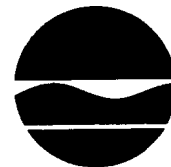


New York State Department of Environmental Conservation

50 Wolf Road, Albany, New York 12233-3505



**Langdon Marsh
Commissioner**

MEMORANDUM

OCTOBER 26, 1994

TO: Regional Water Engineers, Bureau Directors, Section Chiefs

SUBJECT: Division of Water Technical and Operational Guidance Series
NEW DISCHARGES TO PUBLICLY OWNED TREATMENT WORKS
(Originator: Mr. DiMura) (1.3.8)

PURPOSE

To provide guidance to NYSDEC regional and central office permit writers in evaluating the potential effect of a new, substantially increased or changed non-domestic discharge to a Publicly Owned Treatment Works (POTW). The focus of this TOGS is the effects of a new, increased or changed discharge on the POTW's State Pollutant Discharge Elimination System (SPDES) permit and on the POTW's pretreatment program.

DISCUSSION

6 NYCRR 754.4(g) and (i), SPDES Permit General Condition 12.1 and 40 CFR 122.42 require New York State POTW permittees to notify NYSDEC of new discharges or substantial changes in the volume or character of pollutants discharged to the permitted POTW. NYSDEC must then determine if the POTW SPDES permit needs to be modified to account for the proposed discharge, change or increase. In addition, through a memorandum of understanding (MOU) with the USEPA, the Division of Water shares pretreatment program oversight (approval authority) responsibility with the USEPA.

Under the combined responsibility of implementing the state regulations and fulfilling the pretreatment MOU, the Division of Water must determine all of the following:

I. If the POTW permittee has adequately evaluated the effects of a proposed new, increased or changed discharge on the POTW operation, sludge disposal, effluent quality and POTW employee health and safety;

II. If a proposed new, increased or changed discharge to the POTW will result in the discharge from the POTW treatment plant of a substance that must be subject to a POTW effluent limit or POTW effluent action level or other monitoring requirement in the POTW SPDES permit and;

III. If a proposed new, increased or changed discharge contains one or more bioaccumulative and persistent substances. If it does contain bioaccumulative and persistent substances, DOW must determine if it is tributary to a

combined sewer overflow or if it is proposed to be trucked under a Part 364 permit to the POTW or if it is to a POTW from which any discharge of the contained bioaccumulative and persistent substances would be considered a violation of a water quality standard. If one of the aforementioned 3 conditions is met, DOW must determine if the proposed discharge of bioaccumulative and persistent substances must be limited at the point of discharge to the POTW or subject to other permit requirements.

In large part this guidance (TOGS 1.3.8) and the Appendix C, Guidance for Acceptance of New Discharges compile the standard operating procedures for evaluation of new non-domestic discharges to POTWS that are presently being used by local pretreatment program coordinators and NYSDEC permit writers. However, this guidance proposes to handle new discharges of bioaccumulative and persistent substances in a fundamentally different manner.

An untreated indirect discharge of bioaccumulative and persistent substances tributary to a combined sewer overflow is likely to be rendered undetectable by dilution prior to discharge through the overflow. For many bioaccumulative and persistent substances, even very small amounts discharged without treatment through a CSO would violate a water quality standard. Furthermore, future remediation may be required when those persistent substances accumulate in downstream sediments.

For direct dischargers, the SPDES permit program has reduced point source discharges to very low levels. The Division is frequently involved in hearing negotiations with permittees that require special monitoring programs just to detect the limited substances at permitted levels. Under the proposed regulations for the Great Lakes Water Quality Initiative, discharges of bioaccumulative and persistent substances would be capped at present levels and new discharges of bioaccumulative and persistent substances would be prohibited unless the discharger demonstrates compelling economic or sociological reasons for the increased discharge.

Considering the context of these and other Division of Water initiatives, it would be incongruous to allow new dischargers to use combined sewer systems to mask the discharge of bioaccumulative and persistent substances through CSOs. Such overflows would assure that, at least part of the time, the discharged bioaccumulative and persistent substance would be untreated and would subsequently tend to reconcentrate in the environment because of their bioaccumulative and persistent properties.

At the same time, an untreated discharge of BADs to a separate sewer system, that would be diluted to be undetectable in the POTW treatment plant effluent, would be detrimental to or substantially damage or pollute the environment or natural resources of the

state.

For all of the above reasons, the department is addressing these discharges now rather than waiting for an EPA initiative.

Where no federal categorical discharge standard applies, the department's most implementable authority to restrict discharges to POTWs (rather than from POTWs) is over discharges to combined sewers (Montgomery Environmental Coalition vs. Costle, 646 F. 2d 568 (D.C. Cir. 1980) and 40 CFR 122.45(h)), discharges to POTWs from which any discharge would be considered a violation of a water quality standard (6NYCRR 703 and 40 CFR 122.45(h)) and discharges of waste that is hauled to POTWs under a Part 364 permit (ECL 27- 0305). It is for these types of discharges that this guidance recommends more restrictive measures.

For discharges that do not contain bioaccumulative and persistent substances, there are times when the department should be rightly excluded from review of a new discharge. Many POTWs have approved pretreatment programs that would allow for ample review and control of these new discharges. Furthermore, these POTWs are frequently already receiving substantial quantities of industrial waste such that the acceptance of a new discharge may not constitute a substantial change in volume or character of pollutants being introduced to the POTW as defined by State/Federal regulation and the SPDES General Conditions.

To allow for consistent handling of POTW notifications of proposed new, changed or substantially increased discharges, the Division of Water has prepared the document entitled Guidance for Acceptance of New Discharges (Appendix C) for POTW's preparing new discharge notifications for DEC. Included in this document are guidance to POTWs for: (1) evaluating the effects of proposed new, increased or changed discharges, (2) completing the form and (3) determining if the form must be submitted to DEC prior to permitting the new discharge. NYSDEC staff should encourage POTWs with approved local pretreatment programs to make this determination rather than awaiting an NYSDEC determination.

Permit writers may also wish to refer to the April 23, 1992 Division of Hazardous Substance Regulation and the Division of Water joint memorandum on Part 364 Permits for Industrial Waste with Disposal at POTWs. This memorandum requires that the Regional Water Engineer sign off on issuance of any 364 transporter permits allowing for discharges to POTWs.

GUIDANCE

All new, increased or changed discharge proposals should be submitted to the Permit writer by the POTW permittee on the New Discharge Form in accordance with Appendix C, Guidance for Acceptance or New Discharges. If a proposal is not submitted in

accordance with Appendix C, or if it is incomplete, it should be returned to the permittee.

Upon submission of a complete New Discharge Form and associated documentation, the permit writer should consult the guidance below to determine if the SPDES permit must be modified.

I. PERMITTEE EVALUATION OF EFFECTS

In accordance with Appendix C (Guidance for Acceptance of New Discharges), POTWs proposing to accept a new discharge must first demonstrate that:

- A. the discharge is adequately characterized;
- B. the discharge will not cause the Maximum Allowable Headworks Loadings to be exceeded;
- C. the discharge will not endanger the health and safety of POTW employees;
- D. the discharge will not cause a nuisance (i.e. odors) or an explosive condition;
- E. the discharge complies with National Pretreatment Standards and
- F. all pollution prevention requirements have been satisfied.

The permit writer's review of whether these six items have been satisfied should be in accordance with the guidance given in Appendix C and, provided the New Discharge form has been adequately prepared and the certifications called for by the Appendix C Guidance are included, should be relatively brief.

Nonetheless, if a new discharge is a Significant Industrial User (SIU) in accordance with 40 CFR 403.3, that discharge must be controlled by permit.

If the proposed SIU discharge is to a POTW that does not have a USEPA pretreatment program or pretreatment mini-program in place, the permit writer should prohibit the discharge until a mini-program or USEPA pretreatment program is in place.

Further, if the waste is to be hauled to the POTW, the point of discharge must be approved by the POTW and the operator should have control over the method and rate of discharge.

In reviewing the submission, the permit writer should contact and consult with his/her counterpart in the region or central office. If the submission does not demonstrate that the above criteria have been met, the permit writer should notify the permittee by letter of the deficiencies with a copy to the regional water engineer or, for regional permit writers, the Chief of the Biological Systems Section.

II. POTW TREATMENT PLANT SPDES PERMIT

When a permit writer receives a New Discharge Form proposing a discharge that is not a discharge of bioaccumulative and persistent substances to a combined sewer system, the permit writer must determine whether the POTW SPDES permit must be modified to include an action level, limit or additional monitoring prior to the POTW's acceptance of the discharge. This determination should be made in accordance with TOGS 1.3.3.

If the SPDES permit must be modified, the permit writer must notify the POTW permittee that the discharge is prohibited until the permit has been modified or until the permittee requires the discharge to be pretreated such that a permit modification is unnecessary. Appendix B contains an example letter for notifying a POTW permittee that a discharge is prohibited until the permit has been modified or until the permittee requires the discharge to be pretreated such that a permit modification is unnecessary.

If the SPDES permit does not need to be modified, the permit writer must notify the POTW permittee that the discharge can be accepted without permit modification. Appendix B contains an example letter for notifying a POTW that a discharge can be accepted without permit modification.

If the permit writer believes that the discharge may be accepted without permit modification, but nonetheless believes that some short term monitoring would be appropriate, the permit writer should send a "308 letter". The NYSDEC has ample authority to require reasonable short term monitoring under Section 308 of the Clean Water Act. Using a 308 letter the permit writer can require short term monitoring without modifying the SPDES permit. Appendix B contains an example letter for notifying a POTW that a discharge can be accepted without permit modification, but that the POTW must perform a short term monitoring program.

III. BIOACCUMULATIVE AND PERSISTENT SUBSTANCES TO COMBINED SEWERS OR TRUCKED TO ANY POTW

CSO Notification

When a permit writer receives a New Discharge Form proposing a discharge to a combined sewer system of one or more of the bioaccumulative and persistent substances in Appendix C (Guidance for Acceptance of New Discharges) - ATTACHMENT 3, the permit writer must determine whether the discharges have the potential to exceed the BAT/BPJ levels given in ATTACHMENT 3 at the point of discharge to the sewer system. The assessment should include consideration of whether dilution is being used to meet the BAT/BPJ levels. The permittee should also provide an assessment of the frequency of downpipe CSOs.

Bioaccumulative and Persistent Substances to CSO Meeting ATTACHMENT 3 Levels

If the bioaccumulative and persistent substances are not expected to exceed the BAT/BJP levels at the point of discharge to the sewer system and the new discharge will not require additional effluent limits, action levels or monitoring requirements for the POTW treatment plant permit, the permittee should be informed that the permit does not need to be modified prior to the permittee accepting the proposed new discharge. Appendix B contains an example letter for notifying a POTW that a discharge can be accepted without permit modification.

Controlled Release to CSO of Bioaccumulative and Persistent Substances Exceeding ATTACHMENT 3 Levels

If the bioaccumulative and persistent substances are expected to exceed the BAT/BJP levels at the point of discharge to the sewer system and the frequency of downpipe overflows is sufficiently infrequent (as a rule of thumb, less than four times per year) and the discharge is of a nature that it can be readily controlled, the permit writer should notify the permittee that the discharge cannot be accepted until the permit is modified or until the permittee prohibits the discharge when downpipe CSOs are operating. Appendix B contains an example letter for notifying a POTW permittee that a discharge is prohibited until the permit is modified or until the permittee limits, by permit, the discharge to the levels given in Appendix C - ATTACHMENT 3. If the permittee chooses to accept the discharge and not impose conditions as NYSDEC would impose herein, the permit writer must modify the CSO outfall permit (whether the CSO outfall permit is separate from or part of the POTW treatment plant permit) to prohibit discharges when any downpipe CSOs are operating. Whether any downpipe CSOs are operating may be determined by monitoring of the most frequently operating downpipe CSO as an indicator of the operation of all downpipe CSOs. The permittee and the discharger should designate coordinators and the permittee should be required to submit flow inventory reports with DMRs. Appendix A contains an example permit page to implement this requirement.

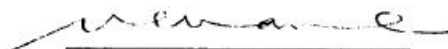
Continuous Discharge to CSO of Bioaccumulative and Persistent Substances Exceeding ATTACHMENT 3 Levels

If the bioaccumulative and persistent substances are expected to exceed the BAT/BJP levels at the point of discharge to the sewer system and the frequency of downpipe overflows or the nature of the discharge make controlled release an unacceptable option, the permit writer should notify the permittee that the discharge cannot be accepted until the permit is modified or until the permittee limits, by permit, the discharge to the levels given in Appendix C - ATTACHMENT 3. Appendix B contains an example letter for notifying a POTW permittee that a discharge is prohibited until the permit is modified or until the permittee limits, by permit, the discharge to the levels given in Appendix C - ATTACHMENT 3. If the permittee chooses to accept the discharge and not impose conditions

as NYSDEC would impose herein, the permit writer must modify the CSO outfall permit (whether the CSO outfall permit is separate from or part of the POTW treatment plant permit) to require the new discharge to meet the BAT/BJP discharge levels for bioaccumulative and persistent substances as summarized in Appendix C - ATTACHMENT 3. Appendix A is an example permit page to implement this requirement.

Discharges Delivered Under a 364 Permit

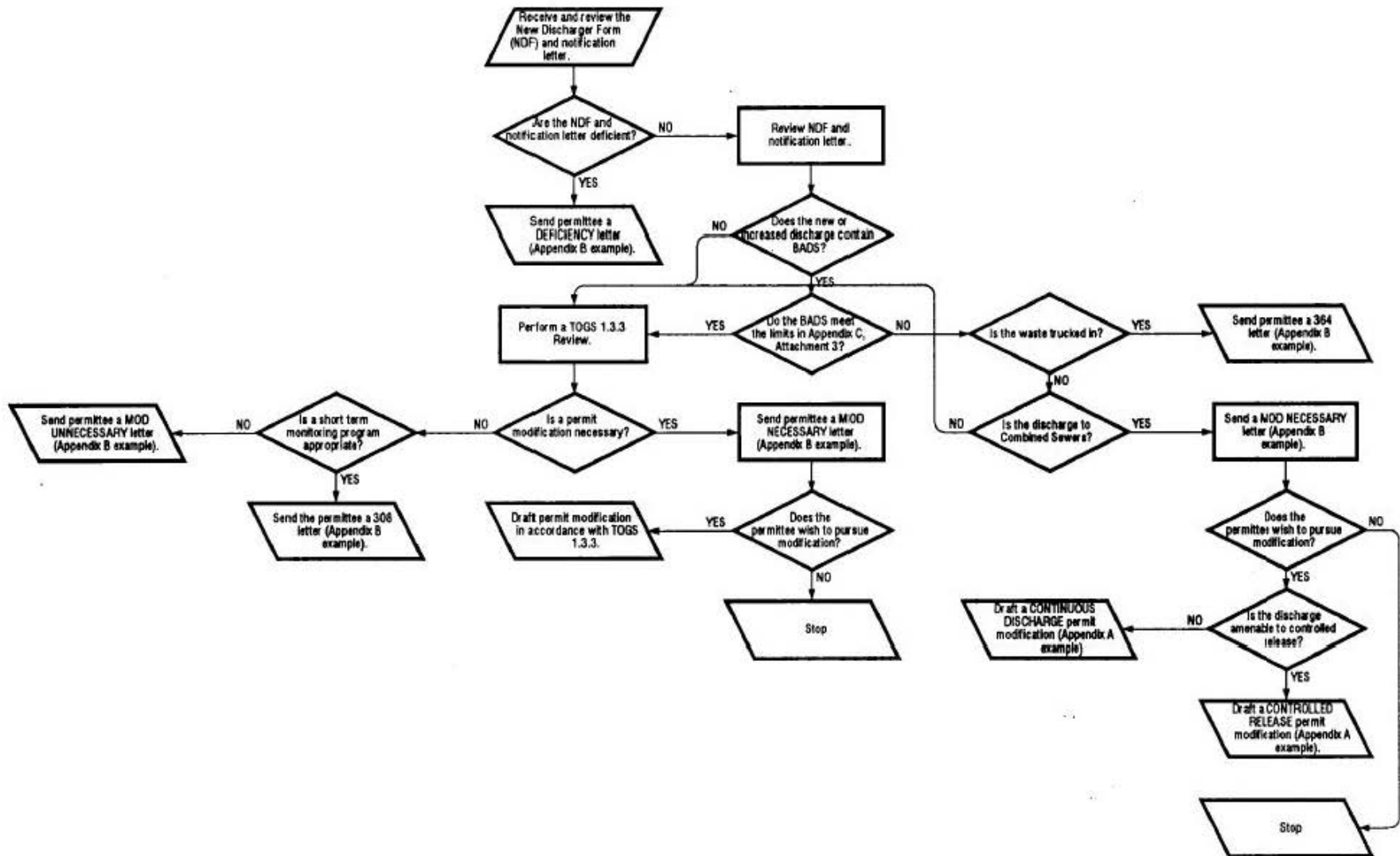
If the proposed new discharge is to be hauled to the POTW under a Part 364 transporter permit, the permit writer should consult the April 23, 1992 Division of Hazardous Substance Regulation and the Division of Water joint memorandum on Part 364 Permits for Industrial waste. In addition, if any bioaccumulative and persistent substances are expected to exceed the levels given in ATTACHMENT 3 at the point of discharge to the sewer system, the permit writer should contact the Regional Water Engineer to assure that the 364 permit will not be approved for wastes exceeding the levels given in ATTACHMENT 3. The permit writer should also notify the permittee that it has been recommended to the Regional Water Engineer that the 364 permit be denied unless the discharge is treated to meet the levels given in ATTACHMENT 3. Appendix B contains an example letter to notify the permittee that the permit writer has recommended that the 364 permit be denied.



N.G. Kaul, P.E.
Director
Division of Water

Attachments

RECOMMENDED PERMIT WRITER'S DECISION TREE FOR NEW DISCHARGES TO POTWS



APPENDIX A
NYSDEC DIVISION OF WATER TOGS 1.3.8
EXAMPLE PERMIT PAGES

**APPENDIX A - TOGS 1.3.8
CONTINUOUS DISCHARGE PERMIT**

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning EDM

and lasting until EDM + 5 YEARS

the discharges from the permitted facility shall be limited and monitored by the permittee as specified below:

Outfall Number & Effluent Parameter	Discharge Limitations		Units	Minimum Monitoring Requirements	
	Daily Avg.	Daily Max.		Measurement Frequency	Sample Type

{INSERT OUTFALL NUMBER} - Combined Sewer Overflow {INSERT NAME CLOSEST ROUTINELY OPERATING DOWN PIPE FLOW}

{INSERT NAME(S) OF BIOACCUMULATIVE AND PERSISTENT SUBSTANCES}		INSERT LIMIT FROM APP. C ATTACH- MENT 3 ⁽¹⁾	µg/l	(In accordance with Appendix C)	24-hr.comp. ⁽¹⁾
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(1) The Effluent limit and monitoring requirements apply at {INSERT NAME AND LOCATION OF PROPOSED NEW DISCHARGE SOURCE}.

APPENDIX B
NYSDEC DIVISION OF WATER TOGS 1.3.8
EXAMPLE LETTERS



Langdon Marsh
Commissioner

APPENDIX B - TOGS 1.3.8
MODIFICATION UNNECESSARY LETTER

Permittee Name (from page one of permit)
Permittee Mailing Address (from page one of permit)

re: New Discharge Notification
By Letter Dated {INSERT DATE}
SPDES Permit NY {INSERT # }

Dear
Permittee:

This letter is to notify you that the above noted discharge may proceed without modification to the above noted permit.

Under General Condition 12.1 of New York State Pollution Discharge Elimination System (SPDES) permits, 6 NYCRR Part 754.4(g) and 40 CFR 122.42, Publicly Owned Treatment Works (POTW) permittees are required to notify the New York State Department of Environmental Conservation (NYSDEC) when they will be accepting 'new or increased discharges of pollutants'. Under 6 NYCRR Part 754.4(i) the NYSDEC may prohibit the discharge until the SPDES permit is modified to account for the new discharge. It is not necessary to modify your SPDES permit to account for the above noted discharge.

If you have any questions or comments, please do not hesitate to call me at (518)457-6716.

Very Truly Yours

Chief, Biological Systems Section
OR Regional Water Engineer

cc: John Pulaski
Regional Water Engineer - Region {INSERT R.O.}
Chief, Biological Systems Section - Albany

New York State Department of Environmental Conservation

50 Wolf Road, Albany, New York 12233-3505



Langdon Marsh
Commissioner

APPENDIX B - TOGS 1.3.8
308 LETTER

Permittee Name (from page one of permit)
Permittee Mailing Address (from page one of permit)

re: New Discharge Notification
By Letter Dated {INSERT DATE}
SPDES Permit NY {INSERT #}

Dear Permittee:

This letter is to notify you that the above noted discharge may proceed without modification to the above noted permit.

Under General Condition 12.1 of New York State Pollution Discharge Elimination System (SPDES) permits, 6 NYCRR Part 754.4(g) and 40 CFR 122.42, Publicly Owned Treatment Works (POTW) permittees are required to notify the New York State Department of Environmental Conservation (NYSDEC) when they will be accepting 'new or increased discharges of pollutants'. Under 6 NYCRR Part 754.4(i) the NYSDEC may prohibit the discharge until the SPDES permit is modified to account for the new discharge. It is not necessary to modify your SPDES permit to account for the above noted discharge.

Nonetheless, in accordance with Section 308 of the Clean Water Act, 33 USC Section 1318, we are requesting that you provide the information detailed on the attached page to provide additional assurance that the proposed discharge does not make it necessary to modify your discharge permit.

If you have any questions or comments, please do not hesitate to call me at (518)457-6716.

Very Truly Yours

Chief, Biological Systems Section
OR Regional Water Engineer

cc: John Pulaski
Regional Water Engineer - Region {INSERT R.O.}
Chief, Biological Systems Section - Albany

HIGH INTENSITY MONITORING PROGRAM

The effluent from the {insert name of treatment plant}, SPDES Permit No. NY {insert permit number}, shall be monitored for three days during which {insert name of new discharge} is discharging quantities of pollutants that are representative of normal discharge operations. The resulting monitoring results shall be submitted, within 6 months of the date of receipt of this letter, to:

Regional Water Engineer
{insert address}

Chief, Biological Systems
Section NYSDEC, Room 318
50 Wolf Road
Albany, NY 12233-3505

The substance(s) for which to be monitored, the sample type(s) and special analytical requirement(s) are as follows:

<u>PARAMETER</u>	<u>SAMPLE TYPE</u>	<u>ANALYTICAL TECHNIQUE</u>
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{Generally, acceptable analytical techniques are GC/MS for organics and Graphite Furnace for metals}
{Generally, with the exception of volatiles and cyanide, the sample type should be 24 hour composite}
{Toxicity Testing may be the best screen when substances will be discharged which have no water quality standard, are below detection but are nonetheless of concern and when there is a complex mixed effluent. If toxicity testing is required the monitoring should be for three sets of two 24 hour composite samples}



Langdon Marsh
Commissioner

APPENDIX B - TOGS 1.3.8
DEFICIENCY LETTER

Permittee Name (from page one of permit)
Permittee Mailing Address (from page one of permit)

re: New Discharge Notification
By Letter Dated {INSERT DATE}
SPDES Permit NY {INSERT #}

Dear Permittee:

This letter is to notify you that the above notification is deficient and must be supplemented with the information needs detailed on the attached page(s).

Under General Condition 12.1 of New York State Pollution Discharge Elimination System (SPDES) permits, 6 NYCRR Part 754.4(g) and 40 CFR 122.42, Publicly Owned Treatment Works (POTW) permittees are required to notify the New York State Department of Environmental Conservation (NYSDEC) when they will be accepting 'new or increased discharges of pollutants'. Under 6 NYCRR Part 754.4(i) the NYSDEC may prohibit the discharge until the SPDES permit is modified to account for the new discharge. It may be necessary to modify your permit to account for the above noted discharge; you are prohibited from accepting the discharge until this determination is complete. Please submit the information noted on the attached page(s) to:

The Regional Water Engineer
Chief, Biological Systems Section
NYSDEC, Room 318
50 Wolf Road
Albany, NY 12233-3505

If you have any questions or comments, please do not hesitate to call me at (518)457-6716.

Very Truly Yours

Chief, Biological Systems Section
OR Regional Water Engineer

cc: John Pulaski
Regional Water Engineer - Region {INSERT R.O.}
Chief, Biological Systems Section - Albany

ADDITIONAL INFORMATION NEEDS OR DEFICIENCIES

Please submit the following [M]issing or [I]ncomplete information, as indicated below (if the brackets do not contain an I or an M, the information submitted is adequate):

1. [] Permittee endorsement.
2. [] Source description.
3. [] Basis of hazardous determination.
4. [] Method of conveyance to the POTW.
5. [] Description of substance analyzed for.
6. [] Certification that the discharge will meet (1) sewer code, (2) 40 CFR 403.5, (3) applicable federal categorical standards, (4) the maximum allowable headworks loadings and (5) will not cause nuisance odor conditions.
7. [] Statement of compliance with SPDES Permit limits.
8. [] Description of control instrument.
9. [] Statement of whether the new discharge would be a significant industrial user.
10. [] CSO outfall numbers, latitudes and longitudes and a statement that the concentrations shown on the new discharge form are the maximum expected concentrations.
11. [] Sludge disposal method and ultimate disposal site.
12. [] New Discharger Form
13. [] (other)

Additional information required for those items listed as incomplete above:



Langdon Marsh
Commissioner

APPENDIX B - TOGS 1.3.8
MODIFICATION NECESSARY LETTER

Permittee Name {from page one of permit}
Permittee Mailing Address {from page one of permit}

re: New Discharge Notification
By Letter Dated {INSERT DATE}
SPDES Permit NY {INSERT #}

Dear Permittee:

This letter is to notify you that the above noted discharge prohibited until the above noted permit is modified to account for the discharge.

Under General Condition 12.1 of New York State Pollution Discharge Elimination System (SPDES) permits, 6 NYCRR Part 754.4(g) and 40 CFR 122.42, Publicly Owned Treatment Works (POTW) permittees are required to notify the New York State Department of Environmental Conservation (NYSDEC) when they will be accepting 'new or increased discharges of pollutants'. Under 6 NYCRR Part 754.4(i) the NYSDEC may prohibit the discharge until the SPDES permit is modified to account for the new discharge. It is necessary to modify your SPDES permit to account for the above noted discharge. Please complete and submit the attached short environmental assessment form, an application fee (\$250 for POTWs over 100,000 GPD and \$150 for POTWs 10,000 to 100,000 GPD) and a copy of your original submission {INSERT IF NECESSARY - along with the additional information noted on the attached page} to:

Regional Permit Administrator
Division of Regulatory Affairs
{address of regional office}

{FOR USEPA APPROVED PRETREATMENT PROGRAMS ONLY}

Alternatively, the discharge may be accepted without modification to the above noted SPDES permit if (1) Bioaccumulative and Durable Substances in the proposed new discharge are limited by discharge permit to the levels listed in ATTACHMENT 3 (copy attached) to the NYSDEC manual entitled Guidance for Acceptance of New Discharges at the point of discharge to the sewers and (2) all other toxic substances believed present are limited by sewer discharge permit to levels at which it would be reasonable to conclude that those substances would not be detectable* in POTW treatment plant discharge.

If you have any questions or comments, please do not
hesitate to call me at (518)457-6716.

Very Truly Yours

Chief, Biological Systems Section
OR Regional Water Engineer

* see Guidance for Acceptance of New Discharges for a
description of what is meant by detectable .

cc: John Pulaski
Regional water Engineer - Region {INSERT R.O.}
Chief, Biological Systems Section - Albany



Langdon Marsh
Commissioner

APPENDIX B - TOGS 1.3.8
364 LETTER

Permittee Name {from page one of permit}
Permittee Mailing Address {from page one of permit}

re: New Discharge Notification
By Letter Dated {INSERT DATE}
SPDES Permit NY {INSERT #}

Dear Permittee:

This letter is to notify you that I have recommended that the Department deny the permit to truck the waste described in the above noted notification to the your POTW.

In accordance with an internal NYSDEC procedure devised by the Divisions of Hazardous Substance Regulation and Water, the Regional Water Engineer must sign off on any permits to haul waste to a POTW for disposal. I have determined that the discharge to your POTW of the bioaccumulative and durable substances described in the above noted notification would be detrimental to or substantially damage or pollute the environment or natural resources of the state. In accordance with ECL 27-0305, I am recommending that the 6NYCRR Part 364 transporter permit for that waste be denied.

{FOR USEPA APPROVED PRETREATMENT PROGRAMS ONLY}

Alternatively, I will sign off on the 364 transporter permit if (1) Bioaccumulative and Durable Substances in the proposed new discharge are limited by discharge permit to the levels listed in ATTACHMENT 3 (copy attached) to the NYSDEC manual entitled Guidance for Acceptance of New Discharges at the point of discharge to the sewers and (2) all other toxic substances believed present are limited by sewer discharge permit to levels at which it would be reasonable to conclude that those substances would not be detectable* in POTW treatment plant discharge.

If you have any questions or comments, please do not hesitate to call me at {INSERT TELEPHONE NUMBER OF RWE}

Very Truly Yours

Regional Water Engineer

* see Guidance for Acceptance of New Discharges for a description of what is meant by detectable.

cc: John Pulaski
Chief, Biological Systems Section - Albany

APPENDIX C
NYSDEC DIVISION OF WATER TOGS 1.3.8
GUIDANCE FOR ACCEPTANCE OF NEW DISCHARGES



Langdon Marsh
Commissioner

APPENDIX C - TOGS 1.3.8
GUIDANCE FOR ACCEPTANCE OF NEW
DISCHARGES

Guidance to New York State Publicly Owned Treatment Works State Pollutant Discharge Elimination System permit holders on acceptance of new, increased or changed discharges from non-domestic¹ users (or potential users) of the Publicly Owned Treatment Works.

Under General Condition 12.1 of New York State Pollutant Discharge Elimination System (SPDES) permits, 6 NYCRR Part 754.4(g) and 40 CFR 122.42, Publicly Owned Treatment Works (POTW) permittees are required to notify the New York State Department of Environmental Conservation (NYSDEC) when they will be accepting 'new or increased discharges of pollutants'. This guidance is intended to assist POTW permittees in (1) judging what constitutes 'any substantial change in volume or character of pollutants' as set forth in General Condition 12.1, 6 NYCRR Part 754.4(g) and 40 CFR 122.42, (2) preparing notifications to the Department of 'any substantial change in volume or character of pollutants', (3) judging when a waste is adequately characterized and (4) evaluating the effects of a discharge on POTW operation, effluent quality and POTW employee health and safety.

I. PRIOR NOTIFICATION TO NYSDEC

Notwithstanding the notification requirements in permits, state and federal regulation, there are times when the NYSDEC should be rightly excluded from review of a new, increased or changed discharge. Many local POTWs have approved pretreatment programs that would allow for ample review and control of new discharges. Furthermore, these POTWs are, many times, already receiving substantial quantities of industrial waste such that acceptance of a new or increased discharge may not constitute a substantial change in volume or character of pollutants being introduced to the POTW.

To provide for efficient, non-duplicative review of such discharges, POTWs may reasonably accept new or increased discharges of wastes without prior notification to NYSDEC provided:

- (1) the waste is adequately characterized; and
- (2) for each toxic substance believed present in the proposed discharge to the POTW at levels exceeding the levels found in

¹For the purposes of this guidance, a non-domestic user is any discharger to the POTW that may discharge wastewater that are substantially different, or represents a substantial increase in wastewater presently being discharged to the POTW. Non-domestic users do not, as a matter of course, include laundromats, restaurants, car washes, auto repair shops, etc. These sources would be significant only in the smallest POTWs.

domestic wastes², headworks loading analysis shows the discharge will not, in conjunction with present discharges, cause the maximum allowable headworks loading to be exceeded; and

(3) the POTW SPDES permit contains an effluent limit for each toxic substance believed present; or the pollutant is covered by an action level in the SPDES permit and the proposed discharge would not, in conjunction with present discharges, cause the action level to be exceeded; or it would be reasonable to conclude that the toxic substance is at levels that, in conjunction with present discharges, would not be detectable³ in the POTW treatment plant effluent; and

(4) the discharge is not believed to contain bioaccumulative and persistent substances (see ATTACHMENT 3 for a listing of bioaccumulative and persistent substances); and

(5) the discharge will not endanger the health and safety of POTW employees; and

(6) the discharge will not cause a nuisance (i.e. odors) or an explosive condition;

(7) the discharge will not violate a national pretreatment standard;

(8) the discharge will not violate local sewer use code(s);

(9) all pollution prevention requirements have been satisfied and

(10) the POTW is covered under a USEPA approved pretreatment program.

POTWs with approved local pretreatment programs are encouraged to determine whether or not notification to NYSDEC prior to acceptance of a proposed discharge is necessary. If prior notification is necessary, POTW permittees should submit the New Discharge Form and cover letter as outlined in IX below. However, even if the POTW permittee determines that prior notification to the department is not necessary, it may nonetheless be wise to submit a completed New Discharge Form and cover letter with the annual pretreatment report.

II. ADEQUATE INITIAL CHARACTERIZATION

Whether or not a proposed discharge is adequately characterized is dependent on the source of the discharge and the amount of available monitoring information and/or on engineering projections of the discharge's wastewater quality. For continuous discharges initial characterization is usually adequate using any

• Levels found in domestic waste can be determined by analysis of the POTW 's domestic wastes or the permittee may use the Levels given in the Supplemental Manual on the Development and Implementation of Local Discharge Limitations Under the Pretreatment Program, USEPA • 5/91.

• Detection Levels of substances in wastewater vary depending upon the wastewater matrix, analytical services available and the effort expended in sample collection and analysis. This guidance document recommends that the permittee use the GC/MS Method Detection Limit (MDL) for most organics (where GC/MS is appropriate), GC/ECD MDL for PCBs/Pesticides and the Graphite Furnace MDL for metals (where Graphite Furnace is appropriate) as shown in ATTACHMENT 5 to calculate effluent Loadings that would be detectable.

three daily composite samples analyzed for conventionals, non-conventionals, Oil and Grease, pH and toxics. For holding tank discharges that are likely to be consistent, initial characterization may be achieved with one sample if top, middle and bottom samples can be composited. For holding tank discharges that are likely to be inconsistent, it may be necessary to monitor likely constituents in each tank prior to discharge.

Some examples of appropriate initial characterization programs are as follows:

Leachate. When a landfill or other source of leachate is not on the DEC list of inactive hazardous waste disposal sites, the leachate can be adequately characterized by any three daily composite samples for BOD, TSS, Oil and Grease, TKN, Ammonia, Iron, Manganese, pH, Phenols, Phosphorus, Chlorides, Total Dissolved Solids and one daily composite sample for all priority pollutants except 2,3,7,8 TCDD and asbestos (see ATTACHMENT 1 for a listing of priority pollutants). To find out if a landfill is on the DEC list of inactive hazardous waste disposal sites, contact the Division of Hazardous Waste Remediation ((518)457-0639).

When a landfill or other source of leachate is on the DEC list of inactive hazardous waste disposal sites and no other information is known about the site (there is no ongoing investigation) , then adequate characterization requires any three daily composite samples analyzed for BOD, TSS, Oil and Grease, TKN, Ammonia, Manganese, Phosphorus, pH, Chlorides, Total Dissolved Solids and a single daily composite sample for all the substances listed on the Target Compound list plus 30 (see ATTACHMENT 2 for the Target Compound List - the plus 30 refers to up to 30 fugitive peaks in a GC/MS scan).

When a landfill is on the DEC list of inactive hazardous waste disposal sites and there is an ongoing investigation, the characterization needs should be determined from the ongoing investigation. A Division of Hazardous Waste Remediation contact overseeing the ongoing investigation should be identified and consulted.

Fuel Contaminated Wastewater. Groundwater remediation or tank waters associated with fuel contaminated wastewater should be characterized by at least one sample for Benzene, Toluene, Ethyl benzene, Xylene, Methyl tert-butyl ether, Naphthalene, Oil and Grease, pH and Lead.

Groundwater Remediation Wastewaters C other than fuel contaminated). Groundwater remediation wastewater characterization needs are most frequently determined from ongoing investigations of the source(s) of contamination. If there are additional concerns, then additional monitoring should be required.

Categorical Industrial Discharge. An industry subject to a federal categorical pretreatment standard must, at a minimum, monitor for all of the regulated pollutants in accordance with 40 CFR 403.12.

Proposed Facilities. For discharges which are proposed but for which no wastewater has been generated for sampling and analysis, an engineering projection of the proposed discharge should be evaluated. The engineering projection should be based on discharges from similar facilities.

POTW Treatment Plant Sludges. Notwithstanding the best practice of only introducing POTW sludge to the solids treatment or destruction train, when a POTW sludge is proposed to be accepted for treatment and disposal a single representative sample of the sludge should be monitoring initially for percent solids, percent volatile solids Ammonia, Nitrate, TKN, Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Phosphorus, pH, Potassium, Selenium and Zinc.

Please note that wastewater treatment plant sludges are fundamentally different than liquid wastewater in that contaminants tend to be concentrated in in the solids portion of the sludge, making the concentrations of contaminants range to much higher levels than could reasonably be expected in liquid wastewater. At the same time, because the contaminants are already associated with solids, they will be more likely to be easily removed with the treatment plant sludge. It may be more appropriate to compare levels of contaminants in sludge to sludge standards for landspreading than to standards for discharge of liquid wastewater.

Septage. Concerns about septage center more on the effects of the septage on the design conventional parameters of the treatment plant. As such prior monitoring of septage is unnecessary. Rather, the effects of septage on a plant should be assessed based on the general characteristics given in Appendix C - Attachment 4.

III. ONGOING CHARACTERIZATION

Wastewater.

For the first year of operation, new discharges of liquid wastewater should be monitored in accordance with the following chart for substances detected during the initial characterization. The monitoring frequency may then be reduced if warranted by the results of the first year of monitoring.

INDUSTRIAL FLOW (GPD)	RECOMMENDED INDUSTRIAL SELF-MONITORING FREQUENCIES DURING INITIAL COMPLIANCE PERIOD (FIRST YEAR)	
	CONVENTIONALS, METALS, CYANIDE, AND PHENOL	GC OR GC/MS ORGANICS
0-10,000	1/MONTH	2/YEAR
10,001-50,000	2/MONTH	4/YEAR
50,001-100,000	1/WEEK	1/MONTH
100,001-240,000	2/WEEK	2/MONTH
>240,000	3/WEEK	4/MONTH

If no discharge exists during any period, no monitoring should be required.

Septage. Some of the best ongoing monitoring programs for septage in the State use a permitting system that requires reporting of the source and subsequent telephone survey of sources to verify that the septage comes from households. In addition, it is appropriate to check all loads for pH and visual appearance and to spot check loads for metals, oil and grease and volatiles.

Please note that, as is true with wastewater treatment plant sludges, septage is fundamentally different than liquid wastewater in that metal discharged from a residence will likely concentrate in the septic tank solids, making the concentrations of metals range to much higher levels than could reasonably be expected in liquid wastewater. The variability of results of septage monitoring summarized in the Supplemental Manual On the Development and Implementation of Local Discharge Limitations Under the Pretreatment Program - May, 1991 (see Appendix C - Attachment 4) and the variability of results in septage monitoring done by Westchester County Department of Environmental Facilities suggest that monitoring results for sludge cannot be compared directly to local limits.

IV. MAXIMUM ALLOWABLE HEADWORKS LOADING

The Maximum Allowable Headworks Loading (MAHL) for any substance is the mass loading of that substance that the POTW has determined, through engineering analysis, below which (1) SPDES permit effluent limits will not be exceeded, (2) sludge disposal criteria will not be exceeded and (3) the processes at the POTW treatment plant will not be inhibited. EPA guidance for calculation of MAHLs is contained in the document entitled Guidance Manual on the Development and Implementation of Local Discharge

The MAHL includes the loading from industrial, non-industrial sources and a safety factor. Showing that the total permitted load to the facility does not exceed the MAHL is not adequate. The total permitted load plus the non-industrial load plus a margin of safety must be less than the MAHL.

Furthermore, the MAHL for any one substance may originally have been calculated without the benefit of a SPDES permit effluent limit for that substance (e.g. the MAHL may have been based on sludge criteria or inhibition). Showing that the MAHL would not be exceeded when the substance is not addressed by the permit is not, in itself, adequate to show that the SPDES permit does not need to be modified to include additional action level(s) or effluent limit(s).

The MAHLs for conventional pollutants and for flows are the design ratings for the POTW treatment plant.

If the proposed discharge would cause the MAHL to be exceeded, it must be prohibited or pretreatment must be required to assure the MAHL will not be exceeded.

V. BIOACCUMULATIVE AND PERSISTENT SUBSTANCES

Bioaccumulative and persistent substances are those substances listed in ATTACHMENT 3. Because of the characteristics of these substances, prior notification to NYSDEC is necessary for every proposed discharge of bioaccumulative and persistent substances. Further, bioaccumulative and persistent substances should not be accepted without prior DEC approval.

One exception to this bioaccumulative and persistent substances notification/approval process is mercury in septage or sewage treatment plant sludges. Acceptance of septage or sewage sludge that contains Mercury at levels lower than the landspreading guidelines, would not require prior notification of NYSDEC solely because of the Mercury contained in the discharge.

VI. POTW EMPLOYEE HEALTH AND SAFETY

A proposed discharge may cause enclosed space type dangers to employees of the POTW at pump stations, sewers, manholes, etc. The EPA Manual entitled Guidance to Protect POTW Workers from Toxic and Reactive Gases and Vapors - June, 1992 and DEC Air Guide -I, Guidelines for the Control of Toxic Ambient Air Contaminants should be used to evaluate these types of discharges.

Examples of concentrations in wastewater that would normally

be considered acceptable for protection of POTW employees are as follows :

<u>PARAMETER</u>	<u>CONCENTRATION</u>
Benzene	0.14 mg/l
Ethyl benzene	1.59 mg/l
Naphthalene	2.65 mg/l
Toluene	1.36 mg/l
Xylene	2.08 mg/l

Nonetheless, there are many other substances that create life threatening environments in sewers (methane, hydrogen sulfide, etc.) and each POTW should provide an independent assessment of the health hazards to POTW employees working downpipe of such discharges.

VII. NUISANCE OR EXPLOSIVE CONDITIONS

A proposed discharge may cause odors if the point of introduction to the POTW is poorly chosen. Examples of this are (1) the introduction of septage to a manhole in a heavily trafficked area, (2) the introduction of septage to the POTW treatment plant in a sloppy manner or (3) introduction of a volatile chemical waste where the public may be exposed to vapors from the waste.

Introduction of septage should be in accordance with Recommended Standards for Wastewater Facilities - 1990 edition. A copy of the relevant section is included in attachment 4. Another good document on septage handling and treatment is the EPA Handbook - Septage Treatment and Disposal.

Where odor from organic vapors is a consideration, the permittee should screen discharges by calculating the vapor phase concentrations of volatile organics using the algorithm described in the Guidance Manual on Development and Implementation of Local Discharge Limitations Under the Pretreatment Program, USEPA, December, 1987, Chapter 4 and by comparing those levels to odor thresholds in the literature (e.g. The Handbook of Environmental Data on Organic Chemicals - Van Nostrand Reinhold).

Examples of maximum concentrations in wastewater levels that would normally be considered acceptable for protection against odors at points in the sewer system exposed to the environment are as follows:

<u>PARAMETER</u>	<u>VAPOR ODOR RECOGNITION</u>	<u>CONCENTRATION</u>
Benzene	30 mg/cu m (detection)	133 ug/l
Ethyl benzene	2.6 mg/cu m	90 ug/l
Naphthalene	3 mg/cu m	157 ug/l
Toluene	15 mg/cu m	54 ug/l
Xylene	8 mg/cu m	38 ug/l

A proposed discharge may also pose an explosive threat. The Guidance Manual on Development and Implementation of Local Discharge Limitations Under the Pretreatment Program, USEPA, December, 1987, Chapter 4 and table 4-2 provide screening techniques for explosive substances.

Examples of maximum concentrations in wastewater that would normally be considered acceptable for protection against explosion are as follows:

<u>PARAMETER</u>	<u>CONCENTRATION</u>
Benzene	20 mg/l
Ethyl benzene	16 mg/l
Naphthalene	240 mg/l
Toluene	17 mg/l
Xylene	20.8 mg/l

Nonetheless, each POTW should provide an independent assessment of the explosion hazards for substances discharged to sewers.

Discharges with closed cup flashpoints less than 140 degrees F are prohibited under 40 CFR 403.5.

Also in accordance with 40 CFR 403.5, any trucked or hauled waste must be discharged at a location formally designated by the POTW permittee and included in the transporter's 364 permit.

VIII. POLLUTION PREVENTION REQUIREMENTS

At the time of the writing of this guidance the NYSDEC is undertaking at least one initiative designed to foster pollution prevention in discharges to POTWs. Proposed discharges should comply with NYSDEC initiatives on pollution prevention.

IX. NEW DISCHARGE FORM

Notification to the NYSDEC of any substantial change in volume or character of pollutants being introduced in a POTW must be submitted with a completed New Discharge Form and a cover letter, signed by the Chief Executive Officer of the permitted entity or an equivalent, duly authorized local official, containing the following information:

1. A statement from the permittee endorsing the submission.
2. A brief description the source of the proposed discharge.
3. A brief explanation of the basis of the determination of

whether the waste is hazardous or non-hazardous.

4. How the proposed discharge will be conveyed from the source to the POTW and in what manner the proposed discharge will be introduced.
5. The substances for which the proposed discharge has been analyzed. When the proposed discharge has been scanned, simply note the scan, not all the analytes in the scan (e.g. priority pollutants, Target Compound List plus 30, Volatiles, Semi-Volatiles, etc.).
6. A statement that the proposed discharge will meet (1) the local sewer use code, (2) 40 CFR 403.5 including prohibitions against explosion and protections of worker health and safety, (3) all applicable federal categorical pretreatment standards (4) the Maximum Allowable Headworks Loadings and (5) odor control requirements.
7. A statement that compliance with SPDES Permit limits will be maintained.
8. The proposed control instrument (permits/contracts, permit limits, monitoring, etc.) which the POTW will impose on the new or increased discharge.
9. Whether or not a new discharge is proposed for classification as a Significant Industrial User (SIU) and provide the basis for that proposal.
10. For a proposed discharge of bioaccumulative and persistent to a combined sewer system, list CSOs downpipe from the discharge point including outfall numbers, frequencies of discharge (per year) and latitudes and longitudes. In addition, a statement that the concentrations shown on the new discharge form are the maximum expected concentrations and that those concentrations are achieved without dilution.
11. The method of POTW sludge disposal or reuse and the ultimate site of reuse or disposal.

NEW DISCHARGE FORM
for new or increased discharges to POTWs

1. POTW NAME AND SPDES PERMIT NUMBER		2. PROPOSED DISCHARGE SOURCE, NAME & ADDRESS			4. LOCATION OF PROPOSED DISCHARGE POINT				
		3. PROPOSED DATE TO COMMENCE DISCHARGE			5. IS THE DISCHARGE A HAZARDOUS WASTE?				
6. SUBSTANCE	7. MAX DISCHARGE CONCENTRATION PROPOSED (PPM)	8. PRESENT POTW MIN REMOVAL RATE (%)	9. MAX LBS ADDITIONAL LOADING PROPOSED	10. PRESENT TOTAL LBS PERMITTED LOADING	11. NON INDUSTRIAL LOADING LBS	12. PRESENT MAX LBS HEADWORKS LOADING	13. MAX LBS ALLOWABLE HEADWORKS LOADING	14. PROJECTED MAX LBS HEADWORKS LOADING	15. PROJECTED MAX LBS EFFLUENT LOADING
Flow (gpd)									
Flow (gpm)									
BOD,									
SUSPENDED SOLIDS									

DIRECTIONS FOR NEW DISCHARGE FORM

Question 1. Use name and permit number from page 1 of your SPDES permit.

Question 3. Please note date when proposed discharge will commence.

Question 4. E.G. - Influent wet well, influent holding tank, discharge source sewer, manhole at Hollywood and Vine, etc.

Question 5. Please note whether the proposed discharge would be a characteristic or listed hazardous waste.

Question 6. Include all substances detected in the initial characterization program.

Question 7. Include maximum from initial monitoring or, if the discharge is expected to exceed what showed up in initial monitoring, a projected 'worst case' (for example - 8th decile). Even though the column indicates PPM units, also include the maximum flows (gpd and gpm) that will be allowed on any given day in this column.

Question 8. Generally for metals; use a reasonable worst case (for example - 8th decile) to represent min. If an assumed removal rate is used footnote the number and explain the basis for the removal rate on a separate sheet.

Question 9. See directions for question 6.

Question 10. If other dischargers to the POTW are permitted to discharge the substance, the total pounds allowed to all other dischargers.

Question 11. Generally for metals (especially copper, zinc and lead), taken from the Supplemental Manual on the Development and Implementation of Local Discharge Limitations Under the Pretreatment Program, USEPA - May 1991 or from sampling of purely residential wastewaters in the POTW service area.

Question 12. If influent monitoring information is available for the substance, use the most recent year's data to calculate the loadings for this column.

Question 13. If available, as calculated in accordance with the most recent headworks analysis; this does not necessarily require a revised headworks analysis.

Question 14. If detailed maximum data is not available, project a worst case.

Question 15. If detailed maximum data is not available, project a worst case.

SUBMIT THE COVER LETTER, NEW DISCHARGE FORM AND ANY ATTACHMENTS TO:

The Regional Water Engineer

Chief, Biological systems Section
NYSDEC, Room 318
50 Wolf Road
Albany, NY 12233-3505

APPENDIX C - ATTACHMENT 1
NYSDEC DIVISION OF WATER TOGS 1.3.8
GUIDANCE FOR ACCEPTANCE OF NEW DISCHARGES

PRIORITY POLLUTANTS
(From: 40CFR Part 122, Appendix D)

TABLE II - ORGANIC TOXIC POLLUTANTS IN EACH OF FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GC/MS)

Volatiles	
1V	acrolein
2V	acrylonitrile
3V	benzene
5V	bromoform
6V	carbon tetrachloride
7V	chlorobenzene
8V	chlorodibromomethane
9V	chloroethane
10V	2-chloroethylvinyl ether
11V	chloroform
12V	dichlorobromomethane
14V	1,1-dichloroethane
15V	1,2-dichloroethane
16V	1,1-dichloroethylene
17V	1,2-dichloropropane
18V	1,3-dichloropropylene
19V	ethylbenzene
20V	methyl bromide
21V	methyl chloride
22V	methylene chloride
23V	1,1,2,2-tetrachloroethane
24V	tetrachloroethylene
25V	toluene
26V	1,2-trans-dichloroethylene
27V	1,1,1-trichloroethane
28V	1,1,2-trichloroethane
29V	trichloroethylene
31V	vinyl chloride
Acid Compounds	
1A	2-chlorophenol
2A	2,4-dichlorophenol
3A	2,4-dimethylphenol
4A	4,6-dinitro-o-cresol
5A	2,4-dinitrophenol
6A	2-nitrophenol
7A	4-nitrophenol
8A	p-chloro-m-cresol
9A	pentachlorophenol
10A	phenol
11A	2,4,6-trichlorophenol

* Dioxin is not listed in Part 122, but it is a priority pollutant

** Phenols, Total is not a priority pollutant but is considered a Toxic Substance for Toxic/Non Toxic classification of permits (analysis by 4AAP)

Base/Neutral	
1B	acenaphthene
2B	acenaphthylene
3B	anthracene
4B	benzidine
5B	benzo(a)anthracene
6B	benzo(a)pyrene
7B	3,4-bem.ofluorantbene
8B	benzo(ghi)perylene
9B	benzo(k)fluoranthene
10B	bis(2-chloroethoxy)methane
11B	bis(2-chloroethyl)ether
12B	bis(2-chloroisopropyl)ether
13B	bis(2-ethylhexyl)phthalate
14B	4-bromophenyl phenyl ether
15B	butylbenzyl phthalate
16B	2-chloronapthalene
17B	4-chloropbenyl phenyl ether
18B	chrysene
19B	dibenzo(a,h)anthracene
20B	1,2-dichlorobenzene
21B	1,3-dichlorobenzene
22B	1,4-dichlorobenzene
23B	3,3'-dichlorobenzidine
24B	diethyl phthalate
25B	dimethyl phthalate
26B	di-n-butyl phthalate
27B	2,4-dinitrotoluene 2,6-
28B	dinitrotoluene
29B	di-n-octyl phthalate
30B	1,2-diphenylhydrazine (as azobenzene)
31B	fluoranthene
32B	fluorene
33B	hexachlorobenzene
34B	hexachlorobutadiene
35B	hexachlorocyclopentadiene
36B	hexachloroethane
37B	indeno(1,2,3-cd)pyrene
38B	isophorone
39B	naphthalene
40B	nitrobenzene
41B	N-nitrosodimetbylamine
42B	N-nitrosodi-n-propylamine
43B	N-nitrosodiphenylamine
44B	phenantbrene
45B	pyrene
46B	1,2,4-trichlorobenzene

Pesticides	
1P	aldrin
2P	alpha-BBC
3P	beta-BBC
4P	lamma-BHC
5P	delta-BBC
6P	chlordan
7P	4,4'-DDT
8P	4,4'-DDE
9P	4,4'-DDD
10P	dieldrin
11P	alpha-endosulfan
12P	beta-endosulfan
13P	endosulfan sulfate
14P	endrin
15P	endrin aldehyde
16P	heptachlor
17P	heptachlor epoxide
18P	PCB-1242
19P	PCB-1254
20P	PCB-1221
21P	PCB-1232
22P	PCB-1248
23P	PCB-1260
24P	PCB-1016
25P	toxaphene

Dioxin

2,3,7,8-Tetra-chlorodibenzo-P-Dioxin*

TABLE III - OTHER TOXIC POLLUTANTS (METALS AND CYANIDE) AND TOTAL PHENOLS

Antimony, Total
Arsenic, Total
Beryllium, Total
Cadmium, Total
Chromium, Total
Copper, Total
Lead, Total
Mercury, Total
Nickel, Total
Selenium, Total
Silver, Total
Thallium, Total
Zinc, Total
Cyanide, Total
Phenols, Total**

TABLE V - TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES REQUIRED TO BE IDENTIFIED BY EXISTING DISCHARGERS IF EXPECTED TO BE PRESENT

Toxic Pollutants

Asbestos

APPENDIX C - ATTACHMENT 2
NYSDEC DIVISION OF WATER TOGS 1.3.8
GUIDANCE FOR ACCEPTANCE OF NEW DISCHARGES

**Superfund Target Compound List (TCL) and
Contract Required Quantitation Limits (CRQL)**

Volatiles	CAS Number	Quantitation Limits*			On Column (ng)	
		Water µg/L	Low Soil µg/Kg	Med Soil µg/Kg		
1.	Chloromethane	74-87-3	10	10	1200	(50)
2.	Bromomethane	74-83-9	10	10	1200	(50)
3.	Vinyl chloride	75-01-4	10	10	1200	(50)
4.	Chloroethane	75-00-3	10	10	1200	(50)
5.	Methylene chloride	75-09-2	10	10	1200	(50)
6.	Acetone	67-64-1	10	10	1200	(50)
7.	Carbon Disulfide	75-15-0	10	10	1200	(50)
8.	1,1-Dichloroethylene	75-35-4	10	10	1200	(50)
9.	1,1-Dichloroethane	75-35-3	10	10	1200	(50)
10.	1,2-Dichloroethylene(total)	540-59-0	10	10	1200	(50)
11.	Chloroform	67-66-3	10	10	1200	(50)
12.	1,2-Dichloroethane	107-06-2	10	10	1200	(50)
13.	2-Butanone	78-93-3	10	10	1200	(50)
14.	1,1,1-Trichloroethane	71-55-6	10	10	1200	(50)
15.	Carbon tetrachloride	56-23-5	10	10	1200	(50)
16.	Bromodichloromethane	75-27-4	10	10	1200	(50)
17.	1,2-Dichloropropane	78-87-5	10	10	1200	(50)
18.	cis-1,3-Dichloropropene	10061-01-5	10	10	1200	(50)
19.	Trichloroethene	79-01-6	10	10	1200	(50)
20.	Dibromochloromethane	124-48-1	10	10	1200	(50)
21.	1,1,2-Trichloroethane	79-00-5	10	10	1200	(50)
22.	Benzene	71-43-2	10	10	1200	(50)
23.	trans-1,3-Dichloropropene	10061-02-6	10	10	1200	(50)
24.	Bromoform	75-25-2	10	10	1200	(50)
25.	4-Methyl-2-pentanone	108-10-1	10	10	1200	(50)
26.	2-Hexanone	591-78-6	10	10	1200	(50)
27.	Tetrachloroethene	127-18-4	10	10	1200	(50)
28.	Toluene	108-88-3	10	10	1200	(50)
29.	1,1,2,2-Tetrachloroethane	79-34-5	10	10	1200	(50)
30.	Chlorobenzene	108-90-7	10	10	1200	(50)
31.	Ethyl Benzene	100-41-4	10	10	1200	(50)
32.	Styrene	100-42-5	10	10	1200	(50)
33.	Total Xylenes	1330-20-7	10	10	1200	(50)

* Quantitation Limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, calculated on dry weight basis, as required by the protocol, will be higher.

**Superfund Target Compound List (TCL) and
Contract Required Quantitation Limits (CRQL)***

Semivolatiles	CAS Number	Quantitation Limits*			On Column (ng)	
		Water µg/L	Low Soil µg/Kg	Med Soil µg/Kg		
34.	Phenol	108-95-2	10	330	10,000	(20)
35.	bis(2-Chloroethyl) ether	111-44-4	10	330	10,000	(20)
36.	2-Chlorophenol	95-57-8	10	330	10,000	(20)
37.	1,3-Dichlorobenzene	541-73-1	10	330	10,000	(20)
38.	1,4-Dichlorobenzene	106-46-7	10	330	10,000	(20)
39.	1,2-Dichlorobenzene	95-50-1	10	330	10,000	(20)
40.	2-Methylphenol	95-48-7	10	330	10,000	(20)
41.	2,2'-oxybis(1-Chloro- propane) #	108-60-1	10	330	10,000	(20)
42.	4-Methylphenol	106-44-5	10	330	10,000	(20)
43.	N-Nitroso-di-n-propylamine	621-64-7	10	330	10,000	(20)
44.	Hexachloroethane	67-72-1	10	330	10,000	(20)
45.	Nitrobenzene	98-95-3	10	330	10,000	(20)
46.	Isophorone	78-59-1	10	330	10,000	(20)
47.	2-Nitrophenol	88-75-5	10	330	10,000	(20)
48.	2,4-Dimethylphenol	105-67-9	10	330	10,000	(20)
49.	bis(2-Chloroethoxy) methane	111-91-1	10	330	10,000	(20)
50.	2,4-Dichlorophenol	120-83-2	10	330	10,000	(20)
51.	1,2,4-Trichlorobenzene	120-82-1	10	330	10,000	(20)
52.	Naphthalene	91-20-3	10	330	10,000	(20)
53.	4-Chloroaniline	106-47-8	10	330	10,000	(20)
54.	Hexachlorobutadiene	87-68-3	10	330	10,000	(20)
55.	4-Chloro-3-methylphenol	59-50-7	10	330	10,000	(20)
56.	2-Methylnaphthalene	91-57-6	10	330	10,000	(20)
57.	Hexachlorocyclopentadiene	77-47-4	10	330	10,000	(20)
58.	2,4,6-Trichlorophenol	88-06-2	10	330	10,000	(20)
59.	2,4,5-Trichlorophenol	95-95-4	25	800	25,000	(50)
60.	2-Chloronaphthalene	91-58-7	10	330	10,000	(20)
61.	2-Nitroaniline	88-74-4	25	800	25,000	(50)
62.	Dimethyl phthalate	131-11-3	10	330	10,000	(20)
63.	Acenaphthylene	208-96-8	10	330	10,000	(20)
64.	2,6-Dinitrotoluene	606-20-2	10	330	10,000	(20)
65.	3-Nitroaniline	99-09-2	25	800	25,000	(50)
66.	Acenaphthene	83-32-9	10	330	10,000	(20)

Previously known by the name bis(2-Chloroisopropyl) ether

**Superfund Target Compound List (TCL) and
Contract Required Quantitation Limits (CRQL)**

Semivolatiles	CAS Number	Quantitation Limits*			On Column (ng)	
		Water µg/L	Low Soil µg/Kg	Med Soil µg/Kg		
67.	2,4-Dinitrophenol	51-28-5	25	800	25,000	(50)
68.	4-Nitrophenol	100-02-7	25	800	25,000	(50)
69.	Dibenzofuran	132-64-9	10	330	10,000	(20)
70.	2,4-Dinitrotoluene	121-14-2	10	330	10,000	(20)
71.	Diethylphthalate	84-66-2	10	330	10,000	(20)
72.	4-Chlorophenyl phenyl ether	7005-72-3	10	330	10,000	(20)
73.	Fluorene	86-73-7	10	330	10,000	(20)
74.	4-Nitroaniline	100-01-6	25	800	25,000	(50)
75.	4,6-Dinitro-2-methylphenol	534-52-1	25	800	25,000	(50)
76.	N-nitrosodiphenylamine	86-30-6	10	330	10,000	(20)
77.	4-Bromophenyl phenyl ether	101-55-3	10	330	10,000	(20)
78.	Hexachlorobenzene	118-74-1	10	330	10,000	(20)
79.	Pentachlorophenol	87-86-5	25	800	25,000	(50)
80.	Phenanthrene	85-01-8	10	330	10,000	(20)
81.	Anthracene	120-12-7	10	330	10,000	(20)
82.	Carbazole	86-74-8	10	330	10,000	(20)
83.	Di-n-butyl phthalate	84-74-2	10	330	10,000	(20)
84.	Fluoranthene	206-44-0	10	330	10,000	(20)
85.	Pyrene	129-00-0	10	330	10,000	(20)
86.	Butyl benzyl phthalate	85-68-7	10	330	10,000	(20)
87.	3,3'-Dichlorobenzidine	91-94-1	10	330	10,000	(20)
88.	Benz(a)anthracene	56-55-3	10	330	10,000	(20)
89.	Chrysene	218-01-9	10	330	10,000	(20)
90.	bis(2-Ethylhexyl)phthalate	117-81-7	10	330	10,000	(20)
91.	Di-n-octyl phthalate	117-84-0	10	330	10,000	(20)
92.	Benzo(b)fluoranthene	205-99-2	10	330	10,000	(20)
93.	Benzo(k)fluoranthene	207-08-9	10	330	10,000	(20)
94.	Benzo(a)pyrene	50-32-8	10	330	10,000	(20)
95.	Indeno(1,2,3-cd)pyrene	193-39-5	10	330	10,000	(20)
96.	Dibenz(a,h)anthracene	53-70-3	10	330	10,000	(20)
97.	Benzo(g,h,i)perylene	191-24-2	10	330	10,000	(20)

* Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the Laboratory for soil/sediment, calculated on dry weight basis as required by the Protocol, will be higher.

**Superfund Target Compound List (TCL) and
Contract Required Quantitation Limits (CRQL)***

Pesticides/Aroclors	CAS Number	Quantitation Limits*			
		Water µg/L	Soil µg/Kg	On Column (ng)	
98.	alpha-BHC	319-84-6	0.05	1.7	5
99.	beta-BHC	319-85-7	0.05	1.7	5
100.	delta-BHC	319-86-8	0.05	1.7	5
101.	gamma-BHC (Lindane)	58-89-9	0.05	1.7	5
102.	Heptachlor	76-44-8	0.05	1.7	5
103.	Aldrin	309-00-2	0.05	1.7	5
104.	Heptachlor epoxide	1024-57-3	0.05	1.7	5
105.	Endosulfan I	959-98-8	0.05	1.7	5
106.	Dieldrin	60-57-1	0.10	3.3	10
107.	4,4'-DDE	72-55-9	0.10	3.3	10
108.	Endrin	72-20-8	0.10	3.3	10
109.	Endosulfan II	33213-65-9	0.10	3.3	10
110.	4,4'-DDD	72-54-8	0.10	3.3	10
111.	Endosulfan sulfate	1031-07-8	0.10	3.3	10
112.	4,4'-DDT	50-29-3	0.10	3.3	10
113.	Methoxychlor	72-43-5	0.50	17.0	50
114.	Endrin ketone	53494-70-5	0.10	3.3	10
115.	Endrin aldehyde	7421-36-3	0.10	3.3	10
116.	alpha-Chlordane	5103-71-9	0.05	1.7	5
117.	gamma-Chlordane	5103-74-2	0.05	1.7	5
118.	Toxaphene	8001-35-2	5.0	170.0	500
119.	AROCLOR-1016	12674-11-2	1.0	33.0	100
120.	AROCLOR-1221	11104-28-2	1.0	67.0	200
121.	AROCLOR-1232	11141-16-5	1.0	33.0	100
122.	AROCLOR-1242	53469-21-9	1.0	33.0	100
123.	AROCLOR-1248	12672-29-6	1.0	33.0	100
124.	AROCLOR-1254	11097-69-1	1.0	33.0	100
125.	AROCLOR-1260	11096-82-5	1.0	33.0	100

* Quantitation Limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the Laboratory for soil/sediment, calculate on dry weight basis, as required by the Protocol, will be higher.

SECTION II

SUPERFUND-CLP INORGANICS

Superfund Target Compound List (TCL) and Contract Required Quantitation Limit

Parameter	Contract Required Quantitation Level ($\mu\text{g/L}$)
1. Aluminum	200
2. Antimony	60
3. Arsenic	10
4. Barium	200
5. Beryllium	5
6. Cadmium	5
7. Calcium	5000
8. Chromium	10
9. Cobalt	50
10. Copper	25
11. Iron	100
12. Lead	3
13. Magnesium	5000
14. Manganese	15
15. Mercury	0.2
16. Nickel	40
17. Potassium	5000
18. Selenium	5
19. Silver	10
20. Sodium	5000
21. Thallium	10
22. Vanadium	50
23. Zinc	20
24. Cyanide	10

APPENDIX

TABLE NO. 2*

COMPARISON OF SEPTAGE AND MUNICIPAL WASTEWATER^a

Parameter	Septage^b	Wastewater^c	Ratio of Septage to Wastewater
TS	40,000	720	55:1
TVS	25,000	365	68:1
TSS	15,000	220	68:1
VSS	10,000	165	61:1
BOD ₅	7,000	220	32:1
COD	15,000	500	30:1
TKN	700	40	17:1
NH ₃ -N	150	25	6:1
Total P	250	8	31:1
Alkalinity	1,000	100	10:1
Grease	8,000	100	80:1
pH	6.0	--	--
LAS	150	--	--

^a Values expressed as mg/L, except for pH.

^b Based on suggested design values in Table No. 1 (USEPA Table 3-4).

^c From Metcalf and Eddy, 2nd Edition, "medium strength sewage".

* Table No. 2 including footnotes is taken from the USEPA Handbook entitled "Septage Treatment and Disposal", 1984, EPA-625/6-84-009 and is designated in that document as "Table 3-8".

TABLE 12. OVERALL AVERAGE ORGANIC POLLUTANT LEVELS (MG/L)

POLLUTANT	RES. AVERAGE	SEPTAGE AVERAGE	LEACHATE AVERAGE	COMMERCIAL FACILITIES					
				CAR WASH AVERAGE	DRY CLEANER AVERAGE	HOSPITAL AVERAGE	INDUSTRIAL LAUNDRIES AVERAGE	RADIATOR SHOP AVERAGE	TRUCK CLEANERS AVERAGE
ACETONE		10.588	2.8						
BENZENE		0.062	0.025						
BENZOIC ACID			0.19						
BIS(2-ETHYLHEXYL)PHTHALATE	0.006				0.37		0.725		
BROMODICHLOROMETHANE							0.009		
BROMOFORM							0.026		
2-BUTANONE			13.633						
2-(2-BUTOXYETHOXY) ETHANOL					0.59				
BUTYL BENZYL PHTHALATE							0.033		
BUTYL CELLOSOLVE					1.3				
CARBON TETRACHLORIDE							0.010		
CHLOROBENZENE			0.011				0.009		
CHLOROETHANE			0.021						
CHLOROFORM	0.009						0.141		
4,4'-DDD	0.0003								
1,4-DICHLOROBENZENE			0.101						
1,1 DICHLOROETHANE	0.026		0.575						
1,1 DICHLOROETHENE	0.007		0.030						
DIETHYL PHTHALATE			0.11						
DIMETHYL PHTHALATE			0.005						
2,4 DIMETHYLPHENOL			0.107						
DI-N-OCTYL PHTHALATE					0.042		0.057		
ETHYL BENZENE		0.067	0.171				0.950		
1-ETHYL-2-METHYL BENZENE							150		

TABLE 12. OVERALL AVERAGE ORGANIC POLLUTANT LEVELS (MG/L) (Continued)

POLLUTANT	RES. AVERAGE	SEPTAGE AVERAGE	LEACHATE AVERAGE	COMMERCIAL FACILITIES					
				CAR WASH AVERAGE	DRYCLEANER AVERAGE	HOSPITAL AVERAGE	INDUSTRIAL LAUNDRIES AVERAGE	RADIATOR SHOP AVERAGE	TRUCK CLEANERS AVERAGE
1-ETHYL-4-METHYL BENZENE							150		
FLUORANTHENE	0.001								
FORMALDEHYDE						0.58			
2-HEXANONE			0.094						36478.502
ISOPROPYL ALCOHOL	14.055								
METHYL ALCOHOL		15.84							
METHYL ETHYL KETONE		3.650							
METHYLENE CHLORIDE	0.027	0.101	0.310				0.006		
4-METHYLPHENOL			0.065						
4-METHYL-2-PENTANONE			0.43						
M-XYLENE							6.744		
NAPHTHALENE			0.113				0.310		
N-BUTYL BENZENESULFONAMIDE					1.2				
N-NITROSODIPHENYLAMINE			0.011						
PENTACHLOROPHENOL			0.016						
PHENOLS	0.010		0.710		0.117	0.201	0.244		
2-PROPANOL							25.5		
1-PROPANOL							74		
PYRENE	0.0002								
P-CHLORO-M-CRESOL			0.018						
P-XYLENE							3.543		1.881
1,1,2,2 TETRACHLOROETHANE							0.099		
TETRACHLOROETHENE	0.015						0.163		

TABLE 12. OVERALL AVERAGE ORGANIC POLLUTANT LEVELS (MG/L) (Continued)

POLLUTANT	RES. AVERAGE	SEPTAGE AVERAGE	LEACHATE AVERAGE	COMMERCIAL FACILITIES					
				CAR WASH AVERAGE	DRYCLEANER AVERAGE	HOSPITAL AVERAGE	INDUSTRIAL LAUNDRIES AVERAGE	RADIATOR SHOP AVERAGE	TRUCK CLEANERS AVERAGE
TETRACHLOROETHYLENE	0.00001								
TOLUENE		0.170	0.735		0.016		4.032		
TOTAL BHC	0.001								
TOTAL ENDOSULFAN	0.002								
TRANS-1,2-DICHLOROETHENE	0.013						0.026		
1,2,4-TRICHLOROBENZENE	0.013								
1,1,1-TRICHLOROETHANE			0.019				0.025		
TRICHLOROETHENE			0.028						
TRICHLOROETHYLENE			0.018						
VINYL ACTETATE			0.250						
VINYL CHLORIDE			0.067						
XYLENE		0.051	0.317						

TABLE 13. OVERALL AVERAGE INORGANIC POLLUTANT LEVELS (MG/L)

POLLUTANT	RES. AVERAGE	SEPTAGE AVERAGE	LEACHATE AVERAGE	COMMERCIAL FACILITIES					
				CAR WASH AVERAGE	DRY CLEANER AVERAGE	HOSPITAL AVERAGE	INDUSTRIAL LAUNDRIES AVERAGE	RADIATOR SHOP AVERAGE	TRUCK CLEANERS AVERAGE
ALUMINUM			0.34					1.13	7.7
ANTIMONY			0.142			0.018			0.09
ARSENIC	0.007	0.141	0.042			0.026	0.034	0.012	0.068
BARIUM	0.115	5.758	0.201			1.779	0.506		
BERYLLIUM									0.013
BORON	0.3								
CADMIUM	0.008	0.097	0.030	0.017	0.008	0.018	0.034	0.165	0.027
CHROMIUM	0.034	0.490	0.633	0.074	0.022	0.117	0.216	0.128	0.120
CHROMIUM(III)	0.006								
COBALT		0.406			0.004				
COPPER	0.109	4.835	0.395	0.139	0.086	0.452	0.552	22.218	0.233
CYANIDE	0.082	0.469	0.029				0.101	0.030	55.587
FLUORIDE	0.255					0.637			
IRON	0.989	39.287	33.8		0.51	2.249	3.796	64.430	
LEAD	0.116	1.210	0.156	0.162	0.032	0.881	1.514	69.210	0.353
LITHIUM	0.031								
MANGANESE	0.087	6.088	13.224				0.553	1.23	
MERCURY	0.002	0.005	0.001			0.002	0.004	0.0004	
NICKEL	0.047	0.526	0.550	0.080	0.009	0.060	0.140	0.300	0.177
SELENIUM	0.004		0.010			0.011	0.016		0.012
SILVER	0.019	0.099	0.019	0.018		0.098	0.123	0.024	0.114
THALLIUM									0.042
TIN		0.076							
ZINC	0.212	9.971	12.006	0.543	0.174	0.563	1.873	145.295	4.416

TABLE 14. OVERALL AVERAGE NONCONVENTIONAL POLLUTANT LEVELS (MG/L)

POLLUTANT	RES. AVERAGE	SEPTAGE AVERAGE	LEACHATE AVERAGE	COMMERCIAL FACILITIES					
				CAR WASH AVERAGE	DRY CLEANER AVERAGE	HOSPITAL AVERAGE	INDUSTRIAL LAUNDRIES AVERAGE	RADIATOR SHOP AVERAGE	TRUCK CLEANERS AVERAGE
AMMONIA	43.111								
COD		21247.951	34.545	126.333	315.565	346.721	1421.409	7.667	
PHOSPHATE	28.8				25.719	4.465	13.2		7.85
SULFIDE							4.800		
SURFACTANTS					0.02	1.791			
TDS					625	426.583			3364
TOTAL PHOSPHORUS	0.7								

APPENDIX C - ATTACHMENT 3
NYSDEC DIVISION OF WATER TOGS 1.3.8
GUIDANCE FOR ACCEPTANCE OF NEW DISCHARGES

APPENDIX C - ATTACHMENT 3
 BAT/BPJ LIMITS AT THE POINT OF DISCHARGE TO SEWERS
 NYSDEC DIVISION OF WATER TOGS 1.3.8
 BIOACCUMULATIVE AND PERSISTENT SUBSTANCES *

NAME	BAT/BPJ (DAILY MAXIMUM - UG/L)	PRACTICAL QUANTITATION LIMIT	BASIS FOOT NOTE	CAS NUMBER
Aldrin	8	8	1,2	309-00-2
4-Bromophenyl phenyl ether	20	20	4	101-55-3
Chlordane (also CAS# 12789-03-6)	10	10	1,2	57-74-9
4-Chlorophenyl phenyl ether	20	20	4	7005-72-3
4,4'-DDD; p,p'-DDD; 4,4'-TDE; p,p'TDE	10	10	4	72-54-8
4,4'-DDE; p,p'-DDE	20	20	5	72-55-9
4,4'-DDT; p,p'-DDT	20	20	4	50-29-3
Dieldrin	10	10	1,2	60-57-1
Endrin	10	10	1,2	72-20-8
Heptachlor	8	8	1,2,4	76-44-8
Heptachlor epoxide	9	9	1,2	1024-57-3
Hexachlorobenzene	8	8	2	118-74-1
Hexachlorobutadiene; hexachloro-1,3-butadiene	4	4	1,2	87-68-3
Hexachlorocyclohexane; BHC	40	40	4	608-73-1
alpha-Hexachlorocyclohexane; alpha-BHC	10	10	4	319-84-6
beta-Hexachlorocyclohexane; beta-BHC	20	20	4	319-85-7
gamma-Hexachlorocyclohexane; gamma-BHC; LINDANE	10	10	4	58-89-9
delta-Hexachlorocyclohexane; delta-BHC	10	10	4	319-86-8
Mercury	1,15	0.8	6,7	7439-97-6
Methoxychlor	18	0.4	8	72-43-5
Mirex; dechlorane	0.4	0.4	4	2385-85-5
Octachlorostyrene	N/A	N/A		29082-74-4
Pentachlorobenzene	10	10	4	608-93-5
Photomirex	N/A	N/A		39801-14-4
Polychlorinated Biphenyls; PCBs	0.3	0.3	1,3	A21000-00-0
2,3,7,8-TCDD	0.017	0.008	4	1746-01-6
1,2,3,4-Tetrachlorobenzene	10	10	4	634-66-2
1,2,4,5-Tetrachlorobenzene	10	10	4	95-94-3
Toxaphene	10	10	4	8001-35-2

1. GC/MS - PQL, Granular Activated Carbon, R.R.E.L. Treatability Database (RREL)
2. GC/MS - PQL, Resin Adsorption, RREL
3. GC/MS - PQL, Activated Carbon, ALCOA
4. GC/MS - PQL, Activated Carbon, Best Professional Judgement
5. GC/MS - PQL, Sedimentation, RREL
6. Chemical Precipitation, RREL
7. Ion Exchange, LCP
8. Wet Air Oxidation, RREL

* As derived from the Great Lakes initiative list of Bioaccumulative Chemicals of Concern

APPENDIX C - ATTACHMENT 4
NYSDEC DIVISION OF WATER TOGS 1.3.8
GUIDANCE FOR ACCEPTANCE OF NEW DISCHARGES

Recommended Standards for WASTEWATER FACILITIES

POLICIES FOR THE DESIGN, REVIEW, AND APPROVAL OF PLANS AND
SPECIFICATIONS FOR WASTEWATER COLLECTION AND TREATMENT
FACILITIES

1990 EDITION

A REPORT OF THE WASTEWATER
COMMITTEE OF THE
GREAT LAKES -UPPER MISSISSIPPI RIVER
BOARD OF STATE PUBLIC HEALTH AND ENVIRONMENTAL MANAGERS

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**APPENDIX
HANDLING AND TREATMENT OF SEPTAGE
AT A
WASTEWATER TREATMENT PLANT**

GENERAL

One method of septage disposal is the discharge to a municipal or district wastewater treatment plant (WWTP). The handling and treatment of septage received at a WWTP is the subject of this appendix.

Septage Defined

Septage is a general term for the contents removed from septic tanks, portable vault toilets, privy vaults, holding tanks, grease traps, very small wastewater treatment plants, or semi-public facilities (i.e., schools, motels, mobile home parks, campgrounds, small commercial endeavors) receiving wastewater from domestic sources.

Nondomestic (industrial) wastes are not included in the definition and are not covered by this appendix.

Septage Characteristics

Compared to raw domestic wastewater from a conventional municipal sewer collection system, septage usually is quite high in organic, grease, and solids concentrations. Substantial quantities of phosphorus, ammonia nitrogen, bacterial growth inhibitors, and cleaning materials may be present in septage depending on the source. Tables No. 1 and No. 2 (Tables 3-4 and 3-8 from the U.S. EPA Handbook entitled "Septage Treatment and Disposal" 1984, EPA-625/6-84-009 reprinted herein) give a comparison of some of the common parameters for septage and municipal wastewater. Characteristics of septage may be expected to vary widely from load to load depending on the source (i.e., septic tank pumpage compared to grease traps or to recreational vehicles, or dump station holding tanks containing bacteria inhibitors).

Treatment of Septage at a WWTP

Septage is normally considered treatable at a WWTP. However, unless proper engineering planning and design is provided, septage may represent a shock loading or have other adverse impacts on plant processes and effluent quality which will be influenced by many factors including the following:

- a. Capacity (MGD) (m^3/d) of the WWTP relative to the amount and rate of septage feed to the plant;
- b. Unused WWTP capacity available (above current sewer collection system loadings) to treat septage loadings;
- c. Sensitivity of the treatment plant process to daily fluctuations in loadings brought about by the addition of septage;
- d. Slug septage loadings of BOD, ammonia or phosphorus which may cause process upset, pass through to effluent, odor nuisance or other problems such as foaming aeration tank/aerated digester;
- e. The point of introduction of the septage into the WWTP process. Feasible alternative points of feed to the WWTP units shall be evaluated including feed to the sludge processing units provided the unit function will not be adversely affected;

- f. The ability to control feed rates of septage to the WWTP during off peak loading periods; and,
- g. The volume and concentrations of bacterial growth inhibitors in septage from some portable vault toilets and recreational dump station holding tanks.

The permitted plant effluent regulatory limits for the WWTP on each of the controlled parameters must be considered when evaluating these factors.

WWTP Facilities Considered for Septage Treatment

It is essential that an adequate engineering evaluation be made of the existing WWTP and the anticipated septage loading being considered prior to receiving septage at the WWTP. The regulatory agency shall be contacted to obtain the appropriate approvals prior to the acceptance of septage. For proposed WWTP expansion and upgrading, the engineering report or facility plan (refer to Chapter 10), shall include anticipated septage loading in addressing treatment plant sizing and process selection. The following items should be included as appropriate in the engineering evaluation and facility planning:

- a. The uninterrupted and satisfactory treatment (within the plant regulatory limits) of wasteloads from the sewer system must not be adversely affected by the addition of septage to the plant;
- b. In general, the smaller the WWTP design capacity relative to the septage loading proposed, the more subject the WWTP will be to upset and potential violation of permitted discharge effluent limits;
- c. Allocation of organic plant capacity originally planned for future growth;
- d. For plants to be expanded and upgraded, the engineering evaluation and facility planning should jointly consider the sensitivity of the WWTP process to receiving of septage, and the impact on the discharge parameter limits;
- e. An evaluation of available WWTP operator staff and the staffing requirements necessary when septage is to be received. Staff should be present when septage is being received and unloaded. Added laboratory work associated with the receiving of septage for treatment should be included in the staffing evaluation;
- f. The space for constructing septage receiving facilities that are to be off-line from the raw wastewater incoming from the sewer system. The location of the septage receiving facility and the septage hauler unloading area should consider other plant activity, and traffic flow; and
- g. The impact of the septage handling and treatment on the WWTP sludge handling and processing units and ultimate sludge disposal procedures.

WWTP Septage Receiving Facility

The design of the septage receiving station at the WWTP should provide for the following elements:

- a. Hard surface haul truck unloading ramp sloped to a drain to allow ready cleaning of any spillage and washing of the haul tank, connector hoses, and fittings. The ramp drainage must be tributary to treatment facilities and shall exclude excessive stormwater;

- b. A flexible hose fitted with easy connect coupling to provide for direct connection from the haul truck outlet to minimize spillage and help control odors;
- c. Washdown water with ample pressure, hose, and spray nozzle for convenient cleaning of the septage receiving station and haul trucks. The use of chlorinated WWTP effluent may be considered for this purpose. If a potable water source is used, it must be protected in accordance with Section 56 of these Recommended Standards;
- d. An adequate off-line septage receiving tank should be provided. Capability to collect a representative sample of any truck load of waste accepted for discharge at the WWTP shall be provided. The receiving tank should be designed to provide complete draining and cleaning by means of a sloped bottom equipped with a drain sump. The design should give consideration to adequate mixing, for testing, uniformity of septage strength, and chemical addition, if necessary, for treatability and odor control. The WWTP shall have authority to prevent and/or stop discharge that is likely to cause WWTP discharge violation;
- e. Screening, grit, and grease removal of the septage as appropriate to protect the WWTP treatment units;
- f. Pumps provided for handling the septage should be of the nonclogging design and capable of passing 3-inch (76.2 mm) diameter solids;
- g. Valving and piping for operational flexibility to allow the control of the flow rate and point of discharge of the septage to the WWTP;
- h. Safety features to protect the operational personnel. Refer to Section 57; and
- i. Laboratory and staffing capability to determine the septage strength and/or toxicity to the WWTP treatment processes. Provision for the WWTP operation reports to include the plant load attributed to septage.

WA:ts/1446n and 1477n

APPENDIX

TABLE NO. 1*

**PHYSICAL AND CHEMICAL CHARACTERISTICS OF SEPTAGE, AS
FOUND IN THE LITERATURE, WITH SUGGESTED DESIGN VALUES^{a,b}**

Suggested Parameter	United States (5) (9-19)				Europe/Canada (4) (20)				EPA Mean	Design Value
	Average	Minimum	Maximum	Variance	Average	Minimum	Maximum	Variance		
TS	34,106	1,132	130,475	115	33,800	200	123,860	619	38,800	40,000
TVS	23,100	353	71,402	202	31,600	160	67,570	422	25,260	25,000
TSS	12,862	310	93,370	301	45,000	5,000	70,920	141	3,000	15,000
VSS	9,027	95	51,500	542	29,900	4,000	52,370	13	8,720	10,000
BOD ₅	6,480	440	78,600	179	8,343	700	25,000	36	5,000	7,000
COD	31,900	1,500	703,000	469	28,975	1,300	114,870	88	42,850	15,000
TKN	588	66	1,060	16	1,067	150	2,570	17	677	700
NH ₃ -N	97	3	116	39	---	---	---	---	157	150
Total P	210	20	760	38	155	20	636	32	253	250
Alkalinity	970	522	4,190	8	---	---	---	---	---	1,000
Grease	5,600	208	23,368	112	---	---	---	---	9,090	8,000
pH	---	1.5	12.6	8	---	5.2	9.0	---	6.9	6.0
LAS	---	110	200	2	---	---	---	---	157	150

^a Values expressed as mg/L, except for pH.

^b The data presented in this table were compiled from many sources. The inconsistency of individual data sets results in some skewing of the data and discrepancies when individual parameters are compared. This is taken into account in offering suggested design values.

* Table No. 1 including footnotes is taken from the USEPA Handbook entitled "Septage Treatment and Disposal", 1984, EPA-625/6-84-009 and is designated in that document as "Table 3-4".

APPENDIX C - ATTACHMENT 5
NVSDEC DIVISION OF WATER TOGS 1.3.8
GUIDANCE FOR ACCEPTANCE OF NEW DISCHARGES

APPENDIX C - ATTACHMENT 5
DIVISION OF WATER TOGS
1.3.8
ANALYTICAL DETECTABILITY AND
QUANTIFICATION ORGANICS AND INORGANICS

The following listings show the method detection limits (MDLs) and practical quantification limits (PQLs), where they are available for various analytical procedures in water. In the listing the abbreviations are as follows:

- MDL - method detection limit; the concentration thought to represent the level at which accuracy is approximately plus or minus 100 %
- PQL - practical quantitation limit; the concentration thought to represent the level at which accuracy is approximately plus or minus 30 %
- HPLC - high pressure liquid chromatography
- GC - gas chromatography
- FID - flame ionization detector
- ECD - electron capture detector
- HECD - hall electron capture detector
- GC/MS - gas chromatography/mass spectroscopy
- FAA - flame/atomic adsorption
- GFAA - graphite furnace/atomic adsorption
- ICP - inductively coupled plasma

The values given are in micrograms per liter (ppb). The values are generalized; actual MDLs and PQLs will vary depending on wastewater matrix and laboratory.

APPENDIX C - ATTACHMENT 5
 DIVISION OF WATER TOGS 1.3.8
 ORGANICS

SUBSTANCE	HPLC		GC		GC/MS	
	MDL	PQL	MDL	PQL	MDL	PQL
ACENAPTHENE	1.8	7			1.9	8
ACENAPHTHYLENE	2.3	9			3.5	10
ACETONE					20	100
ACETONITRI LE		FID	20	100		
ACETOPHENONE					2	10
2-ACETYLAMINOFLUORENE					2	10
ACROLEIN		FID	0.7	3	50	200
ACRYLONITRI LE		FID	0.5	2	50	200
ALACHLOR		NSD	0.2	0.8		
ALDICARB	2	8				
ALDRIN		ECO	0.004	0.02	1.9	8
ALLYL CHLORIDE		HECD	1	5	20	100
AMETRYN		HECD/N	2	8		
4-AMINOBI PHENYL					2	10
AMINOCARB		TLC*	10	40		
ANILINE					2	10
ANTHRACENE	0.66	3			1.9	8
AOP	COLORI		20	60		
ARAMITE					3	10
ATRATON		HECD/N	2	8		
ATRAZINE		HECD/N	2	8		
AZINPHOS METHYL		FPD/P	0.2	0.6		
BARBAN		TLC*	5	20		
BENFLURALIN		ECO	2	8		
BENOMYL	8.7	30				
BENTAZON		FPD	10	40		
BENZ[A]ANTHRACENE	0.013	0.05			7.8	30
BENZENE		PID	0.2	0.8	4.4	20
BENZIDINE	0.08	0.3			50	200
BENZO[B] FLUORANTHENE	0.018	0.07			4.8	20
BENZO[K] FLUORANTHENE	0.017	0.07			2.5	10
BENZO[g,h,i,] PERYLENE	0.076	0.3			4.1	20
BENZO[a]PYRENE	0.023	0.09			2.5	10
BENZYL ALCOHOL					5	20

APPENDIX C - ATTACHMENT 5
 DIVISION OF WATER TOGS 1.3.8
 ORGANICS

SUBSTANCE	HPLC		GC		GC/MS	
	MDL	POL	MDL	PQL	MDL	PQL
BENZYLCHLORIDE		HSD	10000	40000		
ALPHA-BHC		ECO	0.003	0.01	2	10
BETA-BHC		ECO	0.006	0.02	4.2	20
DELTA-BHC		ECO	0.009	0.04	3.1	10
GAMMA-BHC		ECO	0.004	0.02	2	10
BOD	OXY DE		2000	2000		
BIS(2-CHLOROETHOXY) METHANE		HECD	0.5	2	5.3	20
BIS(2-CHLOROETHYL) ETHER		HECD	0.3	1	5.7	20
BIS(2-CHLOROISOPROPYL) ETHER		HECD	0.8	3	5.7	20
BIS(2-ETHYLHEXYL) PHTHALATE		ECO	2	8	2.5	10
BOLSTAR		FPD/P	0.15	0.6		
BROMOACIL		NTD	2.38	10		
BROMIDE	TITRIME		400	2000		
BROMODICHLOROMETHANE		HECD	0.1	0.4	2.2	9
BROMOFORM		HECD	0.2	0.8	4.7	20
BROMOMETHANE		HECD	1.18	5	2	10
4-BROMOPHENYL PHENYL ETHER		HECD	2.3	9	1.9	8
BUSAN 40	COLORI		20	60		
BUSAN 85	COLORI		20	60		
BUTACHLOR		NSD	0.2	0.8		
2-BUTANONE		FID	2	10	20	100
BUTYL BENZYL PHTHALATE		ECO	0.34	1	2.5	10
CAPTAN		ECO	0.1	0.4		
CARBAM S	COLORI		20	60		
CARBARYL		TLC*	10	40		
CARBENDAZIM	8.7	30				
CARBOFURAN	0.2	10				
CBOD5	OXY DE		2000	2000		
CARBON DISULFIDE					1	5
CARBON TETRACHLORIDE		HECD	0.12	0.5	2.8	10
CARBOPHENOTHION		ECO	0.05	0.2		
COD	TITRIME		10000	50000		
CHLORDANE		ECO	0.014	0.06	2	10
CHLORDENE		ECO	0.01	0.04		

APPENDIX C - ATTACHMENT 5
 DIVISION OF WATER TOGS 1.3.8
 ORGANICS

SUBSTANCE	HPLC		GC		GC/MS	
	MDL	POL	MDL	POL	MDL	POL
CHLORIDE	COLOR!		900	4000		
CHLORINE-TOTAL RESIDUAL	IODOME		3	10		
	SPECTR		40	100		
	AMPER		40	200		
	DPD-FA		60	60		
4-CHLOROANILINE					5	20
CHLOROBENZENE		HECD	0.32	1	6	20
CHLOROBENZI LATE		ECO	0.2	0.8		
CHLOROETHANE		HECD	0.52	2	2	10
2-CHLOROETHYL VINYL ETHER		HECD	0.13	0.5	2	10
CHLOROFORM		HECD	0.05	0.2	1.6	6
CHLOROMETHANE		HECD	0.08	0.3	2	10
4-CHLORO-3-METHYLPHENOL		FID	0.36	1		
		ECO	1.8	7	3	10
2-CHLORONAPHTHALENE		ECO	0.94	4	1.9	8
2-CHLOROPHENOL		FID	0.31	1		
			0.58	2	3.3	10
4-CHLOROPHENYL PHENYL ETHER		HECD	3.9	20	4.2	20
CHLOROPRENE		HECD	10	50	1	5
CHLOROPROPHAM		TLC*	10	40		
CHLOROPROPYLATE		ECO	0.2	0.8		
CHLORPYRIFOS		FPD/P	0.3	1		
CHLORPYRIFOS METHYL		FPD/P	0.3	1		
CHRYSENE	0.15	0.6			2.5	10
COLIFORM, FECAL		MPN**	0.5	2		
		MF**	1	4		
COLIFORM, TOTAL		MPN**	0.5	2		
		MF**	1	4		
COLOR	SPECTR		20	80		
COUMAPHOS		FPD/P	1.5	6		
CYANAZINE	6	20				
2,4-D		ECO	0.05	0.2		
2,4-D ISOBUTYL ESTER		ECO	1.2	5		
2,4-D ISOCTYL ESTER		ECO	1.2	5		

APPENDIX C - ATACHMENT 5
 DIVISION OF WATER TOGS 1.3.8
 ORGANICS

SUBSTANCE	HPLC		GC		GC/MS	
	MDL	PQL	MDL	PQL	MDL	PQL
DALAPON		ECO	5.8	20		
2,4-OB		ECO	0.91	0.4		
2,4-DB ISOBUTYL ESTER		ECO	0.91	0.4		
2,4-DB ISOOCTYL ESTER		ECO	0.91	0.4		
4,4'-000		ECO	0.011	0.04	2.8	10
4,4'-DDE		ECO	0.004	0.02	5.6	20
4,4'-DOT		ECO	0.012	0.05	4.7	20
DEET		NTD	3.39	10		
DEMETON-0		FPO/P	0.2	0.6		
DEMETON-S		FPO/P	0.2	0.6		
DIALLATE					2	10
DIAZINON		FPD/P	0.2	0.6		
DIBENZO[a,h]ANTHRACENE	0.03	0.1			2.5	10
DIBENZOFURAN					2	10
OIBROMOCHLOROMETHANE		HECO	0.09	0.4	3.1	10
1,2-0IBROM0-3-CHLOROPROPANE		ECO	0.04	0.2		
OIBROMOCHLOROMETHANE		HECD	0.09	0.4	3.1	10
1,2-0IBROM0-3-CHLOROPROPANE		ECO	0.04	0.2		
1,2 OIBROMOETHANE		HECO	2	10	1	5
01-N-BUTYLPHthalate		ECO	0.36	1	2.5	10
OICAMBA		ECO	0.005	0.02		
OICHLOFENTHION		ECO	0.05	0.2		
OICHLORAN		ECO	0.1	0.4		
1,2-0ICHLOROBENZENE		HECD	0.15	0.6		
		PIO	0.4	2		
		ECO	1.14	5	1.9	8
1,3-DICHLOROBENZENE		HECO	0.32	1		
		PIO	0.4	2		
		ECO	1.19	5	1.9	8
1,4-0ICHLOROBENZENE		HECO	0.24	1		
		PIO	0.3	1		
		ECO	1.34	5	4.4	20
3,3'-0ICHLOROBENZIOI NE	0.13	0.5			16.5	70
TRANS-1,4-0ICHLOR0-2-BUTENE					1	5

APPENDIX C - ATTACHMENT 5
 DIVISION OF WATER TOGS 1.3.8
 ORGANICS

SUBSTANCE	HPLC		GC		GC/MS	
	MDL	POL	MDL	POL	MDL	POL
DICHLORODIFLUOROMETHANE		HECD	1.81	7		
1,1-DICHLOROETHANE		HECD	0.07	0.3	4.7	20
1,2-DICHLOROETHANE		HECD	0.03	0.1	2.8	10
1,1-DICHLOROETHENE		HECD	0.13	0.5	2.8	10
trTRANS-1,2-DICHLOROETHENE		HECD	0.1	0.4	1.6	6
2,4-DICHLOROPHENOL		FID	0.39	2		
		ECO	0.68	3	2.7	10
2,6-DICHLOROPHENOL					2	10
1,2-DICHLOROPROPANE		HECD	0.04	0.2	6	20
CIS-1,3-DICHLOROPROPENE		HECD	0.34	1	5	20
TRANS-1,3-DICHLOROPROPENE		HECD	0.2	0.8	1	5
DICHLORVOS		FPD/P	0.1	0.4		
DICOFOL		ECO	0.01	0.04		
DIELDRIN		ECO	0.002	0.008	2.5	10
DIETHYLPHTHALATE		ECO	0.49	2	1.9	8
DIMETHOATE					2	10
4-(DIMETHYLAMINO)AZOBENZENE					2	10
7,12-DIMETHYLBENZ[a]ANTHRACENE					2	10
3,3'-DIMETHYLBENZIDINE					2	10
ALPHA,ALPHA-DIMETHYLPHENYLAMINE					2	10
2,4-DIMETHYLPHENOL		FID	0.32	1		
		ECO	0.63	3	2.7	10
DIMEHTYLPHTHALATE		ECO	0.29	1	1.6	6
1,3-DINITROBENZENE					2	10
2,4-DINITROPHENOL		FID	13	50	42	200
2,4-DINITROTOLUENE		ECO	0.02	0.08	5.7	20
2,6-DINITROTOLUENE		ECO	0,01	0.04	1.9	8
DINOSEB		ECO	0.07	0.3		
01-N-OCTYLPHTHALATE		ECO	3	10	2.5	10
1,4-DIOXANE		FID	40	150		
DIOXATHION		ECO	0.05	0.2		
DIPHENYLAMINE					2	10
DISULFOTON		FPD/P	0.2	0.6		
DIURON		TLC*	10	40		

APPENDIX C - ATTACHMENT 5
 DIVISION OF WATER TOGS 1.3.8
 ORGANICS

SUBSTANCE	HPLC		GC		GC/MS	
	MDL	POL	MDL	POL	MDL	POL
ENDOSULFAN I		ECO	0.014	0.06	2	10
ENDOSULFAN II		ECO	0.004	0.02	2	10
ENDOSULFANSULFATE		ECO	0.066	0.3	5.6	20
ENORIN		ECO	0.006	0.02	2	10
ENDRINALDEHYDE		ECO	0.023	0.1	2	10
ETHALFLURALIN		ECO	2	8		
ETHION		ECO	0.05	0.2		
ETHYLBENZENE		PIO	0.2	0.8	7.2	30
ETHYLENE GLYCOL			1000	4000		
ETHYL METHACRYLATE		FID	2	10	1	5
ETHYL METHANESULFONATE					2	10
ETRIDIAZOLE		ECO	0.04	0.2		
FAMPHUR					2	10
FECAL STREPTOCOCCI		MPN	0.5	2		
		MF	1	4		
		PC	1	4		
FENSULFOTHION		FPD/P	1.5	6		
FENTHION		FPD/P	0.1	0.4		
FENURON		TLC*	5	20		
FENURON-TCA		TLC*	10	40		
FERBAM	COLOR I		20	60		
FLUOMETURON	11.1	40				
FLUORANTHENE	0.21	0.8			2.2	9
FLUORENE	0.21	0.8	1.9	8		
FLUORIDE	MAN. EL		30	100		
	SPADNS		70	300		
	COMPL		50	200		
GLYPHOSATE	5	20				
HEPTACHLOR		ECO	0.003	0.01	1.9	8
HEPTACHLOR EPOXIDE		ECO	0.083	0.3	2.2	9
HEXACHLOROBENZENE		ECO	0.05	0.2	1.9	8
HEXACHLOROBICYCLOHEPTADIENE		ECO	0.01	0.04		
HEXACHLOROBUTADIENE		ECO	0.34	1	0.9	4
HEXACHLOROCYCLOPENTADIENE		ECO	0.4	2	2	10

APPENDIX C-ATTACHMENT 5
 DIVISION OF WATER TOGS 1.3.8
 ORGANICS

SUBSTANCE	HPLC		GC		GC/MS	
	MDL	PQL	MDL	PQL	MDL	PQL
HEACHLOROETHANE		ECO	0.03	0.1	1.6	6
HEXACHLOROPENTADIENE		ECO	0.01	0.04		
HEXACHLOROPHENE					2	10
HEXACHLOROPROPENE					2	10
2-HEXANONE					10	50
HEXAZINONE		NTD	0.72	3		
INDEN0[1,2,3-c,d] PYRENE	0.043	0.2			3.7	10
IODOMETHANE		HECD	10	40	1	5
ISOBUTYL ALCOHOL		FID	10	50		
ISODRIN		ECO	0.05	0.2	2	10
ISOPHORONE		FID	5.7	20		
		ECO	15.7	60	2.2	9
ISOPROPALIN		ECO	0.02	0.08		
ISOSAFROLE					2	10
KEPONE					2	10
KN METHYL	COLOR!		20	60		
LINURON		TLC*	10	40		
MALATHION		FPD/P	0.2	0.6		
MACOZEB	COLOR!		20	60		
MANEB	COLOR!		15.3	60		
MCPA		ECO	249	1000		
MCPA ISOCTYL ESTER		ECO	249	1000		
MCPP		ECO	192	800		
MEPHOSFOLAN		FID	25	100		
METHACRYLONITRILE		FID	1	5	1	5
METHAM	COLOR!		3.7	10		
METHAPYRILENE					2	10
METHIOCARB		TLC*	20	80		
METHOMYL	10	40				
METHOXYCHLOR		ECO	0.1	0.4		
3-METHYLCHOLANTHRENE					2	10
2-METHYL-4,6-DINITROPHENOL		FID	16	60	24	100
METHYLENE BROMIDE		HECD	4	15	1	5
METHYLENE CHLORIDE		HECD	0.25	1	2.8	10

APPENDIX C - ATTACHMENT 5
 DIVISION OF WATER TOGS 1.3.8
 ORGANICS

SUBSTANCE	HPLC		GC		GC/MS	
	MDL	POL	MDL	POL	MDL	POL
METHYL METHACRYLATE		FID	0.5	2	1	5
3-METHYLMETHANESULFONATE					2	10
2-METHYLNAPHTHALENE					2	10
4-METHYL-2-PENTANONE		FID	1	5	10	50
2-METHYLPHENOL					2	10
3-METHYLPHENOL					2	10
4-METHYLPHENOL					2	10
METHYL TRITHION		ECO	0.05	0.2		
METRIBUZIN		NTD	0.46	2		
MEVINPHOS		FPD/P	0.3	1		
MEXACARBATE		TLC*	10	40		
MIREX		ECO	0.1	0.4		
MONURON		TLC*	5	20		
MONURONTCA		TLC*	10	40		
NABAM	COLORI		20	60		
NALED		FPD/P	0.1	0.4		
NAPHTHALENE	1.8	7			1.6	6
1,4-NAPHTHOQUINONE					2	10
1-NAPHTHYLAMINE					2	10
2-NAPHTHYLAMINE					2	10
NEBURON		TLC*	10	40		
NIACIDE	COLORI		20	60		
2-NITROANILINE					10	50
3-NITROANILINE					10	50
4-NITROANILINE					10	50
NITROBENZENE		FID	3.6	10		
		ECO	13.7	50	1.9	8
NITROGEN	COLORI		300	1000		
NITROGEN, NITRATE-NITRITE	MAN.C		20	60		
	AUTO. C		40	100		
	AUTO H		60	200		
NITROGEN, NITRITE	MAN.SP		10	40		
	AUTO.S		20	100		
NITROGEN, TOTAL KJELDAHL	AUTO.P		20	60		

APPENDIX C • ATACHMENT 5
 DIVISION OF WATER TOGS 1.3.8
 ORGANICS

SUBSTANCE	HPLC		GC		GC/MS	
	MDL	POL	MDL	POL	MDL	POL
	POTENT		30	200		
	ELECTR		30	100		
	TITRATI		400	2000		
	NESSLE		100	400		
2-NITROPHENOL		FID	0.45	2		
		ECO	0.77	3	3.6	10
4-NITROPHENOL		FID	2.8	10		
		ECO	0.7	3	2.4	10
4-NITROUINOLINE-1-0XIDE					2	10
N-NITROSODIMETHYLAMINE		NPD	0.15	0.6	2	10
N-NITROSODIPHENYLAMINE		NPD	0.81	3	1.9	8
N-NITROSODI-N-PROPYLAMINE		NPD	0.46	2	2	10
N-NITROSOMETHYLETHYLAMINE					2	10
N-NITROSOMORPHOLINE					2	10
N-NITROSOPIPERIDINE					2	10
N-NITROSOPIRROLIDINE					2	10
5-NITRO-0-TOLUIDINE					2	10
OIL AND GREASE	GRAVIM		3000	10000		
ORGANIC CARBON.TOTAL	COMBU		10000	50000		
OXAMYL	9.2	40				
PARATHION ETHYL		FPD/P	0.2	0.6		
PARATHION METHYL		FPD/P	0.2	0.6		
PENTACHLOROENZENE					2	10
PENTACHLORETHANE					1	5
PENTACHLORONITROBENZENE		ECO	0.1	0.4		
PENTACHLOROPHENOL		FID	7.4	30		
		ECO	0.59	2	3.6	10
PERTHANE		ECO	0.01	0.04		
PH	ELECTR		0.3	1		
PHENACETIN					2	10
PHENANTHRENE	0.64	3			5.4	20
PHENOL		FID	0.14	0.6		
		ECO	2.2	9	1.5	6
PHENOLICS.TOTAL	MAN.4A		5	20		

APPENDIX C-ATTACHMENT 5

DIVISION OF WATER TOGS 1.3.8

ORGANICS

SUBSTANCE	HPLC		GC		GC/MS	
	MDL	POL	MDL	PQL	MDL	PQL
	AUT0.4		2	8		
1,4-PHENYLENEDIAMINE					2	10
PHORATE		FPD/P	0.15	0.6		
2-PICOLINE					1	5
PCB - 1016		ECO	0.065	0.3	20	100
PCB - 1221		ECO	0.065	0.3	30	100
PCB - 1232		ECO	0.065	0.3	30	100
PCB - 1242		ECO	0.065	0.3	20	100
PCB - 1248		ECO	0.065	0.3	20	100
PCB - 1254		ECO	0.065	0.3	36	100
PCB - 1260		ECO	0.065	0.3	20	100
PROFLURIN		ECO	0.14	0.6		
PROMETON		HECD	2	8		
PROMETRYN		HECD	2	8		
PRONAMIDE					2	10
PROPACHLOR		NSD	0.2	0.8		
		ECO	1	4		
PROPAZINE		HECD	2	8		
PROPHAM		TLC*	20	80		
PROPIONITRILE		FID	10	50	1	5
PROPOXUR		TLC*	10	40		
PYRENE	0.27	1			1.9	8
PYRIDINE					1	5
TOTAL SOLIDS	GRAVIM		10000	40000		
TOTAL DISSOLVED SOLIDS	GRAVIM		10000	40000		
TOTAL SUSPENDED SOLIDS	GRAVIM		4000	20000		
TOTAL VOLATILE SOLIDS	GRAVIM		30000	100000		
(TOTAL)SETTLEABLE SOLIDS	VOLUM		0.2	0.8		
RONNEL		FPD/P	0.3	1		
SAFROLE					2	10
SECBUMETON		HECD/N	2	8		
SIDURON		TLC*	5	20		
SIMAZINE		HECD/N	2	8		
SIMETRYN		NTD	0.07	0.3		

APPENDIX C - ATTACHMENT 5
 DIVISION OF WATER TOGS 1.3.8
 ORGANICS

SUBSTANCE	HPLC		GC		GC/MS	
	MDL	POL	MDL	POL	MDL	POL
STIROFOS		FPD/P	5	20		
STROBANE		ECO	0.1	0.4		
STYRENE		PIO	0.2	1	1	5
SURFACTANTS(MBAS)	COLORI		100	400		
SWEP		TLC*	20	80		
2,4,5-T		ECO	0,01	0.04		
TERBACIL		NTD	3	10		
TERBUFOS		FID	25	100		
TERBUTHYL AZI NE		HECD/N	2	8		
TERBUTRYN		NTD	0.05	0.2		
1,2,4,5-TETRACHLORO BENZENE					2	10
2,3,7,8-TETRACHLORO DI BENZO-P-DIOXI					0.002	0.008
1,1,1,2-TETRACHLOROETHANE		HECD	1	5	1	5
1,1,2,2-TETRACHLOROETHANE		HECD	0.03	0.1	6.9	30
TETRACHLOROETHENE		HECD	0.03	0.1	4.1	20
2,3,4,6-TETRACHLOROPHENOL					2	10
TETRAETHYL DITHIOPYROPHOSPHATE					2	10
THIONAZIN					2	10
TOLUENE		PIO	0.2	0.8	6	20
0-TOLUIDINE					2	10
TOXAPHENE		ECO	0.24	1	2	10
2,4,5-TP		ECO	0.01	0.04		
2,4,5-TP ISOOCYL ESTER		ECO	0.17	0.7		
TRIADIMEFON		NTD	0.78	3		
1,2,4-TRICHLORO BENZENE		ECO	0.05	0.2	1.9	8
1,1,1 TRICHLOROETHANE		HECD	0.03	0.1	3.8	20
1,1,2 TRICHLOROETHANE		HECD	0.02	0.08	5	20
TRICHLOROETHENE		HECD	0.012	0.5	1.9	8
TRICHLOROFLUOROMETHANE		HECD	2	10	1	5
TRICHLORONATE		FPD/P	0.15	0.6		
2,4,5-TRICHLOROPHENOL					2	10
2,4,6-TRICHLOROPHENOL		FID	0.64	3		
		ECO	0.58	2	2.7	10
1,2,3-TRI CHLOROPROPANE		HECD	2	10	1	5

APPENDIX C - ATTACHMENT 5
 DIVISION OF WATER TOGS 1.3.8
 ORGANICS

SUBSTANCE	HPLC		GC		GC/MS	
	MDL	POL	MDL	PQL	MDL	POL
TRICYCLAZOLE		NTD	3	10		
0,0,0-TRIETHYL PHOSPHOROTHIOATE					2	10
TRIFLURALIN		ECO	0.1	0.4		
1,3,5-TRINITROBENZENE					2	10
TURBIDITY	NEPHEL		2	7		
VINYL ACETATE					1	5
VINYL CHLORIDE		HECD	0.18	0.7	2	10
XYLENE, TOTAL		PIO	1	5	1	5
ZAC	COLORI		20	60		
ZINEB	COLORI		20	60		
ZIRAM	COLORI		1.9	8		

APPENDIX C - ATTACHMENT 5
 DIVISION OF WATER
 INORGANICS

SUBSTANCE	FAA		GFAA		ICP		COLORIMET		DCP	
	MDL	PQL	MDL	PQL	MDL	PQL	MDL	PQL	MDL	PQL
ACIDITY(CAC03)	TITRATI		5000	20000						
ALKALINITY, AS CAC03	TITRATI		4000	20000			2000	6000		
ALUMINIUM,TOTAL	100	400	3	10	45	200	6	20	2	8
AMMONIA	NESSL		100	400						
	TITRAT*		400	2000						
	ELECT		30	100						
	AUTO P		20	60						
	AUTO E		30	200						
ANTIMONY,TOTAL	200	800	3	10	32	100				
ARSENIC, TOTAL			1	4	53	200	10	40		
		AA/GH	2	8						
BARIUM, TOTAL	100	400	2	8	2	8			0.3	1
BERYLLIUM,TOTAL	5	20	0.2	0.8	0.3	1	5	20	0.3	1
BORON.TOTAL					5	20			8	30
CADMIUM,TOTAL	5	20	0.1	0.4	4	20	20	80	5	20
CALCIUM.TOTAL	10	40	10	40					0.7	3
	TITAIME		500	2000						
CHROMIUM,HEXAVALENT	FANCE		8	30			200	600		
CHROMIUM, TOTAL	50	200	1	4	7	30	200	600	2	8
	FAA/CE		1	4						
COBALT,TOTAL	50	200	1	4	7	30			5	20
COPPER,TOTAL	20	80	1	4	6	20	10	50	2	8
CYANIDE(A)	TITRIME		20	60						
CYANIDE(T)	TITRIME		20	60						
	SPECT		200	600						
GOLD,TOTAL	100	400	1	4	8	30				
HARDNESS	10	40			40	200	400	20000		
	TITRAT*		9000	30000						
IRIDIUM,TOTAL	3000	10000	30	100						
IRON, TOTAL	30	100	1	4	7	30	200	900	7	30
LEAD,TOTAL	100	400	1	4	42	200	3	9	7	30
MAGNESIUM, TOTAL	1	4			30	100			0.2	0.8
MANGANESE, TOTAL	10	40	0.2	0.8	2	8	80	300	3	10

APPENDIX C-ATTACHMENT 5
DIVISION OF WATER
INORGANICS

SUBSTANCE	FAA		GFAA		ICP		COLORIMET		DCP	
	MDL	PQL	MDL	PQL	MDL	PQL	MDL	PQL	MDL	PQL
MERCURY, TOTAL	COLD V		0.2	0.8						
MOLYBDENUM, TOTAL	100	400	1	4	8	30			4	20
NICKEL, TOTAL	40	200	1	4	15	60	2000	10000	2	8
OSMIUM, TOTAL	300	1000	20	80						
PALLADIUM, TOTAL	100	400	5	20					2	8
PHOSPHORUS, ORTHOPHOSPHAT	AUT C		20	60						
	MAN SR		30	100						
	MAN TR		10	40						
PHOSPHOROUS, TOTAL	AUTO C		20	60						
	MAN SR		100	400						
	MAN TA		10	40						
	SEM-AU		30	100						
PLATINUM, TOTAL	200	800	20	80					20	80
POTASSIUM, TOTAL	10	40					5000	20000		
		AES*	1000	6000						
RHENIUM, TOTAL	5000	20000	200	800						
RHODIUM, TOTAL	50	200	5	20						
RUTHENIUM, TOTAL	200	800	20	80						
SELENIUM, TOTAL	2	8	2	8	75	300	1	4		
SILICA, DISSOLVED	MAN.CO		2000	9000	58	200				
	AUTO C		1000	4000						
SILVER, TOTAL	10	40	0.2	0.8	7	30	2	8	4	20
SODIUM, TOTAL	2	8	0.2	0.8	29	100			200	800
	FLAME		100	400						
SPECIFIC CONDUCTANCE	WHEAT		20	70						
(uMHOS/CM)										
SULFATE	GRAVIM		10000	40000			2000	7000		
	TURBID		1000	4000						
SULFIDE	TITRIME		1000	4000			100	400		
SULFITE	TITRIME		2000	8000						
TEMPERATURE(oC)	THERM		0.1	0.4						
THALLIUM	100	400	1	4	40	200				
TIN, TOTAL	800	3000	5	20						

APPENDIX C - ATTACHMENT 5
 DIVISION OF WATER
 INORGANICS

SUBSTANCE	FAA		GFAA		ICP		COLORIMET		DCP	
	MDL	POL	MDL	POL	MDL	POL	MDL	POL	MDL	POL
TITANIUM,TOTAL	400	2000	10	40					50	200
TURBIDITY(NTU)	NEPHEL		2	7						
VANADIUM,TOTAL	200	800	4	20	8	30	2.5	10	2	8
ZINC,TOTAL	5	20	0.05	0.2	2	8			6	20
	DITHIZO		100	400						
	ZINCON		20	80						