

New York State Department of Environmental Conservation

Division of Water

Bureau of Water Permits, Room 314

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John P. Cahill
Commissioner

MEMORANDUM

TO: Regional Water Engineers
FROM: Angus Eaton, BWP, DOW
SUBJECT: Chemical Bulk Storage (CBS) Secondary Containment Area Stormwater Management
DATE: April 4, 2000

Purpose:

The purpose of this memo is to provide guidance concerning the management of stormwater which collects in CBS secondary containment systems. Issues summarized on this page are detailed in the attachments.

Background:

CBS regulations required the installation of secondary containment systems by December 22, 1999 for many aboveground tanks, non-stationary tank storage areas and for transfer stations. One consequence of these requirements is the collection and periodic discharge of stormwater at many facilities. Because existing data indicates secondary containment area stormwaters are contaminated, these stormwater discharges must be authorized by SPDES permits. Spills are not stormwater and may not be discharged except under special circumstances (see *Attachment 1*). Proposed discharges tributary to POTWs must be reviewed and authorized consistent with the procedures specified in TOGS 1.3.8.

Short-Term Recommendations (focus on necessary permit coverage):

Eliminate these discharges where possible. Facilities with unauthorized discharges should be directed to obtain permit coverage either by applying for a general permit (if eligible) or if they currently have an individual permit by submitting a written notification in accordance with general condition 1.c. of their permit.

Long-Term Recommendations (focus on pollution reduction):

Eliminate these discharges where possible. Discharges from large facilities should be authorized by individual permits. Small facilities may be authorized by either individual or general (if eligible) permits, assuming the permittee does not insist on an individual permit. New BMP requirements (see *Attachment 7*) have been developed which appear to be the most efficient means of controlling pollution from these discharges although there may be problem facilities where establishing limits and monitoring is also appropriate. The new BMP pages are available electronically in the SPDES.forms directory as BMPcbs and should be included in all new or modified individual permits authorizing the discharge of CBS stormwater. Permits in need of these new pages should have their EBPS score revised accordingly and the pages included when the permit is next modified. The adequacy of BMP requirements in the general permit is currently being evaluated and any necessary changes will be included in the permit renewal planned for November 2003.

Please contact me at 518-457-6717 if you have any questions.

Attachments

cc: DOW Bureau Directors
BWP Staff
Bulk Storage Administration Section
Regional Spill Engineers

Attachment 1

DETAILED DISCUSSION and SUPPORTING INFORMATION:

PURPOSE:

The purpose of this guidance is to reduce the potential for water pollution resulting from the management of stormwater which collects in chemical bulk storage secondary containment systems. Stormwater management issues including the severity of contamination, applicable regulations, need for a SPDES permit and appropriate permit requirements are addressed.

Petroleum bulk storage stormwater management is not addressed by this memo. Petroleum bulk storage stormwater management guidance on this subject can be found in the 1986 Oil Discharge Category SPDES permit guidance manual and Dan Halton's June 1, 1990 memo - SPDES Permits for Containment associated with "Small" Above Ground Petroleum Storage Tanks.

BACKGROUND:

Significant quantities of chemicals are stored at many types of facilities such as industrial plants, airports, power generating stations, hazardous waste sites and wastewater treatment plants. These substances may be stored as liquids, solids or gases. Wherever chemicals are handled and stored, there is a potential for water pollution to result from both spilled material and stormwater runoff from areas contaminated by spilled material. This potential will vary between and within facilities based on the chemicals involved, BMPs employed and the physical setting. The most likely source areas for spilled chemicals and contaminated stormwater are traffic areas, transfer stations and storage areas. As noted below, CBS-regulated transfer stations and storage areas are sometimes required to have secondary containment systems. Traffic areas not associated with transfer stations are not required to have secondary containment and therefore will not be discussed further.

CBS Stormwater Quality and Quantity:

There is a limited amount of data available describing CBS secondary containment area stormwater quality and disposal practices. Available information has been summarized in *Attachment 2*. Based on this limited data and anecdotal evidence, it appears that secondary containment area stormwater is likely to become contaminated with detectable levels of the chemical(s) being stored in that area. Also, this stormwater may become contaminated by air emissions from adjacent storage areas and/or other air emission sources at a facility. At one facility, each containment area is contaminated with chemicals stored elsewhere on-site and three of the four containment areas studied are likely to be considered too contaminated for discharge without treatment.

The volume of stormwater collected by and discharged from secondary containment areas is relatively small compared to the volume of most wastewater discharges such as cooling waters. Stormwater quantity is a function of the area exposed to precipitation, the amount of precipitation and the rate of evaporation. Average and maximum daily stormwater discharge volumes can be estimated by using mean annual precipitation (see *Attachment 3*) and either 10 or 25-year 24-hour precipitation (see *Attachment 4*) data for the area of interest, ignoring evaporation.

APPLICABLE REGULATORY REQUIREMENTS:

Existing laws and regulations governing facilities that handle and store chemicals are many. A partial listing is included in *Attachment 5*. Fortunately, to understand CBS secondary containment stormwater issues, only a knowledge of CBS program and Water program regulations is required.

CBS Program:

Only those CBS program requirements which are pertinent to the subject of this memo have been summarized below.

Applicability: CBS storage, handling and construction regulations apply to hazardous substances (see definition below) which are stored in stationary aboveground tanks 185 gallons or greater, all belowground tanks, and, non-stationary tanks storing 1000 kg or greater for a period of 90 consecutive days or more. Exceptions are provided for process tanks, farms (e.g. ammonia, pesticides, etc.) and tanks or materials covered by other regulatory programs such as petroleum, RCRA, nuclear waste, etc. CBS spill regulations and reporting requirements apply to all facilities, without regard to the storage thresholds or exemptions noted above (see Spills below for more information). CBS registrations are required to be renewed every two years.

< Hazardous Substance - A substance which because of its quantity, concentration or characteristics may be harmful to humans or the environment when improperly handled or stored. Does not include hazardous wastes, petroleum, many surfactants, food products, and many water treatment chemicals including biocides. A listing of regulated hazardous substances and their reportable quantities can be found in 6NYCRR 597.

Secondary Containment: A dike, remote impoundment, or any other containment area which protects a tank, pipe or transfer station from damage due to vehicle traffic, fire and spills from nearby tanks, and which prevents any spilled material including degraded products from reaching the land or water outside the containment area. A properly functioning secondary containment system will exclude all groundwater and surface water runoff but may or may not exclude precipitation.

< Underground Tank - All tanks must have secondary containment which is water tight and include a leak detection system. No stormwater issues here.

< Aboveground Tank - A stationary tank with a capacity of 185 gallons or greater including those which can be inspected in a subterranean vault. Secondary containment must be installed with all new tanks (since 2/11/95) and by **12/22/99** for all existing tanks. The diked area must have capacity to contain 110% of the volume of the largest tank or interconnected (manifolded) tanks.

< Non-Stationary Tank - Includes barrels, drums or other holding vessels which are mobile in design and practice and used to store 1000 kg or greater for a period of 90 consecutive days or more. For non-stationary tanks which do not exceed the 90 day threshold, registration is not required but the facility must maintain inventory records. Secondary containment must be provided by **12/22/99** for all non-stationary tank storage areas. The diked area must have capacity to contain 110% of the volume of the largest tank or interconnected tanks.

< Transfer Station - Areas where pipes or hoses are connected and disconnected for the purpose of emptying and filling a storage tank. Secondary containment must be installed with all new transfer stations (since 2/11/95) and by **12/22/99** for all existing transfer stations. The diked area must have capacity to contain the volume of any leak or spill likely to occur there.

< Piping System - On-ground and underground piping systems must have secondary containment. Aboveground piping systems are not required to have secondary containment systems.

< Emptying Secondary Containment Systems (excluding underground tanks) - A system must be equipped with a sump and manually operated pump, siphon, valves or other drainage system to permit the drainage of liquids resulting from leaks, spills or precipitation. Drainage systems from tank secondary containment systems must be locked in a closed position except when the operator is in the process of draining accumulated liquids. Drainage systems from transfer area secondary containment systems need only be locked in a closed position during a transfer. Spilled or leaked substances must be removed within 24 hours. CBS regulations require that stormwater discharges from a secondary containment system must be uncontaminated or if contaminated must be discharged and treated in accordance with SPDES requirements. Stormwater, snow and ice must be removed before it compromises the required containment system capacity.

< Storage of Solids - By 12/22/99 hazardous substances which are water soluble solids at ambient temperature must be stored in non-stationary tanks which prevent entry of stormwater or in an area protected from entry of stormwater by a building or similar enclosure.

< Storage of Gases - If the substance stored in an aboveground tank is a liquid at storage conditions and a gas at ambient conditions, then secondary containment must be provided to contain the liquid component of any spill.

< Permanently Closed Aboveground Storage Tanks - Secondary containment systems must have drainage for accumulated water or precipitation.

Spills: A spill is defined by CBS regulation to be any escape of a substance from the containers employed in the normal course of storage, transfer, processing or use. Any spill of a **reportable quantity** of a hazardous substance must be reported within 2 hours of the release unless the spill is to a secondary containment system and completely contained within 24 hours and the total volume is recovered or accounted for. Refer to 6NYCRR 597 for reportable quantity thresholds. Reporting of priority pollutant metal solid particle spills is not required if the mean particle diameter exceeds 0.004 inches. However, spills of any quantity that may cause a fire, explosion, contravention of air or water quality standards, illness or injury must be reported within 2 hours of the release. All reportable spills are prohibited unless authorized by the Department or are the result of unavoidable accident or are special case releases to the air (see 6NYCRR 595.2(b)). Spills must be removed from the secondary containment area within 24 hours. Required corrective action may include removal and disposal of contaminated soil, and recovery of hazardous substances from groundwater and surface water.

CBS Program Statistics: The most recent CBS annual report noted that there were 1862 registered facilities with 5919 aboveground and 287 underground registered tanks.¹ Approximately 20% of these tanks were used to store sodium hydroxide. More than 60% of these tanks were used to store common inorganic acids and bases, and compounds typically used for water and wastewater treatment, e.g. NaOH, HCl, alum, and sodium hypochlorite. Currently, there are 1757 registered facilities of which 522 have indicated on their CBS application that they also have SPDES permits.² The number of individual secondary containment areas (aboveground and non-stationary tank storage areas, and transfer stations) at each facility exposed to precipitation can not be determined at this time.

Water Program:

The following information is presented in a way that assumes the reader has a thorough knowledge of water program requirements.

SPDES: Wastewater discharges must be authorized by SPDES permit. Stormwater discharges associated with industrial activity (see 40CFR122.26) and certain construction activities also require SPDES permits. The Department may require that other stormwater discharges be permitted if there is a reasonable potential for them to contain pollutants. Discharges of wastewater or a combination of wastewater and stormwater are usually authorized by individual permits. Permitted stormwater discharges are usually eligible for and authorized by general permits.

< **New Discharges to POTWs** - Proposed discharges tributary to POTWs must be reviewed and authorized consistent with the procedures specified in TOGS 1.3.8.

BMPs: Best Management Practices are pollution control measures or practices that control the generation of pollutants and their release to waters of the State. BMPs can include, but are not limited to, incident (spill) reporting procedures, risk identification and assessment, employee training, inspections and records, preventive maintenance, good housekeeping, materials compatibility, structural measures, security, spill prevention and response, erosion and sediment control, and management of runoff. BMPs are mandated by certain water (and CBS) regulations, Part II of individual SPDES permits, general stormwater permits, other generic permit conditions, the boilerplate BMP Plan permit pages and as site-specific permit special conditions. See TOGS 1.2.1 for more information on BMPs.

Regulatory Summary and Deficiencies:

CBS regulations established secondary containment requirements which result in the collection and periodic discharge of stormwater at many facilities. As noted in the *Background* section above, this stormwater is likely to be contaminated. Additionally, there are expected to be some facilities exempt from CBS registration, design and construction regulations due to the nature or quantity of substances stored which may have secondary containment areas which collect and discharge stormwater. Many facilities with secondary containment area stormwater discharges already have SPDES permits due to existing wastewater discharges or because their stormwater discharges were subject to federal stormwater permitting regulations. Existing water program regulations require that all of these stormwater discharges be authorized by SPDES permits.

BMPs appear to be the most efficient method of preventing the discharge of contaminated CBS secondary containment system stormwaters but they must be implemented to be effective. Existing BMP oriented regulations and generic SPDES permit requirements, including the current BMP permit pages are insufficient to address all water pollution concerns. For example, as indicated by the above section on spills, there is no required procedure to confirm whether spills (reported or unreported) have left behind residual contamination which could then contaminate stormwater.

Specific recommendations for permitting and BMPs are noted in the following section.

STORMWATER DISPOSAL RECOMMENDATIONS:

The two basic options are discharge or no discharge. Selecting the appropriate option is complicated by whether the facility has a SPDES permit and whether the SPDES permit authorizes the discharge (explicitly or implicitly). Consideration must also be given to the pollutants involved, sample results (if any), available treatment facilities, receiving water, compliance history, etc. Spills, leaks or releases are not stormwater and may not be discharged regardless of the availability of acceptable treatment except under special circumstances (see *Discussion of Related Discharges* below).

SPDES Permitting:

Due to the potential for water pollution, it is recommended that the facility eliminate the need for a discharge. However, if discharge elimination is not feasible, then the **permittee must obtain a SPDES permit**. Discharge options are noted in *Attachment 6*. If the facility has an existing SPDES permit, the permit should be reviewed to ensure that the discharge is authorized and that the permit type (individual or general) and requirements are appropriate. If the facility does not have a SPDES permit, one must be obtained.

Permit Type and Requirements: Discharges from large facilities should be authorized by individual permits. It is left to the permit writer's discretion whether an individual permit or a general permit (if eligible) is appropriate for small facilities, assuming the permittee does not insist on an individual permit. The permit type should be determined upon consideration of those factors noted at the beginning of the *Stormwater Disposal Recommendations* section above. In all cases, it is recommended that the permit writer solicit stormwater quality data from the facility to assist in determining an individual versus a general permit. For the case of individual permits, the permit writer should determine whether new BMP requirements will be sufficient or if new limits or monitoring are also appropriate.

< **Analytical results** - The only way to determine stormwater quality is to sample it for the pollutants which may be present. Pollutants of concern include pH and whatever is handled, transferred or stored in the containment area. Other pollutants handled or stored nearby, generic and indicator parameters (e.g. oil & grease, BOD, COD, solids) may also be pollutants of concern. When testing large containment areas and large storage tanks, pollutant concentrations may vary significantly based on sample location and it may be advisable to require collection of grab samples at multiple locations. At the permit writer's discretion, the grab samples may be analyzed separately or composited prior to analysis.

< **Individual permit** - An advantage of individual permits is that they can be tailored to the specific facility by the permit writer. When developing an individual permit, the permit writer must decide (1) if secondary containment area outlets should be identified as individual outfalls with monitoring requirements and effluent limitations, and/or (2) if new requirements should be placed on existing final outfalls, or (3) if control via boilerplate and/or site specific BMPs is sufficient. Please note that a containment area discharge which is not tributary to another outfall must be identified as a final outfall in the SPDES permit, even if the permit writer does not wish to establish any outfall-specific limits or monitoring requirements.

It is recommended that if the containment area outlets are not limited in the permit, then appropriate limits and monitoring should be applied to the final outfall(s) as necessary. In either case, it is recommended that one of the revised generic BMP permit pages be included in all new or modified permits authorizing the discharge of CBS stormwater. The new BMP pages are available electronically in the SPDES.forms directory (BMPcbs) and have been developed to better address CBS stormwater pollution issues than previous BMP guidance. These BMPs require the permittee to monitor and report stormwater data but do not establish specific effluent limits. Permittees must append the required stormwater monitoring to the DMRs they submit. The new BMPs are summarized in *Attachment 7*. Permits in need of modification to add the new BMP pages should have their EBPS score revised accordingly and the pages included in the permit during the next

modification. At the Department's discretion a facility covered by the general permit can be required to obtain an individual permit.

The permit writer could require testing of impounded stormwater and the receipt of acceptable results prior to discharge. This requirement could be applied prior to each discharge or only prior to the first discharge following a spill. If so, the facility inspector must be prepared to receive requests from permittee's to discharge this stormwater. The inspector must then be able to judge whether the stormwater analytical results are acceptable and discharge can be authorized or are unacceptable and the permittee must either provide acceptable treatment or find an alternative method of disposal. This requirement should only be included in the permit at the request of the facility inspector. If acceptable analytical results are required prior to each batch discharge, the permit writer must be aware that the stormwater quality can change between the time the samples are collected and the results are reported by the laboratory.

< General permit (industrial stormwater) - The general permit is easy to implement and requires less Department resources per facility. However, those with contaminated stormwater and poor SWPPPs may be less likely to be detected and corrected compared to individual permittees. The general permit requires semi-annual and annual monitoring of some CBS stormwater discharges as specified in Parts V.B.2.a-f and V.B.3.a-d. Please note that semi-annual monitoring results must be routinely submitted but annual monitoring results are not submitted unless specifically required in writing. The Department, at its discretion, may require general permit holders to perform this sampling as noted in V.B.1.b. The adequacy of BMP requirements in the current general permit is being evaluated and any necessary changes will be included in the permit renewal planned for November 2003.

< Review of monitoring data - The CBS stormwater data submitted by the permittee should be reviewed no less than annually by the permit writer. If significant levels of pollutants are being discharged, a general permittee can be required to obtain an individual permit, and an individual permit can be re-scored (EBPS) and eventually modified to require additional BMP activities, effluent limits, etc.

Treatment:

Treatment of the stormwater prior to discharge may be necessary depending on the chemicals involved, their concentration in the stormwater and SPDES permit requirements. Spills, leaks or releases are not stormwater and may not be discharged regardless of the availability of acceptable treatment except under special circumstances (see *Discussion of Related Discharges* below).

More than 33% of CBS tank registrations are for common inorganic acid and bases. At most, treatment for these stormwaters would consist of pH adjustment. Depending on the substance stored, some contaminated stormwaters may be effectively "treated" by extended exposure to air and sunlight, e.g. total residual chlorine and hydrogen peroxide. Other contaminated stormwaters may be adequately treated by conventional biological treatment systems, e.g. ethylene glycol, formaldehyde, methanol and some phenols. Finally, some stormwaters will require highly specialized treatment which may not be available at the facility, e.g., cyanide compounds, mercury and xylenes.

Discussion of Related Discharges:

In general, the following wastewaters should be sampled and satisfactory analytical results obtained prior to any discharge.

Collected Spills, Leaks and Releases - In accordance with CBS regulations, all spills, leaks and releases of hazardous substances are prohibited to enter the environment unless authorized by a valid permit. Some spills may be diluted with water or other chemical compounds in order to reduce the likelihood of fire or some other dangerous condition. In general, no SPDES permits should be issued to authorize such discharges. The spilled material must be removed and reused if possible or otherwise disposed of properly. There may be rare cases where the discharge of spilled material is acceptable but only if (1) a treatment system exists at the facility which is effective for the pollutants involved, (2) there are site-specific BMPs regulating the handling, treatment and discharge of spills, (3) these pollutants are strictly controlled by numerical effluent limits and frequent monitoring, and (4) the permit specifically authorizes the discharge of spills. At complex facilities careful scrutiny by the permit writer may be necessary to differentiate between spills and some process wastewaters.

Collected Groundwater and Surface Water Run-on - Secondary containment systems are required to exclude these waters. Therefore, any collected groundwater or surface water run-on indicates a failure of the system which requires immediate repair to eliminate such infiltration. Any discharge should be in accordance with an issued SPDES permit.

Fire Fighting Wastewaters - Runoff captured by the secondary containment area is expected to be highly contaminated, containing pollutants resulting from both the fire and the use of any chemical fire retardants or foams. The discharge of these wastewaters should not be authorized. See also the DOW memo, Final Draft Guidance, Fire Suppressant Foam - Best Management Practices, 2/27/97.

Fire Training Water - Unlike fire fighting, fire training is a planned activity and can be controlled. Use of fire retardants, foams or other water additives is not recommended due to contamination and refoaming concerns. Runoff from fire training which uses only clean water without any additives and does not contact areas which can cause it to become contaminated may be discharged without the need for a SPDES permit. Contaminated fire training wastewaters should only be discharged if appropriate treatment is available and in accordance with an issued SPDES permit.

Tank Bottoms - Tank bottoms consist of accumulated product contaminants or sludge and are unsuitable for discharge except in the case where authorized by permit and appropriate treatment is available.

Tank or Containment System Cleaning Wastewaters - Water and/or chemical additives may be used to clean tanks or containment areas of residual contamination. These wastewaters are unsuitable for discharge except in the case where authorized by permit and appropriate treatment is available.

Tank Hydrotesting Wastewaters - Tanks being hydrostatically tested must be free of product and cleaned to remove any residual product. See tank cleaning wastewater recommendations above. If authorized for discharge, samples should be taken prior to discharge from various levels within the tank (top, middle and bottom). If samples demonstrate conformance with permit requirements, discharge may commence without treatment.

Ballast waters - Ballast waters may be added to storage tanks in order to safeguard against damage or movement caused by floodwaters. CBS regulations specify that ballast water must not be discharged to waters of the State without first obtaining a SPDES permit. Refer to recommendations for addressing tank cleaning and hydrotest wastewaters.

Discharges Into Secondary Containment Systems - Discharges into containment systems should not be authorized as they will only serve to consume required containment capacity and increase the need for system draining and the potential for pollution. One exception is the addition of steam during freezing weather. For example, steam may be added to the containment area sump in order to maintain pump-out capability.

SUMMARY:

Many facilities periodically discharge stormwater which collects in chemical bulk storage secondary containment areas. These stormwater discharges must be authorized by SPDES permits. This stormwater is potentially contaminated. In order to minimize water quality impacts caused by these discharges, it is recommended that all of these facilities' SPDES permits include updated BMP requirements and, in some cases, additional permit limits and monitoring requirements. These recommendations, when implemented, should improve the quality of stormwater being discharged without a substantial increase in Division of Water workload.

Acknowledgment:

This guidance was developed with the assistance of the Bulk Storage Administration Section staff.

Footnotes:

- 1 - CBS Registration Program - Annual Report for Fiscal Year 98/99, August 25, 1999.
- 2 - Memo from Joseph Zalewski to Shayne Mitchell, January 27, 2000.

Attachment 2

AVAILABLE CBS SECONDARY CONTAINMENT AREA STORMWATER DATA:

Nepera, NY0006670

The following analytical information was included in the permittee's August 9, 1999 application requesting authorization to discharge stormwater from four of their CBS secondary containment areas. The request is being reviewed by the Department. As of the date of this memo, the permittee is not authorized to discharge secondary containment area stormwater and currently incinerates it.

Acetaldehyde and Acetone (TF54) - acetaldehyde <5 ug/l, acetone <10 ug/l, ammonia 3400 ug/l, benzene 14 ug/l, formaldehyde 12 ug/l, 3-methylpyridine 35 ug/l.

Ammonia (TF55) - acetaldehyde 40 ug/l, acetone 28 ug/l, ammonia 53000 ug/l, formaldehyde 150 ug/l, 3-methylpyridine 81000 ug/l and pyridine 100 ug/l.

2-Methylpyridine (TF56) - acetaldehyde 6 ug/l, acetone 1200 ug/l, ammonia 31000 ug/l, benzene 1000 ug/l, formaldehyde 920 ug/l, 2-methylpyridine 5400 ug/l, 3-methylpyridine 800 ug/l, pyridine 600 ug/l.

Pyridine (TF87) - acetaldehyde 110 ug/l, acetone 32 ug/l, ammonia 400000 ug/l, benzene 49 ug/l, formaldehyde 490 ug/l, 2-methylpyridine 460 ug/l, pyridine 530 ug/l.

GE - Selkirk, NY0007072

This facility's permit regulates secondary containment area discharges at outfalls 002, 003 (#6 oil), and 004 (rail yard). Permit requirements include limits, monitoring and BMPs. Each batch discharge is regulated as noted below. 004 batches which don't meet these limits are pumped to the facility's treatment plant prior to being discharged.

Chemical storage includes organic cyclic compounds, polymers, resins, WTCs, ammonia, acids and bases.

002: Limits - pH (6-9), settleable solids 0.3 ml/l, and oil & grease 15 mg/l. Monitor only - flow, TSS, TOC and receiving water flow. Flow cannot exceed 10 million gallons per year or 25% of the receiving water flow when discharging.

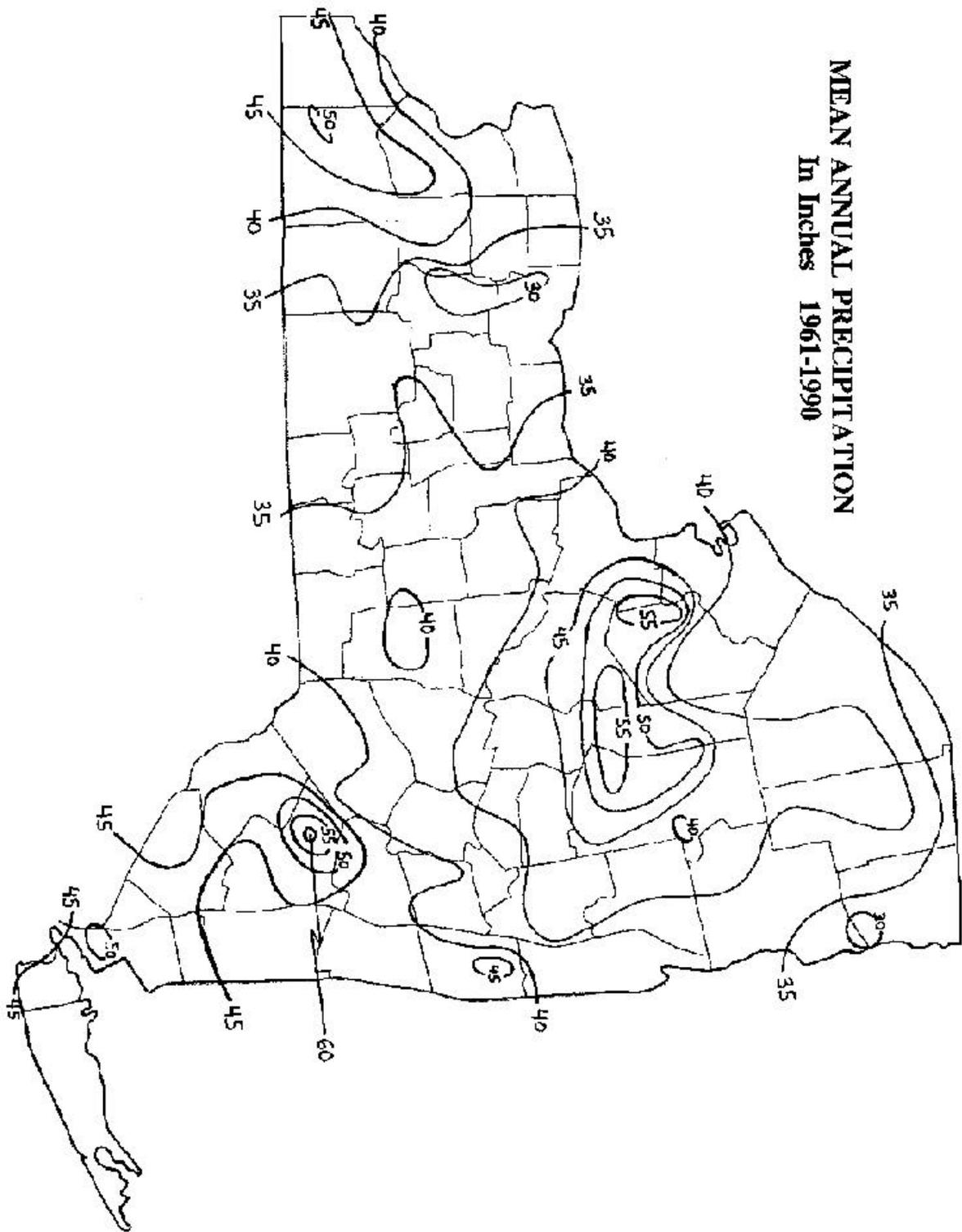
003: Limits - pH (6-9), oil & grease 15 mg/l, and benzene 6 ug/l. Action Levels - toluene and xylenes 100 ug/l each. Monitor only - flow and TOC.

004: Limits - pH (6-9), oil & grease 15 mg/l, and phenols 2 ug/l. Action Levels - toluene and styrene 100 ug/l each. Monitor only - flow and TOC.

VAW, NY0007561

Bulk storage secondary containment system stormwaters are reused as process make-up water. Process wastewaters are pretreated and discharged to municipal sewer.

Attachment 3



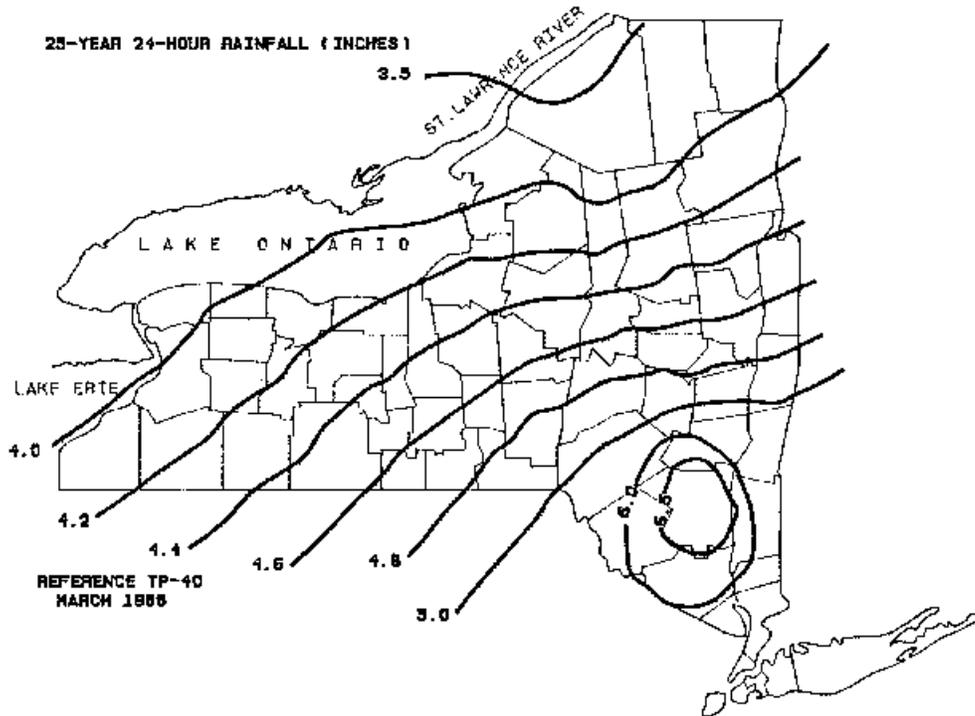
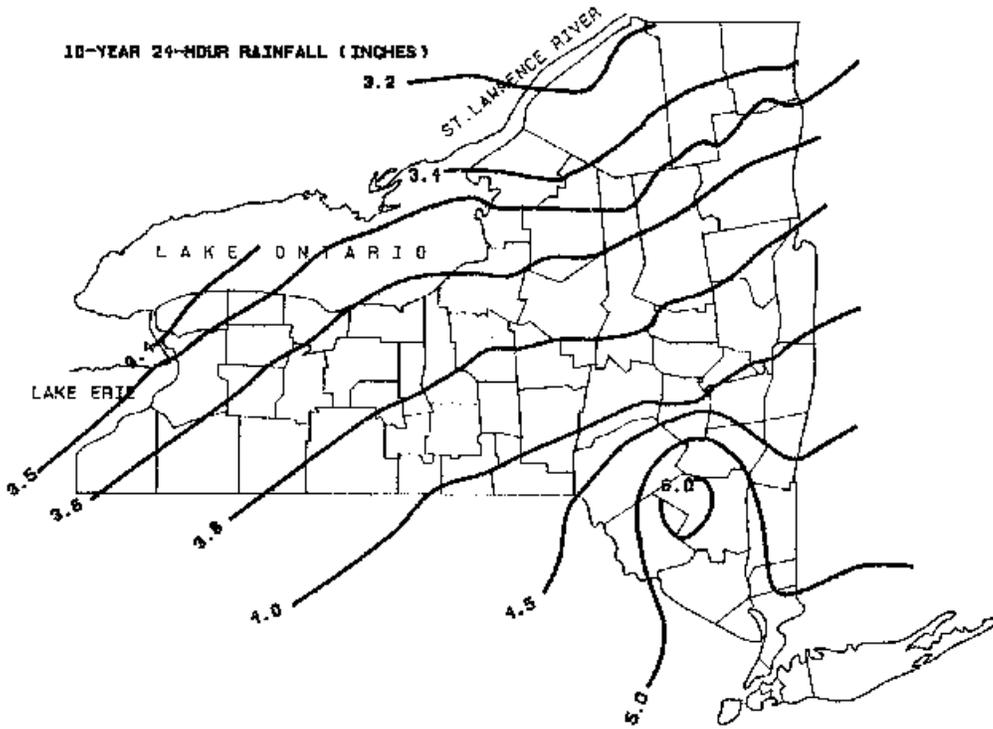
MEAN ANNUAL PRECIPITATION
In Inches 1961-1990

Source: NY
Divi

Air, Bureau of Technical Services, Meteorological Services Section, Undated. Based on Climatology of the US, Monthly Station Normals of Temperature, Precipitation and Heating and Cooling Days 1961-1990 for New York.

SDEC,
sion of

Attachment 4



Source: Ada
York Guidelines for Urban Erosion and Sediment Control, October 1991, Page 10.31.

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Attachment 5

PARTIAL LISTING of APPLICABLE LAW and REGULATION:

Existing requirements governing the handling, storage, registration and spills of petroleum and chemicals include:

- , Petroleum Bulk Storage Act (ECL, Article 17, Title 10),
Petroleum Bulk Storage (PBS) regulations (6NYCRR Parts 612-614),
- , Substances Hazardous or Acutely Hazardous to the Public Health, Safety or the Environment (ECL, Article 37),
- , Hazardous Substances Bulk Storage Act (ECL, Article 40),
Chemical Bulk Storage (CBS) regulations (6NYCRR Parts 595-599),
- , Oil Spill Prevention, Control and Compensation Act (Navigation Law, Article 12)
Major Onshore Storage Facilities (MOSF) regulations (6NYCRR Part 610),
- , Liquid Petroleum Pipeline Corporations (Public Service Law, Article 3-C),
- , Liquefied Natural and Petroleum Gas Act (ECL, Article 23, Title 17),
- , Solid Waste Management and Resource Recovery Facilities (ECL, Article 27, Title 7),
- , Industrial Hazardous Waste Management (ECL, Article 27, Title 9),
- , Industrial Siting Hazardous Waste Facilities (ECL, Article 27, Title 11),
- , Natural Gas Pipeline Safety Act of 1968 (ECL 40-0103.2),
- , Hazardous Liquid Pipeline Safety Act of 1979 (ECL 40-0103.3),
- , Natural Gas Act (ECL 40-0103.4),
- , Atomic Energy Act of 1954 (as set forth in ECL 40-0103.7).

Attachment 6

CHEMICAL BULK STORAGE SECONDARY CONTAINMENT AREA STORMWATER DISCHARGE OPTIONS:

(1) *No Discharge* - No SPDES Permit Required

- (a) Eliminate the accumulation of stormwater. This could be accomplished by installing a roof over secondary containment areas or locating tanks indoors.
- (b) Reuse/recycle stormwater, e.g. use as process make-up water (assuming no process wastewater discharge).
- (c) Drain to municipal sewer if available, authorized and after appropriate treatment.
- (d) Pump off by industrial waste hauler and dispose of at approved off-site location.
- (e) Pump off and incinerate on-site in accordance with applicable regulations.

(2) *Discharge* - SPDES Permit Required

- (a) Test each batch of stormwater to determine discharge acceptability.
 - (i) If unacceptable, then do not discharge (see (1) above or (ii) below).
 - (ii) If unacceptable, provide suitable treatment prior to discharge.
 - (iii) If acceptable, then discharge.
- (b) Test the first discharge of stormwater following cleanup of a spill to determine discharge acceptability and judge as in (2)(a) above. Other batches must be tested during discharge but discharge quality will not be known until after the discharge is completed and analytical results are received (unless a quick test is available, e.g., pH, chlorine test kit, etc.).
- (c) Testing of each batch during discharge. Discharge quality will not be known until after the discharge is completed.
- (d) Periodic testing of batches during discharge.
- (e) No batch testing but periodic testing after combination with other wastewaters at final outfall.
- (f) No testing at all.

(3) *Discharge* - No SPDES Permit Required

Discharge without a SPDES permit is generally not recommended.

Attachment 7

Recommended Best Management Practices - Chemical and Petroleum Bulk Storage Secondary Containment Area Stormwater Runoff and Related Discharges:

Facilities with Petroleum and/or Chemical Bulk Storage (PBS and CBS) Areas:

Compliance must be maintained with all applicable regulations including those involving releases, registration, handling and storage (6NYCRR 595-599) and (6NYCRR 612-614). Stormwater discharges from handling and storage areas should be eliminated where practical.

Spill Cleanup - All spilled or leaked substances must be removed from secondary containment systems as quickly as practical and in all cases within 24 hours. The containment system must be thoroughly cleaned to remove any residual contamination which could cause contamination of stormwater and the resulting discharge of pollutants to waters of the State. Following spill cleanup the affected area must be completely flushed with clean water three times and the water removed after each flushing for proper disposal in an on-site or off-site wastewater treatment plant permitted to discharge such wastewater. Alternatively, the permittee may test the first batch of stormwater following the spill cleanup to determine discharge acceptability. If the water contains no pollutants it may be discharged. Otherwise it must be disposed of as noted above. See *Discharge Monitoring* below for the list of parameters to be sampled for.

Discharge Operation - Stormwater must be removed before it compromises the required containment system capacity. All discharges must be done under the direct supervision of plant environmental, health and safety personnel. Bulk storage secondary containment drainage systems must be locked in a closed position except when the operator is in the process of draining accumulated stormwater. Transfer area secondary containment drainage systems must be locked in a closed position during all transfers and must not be reopened unless the transfer area is clean of contaminants. Stormwater discharges from secondary containment systems should be avoided during periods of precipitation. A logbook shall be maintained on-site noting the date, time and personnel supervising each discharge.

Discharge Monitoring of Bulk Storage Secondary Containment Systems - *This paragraph only applies to those bulk storage containment system outlets which are not identified in the SPDES permit as an outfall with explicit effluent limitations.* A representative sample shall be collected of each discharge¹ from each outlet. The sample must be analyzed for flow, pH, the substance(s) stored within the containment area and any other pollutants the permittee knows or has reason to believe are present². Flow may be calculated by measuring the depth of water within the containment area times the wetted area converted to gallons or by other suitable methods.

Discharge Monitoring of Transfer Area Secondary Containment Systems - *This paragraph only applies to those transfer area containment system outlets which are separate from bulk storage containment system outlets and are not identified in the SPDES permit as an outfall with explicit effluent limitations.* The first discharge¹ following any spill or leak must be sampled for flow, pH, the substance(s) transferred in that area and any other pollutants believed to be present. Flow may be calculated as noted in the previous paragraph.

Discharge Reporting - Any samples or measurements required above must be submitted to the Department by appending them to the corresponding discharge monitoring report (DMR). Failure to perform the required discharge monitoring and reporting shall constitute a violation of the terms of the SPDES permit.

Prohibited Discharges:

The following discharges are prohibited unless specifically authorized elsewhere in this SPDES permit: spills or leaks, tank bottoms, maintenance wastewaters, wash waters where detergents or other chemicals have been used, tank hydrotest and ballast waters, contained fire fighting runoff, fire training water contaminated by contact with pollutants or containing foam or fire retardant additives, and, unnecessary discharges of water or wastewater into secondary containment systems. An example of a necessary discharge could be the addition of steam to prevent bulk storage containment area sump pumps from freezing during cold weather. In all cases, any discharges which contain a visible sheen, foam, or odor, or may cause or contribute to a violation of water quality are prohibited.

(1) Discharge includes stormwater discharges and snow and ice removal. If applicable, a representative sample of snow and/or ice should be collected and allowed to melt prior to sample preservation and analysis.

(2) If the stored substance is a petroleum product (i.e. fuel oil, gasoline, kerosene, etc.) then the discharge should be sampled for oil & grease, benzene, ethylbenzene, naphthalene, toluene and total xylenes. If the substance(s) are listed in Tables 6-8 of the NYSDEC Division of Water Application Form NY-2C sampling is required. If the substance(s) are listed in Tables 9-10 of the NYSDEC Division of Water Application Form NY-2C sampling for appropriate indicator parameters may be required, e.g., substituting BOD5 for methanol, substituting toxicity testing for demeton. Form NY-2C is available on the NYSDEC web site. Contact the facility inspector for further instructions on the appropriate indicator parameters to select. In all cases flow and pH monitoring is required. Tables 6-10 of NY-2C are summarized in *Attachment 8*.

Attachment 8

NY-2C Tables 6 - 10:

TABLE 6

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

Include monitoring results for any of the pollutants listed below that are believed present in the discharge .

<i>GC/MS Volatile fraction compounds:</i>		<i>GC/MS Base/Neutral fraction compounds</i>		<i>GC/MS Pesticides fraction compounds:</i>	
CAS #	Pollutant Name	CAS #	Pollutant Name	CAS #	Pollutant Name
00107-02-8	Acrolein	00083-32-9	Acenaphthene	00309-00-2	Aldrin
00107-13-1	Acrylonitrile ¹	00208-96-8	Acenaphthylene	00319-84-6	alpha-BHC ¹
00071-43-2	Benzene	00120-12-7	Anthracene ¹	00319-85-7	beta-BHC ¹
00075-25-2	Bromoform	00092-87-5	Benzidine	00058-89-9	gamma-BHC (Lindane) ¹
00056-23-5	Carbon Tetrachloride	00056-55-3	Benz(a)anthracene ¹	00319-86-8	delta-BHC ¹
00108-90-7	Chlorobenzene	00050-32-8	Benzo(a)pyrene ¹	00057-74-9	Chlordane ¹
00124-48-1	Chlorodibromomethane	00205-99-4	3,4-Benzofluoranthene ¹	00050-29-3	4,4'-DDT ¹
00075-00-3	Chloroethane	00191-24-2	Benzo(ghi)perylene ¹	00072-55-9	4,4'-DDE ¹
00110-75-8	2-Chloroethylvinyl ether	00207-08-9	Benzo(k)fluoranthene	00072-54-8	4,4'-DDD ¹
00067-66-3	Chloroform	00111-91-1	Bis(2-chloroethoxy)methane	00060-57-1	Dieldrin ¹
00075-27-4	Dichlorobromomethane	00111-44-4	Bis(2-chloroethyl)ether	00959-98-8	alpha-Endosulfan ¹
00075-34-3	1,1-Dichloroethane	00102-60-1	Bis(2-chloroisopropyl)ether	33213-65-9	beta-Endosulfan
00107-06-2	1,2-Dichloroethane	00117-81-7	Bis(2-ethylhexyl)phthalate	01031-07-8	Endosulfan sulfate
00075-35-4	1,1-Dichloroethylene	00101-55-3	4-Bromophenyl phenyl ether ¹	00072-20-8	Endrin ¹
00078-87-5	1,2-Dichloropropane	00085-68-7	Butylbenzyl phthalate	07421-93-4	Endrin aldehyde
00542-75-6	1,3-Dichloropropylene	00091-58-7	2-Chloronaphthalene	00076-44-8	Heptachlor ¹
00100-41-4	Ethylbenzene	07005-72-3	4-Chlorophenyl phenyl ether ¹	01024-57-3	Heptachlor epoxide ¹
00074-83-9	Methyl Bromide ¹	00218-01-9	Chrysene ¹	53469-21-9	PCB-1242 ¹
00074-87-3	Methyl Chloride	00053-70-3	Dibenz(a,h)anthracene ¹	11097-69-1	PCB-1254 ¹
00075-09-2	Methylene Chloride	00095-50-1	1,2-Dichlorobenzene	11104-28-2	PCB-1221 ¹
00079-34-5	1,1,2,2-Tetrachloroethane	00541-73-1	1,3-Dichlorobenzene	11141-16-5	PCB-1232 ¹
00127-18-4	Tetrachloroethylene	00106-46-7	1,4-Dichlorobenzene	12672-29-6	PCB-1248 ¹
00108-88-3	Toluene	00091-94-1	3,3'-Dichlorobenzidine	11096-82-5	PCB-1260 ¹
00156-60-5	1,2-trans-Dichloroethylene	00084-66-2	Diethyl phthalate	12674-11-2	PCB-1016 ¹
00071-55-6	1,1,1-Trichloroethane	00131-11-3	Dimethyl phthalate	08001-35-2	Toxaphene ¹
00079-00-5	1,1,2-Trichloroethane	00084-74-2	Di-n-butyl phthalate		
00079-01-6	Trichloroethene	00606-20-2	2,6-Dinitrotoluene	01764-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin ^{1,2}
00075-01-4	Vinyl Chloride	00117-84-0	Di-n-octyl phthalate		

Dioxin:

Metals and Other Toxic Pollutants:

CAS # Pollutant Name

CAS #	Pollutant Name
07440-36-0	Antimony, Total
07440-38-2	Arsenic, Total
07440-41-7	Beryllium, Total
07440-43-9	Cadmium Total
07440-47-3	Chromium, Total
07440-50-8	Copper, Total
07439-92-1	Lead, Total
07439-97-6	Mercury, Total ¹
07440-02-0	Nickel, Total
07782-49-2	Selenium, Total
07440-22-4	Silver, Total
07440-28-0	Thallium, Total ¹
07440-66-6	Zinc, Total
00057-12-5	Cyanide, Total
	Phenols, Total ³
01332-21-4	Asbestos

GC/MS Acid Fraction Compounds:

CAS #	Pollutant Name
00122-66-7	1,2-Diphenylhydrazine
00206-44-0	Fluoranthene ¹
00086-73-7	Fluorene
00095-57-8	2-Chlorophenol
00120-83-2	2,4-Dichlorophenol
00105-69-7	2,4-Dimethylphenol
00534-52-1	4,6-Dinitro-o-cresol ¹
00051-28-5	2,4-Dinitrophenol
00088-75-5	2-Nitrophenol
00100-02-7	4-Nitrophenol
00059-50-7	p-Chloro-m-cresol
00087-86-5	Pentachlorophenol ¹
00108-95-2	Phenol
00088-06-2	2,4,6-Trichlorophenol
00118-74-1	Hexachlorobenzene ¹
00087-68-3	Hexachlorobutadiene ¹
00077-47-4	Hexachlorocyclopentadiene
00067-72-1	Hexachloroethane ¹
00193-39-5	Indeno(1,2,3-cd)pyrene ¹
00078-59-1	Isophorone
00091-20-3	Naphthalene
00098-95-3	Nitrobenzene
00062-75-9	N-nitrosodimethylamine
00621-64-7	N-nitrosodi-n-propylamine
00086-30-6	N-nitrosodiphenylamine
00085-01-8	Phenanthrene ¹
00129-00-0	Pyrene ¹
00120-82-1	1,2,4-Trichlorobenzene ¹

- Notes:
1. These pollutants either have FDA fish flesh concentration limits, are identified as Bioaccumulative Chemicals of Concern (BCCs), or are restricted pesticides.
 2. Dioxin is not listed in Part 122, Appendix D, but is a priority pollutant.
 3. Phenols, Total is not a Priority Pollutant but is considered a Toxic Substance for permit classification purposes.

TABLE 7

Other Significant Pollutants with NYSDEC Standards/Guidance Values and USEPA/NYSDEC Promulgated Analytical Methods
 Include monitoring results for any of the pollutants listed below that are believed present in the discharge.

A. Base/Neutral/Acid Compounds:

CAS Number	Parameter Name
00092-67-1	4-Aminobiphenyl
00062-53-3	Aniline
00140-57-8	Aramite
00106-47-8	4-Chloroaniline
00119-93-7	3,3'-Dimethylbenzidine
00122-09-8	á,á-Dimethylphenethylamine
00099-65-0	1,3-Dinitrobenzene
00122-39-4	Diphenylamine
00070-30-4	Hexachlorophene
01888-71-7	Hexachloropropene
00099-55-8	5-Nitro-o-toluidine
00088-74-4	2-Nitroaniline
00099-09-2	3-Nitroaniline
00100-01-6	4-Nitroaniline
00608-93-5	Pentachlorobenzene ¹
00106-50-3	1,4-Phenylenediamine
00298-02-2	Phorate
00095-94-3	1,2,4,5-Tetrachlorobenzene ¹
00095-53-4	o-Toluidine
00099-35-4	1,3,5-Trinitrobenzene, sym-

B. Conventional Compounds and Metals:

CAS Number	Parameter Name
07664-41-7	Ammonia/ammonium
24959-67-9	Bromide
	Chloride
	Color
	Coliform, Fecal
	Coliform, Total
16984-48-8	Fluoride
	Nitrogen, Nitrate
	Nitrogen, Nitrite
	Methylene Blue Active Substances
07723-14-0	Phosphorus (as P), Total
	Radioactivity
	Alpha, Total
	Beta, Total
	Radium, Total
	Radium 226, Total
	Solids, Settleable
14808-79-8	Sulfate (as SO4)
	Sulfide (as S)
14265-45-3	Sulfite (as SO3)
	Cyanide, Amenable to Chlorination
07440-47-3	Chromium, Hexavalent
07439-90-5	Aluminum, Total
07440-39-3	Barium, Total
07440-42-8	Boron, Total
07440-48-4	Cobalt, Total

07439-89-6	Iron, Total
07439-95-4	Magnesium, Total
07439-98-7	Molybdenum, Total
07439-96-5	Manganese, Total
07440-23-5	Sodium, Total
07440-31-5	Tin, Total
07440-32-6	Titanium, Total
07440-62-2	Vanadium, Total

C. Volatile Organic Compounds:

CAS Number	Parameter Name
00067-64-1	Acetone
00107-05-1	Allyl chloride
00126-99-8	Chloroprene
00074-95-3	Dibromomethane
00110-57-6	trans-1,4-Dichloro-2-butene
00075-71-8	Dichlorodifluoromethane
00156-59-2	cis-1,2-Dichloroethylene
10061-01-5	cis-1,3-Dichloropropene
10061-02-6	trans-1,3-Dichloropropene
00106-93-4	Ethylene dibromide (EDB)
00107-21-1	Ethylene glycol
00591-78-6	2-Hexanone
00126-98-7	Methacrylonitrile
00078-93-3	Methyl ethyl ketone
00074-88-4	Methyl iodide (Iodomethane)
00080-62-6	Methyl methacrylate
00076-01-7	Pentachloroethane
00110-86-1	Pyridine
00100-42-5	Styrene
00630-20-6	1,1,1,2-Tetrachloroethane
00075-69-4	Trichlorofluoromethane
00096-18-4	1,2,3-Trichloropropane
00095-47-6	Xylene, Ortho- (1,2-)
00108-38-3	Xylene, Meta- (1,3-)
00106-42-3	Xylene, Para- (1,4-)

D. Pesticides:

CAS Number	Parameter Name
15972-60-8	Alachlor
00116-06-3	Aldicarb
00834-12-8	Ametryn
02032-59-9	Aminocarb (Metacil)
01610-17-9	Atraton
01912-24-9	Atrazine
00086-50-0	Azinphosmethyl
00101-27-9	Barban
01861-40-1	Benefin
00314-40-9	Bromacil

23184-66-9	Butachlor
00133-06-2	Captan
00063-25-2	Carbaryl
01563-66-2	Carbofuran ¹
00075-99-0	Dalapon
00298-03-3	Demeton (-o)
00126-75-0	Demeton (-S) ¹
00333-41-5	Diazinon
00096-12-8	1,2- Dibromo-3-chloropropane
01918-00-9	Dicamba
00094-75-7	2,4-Dichlorophenoxyacetic acid (2,4-D) ¹
00088-85-7	Dinoseb ¹
00298-04-4	Disulfoton
14484-64-1	Ferbam
02164-17-2	Fluometuron
01071-83-6	Glyphosate (Roundup) ¹
00608-73-1	Hexachlorocyclohexanes
51235-04-2	Hexazinone
00465-73-6	Isodrin
33820-53-0	Isopropalin
00143-50-0	Kepon ¹
00121-75-5	Malathion
08018-01-7	Mancozeb
12427-38-2	Maneb
16752-77-5	Methomyl ¹
00072-43-5	Methoxychlor ¹
00298-00-0	Methyl parathion ¹
00094-74-6	2-Methyl-4-chloro-phenoxyacetic acid; MCPA
21087-64-9	Metribuzin
02385-85-5	Mirex(Hexachloropentadiene) ¹
00142-59-6	Nabam
23135-22-0	Oxamyl ¹
00056-38-2	Parathion ¹
00082-68-8	Pentachloronitrobenzene
01610-18-0	Prometon
01918-16-7	Propachlor
00139-40-2	Propazine
00122-42-9	Propham
00122-34-9	Simazine ¹
05902-51-2	Terbacil
13071-79-9	Terbufos ¹
00093-76-5	2,4,5-Trichlorophenoxyacetic acid ¹
01582-09-8	Trifluralin
12122-67-7	Zineb
00137-30-4	Ziram

Notes: 1. These pollutants either have FDA fish flesh concentration limits, are identified as Bioaccumulative Chemicals of Concern (BCCs), or are restricted pesticides.

TABLE 8
Other Significant Pollutants with USEPA/NYSDEC Promulgated Analytical Methods

Include monitoring results for any of the pollutants listed below that are believed present in the discharge.

CAS Number	Pollutant Name	CAS Number	Pollutant Name
	AOP (Ambam oxidation product)	00066-27-3	3-Methyl methanesulfonate
00075-05-8	Acetonitrile	00953-17-3	Methyl trithion
00098-86-2	Acetophenone	00108-10-1	4-Methyl-2-pentanone; Methyl isobutyl ketone
17804-35-2	Benomyl	00056-49-5	3-Methylcholanthrene
25057-89-0	Bentazon	00091-57-6	2-Methylnaphthalene
00100-51-6	Benzyl alcohol	00095-48-7	2-Methylphenol; o-Cresol
00100-44-7	Benzyl chloride	00108-39-4	3-Methylphenol; m-Cresol
35400-43-2	Bolstar (Sulprofos)	00106-44-5	4-Methylphenol; p-Cresol
51026-28-9	Busan 40	07786-34-7	Mevinphos
00128-03-0	Busan 85	00315-18-4	Mexacarbate ¹
07440-70-2	Calcium, Total	00150-68-5	Monuron
00128-04-1	Carbam S	00140-41-0	Monuron-TCA
10605-21-7	Carbendazim	10595-95-6	N-Nitrosomethylethylamine
00075-15-0	Carbon disulfide ¹	00059-89-2	N-Nitrosomorpholine
00786-19-6	Carbophenothion (Trithion) ¹	00100-75-4	N-Nitrosopiperidine
03734-48-3	Chlordene	00930-55-2	N-Nitrosopyrrolidine
00093-65-2	2-(4-Chloro-2-methylphenoxy)propionic acid; MCPP	00300-76-5	Naled
00510-15-6	Chlorobenzilate	00134-32-7	1-Naphthylamine
00101-21-3	Chloroprotham	00091-59-8	2-Naphthylamine
05836-10-2	Chloropropylate	00130-15-4	1,4-Naphthoquinone
02921-88-2	Chlorpyrifos	00555-37-3	Neburon
05598-13-0	Chlorpyrifos methyl	15339-36-3	Niacaide
00056-72-4	Coumaphos	00056-57-5	4-Nitroquinoline-1-oxide
21725-46-2	Cyanazine	07440-04-2	Osmium, Total
00094-82-6	2,4-DB	07440-05-3	Palladium, Total
00134-62-3	DEET	00072-56-0	Perthane
02303-16-4	Diallate	00062-44-2	Phenacetin
00132-64-9	Dibenzofuran		Phosphorus, Orthophosphate
00097-17-6	Dichlofenthion	00109-06-8	Picoline, alpha-
00099-30-9	Dichloran	07440-06-4	Platinum, Total
00087-65-0	2,6-Dichlorophenol	07440-09-7	Potassium, Total
00062-73-7	Dichlorvos ¹	26399-36-0	Profluralin
00115-32-2	Dicofol	07287-19-6	Prometryn
00297-97-2	o,o-Diethyl-o-2-pyrazinyl phosphorothioate (Thionazin)	23950-58-5	Pronamide
00060-51-5	Dimethoate	00107-12-0	Propionitrile
00057-97-6	7,12-Dimethylbenz(a)anthracene	00114-26-1	Propoxur
00123-91-1	1,4-Dioxane; diethylene dioxide	07440-15-5	Rhenium
00078-34-2	Dioxathion ¹	07440-16-6	Rhodium, Total
00330-54-1	Diuron	00299-84-3	Ronnell
55283-68-6	Ethalflyralin	07440-18-8	Ruthenium, Total
00563-12-2	Ethion ¹	00094-59-7	Safrole
00097-63-2	Ethyl methacrylate	26259-45-0	Secbumeton
00062-50-0	Ethyl methane sulfonate	01982-49-6	Siduron
02593-15-9	Etridiazole	07631-86-9	Silica, Dissolved
00052-85-7	Famphur ¹	01014-70-6	Simetryn
68876-78-8	Fecal Streptococci	00961-11-5	Stirofos
00115-90-2	Fensulfothion	08001-50-1	Strobane ¹
00055-38-9	Fenthion (Baytex) ¹	01918-18-9	Swep
00101-42-8	Fenuron	05915-41-3	Terbutylazine
04482-55-7	Fenuron-TCA	00886-50-0	Terbutryn
00050-00-0	Formaldehyde	00058-90-2	2,3,4,6-Tetrachlorophenol
07440-57-5	Gold, Total	03689-24-5	Tetraethyl dithiopyrophosphate
03389-71-7	Hexachlorobicycloheptadiene	43121-43-3	Triadimefon
07439-88-5	Iridium, Total	00327-98-0	Trichloronate
00078-83-1	Isobutyl alcohol	00095-95-4	2,4,5-Trichlorophenol
00120-58-1	Isosafrole	32534-95-5	2,4,5-Trichlorophenoxyacetic acid, isoctyl ester
00128-03-0	KN Methyl	41814-78-2	Tricyclazole
00330-55-2	Linuron	00126-68-1	o,o,o-Triethylphosphorothioate
26544-20-7	MCPA isoctyl ester	00108-05-4	Vinyl acetate
00950-10-7	Mephosfolan	38714-47-5	ZAC (Zinc ammonium carbonates, etc)
00137-42-8	Metham		
02032-65-7	Methyl carbamate; methiocarb ¹		

Notes: 1. These pollutants either have FDA fish flesh concentration limits, are identified as Bioaccumulative Chemicals of Concern (BCCs), or are restricted pesticides.

TABLE 9

Other Significant Pollutants with NYSDEC Standards/Guidance Values

Identify any of the pollutants listed below that are believed present in the discharge. No USEPA/NYSDEC analytical methods have been promulgated for the pollutants in Table 9. Provide analytical results, if available.

CAS Number	Pollutant Name	CAS Number	Pollutant Name
00079-06-1	Acrylamide	13560-89-9	Dechlorane Plus
00079-10-7	Acrylic acid	08065-48-3	Demeton (Systox) ¹
01646-88-4	Aldicarb sulfone	00103-23-1	Di(2-ethylhexyl)adipate
01646-87-3	Aldicarb sulfoxide	10222-01-2	2,2-Dibromo-3-nitrilopropionamide
68391-01-5	Alkyl dimethyl benzyl ammonium chloride	03252-43-5	Dibromoacetone
	Alkyl diphenyl oxide sulfonates	00583-53-9	1,2-Dibromobenzene
00095-84-1	2-Amino-para-cresol	00108-36-1	1,3-Dibromobenzene
02835-99-6	4-Amino-meta-cresol	00106-37-6	1,4-Dibromobenzene
02835-95-2	5-Amino-ortho-cresol	00594-18-3	Dibromodichloromethane
	Aminomethylene phosphonic acid salts	01476-11-5	cis-1,4-Dichloro-2-butene
26445-05-6	Aminopyridine	00328-84-7	3,4-Dichlorobenzotrifluoride
00504-29-0	2-Aminopyridines	00075-71-8	Dichlorodifluoromethane
00462-08-8	3-Aminopyridines	00075-43-4	Dichlorofluoromethane
00504-24-5	4-Aminopyridines	00078-99-9	1,1-Dichloropropanes
00108-44-1	3-Aminotoluene	00142-28-9	1,3-Dichloropropanes
00106-49-0	4-Aminotoluene	00594-20-7	2,2-Dichloropropanes
00100-66-3	Anisole	00563-58-6	1,1-Dichloropropene
	Aryltriazoles	00098-87-3	á,á-Dichlorotoluene
00103-33-3	Azobenzene	32768-54-0	2,3-Dichlorotoluenes
00098-87-3	Benzal chloride	00095-73-8	2,4-Dichlorotoluenes
00271-61-4	Benzisothiazole	19398-61-9	2,5-Dichlorotoluenes
00098-07-7	Benzoic trichloride	00118-69-4	2,6-Dichlorotoluenes
25973-55-1	2-(2-hydroxy-3,5-di-tert-pentylphenyl)Benzotriazole	00095-75-0	3,4-Dichlorotoluenes
00092-52-4	1,1'-Biphenyl	25186-47-4	3,5-Dichlorotoluenes
00542-88-1	Bis(chloromethyl)ether	00076-12-0	1,2-Difluoro-1,1,2,2-tetrachloroethane
	Boric acid, Borates and Metaborates	00100-18-5	1,4-Diisopropyl benzene
00108-86-1	Bromobenzene	00577-55-9	1,2-Diisopropylbenzene
00074-97-5	Bromochloromethane	00099-62-7	1,3-Diisopropylbenzene
31600-69-8	4-(1-methylethoxy)-1-Butanol	00121-69-7	N,N-Dimethyl aniline
15798-64-8	cis-2-Butenal	01861-32-1	Dimethyl tetrachloroterephthalate
00123-73-9	trans-2-Butenal	00087-59-2	2,3-Dimethylaniline
01190-76-7	cis-2-Butenenitrile	00095-68-1	2,4-Dimethylaniline
00627-26-9	trans-2-Butenenitrile	00095-78-3	2,5-Dimethylaniline
00112-34-5	Butoxyethoxyethanol	00087-62-7	2,6-Dimethylaniline
05131-66-8	Butoxypropanol	00095-64-7	3,4-Dimethylaniline
	Butyl isopropyl phthalate	00108-69-0	3,5-Dimethylaniline
02008-41-5	Butylate	01875-92-9	Dimethylbenzylammonium chloride
00104-51-8	n-Butylbenzene	00538-39-6	4,4'-Dimethylbibenzyl
00135-98-8	sec-Butylbenzene	04957-14-6	4,4'-Dimethyldiphenylmethane
00098-06-6	tert-Butylbenzene	05197-80-8	Dimethylethylbenzylammonium chloride
05234-68-4	Carboxin	00068-12-2	Dimethylformamide
00133-90-4	Chloramben	25321-14-6	Dinitrotoluene (mixed isomers)
00118-75-2	Chloranil	00602-01-7	2,3-Dinitrotoluene
	Chlorinated dibenzofurans	00619-15-8	2,5-Dinitrotoluene
00460-35-5	3-Chloro-1,1,1-trifluoropropane	00610-39-9	3,4-Dinitrotoluene
00095-69-2	4-Chloro-o-toluidine	00618-85-9	3,5-Dinitrotoluene
00095-79-4	5-Chloro-o-toluidine	00957-51-7	Diphenamid
00095-51-2	2-Chloroaniline	00530-50-7	1,1-Diphenylhydrazines
00108-42-9	3-Chloroaniline	00085-00-7	Diquat dibromide
00098-56-6	4-Chlorobenzotrifluoride	02439-10-3	Dodecylguanidine acetate
00109-69-3	1-Chlorobutane	13590-97-1	Dodecylguanidine hydrochloride
00107-30-2	Chloromethyl methyl ether	00479-18-5	Dyphilline
00088-73-3	2-Chloronitrobenzene	00145-73-3	Endothall
00121-73-3	3-Chloronitrobenzene	53494-70-5	Endrin ketone
00100-00-5	4-Chloronitrobenzene	00107-07-3	Ethylene chlorohydrin
01897-45-6	Chlorothalonil	00075-21-8	Ethylene oxide
00095-49-8	2-Chlorotoluene	00096-45-7	Ethylenethiourea
00108-41-8	3-Chlorotoluene	00133-07-3	Folpet
00106-43-4	4-Chlorotoluene	00093-14-1	Guaifenesin
00506-68-3	Cyanogen bromide		
00506-77-4	Cyanogen chloride		

TABLE 9 (continued)
Other Significant Pollutants with NYSDEC Standards/Guidance Values

06108-10-7	Hexachlorocyclohexanes (epsilon)	02136-79-0	Tetrachloroterephthalic acid
00302-01-2	Hydrazine	05216-25-1	á, á, á, 4-Tetrachlorotoluene
07783-06-4	Hydrogen sulfide	00109-99-9	Tetrahydrofuran
00123-31-9	Hydroquinone	00058-55-9	Theophylline
02809-21-4	1-Hydroxyethylidene-1,1-diphosphonic acid	00137-26-8	Thiram
29761-21-5	Isodecyl diphenyl phosphate	00095-80-7	Toluene-2,4-diamine
00098-82-8	Isopropylbenzene	00095-70-5	Toluene-2,5-diamine
00527-84-4	2-Isopropyltoluene	00823-40-5	Toluene-2,6-diamine
00535-77-3	3-Isopropyltoluene	29385-43-1	Tolyltriazole
00099-87-6	4-Isopropyltoluene	00615-54-3	1,2,4-Tribromobenzene
	Isothiazolones, total	00056-35-9	Tributyltin oxide
	Linear alkylbenzene sulfonates	00634-93-5	2,4,6-Trichloroaniline
00149-30-4	Mercaptobenzothiazole	00087-61-6	1,2,3-Trichlorobenzenes
00079-41-4	Methacrylic acid	00108-70-3	1,3,5-Trichlorobenzenes
04013-34-7	[1-Methoxyethyl]benzene	00075-69-4	Trichlorofluoromethane
03558-60-9	[2-Methoxyethyl]benzene	00093-72-1	2,4,5-Trichlorophenoxypropionic acid (Silvex) ¹
	Methylbenz(a)anthracenes	00598-77-6	1,1,2-Trichloropropane
06217-18-6	Methylene bithiocyanate	13116-57-9	cis-1,2,3-Trichloropropene
00101-14-4	4,4'-Methylene-bis-(2-chloroaniline)	13116-58-0	trans-1,2,3-Trichloropropene
00101-61-1	4,4'-Methylene-bis-(N,N'-dimethyl)aniline	07359-72-0	2,3,4-Trichlorotoluene
01807-55-2	4,4'-Methylene-bis-(N-methyl)aniline	56961-86-5	2,3,5-Trichlorotoluene
00126-39-6	2-Methylethyl-1,3-dioxolane	02077-46-5	2,3,6-Trichlorotoluene
00611-15-4	2-Methylstyrene	06639-30-1	2,4,5-Trichlorotoluene
00100-80-1	3-Methylstyrene	23749-65-7	2,4,6-Trichlorotoluene
00622-97-9	4-Methylstyrene	00098-07-7	á, á, á-Trichlorotoluene
00098-83-9	á-Methylstyrene	00088-66-4	á, á, 2-Trichlorotoluene
00100-61-8	N-Methylaniline	00094-99-5	á, 2,4-Trichlorotoluene
00098-92-0	Niacinamide	13940-94-8	á, á, 4-Trichlorotoluene
04726-14-1	Nitralin	02014-83-7	á-2,6-Trichlorotoluene
00139-13-9	Nitrioltriacetic acid	00102-47-6	á-3,4-Trichlorotoluene
00088-72-2	2-Nitrotoluene	26523-64-8	Trichlorotrifluoroethanes
00099-08-1	3-Nitrotoluene	00354-58-5	1,1,1-Trichloro-2,2,2-trifluoroethane
00099-99-0	4-Nitrotoluene	00076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane
04685-14-7	Paraquat	00108-67-8	Trimethylbenzenes
40487-42-1	Pendimethalin	00526-73-8	1,2,3-Trimethylbenzenes
00101-84-8	Phenyl ether	00095-63-6	1,2,4-Trimethylbenzenes
00637-50-3	3-Phenyl-1-propene	00108-67-8	1,3,5-Trimethylbenzenes
00766-90-5	cis-1-Phenyl-1-propene	25551-13-7	Trimethylbenzenes (mixed isomers)
00873-66-5	trans-1-Phenyl-1-propene	01463-84-6	2,3,6-Trimethylpyridines
00095-54-5	1,2-Phenylenediamine	00108-75-8	2,4,6-Trimethylpyridines
00108-45-2	1,3-Phenylenediamine	00602-29-9	2,3,4-Trinitrotoluene
00100-63-0	Phenylhydrazine	18292-97-2	2,3,6-Trinitrotoluene
14838-15-4	Phenylpropanolamine	00610-25-3	2,4,5-Trinitrotoluene
01918-02-1	Picloram	00118-96-7	2,4,6-Trinitrotoluene
59536-65-1	Polybrominated biphenyls (PBBs)	00603-15-6	3,4,5-Trinitrotoluene
00709-98-8	Propanil	00115-86-6	Triphenyl phosphate
00103-65-1	n-Propylbenzene	10028-17-8	Tritium
	Quaternary ammonium compounds		Uranyl Ion
07440-24-6	Strontium 90		
34014-18-1	Tebuthiuron		
00634-66-2	1,2,3,4-Tetrachlorobenzenes ¹		
00634-90-2	1,2,3,5-Tetrachlorobenzenes		

For discharges to groundwater, also include any substances to which the Principal Organic Contaminant (POC) groundwater standard applies. The POC groundwater standard includes the following classes of compounds: (1) Halogenated alkanes (includes those compounds identified by *Freon*, *Genatron*, *Halon*, *CFC*- and *HCFC*- prefixes in their product names); (2) Halogenated ethers; (3) Halobenzenes and substituted halobenzenes; (4) Benzene and alkyl- or nitrogen-substituted benzenes; (5) Substituted unsaturated hydrocarbons (i.e. straight or branched chain unsaturated hydrocarbon containing one of the following: halogen, aldehyde, nitrile, amide); (6) Halogenated non-aromatic cyclic hydrocarbons. See 6NYCRR Section 700.1 for additional information.

Notes: 1. These pollutants either have FDA fish flesh concentration limits, are identified as Bioaccumulative Chemicals of Concern (BCCs), or are restricted pesticides.

TABLE 10

Other Pollutants and Hazardous Substances Required to be Identified if Present

Abamectin [Avermectin B1]	1,2-Benzenedicarboxaldehyde	Calcium carbide	Dazomet, sodium salt
Acephate	Benzenepropanoic acid	Calcium chromate	Decanal
Acetic Acid	Benzo(e)pyrene	Calcium cyanamide	2,4-Diaminoanisole sulfate
Acetic anhydride	Benzo(j)fluoranthene	Calcium cyanide ¹	2,4-Diaminoanisole
Acetone cyanohydrin	Benzo(rs)pentaphene	Calcium dodecylbenzenesulfonate	4,4'-Diaminodiphenyl ether
Acetyl bromide	Benzoic acid	Calcium hypochlorite	Diaminotoluene (mixed isomers)
Acetyl chloride	Benzoic acid	Caprolactam	Dibenz(a,h)acridine
Acid Compounds	Benzoic acid, ammonium salt	Captafol	Dibenz(a,j)acridine
Acifluorfen, sodium salt	Benzonitrile	Carbamates	Dibenzo(a,e)fluoranthene
Adipic acid	2-(Thiocyanomethylthio)Benzothiazole	Carbazole	Dibenzo(a,e)pyrene
Alkalinity, Carbonate, as CaCO ₃	Benzoyl chloride	Carbonyl sulfide	Dibenzo(a,h)pyrene
d-trans-Allethrin	Benzoyl peroxide	Catechol	Dibenzo(a,l)pyrene
Allyl alcohol	Beryllium chloride	Chinomethionat	Dibenzo(c,g)carbazole, 7H-
Allylamine	Beryllium fluoride	Chloral	Dibutyltin chloride
Aluminum oxide (fibrous form)	Beryllium nitrate	Chlorendic Acid	Dibutyltin dilaurate
Aluminum phosphide ¹	Bidrin ¹	Chlorfenvinphos (Birlane) ¹	Dichlobenil
Aluminum sulfate	Bifenthrin	Chlorimuron ethyl	Dichlone
1-Amino-2-methylanthraquinone	Bis(2-chloro-1-methylethyl)ether	Chlorine	2,3-Dichloro-1,4-naphthoquinone (Dichlone)
2-Aminoanthraquinone	1,3-Bis(methylisocyanate)cyclohexane	Chlorine dioxide	1,4-Dichloro-2-butene
4-Aminoazobenzene	1,4-Bis(methylisocyanate)cyclohexane	3-Chloro-2-methyl-1-propene	3,3'-Dichlorobenzidine dihydrochloride
Amitraz	Bis(pentabromophenyl)ether	4-Chloro-3,5-dimethylphenol	3,3'-Dichlorobenzidine sulfate
Amitrole	Bismuth, Total	Chloroacetic acid	1,4-Dichlorobutane
Ammonium acetate	Bomyl ¹	2-Chloroacetophenone	Dichlorophene
Ammonium benzoate	Boron trichloride	4-Chlorobenzoic acid	2,3-Dichlorophenol
Ammonium bicarbonate	Boron trifluoride	Chlorophacinone (Rozol) ¹	2,4-Dichlorophenoxyacetic acid (2,4-D), 2-ethylhexyl ester
Ammonium bichromate	Brodifacoum (Talon) ¹	para-Chlorophenyl isocyanate	2,4-Dichlorophenoxyacetic acid (2,4-D), propylene glycol butyl ether ester
Ammonium bifluoride	Bromacil, lithium salt	Chloropicrin ¹	2,4-Dichlorophenoxyacetic acid (2,4-D), 2-ethyl-4-methylpentyl ester
Ammonium bisulfite	Bromadialone (Maki) ¹	3-Chloropropionitrile	2,4-Dichlorophenoxyacetic acid (2,4-D), butoxyethyl ester
Ammonium carbamate	Bromethalin ¹	Chlorosulfonic acid	2,4-Dichlorophenoxyacetic acid (2,4-D), butyl ester
Ammonium carbonate	Bromine	Chlorotetrafluoroethane	2,4-Dichlorophenoxyacetic acid (2,4-D), chlorooctyl ester
Ammonium chloride	1-Bromo-1-(bromomethyl)-1,3-propane dicarbonitrile	Chlorothymol	2,4-Dichlorophenoxyacetic acid (2,4-D), isopropyl ester
Ammonium chromate	Bromophos	Chlorsulfuron	2,4-Dichlorophenoxyacetic acid (2,4-D), sodium salt
Ammonium citrate	Bromoxynil	Cholecalciferol (Quintox) ¹	isobutyl ester
Ammonium fluoride	Bromoxynil octanoate	Chromic acetate	2,3-Dichloropropene
Ammonium fluoroborate	Bronopol	Chromic acid	2,2-Dichloropropionic acid
Ammonium hydroxide	Brucine	Chromic sulfate	Dichlorotetrafluoroethane (CFC-114)
Ammonium nitrate (solution)	1,3-Butadiene	Chromous chloride	â,â-Dichlorotoluene
Ammonium oxalate	1-Butanol	Cimectacarb	Diclofop methyl
Ammonium silicofluoride	Butyl acrylate	Clopyralid	Dicyclohexylamine
Ammonium sulfamate	sec-Butyl alcohol	Cobaltous bromide	Dicyclopentadiene
Ammonium sulfate (solution)	Butylacetate	Cobaltous formate	Diepoxybutane
Ammonium sulfide	Butylamine	Cobaltous sulfamate	Diethanolamine
Ammonium sulfite	N-Butylbenzene sulfonamide	Creosote	Diethyl ethyl
Ammonium tartrate	4,4-Butylidenebis-(6-T-butyl-M-cresol)	para-Cresidine	Diethyl formamide
Ammonium thiocyanate	1,2-Butylene oxide	Crotonaldehyde	Diethyl maleate
Ammonium thiosulfate	N-Butylphthalate	Cupferron	Diethyl mercury
Amyl acetate	Butyraldehyde	Cupric acetate	Diethyl sulfate
Anilazine	Butyric acid	Cupric acetoarsenite	Diethylamine
ortho-Anisidine hydrochloride	4-(4-Chloro-2-methylphenoxy) Butyric acid	Cupric chloride	Diethylaminoethanol
ortho-Anisidine	C.I. Acid Green 3	Cupric nitrate	Diethyldiisocyanatobenzene
para-Anisidine	C.I. Acid Red 114	Cupric oxalate	Diethylene glycol
Antimony pentachloride	C.I. Basic Green 4	Cupric sulfate	Diethylene glycol monoethyl ether
Antimony potassium tartrate	C.I. Basic Red 1	Cupric sulfate ammoniated	Diethylhexylphthalate isomer
Antimony tribromide	C.I. Direct Black 38	Cupric tartrate	Diethyltin dycaprylate
Antimony trichloride	C.I. Direct Blue 218	Cyanogen chloride	Diflubenzuron ¹
Antimony trifluoride	C.I. Direct Blue 6	Cycloate	Diglycidyl resorcinol ether
Antimony trioxide	C.I. Direct Brown 95	Cyclohexamide (Actidone) ¹	2,3-Dihydro-1,6-dimethyl-1H-indene
Arsenic disulfide	C.I. Disperse Yellow 3	Cyclohexane	2,3-Dihydro-1-methyl-1H-indene
Arsenic pentoxide	C.I. Food Red 15	1,4-Cyclohexane diisocyanate	Dihydrosafrole
Arsenic trichloride	C.I. Food Red 5	Cyclohexanol	4,4'-Diisocyanatodiphenyl ether
Arsenic trioxide	C.I. Food Red 7	Cyclohexanone	
Arsenic trisulfide	C.I. Solvent Orange 7	Cyclohexanone oxime	
Avitrol ¹	C.I. Solvent Yellow 14	Cyclohexene	
Azodrin ¹	C.I. Solvent Yellow 3	Cyclohexene	
1-(3-Chloroallyl)-3,5,7-triaza-1-	C.I. Solvent Yellow 34 (Auramine)	Cyclohexylamine	
Azoniaadamantane chloride	C.I. Vat Yellow 4	Cyclopentanone	
Bandane ¹	Cadodylic acid	Cyclotrimethylenetrinitramine	
Barium cyanide	Cadmium acetate	Cyfluthrin	
Bendiocarb	Cadmium bromide	Cyhalothrin	
Bentazon	Cadmium chloride	2,4-DP	
Benzaldehyde	Calcium arsenate	Daminozide (Alar) ¹	
Benzamide	Calcium arsenite	Dasanit ¹	
Benzeneacetic acid		Dazomet	

TABLE 10 (continued)

Other Pollutants and Hazardous Substances Required to be Identified if Present

2,4'-Diisocyanatodiphenyl sulfide	Fenoxycarb	Karbutilate	Methyltrichlorosilane
Diisopropyl ether	Fenpropathrin	Kelthane	Metiram
Diisopropylamine	Fenvalerate	Lactofen	Metolachlor
Dimethipin	Ferric ammonium citrate	Lanthanum, Total	Michler's ketone
3,3'-Dimethoxybenzidine	Ferric ammonium oxalate	Lead acetate	Molinate
dihydrochloride,	Ferric chloride	Lead arsenate	Molybdenum trioxide
3,3'-Dimethoxybenzidine hydrochloride,	Ferric fluoride	Lead chloride	Monitor ¹
3,3'-Dimethoxybenzidine,	Ferric nitrate	Lead flourite	Monochlorobenzyl trifluoride
3,3'-Dimethoxybenzidine-4,4'-diisocyanate	Ferric sulfate	Lead fluoborate	Monoethylamine
	Ferricyanide	Lead iodide	Monomethylamine
Dimethyl chlorothiophosphate	Ferrocyanide	Lead nitrate	Mustard gas
trans-1,4-Dimethyl cyclohexane	Ferrous ammonium sulfate	Lead stearate	(1,1'-thiobis[2-chloro-]Ethane)
Dimethyl sulfate	Ferrous sulfate	Lead sulfate	Myclobutanil
2,2-	Ferrous chloride	Lead sulfide	N-Methyl-2-pyrrolidone
Dimethyl-2,3-Dihydro-7-Benzofuranol	Fluazifop butyl	Lead thiocyanate	N-Methylolacrylamide
3,3'- Dimethyl-4,4'-diphenylene	Fluoride, Complex	Lethane 384 ¹	N-Nitroso-N-methyl urea
diisocyanate	Fluoride, Free	Lithium carbonate	N-Nitrosodi-N-butylamine
Dimethylamine	Fluorine	Lithium chromate	N-Nitrosodiethylamine
Dimethylamine dicamba	Fluoroborates	Lithium, Total	N-Nitrosomethylvinylamine
3,3'- Dimethylbenzidine dihydrochloride	Fluorouracil	2,5-Lutidine	N-Nitrosomonocotine
(o-Tolidine dihydrochloride)	Fluvalinate	Magnesium phosphide ¹	1,5-Naphthalene diisocyanate
3,3'-Dimethylbenzidine dihydrofluoride	Fomesafen	Maleic anhydride	Naphthenic acid
Dimethylcarbanyl chloride	Formetanate hydrochloride (Carazol SP)	Maleic hydrazide	á-Naphthyl thiourea ¹
Dimethyldichlorosilane	Formic acid	Malononitrile	Nickel ammonium sulfate
Dimethyldioxane	Fumaric acid	Mercaptodimethur	Nickel chloride
3,3'-Dimethyldiphenylmethane-4,4'-diisocyanate	Fumarin ¹	Mercuric cyanide	Nickel hydroxide
Dimethyldithiocarbamate	Furan	Mercuric nitrate	Nickel nitrate
2,5-Dimethylfuran	Furazolidone	Mercuric sulfate	Nickel sulfate
1,1-Dimethylhydrazine	Furfural	Mercuric thiocyanate	Nicotine alkaloid ¹
1,2-Dimethylhydrazine	Furium	Mercurous nitrate	Nitrapyrin
2,6-Dimethylphenol	Glycidaldehyde	Merphos	Nitric acid
Dimethylphenylcarbinol	Guthion	Methacrylamide	4-Nitrobiphenyl
Dimethylterephthalate	n-Heptane	Methacrylate	Nitrocyclohexane
ortho-Dinitrobenzene	1-Heptanol	Methanol	Nitrofen
para-Dinitrobenzene	2-Heptanol	Methazole	Nitrofurans
Dinitrophenol ¹	3-Heptanol	Methoprene1	Nitrofurantoin
Dinocap	4-Heptanol	Methoxone sodium salt	Nitrofurazone
Diphacinone ¹	Hexachloronaphthalene	2-Methoxy-5-nitroaniline	Nitrogen dioxide
Dipotassium endosulf	Hexamethyl benzene	2-Methoxyethanol acetate	Nitrogen mustard
Dipropyl isocinchomerate	Hexamethylene diamine	2-Methoxyethanol	Nitroglycerin
Diquat	Hexamethylene-1,6-diisocyanate	Methoxypropylamine	2-Nitropropane
Disodium cyanodithioimidocarbonate	Hexamethylphosphoramide	Methyl acetate	1-Nitropyrene
Di-Syston	Hexanate	2-Methyl benzene sulfonamide	para-Nitrosodiphenylamine
2,4-Dithiobiuret	n-Hexane	Methyl chlorocarbonate	Nonanal
Dithiocarbamate	3-Hexanone	Methyl isobutyl ketone	1-Nonanol
Dodecanoic acid	Hydramethylnon	Methyl isocyanate	Norflurazon
	Hydrazine sulfate	Methyl isothiocyanate	Octachlorocyclopentene
	Hydrochloric acid	Methyl mercaptan	Octachloronaphthalene
	Hydrofluoric acid	Methyl mercury	Octachlorostyrene ¹
	Hydrogen cyanide	Methyl tert-butyl ether	Octamethylpyrophosphoramine
	Hydrogen fluoride	2-Methyl-2-propanol	Oryzalin
	Hydrogen peroxide	1-Methyl-4-(1-methylethenyl)cyclohexene	Osmium tetroxide
	á-Hydroxy-á-methylbenzeneacetic acid	Methylamine	Oxalic acid, benzyl ester
	3-Hydroxycarbofuran	2-Methylanthracene	Oxydemeton methyl
	1-Hydroxyethylidene	9-Methylanthracene	Oxydiazon
	Hydroxyquinoline, total	2-Methylbenzaldehyde	Oxyfluorfen
	Imazalil	3-Methylbenzaldehyde	Ozone
	Iodide (as I)	4-Methylbenzaldehyde	Paraformaldehyde
	3-Iodo-2-propynyl butylcarbamate	4-Methylbenzene sulfonamide	Paraldehyde
	Iron pentacarbonyl	4-Methylbenzenemethanol	Paraquat dichloride
	1,3-Isobenzofurandione	2-Methylbenzoic acid	Pebulate
	1,(3H)-Isobenzofuranone	3-Methylbenzoic acid	Pentac
	Isobutyraldehyde	5-Methylchrysene	Pentamate
	Isofenphos ¹	Methylcyclopentane	Pentobarbital sodium
	Isophorone diisocyanate	4-Methyldiphenylmethane-3,4-diisocyanate	Peracetic acid
	Isoprene	1,1-Methylene	Perchloromethyl mercaptan
	Isopropanolamine	bis(4-isocyanatocyclohexane)	Permethrin ¹
	dodecylbenzenesulfonate	Methylenebis(phenylisocyanate) (MDI)	Phenothrin
	Isopropyl alcohol	4,4'-Methylenedianiline	1,3-Phenylene diisocyanate
	Isopropylamine	1-Methylnaphthalene	1,4-Phenylene diisocyanate
	Isopropylbenzene hydroperoxide	Methylolmethacrylamide	
	4,4'-Isopropylidenediphenol	Methylphthalate	

TABLE 10 (continued)
Other Pollutants and Hazardous Substances Required to be Identified if Present

1,2-Phenylenediamine dihydrochloride	Propylene glycol monomethyl ether	Styrene oxide	dodecylbenzenesulfonate
1,4-Phenylenediamine dihydrochloride	Propylene oxide	Sulfotep ¹	Triethylamine
Phenylmercuric acetate	Propyleneimine	Sulfur moriochloride	Triforine
2-Phenylphenol	Pyrethrins	Sulfuric acid	Trimethyl phosphate
4-Phenylphenol	Quinoline	Sulfuryl fluoride (Vikane) ¹	Trimethylamine
Phenytoin ¹	Quinone	Supracide ¹	1,3,5-Trimethylbenzene
Phosdrin ¹	1,4-Quinone dioxide	Tellurium, Total	Trimethylchlorosilane
Phosgene	Quizalofop ethyl	Temephos	3,3,5-Trimethylcyclohexanone
Phosphamidon ¹	Randox ¹	Tetrachlorodiphenyl ethane (TDE)	2,2,4-Trimethylhexamethylene diisocyanate
Phosphate, Ortho	Reserpine	Tetracycline hydrochloride	2,4,4-Trimethylhexamethylene diisocyanate
Phosphate, as PO4	Resmethrin	Tetraethyl lead ¹ , tetraethyl pyrophosphate ¹	2,3,5-Trimethylphenyl methylcarbamate
Phosphine	Resorcinol	Tetraethyl tin	Triphenyltin chloride
Phosphoric acid	Rhodamine WT	Tetramethrin	Tris(2,3-dibromopropyl) phosphate
Phosphorus oxychloride	Rotenone	1,2,4,5-Tetramethylbenzene	Trypan blue
Phosphorus pentasulfide	Saccharin ¹ (manufacturing)	Thallium sulfate	Uranyl acetate
Phosphorus trichloride	Schradan	2-(4-Thiazolyl)-1H-benzimidazole	Uranyl nitrate
Photomirex ¹	Selenium oxide	Thioacetamide	Urethane (Ethyl carbamate)
Phthalate Esters	Sethoxydim	Thiobencarb	Valone (PMP) ¹
Picric acid	Sevin	Thiocyanate	Vanadium pentoxide
Piperonyl butoxide	Silver nitrate	4,4'-Thiodianiline	Vernolate
Pirimiphos methyl	Sodium	Thiodicarb	Vinclozolin
Pival ¹	Sodium Molybdate	Thiofanox	Vinylidene chloride
Polybutene(1-propene, 2-methyl homopolymer)	Sodium Nitrite	Thiophanate ethyl	Vinyl bromide
Polymeric diphenylmethane diisocyanate	Sodium Sulfate	Thiophanate methyl	Vinyl fluoride
Polymethacrylic Acid	Sodium adipate, disodium salt	Thiosemicarbazide	Vanadyl sulfate ¹
Potassium N-methyldithiocarbamate	Sodium arsenate	Thiourea	Warfarin ¹
Potassium arsenate	Sodium arsenite	Thorium dioxide	Zinc acetate
Potassium arsenite	Sodium azide	Titanium tetrachloride	Zinc ammonium chloride
Potassium bichromate	Sodium bichromate	Toluene diisocyanate	Zinc borate
Potassium bromate	Sodium bifluoride	Toluene-2,6-diisocyanate	Zinc bromide
Potassium chromate	Sodium bisulfite	ortho-Toluidine hydrochloride	Zinc carbonate
Potassium cyanide	Sodium chromate	Tri-N-butyl phosphate	Zinc chloride
Potassium hydroxide	Sodium cyanide	Triallate	Zinc fluoride
Potassium permanganate	Sodium dicamba	Tribenuron methyl	Zinc formate
Prodiamine	Sodium diethyldithiocarbamate	Tributyltin ¹	Zinc hydrosulfite
Profenofos	Sodium dodecylbenzenesulfonate	Tributyltin fluoride	Zinc nitrate
Propane sultone	Sodium fluoride	Tributyltin methacrylate	Zinc phenolsulfonate
1-Propanol	Sodium fluoroacetate ¹	S,S,S-Tributyltrithiophosphate (DEF)	Zinc phosphide
Propargite	Sodium hydrosulfide	Trichlorfon	Zinc silicofluoride
Propargyl alcohol	Sodium hydroxide	Trichloroacetyl chloride	Zinc sulfate
1-Propene	Sodium hypochlorite	Trichlorofon	Zirconium nitrate
Propetamphos	Sodium methylate	2,4,5-Trichlorophenoxy acetic acid, amines	Zirconium potassium fluoride
Propiconazole	Sodium nitrite	2,4,5-Trichlorophenoxy acetic acid salts	Zirconium sulfate
̂-Propiolactone	Sodium o-phenylphenoxide	Trichlorophenoxy propanoic acid (2,4,5-TP), esters	Zirconium tetrachloride
Propionaldehyde	Sodium pentachlorophenate	̂,̂,̂-Trichlorotoluene	Zinc cyanide
Propionic acid	Sodium phosphate (tribasic)	Triclopyr triethylammonium salt	Zinophos ¹
Propionic anhydride	Sodium selenite	Triethanolamine	
Propylene glycol	Sodium phosphate (dibasic)		
Propylene glycol monoethyl ether	Strontium chromate		
	Strychnine ¹		

Notes: 1. These pollutants either have FDA fish flesh concentration limits, are identified as Bioaccumulative Chemicals of Concern (BCCs), or are restricted pesticides.