Amoco Petroleum Products
Refining Business Group
Whiting Business Unit
2815 Indianapolis Boulevard
Post Office Box 710
Whiting, Indiana 46394-0710
219-473-7700

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

July 31, 1996

Mr. Mark W. Stanifer
Chief, Water Enforcement Section
Office of Enforcement
Indiana Department of Environmental Management
100 North Senate Street
P.O. Box 6015
Indianapolis, IN 46206-6015

NPDES Permit Number IN 0000108
Reply to Warning of Noncompliance - Cause No. B-2006

Dear Mr. Stanifer:

This is in response to your letter addressed to Mr. Ford requesting additional information regarding the June 18, 1996 incident. Operational upsets combined with heavy rains caused exceedances of NPDES permit limits for total suspended solids, oil and grease, chemical oxygen demand and biological oxygen demand. During this incident, the activated sludge plant portion of the wastewater treatment plant was temporarily bypassed, after notice to IDEM, for approximately 30 minutes to protect the wastewater treatment plant from becoming inoperable.

At the outset we would like to clarify a few issues:

1. While previous operational upsets had reduced storm surge capacity by around 4 million gallons, the wastewater treatment plant still had approximately 9 million gallons of storm surge capacity on the day of the heavy rains.

2. Permit limits had already been exceeded by the time the temporary bypass was initiated. The bypass was attempted to protect the wastewater treatment plant from becoming inoperable and then requiring an extended period of time to recover.

3. A temporary shutdown of refinery operations would not have avoided the bypass. The shutdown could not be implemented safely in time to prevent the exceedances or the bypass. In fact, a shutdown would have adversely impacted the situation.

Details of these issues are discussed below.

Process upsets at the desalter two weeks prior to the incident resulted in increased loadings of solids and oil and grease to the refinery wastewater treatment plant. In order to prevent these upsets from significantly impacting the wastewater treatment plant, the influent to the wastewater treatment plant was stored in the storm surge/equalization tanks (total operating capacity 18.5 million gallons) for the duration of the upset. This water was subsequently reintroduced to the wastewater treatment plant at a slower rate. On the morning of June 17, 1996 the water being stored in the tanks was reduced to approximately 10 million gallons (normal operating volume in the tanks ranges between 4 and 6 million gallons).

We implemented the refinery water shedding plan at 9:00 am on June ~~18~~ 17, 1996 in anticipation of the heavy rains in the Whiting area that began later in the day around 11:00 am. The water shedding plan is designed to reduce the water loading to the wastewater treatment plant by reducing the amount of process water that is discharged to the sewers. In this instance, the following measures were taken:

1. well point systems were shut off;
2. units eliminated/reduced water use and also stored water in surge tanks on the process units where possible;
3. cooling tower blowdowns were shut off; and
4. water draws from tanks were stopped.

In an effort to control storm water flow and maintain effluent quality, influent water was stored in the storm surge/equalization tanks and then metered into the activated sludge plant at a slower rate, thus controlling the hydraulic residence time through the plant. These actions helped maintain effluent quality within permit limits on June 17, 1996. However, as a result of the continuing storm event that lasted into the early morning hours on June 18, the storm surge/equalization tanks were filled to capacity.

The increased flow from the storm caused the activated sludge beds in the clarifier to rise and resulted in a partial washout of the activated sludge

population from the clarifier. The activated sludge in the effluent resulted in the high loadings of total suspended solids, chemical oxygen demand, biological oxygen demand and oil and grease. Federal, state and local agencies were notified of the incident and we initiated an extensive response effort to mitigate the situation.

Later in the day, we decided to bypass the activated sludge plant portion of the wastewater treatment plant at around 3:45 pm on June 18, 1996. We were concerned that the wastewater treatment plant would become inoperable, because the forecast called for additional thunderstorms for the early evening hours. A continued washout of the activated sludge population due to the high water flows would result in a loss of biological treatment and would render the plant inoperable. It would then take several days for the plant to recover and become operational. IDEM officials, both on-site and in Indianapolis, were apprised of the situation throughout the day. We also discussed the decision to bypass and the reasons for it before initiating the bypass. The bypass was stopped within thirty minutes, as the forecast was changed reducing the likelihood of thunderstorms.

We did not temporarily shutdown refinery operations on June 18 because of safety, environmental and timing issues. A safe and environmentally sound shutdown of the refinery takes two to three days and would not have impacted the bypass. All petroleum hydrocarbons in a unit must be completely flushed before the shut down in order to deinventory the unit and place it in a safe standby mode. Flushing the unit involves steaming and washing the lines and vessels to make sure the unit is free of hydrocarbons. These operations generate additional water and much higher than normal amounts of oil that has to be processed at the wastewater treatment plant and as a result would have further aggravated the situation. For these reasons, the refinery did not shutdown.

As stated in our June 24, 1996 letter, we took several steps to mitigate the impact of the incident. In addition to the water shedding and activating our response team and contractors, we installed boom around the outfall to collect and recover activated sludge solids that were washed out in the effluent. We carried out extensive surveillance of the shoreline and the Lake to determine if there were any impacts and also notified all governmental and area entities that could be impacted by the solids. Health concerns because of fecal coliform was not an issue with the activated sludge solids because the refinery does not treat sanitary wastes. Experts from our Research department and the chemical contract firm were called in to work on optimizing the dosages of chemicals being

added at the wastewater treatment plant in an effort to improve effluent quality. All process units monitored the quality of process water being discharged to the sewer in order to prevent high loadings to the wastewater treatment plant. With the absence of additional rain on June 18, 1996 the wastewater treatment plant recovered quickly and the effluent to the Lake was within permit limits. Recent enhancements to the wastewater treatment plant also helped in this quick recovery.

We have also assembled a project team to review the incident and to develop improvements to prevent a reoccurrence. The project team will perform an exhaustive assessment of upstream refinery operations (up to the point of desalter wash water generation) as well as wastewater treatment plant operations to identify opportunities for improvement. Some of the upstream operations that will be reviewed by the project team include crude deliveries, tank water draw systems and desalter operations. Wastewater treatment plant issues that will be reviewed by the team include storm water handling systems and enhancements to the wastewater treatment plant. The project team will then evaluate the opportunities identified and implement the recommendations selected. The objective of the project team is to implement improvements that will reduce the likelihood of a reoccurrence.

In light of the foregoing, Amoco believes that the June 18 bypass was authorized by the facility's NPDES permit. In addition, we believe that the exceedances of the effluent limitations do not constitute a violation of its NPDES permit because the circumstances qualify as an "upset", as the term is defined in the NPDES permit.

We appreciate the opportunity to provide clarifications about the June 18 exceedance. Please contact Shiv Baloo at (219) 473-3740 or myself at (219) 473-3577 if you have any further questions or would like additional information.

Sincerely,

Julie G. Murphy

J. G. Murphy
Manager, Environmental, Health and Safety

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live

Evan Bayh
Governor

~~Kathy Prosser~~
~~Commissioner~~

Michael O'Connor
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
Telephone 317-232-8603
Environmental Helpline 1-800-451-6027

3) July 9, 1996

VIA CERTIFIED MAIL: Z 411 842 035

Doug Ford, President
Amoco Oil company
200 East Randolph Drive
Chicago, Illinois 60601-7125

Dear Mr. Ford

Re: Noncompliance with
NPDES Permit No. IN 0000108
Amoco Petroleum Products
Refining Business Group
Whiting, Indiana
Cause No. B-2006

Warning of Noncompliance

You are hereby notified that this office has reviewed the status of NPDES Permit No. IN 0000108. This review indicates that the NPDES permit has been violated by exceedances of NPDES permit limitations for total suspended solids (TSS), oil and grease (O&G), and chemical oxygen demand (COD) as a result of the June 18, 1996 incident.

Based on your written report dated June 24, 1996, you state that because of refinery process upsets, the storm surge/equalization tanks were being utilized to hold the desalter water wash and were therefore not available to hold the storm water. Would a temporary shut down of your refinery operation have averted the bypass and subsequent effluent limitation violations? Please note that NPDES Permit No. IN0000108, Management Requirements, Section B.2. Bypass of Treatment Facility, a.(2) definition of "Severe property damage", states, in part, that severe property damage does not mean economic loss caused by delays in production at the permittee's facility.

It is the belief of this office that such violations are of a serious nature and deserve your immediate attention to return to compliance with the terms and conditions of the NPDES permit. It is therefore requested that you advise this office in writing, within fifteen (15) days of the date of this correspondence, of the reasons for the violations as herein noted, along with any mitigating circumstances as to why further enforcement action should not be pursued by this office.

Specifically, please describe any corrective measures which will be taken to assure compliance in the future. Failure to respond to this notice can result in further enforcement action being initiated by this office.

If you have any questions concerning this notice, please contact Liz Melvin at 317/232-8434.

Sincerely,

FOR Mark W. Stanifer, Chief
Water Enforcement Section
Office of Enforcement

cc: Lake County Health Department
U.S. EPA Region V, Water Section
Shiv Baloo, Amoco, Whiting Business Unit

Amoco Petroleum Products
Refining Business Group
Whiting Business Unit
2815 Indianapolis Boulevard
Post Office Box 710
Whiting, Indiana 46394-0710
219-473-7700

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

2) July 3, 1996

RECEIVED
JUL 06 1996
INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

Mr. Gary Starks
Indiana Department of Environmental Management
Office of Water Management
105 South Meridian Street
Indianapolis, IN 46206-6015

Dear Mr. Starks:

NPDES Permit No. IN 0000108
Exceedance of Discharge Parameters at Outfall 001-Addendum

This letter serves as a follow-up to our written notification to the Indiana Department of Environmental Management on 24 June 1996 concerning the exceedance of discharge parameters at Outfall 001 on 18 June 1996. It was stated that the daily maximum permit limit for Biochemical Oxygen Demand (BOD) was very likely to be exceeded that day; however, at that time the BOD results were unavailable. The analytical result for BOD became available on the afternoon of Monday, 1 July 1996. The discharge loading for BOD on 18 June 1996 was 180,988.01 pounds, which exceeds our maximum daily permit limit. The exceedance for this parameter was limited to 18 June 1996. The discharge met all permit limits starting Wednesday, 19 June 1996, as documented by subsequent analytical testing.

The refinery has an excellent record in maintaining compliance with its NPDES permit. This exceedance is only the second exceedance since 1984 for a process parameter. We take great pride in this record and have constantly made process and operational improvements at our wastewater treatment plant and in upstream control at the units. We do not expect further permit limit exceedances from this Outfall. We will continue to review the incident and take appropriate steps if necessary to prevent its recurrence. If you have any questions or would like additional information, please contact me at 219-473-3740.

Sincerely,

Shiv Baloo / EBS

Shiv Baloo
Team Leader-Water

4 SMJ

Amoco Petroleum Products
Refining Business Group
Whiting Business Unit

2815 Indianapolis Boulevard
Post Office Box 710
Whiting, Indiana 46394-0710
219-473-7700

D. H. Wilson
Manager, Whiting Business Unit

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

3) December 4, 1996

Mr. Mark W. Stanifer
Chief, Water Enforcement Section
Office of Enforcement
Indiana Department of Environmental Management
100 North Senate Street
P.O. Box 6015
Indianapolis, IN 46206-6015

FEB 27 11 25 AM '97

NPDES Permit Number IN 0000108
Reply to Warning of Noncompliance - Cause No. B-2006

Dear Mr. Stanifer:

Per your correspondence dated 31 October 1996, this letter outlines the actions we have already taken, as well as the projected plan and timetable for additional actions that are aimed at preventing a recurrence of the incidents that occurred on June 18 and July 18 this year. As our Discharge Monitoring Report (DMR) record illustrates, these incidents are unprecedented. Up until the June 18 incident, the refinery had exceeded a process parameter (Outfall 001) only once since 1984. As stated in prior correspondence with your office, both incidents resulted from operational upsets combined with heavy rains which caused exceedances of NPDES permit limits at Outfall 001. On average, one inch of rainfall equates to six million gallons of additional flow to the wastewater treatment plant (Lakefront). Rainfall during these two incidents was very intense with as much as one inch of rainfall in a one hour period. Total accumulations for June 17/18 and July 17/18 were 2.6 and 6.0 inches, respectively.

Following the incident on June 18, a project team was assembled to review upstream refinery operations as well as Lakefront operations to identify opportunities for improvement. This review included an assessment of crude oil deliveries, tank water draw operations, Pipe Still desalter operations, process sewer dynamics, management of process water and stormwater, and Lakefront operations and communications.

The action items identified in the review are organized into four distinct sections based on refinery operations. The items in each of the sections are aimed at first, minimizing the likelihood of an upset, and second, mitigating the magnitude of an upset by the development and implementation of early detection measures and improved

communications. Finally, the action items listed also address improved handling of upsets at the Lakefront. This organization will allow us to focus our efforts efficiently and effectively between refinery and Lakefront operations.

The initiatives that are being taken to manage crude oil deliveries, tank water draw operations, and desalter operations will minimize the likelihood of future desalter upsets. Development and implementation of early detection methods is ongoing and will minimize the magnitude of desalter upsets if they should occur. Mitigating the magnitude of desalter upsets will allow the Lakefront to treat the influent process wastewater without the need to impound large quantities of water. The Lakefront is also instituting operational and communication protocol that will enhance coordination among affected units when upsets occur.

The action plan and associated timetable is as follows:

The project team identified the following improvements that will be implemented in order to minimize the likelihood of desalter upsets from occurring.

Improved monitoring of crude oil deliveries will aid in minimizing the likelihood of future desalter upsets.

1. An early warning system for high solids or water content is in place for incoming crudes. High solids or water loadings to the desalter can create an upset condition in the desalter operation. The upset results in an oil/water/solids emulsion being carried through with the desalter brine; this results in an increased loading to the process sewer. Although the Lakefront is capable of handling the desalter brine, the emulsion creates additional stress on the activated sludge population. A formal notification procedure has been developed and implemented between Amoco Pipeline Company and the refinery. This procedure will give advance notice of an impending crude receipt with a high solids or water content.

2. An evaluation was performed on crude tank floating suctions during the third quarter of this year. This evaluation revealed opportunities for improved performance of these floating suctions which withdraw crude oil from the tank. Proper performance of the suction is critical to ensure that only oil, and not water, is pumped to the Pipe Still desalters. Specifically, floating suction problems with Tank 916 will be corrected during a scheduled 1997 tank outage. However, until this correction takes place, Tank 916 will not feed crude oil directly to the crude distillation units (11 Pipe Still and 12 Pipe Still). Oil from Tank 916 will be pumped to another tank before being transferred to the Pipe Stills. Tank 918 will be limited to heavy crude oil service only due to buoyancy limitations on its floating suction. Adjustments to Tank 918's floating suction will be considered at its next scheduled outage. These steps will improve crude quality to the desalters by ensuring that only oil is pumped from the crude tanks to the Pipe Stills.
3. Crude composite receipt sampling and reporting has been increased from monthly to weekly and the distribution of these reports has also been widened. These changes are designed to greatly enhance awareness of crude quality.

Efficient operation of tankfield water draw operations improves the quality of crude being sent to the desalters by reducing the amount of water in the tank; as a result, this will help minimize the likelihood of future desalter upsets.

1. A review has been conducted on the design and capacity of strainers installed on tank water draw pumps. We are increasing the preventative maintenance on the strainers to ensure good operation; this maintenance will decrease unplanned downtime and improve the water draw rate.

2. An engineering review of the entire tank water draw system capacity has been initiated to ensure that the system can adequately handle water coming in with the crude via pipeline. This study, which we anticipate to be completed by April 1997, will review pump capacity, line size, and maintenance schedules. The recommendations from this study will be evaluated in conjunction with all other recommendations for implementation.

3. To improve the overall efficiency of the water draw system, the feasibility of additional water detection probes is currently under evaluation. We anticipate completing this review by third quarter 1997.

4. A management system to ensure proper verification of water draw operations has been implemented. This system includes the addition of checkpoints to operator checklists. By properly and routinely verifying water draws, the element of human error in this operation can be greatly reduced.

The next set of action items are aimed at minimizing the likelihood of an upset by optimizing Pipe Still desalter operations and mitigating the magnitude of an upset via early detection.

Improving desalter performance via operational and equipment changes

1. The recycle mudwash system on 11C Pipe Still's D-200 desalter is in-service and is operated daily to help maintain more stable desalter operations. This system allows for a more continuous mudwash operation which minimizes slugs of solids from getting into the sewer system, thereby improving desalter operations and minimizing upsets. Amoco has under contract a chemical vendor with special expertise in desalter operations to assist in daily desalter system management.

2. Impacts from desalter upsets will also be minimized via expanded tankfield and Pipe Still operator awareness training and the upgrade of existing control schemes; these actions were completed during the third and fourth quarters of this year. Prompt recognition and response is critical to mitigating desalter upsets. In addition, operational procedures to mitigate a desalter upset at the Pipe Stills include 'off-hours' call-out of our expert consultant to provide support in managing desalter operations.

3. A new recycle mudwash system has been installed on 11A Pipe Still's D-2 desalter and is now in use. We are currently reviewing the design of this system in order to improve its performance. It is anticipated that this review will be completed and the changes to the initial design executed by fourth quarter of 1997.

4. An agar probe level detection system is in-service on both 11A and 11C Pipe Still; this system is designed to improve desalter level control and early detection of oil in the brine. Additional work is ongoing to enhance the operation of the level detection system. Furthermore, an improved level control system is currently in place at 12 Pipe Still. Optimum level control is crucial when processing heavy crude, because the low API gravity reduces desalter efficiency and can result in upsets.

5. A new recycle mudwash system, similar to the one at 11 Pipe Still, is being designed at 12 Pipe Still and is scheduled to be installed during the fourth quarter of 1997. The installation of this system will enhance desalter performance and reduce the likelihood of desalter upsets at 12 Pipe Still.

Finally, the Lakefront section of the action plan includes several communications and operational improvements.

1. **Increased communication with other process units.**
When the Lakefront impounds water because of a unit upset, the unit asset superintendent will receive a follow-up note which will provide information on why the impoundment was necessary and the volume of water impounded. The process unit is then expected to indicate the preventive methods or training that will be implemented to try to prevent the recurrence of the event, and to review this information with their crews.

2. **Increased communication with the desalter chemical vendors.**
The chemical vendors for the desalters have started providing weekly desalter reports. The purpose of these reports is to provide more information about desalter performance to aid in optimization of this operation.

3. **Chemical treatment at the outlet of the storm surge/equalization tank.**
A new chemical is now being added at the outlet of the storm surge/equalization tank. The addition of this chemical aids in the separation of oily solids from the water at the dissolved air flotation unit (DAF) and prevents the solids from carrying over to the Activated Sludge Plant (ASP). This chemical addition system, which was approved by IDEM in June of this year, enables the Lakefront to better handle oily solids produced during desalter upsets.

4. **Enhanced solids removal.**
The Lakefront is currently trying to obtain a temporary, portable unit to enhance biological solids removal from the activated sludge plant. Three units are currently under

consideration: a rotary drum thickener, a gravity belt thickener, and a DAF. Improved solids removal will allow the plant to recover from upsets, such as desalter upsets or heavy rains, more expediently. The temporary portable unit will also serve as a pilot test for some longer term solids handling options. A decision on implementation will be made by the first quarter of 1997.

5. **Longer term, permanent improvements to solids handling.**
A detailed engineering review has been initiated to evaluate possible projects for long term solids handling at the Lakefront. This review is evaluating operational changes and the equipment required for effective solids removal. Improved sludge removal and handling within the system will prevent biosolids from carrying over to the outfall. In addition, the Lakefront will be able to better handle process (including desalter) upsets because of lower biomass inventories. Some of the options being evaluated include increased biological solids removal at the clarifier, a separate biological solids thickening system, or improved dissolved air flotation unit performance. This review is expected to be completed by the third quarter of 1997.

6. **Modified water shedding plan.**
The water shedding plan is being modified so it can be implemented quicker and in stages. This modification will allow critical operations such as crude tank water draw operations and desalter mudwashing to continue, while limiting the overall surge to the Lakefront. Subsequently, the storm surge can be routed to the Lakefront later in time and under a controlled rate. During past watershedding events, these operations were suspended as well; however, this was found to be deleterious to desalter performance.

The most effective way to prevent the recurrence of this past summer's incidents is to prevent the upstream upset from ever occurring. However, we recognize that this may not always be possible, and are therefore evaluating and implementing improvements at the Lakefront as well. This approach, and the supporting action plan, utilizes sound judgment from both an operational standpoint and a feasibility perspective. In addition to the items that have been or are in the process of being implemented, additional actions will be taken once the engineering reviews are completed. The items from the reviews will be evaluated for effectiveness and feasibility, with a final set of recommendations delineated and implemented. We will always continue to look for more effective ways to operate this refinery in a safe, environmentally sound manner.

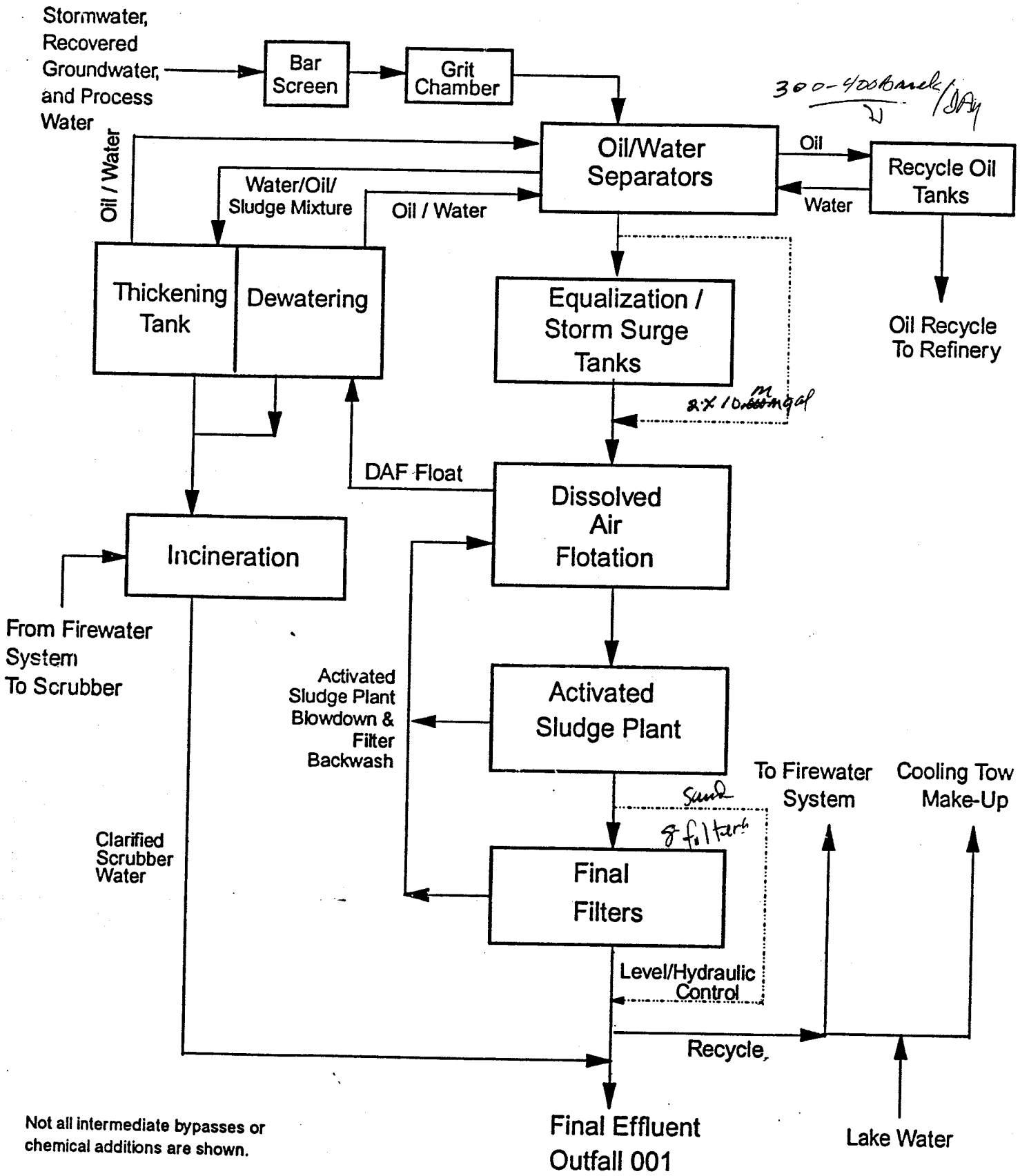
We will provide an update once the reviews have been completed and specific additional actions have been identified. Please contact Shiv Baloo at (219) 473-3740 or Julie Murphy at (219) 473-3577 if you have any questions or would like additional information.

Sincerely,

D. H. Wilson
Manager, Whiting Business Unit

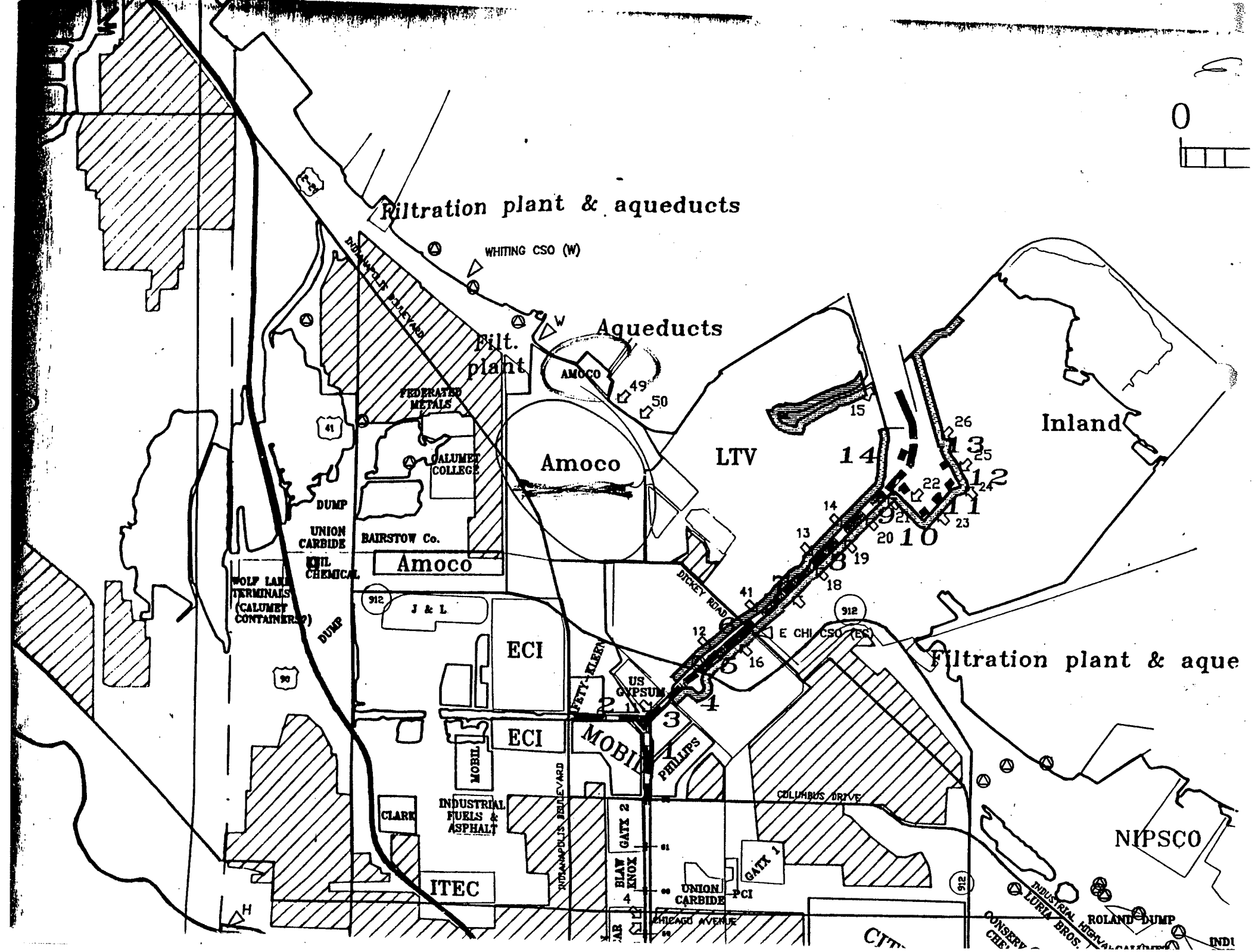
Wastewater Treatment Plant - Water Flow Diagram

Amoco Oil Company - Whiting Refinery



Not all intermediate bypasses or chemical additions are shown.

8/94



Filtration plant & aqueducts
WHITING CSO (W)
Aqueducts
Filt. plant
AMOCO
Amoco
LTV
Inland
FEDERATED METALS
CALUMET COLLEGE
DUMP
UNION CARBIDE
BAIRSTOW Co.
KEIL CHEMICAL
WOLF LAKE TERMINALS (CALUMET CONTAINERS?)
J & L
ECI
FETY-KLEEN
US GYPSUM
MOBIL
PHILLIPS
DICKEY ROAD
E CHI CSO (EC)
Filtration plant & aque
CLARK
INDUSTRIAL FUELS & ASPHALT
INDIANAPOLIS BOULEVARD
GATX 2
BLAW KNOX
UNION CARBIDE
PCI
GATX 1
COLUMBUS DRIVE
CHICAGO AVENUE
ITEC
NIPSCO
ROLAND DUMP
LURIA BROS.
INDUSTRIAL HIGHWAY
0

P file

IDEM

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

NPDES Compliance Inspection Report

100 North Senate Avenue
P. O. Box 6015
Indianapolis, IN 46206 - 6015

Section A: National Data System Coding

Transaction Code	NPDES	yr/mo/day	Inspection Type	Inspector	Fac Type
1 N 2 5	3 IN0000108 11	12 9601 17	18 C	19 S	20 2

Remarks 04

IN COMPLIANCE IN NPDES LIMITS

21 Reserved	Facility Evaluation Rating	BI	QA	Reserved	66
67 69	70 3	71 N	72 N	73 74	75 80

Section B: Facility Data

Name and Location of Facility Inspected	Entry Time	Permit Effective Date
AMOCO Petroleum Oil Co 2815 INDIANAPOLIS BLVD Whiting, IN 46394	9 30 AM PM	3-1-90
	Receiving Waters / POTW	Permit Expiration Date 2-28-95

Name(s) of On-Site Representatives	Title(s)	Phone No(s)
SHIV Baloo	ENVIRON + safety officer	(219) 473-7700

Name, Address of Responsible Official	Title	
Don Wilson	Refinary Manager	
	Phone No. (219) 473-3340	Contacted ☐ Yes ☒ NO

Section C: Areas Evaluated During Inspection
(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

S	Permit	S	Flow Measurement	N	Pretreatment	S	Operations & Maintenance
S	Records/Reports	N	Laboratory	*	Compliance Schedules A.O.	S	Sludge Disposal
S	Facility Site Review	S	Effluent/Receiving Waters	S	Self-Monitoring Program	**	Other: Scrubber Water

Section D: Summary of Findings/Comments (attach additional sheets if necessary)

- NPDES Permit Renewal - Pending to include mixing zone (
- All major equipment for WWT are in service -
  Repairs of Mechanical Bar screening Rake is in progress.
  This was Damaged during a fire/explosion in this Area 1-3-96

* A.O. is in place Cause NO B-1545

** Scrubber water from the incinerator is process through chemical Addition, Ferric chloride / + Polymer → clarification. The Liquid is mixed with WW treated water + Discharged to Lake Michigan, The Solids are Disposed As Hazardous waste. Incinerator operates approx 6 mos/year.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Telephone	Date
Eddy Depter	IDEM-OWM	1-4-96
Signature of Reviewer	**Agency/Office/Telephone**	**Date**
R L Pearson		

Regulatory Office Use Only

Action Taken	Date	Compliance Status
		☐ Non compliance ☐ Compliance

EPA Form 3560-3 (Rev. 3-85) Previous editions are obsolete.

INSTRUCTIONS

Section A: National Data System Coding *(i.e., PCS)*

Column 1: Transaction Code: Use N, C, or D for New, Change, or Delete. All inspections will be *new* unless there is an error in the data entered.

Columns 3-11: NPDES Permit No. Enter the facility's NPDES permit number. *(Use the Remarks columns to record the State permit number, if necessary.)*

Columns 12-17: Inspection Date. Insert the date entry was made into the facility. Use the year/month/day format (e.g., 94/06/30 = June 30, 1994).

Column 18: Inspection Type. Use one of the codes listed below to describe the type of inspection:

A Performance Audit
B Compliance Biomonitoring
C Compliance Evaluation (non-sampling)
D Diagnostic
E Corps of Engineers Inspection
F Pretreatment Follow-up
G Pretreatment Audit
I Industrial User (IU) Inspection
L Enforcement Case Support
M Multimedia
P Pretreatment Compliance Inspection
R Reconnaissance
S Compliance Sampling
U IU Inspection with Pretreatment Audit
X Toxics Inspection
Z Sludge
2 IU Sampling Inspection
3 IU Non-Sampling Inspection
4 IU Toxics Inspection
5 IU Sampling Inspection with Pretreatment
6 IU Non-Sampling Inspection with Pretreatment
7 IU Toxics with Pretreatment

Column 19: Inspector Code. Use one of the codes listed below to describe the *lead agency* in the inspection.

C — Contractor or Other Inspectors *(Specify in Remarks columns)*
E — Corps of Engineers
J — Joint EPA/State Inspectors—EPA Lead
N — NEIC Inspectors
R — EPA Regional Inspector
S — State Inspector
T — Joint State/EPA Inspectors—State lead

Column 20: Facility Type. Use one of the codes below to describe the facility.

1 — Municipal. Publicly Owned Treatment Works (POTWs) with 1987 Standard Industrial Code (SIC) 4952.
2 — Industrial. Other than municipal, agricultural, and Federal facilities.
3 — Agricultural. Facilities classified with 1987 SIC 0111 to 0971.
4 — Federal. Facilities identified as Federal by the EPA Regional Office.

Columns 21-66: Remarks. These columns are reserved for remarks at the discretion of the Region.

Columns 67-69: Inspection Work Days. Estimate the total work effort (to the nearest 0.1 work day), up to 99.9 days, that were used to complete the inspection and submit a QA reviewed report of findings. This estimate includes the accumulative effort of all participating inspectors; any effort for laboratory analyses, testing, and remote sensing; and the billed payroll time for travel and pre and post inspection preparation. This estimate does not require detailed documentation.

Column 70: Facility Evaluation Rating. Use information gathered during the inspection (regardless of inspection type) to evaluate the quality of the facility self-monitoring program. Grade the program using a scale of 1 to 5 with a score of 5 being used for very reliable self-monitoring programs, 3 being satisfactory, and 1 being used for very unreliable programs.

Column 71: Biomonitoring Information. Enter D for static testing. Enter F for flow through testing. Enter N for no biomonitoring.

Column 72: Quality Assurance Data Inspection. Enter Q if the inspection was conducted as followup on quality assurance sample results. Enter N otherwise.

Columns 73-80: These columns are reserved for regionally defined information.

Section B: Facility Data

This section is self-explanatory except for "Other Facility Data," which may include new information not in the permit or PCS (e.g., new outfalls, names of receiving waters, new ownership, and other updates to the record).

Section C: Areas Evaluated During Inspection

Check only those areas evaluated by marking the appropriate box. Use Section D and additional sheets as necessary. Support the findings, as necessary, in a brief narrative report. Use the headings given on the report form (e.g., Permit, Records/Reports) when discussing the areas evaluated during the inspection. The heading marked "Multimedia" may indicate medias such as CAA, RCRA, and TSCA. The heading marked "Other" may indicate activities such as SPCC, BMPs, and concerns that are not covered elsewhere.

Section D: Summary of Findings/Comments

Briefly summarize the inspection findings. This summary should abstract the pertinent inspection findings, not replace the narrative report. Reference a list of attachments, such as completed checklists taken from the NPDES Compliance Inspection Manuals and pretreatment guidance documents, including effluent data when sampling has been done. Use extra sheets as necessary.

INDUSTRIAL INSPECTION

State Form 35969 (R2/2-94)

☒ Satisfactory
☐ Marginal
☐ Unsatisfactory

diana Department of Environmental Management
Office of Water Management
105 S. Meridian Street
Indianapolis, Indiana 46225

Name of inspector: EDDY DEPOSITAR

Date (month, day, year): 1-4-96

Name of company: AMOCO Petroleum Oil Co

Address of company (street and number or Rural Route): 2815 INDIANAPOLIS BLVD

City: WHITING, IN

County: LAKE

Telephone number: (219) 473-7700

ZIP code: 46394-0710

Name of responsible official: DON WILSON Refinery Manager

(219) 473-3740
(219) 473-5379 FAX

Name(s) of individual(s) contacted: SHIV BALOO, ENVIRON'T AFFAIRS

Permit number: IN0000108

Name of receiving stream and/or POTW: LAKE Michigan

Type sewage disposal: Hammond POTW

Name of certified operator:

Number of employees: ≈ 1300

Class: 'D' INDUSTRIAL WWTP

Number:

Type of inspection
☐ O & M ☒ CEI ☐ CSI ☐ Follow-up ☐ Pretreatment
☐ Other (specify) CEI
☐ Products Petroleum Refining + GASOLINE Mfg

Outfall	Water Use	Treatment	Waste Flow MGD	Appearance
001	Process waste	oil separator, PPT. DAF Active sludge, filters	15.8	Clear/Colorless
002	NON-contact Cooling water	oil separator	$\bar{X}$ 122.2 MGD MX 126.1	Clear slt yellow color
003	Storm water		No Discharge	
004	Storm Water		No Discharge	

Other water uses

Sanitary + Service water Discharge TO HSD

EFFLUENT DATA
~~mg/l~~ / (lb/d)

Parameter (001)	Flow	pH	BOD	TSS	CBOD	O/G	Phenol
Permit Limits Daily Max.	Reported	9	8164	5694	58427	2600	73.0
Daily Avg.		6	4161	3646	30323	1368	20.3
Actual Data Daily Max.	15.8	7.7	869	2662	17850	473	1.00
Daily Avg.	10.7	7.5	320	1054	6507	169	0.69

Period covering: 6 Mos July thru Dec 1995

Comments

AMOCO DID NOT exceed numerical limits ~~of~~ IN the NPDES LIMITS

NPDES No. IN0000108

Facility Name Amoco Petroleum Products

City and State 2815 INDIANAPOLIS BLVD
P.O. BOX 710
WHITING, IN 46394-0710 219-473-7700

Date of Inspection

RECORDS, REPORTS, AND SCHEDULES CHECKLIST

B. Recordkeeping and Reporting Evaluation (continued)

YES	NO	N/A	
			8. Pretreatment records are adequate and included:
			a. Industrial Waste Ordinanace (or equivelant documents)
			b. Inventory of industrial waste contributors, including:
			1. Compliance records
			2. User charge information
✓			9. SPCC properly completed, when required. on file/Documented
		✓	10. Best Management Practices Program available, when required.

C. Compliance Schedule Status Review.

			THE PERMITEE IS MEETING THE COMPLIANCE SCHEDULE
			1. The permitee has obtained necessary approvals to begin construction.
			2. Financing arrangements are completed.
			3. Contracts for engineering services has been executed.
			4. Design plans and specifications have been completed.
			5. Construction has begun.
			6. Construction is on schedule.
			7. Equipment acquisition is on schedule.
			8. Construction has been completed.
			9. Start-up has begun.
			10. The permittee has requested an extension of time.
			11. The permittee has met compliance schedule.

✓ Reference: A.O. — Copies on file, IDEM - OE
NOV Cause No. B-1545

FACILITY SITE REVIEW CHECKLIST

YES	NO	N/A	
			1. Standby power or other equivalant provision is provided.
			2. Adequate alarm system for power or equipment failures is available.
			3. POTW handles and disposes of sludge according to applicable Federal, State, and local regulators.
			4. All treatment units, other than back-up units, are in service.
			5. Procedures for facility operation and maintenance exist.
			6. Organization plan (chart) for operation and maintenance is provided.
			7. Operating schedules are established.
			8. Emergency plan for treatment control is established.
			9. Operating management control documents are current and include:
			a. Operating report
			b. Work schedule
			c. Activity report (time cards)
			10. Maintenance record system exists and includes:
			a. As-built drawings
			b. Shop drawings
			c. Construction specifications
			d. Maintenance history
			e. Maintenance costs
			11. Adequate number of qualified operators are on hand.
			12. Established procedures are available for training new operators.
			13. Adequate spare parts and supplies inventory and major equipment specifications are maintained.
			14. Instruction files are kept for operation and maintenance of each item of major equipment.
			15. Operation and maintenance manual is available.
			16. Regulatory agency was notified of bypassing. (Dates _____)

PERMITTEE SAMPLING INSPECTION CHECKLIST

A. Permittee Sampling Evaluation

YES	NO	N/A	
			1. Samplings are taken at sites specified in permit.
✓			2. Locations are adequate for representative samples.
✓			3. Flow proportioned samples are obtained where required by permit.
✓			4. Sampling and analysis completed on parameters specified by permit.
✓			5. Sampling and analysis done in frequency specified by permit.
			6. Permittee is using method of sample collection required by permit. Required Method: _____ If not, method being used is: (✓) Grab ( ) Manual composite (✓) Automatic composite 24HR Composit * 002 n/c c/water TRC 1X week
✓			7. Sample collection procedures are adequate:
✓			a. Samples refrigerated during compositing
✓			b. Proper preservation technique used
✓			c. Container and sample holding times before analyses conform with 40 CFR 136.3
✓			8. Monitoring and analyses are performed more often than required by permit. If so, results reported in permittee's self-monitoring report. X-ck + internal QA/QC Testing - on-going Program.

B. Sampling Inspection Procedures and Observations

NA

		✓	1. Grab samples obtained
		✓	2. Composite sample obtained Composite frequency _____ Preservation _____
		✓	3. Sample refrigerated during compositing.
		✓	4. Flow proportioned sample obtained.
		✓	5. Sample obtained from facility sampling device.
		✓	6. Sample representative of volume and nature of discharge.
		✓	7. Sample split with permitee.
		✓	8. Chain of custody procedures employed.

FLOW MEASUREMENT

C. Flow Measurment Inspection Checklist - Weirs

YES	NO	N/A	
			1. What type of weir is being used?
			2. The weir is exactly level.
			3. The weir plate is plumb and its top edges are sharp and clean.
			4. There is free access for air below the nappe of the weir.
			5. Upstream channel of weir is straight for at least four times the depth of water level, and free from disturbing influences.
			6. The stilling basin of the weir is of sufficient size and clear of debris.
			7. Head measurements are properly made by facility personnel.
			8. Proper flow tables are used by facility personnel.

D. Flow Measurement Inspection Checklist - Other Flow Devices

			1. Type of flowmeter used: _____
			2. What are the most common problems that the operator has had with the flowmeter? Totalizers - Calibrating 1X qtr/year Problems are reported to DMR
			3. Measure Wastewater flow: _____ mgd: Recorded flow: _____ mgd; Error _____ %
			4. Design flow: _____ mgd.
			5. Flow totalizer is properly calibrated.
			6. Frequency of routine inspection by proper operator: _____ /day.
			7. Frequency of maintenance inspections by plant personnel: _____ /year.
			8. Frequency of flowmeter calibration: _____ /month.
			9. Flow measurement equipment adequate to handle expected ranges of flow rates.
			10. Venturi meter is properly installed and calibrated.
			11. Electromagnet flowmeter is properly calibrated.

LABORATORY QUALITY ASSURANCE CHECKLIST (continued)

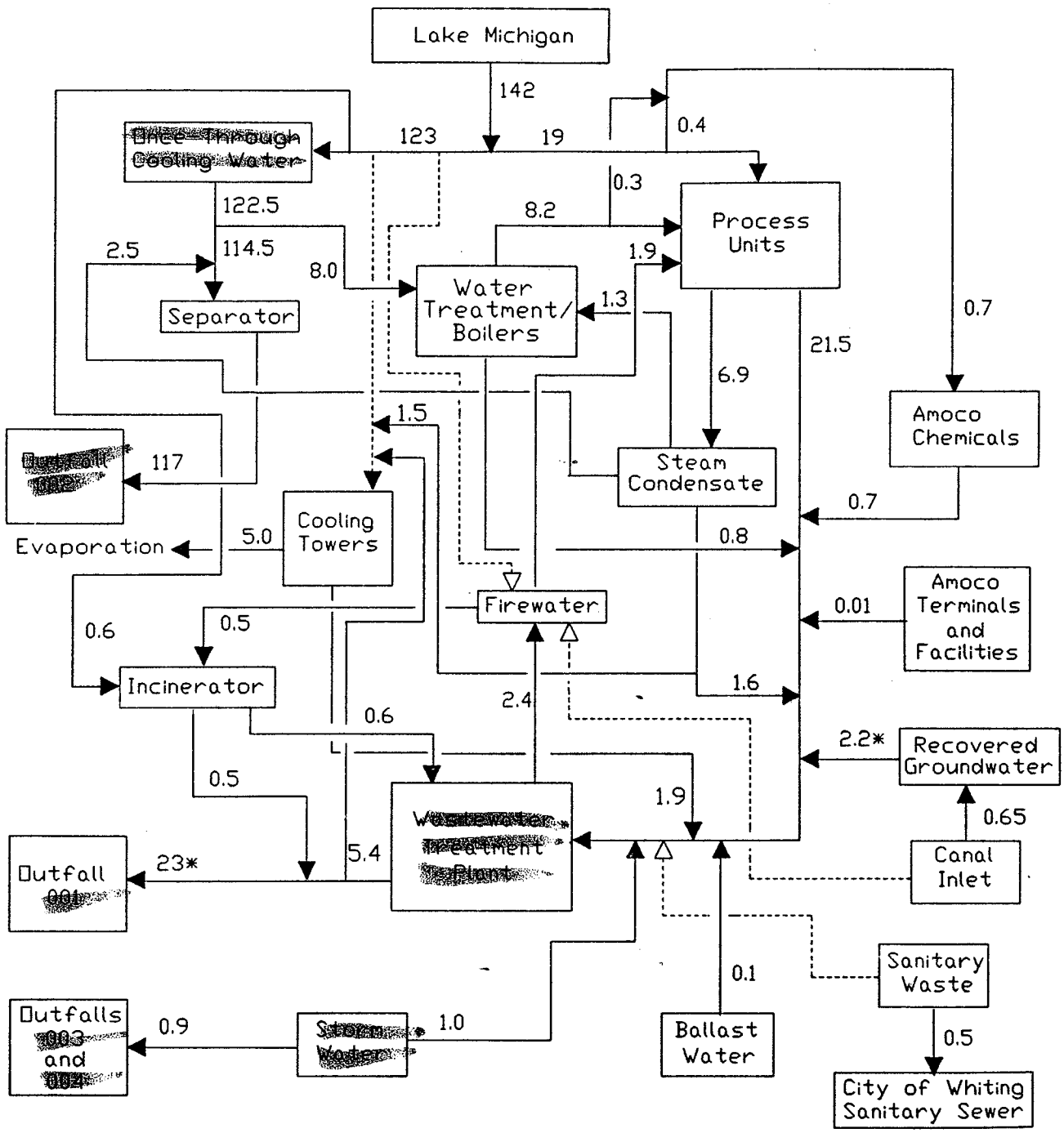
C. Laboratory Facilities and Equipment (continued)

YES	NO	N/A	
			8. Standards are available to perform daily check procedures.
			9. Written trouble-shooting procedures for instruments are available.
			10. Schedule for required maintenance exists.
			11. Proper volumetric glassware is used.
			12. Glassware is properly cleaned.
			13. Standard reagents and solvents are properly stored.
			14. Working standards are frequently checked.
			15. Standards are discarded after shelf life has expired.
			16. Background reagents and solvents run with every series of samples.
			17. Written procedures exist for cleanup, hazardous response methods, and applications of correction methods for reagents and solvents.
			18. Gas cylinders are replaced at 100-200 psi.

D. Laboratory's Precision, Accuracy, and Control Procedures

			1. A minimum of seven replicates is analyzed for each type of control check and this information is on record.
			2. Plotted precision and accuracy control charts are used to determine whether valid, questionable, or invalid data are being generated from day to day.
			3. Control samples are introduced into the train of actual samples to ensure that valid data is being generated.
			4. The precision and accuracy of the analyses are good.

Amoco Oil Company Whiting Refinery
Water Flow Diagram
(Flows in Million Gallons per Day)



* This flow might increase depending on groundwater recovery.

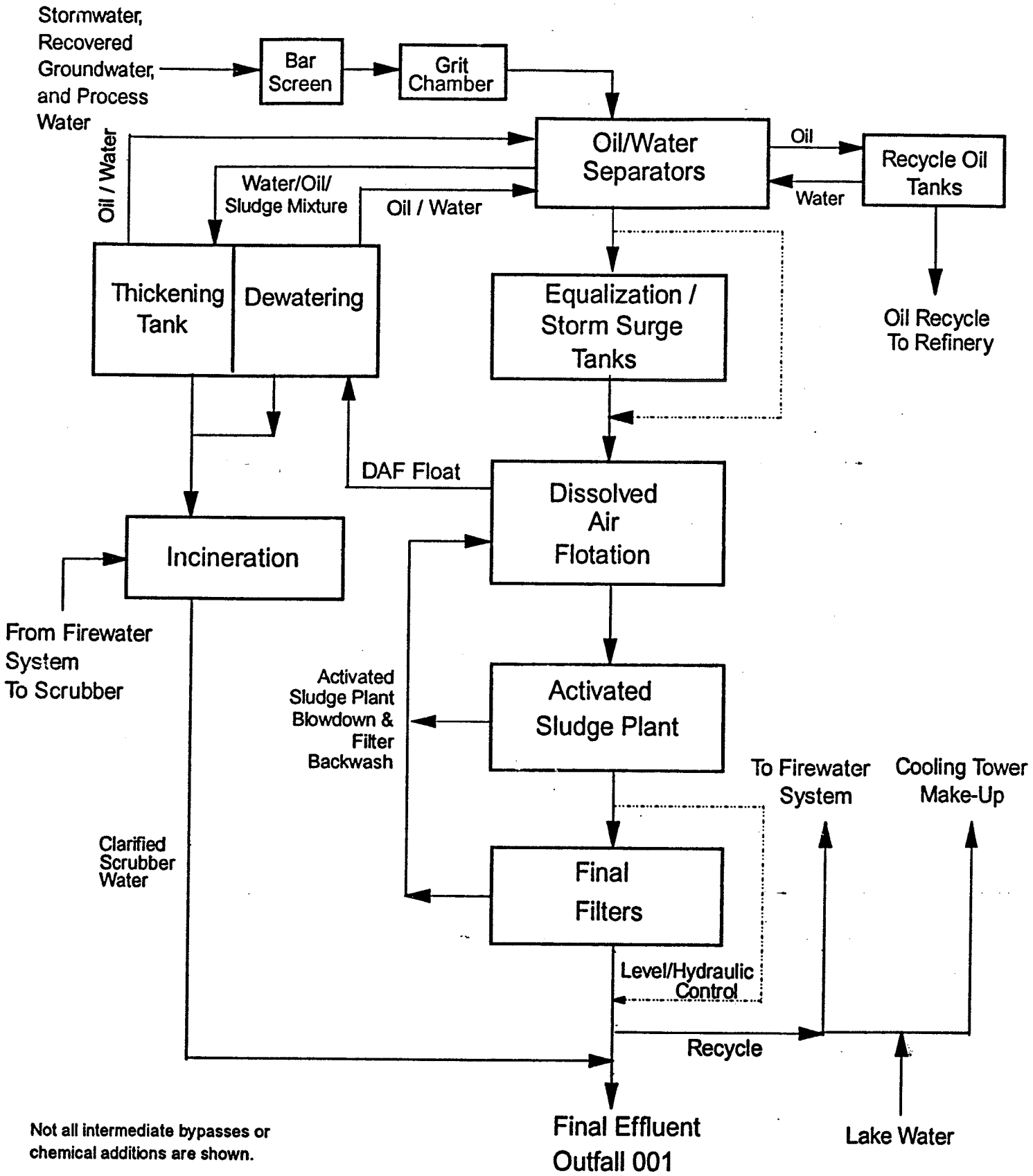
LEGEND

------- Lines available, but not normally used.

08/16/94
nrg

Wastewater Treatment Plant - Water Flow Diagram

Amoco Oil Company - Whiting Refinery



Not all intermediate bypasses or chemical additions are shown.

8/94

IN0000108
1/4/96

Amoco Oil
Whiting IN

'95	001 6/9		#'s/DAY				
			4161/8164	3646/5694	30323/58427	1368/2600	20.3/73.01
	Flow	pH	BOD	TSS	COD	O/G	Phenol
June	14.1	7.6	190	1018	5248	131	0.0 (mg/l <0.01)
No Vio's	18.5	7.5	550	2406	6289	322	0.0
July	14.9	7.8	439	1532	7226	236	0.31
No Vio's	18.5	8.3	709	2422	9860	564	1.0
August	16.6	7.7	353	1208	6721	298	0.0
No Vio's mx	21.3	7.9	1127	2437	9590	550	0.0
Sept	14.8	7.6	206	983	5783	132	0.08
No Vios mx	18.1	7.8	348	1739	11340	275	1.00
Oct	10.7	7.6	181	807	4420	85	0.07
No Vios mx	12.7	7.7	471	1567	5878	212	1.00
Nov	10.7	7.5	320	1056	6507	169	0.69
No Vio's mx	15.8	7.7	869	2662	17850	473	1.00

	1030/2060	23.1/57.4	23.9/68.58	2.01/4.48	Rpt	200/400 mg/l 0.05
	NH3-N	Sulfide	TL Cr	Hx Cr	Se	Feed Coli RCI
June	<21	2.0	<1.2	0.2	qtr'ly	qtr'ly
MX	158	3.0	<1.5	0.2		
July	129	4.8	<1.2	0.2	qtr'ly	qtr'ly
MX	488	13.0	<1.3	0.3		
August	21	4.8	<1.4	0.1	qtr'ly	qtr'ly
No Viol.	52	11.0	1.7	0.2		
Sept	20	2.8	<1.2	0.2	qtr'ly	qtr'ly
MX	41	3.0	<1.5	0.4		
Oct	42	2.6	<0.9	0.1	"	"
MX	560	4.0	<1.0	0.1		
Nov	34	3.3	<0.9	0.1	ϕ	ϕ
MX	178	6.0	<1.1	0.2		

MIXING ZONE LAW

- ALLOWS SCIENTIFIC DEMONSTRATION
- DOES NOT "GRANT" MIXING ZONE
- EXCLUDES BIOACCUMULATIVE CHEMICALS OF CONCERN
- CONSISTENT WITH OTHER STATES BORDERING LAKE MICHIGAN
- CONSISTENT WITH RIVERS FLOWING TO THE LAKE
- WILL NOT ALLOW UNTREATED WASTEWATER DISCHARGE FROM REFINERY
- WILL NOT ALLOW REFINERY TO DISCHARGE MORE POLLUTANTS THAN NOW

NPDES PERMIT RENEWAL APPLICATION

- Demonstrates that Amoco's discharge with a mixing zone does not cause harm to human health or aquatic life:
  - Physical Characteristics
  - Chemical Characteristics
  - Biological Characteristics
- Follows the requirements of federal and state guidelines to demonstrate that the mixing zone is protective of the Lake
- Does NOT request permit limits less stringent than in existing permit
- Shows that Amoco's treated water is safe to drink - It meets primary drinking water standards.
- Implements a mixing zone that protects the use of Lake Michigan
- Proposes to install a state-of-the art outfall structure to further assure the protection of the Lake

Indiana
Environmental
Institute, Inc.

1[illegible] West Market Street
Su[illegible] 816
Indianapolis, Indiana 46204-2814
317/635-6018
FAX 317/687-5139

[Excerpt from IEI's 3/25/94 newsletter]

LAKE MICHIGAN MIXING ZONE BATTLE

On Friday, March 18, 1994 Governor Bayh signed H.B. 1126 granting dischargers to Lake Michigan the same right that dischargers to stream and rivers throughout Indiana have - the opportunity to demonstrate a mixing zone outside of which the standards for chronic toxicity apply.

This opportunity to demonstrate a mixing zone was eliminated for Indiana dischargers to Lake Michigan during the Article 2 rulemaking in 1989.

Although the 1994 bill passed all committees and both houses handily, it was vigorously opposed by the environmentalists. Some environmentalists argued the company should obtain a variance based on affordability of options and through that public process a reasonable decision should be reached about how much salt would be acceptable to remove at how much expense.

Briefly, this regulatory problem began during the consolidation of Lake Michigan rules, Ohio River rules and the rules for the rest of the state when Article 2 water quality standards were revised. Apparently accidentally and certainly with no scientific justification provided by the agency, two changes affecting Lake Michigan dischargers occurred. One was the inclusion for the first time (and only for direct dischargers into Lake Michigan) of a table of nontoxic substances into the same formula used to calculate concentration in effluent permit limits to protect waters from short-term and long-term aquatic and human toxicity. This table had long been a part of Indiana rules as a goal for the best quality drinking water desired from that lake. These concentrations never were considered appropriate for NPDES permits, just as these values are not used for discharge permits into any other waters in Indiana used for public water supply. The numbers were now out there to guide policymakers considering the big picture.

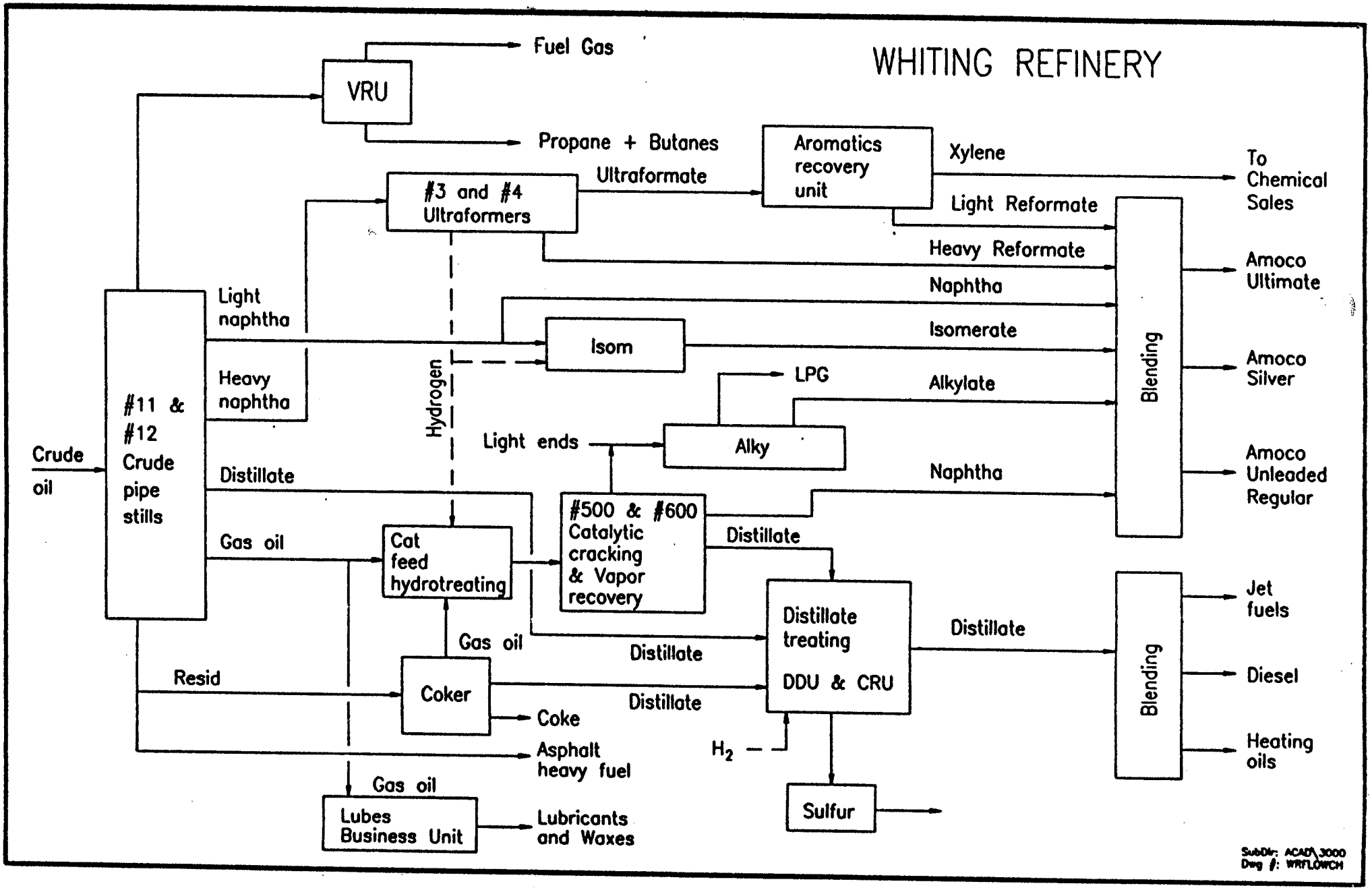
Second was the elimination of the ability to demonstrate a mixing zone for Lake Michigan. This occurred when the rule stated that no Indiana lake shall have a mixing zone. That policy is scientifically justified for all small inland lakes in Indiana. Portions of Lake Michigan, however, do flow. Currents move south from Wisconsin and north up to Michigan. It discharges into the Great Lakes out the St. Lawrence River. Therefore, water quality standards protecting the Lake Michigan from long-term toxicity (4 - day aquatic or lifetime drinking) apply outside the calculated mixing zone, just as into a river. In other words, the 4-day aquatic protection standard applies where the fish live four days at a time relative to the effluent plume. The human health standard really is effective where the intake is for public water supply, but the rules state even these standards must be met at mixing zone.

AMOCO sought legislative remedy to this regulatory inconsistency after failure of the Water Pollution Control Board and IDEM to consider rulemaking change to address it. This could have been accomplished during the original rulemaking on Article 2 when AMOCO brought it to the Board's attention. At that point the Governor held a press conference stating he wanted nothing at all changed from the Article 2 rule proposal before the Board. A subsequent round of rulemaking on Article 5 included some changes to Article 2, but the Lake Michigan mixing zone question and the inclusion of the Table 6J were explicitly not addressed, despite AMOCO formal requests. The rulemaking in which AMOCO was promised the revisions would be considered - the triennial revision of the water quality standards required by the Clean Water Act to have been completed in Indiana by March 1993 - has yet to begin the fourteen month to two year rulemaking process.

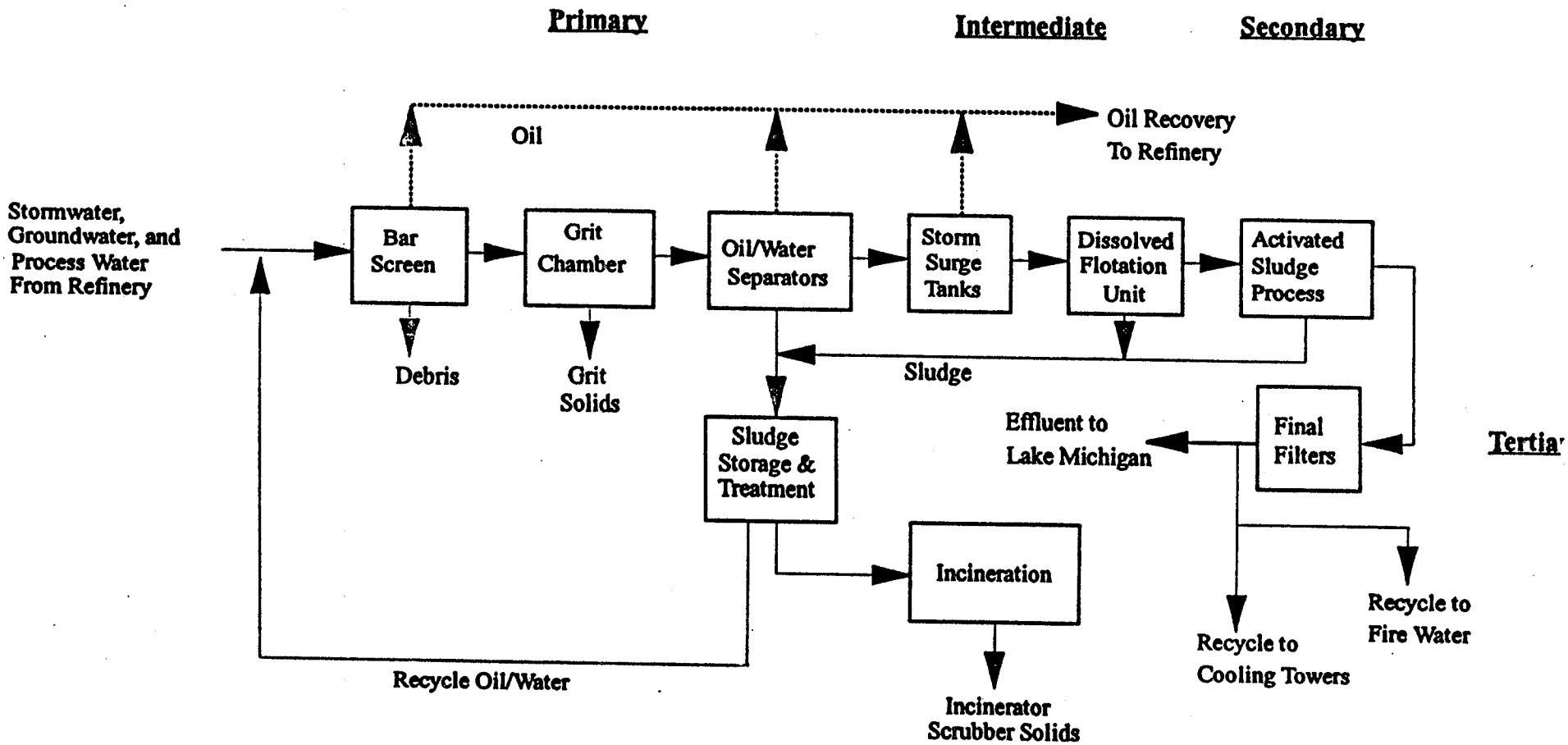
The legislation in H.B. 1126 allows all direct dischargers to Lake Michigan the opportunity to demonstrate that a mixing zone physically exists for all constituents other than bioaccumulative chemicals of concern. This law brings the Lake Michigan portion into consistency with the rest of the state while accelerating the phase out of the mixing zone for the Indiana BCCs for those existing dischargers.

If there is a concern of increasing salt concentration in Lake Michigan, it is entirely appropriate for there to be a study to validate that conclusion and then to determine the best policy to achieve the desired concentrations over an acceptable time-frame.

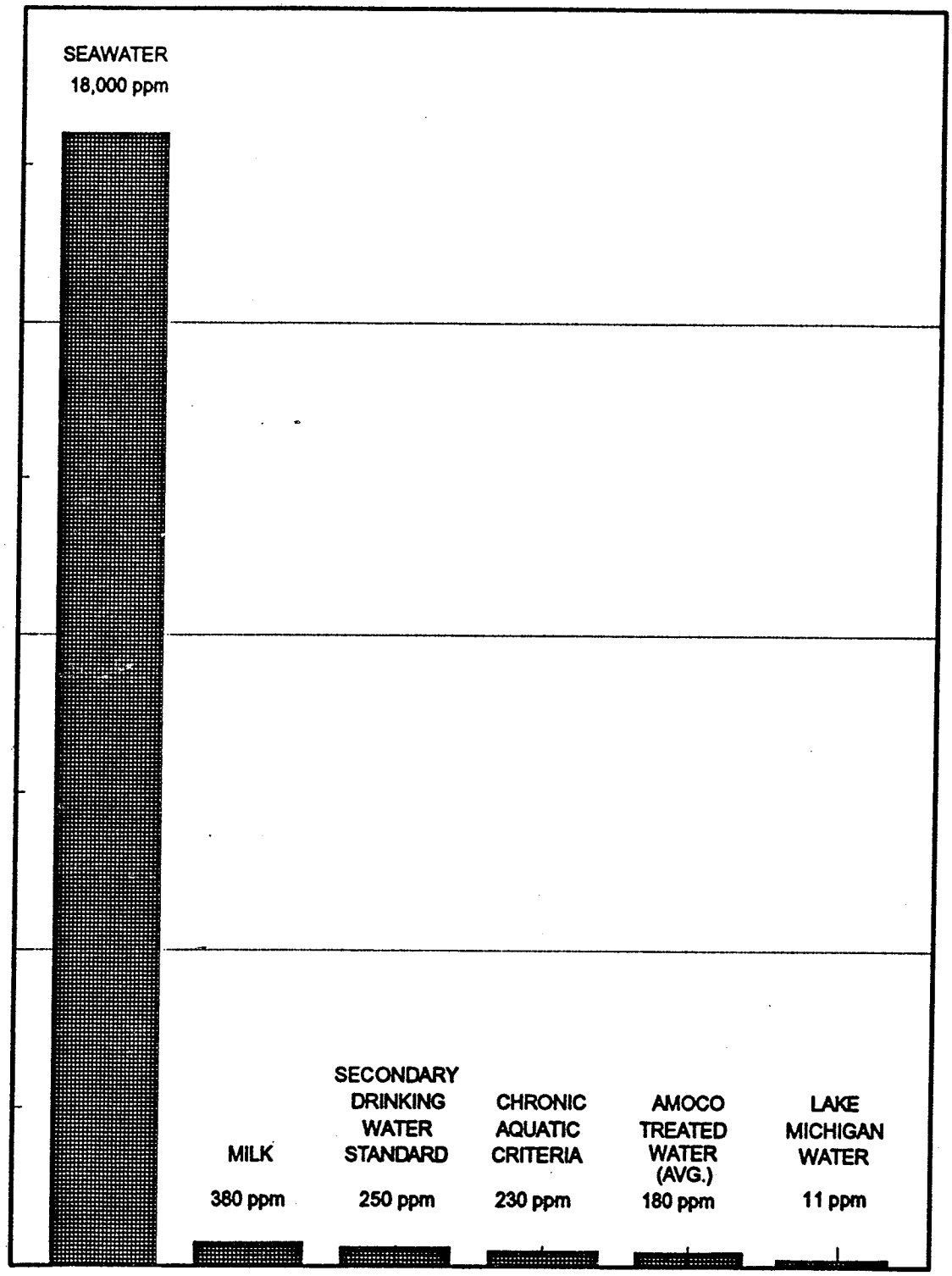
Please contact the Institute, if you wish more information on the water quality standards issues remaining.


WHITING REFINERY
Fuel Gas
VRU
Propane + Butanes
Aromatics recovery unit
Xylene
To Chemical Sales
Ultraformate
#3 and #4 Ultraformers
Light Reformate
Heavy Reformate
Naphtha
Amoco Ultimate
Light naphtha
Isom
Isomerate
Amoco Silver
Heavy naphtha
Hydrogen
LPG
Alkylate
Blending
#11 & #12 Crude pipe stills
Light ends
Alky
Crude oil
Distillate
Naphtha
Amoco Unleaded Regular
#500 & #600 Catalytic cracking & Vapor recovery
Gas oil
Cat feed hydrotreating
Distillate
Jet fuels
Distillate treating
DDU & CRU
Distillate
Gas oil
Distillate
Diesel
Resid
Coker
Distillate
Coke
Heating oils
Asphalt heavy fuel
H_2
Gas oil
Lubes Business Unit
Lubricants and Waxes
Sulfur
SubDir: ACAD\3000
Dwg #: WRFLOWCH

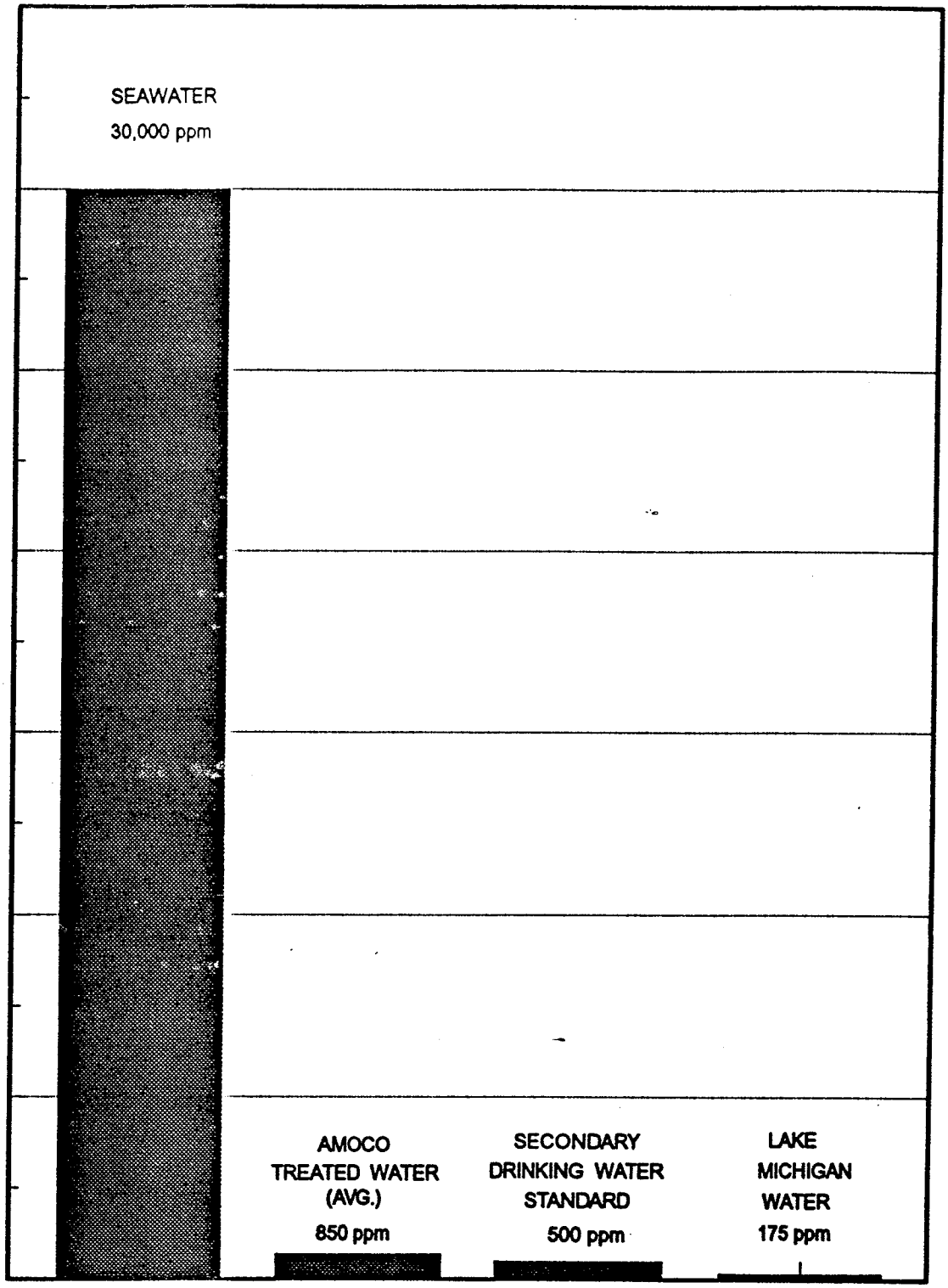
Whiting Refinery
Wastewater Treatment Plant

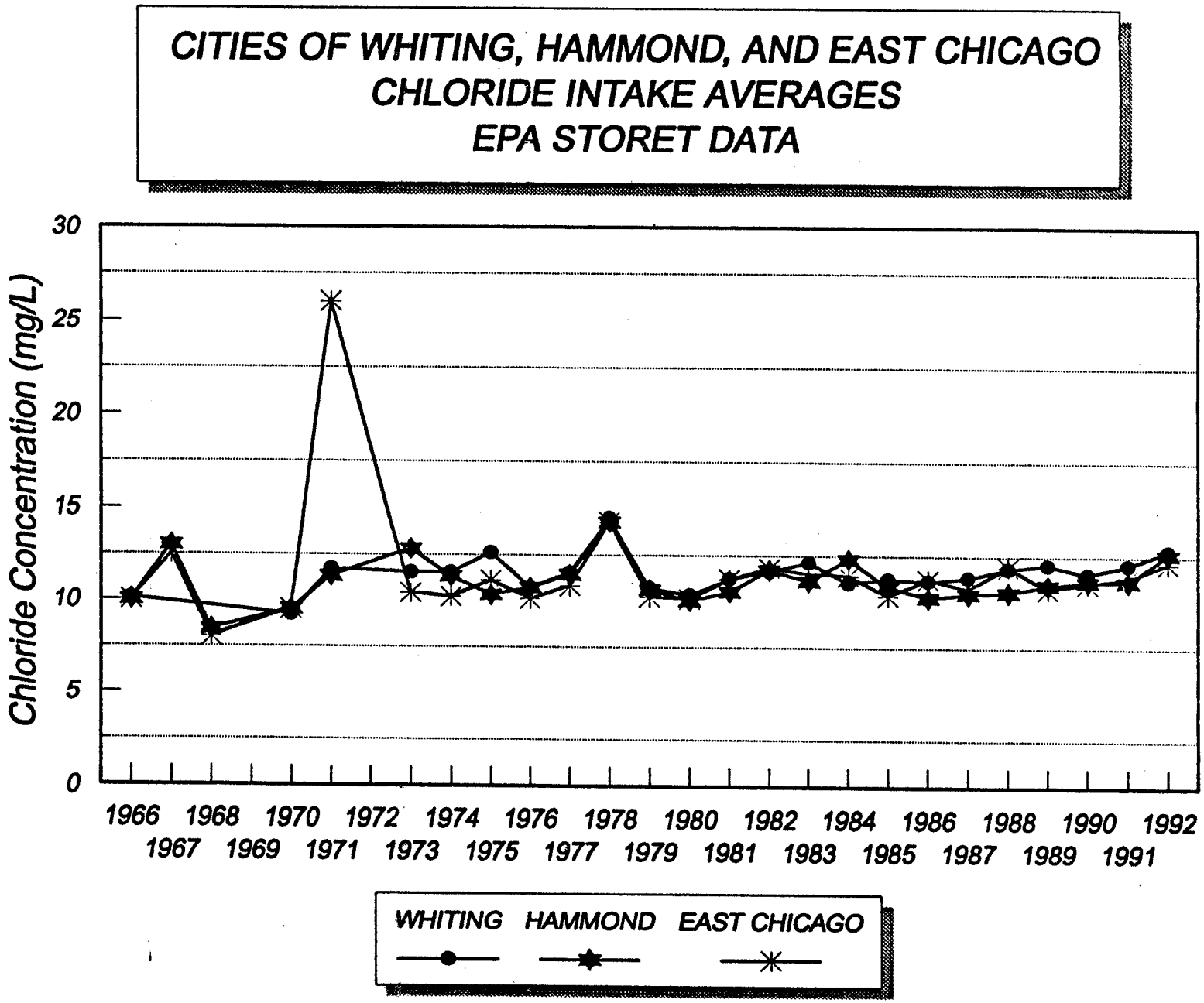


CHLORIDE LEVELS



SALT LEVELS


SEAWATER
30,000 ppm
AMOCO
TREATED WATER
(AVG.)
850 ppm
SECONDARY
DRINKING WATER
STANDARD
500 ppm
LAKE
MICHIGAN
WATER
175 ppm


CITIES OF WHITING, HAMMOND, AND EAST CHICAGO
CHLORIDE INTAKE AVERAGES
EPA STORET DATA
Chloride Concentration (mg/L)
30
25
20
15
10
5
0
1966 1968 1970 1972 1974 1976 1978 1980 1982 1984 1986 1988 1990 1992
1967 1969 1971 1973 1975 1977 1979 1981 1983 1985 1987 1989 1991
WHITING
HAMMOND
EAST CHICAGO

Amoco Petroleum Products
Refining Business Group
Whiting Business Unit

2815 Indianapolis Boulevard
Post Office Box 710
Whiting, Indiana 46394-0710
219-473-7700

Z-097-114-537
Sent 12/22/95 lab

D. H. Wilson
Manager, Whiting Business Unit

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

December 21, 1995

Indiana Department of Environmental Management
Office of Water Management
100 North Senate Street
P.O. Box 6015
Indianapolis, IN 46206-6015

NPDES Permit No. 0000108, Serials 001, 002, 003, and 004

Effluent quality data and Discharge Monitoring Report forms from Amoco Oil Company's Whiting Refinery for the month of November, 1995, are attached.

Effluent quality was excellent and no permit exceedances were recorded at the Lakefront Wastewater Treatment Plant.

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

Sincerely,

D. H. Wilson / R.D.H.

D. H. Wilson

Attachments

Nov. Dec.

12. Downspout near berth 3. This pipe can be used to take in water from the Canal to supplement regular fire water in case of a fire emergency.

13. Pipe from drinking water sump. This pipe is plugged and the drinking water sump is filled in.

sump to BT1 & BT2 next year
lube off-load & pumps if front of BT1 · Oct-Nov
sheet piling Sept. thru Oct

Facility Name/Location if different)
NAME AMOCO OIL COMPANY
ADDRESS 2815 INDIANAPOLIS BLVD
WHITING IN 46394

FACILITY
LOCATION
ATTN: MR. J.E. NACCACHE

DISCHARGE MONITORING REPORT (DMR)

(2-16) IN0000108 — PERMIT NUMBER
(17-19) 001 A — DISCHARGE NUMBER

F - FINAL
MAJOR

Form Approved. 12345
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	95	11	01	TO	95	11	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

*** NO DISCHARGE [X] ***
NOTE: Read instructions before completing this form.

PARAMETER (32-37)		QUANTITY OR LOADING (3 Card Only) (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	QUALITY OR CONCENTRATION (4 Card Only) (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
BOD, 5-DAY (20 DEG. C) 00310 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	320	869	(26)	******	3.8	11.0	(19)	0	5X/ Week	Comp 24
	PERMIT REQUIREMENT	4161 MO AVG	8164 DAILY MX	LBS/DY	******	REPORT MO AVG	REPORT DAILY MX	MG/L		TIME/WEEK	COMP24
GEN DEMAND, CHEM. (LOW LEVEL) (COD) 00335 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	6,507	17,850	(26)	******	67	152	(19)	0	3X/ Week	Comp 24
	PERMIT REQUIREMENT	34323 MO AVG	58427 DAILY MX	LBS/DY	******	REPORT MO AVG	REPORT DAILY MX	MG/L		THREE/ WEEK	COMP24
PH 00400 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	******	******		7.2	******	7.7	(12)	0	3X/ Week	Grab
	PERMIT REQUIREMENT	******	****** **** ****		6.5 MINIMUM	******	9 MAXIMUM	SU		THREE/ WEEK	GRAB
SOLIDS, TOTAL SUSPENDED 00530 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	1,056	2,662	(26)	******	13	47	(19)	0	5X/ Week	Comp 24
	PERMIT REQUIREMENT	3646 MO AVG	5694 DAILY MX	LBS/DY	******	REPORT MO AVG	REPORT DAILY MX	MG/L		TIME/WEEK	COMP24
OIL & GREASE (FREON EXTR.-IR METH) TOT/RC 00560 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	169	473	(26)	******	1.9	5.8	(19)	0	Week-days	Grab
	PERMIT REQUIREMENT	1368 MO AVG	2600 DAILY MX	LBS/DY	******	REPORT MO AVG	REPORT DAILY MX	MG/L		WEEK-DAYS	GRAB
NITROGEN, AMMONIA TOTAL (AS N) 00610 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	34	178	(26)	******	0.38	2.2	(19)	0	5X/ Week	Comp 24
	PERMIT REQUIREMENT	1030 MO AVG	2060 DAILY MX	LBS/DY	******	REPORT MO AVG	REPORT DAILY MX	MG/L		TIME/WEEK	COMP24
SULFIDE, TOTAL (AS S) 00745 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	3.3	6.0	(26)	******	0.04	0.08	(19)	0	1X/ Week	Comp 24
	PERMIT REQUIREMENT	23.1 MO AVG	51.4 DAILY MX	LBS/DY	******	REPORT MO AVG	REPORT DAILY MX	MG/L		WEEKLY	COMP24

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Authorized Agent: Peter B. Beronio Environmental Engineer-Water	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)	Peter B Beronio	219	473-3459	95	12	20
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)