shall provide written notification to the subsequent owner of the site that sewage sludge was placed on the site. The notice should include elements outlined in Section 7. A copy of the notification shall be submitted to the EPA.
- 2. The permittee shall comply with the following management practices:
  - a. The sewage sludge shall not be placed on an active sewage sludge unit if it is likely to adversely affect a threatened or endangered species listed under Section 4 of the Endangered Species Act or its designated critical habitat.
  - b. The run-off from an active sewage sludge unit shall be collected and disposed in accordance with applicable stormwater regulations.
  - c. The run-off collection system for an active sewage sludge unit shall have the capacity to handle run-off from a 24 hour 25 year storm event.
  - d. The leachate collection system for an active sewage sludge unit shall be operated and maintained during the period the sewage sludge unit is active and for three years the sewage sludge unit closes.
  - e. The leachate shall be collected and disposed of in accordance with applicable regulations during the period the sewage sludge unit is active and for three years after it closes.
  - f. i. When a daily cover is placed on an active sewage sludge unit, the concentration of methane gas in air in any structure within the surface disposal site shall not exceed 25 percent of the lower explosive limit, 1.25 percent by volume, for methane gas during the period that the sewage sludge unit is active.
    - ii. The concentration of methane gas in air at the property line of the surface disposal site shall not exceed the lower explosive limit, 5 percent by volume, for methane gas during the period that the sewage sludge unit is active.

- g. i. When a final cover is placed on a sewage sludge unit at closure, and for three years after closure, the concentration of methane gas in air in any structure within the surface disposal site shall not exceed 25 percent of the lower explosive limit, 1.25 percent by volume, for methane gas.
  - ii The concentration of methane gas in air at the property line of the surface disposal site shall not exceed the lower explosive limit, 5 percent by volume, for methane gas for three years after the sewage sludge unit closes.
- h. A food crop, a feed crop, or fiber crop shall not be grown on an active sewage sludge unit. The owner/operator of the sewage sludge unit must demonstrate to EPA that public health and the environment are protected from reasonably anticipated adverse effects of pollutants in sewage sludge when crops are grown on a sewage sludge unit.
- i. Animals shall not be grazed on an active sewage sludge unit. The owner/operator of the sewage sludge unit must demonstrate to EPA that public health and the environment are protected from reasonably anticipated adverse effects of pollutants in sewage sludge when animals are grazed on a sewage sludge unit.
- j. Public access to a surface disposal site shall be restricted for the period that the surface disposal site contains an active sewage sludge unit and for three years the last sewage sludge unit closes.
- k. i. Sewage sludge placed in an active sewage sludge unit shall not contaminate an aquifer.
  - ii The permittee shall demonstrate that sewage sludge place in an active sewage sludge unit does not contaminate an aquifer by either (1) submission of results of a groundwater monitoring program developed by a qualified groundwater scientist; or (2) submission of a certification by a qualified groundwater scientist that the sewage sludge does not contaminate an aquifer.
- 3. The following conditions must be documented by the permittee and owner/operator:
  - a. An active sewage sludge unit shall not restrict the flow of a base flood.
  - b. If a surface disposal site is located in a seismic impact zone, an active sewage sludge unit shall be designed to withstand the maximum recorded horizontal ground level acceleration.

- c. A active sewage sludge unit shall be located 60 meters or more from a fault that has displacement in Holocene time.
- d. An active sewage sludge unit shall not be located in an unstable area.
- e. An active sewage sludge unit shall not be located in a wetland.
- 4. If the active sewage sludge unit is not covered daily, the permittee shall meet either Class A or Class B pathogen reduction utilizing one of the methods in Section 4, and one of the vector attraction reduction requirements in Section 5.
- 5. The permittee shall monitor the sewage sludge for the pollutants in Paragraph 2, the pathogen density, and the vector attraction reduction requirements at the following frequency:

SEWAGE SLUDGE PRODUCED (metric tons per 365 day period)	SAMPLING FREQUENCY
0 <sludge(tons)<290< td=""><td>Once per Year</td></sludge(tons)<290<>	Once per Year
0 <sludge(tons)<1500< td=""><td>Once Per Quarter (four times per year)</td></sludge(tons)<1500<>	Once Per Quarter (four times per year)
1500 <sludge(tons)<15000< td=""><td>Once per 60 Days (six times per year)</td></sludge(tons)<15000<>	Once per 60 Days (six times per year)
Sludge(tons)<15000	Once per Month (12 times per year)

#### **Sampling Frequency Table**

- 6. When a daily cover is placed on an active sewage sludge unit, the air in the structures within a surface disposal site and at the property line of the surface disposal site shall be monitored continuously for methane gas during the time that the surface disposal site contains an active sewage sludge unit and for three years after the sewage sludge unit closes.
- 7. The permittee shall develop and retain the following information for five years:
  - a. The following certification statement:

"I, certify, under penalty of law, that the information that will be used to determine compliance with the pathogen requirements in <u>[insert §503.32(a),</u> <u>§503.32(b)(2), §503.32(b)(3) or §503.32(b)(4)</u> when one of those requirements is

<u>met]</u> and the vector attraction reduction requirements in <u>[insert one of the vector attraction reduction requirements in §503.33(b)(1) through §503.33(b)(8) when one of those requirements is met]</u> was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine or imprisonment."

- b. A description of how the pathogen requirements are met.
- c. When the permittee is responsible for the vector attraction reduction requirements, a description of how the vector attraction reduction requirements are met.
- 8. The owner/operator of the surface disposal site shall develop and retain the following information for five years:
  - a. The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with management practices in §503.24 and the vector attraction reduction requirement in [insert one of the requirements in §503.33(b)(9) through (b)(11) if one of those requirements is met] was prepared under my direct supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

- b. A description of how the management practices in Paragraphs 2a through 2k are met.
- c. Documentation that the requirements in Paragraphs 3a through e are met.
- d. A description of how the vector attraction reduction requirements are met, if the owner/operator is responsible for vector attraction reduction requirements.
- 9. The permittee shall report the information in Paragraphs 8a through c annually on February 19. Reports shall be submitted to EPA at the address in the Monitoring and Reporting section of the permit.
- 10. All sewage sludge sampling and analysis procedures shall be in accordance with the procedures detailed in Section 7.

- 11. If the permittee is not the owner/operator of the surface disposal site, the permittee shall notify the owner/operator of the following:
  - a. The requirements in Paragraphs 1a through e;
  - b. The management practices in Paragraphs 2a through k;
  - c. The requirements in Paragraph 3a through e;
  - d. The requirement in Paragraph 6; and
  - e. The record keeping requirements in Paragraphs 8a through d.

#### 2.3.4. Scenario No.4

A permittee who dispose of their sludge in a municipal solid waste land fill are regulated under 40 CFR Part 258.

- 1. The permittee must dispose of the sewage sludge in a landfill which is in compliance with 40 CFR Part 258.
- 2. Sewage sludge disposed of in a municipal solid waste landfill shall not be hazardous. The Toxicity Characterization Leachate Protocol (TCLP) shall be used as demonstration that the sludge is non-hazardous.
- 3. The sewage sludge must not be liquid as determined by the Paint Filter Liquids Test method (Method 9095 as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, EPA publication No. SW-846).