Napa County Agreement No. 1985

UPDATED

MEMORANDUM OF UNDERSTANDING

Regarding

WINERY PROCESS WASTE TREATMENT AND DISPOSAL

Between

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCICO BAY REGION

And

COUNTY OF NAPA

STATEMENT OF INTENT

The San Francisco Bay Regional Water Quality Control Board (hereinafter Regional Board) and the County of Napa (hereinafter County) have been operating under a memorandum of understanding (agreement) which has established conditions and a procedure for waiver of waste discharge requirements issued by the Regional Board for winery process waste treatment and disposal systems in Napa County. This agreement addesses winery process wastes which are disposed of by surface means only. This arrangement has eliminated duplication of effort and reduced the time required to obtain a county building permit by waiving, reducing or eliminating much of the Regional Board's formal involvement, subject to certain conditions which assure the Board that its concerns regarding water quality effects of these discharges are being addressed at the County level. This updated MOU brings the agreement in line with current program needs.

FINDINGS

1. Winery process wastewater discharges in Napa County are presently regulated by both the Regional Board and the County.

2. Section 13269 of the California Water Code provides that a Regional Board may waive the filing of reports of waste discharge for certain specific types of discharge where such a waiver is not against the public interest. Such a waiver shall be conditional and may be terminated at any time by the Board.

3. Regulation of discharge to subsurface leach field systems has been previously conditionally waived to the County's Director of Environmental Management.

4. The Regional Board, on July 21, 1982, authorized the Executive Officer to execute a Memorandum of Understanding with the County by which the Regional Board would conditionally waive the direct regulation of the most common form of winery wastewater treatment and disposal systems provided the County agreed to regulate such systems under appropriate conditions.

5. In November 1982 both the County and the Regional Board signed an MOU which designated the County as having the primary responsibility for all aspects of approval and regulation of winery wastewater discharges.

AGREEMENT AND CONDITIONS

The Regional Board hereby waives the need for filing of reports of Waste Discharge from wineries in Napa County, and the County, through its Director of Environmental Management, hereby agrees to regulate such discharges, subject to the following conditions:

1. The waiver will apply only to winery process waste in surface treatment and disposal systems. Systems which handle combined sanitary and process waste will continue to require waste discharge requirements from the Regional Board or a written waiver from the Executive Officer.

2. The County will require that applications be filed for any new winery wastewater discharge and for any significant change in the quantity or characteristics of an existing discharge. A complete application will require a detailed engineering design including drawings, specifications and design calculations including water balances where appropriate.

3. The County will carry out the design review prior to issuance of permits in order to ascertain that the proposed design will be adequate to meet permit requirements and to protect water quality. Pond system designs will be required to conform to the "Criteria for Wastewater Storage Ponds" developed by Regional Board staff (Attachment A).

4. The County will provide notification to the Regional Board fifteen (15) days in advance of the issuance of each winery process wastewater permit. The notification will include transmittal of the application including supporting materials and plans that have been found to be acceptable to the County.

5. The County will issue a permit for each winery process wastewater discharge. The permit will include the standard Prohibitions, Specifications, and Provisions which have been included in the Regional Board's Waste Discharge Requirements for similar facilities (Attachment B).

6. County permits will contain a provision that the discharger must carry out a standard self-monitoring program, which will be developed by the County in cooperation with Regional Board staff. The records of this monitoring will be maintained on-site by the discharger and available for inspection by County or Regional Board staff.

   The County will also require dischargers to submit summary reports to it on a regular basis. These reports should be designed to provide the County sufficient information to determine compliance with permit conditions and provide the basic information needed by the County for the semi-annual reports to the Regional Board. The self-monitoring program will also require the discharger to immediately notify the County of any spill or bypass event.

   The County shall immediately notify the Regional Board in cases where wastewater enters or threatens to enter waters of the State.

7. The County permit will contain an access clause providing Regional Board staff with access to the property and wastewater facilities for inspection.

8. The County will perform routine inspections on a regular basis. Each facility will be inspected no less than once per year, during the crushing season if possible. Spot inspections will also be performed during the wet season to monitor compliance with pond freeboard requirements.

9. The Regional Board will provide technical assistance to the County as requested during the design review process.

10. The Regional Board may comment within fifteen (15) days after notification on a pending county approval.

11. The Regional Board will require a Report of Waste Discharge and will formally consider waste discharge requirements for specific discharges upon request from the County or discharger. The Board may also require a Report of Waste Discharge and/or Waste Discharge Requirements for specific discharges at the Regional Board's discretion.

12. The Regional Board will continue to enforce the Water Code in cases where there are violations or threatened violations of the Regional Board's Basin Plan provisions or prohibitions.

13. The County shall submit an annual reportto the Regional Board on February 1 covering:
    a. New permits issued
        1. Winery facility name, location and contact person
        2. Type of treatment and disposal process
        3. Permitted production and wastewater flow capacities
        4. Special permit conditions or unresolved permit issues

    b Permit modifications, reissues, or rescissions
        1. Winery facility name, location and contact person
        2. Permit action taken and associated changes to the winery wastewater treatment disposal practices

    c. Existing permits (Surface and subsurface disposal)
        1. Winery facility name, location and contact person
        2. Average daily wastewater flows
            i. During crush period
            ii During non-crush season
        3. Result of self-monitoring programs
        4. Results of facility inspections
        5. Nature and frequency of violations, and status of correction actions

14. A semi-annual summary report shall be submitted on August 1 briefly listing information in 13 .a.1., b.1, and c.5.

15. The Regional Board or the County shall have the option to terminate this agreement at any time upon thirty (30) days written notice.

16. This Agreement becomes effective November 21, 1991 and replaces the present MOU (Agreement No. 1985).

Marion Otsea, Chairperson
Regional Water Quality Control Board
San Francisco Bay Region

Mel Varreiman, Chairman
Napa County Board of Supervisors

APPROVED FEB 11 1992
BOARD OF SUPERVISORS
COUNTY OF NAPA

JAMES DEL ZOMPO
CLERK OF THE BOARD

BY Lori J. Bush Deputy

APPROVED AS TO FORM
Office of County Counsel
By: Margaret Woodbury
Date: February 10, 1992

Source: California Regional Water Quality Control Board
San Francisco Bay Region
Taken from: Don M. Eisenberg report, 1982
Date: July 1991

ATTACHMENT A

CRITERIA FOR WASTEWATER TREATMENT/STORAGE PONDS

The following guidance material applies only to ponds used for sewage, animal wastes, or food processing wastes from facilities such as wineries. This discussion is not intended to apply to facilities for the treatment, storage or disposal of hazardous, toxic, or other kinds of industrial wastes. These are covered by other regulation (e.g. Title 23, Article 3, Chapter 15, of the Water Code).

DESIGN CONSIDERATIONS

The Regional Board cannot specify the design of pond systems, but the following design methodology is used as guidance criteria to insure wet weather reliability for wastewater ponds in the region. This discussion covers two kinds of ponds; holding ponds used for the storage of wastewater until such time discharge is allowed, and disposal ponds from which no discharge is allowed.

For either kind of pond, the fundamental design tool is the water balance, in which inputs to the pond (wastewater plus rainfall) plus storage (the available volume of the pond system) must equal outputs (evaporation plus percolation plus allowable discharge to land or receiving waters).

Both rainfall and evaporation vary from year to year, but the variation in rainfall is by far the more important from a design standpoint. A useful concept in this regard is return frequency, or the interval over which, on an average, a given amount of rainfall can be expected. A good statistical basis exists in the Bay Area for defining the normal winter's rainfall, as well as those amounts falling in the wettest winter in ten years, in fifty years, etc.

The kinds of holding and disposal pond systems under discussion here are typically of sufficient size that the seasonal rainfall controls the design rather than rainfall over some shorter duration. For example a pond system designed to hold wastewater plus 40 inches of rainwater would be in no danger of overflow from a large 24 hour storm, which might contribute only six to ten inches.

Holding Ponds

Holding ponds are widely used in the Bay Area, notably by dairy ranches, wineries in the Napa and Sonoma Valleys, and the towns of St. Helena, Calistoga, and Bolinas. A typical use of holding ponds is for the storage of wastewater during the wet season with application to agricultural land during the dry season.

Holding ponds are designed on the basis of the anticipated waste flow during the period in which storage is necessary, plus the rainfall onto the ponds, minus any evaporation that occurs.Holding ponds are designed only for storage, and thus the primary consideration is volume rather than surface area. In this case rainfall is important only in the sense that, for the wet season that is the basis for design, the pond must be somewhat deeper than would be the

case if normal rainfall were assumed. For example, if the once in ten year wet season were the design criteria, a pond in the Bay Area might have to be somewhere around a foot deeper than for a normal year.

This extra rain falling on the pond must also be disposed of. Where the method of disposal is by application to agricultural land, sufficient acreage must be provided. For dairy ranches and most wineries, land area is not a limiting factor.

Disposal Ponds

Disposal ponds receive wastewater and rainfall, which must be disposed of primarily by evaporation (percolation – is strongly discouraged). Because of the large are required, disposal ponds are used less than the system of holding ponds with agricultural disposal.

Disposal ponds tend to rely primarily on evaporation rather than percolation. This is due to the local conditions of soil and ground water elevation, and to the tendency of ponds to seal themselves with time. Where evaporation is the primary mode of disposal, pond design is based on evaporation minus rainfall. For example, if the total water loss is 60 inches per year and the total rainfall is 35 inches per year, then the net loss per unit area would be at a rate of 25 inches per year. This would mean that 25 acre-inches, or 680,000 gallons, of wastewater could be disposed of by each acre of pond surface area per year.

It was noted earlier that annual evaporation tends to be relatively constant year to year, but rainfall can be highly variable (the recent 'drought' period is a good example). In practice required disposal pond size is highly sensitive to the amount of rainfall assumed. This point is illustrated in Table 1 below using the previous example, in which evaporation is 60 inches and average rainfall 35 inches, and assuming the once in ten year wet winter has about 40 per cent more rain than an average year.

Table 1

Effect of Rainfall on Disposal Pond Design

	Normal Year	Ten Year Wet Year
Evaporation, inches	60	60
Rainfall, inches	35	49
Net water loss, inches	25	11

For the case given in Table 1, the requirement of design for the once in ten year wet season more than doubles the required area for any given flow. As will be discussed below, one regulatory strategy for handling this situation is to allow ponds to be designed with the assumption that some defined wet year is followed by one or more normal years. In effect this approach would allow storage carry over from one year to another (greater depth) to serve in lieu of surface area.

CRITERIA FOR WET WEATHER RELIABILITY

The selection of criteria for wet weather reliability involves a tradeoff between environmental consequences of overflows on one hand, and the added costs in the form of larger ponds and disposal areas on the other.

Consequences of Overflow

It is useful to consider the sequence of events during a winter having rainfall greater than that selected as a design criteria. If properly operated, holding or evaporation ponds would begin the wet season drawn down to the design storage volume. This volume would be used up with the unusually heavy rainfall as the winter went on, until a time would occur in which no more water could be added. In this case waste from the ponds would either spill over the ponds or be pumped onto the now saturated disposal area, from which runoff may occur to waters of the state. There is no way in which the adverse environmental impacts of such an event can be quantified. All that can be said with any certainty is that the less often overflows occur the better.

Cost of Compliance for Holding Ponds

An effort was made to estimate the costs of compliance with various criteria for holding ponds for wet winters in terms of both pond volume and disposal area. Conditions typical of the North Bay were assumed; namely 60 inches annual evaporation, 35 inches of rainfall, and wet years for various recurrence intervals are taken from a standard U.S. Geological Survey paper on the subject. An effort was made to estimate the dollar impact of compliance with various recurrence intervals, based on assumptions as to cost of land, excavation, and shaping and compaction of dikes. The actual dollar costs generated in this exercise are in 1982 dollars and are obviously of little direct value, but they serve to demonstrate the relationship that exists between costs of compliance with the baseline condition (retention for the average winter) and compliance costs for more demanding criteria. The results of this analysis are summarized in Table 2.

Table 2

Typical Effects of Wet Weather Criteria on Size and Cost of Holding Ponds[1]

Design Criterion	% Additional Pond Volume Required	% Additional Disposal Area Required	Cost
Average Wet Season	0	0	0
5 Year Wet Season	13	8	11
10 Year Wet Season	31	16	25
25 Year Wet Season	53	27	43
100 Year Wet Season	96	57	80

[1] For St. Helena, California based on 70 years of rainfall data

Note: These designs were based on no disposal during wet season (Nov thru March)

The data in Table 2 reveal no obvious break point for establishing a criteria. However, a five year criteria would be inadequate because the small additional sizes for holding ponds and disposal area is less than the uncertainty that exists as to wastewater flow and other variables. The ten year criterion would require ponds around 30 per cent larger than would be required for only average conditions. This seems an adequate measure of safety.

The once in ten year criterion has precedent in a number of other cases; it is contained in several EPA industrial effluent guidelines where rainfall is a factor, and in the State Board's guidelines for animal waste disposal.

Costs of Compliance for Disposal Ponds

An analysis similar to that illustrated by Table 2 above was carried out for disposal ponds in which evaporation was the only mode of water loss. As noted earlier in the discussion, assumptions with respect to rainfall have profound implications for pond design. One means of providing protection against frequent overflows while minimizing added costs is to assume that one or more years following the design year are of average rainfall, and allow the permittee to carry over some of the extra rainfall into the second dry weather season or beyond. In effect this approach would allow the discharger to substitute pond depth for pond area. (In theory, if ponds were of infinite depth, they would need only be designed for an average winter). The results of this analysis are summarized in Table 3.

Table 3

Typical Effects of Wet Weather Criteria on Size and Cost of Disposal Ponds[1]

Design Criterion	% Additional Pond Volume Required	% Additional Disposal Area Required	Additional Pond Cost
Average Wet Season	0	0	0
10 Year Wet Season	125	125	125
100 Year Wet Season	Not possible in most of this region		
10 Year Wet Season, followed by two avg. years	24	24	24
10 Year Wet season, followed by one avg year	42	42	42

This analysis indicates that use of the 100 year winter criterion would rule out the use of evaporation ponds, and even the ten year wet weather criterion would probably have the practical effect of eliminating their use. The allowance for carryover of the added rainfall into more than one subsequent dry season radically lowers the cost of compliance. However, the two year carryover carries too much risk based on three considerations; the Board experience with the tendency of dischargers to underestimate wastewater flows, the lack of flexibility of evaporation systems (expansion can demand land that is not readily available) and the fact that most such systems are either used for sewage rather than process wastes which are typically of less health concern or are in areas where overflows can adversely impact water quality. Based on the above the Board uses the ten year followed by one normal year criterion.

Criteria for Freeboard

Freeboard is defined as the difference between the elevation of the top of the berm and wastewater level in the pond. A pond that is properly designed and operated will generally achieve maximum design freeboard immediately prior to the onset of the wet season (early October in this area). Freeboard requirements, which specify that, at minimum, a certain amount of freeboard be maintained at all times, are intended to insure that excess holding capacity is always available to protect against high-rainfall events of shorter than seasonal duration. Examples of such events are individual storms of extremely high intensity and wet periods of several months duration.

Extra freeboard also protects against unanticipated short-term increases in wastewater flow, such as a process spill or broken water line. Furthermore, extra freeboard provides the potential to accommodate intentional but unanticipated increases in the routine wastewater flow. Finally, the requirement for excess freeboard protects the berms from wave erosion and provides additional safety in the event of a seasonal rainfall which exceeds that of the design recurrence interval.

Six inches is the minimum freeboard that could possibly be considered, as that is barely sufficient to protect from the effects of wind and waves. A one foot minimum freeboard requirement is considered adequate by many pond designers, but leaves little margin to accommodate all the elements mentioned above, which represent essentially unpredictable excess loadings. Two feet of minimum freeboard is almost certainly sufficient to deal with the effects of these unknown elements on a basically sound pond design with good operation.

Protection from Flooding

Flooding of ponds from the outside is another common type of wet weather pond failure. Ponds can be protected from flooding by requiring that they be constructed outside of flood plains or at least that the elevation of the top of the berm be higher than the maximum high water predicted on some specified recurrence interval. Most flood control districts and federal grants require protection of this type of facility from the 100-year flood. Provision for diversion and drainage of storm water runoff around the ponds is another consideration that is important in flood protection. Storm drainage provisions such as ditches and culverts must be designed on the basis of the maximum intensity expected for a rainfall event of relatively short duration. In general these designs are based on the maximum expected for a period of one to several hours, but the exact duration used is a function of the area that is drained.

POND FAILURES

Pond system failure can be due to a number of reasons including an extremely wet winter, an increase in wastewater flows above design capacity, a process upset wherein an inordinately large volume of wastewater is sent to the ponds, a flood flow greater than the pond levees can

withstand, improper levee maintenance against erosion, or improper pond system management.

Pond system management is the major factor in pond systems utilizing land disposal. If the ponds are not drawn down to the proper freeboard level recommended by the water balance for the start of winter, it is likely the ponds will overflow. In addition, for those pond systems where a wet season disposal is part of the water balance (these are rare) and is allowable by permit requirements, the ponds must be continually drawn down when environmental conditions permit.

POND PERCOLATION

To protect groundwater resources, percolation of wastewater through the pond bottoms should be minimized. To keep the pond bottom and levees from leaking, construction of the pond requires the use of heavy earth-moving equipment to compact and seal existing fine-grained soil particles so that percolation of water into subsurface soils has a rate of not more than 10^{-6} cm/sec. Biological growths on the pond bottom should also form a dense slime or biofilm, which helps reduce overall permeability.

TREATMENT PARAMETERS

The treatment of winery wastewaters is typically conducted in two stages. The first stage or 'pretreatment' stage involves the physical-chemical treatment operations of solids removal, pH correction, and flow metering. The second stage is the destruction of waste organic matter by biological oxidative and reductive processes. The oxidative process may have to be supported with mechanical aerators.

Solids Removal

The primary objective in removing solids from the waste stream prior to treatment is to prevent the physical blockage or clogging of collection system piping and pumps by large objects or accumulations of smaller particles. In addition, many of the solids found in wine waste (e.g. grape skins, leaves, etc.) are biodegradable, and can represent a substantial additional organic load to the treatment system if not removed early in the process. Screening of winery effluent is the most effective method of removing these solids down to a particle size of about 1/2 millimeter.

pH Correction

Organic acids formed by yeast cells during the fermentation of grape juice reduce the pH of wine waste to the range of 3 to 5. This acid will corrode and destroy pipes, pumps and other metallic components of the waste treatment system. Furthermore, acidic conditions inhibit or completely halt many of the biological reactions employed in the waste treatment process. For these reasons, it is necessary to raise the pH of the waste to neutrality (pH 7) by metered chemical additions.

Flow Metering

Accurate records of process waste discharge volume are important, not only for efficient winery operations, but for compliance with discharge permit regulations. In addition to the instantaneous flow rates, the total cumulative flow should be recorded

Pond Loading and Aeration

The system design must be based on a design concept emphasizing simplicity, economy, effectiveness and fail-safe operation. The installation must be capable of efficiently treating the waste to the degree necessary for preventing odors and other nuisances, and, in many cases, to promote disposal of treated waste through irrigation.

Because odors occur when there is insufficient dissolved oxygen in the upper layers of the pond, enhancing pond performance and reliability concerns the selection and placement of mechanical aerators. Floating aerators provide backup to supplement the pond's natural oxygen-generating capabilities during periods of peak loading (e.g. crush season) or other unfavorable conditions. Standard engineering practice for sizing floating-loaded facilities requires that 1 to 2 pounds of aerator oxygen be available for each pound of BOD introduced to facultative ponds at the seasonal peak.

SUMMARY

The following criteria is to be used in the design of wastewater ponds and land disposal systems:

Holding Ponds	The 10-year wet seasonal rainfall should be the design basis for holding ponds. The ponds should have the capacity to store the anticipated rainfall plus wastewater for the wet season. A good water balance analysis is paramount in pond design – without it treatment and containment reliability will be questionable.Two feet of freeboard should be maintained at all times. For new or expansion of existing ponds the bottom of the pond(s) shall be lined with suitable clay soils, or compacted so that percolation of water into subsurface soils has a rate of not more than 10^{-6} cm/sec.The discharger should be required to document, by October 1 of each year, that adequate freeboard exists for the anticipated rainfall (10-year wet season) plus wastewater for the wet season. All ponds should be protected from washout or erosion resulting from a 100-year return interval flood flow.
Disposal Area	The discharger should document, by appropriate soils and engineering studies, that adequate area exists to dispose or reclaim all annual wastewater plus the 10-year wet season rainfall during the seven month dry season. If the discharger provides adequate documentation, allowance may be made to dispose of some wastewater during the wet weather months.
Evaporation Ponds	The same criteria applies as for holding ponds except that, for evaporation ponds, a normal year's rainfall shall be assumed to follow the 10-year wet season.

ATTACHMENT B

PROHIBITIONS, SPECIFICATIONS, AND PROVISIONS

FOR

WINERY PROCESS WASTEWATER DISCHARGES

The following requirements should be a part of any winery wastewater permit issued by the County. Since the permits are site specific, additions, modifications or deletions would apply on a case-by-case basis.

FINDINGS

This section should describe the production facility, treatment and disposal facilities, etc.

Winery name, owner, operator, location
Technical reports submitted
Facility description
Wastewater production flows
Discription of treatment, storage and disposal facilities
Treatment pond descriptions with projected water balances
CEQA determinations
Any other pertinent information

PROHIBITIONS

1. Wastewater discharged to the treatment system (ponds, etc.) shall not exceed the total annual design flows described in Finding ____of this permit.

2. Neither the treatment, storage, nor disposal of wastes shall create a nuisance or pollution as defined in the California Water Code.

3. There shall be no bypass or overflow of waste to waters of the State from the wastewater collection, treatment, transport, storage or disposal facilities.

4. Discharge of toxic substances into a pond treatment system which will disturb the normal biological treatment mechanisms is prohibited.

5. The discharge of waste shall not degrade the quality of any groundwater used for domestic purposes or cause an increase in any quality parameter that would make groundwater unsuitable or irrigation use.

6. No reclaimed water shall be allowed to escape from the designated use area via surface flow.

DISCHARGE SPECIFICATIONS

General

1. All wastewater streams discharging into ponds shall be measured in order to monitor the total flow rate of wastewater.

2. The permittee shall maintain in good working order and operate as efficiently as possible

any facilities or control system installed to achieve compliance with this permit.

Treatment/Storage Ponds

1. The ponds shall be adequately protected from erosion, washout, and flooding from a rainfall event having a predicted frequency of once in 100 years.

2. To prevent the threat of overflows, a minimum freeboard of 2 feet shall be maintained in the ponds at all times.

3. Water samples within 1 foot of the surface of the pond(s) shall meet the following quality limits at all times:

   In any grab sample:

Dissolved Oxygen	2.0 mg/l minimum
Dissolved Sulfide	0.1 mg/l maximum
pH	6.0 minimum 9.0 maximum

4. The treatment pond(s) shall be underlain by an impermeable layer which will allow a percolation rate of not more than 10^{-6} cm/sec (expansion or new ponds).

Reclaimed Water Use Restrictions

1. Use of reclaimed water on areas not specified in Finding on Attachment ___ of this permit is prohibited without written authorization from (Director of Environmental Management)

2. No reclaimed water shall be applied to the vineyard disposal area in anticipation of or during rainfall, 48 hours after a rainfall or when soils are saturated.

3. No reclaimed water used for irrigation shall be allowed to escape to areas outside the irrigation areas, either by surface flow or airborne spray, except for minor quantities associated with good irrigation practice.

4. Ponding shall not occur in the disposal area in amounts which could cause a mosquito problem.

PROVISIONS

1. The permittee shall comply with a Self-Monitoring Program as specified by (Director of Environmental Management)

2. In reviewing compliance with Prohibition 3 of this permit, the (Director of Environmental Management) will take special note of the difficulties encountered in achieving compliance during entire wet seasons having a rainfall recurrence interval of greater than once in ten years.

3. The permittee shall permit the (Director of Environmental Management) and/or the Regional Board, or their authorized representatives:

   a. Entry upon premises in which a regulated facility or activity is located or conducted, or where records are kept under the conditions of this permit;

   b. Access to and copy of, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspection, at reasonable times, of any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. To photograph, sample or monitor, at reasonable times, for the purpose of assuring compliance with this permit.

4. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the permittee(s), the permittee(s) shall notify the succeeding owner or operator of the existence of this permit by letter, a copy of which shall be forwarded to the (Director of Environmental Management).

5. The permittee(s) shall file with the (Director of Environment Management) a written report at least 180 days before making any material change in the character, location, or volume of the waste discharge, except for emergency conditions in which case the (Director of Environmental Management) shall be notified as soon as possible by phone and in writing.