NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT FACT SHEET
August 2011

Facility Name:	Mobil Saipan Terminal
Permittee Name:	Mobil Oil Mariana Islands, Inc.
Type of Facility:	Petroleum bulk storage terminal, SIC Code 5171
Mailing Address:	P.O. Box 500367 Saipan, MP 96950
Facility Location:	Petroleum Lane Puerto Rico Village, MP 96950
Contact Person:	Anthony Wenceslao (670) 236-8122
NPDES Permit No.:	MP0020397

I. STATUS OF PERMIT

Mobil Oil Mariana Islands, Inc. (the "permittee") applied for a National Pollutant Discharge Elimination System (NPDES) permit to allow the discharge of stormwater, tank bottom water draws, hydrostatic test water, and miscellaneous maintenance discharges from the Mobil Saipan Terminal, located on the island of Saipan, Commonwealth of the Northern Mariana Islands, to Tanapag Harbor. This facility has been classified as a new discharger (see Part II of this fact sheet). A complete application was submitted on April 29, 2010. EPA Region IX has developed this permit and fact sheet pursuant to Section 402 of the Clean Water Act, which requires point source dischargers to control the amount of pollutants that are discharged to waters of the United States through obtaining a NPDES permit.

This permittee has been classified as a minor discharger.

II. GENERAL DESCRIPTION OF FACILITY

The Mobil Saipan Terminal ("facility" or "discharger") is a petroleum bulk storage terminal located at the Saipan Seaport (the "Port", part of the Commonwealth Ports Authority or "CPA") in the Commonwealth of the Northern Mariana Islands (CNMI). The facility is primarily engaged in the storage and wholesale distribution of petroleum products. Bulk fuels are stored at the facility and distributed via tank trucks to company-owned service stations and commercial and government accounts throughout the island of Saipan. The facility also supplies diesel fuel to marine vessels at the Port's dock via pipeline. Bulk fuels are delivered to the facility at the Port's commercial dock.

Products handled at the facility include motor gasoline, jet fuel, and diesel. Lubricants and hydraulic fluids are associated with oil-filled operational equipment. In the event of a fire, chemical foaming agents (Aer-O-Foam XL3 or Aer-O-Water 1%) are used in firefighting water. These chemical foaming agents are not used during fire water system testing. The permit prohibits the discharge of any chemical firefighting foaming agents during firefighting water system testing or during normal operations.

In 1993, the facility discharged directly to the ocean. In 1994, when CPA reclaimed the land to build the Port, Mobil Saipan upgraded its oil-water separator and sought a "Land Disposal of Waste Water Permit" from the CNMI Division of Environmental Quality (DEQ) to discharge stormwater into percolation fields. The facility is currently covered under the Multi-Sector General Permit (No. NIR05A088) for discharges into the percolation fields, and will terminate MSGP coverage upon the issuance of an individual NPDES permit authorizing wastewater and stormwater discharge to surface water. Because the facility was previously discharging to land, and no data exist for the effluent, this facility is being classified as a new discharger.

The facility currently has a Spill Prevention Control and Countermeasure Plan. All storage tanks and drum storage areas are surrounded by concrete containment structures. The paved area at the facility's truck loading station drains only to an oily water sewer, and there is a spill kit nearby. Dry clean-up practices are used to control release of pollutants from drips and minor leaks into containment areas.

III. DESCRIPTION OF RECEIVING WATER

Discharge from the facility will flow directly into the Port's sewer (see Part IV of this fact sheet for further details). The point of monitoring and compliance for the facility will be Outfall 001 (N 15°13'29", E 145°44'5"), located after the facility's oil-water separator and lift station, and before the tie-in to the Port's sewer system.

A license agreement between the permittee (referred to below as "Mobil") and the CPA was submitted with the NPDES permit application. Section 4 of this agreement states:

> *"Mobil shall operate its [oil-water separator ("OWS")] in accordance with all applicable laws and regulations. Mobil's OWS shall meet all minimum environmental standards. A valve shall be installed whereby the discharge flow from Mobil's OWS into the connecting pipeline can be closed off. In the event any impermissible discharge is detected from the CPA OWS outfall into Tanapag Harbor, then, in such event, the CPA shall immediately notify Mobil which shall close the valve to assist in determining the source of the impermissible discharge. Mobil shall be permitted to resume discharging into the connecting pipeline once it is determined that Mobil's OWS was not the source of the impermissible discharge, subject to any limitations put upon the use of the connecting pipeline and discharge pipeline by any CNMI or federal government agency having jurisdiction."*

The Port's sewer discharges into Tanapag Harbor, which connects to the Saipan Lagoon and Philippine Sea, at an outfall located at N 15°13'35", E 145°44'12", henceforth referred to as Outfall 001A. Outfall 001A is a rectangular outlet near average receiving water level.

Outfall 001A discharges within CNMI territorial waters. However, as CNMI DEQ has not been delegated authority for administering the NPDES permitting program, EPA Region IX has primary regulatory responsibility for the discharge.

Under CNMI DEQ's *Water Quality Standards*, Tanapag Harbor is designated a Class A Marine Water (CNMI DEQ, 2004). Water quality criteria are established for Class A waters to protect their use for recreational purposes and aesthetic enjoyment. Other designated uses are allowed as long as they are compatible with the protection and propagation of fish, shellfish, and wildlife, and recreation in and on these waters.

Tanapag Harbor is listed as impaired for enterococci, dissolved oxygen, biological indicators of ecosystem health, and orthophosphate, according to the CNMI 2010 CWA Section 303(d) List of Water Quality Limited Segments. None of these constituents are identified as typical pollutants for petroleum bulk storage terminals. (See section V.B of this fact sheet for further information.)

IV. DESCRIPTION OF DISCHARGE

Discharge is expected to primarily consist of stormwater, with additional discharges from storage tank bottom water draws, hydrostatic tests, firefighting and system tests, service water system leaks, and maintenance activities. Marine water may be used for hydrostatic tests and firefighting system tests. All discharge flows are expected to be intermittent.

Stormwater will be collected from the entire 157,707-sq. ft. concrete-paved surface area of the facility, including a diked containment area for tanks that store refined petroleum products, a containment area for drums containing petroleum products, a tank truck loading rack, and the facility yard. There is no normal contact between stormwater and stored materials. However, minor leaks from piping and valves may occur and will be cleaned up with dry methods during dry weather conditions to minimize the potential for oil and grease in the stormwater discharge.

Discharge will flow through a new treatment system consisting of a 1,900-gallon surge tank, a 200-gpm (gallons per minute) capacity gravity oil-water separator and a 400-gpm gravity oil-water separator. The separators can be operated in parallel, or only one separator can be used, depending on the volume of water requiring treatment and the targeted rate of treatment. Effluent from the separators flows by gravity into a 3,800-gallon lift station. Typical flow through the lift station will be 600 gpm, but up to 1,200 gpm can be pumped through the lift station under extreme conditions, such as if the tank farm is flooded. Treated effluent will then be pumped in a 12-inch diameter concrete-encased PVC pipe to a point where it will enter the Port's storm sewer system, at N 15°13'29", E 145°44'5". As described in Part III of this fact sheet, monitoring will occur at Outfall 001, located after the lift station and just prior to the tie-in to the Port's sewer; therefore, this will be the point of compliance for the discharge. The Port's sewer discharges into Tanapag Harbor at Outfall 001A (see Part III of this fact sheet).

Stormwater runoff from the yard area at the terminal does not flow to the oil-water separators. Runoff from the yard will flow into a catch basin, which flows directly into the lift station, and then into the Port's sewer system. Drainage from a vehicle parking area on the site

will flow to a catch basin that ties into the Port's sewer system downstream of Outfall 001, and therefore will not flow through the oil-water separators. The connection valve from this catch basin to the Port's sewer will be normally closed except to drain the area during heavy rainfall conditions. No industrial activities occur in the yard or parking areas. As part of the Pollution Prevention Plan, the permit contains requirements for best management practices (BMPs) to be implemented in the yard and parking areas to minimize pollutant runoff during storm events.

There is no effluent data for this facility. As part of the application for permit renewal, the permittee provided estimates of sources of non-stormwater flows (stormwater contribution is expected to be 19,800 gallons/day averaged over the year) and pollutant concentrations, shown in Tables 1 and 2, respectively. Estimated pollutant concentration data was based on operations at the Mobil Saipan facility, discharge from similar facilities (the Mobil Cabras Terminal in Guam and the ExxonMobil Southwestern Terminal in Los Angeles, California), and best professional judgment.

Table 1. Flow Source Estimates.

Source contributing flow	**Frequency**		**Flow**	
	Average days per week	Average months per year	Maximum daily flow rate (MGD)	Duration (days)
Hydrostatic testing	variable	2	0.846	2
Storage tank water draws	variable	4	0.0009	4
Fire system testing, leaks, firefighting	variable	12	0.24	4
Service water system leaks and maintenance	variable	12	0.0009	14

Table 2. Estimated Effluent Characteristics.

Parameter	**Units**	**Discharge Data**	
		Maximum Daily Discharge	Average Daily Discharge
Flow	MGD	1.728	0.0262
Biochemical Oxygen Demand, 5-day (BOD_5)	mg/L	20	10
Chemical Oxygen Demand	mg/L	100	35
Total Organic Carbon	mg/L	35	10
Total Suspended Solids (TSS)	mg/L	30	15
Ammonia (as N)	mg/L	<0.1	<0.1
Temperature	°C	ambient	
Oil and Grease	mg/L	15	5
Lead[(1)]	mg/L	0.005	<0.005
Benzene	mg/L	0.02	0.002
Ethylbenzene	mg/L	0.035	0.003

Parameter	Units	Discharge Data	
		Maximum Daily Discharge	Average Daily Discharge
Toluene	mg/L	0.100	0.012
Group B Metals	mg/L	trace	trace
Sulfate, Phosphorous	mg/L	trace	trace
Naphthalene	mg/L	trace	trace
Total Nitrogen	mg/L	trace	trace
Xylene	mg/L	unknown	

(1) Lead is reported because the discharger believes it may be present in *de minimis* amounts as a residual remaining in the storage tanks from historic terminal operations. Samples analyzed for lead in wastewater at the Mobil Cabras Terminal in Guam were non-detect for the year 2009. Therefore, the facility does not expect detectable concentrations of lead in the discharge.

V. DETERMINATION OF NUMERICAL EFFLUENT LIMITATIONS

EPA has developed effluent limitations and monitoring requirements in the permit based on an evaluation of the technology used to treat the pollutant (e.g., "technology-based effluent limits") and the water quality standards applicable to the receiving water (e.g., "water quality-based effluent limits"). EPA has established the most stringent of applicable technology-based or water quality-based standards in the permit, as described below.

A. Applicable Technology-Based Effluent Limitations

Effluent Limitations Guidelines

EPA has established national standards based on the performance of treatment and control technologies for wastewater discharges to surface waters for certain industrial categories. Effluent limitations guidelines represent the greatest pollutant reductions that are economically achievable for an industry, and are based on Best Practicable Control Technology (BPT), Best Conventional Pollutant Control Technology (BCT), and Best Available Technology Economically Achievable (BAT) (Sections 304(b)(1), 304(b)(4), and 304(b)(2) of the CWA respectively).

There are no applicable ELGs for petroleum bulk storage terminals (SIC 5171). EPA considered the need for ELGs for petroleum bulk storage terminals in the Technical Support Document for the 2004 Effluent Guidelines Program Plan, but concluded that regulation of this industry category under individual permits was adequate (EPA, 2004). Refer to Part V.B.3 for a list of typical pollutants of concern for this type of facility.

Oil and Grease

The permit contains a technology-based daily maximum effluent limit of 15 mg/L for oil and grease. The effluent limit for oil and grease is based on EPA's Best Professional Judgment (BPJ) related to the development of technology-based effluent limits since (1) there are no applicable effluent limitation guidelines and performance standards for oil and grease, and (2)

similar industrial facilities have shown that 15 mg/l can be easily achieved by an oil and water separator. Section 402(a)(1) of the Clean Water Act (CWA) provides for the establishment of BPJ-based effluent limits when effluent limitation guidelines and performance standards are not available for a pollutant of concern. The limit is consistent with similar facilities that treat oily wastewater and stormwater. In addition to this technology-based numerical effluent limit, narrative water quality-based limits for oil and grease are included in the permit (see Part VI of this fact sheet).

B. Water Quality-Based Effluent Limitations

Water quality-based effluent limitations are required in NPDES permits when the permitting authority determines that a discharge causes, has the reasonable potential to cause, or contributes to an excursion above any water quality standard (40 CFR 122.44(d)(1)).

When determining whether an effluent discharge causes, has the reasonable potential to cause, or contributes to an excursion above narrative or numeric criteria, the permitting authority shall use procedures which account for existing controls on point and non-point sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity) and where appropriate, the dilution of the effluent in the receiving water (40 CFR 122.44(d)(1)(ii)).

EPA evaluated the reasonable potential to discharge toxic pollutants according to guidance provided in the *Technical Support Document for Water Quality-Based Toxics Control* (TSD) (Office of Water Enforcement and Permits, U.S. EPA, March 1991) and the *U.S. EPA NPDES Permit Writers Manual* (Office of Water, U.S. EPA, December 1996). These factors include:

1. Applicable standards, designated uses and impairments of receiving water
2. Dilution in the receiving water
3. Type of industry
4. History of compliance problems and toxic impacts
5. Existing data on toxic pollutants - Reasonable Potential Analysis

1. Applicable Standards, Designated Uses and Impairments of Receiving Water

CNMI adopted water quality criteria in January 1997 and amended the criteria on September 24, 2004, for waters of the Commonwealth. CNMI DEQ's *Water Quality Standards* designate Tanapag Harbor as a Class A Marine Water. The requirements contained in the permit are necessary to prevent violations of applicable water quality standards in Tanapag Harbor. Water quality criteria for Class A waters are established to protect their use for recreational purposes and aesthetic enjoyment.

The *Water Quality Standards* further specify: "Any other use shall be allowed as long as it is compatible with the protection and propagation of fish, shellfish, and wildlife, and with compatible recreation with risk of water ingestion by either children or adults. Such waters shall be kept clean of solid waste, oil and grease, and shall not act as receiving waters for any effluent which has not received the best degree of treatment of control practicable under existing technology and economic conditions and compatible with standards established for this class."

CNMI water quality standards for priority toxic pollutants are based on EPA's *National Recommended Water Quality Criteria*.

Tanapag Harbor is listed as impaired for enterococci, dissolved oxygen, biological indicators of ecosystem health, and orthophosphate, according to the CNMI 2010 CWA Section 303(d) List of Water Quality Limited Segments (Tanapag Harbor is located in CNMI-designated coastal water segment 19A, "West Tapotchau North"). None of these constituents are identified as typical pollutants for petroleum bulk storage terminals.

2. Dilution in the Receiving Water

A mixing zone is allowable for the receiving water. However, the permittee has not provided any information to support determination of a mixing zone, and no water quality-based numerical effluent limits are included in the permit. Therefore, no dilution of the effluent has been considered in the development of water quality-based effluent limits applicable to the discharge. A technology-based effluent limit for oil and grease is included, which will apply at outfall point 001 (the monitoring and compliance point for the facility) without consideration of dilution in the receiving water.

3. Type of Industry

According to the *Technical Support Document for the 2004 Effluent Guidelines Program Plan* (EPA, 2004), typical pollutants for petroleum bulk storage terminals are oil & grease, total petroleum hydrocarbons, biochemical oxygen demand, chemical oxygen demand, total organic carbon, ammonia, total suspended solids, phenols, total dissolved solids, naphthenic acids, aromatics (benzene, toluene, ethylbenzene, xylene), and surfactants. Benzene, toluene, ethylbenzene and xylene are the more volatile components of petroleum hydrocarbons. These pollutants are usually present in petroleum products, but are most associated with petroleum products with lighter ranges of hydrocarbons, such as gasoline. Additionally, although all gasoline currently stored at the facility is unleaded, the discharger believes lead may be present in *de minimis* amounts as a residual in the storage tanks from historic terminal operations. Since discharges from this facility may come into contact with petroleum products, including gasoline, and because oil-water separators are the only means of treatment, it is reasonable to expect that these pollutants may be discharged to surface waters.

4. History of Compliance Problems and Toxic Impacts

Discharge of wastewater or stormwater from the facility has not caused any known compliance problems or toxic impacts.

5. Existing Data on Toxic Pollutants

There is no existing data for the facility. However, data from similar facilities was submitted as part of the permit application (see Part IV, Table 2 of this fact sheet).

C. Rationale for Effluent Limits

EPA evaluated the typical pollutants expected to be present in the effluent and selected the most stringent of applicable technology-based standards or water quality-based effluent limitations. Where effluent concentrations of toxic parameters are unknown or are not reasonably expected to be discharged in concentration that have the reasonable potential to cause or contribute to water quality violations, EPA may establish monitoring requirements in the permit. Where monitoring is required, data will be re-evaluated and the permit may be re-opened to incorporate effluent limitations as necessary.

Flow, Temperature, pH, and Salinity

No limits are established for flow, pH, salinity, or temperature, but effluent temperature, pH, salinity, and flow rates must be monitored and reported. Continuous flow monitoring is required to determine flow characteristics of discharges. Monitoring for temperature and pH is necessary to determine reasonable potential for discharge to cause or contribute to exceedances of water quality criteria for Tanapag Harbor. Moreover, salinity, pH, and temperature values are needed to calculate concentrations of un-ionized ammonia in the effluent. Temperature, pH, salinity, and flow rates shall be taken as field measurements at the time of sampling during each discharge.

If monitored concentrations for any parameters exceed applicable water quality criteria for Tanapag Harbor (see Appendix A), the permittee must notify EPA. The permit includes a reopener provision that allows effluent limits to be established if reported data demonstrates reasonable potential to cause or contribute to an exceedance of applicable water quality standards.

Oil and Grease

As previously described, the permit includes a numerical technology-based daily maximum effluent limit of 15 mg/L for oil and grease. In addition, narrative water quality-based effluent limits are included, since oil and grease are commonly found in wastewater and stormwater from similar bulk petroleum storage facilities (see Part VI of this fact sheet). Sampling for oil and grease shall be conducted at a minimum of once per month, during a discharge event (if the facility does not discharge during the reporting period, no monitoring is required).

TSS, Lead, Benzene, Toluene, Ethylbenzene

CNMI water quality criteria exist for these parameters, which are considered pollutants of concern for petroleum bulk storage terminals (see Part V.B.3 of this fact sheet). Since the facility is a new permittee, no data exists for actual pollutant levels in the discharge. The facility submitted estimates of pollutant levels based on similar facilities, none of which exceed water quality standards for the receiving water. Therefore, no limits for these pollutants are included in the permit. However, monitoring is required to determine actual levels of pollutants in effluent and stormwater runoff at the facility. Sampling shall occur at a minimum of once per month, during a discharge event (if the facility does not discharge during the reporting period, no monitoring is required). As discharges may be brief in duration (less than 24 hours), grab samples are required for these parameters, rather than composite samples.

If monitored concentrations for any parameters exceed applicable water quality criteria for Tanapag Harbor (see Appendix A), the permittee must notify EPA. The permit includes a reopener provision that allows effluent limits to be established if reported data demonstrates reasonable potential to cause or contribute to an exceedance of applicable water quality standards. The permittee may request that monitoring frequency for any of these constituents be reduced to once per quarter if no reasonable potential exists to exceed applicable water quality standards after twelve samples of that constituent are collected and reported.

Total Ammonia (un-ionized)

CNMI water quality criteria exist for un-ionized ammonia. Monitoring is required to determine actual levels of pollutants in effluent and stormwater runoff at the facility. Un-ionized ammonia cannot be measured directly; however, total ammonia can be measured, and the un-

ionized portion may be calculated using the pH, temperature, and salinity of the sample. This calculation is explained in *"Appendix III. Calculation of Un-Ionized Ammonia in Saline Waters"* in the Florida Department of Environmental Protection's Chemistry Laboratory Methods Manual, available online at http://www.dep.state.fl.us/labs/docs/unnh3sop.doc.

If monitored concentrations exceed applicable water quality criteria for Tanapag Harbor (see Appendix A), the permittee must notify EPA. The permit includes a reopener provision that allows effluent limits to be established if reported data demonstrates reasonable potential to cause or contribute to an exceedance of applicable water quality standards.

Volatile and Semi-volatile Organic Compounds

Quarterly monitoring is required for volatile and semi-volatile organic compounds (which include total petroleum hydrocarbons, phenols, and aromatics), as these compounds are commonly found in wastewater and stormwater from similar bulk petroleum storage facilities (see Part V.B.3 of this fact sheet). Monitoring for these pollutants is necessary to determine reasonable potential for discharge to cause or contribute to exceedances of water quality criteria for Tanapag Harbor. Sampling shall occur during a discharge event.

If monitored concentrations for any parameters exceed applicable water quality criteria for Tanapag Harbor (see Appendix A), the permittee must notify EPA. The permit includes a reopener provision that allows effluent limits to be established if reported data demonstrates reasonable potential to cause or contribute to an exceedance of applicable water quality standards.

D. Anti-Backsliding

Section 402(o) of the CWA prohibits the renewal or reissuance of an NPDES permit that contains effluent limits less stringent than those established in the previous permit, except as provided in the statute.

This permit is not a renewal or reissuance and therefore does not allow backsliding.

E. Antidegradation Policy

EPA's antidegradation policy at 40 CFR 131.12 and CNMI DEQ's *Water Quality Standards* require that existing water uses and the level of water quality necessary to protect the existing uses be maintained.

The permit contains a technology-based limit for oil and grease that will apply at the end of pipe without consideration of dilution in the receiving water. As the facility is a new permittee, no effluent data exists for the proposed discharge. However, data from similar facilities submitted in the discharger's application appear to satisfy water quality criteria. Furthermore, a reopener provision is included in the permit that allows effluent limits to be established if effluent data demonstrates reasonable potential to cause or contribute to an exceedance of applicable water quality standards for Tanapag Harbor. Therefore, it is not expected that the discharge will adversely affect the receiving water.

VI. NARRATIVE WATER QUALITY-BASED EFFLUENT LIMITS

CNMI DEQ's *Water Quality Standards* contain narrative water quality standards applicable to the receiving water. Therefore, the permit incorporates the following applicable narrative water quality standards:

1) The discharge shall be free from:
    i. Substances attributable to domestic, industrial, or other controllable sources of pollutants and shall be capable of supporting desirable aquatic life and be suitable for recreation in and on the water.
    ii. Toxic pollutants in concentrations that are lethal to, or produce detrimental physiological responses in human, plant, or animal life.
    iii. Materials that will settle to form objectionable sludge or bottom deposits.
    iv. Floating debris, oil, grease, scum, or other floating materials.
    v. Substances in amounts sufficient to produce taste, odor, or detectable off flavor in the flesh of fish; or in amounts sufficient to produce odor or turbidity in the water, or other conditions that alter the naturally occurring characteristics of the water.
    vi. High temperatures; biocides; pathogenic organisms; toxic, corrosive, or other deleterious substances at levels or in combinations sufficient to be toxic or harmful to human health or aquatic life, or in amounts sufficient to interfere with any beneficial use of the water.
    vii. Soil particles resulting from erosion on land involved in earth work, such as construction of public works; highways; subdivisions; recreational, commercial, or industrial development; or the cultivation and management of agricultural lands that adversely affect beneficial use.
    viii. Substances or conditions or combinations thereof in concentration which produce undesirable aquatic life.
2) The concentration of oil or petroleum products in the discharge shall not:
    i. Be detectable as a visible film, sheen, or discoloration of the surface, or cause an objectionable odor.
    ii. Cause tainting of fish or other aquatic life, be injurious to the indigenous biota, or cause objectionable taste in drinking water.
    iii. Form an oil deposit on beaches or shoreline, or on the bottom of a body of water.

VII. MONITORING AND REPORTING REQUIREMENTS

The permit requires the discharger to conduct monitoring for all pollutants or parameters where effluent limits have been established, at the minimum frequency specified. Additionally, where effluent concentrations of toxic parameters are unknown or where data is insufficient to determine reasonable potential, monitoring may be required for pollutants or parameters where effluent limits have not been established.

A. Effluent Monitoring and Reporting

The permittee shall conduct effluent monitoring to evaluate compliance with the permit conditions. The permittee shall perform all monitoring, sampling and analyses in accordance with the methods described in the most recent edition of 40 CFR 136, unless otherwise specified in the permit. All monitoring data shall be reported on monthly DMR forms and submitted quarterly as specified in the permit.

B. Receiving Water Visual Monitoring

The permittee shall notify EPA and CNMI DEQ of receiving water conditions at Outfall 001A, including oily sheen, foam, discoloration, or floating debris. This monitoring shall be conducted once per quarter while there is discharge from the facility, and shall be submitted as an attachment to the DMRs. Receiving water visual monitoring is necessary to assess compliance with narrative water quality-based effluent limits for Tanapag Harbor (Part VI of this fact sheet). Because discharge at Outfall 001A does not solely originate from the Mobil facility, but also from other Port tenants, if the permittee believes that any sheen, foam, discoloration, or floating debris is not originating from the Mobil facility, an explanation for this reasoning shall be included. Receiving water visual monitoring may be conducted and submitted by the Port, instead of by Mobil, if it satisfies the monitoring requirements in the permit.

C. Priority Toxic Pollutants Scan

The permittee shall conduct quarterly monitoring for the volatile and semi-volatile organic compounds listed in Attachment E of the permit. The permittee shall also conduct annual monitoring for the remaining priority toxics pollutants. This monitoring will ensure that the discharge does not contain toxic pollutants in concentrations that may cause a violation of water quality standards. The permittee shall perform all effluent sampling and analyses for the priority pollutants scan in accordance with the methods described in the most recent edition of 40 CFR 136, unless otherwise specified in the permit or by EPA. 40 CFR 131.36 provides a complete list of Priority Toxic Pollutants.

If monitored concentrations for any parameters exceed applicable water quality criteria for Tanapag Harbor (see Appendix A), the permittee must notify EPA. The permit includes a reopener provision that allows effluent limits to be established if reported data demonstrates reasonable potential to cause or contribute to an exceedance of applicable water quality standards.

VIII. SPECIAL CONDITIONS

A. Development and Implementation of Best Management Practices

Pursuant to 40 CFR 122.44(k)(4), EPA may impose Best Management Practices (BMPs) which are "reasonably necessary…to carry out the purposes of the Act." The pollution prevention requirements or BMPs in the permit operate as technology-based limitations on effluent discharges that reflect the application of Best Available Technology and Best Control Technology. Therefore, the permit requires that the permittee develop (or update) and implement a Pollution Prevention Plan with appropriate pollution prevention measures or BMPs designed to prevent pollutants from entering Tanapag Harbor and other surface waters while performing normal processing operations at the facility.

As stormwater runoff from the yard area at the facility will not be treated by the oil-water separator, the permittee shall develop and implement BMPs that are necessary to control pollutant discharge, including oil and grease, from this area.

The permittee is required to maintain and update as necessary their Spill Prevention, Control and Countermeasure Plan in accordance with 40 CFR 112.

IX. OTHER CONSIDERATIONS UNDER FEDERAL LAW

A. Impact to Threatened and Endangered Species

Section 7 of the Endangered Species Act of 1973 (16 U.S.C. § 1536) requires federal agencies to ensure that any action authorized, funded, or carried out by the federal agency does not jeopardize the continued existence of a listed or candidate species, or result in the destruction or adverse modification of its habitat.

EPA submitted a request to the U.S. Fish and Wildlife Service Pacific Islands Office (FWS) for a list of endangered and threatened terrestrial species in the vicinity of Tanapag Harbor on May 20, 2010. FWS responded on June 25, 2010 with a list of two federally endangered birds, the Mariana common moorhen and the nightingale reed-warbler, that have been observed in the wetlands surrounding Tanapag Harbor, as well as two sea turtles, the threatened green turtle and the endangered hawksbill turtle, both of which have been sighted in the seagrass beds near the American Memorial Park Harbor (approximately 1 mile southwest of the discharge point) and may have historically nested on the shore of Saipan Lagoon. FWS also noted that there is no designated or proposed critical habitat in the vicinity of Tanapag Harbor. EPA determined that the proposed action may affect, but is not likely to adversely affect, the federally endangered Mariana common moorhen, nightingale reed-warbler, and hawksbill turtle, or the federally threatened green turtle. FWS concurred with EPA's determination on May 18, 2011.

The Pacific Islands office of the National Marine Fisheries Service (NMFS) website generated a list of 11 threatened or endangered marine species that may be affected by activities in the Commonwealth of the Northern Mariana Islands (in which the permittee is located). NMFS comments on the draft permit (dated May 18, 2011, see EPA's Response to Comments) elaborated that the only threatened or endangered species that have ever been documented in Tanapag Harbor are the endangered hawksbill turtle and the threatened green turtle. EPA determined that the discharge will have no effect on the endangered blue whale, fin whale, humpback whale, sei whale, sperm whale, dugong, and leatherback turtle, or the threatened loggerhead turtle and olive ridley turtle because the relatively low discharge volume from the facility indicates that the discharge will have no effects on species outside of Tanapag Harbor. EPA determined that the proposed action may affect, but is not likely to adversely affect, the endangered hawksbill turtle or the threatened green turtle, based on the intermittent and low flow rate from the facility, an analysis of the facility's discharge and data from comparable petroleum bulk storage terminals that demonstrated no reasonable potential for the discharge to cause or contribute to an exceedance of applicable water quality standards, and the fact that the proposed action is not expected to contribute to the identified threats facing these species. NMFS concurred with EPA's determination on June 21, 2011.

FWS recommended in their May 18, 2011, concurrence letter "that a marine biological assessment be conducted in the area and this assessment be conducted in areas both within and outside the projected mixing zone." FWS "further recommend[ed] collecting this information and evaluating the results prior permit issuance." NMFS agreed with this recommendation in their June 21, 2011 concurrence letter.

CNMI DEQ operates a monitoring station at 15.2263°N, 145.7377°E (station WB10, DPW Channel Bridge), approximately 300 feet east of Outfall 001A in the same Class A receiving water, for pollutants such as enterococci and dissolved oxygen. DEQ also operates a coral reef and seagrass biocriteria monitoring station in the same Class A receiving water (station 45), though no data were available from the previous reporting period (CNMI DEQ, 2010). CNMI DEQ has not authorized a mixing zone for this discharge. Consequently, applicable water quality standards (which include protection of aquatic life from acute and chronic toxic effects) must be met end-of-pipe, before the effluent is discharged into the receiving water. EPA conducted a reasonable potential analysis (RPA) for the discharge to cause or contribute to an excursion above CNMI water quality standards. As no facility-specific effluent data exists, EPA used data from comparable petroleum bulk storage terminals for the RPA; results demonstrated that the discharge is not expected to cause, have the reasonable potential to cause, or contribute to an excursion above applicable water quality standards. However, the discharger must notify EPA if effluent samples exceed CNMI water quality standards applicable to the receiving water, and water quality-based effluent limits can be added to the permit accordingly. EPA expects that if the discharger complies with their NPDES permit requirements and meets water quality standards, marine resources will be protected.

B. Impact to Coastal Zones

The Coastal Zone Management Act (CZMA) requires that Federal activities and licenses, including Federally permitted activities, must be consistent with an approved state Coastal Management Plan (CZMA Sections 307(c)(1) through (3)). Section 307(c) of the CZMA and implementing regulations at 40 CFR 930 prohibit EPA from issuing a permit for an activity affecting land or water use in the coastal zone until the applicant certifies that the proposed activity complies with the State (or Territory) Coastal Zone Management program, and the Territory or its designated agency concurs with the certification. In CNMI, the lead agency responsible for performing Coastal Zone Management consistency reviews is the Coastal Resource Management Office (CRMO).

EPA provided copies of the draft permit and fact sheet to the CRMO for review and comment during the public notice period. According to the CRMO's consistency procedures, an applicant that seeks a Federal permit or license must submit consistency certification to the CRMO. If the CRMO objects to the consistency certification, the Federal agency (in this case, EPA) cannot issue the license or permit. EPA has informed the permittee that it must work with the CRMO to develop and submit a consistency certification in order to gain coverage under the permit.

C. Impact to Essential Fish Habitat

The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act (MSA) set forth a number of new mandates for the National Marine Fisheries Service (NMFS), regional fishery management councils and other federal agencies to identify and protect important marine and anadromous fish species and habitat. The MSA requires Federal agencies

to make a determination on Federal actions that may adversely impact Essential Fish Habitat (EFH).

The permit contains technology-based effluent limits and numerical and narrative water quality-based effluent limits as necessary for the protection of applicable aquatic life uses. Furthermore, the permit contains a re-opener provision for numeric effluent limits to be established if any parameters demonstrate potential to exceed or contribute to an exceedance of CNMI water quality standards for the protection of marine life. Therefore, EPA has determined that the permit will not adversely affect essential fish habitat.

EPA provided copies of the draft permit and fact sheet to NMFS for review and comment during the public notice period. NMFS Pacific Islands Regional Office Habitat Conservation responded on June 20, 2011, "that the proposed permit discharge will likely not adversely effect *[sic]* Essential Fish Habitat (EFH)" based on the proposed discharge and receiving water characteristics. NMFS further recommended that "effort is made to ensure NPDES permit conditions are fully enforced, including monitoring compliance" and asked "to review the Spill Prevention Control Plan and Quality Assurance Manual once these are developed, and to receive notice of any occurrence when the permit is re-opened."

D. Impact to National Historic Properties

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effect of their undertakings on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. Pursuant to the NHPA and 36 CFR §800.3(a)(1), EPA is making a determination that issuing this NPDES permit does not have the potential to affect any historic properties or cultural properties. As a result, Section 106 does not require EPA to undertake additional consulting on this permit issuance.

X. STANDARD CONDITIONS

A. Reopener Provision

In accordance with 40 CFR 122 and 124, this permit may be modified by EPA to include effluent limits, monitoring, or other conditions to implement new regulations, including EPA-approved water quality standards; or to address new information indicating the presence of effluent toxicity or the reasonable potential for the discharge to cause or contribute to exceedances of water quality standards.

B. Standard Provisions

The permit requires the permittee to comply with EPA Region IX Standard Federal NPDES Permit Conditions, dated July 1, 2001.

XI. ADMINISTRATIVE INFORMATION

A. Public Notice (40 CFR 124.10)

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft NPDES permit or other significant action with respect to an NPDES permit or application.

B. Public Comment Period (40 CFR 124.10)

Notice of the draft permit must be placed in a daily or weekly newspaper within the area affected by the facility or activity, with a minimum of 30 days provided for interested parties to respond in writing to EPA. After the closing of the public comment period, EPA is required to respond to all significant comments at the time a final permit decision is reached or at the same time a final permit is actually issued.

EPA published a public notice of the draft permit and fact sheet in the Marianas Variety News and the Saipan Tribune on April 18, 2011, and again in the Marianas Variety News on May 3, 2011. The public comment period ended May 18, 2011. EPA received comments from FWS and NMFS (see EPA's Response to Comments).

C. Public Hearing (40 CFR 124.12(c))

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if EPA determines there is a significant amount of interest expressed during the 30-day public comment period or when it is necessary to clarify the issues involved in the permit decision.

D. Water Quality Certification Requirements (40 CFR 124.53 and 124.54)

For States, Territories, or Tribes with EPA approved water quality standards, EPA requests certification from the affected State, Territory, or Tribe that the permit will meet all applicable water quality standards. Certification under section 401 of the CWA shall be in writing and shall include the conditions necessary to assure compliance with referenced applicable provisions of sections 208(e), 301, 302, 303, 306, and 307 of the CWA and appropriate requirements of Territory law.

EPA requested water quality certification under CWA section 401 from CNMI DEQ. The water quality certification was public-noticed concurrently with the proposed NPDES permit. CNMI DEQ provided certification on July 19, 2011.

XII. CONTACT INFORMATION

Comments, submittals, and additional information relating to this proposal may be directed to:

Amelia Whitson, (415) 972-3216, Whitson.Amelia@EPA.gov
EPA Region IX
75 Hawthorne Street (WTR-5)
San Francisco, California 94105

XIII. REFERENCES

CNMI DEQ. 2004. *Commonwealth of the Northern Mariana Islands Water Quality Standards*. [Online] Available: http://www.deq.gov.mp/artdoc/Sec9art52ID133.pdf

CNMI DEQ. 2010. *Commonwealth of the Northern Mariana Islands Integrated 305(b) and 303(d) Water Quality Assessment Report*. [Online] Available: http://www.epa.gov/region09/water/tmdl/pacislands/cnmi305b-integrated-report-nov2010.pdf

EPA. 1991. *Technical Support Document for Water Quality-based Toxics Control*. Prepared by EPA, Office of Water Enforcement and Permits, in March 1991. EPA/505/2-90-001.

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Florida Department of Environmental Protection. 2001. Chemistry Laboratory Methods Manual, *"Appendix III. Calculation of Un-Ionized Ammonia in Saline Waters"*. pp. 11-16 [Online] Available: http://www.dep.state.fl.us/labs/docs/unnh3sop.doc

National Marine Fisheries Service, Pacific Islands Regional Office. 2010. *Marine Protected Species of the Mariana Islands*. [Online] Available: http://www.fpir.noaa.gov/Library/PRD/ESA%20Consultation/Marianas%20Species%20List%20May%202010.pdf

Permittee's NPDES permit application documents. Dated March 17, 2010.

U.S. Fish & Wildlife Service, Pacific Islands Office. Personal correspondence, 2010-SL-0320. Dated 25 June 2010.

Appendix A: Applicable numeric CNMI Water Quality Standards for monitored parameters, Class A marine receiving waters

pH
pH shall not deviate more than 0.5 units from a value of 8.1.

Total Suspended Solids
Concentrations of suspended matter at any point should not exceed 40 mg/L except when due to natural conditions.

Total Ammonia (un-ionized)
Concentration shall not exceed 0.02 mg/L.

Priority Toxic Pollutants (including Lead, Benzene, Toluene, Ethylbenzene, and volatile and semi-volatile organic compounds)
Aquatic life and human health numeric criteria for the toxic pollutants included in the CWA Section 307(a) list of priority pollutants, or any subsequent revision are incorporated by reference into the CNMI Water Quality Standards (National Recommended Water Quality Criteria: 2002, EPA-822-R-02-047, November 2002, listed in the following tables). Criteria listed under "Saltwater CMC" (Criteria Maximum Concentration), "Saltwater CCC" (Criterion Continuous Concentration), and "Human Health For Consumption of Organism Only" are applicable to the receiving water.

NATIONAL RECOMMENDED WATER QUALITY CRITERIA FOR PRIORITY TOXIC POLLUTANTS

	Priority Pollutant	CAS Number	Freshwater CMC (µg/L)	Freshwater CCC (µg/L)	Saltwater CMC (µg/L)	Saltwater CCC (µg/L)	Human Health For Consumption of: Water + Organism (µg/L)	Human Health For Consumption of: Organism Only (µg/L)	FR Cite/ Source
1	Antimony	7440360					5.6 B	640 B	65FR66443
2	Arsenic	7440382	340 A,D,K	150 A,D,K	69 A,D,bb	36 A,D,bb	0.018 C,M,S	0.14 C,M,S	65FR31682 57FR60848
3	Beryllium	7440417					Z		65FR31682
4	Cadmium	7440439	2.0 D,E,K,bb	0.25 D,E,K,bb	40 D,bb	8.8 D,bb	Z		EPA-822-R-01-001 65FR31682
5a	Chromium (III)	16065831	570 D,E,K	74 D,E,K			Z Total		EPA820/B-96-001 65FR31682
5b	Chromium (VI)	18540299	16 D,K	11 D,K	1,100 D,bb	50 D,bb	Z Total		65FR31682
6	Copper	7440508	13 D,E,K,cc	9.0 D,E,K,cc	4.8 D,cc,ff	3.1 D,cc,ff	1,300 U		65FR31682
7	Lead	7439921	65 D,E,bb,gg	2.5 D,E,bb,gg	210 D,bb	8.1 D,bb			65FR31682
8a 8b	Mercury Methylmercury	7439976 22967926	1.4 D,K,hh	0.77 D,K,hh	1.8 D,ee,hh	0.94 D,ee,hh		0.3 mg/kg J	62FR42160 EPA823-R-01-001
9	Nickel	7440020	470 D,E,K	52 D,E,K	74 D,bb	8.2 D,bb	610 B	4,600 B	65FR31682
10	Selenium	7782492	L,R,T	5.0 T	290 D,bb,dd	71 D,bb,dd	170 Z	4200	62FR42160 65FR31682 65FR66443
11	Silver	7440224	3.2 D,E,G		1.9 D,G				65FR31682
12	Thallium	7440280					1.7 B	6.3 B	65FR31682

	Priority Pollutant	CAS Number	Freshwater CMC (µg/L)	Freshwater CCC (µg/L)	Saltwater CMC (µg/L)	Saltwater CCC (µg/L)	Human Health For Consumption of: Water + Organism (µg/L)	Human Health For Consumption of: Organism Only (µg/L)	FR Cite/ Source
13	Zinc	7440666	120 D,E,K	120 D,E,K	90 D,bb	81 D,bb	7,400 U	26,000 U	65FR31682 65FR66443
14	Cyanide	57125	22 K,Q	5.2 K,Q	1 Q,bb	1 Q,bb	700 B	220,000 B,H	EPA820/B-96-001 57FR60848
15	Asbestos	1332214					7 million fibers/L I		57FR60848
16	2,3,7,8-TCDD (Dioxin)	1746016					5.0E-9 C	5.1E-9 C	65FR66443
17	Acrolein	107028					190	290	65FR66443
18	Acrylonitrile	107131					0.051 B,C	0.25 B,C	65FR66443
19	Benzene	71432					2.2 B,C	51 B,C	IRIS 01/19/00 &65FR66443
20	Bromoform	75252					4.3 B,C	140 B,C	65FR66443
21	Carbon Tetrachloride	56235					0.23 B,C	1.6 B,C	65FR66443
22	Chlorobenzene	108907					680 B,Z,U,	21,000 B,H,U	65FR31682
23	Chlorodibromomethane	124481					0.40 B,C	13 B,C	65FR66443
24	Chloroethane	75003							
25	2-Chloroethylvinyl Ether	110758							
26	Chloroform	67663					5.7 C,P	470 C,P	62FR42160
27	Dichlorobromomethane	75274					0.55 B,C	17 B,C	65FR66443

	Priority Pollutant	CAS Number	Freshwater CMC (µg/L)	Freshwater CCC (µg/L)	Saltwater CMC (µg/L)	Saltwater CCC (µg/L)	Human Health For Consumption of: Water + Organism (µg/L)	Human Health For Consumption of: Organism Only (µg/L)	FR Cite/ Source
28	1,1-Dichloroethane	75343							
29	1,2-Dichloroethane	107062					0.38 B,C	37 B,C	65FR66443
30	1,1-Dichloroethylene	75354					0.057 C	3.2 C	65FR66443
31	1,2-Dichloropropane	78875					0.50 B,C	15 B,C	65FR66443
32	1,3-Dichloropropene	542756					10	1,700	57FR60848
33	Ethylbenzene	100414					3,100 B	29,000 B	65FR31682
34	Methyl Bromide	74839					47 B	1,500 B	65FR66443
35	Methyl Chloride	74873							65FR31682
36	Methylene Chloride	75092					4.6 B,C	590 B,C	65FR66443
37	1,1,2,2-Tetrachloroethane	79345					0.17 B,C	4.0 B,C	65FR66443
38	Tetrachloroethylene	127184					0.69 C	3.3 C	65FR66443
39	Toluene	108883					6,800 B,Z	200,000 B	65FR31682
40	1,2-Trans-Dichloroethylene	156605					700 B,Z	140,000 B	65FR31682
41	1,1,1-Trichloroethane	71556					Z		65FR31682
42	1,1,2-Trichloroethane	79005					0.59 B,C	16 B,C	65FR66443
43	Trichloroethylene	79016					2.5 C	30 C	65FR66443
44	Vinyl Chloride	75014					2.0 C	530 C	57FR60848

	Priority Pollutant	CAS Number	Freshwater CMC (µg/L)	Freshwater CCC (µg/L)	Saltwater CMC (µg/L)	Saltwater CCC (µg/L)	Human Health For Consumption of: Water + Organism (µg/L)	Human Health For Consumption of: Organism Only (µg/L)	FR Cite/ Source
45	2-Chlorophenol	95578					81 B,U	150 B,U	65FR66443
46	2,4-Dichlorophenol	120832					77 B,U	290 B,U	65FR66443
47	2,4-Dimethylphenol	105679					380 B	850 B,U	65FR66443
48	2-Methyl-4,6-Dinitrophenol	534521					13	280	65FR66443
49	2,4-Dinitrophenol	51285					69 B	5,300 B	65FR66443
50	2-Nitrophenol	88755							
51	4-Nitrophenol	100027							
52	3-Methyl-4-Chlorophenol	59507					U	U	
53	Pentachlorophenol	87865	19 F,K	15 F,K	13 bb	7.9 bb	0.27 B,C	3.0 B,C,H	65FR31682 65FR66443
54	Phenol	108952					21,000 B,U	1,700,000 B,U	65FR66443
55	2,4,6-Trichlorophenol	88062					1.4 B,C	2.4 B,C,U	65FR66443
56	Acenaphthene	83329					670 B,U	990 B,U	65FR66443
57	Acenaphthylene	208968							
58	Anthracene	120127					8,300 B	40,000 B	65FR66443
59	Benzidine	92875					0.000086 B,C	0.00020 B,C	65FR66443
60	Benzo(a)Anthracene	56553					0.0038 B,C	0.018 B,C	65FR66443
61	Benzo(a)Pyrene	50328					0.0038 B,C	0.018 B,C	65FR66443

	Priority Pollutant	CAS Number	Freshwater CMC (µg/L)	Freshwater CCC (µg/L)	Saltwater CMC (µg/L)	Saltwater CCC (µg/L)	Human Health For Consumption of: Water + Organism (µg/L)	Human Health For Consumption of: Organism Only (µg/L)	FR Cite/ Source
62	Benzo(b)Fluoranthene	205992					0.0038 B,C	0.018 B,C	65FR66443
63	Benzo(ghi)Perylene	191242							
64	Benzo(k)Fluoranthene	207089					0.0038 B,C	0.018 B,C	65FR66443
65	Bis(2-Chloroethoxy)Methane	111911							
66	Bis(2-Chloroethyl)Ether	111444					0.030 B,C	0.53 B,C	65FR66443
67	Bis(2-Chloroisopropyl)Ether	108601					1,400 B	65,000 B	65FR66443
68	Bis(2-Ethylhexyl)Phthalate[X]	117817					1.2 B,C	2.2 B,C	65FR66443
69	4-Bromophenyl Phenyl Ether	101553							
70	Butylbenzyl Phthalate[W]	85687					1,500 B	1,900 B	65FR66443
71	2-Chloronaphthalene	91587					1,000 B	1,600 B	65FR66443
72	4-Chlorophenyl Phenyl Ether	7005723							
73	Chrysene	218019					0.0038 B,C	0.018 B,C	65FR66443
74	Dibenzo(a,h)Anthracene	53703					0.0038 B,C	0.018 B,C	65FR66443
75	1,2-Dichlorobenzene	95501					2,700 B	17,000 B	65FR31682
76	1,3-Dichlorobenzene	541731					320	960	65FR66443
77	1,4-Dichlorobenzene	106467					400 Z	2,600	65FR31682
78	3,3'-Dichlorobenzidine	91941					0.021 B,C	0.028 B,C	65FR66443

	Priority Pollutant	CAS Number	Freshwater CMC (µg/L)	Freshwater CCC (µg/L)	Saltwater CMC (µg/L)	Saltwater CCC (µg/L)	Human Health For Consumption of: Water + Organism (µg/L)	Human Health For Consumption of: Organism Only (µg/L)	FR Cite/ Source
79	Diethyl Phthalate[W]	84662					17,000 B	44,000 B	65FR66443
80	Dimethyl Phthalate[W]	131113					270,000	1,100,000	65FR66443
81	Di-n-Butyl Phthalate[W]	84742					2,000 B	4,500 B	65FR66443
82	2,4-Dinitrotoluene	121142					0.11 C	3.4 C	65FR66443
83	2,6-Dinitrotoluene	606202							
84	Di-n-Octyl Phthalate	117840							
85	1,2-Diphenylhydrazine	122667					0.036 B,C	0.20 B,C	65FR66443
86	Fluoranthene	206440					130 B	140 B	65FR66443
87	Fluorene	86737					1,100 B	5,300 B	65FR66443
88	Hexachlorobenzene	118741					0.00028 B,C	0.00029 B,C	65FR66443
89	Hexachlorobutadiene	87683					0.44 B,C	18 B,C	65FR66443
90	Hexachlorocyclopentadiene	77474					240 U,Z	17,000 H,U	57FR60848
91	Hexachloroethane	67721					1.4 B,C	3.3 B,C	65FR66443
92	Ideno(1,2,3-cd)Pyrene	193395					0.0038 B,C	0.018 B,C	65FR66443
93	Isophorone	78591					35 B,C	960 B,C	65FR66443
94	Naphthalene	91203							
95	Nitrobenzene	98953					17 B	690 B,H,U	65FR66443

	Priority Pollutant	CAS Number	Freshwater CMC (µg/L)	Freshwater CCC (µg/L)	Saltwater CMC (µg/L)	Saltwater CCC (µg/L)	Human Health For Consumption of: Water + Organism (µg/L)	Human Health For Consumption of: Organism Only (µg/L)	FR Cite/ Source
96	N-Nitrosodimethylamine	62759					0.00069 B,C	3.0 B,C	65FR66443
97	N-Nitrosodi-n-Propylamine	621647					0.0050 B,C	0.51 B,C	65FR66443
98	N-Nitrosodiphenylamine	86306					3.3 B,C	6.0 B,C	65FR66443
99	Phenanthrene	85018							
100	Pyrene	129000					830 B	4,000 B	65FR66443
101	1,2,4-Trichlorobenzene	120821					260	940	IRIS11/01/96
102	Aldrin	309002	3.0 G		1.3 G		0.000049 B,C	0.000050 B,C	65FR31682 65FR66443
103	alpha-BHC	319846					0.0026 B,C	0.0049 B,C	65FR66443
104	beta-BHC	319857					0.0091 B,C	0.017 B,C	65FR66443
105	gamma-BHC (Lindane)	58899	0.95 K		0.16 G		0.019 C	0.063 C	65FR31682 65FR66443
106	delta-BHC	319868							
107	Chlordane	57749	2.4 G	0.0043 G,aa	0.09 G	0.004 G,aa	0.00080 B,C	0.00081 B,C	65FR31682 65FR66443
108	4,4'-DDT	50293	1.1 G,ii	0.001 G,aa,ii	0.13 G,ii	0.001 G,aa,ii	0.00022 B,C	0.00022 B,C	65FR31682 65FR66443
109	4,4'-DDE	72559					0.00022 B,C	0.00022 B,C	65FR66443
110	4,4'-DDD	72548					0.00031 B,C	0.00031 B,C	65FR66443

	Priority Pollutant	CAS Number	Freshwater CMC (µg/L)	Freshwater CCC (µg/L)	Saltwater CMC (µg/L)	Saltwater CCC (µg/L)	Human Health For Consumption of: Water + Organism (µg/L)	Human Health For Consumption of: Organism Only (µg/L)	FR Cite/ Source
111	Dieldrin	60571	0.24 K	0.056 K,O	0.71 G	0.0019 G,aa	0.000052 B,C	0.000054 B,C	65FR31682 65FR66443
112	alpha-Endosulfan	959988	0.22 G,Y	0.056 G,Y	0.034 G,Y	0.0087 G,Y	62 B	89 B	65FR31682 65FR66443
113	beta-Endosulfan	33213659	0.22 G,Y	0.056 G,Y	0.034 G,Y	0.0087 G,Y	62 B	89 B	65FR31682 65FR66443
114	Endosulfan Sulfate	1031078					62 B	89 B	65FR66443
115	Endrin	72208	0.086 K	0.036 K,O	0.037 G	0.0023 G,aa	0.76 B	0.81 B,H	65FR31682
116	Endrin Aldehyde	7421934					0.29 B	0.30 B,H	65FR66443
117	Heptachlor	76448	0.52 G	0.0038 G,aa	0.053 G	0.0036 G,aa	0.000079 B,C	0.000079 B,C	65FR31682 65FR66443
118	Heptachlor Epoxide	1024573	0.52 G,V	0.0038 G,V,aa	0.053 G,V	0.0036 G,V,aa	0.000039 B,C	0.000039 B,C	65FR31682 65FR66443
119	Polychlorinated Biphenyls PCBs:			0.014 N,aa		0.03 N,aa	0.000064 B,C,N	0.000064 B,C,N	65FR31682 65FR66443
120	Toxaphene	8001352	0.73	0.0002 aa	0.21	0.0002 aa	0.00028 B,C	0.00028 B,C	65FR31682 65FR66443

Footnotes:

A This recommended water quality criterion was derived from data for arsenic (III), but is applied here to total arsenic, which might imply that arsenic (III) and arsenic (V) are equally toxic to aquatic life and that their toxicities are additive. In the arsenic criteria document (EPA 440/5-84-033, January 1985), Species Mean Acute Values are given for both arsenic (III) and arsenic (V) for five species and the ratios of the SMAVs for each species range from 0.6 to 1.7.

Chronic values are available for both arsenic (III) and arsenic (V) for one species; for the fathead minnow, the chronic value for arsenic (V) is 0.29 times the chronic value for arsenic (III). No data are known to be available concerning whether the toxicities of the forms of arsenic to aquatic organisms are additive.

B This criterion has been revised to reflect The Environmental Protection Agency's q1* or RfD, as contained in the Integrated Risk Information System (IRIS) as of May 17, 2002. The fish tissue bioconcentration factor (BCF) from the 1980 Ambient Water Quality Criteria document was retained in each case.

C This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right).

D Freshwater and saltwater criteria for metals are expressed in terms of the dissolved metal in the water column. The recommended water quality criteria value was calculated by using the previous 304(a) aquatic life criteria expressed in terms of total recoverable metal, and multiplying it by a conversion factor (CF). The term "Conversion Factor" (CF) represents the recommended conversion factor for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column. (Conversion Factors for saltwater CCCs are not currently available. Conversion factors derived for saltwater CMCs have been used for both saltwater CMCs and CCCs). See "Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria," October 1, 1993, by Martha G. Prothro, Acting Assistant Administrator for Water, available from the Water Resource center, USEPA, 401 M St., SW, mail code RC4100, Washington, DC 20460; and 40CFR§131.36(b)(1). Conversion Factors applied in the table can be found in Appendix A to the Preamble- Conversion Factors for Dissolved Metals.

E The freshwater criterion for this metal is expressed as a function of hardness (mg/L) in the water column. The value given here corresponds to a hardness of 100 mg/L. Criteria values for other hardness may be calculated from the following: CMC (dissolved) = $\exp\{m_A [\ln(\text{hardness})] + b_A\}$ (CF), or CCC (dissolved) = $\exp\{m_C [\ln(\text{hardness})] + b_C\}$ (CF) and the parameters specified in Appendix B- Parameters for Calculating Freshwater Dissolved Metals Criteria That Are Hardness-Dependent.

F Freshwater aquatic life values for pentachlorophenol are expressed as a function of pH, and are calculated as follows: CMC = $\exp(1.005(\text{pH})-4.869)$; CCC = $\exp(1.005(\text{pH})-5.134)$. Values displayed in table correspond to a pH of 7.8.

G This Criterion is based on 304(a) aquatic life criterion issued in 1980, and was issued in one of the following documents: Aldrin/Dieldrin (EPA 440/5-80-019), Chlordane (EPA 440/5-80-027), DDT (EPA 440/5-80-038), Endosulfan (EPA 440/5-80-046), Endrin (EPA 440/5-80-047), Heptachlor (EPA 440/5-80-052), Hexachlorocyclohexane (EPA 440/5-80-054), Silver (EPA 440/5-80-071). The Minimum Data Requirements and derivation procedures were different in the 1980 Guidelines than in the 1985 Guidelines. For example, a "CMC" derived using the 1980 Guidelines was derived to be used as an instantaneous maximum. If assessment is to be done using an averaging period, the values given should be divided by 2 to obtain a value that is more comparable to a CMC derived using the 1985 Guidelines.

H No criterion for protection of human health from consumption of aquatic organisms excluding water was presented in the 1980 criteria document or in the *1986 Quality Criteria for Water*. Nevertheless, sufficient information was presented in the 1980 document to allow the calculation of a criterion, even though the results of such a calculation were not shown in the document.

I This criterion for asbestos is the Maximum Contaminant Level (MCL) developed under the Safe Drinking Water Act (SDWA).

J This fish tissue residue criterion for methylmercury is based on a total fish consumption rate of 0.0175 kg/day.

K This recommended criterion is based on a 304(a) aquatic life criterion that was issued in the *1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water*, (EPA-820-B-96-001, September 1996). This value was derived using the GLI Guidelines (60FR15393-15399, March 23, 1995; 40CFR132 Appendix A); the difference between the 1985 Guidelines and the GLI Guidelines are explained on page iv of the 1995 Updates. None of the decisions concerning the derivation of this criterion were affected by any considerations that are specific to the Great Lakes.

cc When the concentration of dissolved organic carbon is elevated, copper is substantially less toxic and use of Water-Effect Ratios might be appropriate.

dd The selenium criteria document (EPA 440/5-87-006, September 1987) provides that if selenium is as toxic to saltwater fishes in the field as it is to freshwater fishes in the field, the status of the fish community should be monitored whenever the concentration of selenium exceeds 5.0 µg/L in salt water because the saltwater CCC does not take into account uptake via the food chain.

ee This recommended water quality criterion was derived on page 43 of the mercury criteria document (EPA 440/5-84-026, January 1985). The saltwater CCC of 0.025 ug/L given on page 23 of the criteria document is based on the Final Residue Value procedure in the 1985 Guidelines. Since the publication of the Great Lakes Aquatic Life Criteria Guidelines in 1995 (60FR15393-15399, March 23, 1995), the Agency no longer uses the Final Residue Value procedure for deriving CCCs for new or revised 304(a) aquatic life criteria.

ff This recommended water quality criterion was derived in *Ambient Water Quality Criteria Saltwater Copper Addendum* (Draft, April 14, 1995) and was promulgated in the Interim final National Toxics Rule (60FR22228-222237, May 4, 1995).

gg EPA is actively working on this criterion and so this recommended water quality criterion may change substantially in the near future.

hh This recommended water quality criterion was derived from data for inorganic mercury (II), but is applied here to total mercury. If a substantial portion of the mercury in the water column is methylmercury, this criterion will probably be under protective. In addition, even though inorganic mercury is converted to methylmercury and methylmercury bioaccumulates to a great extent, this criterion does not account for uptake via the food chain because sufficient data were not available when the criterion was derived.

ii This criterion applies to DDT and its metabolites (i.e., the total concentration of DDT and its metabolites should not exceed this value).