

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 99-035
NPDES PERMIT NO. CA0005321
WASTE DISCHARGE REQUIREMENTS FOR:

SAN FRANCISCO DRY DOCK, INC.
SAN FRANCISCO
SAN FRANCISCO COUNTY

PORT OF SAN FRANCISCO
SAN FRANCISCO
SAN FRANCISCO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region,
(hereinafter called the Board) finds that:

1. San Francisco Dry Dock Incorporated, hereinafter called the discharger has applied for reissuance of its National Pollutant Discharge Elimination System (NPDES) Permit No. CA0005321.
2. Named Dischargers: San Francisco Dry Dock Incorporated (SFDD) operates the facility. Thus, SFDD is named as a primary discharger.

This facility and the underlying property are owned by the Port of San Francisco, who leased this facility to SFDD. The Port of San Francisco is named as the secondary discharger since it is the property owner.

The Port of San Francisco will be responsible for compliance with this order only if the Board or Executive Officer finds that SFDD has failed to comply with the requirements of this Order and the Port of San Francisco has been given notice of the lack of compliance and an opportunity to obtain compliance by SFDD.

FACILITY DESCRIPTION

3. The discharger operates a ship repair facility specializing in both government and commercial work. The repair process may include painting, abrasive blasting, hydroblasting, fabrication of parts, and cleaning of tanks on board vessels.
4. The facility is located at the foot of 20th Street in San Francisco, as shown in Figure 1. The site is immediately adjacent to San Francisco Bay.

5. The facility consists of two floating dry docks (Dry Dock #1 and #2) and three piers (Pier #3, #4, and #5) as shown in Figure 2. Pier #5 is fenced off and is no longer in use.
6. The dry docking of vessels starts with the configuration of the keel blocks in the dry dock to fit the vessel being serviced. Then the enclosed ballast tanks under the floating dry docks are filled with bay water until the dry dock is submerged. The vessel is then brought into position on top of the keel block. At this point, the water is pumped out of the dry dock ballast tanks and the dry dock along with the ship emerges from the water. At this point, the vessel is ready to be repaired.
7. The ship repair process may include painting, abrasive blasting, hydroblasting, fabrication of parts and cleaning of tanks on board of vessels.
8. After each repair operation, the discharger sweeps and washes down the dry dock prior to submerging the floating dry docks. The wash down water from the floating dry docks is collected in holding tanks and discharged into the City of San Francisco's Southeast Treatment Plant via sanitary sewers. In addition to the wash down water, all process wastewater is discharged into the sanitary sewers and stormwater from the entire facility is discharged into the storm sewers.
9. The U.S. Environmental Protection Agency (USEPA) and the Board have classified this discharge as a minor discharge.

PURPOSE OF ORDER

10. This NPDES permit regulates the discharge of effluent from ship repair operations which may include ballast water from the floating dry docks, ballast water from ship/boat/barge ballast tanks, non contact cooling water, and stormwater associated with industrial activity from the facility to central San Francisco Bay, a water of the United States. These discharges were previously governed by Waste Discharge Requirements specified in Order No. 90-48, adopted by the Board on April 25, 1990. Order No. 90-48 was continued in effect past the expiration date, in accordance with NPDES regulations, by letter of the Executive Officer dated April 18, 1995. This Order No. 99-035 supersedes Order No. 90-48.

DISCHARGE DESCRIPTION

11. The discharges are described below and are based on information contained in the Report of Waste Discharge, Stormwater Pollution Prevention Plan, Best Management Plan, and recent self-monitoring reports submitted by the discharger.
 - a. **Waste 001** consists of spent abrasive and paint residues which remain after sweeping and washing Dry Dock #1. These wastes may be carried into the bay when the dry dock is submerged to release the vessel, or when

stormwater or other water from the vessel run off the dry dock floor while the dock is still afloat.

- b. **Waste 002** consists of spent abrasive and paint residues that remain after sweeping and washing Dry Dock #2. These wastes may be carried into the bay when the dry dock is submerged to release the vessel being serviced, or when stormwater or other water from the vessel run off the dry dock floor while the dock is still afloat.
 - c. **Waste 003** consists of non-contact cooling water from Dry Dock #1. Some of the vessels being serviced maintain operation of environmental systems on board (air conditioning, heating, and refrigeration). These systems require cooling water flow to operate correctly. The water is provided to them via the salt water fire main system. This water comes into contact with the ship piping system and heat generated by these systems, prior to being discharged back to the bay.
 - d. **Waste 004** consists of non-contact cooling water from Dry Dock #2. Some of the vessels being serviced maintain operation of environmental systems on board (air conditioning, heating, and refrigeration). These systems require cooling water flow to operate correctly. The water is provided to them via the salt water fire main system. This water comes into contact with the ship piping system and heat generated by these systems, prior to being discharged back to the bay.
 - e. **Waste 005** consists of 250,000 gallons per evolution of ballast water from the vessels being serviced. This water is likely to be contaminated with chemical additives, oil and grease, particulate, and invasive species. Hence, this water is prohibited from discharge into San Francisco Bay.
 - f. **Waste 006** consists of approximately 30 million gallons of ballast water discharged from Dry Dock #1 for every dry dock evolution. Ballast water is used to submerge the dry dock in order to bring in the vessels. Because the ballast tanks are enclosed and no chemical additive is used, this is a discharge of bay water.
 - g. **Waste 007** consists of approximately 30 million gallons of ballast water discharged from Dry Dock #2 for every dry dock evolution. Ballast water is used to submerge the dry dock in order to bring in the vessels. Because the ballast tanks are enclosed and no chemical additive is used, this is a discharge of bay water.
12. In addition to the waste streams above, San Francisco Dry Dock also discharges some process wastes into the sanitary sewers of the City of San Francisco. These wastes consist of hydroblasting water from the surface preparation process and

tank cleaning process and stormwater runoff from the entire facility and stormwater runoff from dry docks in which painting and/or abrasive blasting operations are taking place. These discharges are not governed by this permit.

APPLICABLE PLANS, POLICIES AND REGULATIONS

13. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board (State Board) and the Office of Administrative Law on July 20 and November 13, respectively, of 1995. A summary of regulatory provisions is contained in Title 23 of the California Code of Regulations at Section 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface and ground waters.
14. Effluent limitations and toxic effluent standards established pursuant to Section 208(b), 301, 304, and 307 of the Federal Water Pollution Control Act and amendments thereto are applicable to the discharge.
15. Pursuant to 40 CFR 122.44, "Establishing Limitations, Standards, and Other Permit Conditions," NPDES permits should also include toxic pollutant limitations if the discharger uses or manufactures a toxic pollutant as an intermediate or final product or byproduct. This permit may be modified prior to the expiration date, pursuant to 40 CFR 122.62 and 124.5, to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as part of this Order.

BENEFICIAL USES

16. The beneficial uses of Lower San Francisco Bay and contiguous waters are:
 - a. Ocean, commercial and sport fishing
 - b. Estuarine habitat
 - c. Industrial service supply
 - d. Fish migration
 - e. Navigation
 - f. Preservation of rare and endangered species
 - g. Water contact recreation
 - h. Noncontact water recreation
 - i. Shellfish harvesting
 - j. Wildlife habitat

BASIS FOR REQUIREMENTS

17. The Basin Plan establishes a narrative objective for acute and chronic toxicity in the Bay. In part, it states that "All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species...."
18. Effluent and receiving water limitations in this Order are based on the plans, policies, and water quality objectives and criteria of the Basin Plan, Quality Criteria for Water (EPA/5-86-001, 1986; Gold Book), applicable Federal Regulations (40 CFR Parts 122 through 131), the National Toxics Rule (57 FR 60848, 22 December 1992; NTR), and best professional judgment.
19. The establishment of many of the chemical specific limitations depend upon the salinity characteristics of the receiving waters. Data contained in Annual Report for San Francisco Bay Estuary Regional Monitoring Program for Trace Substances (1993, 1994, and 1995) for station BB30 located at Oyster Point show that the salinity of the receiving water is above 5 parts per thousand greater than ninety-five percent of the time. Based on these data, the salinity in the vicinity of the discharges is brackish and marine in character.

CEQA AND PUBLIC NOTICE OF ACTION

20. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100 of Division 13) of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.
21. The Board has notified the discharger and interested agencies and persons of its intent to issue waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
22. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED THAT the Discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions:

1. Direct discharge of domestic sanitary waste to Waters of the State is prohibited.
2. The direct discharge of particulate and paint residues from the dry dock, ships, or piers, to Waters of the State is prohibited.
3. The placement of spent abrasive and paint residue in areas where the materials may be washed into Waters of the State by stormwater runoff, or by tide or wave action is prohibited.
4. Discharge of wastewater, materials, or wastes which is not otherwise authorized by this Order, to Waters of the State is prohibited.
5. The discharge of floating oil or other floating material from any activity that may cause deleterious bottom deposits, turbidity or discoloration in surface waters is prohibited.
6. Discharge of Waste 005 to Waters of the State is prohibited.
7. Discharge of pressure washing water, boiler drainage water or any process water that is used or accumulated in the dry docks to Waters of the State during the dismantling or repair processes is prohibited.
8. During a storm event, San Francisco Dry Dock shall not discharge any process water to the sewer systems of City of San Francisco unless specifically approved by the General Manager of the San Francisco Public Utilities Commission.

B. Effluent Limitations:

1. The temperature of Waste 003 and 004 shall not exceed 86 °F.
2. The discharge of particulate from Wastes 001 and 002 shall not exceed those quantities remaining after the following measures have been taken: prior to the submergence of any portion of either of the floating dry docks, the discharger shall remove spent abrasives, paint residues, and other debris from those portions of the dry dock floor which are reasonably accessible, to a degree achievable by scraping, broom cleaning and pressure washing. After a vessel has been removed from a dry dock, the remaining area of the floor which were previously inaccessible shall be cleaned by scraping, broom cleaning and pressure washing as soon as practical, and prior to the introduction of another vessel. This provision shall not apply in cases wherein a vessel must be introduced into the dry

dock on an emergency basis, such as to prevent sinking, or leakage of oil or other materials. The Executive Officer shall be notified in such cases.

C. Receiving Water Limitations:

1. The discharge of waste shall not cause the following conditions to exist in Waters of the State at any place:
 - a. Floating, suspended, or deposited microscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Long term alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in Waters of the State in any place within one foot of the water surface:
 - a. **Dissolved Oxygen:** 5.0 mg/l minimum. Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
 - b. **pH:** The pH shall not be depressed below 6.5 nor raised above 8.5 nor caused to vary from normal ambient pH levels by more than 0.5 units.
 - c. **Un-ionized ammonia:** 0.025 mg/l as N annual median
0.4 mg/l as N maximum
3. The discharge shall not cause a violation of any applicable water quality objective for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the

Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

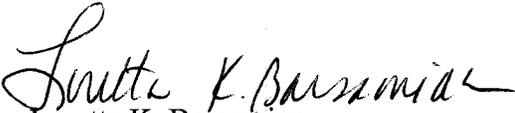
D. Provisions:

1. **Stormwater Pollution Prevention Plan (SWPPP):** The discharger shall evaluate and update annually the SWPPP by July 1st of every year, or sooner if there is a change in the operation of the facility which may substantially affect the quality of the stormwater discharged from the facility. An annual compliance report acceptable to the Executive Officer documenting the progress and problems encountered with the implementation of the SWPPP during the previous year shall be submitted on July 15th of every year. The tasks in the SWPPP shall include photographing the dry docks after the first storm event of the year. A copy of these photographs shall be included in the annual report.
2. **Best Management Plan (BMP):** The discharger shall evaluate and update annually the BMP by August 1st of every year, or sooner if there is a change in the operation of the facility which may substantially affect the quality of the water discharged from the facility. An annual compliance report acceptable to the Executive Officer documenting the progress and problems encountered with the implementation of the BMP during the previous year shall be submitted on August 15th of every year.
3. **Sediment Quality Monitoring Study:** The discharger shall submit an updated sediment quality monitoring study proposal two months after the date of adoption of this order. The study shall be designed to monitor the sediment quality around the dry dock facilities for concentrations of total organotins, copper, lead, zinc and toxicity as determined by a solid phase sediment bioassay employing an amphipod test species. At least two sediment locations per dry dock shall be sampled, and results of sampling shall be compared with a reference sediment sample site in a location which can be presumed to be free from the effects of the dishcarger's activities and other potential impacts.
4. **Permit Rescinded:** The requirements prescribed by this Order supersede the requirements prescribed by Order No. 90-048 adopted on April 18, 1990. Order No. 90-48 is hereby rescinded.
5. **Self-Monitoring Program:** The discharger shall conduct monitoring in accordance with the attached Self-Monitoring Program as adopted by the Board. The Self-Monitoring Program may be amended by the Executive Officer pursuant to 40 CFR122.62, 122.63, and 124.5.

6. **Time Schedule:** San Francisco Dry Dock does not have to comply with Prohibition #6 until January 1, 2000. This is to provide San Francisco Dry Dock adequate time to apply for a Pre-treatment Permit with the City of San Francisco for the discharge of vessel ballast water.
7. **Permit Reopener:** Pursuant to USEPA regulations 40 CFR 122.44, 122.62, and 124.5, the permit may be modified prior to the expiration date for reasons including:
 - a. to add effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through the monitoring program included as part of this Order.
8. **Signatory and Certification:** All applications, reports, or information submitted to the Regional Board shall be signed and certified pursuant to Environmental Protection Agency regulations (40 CFR 122.41K).
9. **Notification on Changes:** Pursuant to Environmental Protection Agency regulations [40 CFR 122.42(a)] the discharger must notify the Regional Board as soon as it knows or has reason to believe:
 - a. that they have begun or expect to begin use or manufacture a pollutant not reported in the permit application, or
 - b. a discharge of a toxic pollutant not limited by this permit has occurred, or will occur, in concentrations that exceed the specified limits in 40 CFR 122.42(a).
10. **Standard Provisions:** This Order includes all items of the attached "Standard Provisions and Reporting Requirements" dated August 1993. In part, these Standard Provisions require submittal of reports on Safeguards to Electric Power Failure within 90 days of adoption of this Order.
11. **Permit Expiration:** This Order expires May 25, 2004. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of the expiration date as application for issuance of new waste discharge requirements.

12. **Effective Date of Permit:** This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto and shall become effective on the date of adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.
13. **Pretreatment Requirement:** The discharger shall obtain the required pretreatment permit from the San Francisco Public Utilities Commission Bureau of Environmental Regulation and Management, and meet all pretreatment requirements promulgated under the City of San Francisco Industrial Waste Ordinance.
14. **Secondarily-Responsible Discharger:** After being notified by the Executive Officer that SFDD has failed to comply with this Order, the Port of San Francisco shall try to obtain compliance by SFDD. If compliance is not achieved 60 days after the receipt of the notification letter, SFDD shall then be responsible for complying with this Order.

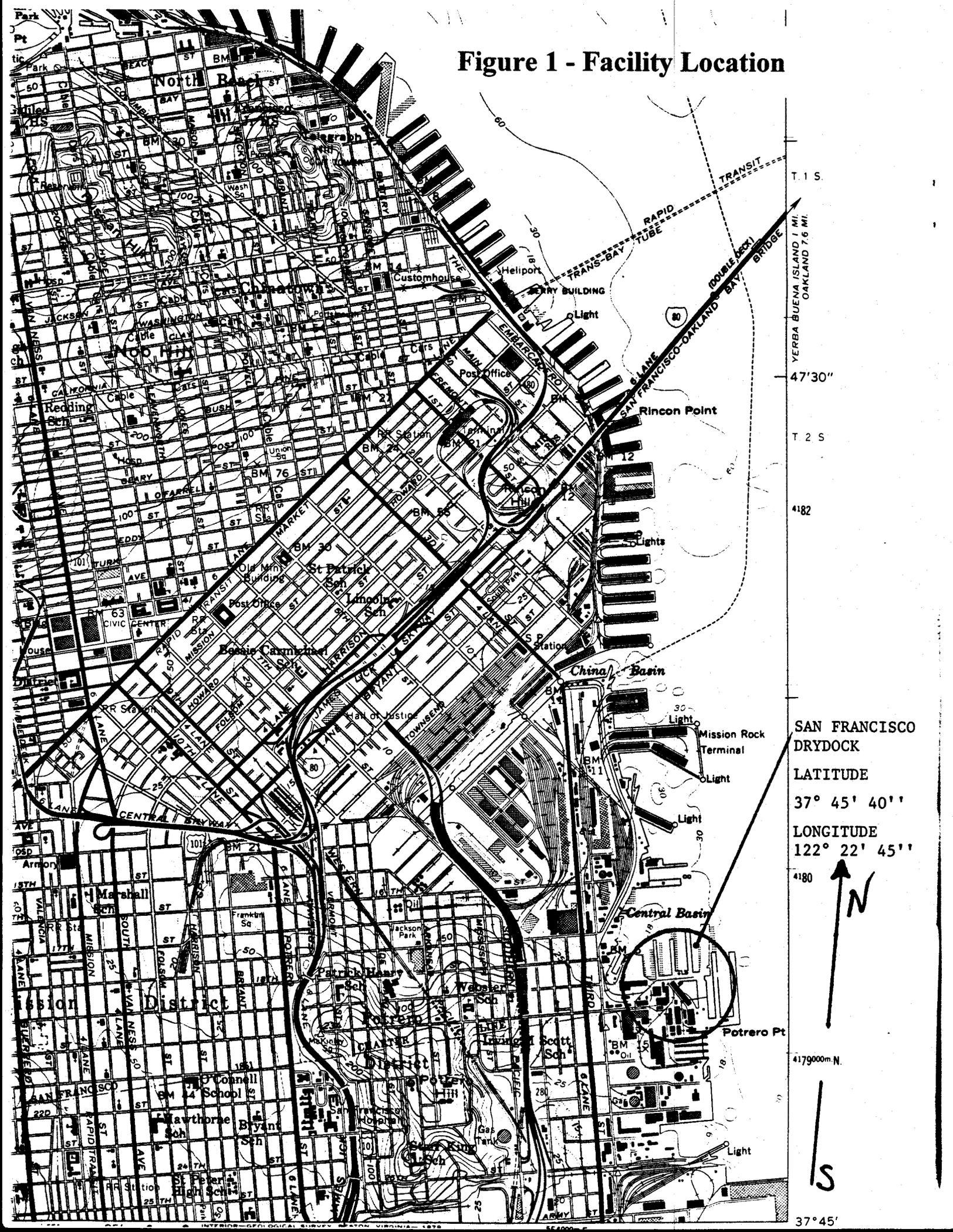
I, Loretta K. Barsamian, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on May 25, 1999.

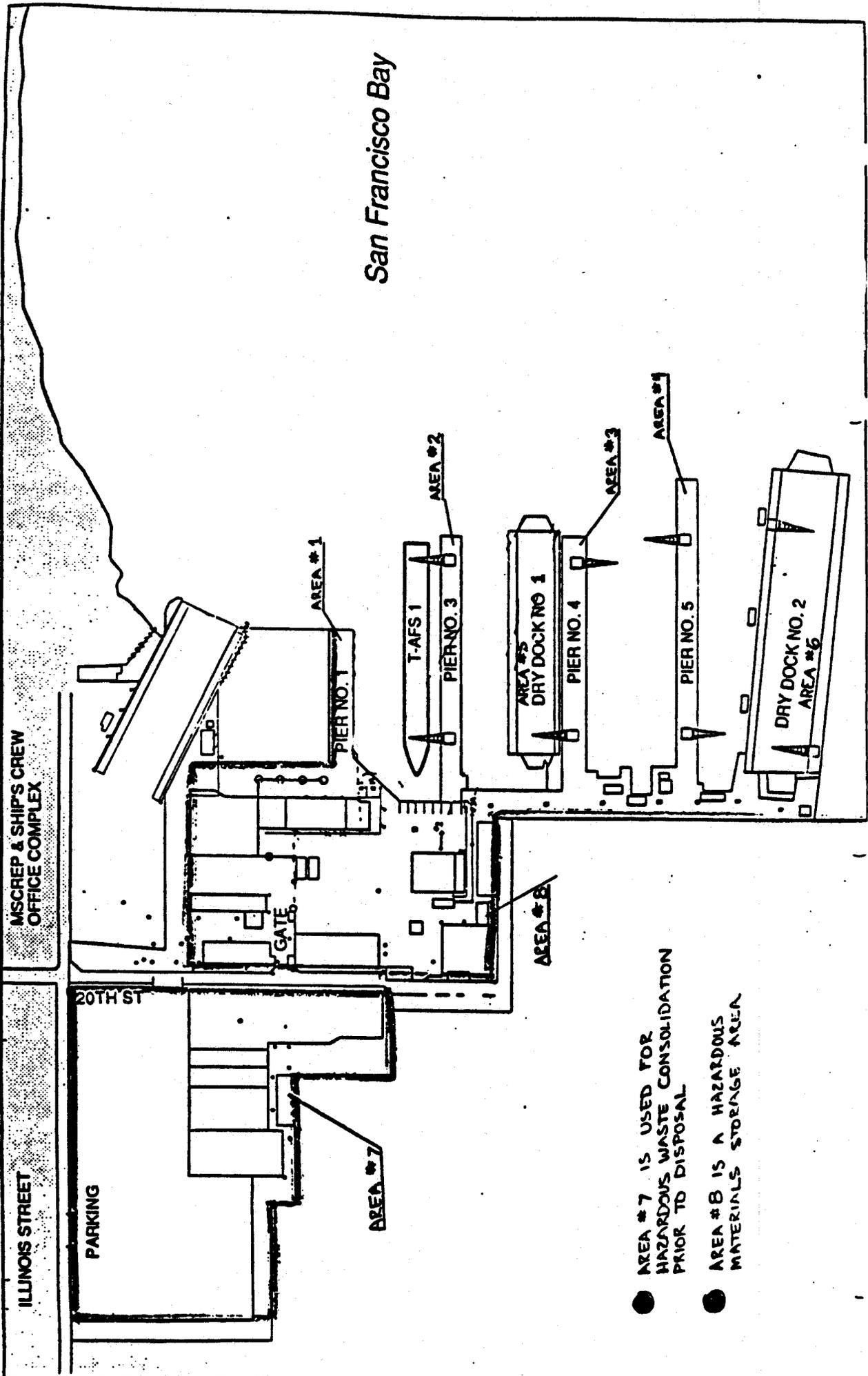

Loretta K. Barsamian
Executive Officer

Attachments:

- Figure 1 - Facility Location
- Figure 2 - Facility Map
- Standard Provisions and Reporting Requirements, August 1993
- Self Monitoring Program - Part A (August 1993), and Part B

Figure 1 - Facility Location





- AREA #7 IS USED FOR HAZARDOUS WASTE CONSOLIDATION PRIOR TO DISPOSAL
- AREA #B IS A HAZARDOUS MATERIALS STORAGE AREA

Figure 2: Facility Map

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

SAN FRANCISCO DRY DOCK INC.
SAN FRANCISCO
SAN FRANCISCO COUNTY

AND

PORT OF SAN FRANCISCO
SAN FRANCISCO
SAN FRANCISCO COUNTY

NPDES NO. CA0005321
ORDER NO. 99-035

CONSISTS OF

PART A
DATED AUGUST 1993

AND

PART B
ADOPTED MAY 25, 1999

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	The entire floor area of Dry Dock No. 1 which is submerged during vessel release.
E-002	The entire floor area of Dry Dock No. 2 which is submerged during vessel release.
E-003	At a point in the non-contact cooling water discharge from Dry Dock #1 prior to when it reaches the receiving water.
E-004	At a point in the non-contact cooling water discharge from Dry Dock #2 prior to when it reaches the receiving water.

B. RECEIVING WATER

<u>Station</u>	<u>Description</u>
R-001	At a point at the end of Pier No. 3.
R-002	At a point at the end of Pier No. 4.

C. LAND OBSERVATIONS

<u>Station</u>	<u>Description</u>
L-1 thru L-'n'	Located along the facility perimeter adjacent to the water at equidistant intervals not to exceed 200 feet.
D-1 thru D-'n'	Located along the entire floor area of the dry dock at equidistant intervals not to exceed 200 feet.

II. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis is given in Table 1 (attached).

III. MODIFICATION OF PART A

Delete items C.2.a, D.1.e, D.1.f, D.5.b, E.3, E.5, and F.4.c.

IV. MISCELLANEOUS REPORTING

Instead of monthly reports as specified in Part A of the SMP- Section E.4, self-monitoring reports shall be submitted quarterly in the format specified in Part A of the SMP

I, Loretta K. Barsamian, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 99-035.
2. Is effective on May 25, 1999.
3. May be reviewed at any time subsequent to the effective date upon written notices from the Executive Officer or request from the discharger.


Loretta K. Barsamian
Executive Officer

Attachment:

Table 1. Schedule for Sampling, Measurements, and Analysis

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	Recommended Detection Limit	E-001 and E-002	E-003 and E-004	All R Stations		All L Stations	All D Stations
				G	O		
Type of Sample	---	(1)	C-24	G	O	O	O
Flow Rate (MGD)		(2)	(2)				
Settleable Matter (ml/l-hr)	0.01 ml/l-hr		E	2/Y			
Oil and Grease (mg/l)	1 mg/l		E	2/Y			
Total Suspended Matter (mg/l)	1 mg/l		E	2/Y			
Toxicity (% survival)	---		Q	2/Y			
Turbidity (Tu)	1 Tu		E	2/Y			
pH (pH Units)	---		E	2/Y			
Dissolved Oxygen (mg/l and % saturation)	1 mg/l % saturation			2/Y			
Temperature (^o C & ^o F)	---		E	2/Y			
Aluminum (μg/l)	1 μg/l		M	2/Y			
Arsenic (μg/l)	1 μg/l		M	2/Y			
Cadmium (μg/l)	0.5 μg/l		M	2/Y			
Chromium (μg/l)	1 μg/l		M	2/Y			
Copper (μg/l)	2 μg/l		M	2/Y			
Cyanide (μg/l)	5 μg/l		M	2/Y			
Lead (μg/l)	1 μg/l		M	2/Y			
Mercury (μg/l)	0.01 μg/l		M	2/Y			
Nickel (μg/l)	1 μg/l		M	2/Y			
Silver (μg/l)	1 μg/l		M	2/Y			
Zinc (μg/l)	5 μg/l		M	2/Y			
Phenols (μg/l)	50 μg/l			2/Y			
PCB (μg/l)	1 μg/l			2/Y			
Tributyltin (μg/l)	0.001 μg/l			2/Y			
Un-ionized Ammonia as N (mg/l)	1 mg/l			2/Y			
Chlorinated Hydrocarbons (μg/l) [EPA Method 8120]	1 μg/l			2/Y			
PAHs (μg/l) [EPA Method 8100]	2 μg/l			2/Y			
All Applicable Standard Observations	---	E	E		Q	Q	Q
Observe for Pollutant Runoff	---	E			Q	Q	Q

- (1) Prior to the submergence of any portion of the dry dock, adequacy of the cleanliness of areas will be observed, certified and recorded, indicating the dates and times of the dry dock use, observations and submergence. The recorded information shall consist of photographs and written descriptions.
- (2) Flow rate shall be taken at the point of dry dock ballast water discharges into San Francisco Bay. Flow rate can be measured with an in stream flow meter or estimated through pumping record.

LEGEND FOR TABLES

TYPE OF SAMPLE

G = grab sample
 C-24 = composite sample - 24 hour
 Cont = continuous sampling
 O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
 E = waste effluent stations
 R = receiving water stations
 D = dry dock stations
 L = basin and/or pond levee stations
 S = stormwater monitoring stations

FREQUENCY OF SAMPLING

E = each occurrence	2/W = 2 days per week	2W = every 2 weeks
W = once each week	2/M = 2 days per month	3M = every 3 months
M = once each month	2/Y = once in March and once in September	Cont = continuous
Y = once each year		
5Y = once every five years		
Q = quarterly, once in March, June, September and December		