2.2. Contents of Notice of Intent

NOTE: It is not necessary to submit an NOI if a current application for an individual NPDES permit for sewage sludge has been submitted to EPA Region 8 and the application is considered complete.

The information requested in the NOI may be submitted in one of the following three methods:

- Letter format;

- Combination of hard (printed) copy using EPA=s Biosolids Data Management System (BDMS) and in letter format. The letter format shall include the required information not included in the BDMS and the certification as given in Part 2.2.4 (The BDMS program may be downloaded from the Region 8 Biosolids Management Program=s WEB page. The URL for the BDMS is http://www.epa.gov/region08/biosolids/; or

- Combination of letter format and electronic format. The letter format portion of the submittal shall include the information required in Part 2.2.1, the required information that is not submitted in electronic format, a description of the electronic format used, a listing of the information included in electronic format, and the certification as given in Part 2.2.4. The information submitted in electronic format shall be in either BDMS, a *Lotus 7 123* spreadsheet (version 9.8 or older), a *Microsoft 7 Excel* spreadsheet (version Office 2003 or older), or a *Microsoft 7 Access* database (version Office 2003 or older). The electronic files must be on either CD-ROMs, DVDs, 3 2 inch floppy disks. The electronic files must be in the form that they can be opened by the aforementioned software programs and the data viewed and/or printed in those programs.

Applicants shall complete the appropriate parts of the NOI as specified below based on the category for which coverage is being requested:

Category	Parts of NOI to Complete
1	Parts 2.2.1 and 2.2.4.
2	Parts 2.2.1, 2.2.2, and 2.2.4.
3	Parts 2.2.1, 2.2.3, and 2.2.4.

NOTE: All applicants must complete Part 2.2.4 and include the certification statement in the signed document.

2.2.1. **Basic Information - All Applicants Complete**

2.2.1.1. Official or legal name of applicant.

2.2.1.2. Responsible Official
- Name
- Title
- Mailing Address
- Phone

2.2.1.3. Contact Person
- Name
- Title
- Office Phone
- Cell Phone

- E-mail
- Fax

2.2.1.4. Facility/operation Physical Address
- Street
- City/State
- County
- Latitude and longitude of the facility

2.2.1.5. Facility/operation Mailing Address

2.2.1.6. Status of applicant as Federal, State, public, private, or other entity.

2.2.1.7. Indian Country
- Is the facility/operation located in Indian country?
- Are any of the sewage sludge use/disposal activities covered under this notice of intent located on Indian country? If yes, provide a description.

2.2.1.8. Specify the category or subcategories, as described in Part 1.1, for which coverage under this permit is requested. Coverage under more than one subcategory may be requested.

Category 1: Facilities/operations that generate and/or partially treat sewage sludge, but do not use/dispose of sewage sludge.

Category 2: Facilities/operations that use/dispose of sewage sludge and may also generate and/or treat sewage sludge. Facilities/operations that treat sewage sludge and have someone else use/dispose of the sewage sludge without further treatment (e.g., contractors land applying sewage sludge) are considered to be in this category.
Subcategory 2.a - Land application of sewage sludge
Subcategory 2.b - Landfilling of sewage sludge
Subcategory 2.c - Surface disposal of sewage sludge

Category 3: Wastewater lagoon systems that need to land apply sewage sludge on an occasional, restricted basis.

Does the facility/operation presently have coverage under this general permit and application is being made for a change or addition in coverage under the general permit? If yes, provide a brief description in the change or addition in coverage that is being requested.

2.2.1.9. Is wastewater treatment done at this facility? If yes, provided the following information:
- Approximate population served.
- A brief description of the wastewater treatment process, including the number of treatment units (e.g., two primary clarifiers). A schematic of the treatment process shall be included as part of the description. If the facility is a wastewater lagoon system, give the number of cells and the area (in acres) of each cell.
- Average annual flow in million gallons per day (MGD).
- Does the facility have a pretreatment program?

2.2.1.10. Does this facility have an NPDES permit for the discharge of wastewater? If yes, give the NPDES permit number and permit expiration date.

2.2.1.11. Does this facility/operation currently have or has it previously had an NPDES permit that authorizes the use/disposal of sewage sludge? If yes, give the NPDES permit number and permit expiration date.

2.2.1.12. Does this facility/operation have authorization by the State for the use and/or disposal of sewage sludge? If yes, give the name of the State authorization document and the authorization number.

2.2.1.13. The amount of sewage sludge generated at the facility in dry metric tons per year (dmt/y). If a wastewater lagoon system, give an estimate of the amount of sewage sludge to be removed in dry metric tons (dmt).

2.2.1.14. Is any sewage sludge brought into the facility from other sources? If yes, list amount in dmt/y for each source and give the name and location of each source.

2.2.1.15. Is any sewage sludge sent to another facility for treatment prior to final use/disposal? If yes, list amount in dmt/y for each facility and give the name and location of each facility.

2.2.1.16. Applicants for coverage under Category 1, provide a summary of analytical monitoring data (i.e., sewage sludge quality, percent solids, etc.) on sewage sludge collected during the previous calendar year or the previous 12 months. Give the average and maximum values.

2.2.1.17. Provide a brief description of the sewage sludge treatment provided at the facility and give the number of treatment units involved (see Table NOI-1).

TABLE NOI-1
BIOSOLIDS TREATMENT PROVIDED (Number of Units)

THICKENING	CONDITIONING	OTHER
Gravity	Chemical Conditioning	Wastewater Lagoon
DAF		Mixing of Biosolids
Centrifuge	DEWATERING	Oxidation Ditch
	Vacuum Filter	
STABILIZATION	Pressure Filter	
Aerobic Digestion	Belt Filter	
Anaerobic Digestion	Drying Bed	
Heat Treatment	Drying Lagoon	
Wet Oxidation	Heat Drying	
Chemical (Lime) Stab.	Centrifuge	
Composting		
Biosolids Lagoons		

2.2.2. Additional Information for Applicants for Coverage Under Category 2

2.2.2.1. Provide a brief narrative description of the methods of final use/disposal of sewage sludge that is treated and/or received at the facility or operation. Also provide the information in the following table (TABLE NOI-2) for the previous calendar year or previous 12 months. Enter 0 or N/A where not applicable. For those facilities that will be starting use/disposal of sewage sludge, provide an estimate of the amount that will occur during the first year of use/disposal.

TABLE NOI-2
FINAL USE/DISPOSAL FOR PREVIOUS CALENDAR YEAR OR PREVIOUS 12 MONTHS

TOTAL ANNUAL PRODUCTION (Predigestion) in dmt	
TOTAL ANNUAL PRODUCTION (Postdigestion) in dmt	
LAND APPLICATION (Total): _____ dmt	
Bulk Sewage Biosolids (Total):_____dmt	Derived Material (Total): _____dmt
Agricultural Land: _____dmt	Agricultural Land: _____dmt
Range Land: _____ dmt	Range Land: _____dmt
Forest: _____dmt	Forest: _____dmt
Public Contact Site: _____dmt	Public Contact Site: _____dmt
Reclamation: _____dmt	Reclamation: _____ dmt
Sold or Given Away: _____dmt	Sold or Given Away: _____dmt
Lawn or Garden: _____dmt	Lawn or Garden: _____dmt
SURFACE DISPOSAL (Total): _____dmt	
With liner and leachate collection system: _____dmt	
Without liner and leachate collection system: _____dmt	
LANDFILL (Total): _____dmt	
Landfill Disposal: _____dmt	Landfill Cover: _____dmt
Landfill Name: _____	
Does the landfill comply with 40 CFR Part 258 requirements? (Y/N)	
INCINERATION: _____dmt	
OTHER _____ _____dmt	
STORED: _____dmt	
LONG TERM TREATMENT: _____dmt	

2.2.2.2. Are contract appliers and/or haulers used to land apply sewage sludge and/or haul the sewage sludge to the use/disposal site(s)? If yes, provide the following information for each contract applier or hauler:

- ! Name of company, organization, or individual;
- ! Mailing address;
- ! Name and phone number of contact person; and
- ! Amount of Use: (Majority/Occasional)

2.2.2.3. Land Application of Sewage Sludge If application is being made to land apply sewage sludge under Subcategory 2.a., provide the information specified below. The information is to be provided for each active land application site and for each site that is planned to be used during the first six (6) months of coverage under this permit. (For those sites where land application will begin more than six months after start of coverage under this permit, the permittee shall submit an addendum to its NOI with the information specified below at least 45 days before the planned start of land application at the site. Coverage for additional land application sites (not identified in the original NOI) begins 45 days after submittal of the required information unless the permittee is notified otherwise by the permit issuing authority.):

2.2.2.3.1. For each land application site supply the applicable information listed in Table NOI-3.

TABLE NOI-3
LAND APPLICATION SITE INFORMATION

Site Name	Site No.
State Authorization No.	State Site No.
Name of nearest stream and distance	
Owner	
Operator	
Applier	
Latitude	Longitude
Street address or other locational description, or	
Section _____; Township _____; Range _____	
Size (acres)	Size (hectares)
Crop(s)	

2.2.2.3.2. <u>Metals, Total Solids, Nitrogen, and Phosphorus Data for Sewage Sludge</u>: For sewage sludge that is land applied or will be land applied, provide the specified data for the pollutants and total solids listed in Table NOI-4. The data shall be based on a minimum of three sampling events that occurred at least one month apart and the data shall be no more than four and one-half years old. New facilities/operations see **<u>Note</u>** following Table NOI-5.

TABLE NOI-4
METALS, TOTAL SOLIDS, NITROGEN, & PHOSPHORUS DATA FOR SEWAGE SLUDGE THAT IS LAND APPLIED

Pollutants & Characteristics	Units	Average Concentration	Maximum Concentration	Number of Samples
Arsenic (As) a/	mg/Kg			
Cadmium (Cd) a/	mg/Kg			
Copper (Cu) a/	mg/Kg			
Lead (Pb) a/	mg/Kg			
Mercury (Hg) a/	mg/Kg			
Molybdenum (Mo) a/	mg/Kg			
Nickel (Ni) a/	mg/Kg			
Selenium (Se) a/	mg/Kg			
Zinc (Zn) a/	mg/Kg			
Total Solids	%			
Nitrite plus Nitrate (N)	%			
Total Kjeldahl Nitrogen (N)	%			
Ammonia (N)	%			
Total Phosphorus (P)	%			

a/ Report as mg per Kg of total solids (i.e., dry weight basis).

2.2.2.3.3. Describe briefly how the applicable vector attraction reduction requirements required under 40 CFR Part 503 for land application of sewage sludge will be met.

2.2.2.3.4. Describe briefly how the applicable pathogen requirements under 40 CFR Part 503 for land application of sewage sludge will be met.

In addition, provide a summary of data that will show that the sewage sludge that has been or will be land applied can comply with the applicable pathogen requirements in 40 CFR Part 503.32. For Class A pathogen requirements the data shall include both monitoring data for the applicable pathogens and data from applicable process requirements. For Class B pathogen requirements the data may be either monitoring data for fecal coliforms and/or data for the applicable process requirements (e.g., time and temperature for sewage sludge digestion, etc.,). The data shall be based on a minimum of three sampling events that occurred at least one month apart and the data shall be no more than four and one-half years old. See Table NOI-5 for list of pollutants that may be applicable and the data to provide. New facilities/operations see **Note** following Table NOI-5.

TABLE NOI-5
PATHOGEN AND TOTAL SOLIDS DATA FOR SEWAGE SLUDGE THAT IS LAND APPLIED

Pollutants & Characteristics	Units	Average Concentration a/	Maximum Concentration	Number of Samples
Fecal Coliform	No./g b/			
Salmonella	No./4g b/			
Helminth OVA	No./g b/			
Enteric Virus	PFU/g b/			
Total Solids	%			

a/ Geometric mean shall be determined for fecal coliforms. Arithmetic mean shall be determined for the other pollutants and total solids.

b/ Results shall be reported on a dry weight basis.

Note: For Parts 2.2.2.3.2 and 2.2.2.3.4 above, new facilities/operations that do not yet have the required sewage sludge monitoring data shall submit the required data separately within six (6) months after the start of land application of sewage sludge. The data shall be based on a minimum of three (3) sampling events and the samples shall be collected in accordance with the requirements of Part 4.1.4. New operations that land apply sewage sludge, but do not treat it, are required to submit all of the required data with the NOI.

2.2.2.3.5. Provide the data on metals, total solids, nitrates, and phosphorus listed in Table NOI-6 for the soils at each land application site. The data shall be no more than four and one-half years old unless the permit issuing authority grants prior approval to use older data. Except as noted below, a minimum of six representative samples of one foot depth each for each 320 (or less) acre area are to be collected into one sample and analyzed. Guidance on collecting representative samples using a random sampling process may be found in Section 2.4 of the 1999 version of the EPA Region 8 Biosolids Management Handbook. In addition, the local office of the agricultural extension service, the State Land Grant University, etc., might have guidance on collecting representative samples. For those land application sites that have length to width ratios greater than 32:1 and are more than 4.0 miles long, the applicant shall submit a proposed sampling plan to the permit issuing authority for approval. Small-scale landscaping sites on the wastewater treatment plant grounds, and the sludge treatment facility grounds, if not collocated, that have a combined surface area of less than 5 acres and where less than 1 dry metric ton of sewage sludge has been or will be applied per acre per year, are exempt from these soil sampling requirements.

The analytical results for phosphorus and metals are to be reported as mg of pollutant per Kg of soil (dry weight basis). The total solids data are to be reported as percentage. The analytical results for nitrates are to be reported as mg of nitrate-nitrogen/Kg of soil (dry weight basis).

The deadlines for submitting these data are given below:

2.2.2.3.5.1. For new land application sites where the application of sewage sludge is planned to begin during the first six (6) months of coverage under this permit the data shall be submitted with the NOI;

2.2.2.3.5.2. For new land application sites where the application of sewage sludge is planned to begin more than six (6) months after the start of coverage under this permit the data shall be submitted at least 45 days before the start of land application; and

TABLE NOI-6
METALS, TOTAL SOLIDS, NITRATES, & PHOSPHORUS DATA REQUIRED FOR SOILS AT LAND APPLICATION SITE

Name of Land Application Site:				Site No.:
Pollutants & Characteristics	Units	Average Concentration	Maximum Concentration	Number of Samples
Arsenic (As) a/	mg/Kg			
Cadmium (Cd) a/	mg/Kg			
Copper (Cu) a/	mg/Kg			
Lead (Pb) a/	mg/Kg			
Mercury (Hg) a/	mg/Kg			
Molybdenum (Mo) a/	mg/Kg			
Nickel (Ni) a/	mg/Kg			
Selenium (Se) a/	mg/Kg			
Zinc (Zn) a/	mg/Kg			
Total Solids	%			
Nitrate (N)	mg/Kg			
pH	s.u.			
Available Phosphorus (P) a/, b/, c/	mg/Kg			

a/ Report as mg per Kg of total solids (i.e., dry weight basis).

b/ The sample shall be analyzed for available phosphorus. Depending on the pH of the soil sample, one of the following methods shall be used for the analysis of available phosphorus:

for soil pH greater than 6.5
sodium bicarbonate extraction (Olsen P), 1/ or
ammonium bicarbonate DTPA (AB-DPTA) extraction; 2/
for soil pH 6.5 or less
Bray and Kurtz P-1 extraction. 1/ or
Mehlich 3 1/

1/ *Methods of Phosphorus Analysis for Soils, Sediments, Residuals, and Waters*; Southern Cooperative Series Bulletin No. # 396, June 2000; Southern extension/Research activity - Information exchange Group (SERA-IEG); Gary M. Pierzynski, Editor; URL http://www.sera17.ext.vt.edu/SERA_17_ Publication.htm; ISBN: 1-58161-396-2

2/ Simultaneous Extraction of Macro, Micronutrients and trace Elements Using Ammonium Bicarbonate DPTA (AB-DPTA); *Laboratory Manual for SC-564, Soil and Plant Chemical Analysis,* Spring Semester 1998, Version 4, James R. Self, Juan B. Rodriguez, Soil, Water, and Plant Testing Laboratory, Department of Soil and Crop Sciences, Colorado State University

c/ The method used for analysis of available phosphorus shall be reported.

2.2.2.3.6. Ground Water Information For each new land application site provide the following information: (Note: For existing land application sites this information will have to be provided under the requirements of Part 4.2.2 of this permit):

2.2.2.3.6.1. Ground water classification: If the ground water underlying the land application site has been classified by the State (or applicable Tribe, see Part 13), the classification shall be reported. If the ground water has not been classified, that shall be reported.

2.2.2.3.6.2. Annual high ground water level: Determine if the annual high ground water level at any point under the land application site is likely to be within five (5) feet of the ground surface. This determination may be made using available ground water data for nearby wells, the drilling of temporary observation wells at the site, and/or other methods as appropriate. The results of this determination and the method(s) used in the determination shall be reported.

2.2.2.3.6.3. Plan to Protect Ground Water Quality: If the determination required in Part 2.2.2.3.6.2 above shows that the annual high ground water level at any point under the land application site is likely to be within five (5) feet of the ground surface, submit a plan to for the application of sewage sludge to be conducted in a manner that will not contaminate the ground water or impair the use classification for that water (if the State (or applicable Tribe, see Part 13) has classified it) underlying the site. The plan may consider such factors as reduced application rates in areas of possible high ground water levels, etc. The plan shall provide enough specifics so that the plan can be reviewed for adequacy.

2.2.2.4. Landfilling of Sewage Sludge: If application is being made to landfill sewage sludge under Subcategory 2.b., provide the following information:

2.2.2.4.1. The analytical results of all toxicity characteristic leaching procedure (TCLP) tests that have been conducted within the past three years on sewage sludge that was landfilled.. If a TCLP test has not been conducted within the past three years, a sample shall be collected of sewage sludge that is going to be landfilled and a TCLP test for metals shall be conducted on that sample and the results reported. New facilities/operations see **Note** following Part 2.2.2.4.2.

2.2.2.4.2. A summary of all paint filter tests and total solids analyses that have been conducted on sewage sludge that was landfilled during the past three years. If paint filter tests and/or total solids analyses have not been conducted during the past three years, a sample shall be collected of sewage sludge that is going to be landfilled and the appropriate paint filter test and/or total solids analysis conducted and the results reported. In addition, the results of any other tests required by the State and/or local agencies shall also be reported.

Note: For Parts 2.2.2.4.1 and 2.2.2.4.2 above, new facilities/operations that do not yet have the required sewage sludge monitoring data shall submit the required data separately within three (3) months after the start of landfilling of sewage sludge. For Part 2.2.2.4.1, a minimum of one sample is required and for Part 2.2.2.4.2, the data shall be based on a minimum of three samples.

The samples shall be collected in accordance with the requirements of Part 5.1.2. New operations that landfill sewage sludge, but do not treat it, are required to submit all of the required data with the NOI.

2.2.2.4.3. A brief description of the process that will be used to comply with the vector attraction reduction limitations in Part 5.1.1.2 of this permit.

2.2.2.4.4. The name and location of all landfills currently receiving sewage sludge from the applicant. (For those facilities that will be starting the disposal of sewage sludge by landfilling, provide information on the sites that are planned to be used during the first 12 months of disposal by landfilling.)

2.2.2.5. Surface Disposal of Sewage Sludge: If application is being made to dispose of sewage sludge by surface disposal under Subcategory 2.c., provide the information specified below. The information is to be provided for each active surface disposal site and for each surface disposal site that is planned to be used during the first twelve (12) months of coverage under this permit. (For those surface disposal sites where surface disposal will begin more than 12 months after start of coverage under this permit, the permittee shall submit an addendum to its NOI with the information specified below at least 90 days before the planned start of surface disposal at the site. Surface disposal may not start until coverage is granted.):

2.2.2.5.1. The name and location of each surface disposal site to be covered under this permit. Give the number of sewage sludge units (existing and planned) in each surface disposal site. Give the minimum distance (in meters) from the boundary of the sewage sludge unit to the property line of the surface disposal site.

2.2.2.5.2. Metals Data: For the sewage sludge that is surface disposed or will be surface disposed, provide the data for the pollutants listed in Table NOI-7. The data shall be based on a minimum of three sampling events that occurred at least one month apart and the data shall be no more than four and one-half years old. New facilities/operations see **Note** following Part 2.2.2.5.4.

TABLE NOI-7
METALS &TOTAL SOLIDS DATA FOR SURFACE DISPOSAL

Pollutants	Units	Average Concentration	Maximum Concentration	Number of Samples
Arsenic (As) a/	mg/Kg			
Chromium (Cr) a/	mg/Kg			
Nickel (Ni) a/	mg/Kg			
Total Solids	%			

a/ Report as mg per Kg of total solids (i.e., dry weight basis).

2.2.2.5.3. Describe briefly how the applicable vector attraction reduction requirements required under 40 CFR Part 503 for surface disposal of sewage sludge will be met

2.2.2.5.4. Describe briefly how the applicable pathogen requirements under 40 CFR Part 503 for surface disposal of sewage sludge will be met.

In addition, provide a summary of data that will show that the sewage sludge that has been or will be surface disposed can comply with the applicable pathogen requirements in 40 CFR Part 503. The data may be monitoring data for fecal coliforms, data for the applicable process requirements (e.g., time and temperature for sludge digestion, etc.,) or a signed certified statement that the sewage sludge is covered with soil or other material in the sewage sludge unit at the end of each operating day. The data shall be based on a minimum of three sampling events that occurred at least one month apart and the data shall be no more than four and one-half years old. Fecal coliform data shall be expressed as number per gram of solids and the geometric mean, maximum concentration, and number of samples shall be reported. New facilities/operations see **Note** following Part 2.2.2.5.4.

Note: For Parts 2.2.2.5.2 and 2.2.2.5.4 above, new facilities/operations that do not yet have the required sewage sludge monitoring data shall submit the required data separately within six (6) months after the start of surface disposal of sewage sludge. The data shall be based on a minimum of three (3) sampling events and the samples shall be collected in accordance with the requirements of Part 6.1.4. New operations that surface dispose of sewage sludge, but do not treat it, are required to submit all of the required data with the NOI.

2.2.2.5.5. Provide a copy of the ground water monitoring plan for each surface disposal site and a summary of ground water monitoring data collected for each active surface disposal unit either during the previous 12 months or the previous calendar year.

2.2.2.5.6. Provide a summary of methane gas monitoring data, if collected, for each active surface disposal unit for either the previous 12 months or the previous calendar year.

2.2.3. Category 3: Additional Information for Applicants for Coverage Under Category 3

Wastewater lagoon systems wanting to land apply sewage sludge on a limited basis under the provisions for Category 3 shall provide the additional information as specified below. **Unless otherwise specified, all samples are to be collected no more than one (1) year prior to the submittal of the NOI.** The sewage sludge sampling requirements for wastewater lagoon systems with a design average flow of 1 million gallons per day (MGD) or less are somewhat different than the sampling requirements for larger wastewater lagoon systems. For those systems with a design average flow of 1 MGD or less, the specified number of discrete samples is the minimum number of samples that must be collected from the total of all lagoon cells and other sewage sludge bodies (see definition of Asewage sludge body@ in Part 11)) from which sewage sludge is to be land applied. An equal number of discrete samples shall be collected from each lagoon cell and other sewage sludge bodies from which sewage sludge is to be land applied. For wastewater lagoon systems with a design average flow greater than 1 MGD the specified number of discrete samples must be collected from each lagoon cell and other sewage sludge body from which sewage sludge will be land applied. Only those lagoon cells and other sewage sludge bodies from which sewage sludge is to be land applied need to be sampled.

2.2.3.1. Metals and Total Solids Data.

The sewage sludge is to be sampled for metals and total solids as listed in Table NOI-8. The number of samples to be analyzed for metals and total solids will depend on the design average flow of the wastewater lagoon system and the number of individual lagoon cells or other sewage sludge bodies to be sampled. The minimum number of discrete samples to be collected and the number of composite samples to be analyzed shall be based on the Table NOI-9. The discrete samples used to make up the composite samples are to be representative. Guidance on collecting representative samples using a random sampling process may be found in Section 2.4 of the 1999

version of the EPA Region 8 Biosolids Management Handbook. In addition, the local office of the agricultural extension service, the State Land Grant University, etc., might have guidance on collecting representative samples. Each composite sample shall be analyzed for the listed metals and for total solids. The analytical results for the metals analyses are to be reported on a dry weight basis. Approved methods for the analysis of biosolids (40 CFR Part 503) are given in Appendix A of this permit. The average value of all of the samples, the maximum value of all of the samples, and the number of samples analyzed shall be reported.

TABLE NOI-8
METALS AND TOTAL SOLIDS MONITORING

Pollutants	Units	Average Concentration	Maximum Concentration	Number of Samples
Arsenic (As) a/	mg/Kg			
Cadmium (Cd) a/	mg/Kg			
Copper (Cu) a/	mg/Kg			
Lead (Pb) a/	mg/Kg			
Mercury (Hg) a/	mg/Kg			
Molybdenum (Mo) a/	mg/Kg			
Nickel (Ni) a/	mg/Kg			
Selenium (Se) a/	mg/Kg			
Zinc (Zn) a/	mg/Kg			
Total Solids	%			

a/ Report as mg per Kg of total solids (i.e., dry weight basis).

TABLE NOI-9
NUMBER OF SAMPLES FOR METALS AND TOTAL SOLIDS MONITORING

Design Average Flow, MGD	Minimum Number of Discrete Representative Samples to Be Collected	Number of Composite Samples for Each Lagoon Cell and Other Sewage Sludge Body
Flow $\leq$ 1	27 a/	a/
1 < Flow $\leq$ 10	42 b/	1 b/
Flow > 10	48 b/	1 b/

a/ An equal number of discrete samples shall be collected from each lagoon cell and other sewage sludge body from which sewage sludge will be land applied. A minimum of 27 discrete samples shall be collected for the entire wastewater lagoon system. If necessary, the total number of discrete samples shall be increased so that an equal number of discrete samples are collected from each lagoon cell and other sewage sludge body from which sewage sludge is to be land applied (e.g., if 2 lagoon cells are to be sampled, 14 discrete samples shall be collected from each cell for a total of 28 discrete samples.) All of the discrete samples shall be composited into one composite sample for analysis.

b/ The minimum number of discrete samples that shall be collected from each lagoon cell and other sewage sludge body from which sewage sludge will be land applied. For each lagoon cell or other sludge body all of the discrete samples shall be composited into one composite sample for analysis.

2.2.3.2. Fecal Coliform Data

Describe briefly how the applicable pathogen requirements in Part 7.1.2.1 will be met.

If the pathogen requirements will be met by meeting the numerical limitations on fecal coliforms, the sewage sludge is to be sampled and analyzed for fecal coliforms and total solids. The number of discrete samples to be analyzed for fecal coliforms and total solids will depend on the design average flow of the wastewater lagoon system and the number of individual lagoon cells and other sewage sludge bodies to be sampled. The minimum number of individual samples to be analyzed shall be as given in Table NOI-10. The individual samples are to be representative. Guidance on collecting representative samples using a random sampling process may be found in Section 2.4 of the 1999 version of the EPA Region 8 Biosolids Management Handbook. In addition, the local office of the agricultural extension service, the State Land Grant University, etc., might have guidance on collecting representative samples. The analytical results for each fecal coliform sample is to be expressed in terms of the most probable number (MPN) of fecal coliforms per gram of total solids (dry weight basis). The individual analytical results (fecal coliforms and total solids) for each sample shall be reported. In addition, the geometric mean of all of the fecal coliform analyses (for all samples) shall be calculated and that value shall be reported.

TABLE NOI-10
NUMBER OF SAMPLES FOR FECAL COLIFORMS AND TOTAL SOLIDS

Design Average Flow, MGD	Number of Discrete Representative Samples to Be Collected (N)
Flow $\leq$ 1	7 a/
1 < Flow	7 b/

a/ The minimum number of discrete samples to be collected from the wastewater lagoon system is 7. However, an equal number of discrete samples shall be collected from each lagoon cell and other sewage sludge body from which sewage sludge will be land applied. Therefore, if necessary, the total number of discrete samples shall be increased so that an equal number of discrete samples are collected from each lagoon cell and other sewage sludge body from which sewage sludge is to be land applied (e.g.., if 2 lagoon cells are to be sampled, 4 discrete samples are to be collected from each cell for a total of 8 discrete samples). Each discrete sample shall be analyzed separately for fecal coliforms and total solids.

b/ The minimum number of discrete samples to be collected from each lagoon cell and other sewage sludge body from which sewage sludge will be land applied is 7. Each discrete sample shall be analyzed separately for fecal coliforms and total solids.

2.2.3.3. Describe briefly how the site restriction requirements in Part 7.1.2.2 will be met.

2.2.3.4. Describe briefly how the vector attraction reduction requirements in Part 7.1.3 will be met.

2.2.3.5. Nitrogen, Phosphorus and Soils Data

If the applicant wants approval to land apply the sewage sludge at a rate greater than one (1) dry metric ton (dmt) per acre, the applicant must submit the following information:

2.2.3.5.1. The sewage sludge shall be sampled for the specified forms of nitrogen, total phosphorus, and total solids as listed in Table NOI-11. The number of samples to be analyzed will depend on the design average flow of the wastewater lagoon system and the number of individual lagoon cells and other sewage sludge bodies to be sampled. The minimum number of discrete samples to be collected and the number of composite samples to be analyzed shall be based on Table NOI-9. The discrete samples used to make up the composite samples are to be representative. Guidance on collecting representative samples using a random sampling process may be found in Section 2.4 of the 1999 version of the EPA Region 8 Biosolids Management Handbook. In addition, the local office of the agricultural extension service, the State Land Grant University, etc., might have guidance on collecting representative samples. Each composite sample shall be analyzed for the pollutants listed in Table NOI-11. The analytical results for the nitrogen and phosphorus analyses are to be reported on a dry weight basis. Approved methods for the analysis of biosolids (40 CFR Part 503) are given in Appendix A of this permit. The average value of all of the samples, the maximum value of all of the samples, and the number of composite samples analyzed shall be reported.

TABLE NOI-11
NITROGEN, PHOSPHORUS, AND TOTAL SOLIDS MONITORING a/

Constituents	Units	Average Concentration	Maximum Concentration	Number of Samples
Ammonia (as N) b/	mg/Kg			
Total Kjeldahl Nitrogen (as N) b/	mg/Kg			
Nitrate plus Nitrite (as N) b/	mg/Kg			
Total Phosphorus (as P) b/	mg/Kg			
Total Solids	%			

a/ Sewage sludge data required if permittee wants approval to land apply the sewage sludge at a rate greater than one (1) dry metric ton per acre.

b/ Report as mg per Kg of total solids (i.e., dry weight basis).

2.2.3.5.2. The soils at the site(s) where the sewage sludge is to be land applied shall be analyzed for nitrate-nitrogen, available phosphorus, total solids, and pH. The data shall be no more than four and one-half years old unless the permit issuing authority grants prior approval to use older data. A minimum of six samples of one foot depth each for each 320 (or less) acre area are to be collected into one sample and analyzed. Sampling point locations for new data are to be representative. Guidance on collecting representative samples using a random sampling process may be found in Section 2.4 of the 1999 version of the EPA Region 8 Biosolids Management Handbook. In addition, the local office of the agricultural extension service, the State Land Grant University, etc., might have guidance on collecting representative samples. Depending on the pH of the soil sample, one of the following methods shall be used for the analysis of available phosphorus:

for soil pH greater than 6.5
sodium bicarbonate extraction (Olsen P), 1/ or
ammonium bicarbonate DTPA (AB-DPTA) extraction; 2/
for soil pH 6.5 or less
Bray and Kurtz P-1 extraction, 1/ or
Mehlich 3. 1/

1/ *Methods of Phosphorus Analysis for Soils, Sediments, Residuals, and Waters*; Southern Cooperative Series Bulletin No. # 396, June 2000; Southern extension/Research activity - Information exchange Group (SERA-IEG); Gary M. Pierzynski, Editor; URL http://www.sera17.ext.vt.edu/SERA_17_Publications.htm; ISBN: 1-58161-396-2

2/ Simultaneous Extraction of Macro, Micronutrients and trace Elements Using Ammonium Bicarbonate DPTA (AB-DPTA); *Laboratory Manual for SC-564, Soil and Plant Chemical Analysis,* Spring Semester 1998, Version 4, James R. Self, Juan B. Rodriguez, Soil, Water, and Plant Testing Laboratory, Department of Soil and Crop Sciences, Colorado State University

The method of analysis for available phosphorus shall be reported. The analytical results for phosphorus are to be reported as mg of phosphorus per Kg of soil (dry weight basis). The total solids data are to be reported as percentage. The analytical results for nitrates are to be reported as mg of nitrate-nitrogen/Kg of soil (dry weight basis).

2.2.3.6. Provide maps showing the specific location(s) and acreage to be utilized for land application. Provide the section, township, and range for each site.

2.2.3.7. What type of cover vegetation or crop will be grown on the application site(s).

2.2.3.8. Provide information on the volume of sewage sludge to be land applied, the application rate, and the application methods and equipment to be used to insure uniform and timely incorporation.

2.2.4. Certification Statement and Who Signs - **All Applicants Complete**

The Notice of Intent must be submitted by the organization or entity that has the legal responsibility for the generation, treatment, and/or use disposal of sewage sludge that will be covered under this permit, it shall be signed in accordance with the requirements of Part 10.7, and **the person signing the Notice of Intent shall make the following certification**:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Upon review of the NOI, the Director may request additional information. **Coverage under this permit does not begin until the operator receives written authorization from the Director.**