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**Water Quality Information Paper No. 36:**

**National Pollutant Discharge Elimination  
System (NPDES) Permit  
Application Requirement for  
Storm Water Discharges**

Under the command jurisdiction of the U.S. Army Health Services Command, AEHA's mission is to support the worldwide preventive medicine programs of the Army and other Department of Defense and Federal agencies.

The Agency is unique with the variety of scientific disciplines working together in one military unit to protect the health and well being of soldiers and civilians and enhance the environment.

This is accomplished through support in environmental quality, occupational and environmental health, toxicology, radiation and entomological sciences, pest management, and laboratory services.

AEHA has direct support activities at Fort Meade, Fort McPherson, and Fitzsimons Army Medical Center. The main agency at Aberdeen Proving Ground performs larger consultations and specialized work.

Services are provided upon request. Since AEHA is mission funded, these services are free to Army installations. Projects with unusually large scopes or short time constraints may be conducted on a reimbursable basis.

The USAEHA is the proponent of this information paper. Users are invited to send comments and suggested improvements on a DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to the Commander, U.S. Army Environmental Hygiene Agency, ATTN: HSHB-MS, Aberdeen Proving Ground, MD 21010-5422.

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## Contents

Paragraph	Page
1. INTRODUCTION.....	1
a. Clean Water Act.....	1
b. Implementation.....	1
c. Groups Affected.....	1
d. Application Deadlines (40 CFR 122.26(e)).....	2
2. WHO MUST APPLY: STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES.....	3
a. Covered Activities.....	3
b. Specific Discharges Covered.....	6
3. PERMIT APPLICATION REQUIREMENTS, INDUSTRIAL ACTIVITIES.....	7
a. Group Application Requirements.....	7
b. Individual Application Requirements.....	8
c. Application Requirements for New Sources or Discharges.....	9
d. Application Requirements for Construction Activity Category.....	9
e. Application Requirements for Discharges with Existing NPDES Permits.....	10
f. Additional Notification Responsibility to Municipalities.....	10
4. NPDES FORM 2F INFORMATION REQUIREMENTS. GROUP PART 2 AND INDIVIDUAL APPLICATIONS.....	11
a. Site Map.....	11
b. Site Information.....	11
c. Outfall Certification.....	12
d. Spill History.....	12
e. Quantitative Data.....	12
f. Flow Measurements.....	13
g. Other Pollutant Data.....	13
h. Improvements (Section II).....	13
i. Manufacturing Information.....	14
j. Use of Historical Data.....	14
5. SAMPLE COLLECTION REQUIREMENTS.....	14
6. EPA PERMITTING STRATEGY.....	16
a. Tiered Approach.....	16
b. Relationship of Strategy to Permit Application Requirements.....	17
c. Notice of Intent.....	17
d. Summary.....	17
7. IMPACT.....	18
a. DA Level.....	18
b. Installations.....	18

Paragraph	Page
8. PERMIT REQUIREMENTS.....	18
9. END NOTE.....	19
 Appendices	
A - References.....	A-1
B - Subpart N Requirements (40 CFR 405-461).....	B-1
C - Standard industrial classification.....	C-1
D - Precipitation zones.....	D-1
E - Form 2F.....	E-1
F - DA memorandum.....	F-1



DEPARTMENT OF THE ARMY  
U. S. ARMY ENVIRONMENTAL HYGIENE AGENCY  
ABERDEEN PROVING GROUND, MARYLAND 21010-5422

REPLY TO  
ATTENTION OF

HSHB-ME-WM

MAY 1991

WATER QUALITY INFORMATION PAPER NO. 36  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
PERMIT APPLICATION REQUIREMENTS FOR STORM WATER DISCHARGES

1. INTRODUCTION.

a. Clean Water Act. The Water Quality Act of 1987 (Section 405), which adds Section 402(p) to the Clean Water Act, required the U.S. Environmental Protection Agency (EPA) to establish regulations under the NPDES Program to control storm water discharges associated with:

(1) Industrial activity.

(2) Storm water discharges already permitted prior to 4 February 1987.

(3) Discharges from municipal separate systems serving populations of 100,000 or more.

(4) Discharges for which the EPA or State determines may be contributing to a violation of water quality standards or is a significant contributor of pollutants to receiving waters.

Permits were to be in place for all of the above prior to 1 October 1992.

b. Implementation. On 16 November 1990, the EPA promulgated final rules establishing requirements for the storm water application process covering the above categories. The rules appeared in 55 Federal Register (FR) 47990. In addition to the application process, the rules also set forth requirements for municipal storm water management plans. The rules will be codified under 40 CFR 122, 123, and 124 (NPDES). The Supplementary Information part of the federal register outlines EPA's preliminary approach to permitting.

c. Groups Affected. Much of the new rules deal with municipal storm water collection systems. Federally owned (or state owned) collection systems are designated as nonmunicipal systems and as such are not required to meet any of the rules associated with municipal systems. This paper will not discuss these rules in detail. Nonmunicipal systems are, however, required to meet rules dealing with storm water discharges associated with "industrial activities." Most Army installations

will be affected because the definition of an "industrial activity" includes several activities not typically considered as industrial, including wastewater treatment plants, some landfills, recycling areas, scrap yards, and hazardous waste treatment, storage or disposal facilities. Additionally, separate application requirements are stipulated for major construction sites, and any storm water discharge regardless of origin may be specifically identified by regulatory agencies as needing a permit application.

d. Application Deadlines [40 CFR 122.26(e)].

(1) Industrial Activities.

18 March 1991 - Part 1 of group application

18 November 1991 - Individual applications

Part 2 of group application will be due 12 months after approval of part 1 application.

Individual industries in rejected group applications will have 12 months from time of rejection to submit individual applications.

15 May 1991 - Notification to downstream municipal storm water collection system (where applicable) of connection (information required, but no application)

(2) Large Municipal Systems.

18 November 1991 - Part 1 of application

16 November 1992 - Part 2 of application

(3) Medium Municipal Systems.

18 May 1992 - Part 1 of application

17 May 1993 - Part 2 of application

(4) Industrial Storm Water Discharges with Existing NPDES Permit.

180 days before expiration of existing permit if permit expires after 18 May 1992 or

In accordance with Industrial Activity Deadlines (18 March 1991 for group permits, 18 November 1991 for individual).

(5) Construction Activities [40 CFR 122.21(c)].

90 days before scheduled commencement of construction

(6) New Discharges [40 CFR 122.21(c)].

180 days before scheduled commencement

(7) Discharges Specifically Determined by EPA or state.

60 days after notice from regulatory authority

## 2. WHO MUST APPLY: STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES.

a. Covered Activities. The term "storm water discharge associated with industrial activity" means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to material storage areas. An "industrial activity" is any [40 CFR 126(b)(14)]:

(1) Facility listed in Subpart N of 40 CFR (Parts 405 - 471). Appendix B contains a list of these facilities. Among those typically applicable to Army facilities: metal finishing, explosives manufacturing, hospital, metal molding and casting, copper forming, electrical and electronic component, and nonferrous metals forming and metal powders.

(2) Facility classified under the following standard industrial classification (SIC) codes<sup>1</sup>:

(a) 24 (except 2434), 26 (except 265 and 267), 28 (except 283), 33, 344, and 373.

(b) 10, 12, 13, and 14.

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<sup>1</sup> Some government facilities are not actually assigned SIC codes because their use often is for economical statistical purposes. However, the discussion (55 FR 48010) states that "Federal facilities will be required to submit a permit application if they are engaged in an industrial activity described under 40 CFR 126.26(b)(14)." Hence, if an Army installation has any activities described under the above SIC codes (see Appendix C for list), it must submit a permit application for those facilities.

(c) 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, and 4221 through 4225.

Appendix C contains information on the SIC Codes. For the most part, none of these categories are applicable to Army installations. Group 28 (Chemicals and Allied Products), Group 33 (Primary Metal Industries) and Group 34 (Fabricated Metal Products) would be applicable to a number of U.S. Army Materiel Command (AMC) installations. The SIC codes are separated into groups as shown above because each group has slightly different application requirements. The different requirements are discussed later in this paper.

(3) Hazardous waste (HW) treatment, storage, or disposal (TSD) facility, including those that are operating under interim status or a permit under Subtitle C of the Resource Conservation and Recovery Act (RCRA). Most Army bases have some type of HW facility. The rule includes inactive Solid Waste Management Units (SWMU's) where corrective actions have not been completed.

(4) Landfills, land application sites, and open dumps that receive or have received any industrial wastes from any activity listed as being an "industrial." This includes those which are subject to regulation under Subtitle D of RCRA. Many Army installations have landfills, some of which do receive (or have received) industrial waste. Sewage treatment plant sludges are classified as industrial wastes under this rule. However, permit applications will not be required for lands where sludge is beneficially reused such as farm lands or home gardens, or where sludge is applied to offsite lands.

(5) Facility involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards. There is no mention of minimum facility size, nor is there any reference specifying types of materials recycled. Consequently, any size site involved in any way with the above is considered an industrial activity. Army bases may have a number of places where recycling (Defense Reutilization and Marketing Office sites) is performed or where metal scrapyards exist.

(6) Steam electric power generating facility including coal handling sites. This does not include transformer facilities which are regulated under the Toxics Substance Control Act (TSCA). It does include oil, nuclear, and coal-fired facilities. A number of these facilities may exist in the Army. Steam plants generating only steam are not included.

(7) Transportation facilities classified as SIC 40, 41, 42 (except 4221-4225), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. See Appendix C for specifics. This includes train yards but not gas stations. Only those portions of the facility involved with vehicle maintenance (vehicle rehabilitation, mechanical repairing, painting, fueling and lubricating), equipment cleaning operations (degreasing parts or paint stripping), and airport deicing areas are covered. Army installations will be effected under this category, but the SIC's specified do not cover motor pools. Railroad yards, some warehousing facilities, marinas, and airfields/airports (the SIC codes make no distinction as to type of aircraft; thus, helicopter-only facilities would be covered) fall into the above categories. However, motor pools would be part of Major Group 75 - Automotive Repair, Services, and Parking, which is not subject to the new rule. The term "transportation facility" may be misleading in this case without knowing which SIC code is involved.

(8) Treatment works treating domestic sewage, with a design flow of 1.0 mgd or more. This includes land treatment systems for sludge or wastewaters within the facility boundary. As discussed above, permit applications will not be required to address land where sludge is beneficially reused such as farm lands or home gardens, or where sludge is applied to offsite lands. In this case, the interpretation is that a permit would be required for land disposal if the sole purpose is to provide a means of ultimate disposal of the sludge or wastewater and is thus tied to the operation of the treatment plant. The exclusions are meant for incidental disposal and thus unconnected with the facility generating the waste. However, the rules are not completely clear on this point and some additional interpretations may be necessary. Contact the EPA (see hotline number at end of this paper) if in doubt. Industrial wastewater treatment facilities are discussed in a later paragraph. This category will affect a large number of Army installations.

(9) Construction activity including clearing, grading and excavation activities for operations that are planned to cover 5 or more acres of total land area. Areas of less than 5 acres may still be in this category if the land is part of a larger common plan of development. Permit application requirements are much different for this category than for other categories. Nearly all Army installations have some construction, either existing or planned.

(10) Designated Discharges. Facilities which do not fit into any of the above categories may still be required to submit individual applications if the EPA or state determines that a facility's storm water discharge may be contributing to a violation of a particular receiving water's water quality criteria or is a significant contributor of pollutants to the receiving water [40 CFR 122.26(a)(1)(v)].

b. Specific Discharges Covered. For each facility above, the rules further specify what areas of the facility will be covered in the storm water discharge permit application.

(1) For all activities above, except for those in paragraph 2a(2)(c) above, a permit application must be applied for storm water discharges associated with:

- (a) Industrial plant yards.
- (b) Immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or byproducts used or created by the facility.
- (c) Material handling sites.
- (d) Refuse sites.
- (e) Sites used for the application or disposal of process wastewaters.
- (f) Sites used for the storage and maintenance of material handling equipment.
- (g) Sites used for residual treatment, storage, or disposal.
- (h) Shipping and receiving areas.
- (i) Storage areas (including tank farms) for raw materials, intermediate and final products.
- (j) Areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm waters.

It does not matter if all of these sites are not normally exposed to storm waters (precipitation). All storm water conveyances (pipes, ditches, etc.) emanating from any of these areas are to be covered in the permit application. For most AMC facilities,

land coverage is nearly total. Only parking lots and administrative building areas are exempt. Training bases (FORCOM and TRADOC) will not be affected as greatly.

(2) For the other category, the same specific sites are covered, except that only storm water discharges (except access roads and rail lines) where material handling equipment or activities, raw materials, intermediate and final products, waste materials, byproducts, or industrial machinery actually are exposed to storm water are required to have applications submitted.

3. PERMIT APPLICATION REQUIREMENTS, INDUSTRIAL ACTIVITIES. Dischargers of storm water associated with industrial activity are required to apply for a permit either through a group application or an individual permit, or seek coverage under a promulgated storm water general permit.

a. Group Application Requirements [40 CFR 122.26(c)(2)]. The rules allow any grouping of similar industries to submit a single permit application. The reasoning is that similar industries would have relatively similar storm water discharges. There is a Part 1 application and a Part 2 application. Facilities that have existing individual NPDES permits for storm water discharges are excepted.

(1) General Requirements.

(a) A single entity representing the group must be identified (such as a MACOM).

(b) Part 1 application is sent to the Office of Water Enforcement and Permits<sup>2</sup> for approval (or to the state if the state has primacy). This must be done by 18 March 1991.

(c) A group must be at least 10 in number.

(d) Part 2 application is due no later than 12 months after approval of Part 1 application (which the rules say will be not longer than 60 days after the EPA receives the application).

(2) Part 1 Requirements: No form has been established.

(a) Name and location of participants. The location will be further identified by its location in one of seven designated rainfall subdivisions (see Appendix D).

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<sup>2</sup> EPA, 401 M Street, SW, Washington, DC 20460.

(b) Summarize type of industry involved and explain why they are similar.

(c) List significant materials stored at each site and exposed to the elements. List management practices at each site used to reduce amount of storm water generated.

(d) Identify 10 percent of participants from which quantitative data will be submitted in Part 2 application<sup>3</sup>.

(e) Groups of between 4 and 10 may be formed, but half of these must submit quantitative data in the Part 2 application.

(f) A discussion on different factors which may affect the quality of storm water.

(g) A discussion as to why the 10 percent are representative of the group.

(3) Part 2 Requirements: If the EPA approves the Part 1 application, then a Part 2 application follows, using EPA Form 2F (see Appendix E).

(a) Quantitative data on the selected (10 percent) dischargers.

(b) Complete NPDES Form 2F (see Appendix E). See paragraph 4 for a tabularized summary of data requirements.

(c) Sampling requirements per 40 CFR 122.21(g)(7) (see paragraph 5, this paper).

b. Individual Application Requirements. Individual applications are required for facilities: which were part of a group application for which the Part 1 application was rejected; which the EPA or state has singled out as a possible contributor to water quality criteria violations or a significant contributor of pollutants; which are not part of any group application. Individual applicants must:

(1) Submit NPDES Forms 1 and 2F<sup>4</sup>. (Form 1 is one of the existing NPDES permit application forms). See paragraph 4.

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<sup>3</sup> One from each precipitation zone (see Appendix D) where less than 10 installations are located. Two from each zone if 10 or more installations exist. If more than 1000 facilities are part of the group, no more than 100 must submit quantitative data.

(2) Meet sampling requirements per 40 CFR 122.21(g)(7) (see paragraph 5 of this paper).

(3) Individual applications must be submitted by 18 November 1991 for those not seeking group coverage or one year after denial of group coverage (about May 1992).

c. Application Requirements for New Sources or Discharges. Initially, the permit application requirements are the same as the individual application requirements (see above) except that only concentration estimates are required for pollutant parameters identified in Form 2F. However, the quantitative data must be provided within two years after commencement of discharge.

d. Application Requirements for Construction Activity Category. The operator shall provide a narrative description of (no form used):

(1) The location (including a map) and the nature of the construction activity.

(2) The total area of the site.

(3) Proposed measures, including BMP, to control pollutants in storm water discharges during the construction.

(4) Proposed measures to control pollutants in storm water discharges after construction is completed.

(5) A brief description of applicable state and local erosion and sediment control requirements.

(6) An estimate of the runoff coefficient<sup>5</sup> of the site.

(7) the increase in the impervious area after construction, the nature of fill material, and existing data describing the soil or the nature of the discharge.

(8) the name of the receiving water(s).

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<sup>4</sup> If any of the storm water discharges are mixed with non-storm water discharges (other NPDES permitted outfalls), then Forms 1, 2C, and 2F must be submitted.

<sup>5</sup> The fraction of total rainfall that will appear as runoff.

No quantitative data is required to be submitted. Applications are due no later than 90 days before beginning construction. When a facility is owned by one person but operated by another, it is the duty of the operator to apply for the permit (unless the operating contract states otherwise) [40 CFR 122.21(b)]. The EPA considers an "operator" to include general contractors. Many Army activities are run by a contractor. Unless specifically stated in the operating contract between the Army and the contractor, the contractor would be responsible for submitting the construction application. Note further, that a site may fall under the New Source Category as well as the Construction Category, in which case both sets of requirements would need to be met.

e. Application Requirements for Discharges with Existing NPDES Permits [40 CFR 122.26(e)]. For the most part, these dischargers do not have to submit any applications until 180 days before expiration. If the existing permit expires before 18 May 1992, however, the discharger must submit an application. This can be done as an individual application, or the discharge can be under a group application using the same rules as discussed earlier. If the NPDES permit expires before 15 November 1991, the discharger can submit NPDES Forms 1 and 2C (the regular wastewater form) instead of 1 and 2F.

f. Additional Notification Responsibility to Municipalities. Some industrial activities may discharge through storm sewers which connect to municipal storm water collection system. They must submit permit applications as above, plus they must provide the following information to the municipality:

- (1) A contact person and telephone number.
- (2) The name of the facility.
- (3) The location of the discharge(s).
- (4) A description, including an applicable SIC code which best describes the industry.
- (5) Any existing NPDES permit number.

The notification must be submitted no later than 15 May 1991, or 180 days before commencing a new discharge. Notification is only required to municipal systems serving a population greater than 100,000.

4. NPDES FORM 2F INFORMATION REQUIREMENTS. GROUP PART 2 AND INDIVIDUAL APPLICATIONS.

a. Site Map. A site map showing the following:

- (1) Topography or drainage patterns.
- (2) Each drainage and discharge structure.
- (3) The drainage area of each storm water outfall.
- (4) Paved areas and buildings within each outfall drainage area.
- (5) Each past or present area used for outdoor storage or disposal of "significant materials"<sup>6</sup>.
- (6) Each existing storm water control structure.
- (7) Materials loading and access areas.
- (8) Areas where pesticides, herbicides, soil conditioners and fertilizers are applied.
- (9) Each hazardous TSD facility, including 90-day accumulation points.
- (10) Each well where fluids are injected underground.
- (11) Springs and other surface water bodies which receive storm water.

b. Site Information. An estimate of the area of impervious surfaces and the total area drained by the outfall (within a mile radius) and a narrative description of the following:

- (1) Significant materials that have been treated, stored or disposed of and exposed to storm water within the last 3 years (from time of submittal).

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<sup>6</sup> Includes raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; hazardous substances designated under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); any chemical the facility is required to report under the Superfund Amendments and Reauthorization Act (SARA) Title III; fertilizers; pesticides; and waste products such as ashes, slag and sludge.

(2) Materials management practices over the same time period to minimize exposure of materials to storm water runoff.

(3) Materials loading and access areas.

(4) Pesticide and herbicide use (including locations and frequency).

(5) Soil conditioners and fertilizers applied.

(6) Description of any storm water treatment process.

c. Outfall Certification. A certification that identified storm water outfalls have been evaluated for the presence of nonstorm water discharges<sup>7</sup>, with a description of how the discharge was evaluated.

d. Spill History. Information on spills over the last 3 years.

e. Quantitative Data. Based on samples collected in accordance with 40 CFR 122.21 (see paragraph 5). Required parameters:

(1) Oil and Grease

(2) pH

(3) 5-day biochemical oxygen demand (BOD<sub>5</sub>)

(4) Chemical oxygen demand (COD)

(5) Total suspended solids (TSS)

(6) Total Phosphorus

(7) Total Kjeldahl Nitrogen

(8) Nitrate plus nitrite

(9) Any pollutant limited in the 40 CFR Subpart N (see Appendix B) categories

(10) Any pollutant listed in the facility's NPDES permit for its process wastewater (where applicable)<sup>8</sup>

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<sup>7</sup> The certification can be done by any installation personnel. There is no guidance on this. Any test, including visual, can be done to confirm the absence of non-storm water discharges.

(11) Other pollutants (see item 7 below)

f. Flow Measurements. Estimates of flow rates and the total amount of discharge for the storm event(s). Include the method of flow measurement or estimation. Also, provide information about the storm event including: date and duration, rainfall amounts, duration between storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event (in hours).

g. Other Pollutant Data. A number of pollutants are to be quantified in certain instances as part of the Form 2F application.

(1) Table 2F-2 (see Appendix E). If any of these pollutants are suspected to be present in the storm water outfall, then at least a brief description as to why the pollutant is expected to be present must be provided in Section VIIB (Form 2F). If quantitative data is available, this data must be submitted.

(2) Table 2F-3 (see Appendix E). Any of these parameters, often called the "priority pollutants," must be quantified only if the discharger expects any concentration to be 10 ppb or greater (100 ppb for acrolein, acrylonitrile, 2,4-dinitrophenol, and 2-methyl-4,6 dinitrophenol). If any parameter is expected, but at less than 10 ppb, then only a description as to why is needed. There is no guidance on how one would be able to "guesstimate" a level (VIIC).

(3) Table 2F-4 (see Appendix E). List any pollutant in this list you have reason to believe might be present in the outfall. No analytical data is needed, but must be provided if it exists.

h. Improvements (Section II). If the discharger is under any regulatory schedule for construction, upgrading or operation of wastewater treatment facilities or any other environmental programs, which may effect storm water quality of any of the outfalls in the Form 2F application, the applicant must provide details.

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<sup>8</sup> For example, an army ammunition plant may have an industrial wastewater treatment plant NPDES permit containing limits for TNT or a heavy metal. These parameters would need to be quantified in the storm waters.

i. Manufacturing Information. Any toxic pollutant listed in Tables 2F-2, 2F-3, or 2F-4 which is currently used or manufactured as an intermediate or final byproduct must be listed in Form 2F, Section VIIE.

j. Use of Historical Data. Past data may be used to satisfy sections of the application, subject to the following:

- (1) All data requirements must be met (Form 2F).
- (2) Sampling was done no more than 3 years before submission.
- (3) All data are representative of the discharge.

If little or no changes have been made in the site over the last 3 years, then any storm water data may be useable. Contact the EPA or state about available data. They should be able to determine what is useable and what other data is still needed. This might be more important in Army group applications, since one installation may have collected good data for other reasons (such as an existing NPDES storm water outfall).

#### 5. SAMPLE COLLECTION REQUIREMENTS.

a. Pollutants must be analyzed in accordance with 40 CFR 136 unless no analytical method is approved. A description of the analytical test must be provided.

b. An applicant may typically have many storm water outfalls leaving an industrial facility. When two or more of these outfalls are substantially identical, only one outfall need be tested. However, the regulatory agency must approve this before samples are collected. Each industrial facility on post must be handled as a separate entity, as far as possible. That is, two outfalls cannot be considered substantially identical if they are from separate facilities (such as two separate wastewater treatment plants) even if the quality would be the same. The same is true when comparing two different categories (landfills and scrapyards), even if the storm water quality may be similar.

c. Two sets of samples are required to be collected:

- (1) A grab during the first 30 minutes of the rainfall event (or as soon as possible after).

(2) A flow-weighted composite sample for either the first 3 hours of the rainfall event or for the first 24 hours of the rainfall event. The EPA is giving the discharger a choice here.

Exceptions: One grab sample may be substituted for the composite sample for effluents from holding ponds or other impoundments if the retention time in the holding pond is at least 24 hours. If the discharger can demonstrate that the use of automatic sampling is infeasible, then the regulatory agency may allow a minimum of four grab samples to be collected in lieu of automatic sampler composites.

d. Grab samples must be used for pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform and fecal streptococcus (where required). These parameters are not required to be tested in the composites.

e. Sampling may occur for any storm event:

(1) during which 0.1 inches of rain falls, or

(2) which begins at least 72 hours after the previous storm event.

f. Collection requirements:

(1) At least three samples must be collected per hour with a minimum of 15 minutes between samples.

(2) Samples should be collected at midstream and where turbulence is high.

(3) Samples may be flow composited by collecting discrete samples and using flow measurements or by using a flow-meter/sampler combination and automatically flow compositing. However, a very good pre-estimate of flow is necessary in using the later method, since a low pre-estimate would result in too much sample and a high pre-estimate may yield too little sample. The discrete sampling method would provide a margin of error.

(4) Each individual sample pull must be at least 100 milliliters.

(5) Since the composite must be flow proportional, flow must be measured or estimated throughout the sampling period. This is perhaps the most difficult aspect of the requirements. Using automatic flow meters requires establishment of a control area where flow is directed over a known geometrical shape

(V-notch, rectangle) and may also be costly. The alternative is to manually measure flow using a staff gauge at close intervals as flow passes over the control area. This is, of course, time consuming. Both methods require a knowledge of fluid flow.

g. Volatile organic analyses (VOA's) must be collected out of the composite. (This is a change from normal requirements where the VOA's are grab samples.)

h. Analytical data must be reported as concentrations and mass loadings.

## 6. EPA PERMITTING STRATEGY.

a. Tiered Approach. The EPA is only in the process of developing a permitting strategy and intends to publish a discussion of its preliminary strategy for implementing the Storm Water Program. The EPA is considering a tiered approach to permitting:

(1) Tier I, baseline permitting. The EPA intends to issue general permits that initially cover the majority of storm water discharges associated with industrial activity in states without authorized NPDES programs<sup>o</sup>. These permits would be nonindustry specific. Permit requirements will be developed based on group and/or individual application data. The EPA intends to include a high amount of public involvement during this phase. General permits are currently regulated under 40 CFR 122.28, with only some minor revisions provided by this new rule.

(2) Tier II, watershed permitting. Facilities within watersheds which are shown to be adversely impacted by storm water discharges will be targeted next. Permit requirements will be more specific.

(3) Tier III, industry specific. Specific industry categories will be targeted. The EPA intends to work with the states to coordinate the development of model permits for selected classes. The EPA is currently working on prioritizing industrial classifications.

(4) Tier IV, facility specific. The EPA intends to use facility-specific permitting only when conditions dictate.

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<sup>o</sup> MA, ME, NH, FL, LA, TX, OK, NM, SD, AZ, AK, ID, DC, Puerto Rico, Guam, American Samoa, the Commonwealth of the Northern Marina Islands, and the Trust Territory of the Pacific Islands.

b. Relationship of Strategy to Permit Application Requirements. The submittal of an individual application does not mean that an individual permit will be issued. On the contrary, the EPA appears to be leaning away from the individual permits in favor of general permits. The same is true with group permits, although the EPA intends to develop industry-specific permits to some extent.

(1) Group. The group application requirements are primarily intended to provide information for developing industry specific general permits (Tier III).

(2) Individual. The EPA intends to issue general permits where possible, primarily because of the administrative burden. However, in those instances where an individual permit application is warranted, the EPA may issue an individual permit (Tier IV). It is again stressed that a facility will still probably initially be permitted under a general permit even if it is required to submit an individual application.

c. Notice of Intent. As stated above, the EPA has not finalized its permitting plans. One problem which must be resolved is the way that current regulations are written. Title 40 CFR 122.28 states that facilities covered under general permits are excluded from submitting individual permit applications. This would mean that individual facilities within the non-NPDES states would not have to submit applications. Also, the new rule does not address how a potential permittee is to apply for coverage under a general permit. To clarify the situation, the EPA is currently developing "Notice of Intent" requirements: once the EPA comes out with its Tier I general permits, an industry can file a Notice of Intent to the EPA (or state) that it wants to be covered under the general permit. There will be specific requirements developed for the process. For those states which do not have authorized state NPDES programs, installations can file Notices of Intent now. However, the EPA should be contacted on this matter as it still may require a permit application. It is more prudent to presume that they will.

d. Summary. As one might guess, there seems to be no direct correlation between the permit application process and the permit writing process. For example, submission of a group application does not necessarily mean that the group will be issued a group permit. Apparently, the EPA is allowing itself considerable flexibility on this issue. The Notice of Intent option is also somewhat confusing.

7. IMPACT.

a. DA Level. The DA Environmental Office has issued guidance/policy (see Appendix F). The DA wants to group facilities as much as possible. For example, AMC may be able to group many of its munitions facilities together. The rules are unclear as to how groups may be formed within DA facilities, since many will have a number of different industrial activities. More likely, the TRADOC and FORSCOM installations may stand a better chance at grouping. As of this writing, the DA Environmental Office is considering options, including hiring a contractor to provide the groupings and complete necessary paperwork. The biggest problem right now is the 18 March 1991 deadline for Part 1 requirements.

b. Installations. Nearly all Army installations have facilities which fall under the "industrial category." The impact will be greater for AMC installations, because of their industrial nature, than for other installations. Initially, the individual installations should contact their MACOM environmental offices for guidance on group applications. Also, those installations in non-NPDES authorized states should contact the closest EPA regional office for guidance on general permit coverage. Many installations directed to complete individual applications will not possess in-house abilities to complete sampling and flow monitoring requirements because of inadequate equipment, expertise, manpower, and in some cases - funds.

8. PERMIT REQUIREMENTS.

a. Until the EPA permit guidelines come out, we can only speculate as to what parameters might be regulated. The permits will contain technology based controls based on BAT/BCT considerations or water quality based controls. Much will be resolved when sampling data are collected and analyzed. A major study done by a private group will be used to supplement facility data in developing permit requirements.

b. There are a number of treatment options available to reduce pollutant loadings in storm water discharges. Among them are retention ponds and diking systems. Also, better material management practices can substantially reduce the amount of pollutant loading in storm waters. For those installations which are submitting individual applications, cleaning up material storage areas before sampling is warranted. Levels of pollutants in discharges may be directly related to permit limits.

c. Installations need not take any immediate corrective action if analytical data do not suggest elevated pollutant loads. Conversely, however, installations may need to assess measures if the samples indicated high pollutant loads, and plan to ameliorate the problem. This paper does not go into the various storm water management/control options because it would be premature.

9. END NOTE. As the DA memorandum indicates, USAEHA will provide as much technical guidance to MACOMs and installations as feasible. Please call Michael D. Robison or Richard Valcourt (DSN 584-3289/3816 or 301-671-3289) for additional guidance in meeting the new rules or for clarification of key sections. Onsite help (to meet sampling and flow monitoring requirements) should be requested through MACOM channels. Other sources of guidance on the new rules include USATHAMA (call Judy Timberlake at DSN 584-4714) and the EPA storm water hotline (703-821-4660).



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Environmental Engineer  
Water Quality Engineering Division

APPENDIX A

REFERENCES

1. Final Rule, National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges, 55 Federal Register (FR) 47990, 16 November 1990.
2. Title 40, Code of Federal Regulations (CFR), 1989 rev, Part 122, EPA Administered Permit Programs: The National Pollutant Discharge Elimination System.
3. Title 40, CFR, 1989 rev, Part 123, State Program Requirements.
4. Title 40, CFR, 1989 rev, Part 124, Procedures for Decision Making.
5. Title 40, CFR, 1989 rev, Part 136, Guideline Establishing Test Procedures for the Analysis of Pollutants.
6. Title 40, CFR, 1989 rev, Subpart N, Effluent Guidelines and Standards.
7. Public Law (PL) 94-469, 11 October 1976, Toxic Substances Control act of 1976.
8. PL 94-580, 21 October 1976, Resource Conservation and Recovery Act of 1976, as amended by PL 98-616, 8 November 1984, Hazardous and Solid Waste Amendments of 1984.
9. Memorandum, Department of the Army Environmental Office, ENVR-EP, 17 January 1991, subject: National Pollutant Discharge Elimination System (NPDES) Permit Application Regulations for Storm Water Discharges.

APPENDIX B

SUBPART N REQUIREMENTS (40 CFR 405-461)

The following is a complete list of all industrial categories listed under Subpart N of 40 CFR. Categories in which Army installations may fall are shown in bold. Subparts of categories are shown only if of Army interest. Form 2F requires that industries analyze for any parameter listed under their respective new source performance standards (40 CFR 403 through 471) that is not one of the conventional pollutants listed in Table 2F-2 of Form 2F (see Appendix E). In the list below, the additional parameters are shown to the right of the subpart (parameters in categories not normally applicable to any Army base are not provided). If a subcategory is shown without parameters, it means that no additional parameters are listed in the CFR. Always check with the latest revision of the CFR.

CATEGORY/SUBPART/ADDITIONAL PARAMETERS

405 Dairy Products  
406 Grain Mills  
407 Canned and preserved fruits and vegetables processing  
408 Canned and preserved seafood processing  
409 Sugar processing  
410 Textile mills  
411 Cement manufacturing  
412 Feedlots  
413 **Electroplating** (note: some or all of the listed parameters may not be required, depending on size of facility, see 40 CFR 413)

- A - Common Metals,
- E - Coatings,
- D - Anodizing
- F - Etching,
- G - Electroless, and
- H - Printed Circuit Board: CN, Cu, Ni, Cr, Zn, Pb, Cd, TTO<sup>10</sup>
- B - Precious Metals: CN, Cu, Ni, Cr, Zn, Pb, Cd, Ag, TTO<sup>11</sup>

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<sup>10</sup> Total toxic organics. These are different for each category, Refer to the applicable section of the CFR.

<sup>11</sup> Ibid.

**414 Organic chemicals, plastics, and synthetic fibers**

- F - Commodity Organic Chemicals, and
- G - Bulk Organic Chemicals: Pb, Zn, CN, TTO
- I - Direct Dischargers using Biological Treatment, and
- J - Direct Dischargers not using Biological Treatment:  
Cr, Cu, CN, Pb, Ni, Zn, TTO<sup>12</sup>

**415 Inorganic chemicals**

- F - Chlor-alkali: Hg, Cu, Pb, Ni
- H - Hydrofluoric Acid: Fl, Ni, Zn
- I - Hydrogen Peroxide: CN, TOC (BPT only)
- Q - Sodium Dichromate and Sodium Sulfate: Cr (VI), Ni, Cr (T)
- T - Sodium Sulfite: Cr, Zn
- V - Titanium Dioxide: Cr, Ni

**417 Soap and detergent manufacturing**

**418 Fertilizer manufacturing**

- A - Phosphate
- B - Ammonia
- D - Ammonium Nitrate
- E - Nitric Acid
- F - Ammonium Sulfate

**419 Petroleum refining**

**420 Iron and steel manufacturing**

**421 Nonferrous metals manufacturing**

**422 Phosphate manufacturing**

**423 Steam electric power generating:** Cu, Fe, and any substance used in cooling tower.

**424 Ferroalloy manufacturing**

**425 Leather tanning and finishing**

**426 Glass Manufacturing**

**427 Asbestos Manufacturing**

**428 Rubber Manufacturing**

**429 Timber Products Processing**

**430 Pulp, Paper and Board Mills**

**431 Builders paper and Board Mills**

**432 Meat products**

**433 Metal Finishing**

- A - Metal finishing: Cd, Cr, Cu, Pb, Ni, Ag, Zn, CN, TTO<sup>12</sup>

**434 Coal Mining**

**435 Oil and Gas extraction**

**436 Mineral mining and processing**

**439 Pharmaceutical manufacturing**

**440 Ore mining and dressing:** depends on ore

**443 Paving and Roof Materials**

**446 Paint formulating**

**447 Ink formulating**

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<sup>12</sup> Ibid.

- 454 Gum and wood chemicals manufacturing
- 455 Pesticide chemicals
- 457 Explosives manufacturing
  - A - Manufacturing of Explosives
  - C - Explosives, load, assemble, and pack
- 458 Carbon Black manufacturing
- 459 Photographic: Ag, CN
- 460 Hospital
- 461 Battery manufacturing
- 463 Plastics Molding
- 464 Metals molding and casting
  - A - Aluminum casting,
  - B - Copper casting,
  - C - Ferrous casting, and
  - D - Zinc casting: Cu, Pb, Zn, and phenols
- 465 Coil coating
- 466 Porcelain enameling
- 467 Aluminum forming: Cr, CN, Zn, Al
- 468 Copper forming: Cr, Cu, Pb, Zn, Ni
- 469 Electrical and electronics components
  - A - Semiconductor: TTO<sup>13</sup>, Fl
- 471 Nonferrous metals forming and metal powders
  - C - Nickel-cobalt: Cu, Ni, Fl
  - D - Precious Metals: Cu, Cd, Fl, Ag, CN
  - E - Refractory Metals: Cu, Ni, Fl, Mb
  - F - Titanium Forming: CN, Pb, Zn, Fl
  - H - Zinc Forming: Cr, Cu, CN, Zn

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<sup>13</sup> Ibid.

APPENDIX C

STANDARD INDUSTRIAL CLASSIFICATION

MAJOR GROUP NO./INDUSTRY GROUP NO.<sup>14</sup>

10 METAL MINING

- 101 IRON ORES
- 102 COPPER ORES
- 103 LEAD AND ZINC
- 104 GOLD AND SILVER ORES
- 106 FERROALLOY ORES, EXCEPT VANADIUM
- 109 MISCELLANEOUS METAL ORES

12 COAL MINING

13 OIL AND GAS EXTRACTION

14 MINING AND QUARRYING OF NONMETALLIC MINERALS, EXCEPT FUELS

141 DIMENSION STONE

144 SAND GRAVEL

145 CLAY, CERAMIC, AND REFRACTORY MINERALS

147 CHEMICAL AND FERTILIZER MINERAL MINING

148 NONMETALLIC MINERALS SERVICES, EXCEPT FUELS

149 MISCELLANEOUS NONMETALLIC MINERALS, EXCEPT FUELS

20 FOOD AND KINDRED PRODUCTS

21 TOBACCO PRODUCTS

22 TEXTILE MILL PRODUCTS

23 APPAREL AND OTHER FINISHED PRODUCTS MADE FROM FABRICS AND SIMILAR MATERIALS

24 LUMBER AND WOOD PRODUCTS, EXCEPT FURNITURE

25 FURNITURE AND FIXTURES

26 PAPER AND ALLIED PRODUCTS

27 PRINTING, PUBLISHING, AND ALLIED INDUSTRIES

28 CHEMICALS AND ALLIED PRODUCTS

281 INDUSTRIAL INORGANIC CHEMICALS

286 INDUSTRIAL ORGANIC CHEMICALS

289 MISCELLANEOUS CHEMICAL PRODUCTS

2892 EXPLOSIVES

2899 CHEMICALS AND CHEMICAL PREPARATIONS, NOT ELSEWHERE CLASSIFIED

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<sup>14</sup> Industry codes shown only if applicable to Army facilities. Otherwise just the Major code is shown.

Water Quality Information Paper No. 36

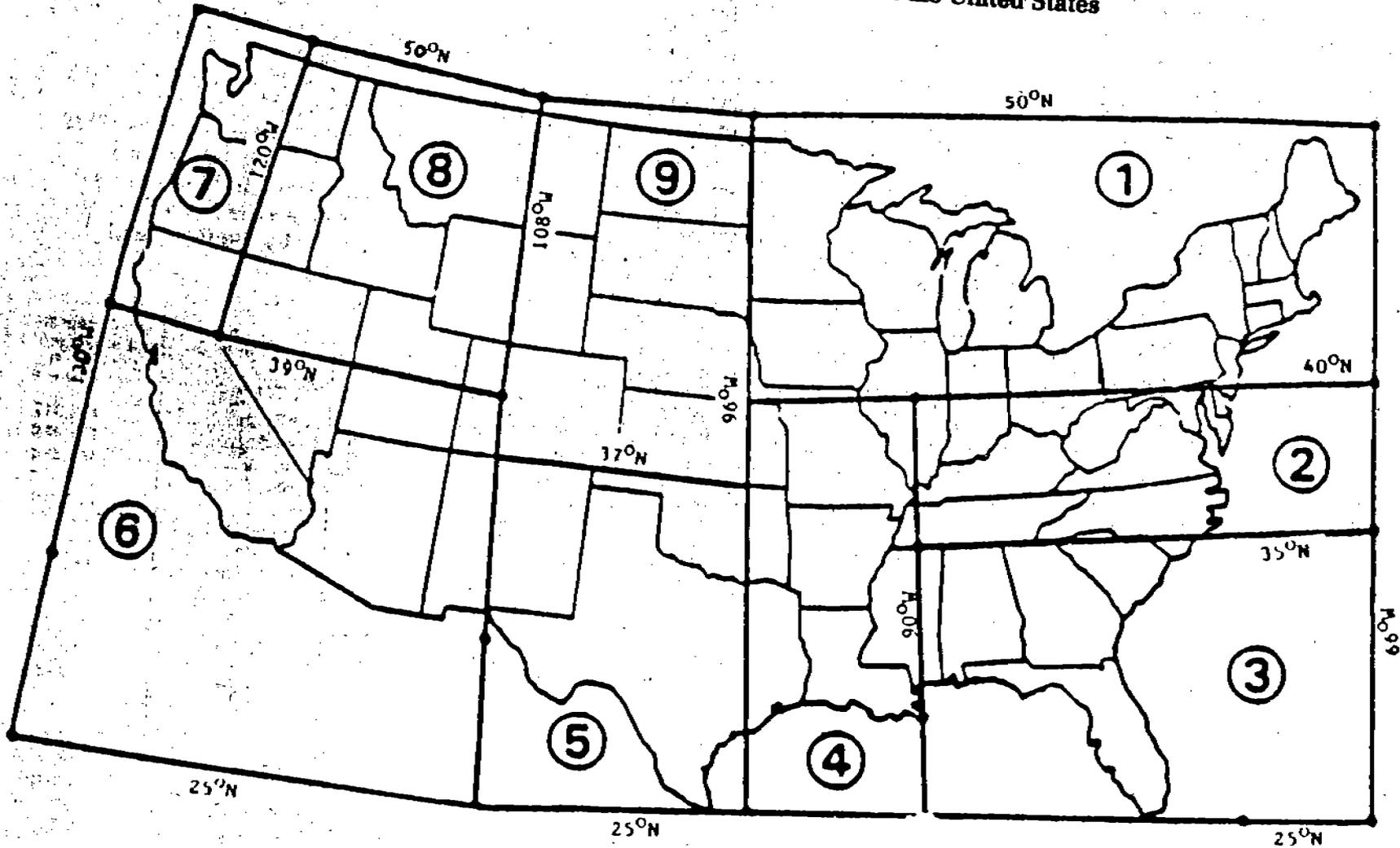
- 29 PETROLEUM REFINING AND RELATED INDUSTRIES
- 30 RUBBER AND MISCELLANEOUS PLASTICS PRODUCTS
- 31 LEATHER AND LEATHER PRODUCTS
- 32 STONE, CLAY, GLASS, AND CONCRETE PRODUCTS
- 33 PRIMARY METAL INDUSTRIES
  - 331 STEEL WORKS, BLAST FURNACES, ROLLING AND FINISHING MILLS
  - 332 IRON AND STEEL FOUNDRIES
  - 333 PRIMARY SMELTING AND REFINING OF NONFERROUS METALS
  - 334 SECONDARY SMELTING AND REFINING OF NONFERROUS METALS
  - 335 ROLLING, DRAWING, AND EXTRUDING OF NONFERROUS METALS
  - 336 NONFERROUS FOUNDRIES (CASTINGS)
  - 339 MISCELLANEOUS PRIMARY METAL PRODUCTS
- 34 FABRICATED METAL PRODUCTS, EXCEPT MACHINERY AND TRANSPORTATION EQUIPMENT
  - 346 METAL FORGING AND STAMPING
  - 347 COATING, ENGRAVING, AND ALLIED SERVICES
  - 348 ORDINANCE AND ACCESSORIES, EXCEPT VEHICLES AND GUIDED MISSILES
    - 3482 SMALL ARMS AMMUNITION
    - 3483 AMMUNITION, EXCEPT FOR SMALL ARMS
    - 3484 SMALL ARMS
    - 3489 ORDINANCE AND ACCESSORIES, NOT ELSEWHERE CLASSIFIED
- 35 INDUSTRIAL AND COMMERCIAL MACHINERY AND COMPUTER EQUIPMENT
- 36 ELECTRONIC AND OTHER ELECTRICAL EQUIPMENT AND COMPONENTS, EXCEPT COMPUTER EQUIPMENT
- 37 TRANSPORTATION EQUIPMENT
  - 371 MOTOR VEHICLES AND MOTOR VEHICLE EQUIPMENT
  - 372 AIRCRAFT AND PARTS
  - 379 MISCELLANEOUS TRANSPORTATION EQUIPMENT
    - 3795 TANKS AND TANK COMPONENTS
- 38 MEASURING, ANALYZING, AND CONTROLLING INSTRUMENTS; PHOTOGRAPHIC, MEDICAL AND OPTICAL GOODS; WATCHES AND CLOCKS
  - 381 SEARCH, DETECTION, NAVIGATION, GUIDANCE AERONAUTICAL AND NAUTICAL SYSTEMS, INSTRUMENTS AND EQUIPMENT
- 39 MISCELLANEOUS MANUFACTURING INDUSTRIES
- 40 RAILROAD TRANSPORTATION
  - 401 RAILROADS

Water Quality Information Paper No. 36

- 41 LOCAL AND SUBURBAN TRANSIT AND INTERURBAN HIGHWAY PASSENGER  
TRANSPORTATION
- 42 MOTOR FREIGHT TRANSPORTATION AND WAREHOUSING
  - 421 TRUCKING AND COURIER SERVICES, EXCEPT AIR
  - 423 TERMINAL AND JOINT TERMINAL MAINTENANCE FACILITIES FOR  
MOTOR FREIGHT TRANSPORTATION
- 43 UNITED STATES POSTAL SERVICE
- 44 WATER TRANSPORTATION
- 45 TRANSPORTATION BY AIR
  - 458 AIRPORTS, FLYING FIELDS, AND TERMINAL SERVICES
- 51 WHOLESALE TRADE NONDURABLE GOODS
  - 517 PETROLEUM AND PETROLEUM PRODUCTS
    - 5171 PETROLEUM BULK STATIONS AND TERMINALS

APPENDIX D  
PRECIPITATION ZONES

Appendix E to Part 122—Rainfall Zones of the United States



D-2

APPENDIX E

FORM 2F

EPA ID Number (copy from Item 1 of Form 1)

Form Approved, OMB No. 2040-0086

Approval expires 5/31/92

Please print or type in the unshaded areas only

Form 2F NPDES



United States Environmental Protection Agency Washington, DC 20460

Application for Permit To Discharge Stormwater Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 26.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., SW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

Table with 4 columns: A. Outfall Number (list), B. Latitude, C. Longitude, D. Receiving Water (name)

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

Table with 4 main columns: 1. Identification of Conditions, Agreements, Etc.; 2. Affected Outfalls (number, source of discharge); 3. Brief Description of Project; 4. Final Compliance Date (a. req., b. proj.)

B. You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility.

Continued from the Front

<b>IV. Narrative Description of Pollutant Sources</b>					
A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.					
Outfall Number	Area of Impervious Surface <i>(provide units)</i>	Total Area Drained <i>(provide units)</i>	Outfall Number	Area of Impervious Surface <i>(provide units)</i>	Total Area Drained <i>(provide units)</i>
B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed, in the last three years, to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.					
C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.					
Outfall Number	Treatment	List Codes from Table 2F-1			
<b>V. Nonstormwater Discharges</b>					
A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharges from these outfall(s) are identified in either an accompanying Form 2C or Form 2E application for the outfall.					
Name and Official Title <i>(type or print)</i>		Signature		Date Signed	
B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.					
<b>VI. Significant Leaks or Spills</b>					
Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.					

EPA ID Number (copy from item 1 of Form 1)

Continued from Page 2

**VII. Discharge Information**

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Tables VII-A, VII-B, and VII-C are included on separate sheets numbered VII-1 and VII-2.

E: Potential discharges not covered by analysis - Is any pollutant listed in Table 2F-2 a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

Yes (list all such pollutants below)

No (go to Section VIII)

**VIII. Biological Toxicity Testing Data**

Yes (list results below)

No (go to Section IX)

**IX. Contract Analysis Information**

Yes

No (go to Section X)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed

**X. Certification**

A. Name & Official Title (type or print)	B. Area Code and Phone No.
C. Signature	D. Date Signed





## Instructions - Form 2F

### Application for Permit to Discharge Storm Water Associated with Industrial Activity

#### Who Must File Form 2F

Form 2F must be completed by operators of facilities which discharge storm water associated with industrial activity or by operators of storm water discharges that EPA is evaluating for designation as a significant contributor of pollutants to waters of the United States, or as contributing to a violation of a water quality standard.

Operators of discharges which are composed entirely of storm water must complete Form 2F (EPA Form 3510-2F) in conjunction with Form 1 (EPA Form 3510-1).

Operators of discharges of storm water which are combined with process wastewater (process wastewater is water that comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, waste product, or wastewater) must complete and submit Form 2F, Form 1, and Form 2C (EPA Form 3510-2C).

Operators of discharges of storm water which are combined with nonprocess wastewater (nonprocess wastewater includes noncontact cooling water and sanitary wastes which are not regulated by effluent guidelines or a new source performance standard, except discharges by educational, medical, or commercial chemical laboratories) must complete Form 1, Form 2F, and Form 2E (EPA Form 3510-2E).

Operators of new sources or new discharges of storm water associated with industrial activity which will be combined with other nonstormwater new sources or new discharges must submit Form 1, Form 2F, and Form 2D (EPA Form 3510-2D).

#### Where to File Applications

The application forms should be sent to the EPA Regional Office which covers the State in which the facility is located. Form 2F must be used only when applying for permits in States where the NPDES permits program is administered by EPA. For facilities located in States which are approved to administer the NPDES permits program, the State environmental agency should be contacted for proper permit application forms and instructions.

Information on whether a particular program is administered by EPA or by a State agency can be obtained from your EPA Regional Office. Form 1, Table 1 of the "General Instructions" lists the addresses of EPA Regional Offices and the States within the jurisdiction of each Office.

#### Completeness

Your application will not be considered complete unless you answer every question on this form and on Form 1. If an item does not apply to you, enter "NA" (for not applicable) to show that you considered the question.

#### Public Availability of Submitted Information

You may not claim as confidential any information required by this form or Form 1, whether the information is reported on the forms or in an attachment. Section 402(j) of the Clean Water Act requires that all permit applications will be available to the public. This information will be made available to the public upon request.

Any information you submit to EPA which goes beyond that required by this form, Form 1, or Form 2C you may claim as confidential, but claims for information which are effluent data will be denied.

If you do not assert a claim of confidentiality at the time of submitting the information, EPA may make the information public without further notice to you. Claims of confidentiality will be handled in accordance with EPA's business confidentiality regulations at 40 CFR Part 2.

#### Definitions

All significant terms used in these instructions and in the form are defined in the glossary found in the General Instructions which accompany Form 1.

#### EPA ID Number

Fill in your EPA Identification Number at the top of each odd-numbered page of Form 2F. You may copy this number directly from Item I of Form 1.

**Item I**

You may use the map you provided for **Item XI** of Form 1 to determine the latitude and longitude of each of your outfalls and the name of the receiving water.

**Item II-A**

If you check "yes" to this question, complete all parts of the chart, or attach a copy of any previous submission you have made to EPA containing the same information.

**Item II-B**

You are not required to submit a description of future pollution control projects if you do not wish to or if none is planned.

**Item III**

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including:

each of its drainage and discharge structures;

the drainage area of each storm water outfall;

paved areas and building within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied;

each of its hazardous waste treatment, storage or disposal facilities (including each area not required to have a RCRA permit which is used for accumulating hazardous waste for less than 90 days under 40 CFR 262.34);

each well where fluids from the facility are injected underground; and

springs, and other surface water bodies which receive storm water discharges from the facility.

**Item IV-A**

For each outfall, provide an estimate of the area drained by the outfall which is covered by impervious surfaces. For the purpose of this application, impervious surfaces are surfaces where storm water runs off at rates that are significantly higher than background rates (e.g., predevelopment levels) and include paved areas, building roofs, parking lots, and roadways. Include an estimate of the total area (including all impervious and pervious areas) drained by each outfall. The site map required under item III can be used to estimate the total area drained by each outfall.

**Item IV-B**

Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored, or disposed in a manner to allow exposure to storm water; method of treatment, storage or disposal of these materials; past and present materials management practices employed, in the last three years, to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied. Significant materials should be identified by chemical name, form (e.g., powder, liquid, etc.), and type of container or treatment unit. Indicate any materials treated, stored, or disposed of together. "Significant materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

**Item IV-C**

For each outfall, structural controls include structures which enclose material handling or storage areas, covering materials, berms, dikes, or diversion ditches around manufacturing, production, storage or treatment units, retention ponds, etc. Nonstructural controls include practices such as spill prevention plans, employee training, visual inspections, preventive maintenance, and housekeeping measures that are used to prevent or minimize the potential for releases of pollutants.

**Item V**

Provide a certification that all outfalls that should contain storm water discharges associated with industrial activity have been tested or evaluated for the presence of non-storm water discharges which are not covered by an NPDES permit. Tests for such non-storm water discharges may include smoke tests, fluorometric dye tests, analysis of accurate schematics, as well as other appropriate tests. Part B must include a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test. All non-storm water discharges must be identified in a Form 2C or Form 2E which must accompany this application (see beginning of instructions under section titled "Who Must File Form 2F" for a description of when Form 2C and Form 2E must be submitted).

**Item VI**

Provide a description of existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years.

**Item VII-A, B, and C**

These items require you to collect and report data on the pollutants discharged for each of your outfalls. Each part of this item addresses a different set of pollutants and must be completed in accordance with the specific instructions for that part. The following general instructions apply to the entire item.

**General Instructions**

Part A requires you to report at least one analysis for each pollutant listed. Parts B and C require you to report analytical data in two ways. For some pollutants addressed in Parts B and C, if you know or have reason to know that the pollutant is present in your discharge, you may be required to list the pollutant and test (sample and analyze) and report the levels of the pollutants in your discharge. For all other pollutants addressed in Parts B and C, you must list the pollutant if you know or have reason to know that the pollutant is present in the discharge, and either report quantitative data for the pollutant or briefly describe the reasons the pollutant is expected to be discharged. (See specific instructions on the form and below for Parts A through C.) Base your determination that a pollutant is present in or absent from your discharge on your knowledge of your raw materials, material management practices, maintenance chemicals, history of spills and releases, intermediate and final products and byproducts, and any previous analyses known to you of your effluent or similar effluent.

**A. Sampling:** The collection of the samples for the reported analyses should be supervised by a person experienced in performing sampling of industrial wastewater or storm water discharges. You may contact EPA or your State permitting authority for detailed guidance on sampling techniques and for answers to specific questions. Any specific requirements contained in the applicable analytical methods should be followed for sample containers, sample preservation, holding times, the collection of duplicate samples, etc. The time when you sample should be representative, to the extent feasible, of your treatment system operating properly with no system upsets. Samples should be collected from the center of the flow channel, where turbulence is at a maximum, at a site specified in your present permit, or at any site adequate for the collection of a representative sample.

For pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, and fecal coliform, grab samples taken during the first 30 minutes (or as soon thereafter as practicable) of the discharge must be used (you are not required to analyze a flow-weighted composite for these parameters). For all other pollutants both a grab sample collected during the first 30 minutes (or as soon thereafter as practicable) of the discharge and a flow-weighted composite sample must be analyzed. However, a minimum of one grab sample may be taken for effluents from holding ponds or other impoundments with a retention period of greater than 24 hours.

All samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where feasible, the variance in the duration of the event and the total rainfall of the event should not exceed 50 percent from the average or median rainfall event in that area.

A grab sample shall be taken during the first thirty minutes of the discharge (or as soon thereafter as practicable), and a flow-weighted composite shall be taken for the entire event or for the first three hours of the event.

Grab and composite samples are defined as follows:

**Grab sample:** An individual sample of at least 100 milliliters collected during the first thirty minutes (or as soon thereafter as practicable) of the discharge. This sample is to be analyzed separately from the composite sample.

**Flow-Weighted Composite sample:** A flow-weighted composite sample may be taken with a continuous sampler that proportions the amount of sample collected with the flow rate or as a combination of a minimum of three sample aliquots taken in each hour of discharge for the entire event or for the first three hours of the event, with each aliquot being at least 100 milliliters and collected with a minimum period of fifteen minutes between aliquot collections. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. Where GC/MS Volatile Organic Analysis (VOA) is required, aliquots must be combined in the laboratory immediately before analysis. Only one analysis for the composite sample is required.

Data from samples taken in the past may be used, provided that:

All data requirements are met;

Sampling was done no more than three years before submission; and

All data are representative of the present discharge.

Among the factors which would cause the data to be unrepresentative are significant changes in production level, changes in raw materials, processes, or final products, and changes in storm water treatment. When the Agency promulgates new analytical methods in 40 CFR Part 136, EPA will provide information as to when you should use the new methods to generate data on your discharges. Of course, the Director may request additional information, including current quantitative data, if they determine it to be necessary to assess your discharges. The Director may allow or establish appropriate site-specific sampling procedures or requirements, including sampling locations, the season in which the sampling takes place, the minimum duration between the previous measurable storm event and the storm event sampled, the minimum or maximum level of precipitation required for an appropriate storm event, the form of precipitation sampled (snow melt or rainfall), protocols for collecting samples under 40 CFR Part 136, and additional time for submitting data on a case-by-case basis.

- B. Reporting:** All levels must be reported as concentration and as total mass. You may report some or all of the required data by attaching separate sheets of paper instead of filling out pages VII-1 and VII-2 if the separate sheets contain all the required information in a format which is consistent with pages VII-1 and VII-2 in spacing and in identification of pollutants and columns. Use the following abbreviations in the columns headed "Units."

Concentration		Mass	
ppm	parts per million	lbs	pounds
mg/l	milligrams per liter	ton	tons (English tons)
ppb	parts per billion	mg	milligrams
ug/l	micrograms per liter	g	grams
kg	kilograms	T	tonnes (metric tons)

All reporting of values for metals must be in terms of "total recoverable metal," unless:

- (1) An applicable, promulgated effluent limitation or standard specifies the limitation for the metal in dissolved, valent, or total form; or
- (2) All approved analytical methods for the metal inherently measure only its dissolved form (e.g., hexavalent chromium); or
- (3) The permitting authority has determined that in establishing case-by-case limitations it is necessary to express the limitations on the metal in dissolved, valent, or total form to carry out the provisions of the CWA. If you measure only one grab sample and one flow-weighted composite sample for a given outfall, complete only the "Maximum Values" columns and insert "1" into the "Number of Storm Events Sampled" column. The permitting authority may require you to conduct additional analyses to further characterize your discharges.

If you measure more than one value for a grab sample or a flow-weighted composite sample for a given outfall and those values are representative of your discharge, you must report them. You must describe your method of testing and data analysis. You also must determine the average of all values within the last year and report the concentration mass under the "Average Values" columns, and the total number of storm events sampled under the "Number of Storm Events Sampled" columns.

- C. **Analysis:** You must use test methods promulgated in 40 CFR Part 136; however, if none has been promulgated for a particular pollutant, you may use any suitable method for measuring the level of the pollutant in your discharge provided that you submit a description of the method or a reference to a published method. Your description should include the sample holding time, preservation techniques, and the quality control measures which you used. If you have two or more substantially identical outfalls, you may request permission from your permitting authority to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If your request is granted by the permitting authority, on a separate sheet attached to the application form, identify which outfall you did test, and describe why the outfalls which you did not test are substantially identical to the outfall which you did test.

#### Part VII-A

Part VII-A must be completed by all applicants for all outfalls who must complete Form 2F.

Analyze a grab sample collected during the first thirty minutes (or as soon thereafter as practicable) of the discharge and flow-weighted composite samples for all pollutants in this Part, and report the results except use only grab samples for pH and oil and grease. See discussion in General Instructions to Item VII for definitions of grab sample collected during the first thirty minutes of discharge and flow-weighted composite sample. The "Average Values" column is not compulsory but should be filled out if data are available.

#### Part VII-B

List all pollutants that are limited in an effluent guideline which the facility is subject to (see 40 CFR Subchapter N to determine which pollutants are limited in effluent guidelines) or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See discussion in General Instructions to Item VII for definitions of grab sample collected during the first thirty minutes (or as soon thereafter as practicable) of discharge and flow-weighted composite sample. The "Average Values" column is not compulsory but should be filled out if data are available.

Analyze a grab sample collected during the first thirty minutes of the discharge and flow-weighted composite samples for all pollutants in this Part, and report the results, except as provided in the General Instructions.

#### Part VII-C

Part VII-C must be completed by all applicants for all outfalls which discharge storm water associated with industrial activity, or that EPA is evaluating for designation as a significant contributor of pollutants to waters of the United States, or as contributing to a violation of a water quality standard. Use both a grab sample and a composite sample for all pollutants you analyze for in this part except use grab samples for residual chlorine and fecal coliform. The "Average Values" column is not compulsory but should be filled out if data are available. Part C requires you to address the pollutants in Table 2F-2, 2F-3, and 2F-4 for each outfall. Pollutants in each of these Tables are addressed differently.

**Table 2F-2:** For each outfall, list all pollutants in Table 2F-2 that you know or have reason to believe are discharged (except pollutants previously listed in Part VII-B). If a pollutant is limited in an effluent guideline limitation which the facility is subject to (e.g., use of TSS as an indicator to control the discharge of iron and aluminum), the pollutant should be listed in Part VII-B. If a pollutant in table 2F-2 is indirectly limited by an effluent guideline limitation through an indicator, you must analyze for it and report data in Part VII-C. For other pollutants listed in Table 2F-2 (those not limited directly or indirectly by an effluent limitation guideline), that you know or have reason to believe are discharges, you must either report quantitative data or briefly describe the reasons the pollutant is expected to be discharged.

**Table 2F-3:** For each outfall, list all pollutants in Table 2F-3 that you know or have reason to believe are discharged. For every pollutant in Table 2F-3 expected to be discharged in concentrations of 10 ppb or greater, you must submit quantitative data. For acrolein, acrylonitrile, 2,4 dinitrophenol, and 2-methyl-4,6 dinitrophenol, you must submit quantitative data if any of these four pollutants is expected to be discharged

in concentrations of 100 ppb or greater. For every pollutant expected to be discharged in concentrations less than 10 ppb (or 100 ppb for the four pollutants listed above), then you must either submit quantitative data or briefly describe the reasons the pollutant is expected to be discharged.

**Small Business Exemption** - If you are a "small business," you are exempt from the reporting requirements for the organic toxic pollutants listed in Table 2F-3. There are two ways in which you can qualify as a "small business". If your facility is a coal mine, and if your probable total annual production is less than 100,000 tons per year, you may submit past production data or estimated future production (such as a schedule of estimated total production under 30 CFR 795.14(c)) instead of conducting analyses for the organic toxic pollutants. If your facility is not a coal mine, and if your gross total annual sales for the most recent three years average less than \$100,000 per year (in second quarter 1980 dollars), you may submit sales data for those years instead of conducting analyses for the organic toxic pollutants. The production or sales data must be for the facility which is the source of the discharge. The data should not be limited to production or sales for the process or processes which contribute to the discharge, unless those are the only processes at your facility. For sales data, in situations involving intracorporate transfer of goods and services, the transfer price per unit should approximate market prices for those goods and services as closely as possible. Sales figures for years after 1980 should be indexed to the second quarter of 1980 by using the gross national product price deflator (second quarter of 1980 = 100). This index is available in National Income and Product Accounts of the United States (Department of Commerce, Bureau of Economic Analysis).

**Table 2F-4:** For each outfall, list any pollutant in Table 2F-4 that you know or believe to be present in the discharge and explain why you believe it to be present. No analysis is required, but if you have analytical data, you must report them. Note: Under 40 CFR 117.12(a)(2), certain discharges of hazardous substances (listed at 40 CFR 177.21 or 40 CFR 302.4) may be exempted from the requirements of section 311 of CWA, which establishes reporting requirements, civil penalties, and liability for cleanup costs for spills of oil and hazardous substances. A discharge of a particular substance may be exempted if the origin, source, and amount of the discharged substances are identified in the NPDES permit application or in the permit, if the permit contains a requirement for treatment of the discharge, and if the treatment is in place. To apply for an exclusion of the discharge of any hazardous substance from the requirements of section 311, attach additional sheets of paper to your form, setting forth the following information:

1. The substance and the amount of each substance which may be discharged.
2. The origin and source of the discharge of the substance.
3. The treatment which is to be provided for the discharge by:
  - a. An onsite treatment system separate from any treatment system treating your normal discharge;
  - b. A treatment system designed to treat your normal discharge and which is additionally capable of treating the amount of the substance identified under paragraph 1 above; or
  - c. Any combination of the above.

See 40 CFR 117.12(a)(2) and (c), published on August 29, 1979, in 44 FR 50766, or contact your Regional Office (Table 1 on Form 1, Instructions), for further information on exclusions from section 311.

#### Part VII-D

If sampling is conducted during more than one storm event, you only need to report the information requested in Part VII-D for the storm event(s) which resulted in any maximum pollutant concentration reported in Part VII-A, VII-B, or VII-C.

Provide flow measurements or estimates of the flow rate, and the total amount of discharge for the storm event(s) sampled, the method of flow measurement, or estimation. Provide the data and duration of the storm event(s) sampled, rainfall measurements, or estimates of the storm event which generated the sampled runoff and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event.

#### Part VII-E

List any toxic pollutant listed in Tables 2F-2, 2F-3, or 2F-4 which you currently use or manufacture as an intermediate or final product or byproduct. In addition, if you know or have reason to believe that 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) is discharged or if you use or manufacture 2,4,5-trichlorophenoxy acetic

acid (2,4,5-T); 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5-TP); 2-(2,4,5-trichlorophenoxy) ethyl, 2,2-dichloropropionate (Erbon); O,O-dimethyl O-(2,4,5-trichlorophenoxy) phosphorothioate (Ronnel); 2,4,5-trichlorophenol (TCP); or hexachlorophene (HCP); then list TCDD. The Director may waive or modify the requirement if you demonstrate that it would be unduly burdensome to identify each toxic pollutant and the Director has adequate information to issue your permit. You may not claim this information as confidential; however, you do not have to distinguish between use or production of the pollutants or list the amounts.

#### Item VIII

Self explanatory. The permitting authority may ask you to provide additional details after your application is received.

#### Item X

The Clean Water Act provides for severe penalties for submitting false information on this application form.

Section 309(c)(4) of the Clean Water Act provides that "Any person who knowingly makes any false material statement, representation, or certification in any application, . . . shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than 2 years, or by both. If a conviction of such person is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or by both." 40 CFR Part 122.22 requires the certification to be signed as follows:

(A) For a corporation: by a responsible corporate official. For purposes of this section, a responsible corporate official means (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25,000,000 (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

Note: EPA does not require specific assignments or delegation of authority to responsible corporate officers identified in 122.22(a)(1)(i). The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate position under 122.22(a)(1)(ii) rather than to specific individuals.

(B) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively, or

(C) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

**Table 2F-1**  
**Codes for Treatment Units**

<b>Physical Treatment Processes</b>			
1-A	Ammonia Stripping	1-M	Grit Removal
1-B	Dialysis	1-N	Microstraining
1-C	Diatomaceous Earth Filtration	1-O	Mixing
1-D	Distillation	1-P	Moving Bed Filters
1-E	Electrodialysis	1-Q	Multimedia Filtration
1-F	Evaporation	1-R	Rapid Sand Filtration
1-G	Flocculation	1-S	Reverse Osmosis (Hyperfiltration)
1-H	Flotation	1-T	Screening
1-I	Foam Fractionation	1-U	Sedimentation (Settling)
1-J	Freezing	1-V	Slow Sand Filtration
1-K	Gas-Phase Separation	1-W	Solvent Extraction
1-L	Grinding (Comminutors)	1-X	Sorption
<b>Chemical Treatment Processes</b>			
2-A	Carbon Adsorption	2-G	Disinfection (Ozone)
2-B	Chemical Oxidation	2-H	Disinfection (Other)
2-C	Chemical Precipitation	2-I	Electrochemical Treatment
2-D	Coagulation	2-J	Ion Exchange
2-E	Dechlorination	2-K	Neutralization
2-F	Disinfection (Chlorine)	2-L	Reduction
<b>Biological Treatment Processes</b>			
3-A	Activated Sludge	3-E	Pre-Aeration
3-B	Aerated Lagoons	3-F	Spray Irrigation/Land Application
3-C	Anaerobic Treatment	3-G	Stabilization Ponds
3-D	Nitrification-Denitrification	3-H	Trickling Filtration
<b>Other Processes</b>			
4-A	Discharge to Surface Water	4-C	Reuse/Recycle of Treated Effluent
4-B	Ocean Discharge Through Outfall	4-D	Underground Injection
<b>Sludge Treatment and Disposal Processes</b>			
5-A	Aerobic Digestion	5-M	Heat Drying
5-B	Anaerobic Digestion	5-N	Heat Treatment
5-C	Belt Filtration	5-O	Incineration
5-D	Centrifugation	5-P	Land Application
5-E	Chemical Conditioning	5-Q	Landfill
5-F	Chlorine Treatment	5-R	Pressure Filtration
5-G	Composting	5-S	Pyrolysis
5-H	Drying Beds	5-T	Sludge Lagoons
5-I	Elutriation	5-U	Vacuum Filtration
5-J	Flotation Thickening	5-V	Vibration
5-K	Freezing	5-W	Wet Oxidation
5-L	Gravity Thickening		

Table 2F-2

**Conventional and Nonconventional Pollutants Required To Be Tested by Existing Discharger if Expected To Be Present**

Bromide  
Chlorine, Total Residual  
Color  
Fecal Coliform  
Fluoride  
Nitrate-Nitrite  
Nitrogen, Total Kjeldahl  
Oil and Grease  
Phosphorus, Total Radioactivity  
Sulfate  
Sulfide  
Sulfite  
Surfactants  
Aluminum, Total  
Barium, Total  
Boron, Total  
Cobalt, Total  
Iron, Total  
Magnesium, Total  
Molybdenum, Total  
Magnesium, Total  
Tin, Total  
Titanium, Total

**Table 2F-3**  
**Toxic pollutants required to be**  
**Identified by applicant if expected to be present**

Toxic Pollutants and Total Phenol		
Antimony, Total	Copper, Total	Silver, Total
Arsenic, Total	Lead, Total	Thallium, Total
Beryllium, Total	Mercury, Total	Zinc, Total
Cadmium, Total	Nickel, Total	Cyanide, Total
Chromium, Total	Selenium, Total	Phenols, Total
<b>GC/MS Fraction Volatile Compounds</b>		
Acrolein	Dichlorobromomethane	1,1,2,2-Tetrachloroethane
Acrylonitrile	1,1-Dichloroethane	Tetrachloroethylene
Benzene	1,2-Dichloroethane	Toluene
Bromoform	1,1-Dichloroethylene	1,2-Trans-Dichloroethylene
Carbon Tetrachloride	1,2-Dichloropropane	1,1,1-Trichloroethane
Chlorobenzene	1,3-Dichloropropylene	1,1,2-Trichloroethane
Chlorodibromomethane	Ethylbenzene	Trichloroethylene
Chloroethane	Methyl Bromide	Vinyl Chloride
2-Chloroethylvinyl Ether	Methyl Chloride	
Chloroform	Methylene Chloride	
<b>Acid Compounds</b>		
2-Chlorophenol	2,4-Dinitrophenol	Pentachlorophenol
2,4-Dichlorophenol	2-Nitrophenol	Phenol
2,4-Dimethylphenol	4-Nitrophenol	2,4,6-Trichlorophenol
4,6-Dinitro-O-Cresol	p-Chloro-M-Cresol	
<b>Base/Neutral</b>		
Acenaphthene	2-Chloronaphthalene	Fluoranthene
Acenaphthylene	4-Chlorophenyl Phenyl Ether	Fluorene
Anthracene	Chrysene	Hexachlorobenzene
Benzidine	Dibenzo(a,h)anthracene	Hexachlorobutadiene
Benzo(a)anthracene	1,2-Dichlorobenzene	Hexachloroethane
Benzo(a)pyrene	1,3-Dichlorobenzene	Indeno(1,2,3-cd)pyrene
2,4-Benzofluoranthene	1,4-Dichlorobenzene	Isophorone
Benzo(ghi)perylene	3,3'-Dichlorobenzidine	Naphthalene
Benzo(k)fluoranthene	Diethyl Phthalate	Nitrobenzene
Bis(2-chloroethoxy)methane	Dimethyl Phthalate	N-Nitrosodimethylamine
Bis(2-chloroethyl)ether	Di-N-Butyl Phthalate	N-Nitrosodi-N-Propylamine
Bis(2-chloroisopropyl)ether	2,4-Dinitrotoluene	N-Nitrosociphenylamine
Bis(2-ethylhexyl)phthalate	2,6-Dinitrotoluene	Phenanthrene
4-Bromophenyl Phenyl Ether	Di-N-Octylphthalate	Pyrene
Butylbenzyl Phthalate	1,2-Diphenylhydrazine (as Azobenzene)	1,2,4-Trichlorobenzene
<b>Pesticides</b>		
Aldrin	Dieldrin	PCB-1254
Alpha-BHC	Alpha-Endosulfan	PCB-1221
Beta-BHC	Beta-Endosulfan	PCB-1232
Gamma-BHC	Endosulfan Sulfate	PCB-1248
Delta-BHC	Endrin	PCB-1260
Chlordane	Endrin Aldehyde	PCB-1016
4,4'-DDT	Heptachlor	Toxaphene
4,4'-DDE	Heptachlor Epoxide	
4,4'-DDD	PCB-1242	

**Table 2F-4**  
**Hazardous substances required to be**  
**identified by applicant if expected to be present**

## Toxic Pollutant

## Asbestos

## Hazardous Substances

Acetaldehyde	Dinitrobenzene	Napthenic acid
Allyl alcohol	Diquat	Nitrotoluene
Allyl chloride	Disulfoton	Parathion
Amyl acetate	Duron	Phenolsulfonate
Aniline	Epichlorohydrin	Phosgene
Benzonitrile	Ethion	Propargite
Benzyl chloride	Ethylene diamine	Propylene oxide
Butyl acetate	Ethylene dibromide	Pyrethrins
Butylamine	Formaldehyde	Quinoline
Carbaryl	Furfural	Resorcinol
Carbofuran	Guthion	Strontium
Carbon disulfide	Isoprene	Strychnine
Chlorpyrifos	Isopropanolamine	Styrene
Coumaphos	Kelthane	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)
Cresol	Kepone	TDE (Tetrachlorodiphenyl ethane)
Crotonaldehyde	Malathion	2,4,5-TP [2-(2,4,5-Trichlorophenoxy) propanoic acid]
Cyclohexane	Mercaptodimethur	Trichlorofan
2,4-D (2,4-Dichlorophenoxyacetic acid)	Methoxychlor	Triethylamine
Diazinon	Methyl mercaptan	Trimethylamine
Dicamba	Methyl methacrylate	Uranium
Dichlobenil	Methyl parathion	Vanadium
Dichlone	Mevinphos	Vinyl acetate
2,2-Dichloropropionic acid	Mexacarbate	Xylene
Dichlorvos	Monoethyl amine	Xylenol
Diethyl amine	Monomethyl amine	Zirconium
Dimethyl amine	Naled	

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APPENDIX F  
DA MEMORANDUM



DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF ENGINEERS  
WASHINGTON, D.C. 20310-2600

REPLY TO  
ATTENTION OF

ENVR-EP (200-1a)

S: 8 Mar 91

17 JAN 1991

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: National Pollutant Discharge Elimination System (NPDES)  
Permit Application Regulations for Storm Water Discharges

1. Reference.

a. Federal Register, Volume 55, Number 222, November 16, 1990, pages 47990-48091.

b. Message, USATHAMA, CETHA-EC, DTG 311525Z Dec 90, subject: Environmental Alert - NPDES Permit Application Regulations for Storm Water Discharges; Final Rule.

2. By reference 1a, the U.S. Environmental Protection Agency (EPA) recently promulgated final NPDES permit application regulations for storm water discharges. The final rules address permit application requirements for storm water discharges associated with industrial activities, discharges from municipal separate storm sewer systems serving a population of 100,000 or greater, and discharges for which the EPA Administrator or the State determines that the storm water discharge contributes to a violation of the water quality standard or is a significant contributor of pollutants to the waters of the United States.

3. Reference 1b, provided you with a summary of reference 1a as it affects Army installations and facilities. These final storm water regulations significantly impact Army installations and facilities with "storm water discharges associated with industrial activity". Industrial activities covered by the regulations are listed in encl 1. It should be noted that "industrial activity" includes facilities not normally considered "industrial", such as hazardous waste handling sites, sewage treatment plants, landfills, and construction sites. The NPDES regulatory scheme provides three potential options for applying for permit coverage for storm water discharges associated with industrial activity: through a notice of intent to satisfy the requirements developed for general permit coverage; through a group application process; or through an individual permit process. Army guidance is as follows:

ENVR-EP (200-1a)

SUBJECT: National Pollutant Discharge Elimination System (NPDES)  
Permit Application Regulations for Storm Water Discharges

a. Installations and facilities with existing NPDES permits for storm water discharges are required to apply for individual permits under the individual permits requirements found at 122.26(c) of reference 1a (see encl 2) 180 days before their current permit expires. Installations and facilities which must reapply for permit renewal before 18 Nov 91 have the option of applying in accordance with the existing Forms 1 and 2C requirements.

b. Installations and facilities located in those States and territories that do not have authorized State NPDES programs (MA, ME, NH, FL, LA, TX, OK, NM, SD, AZ, AK, ID, District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the Trust Territory of the Pacific Islands) should contact their respective EPA Regional office to determine whether they are eligible for coverage under a general permit or whether they must submit an individual permit application requirement (or participate in a group application). Coordination with the EPA Regional Office should be done immediately due to the immediacy of the application deadlines; i.e., 18 Mar 91 for Part 1 of the group application or 18 Nov 91 for an individual permit application.

c. Installations and facilities with sufficiently similar storm water discharges associated with industrial activity should be determined by Major Subordinate Commands (MSCs) or Major Commands (MACOMs). MSCs and/or MACOMs must determine the grouping scheme and submit Part 1 of the group application by 18 Mar 91 to the Office of Water Enforcement and Permits, EN-336, U.S. EPA, 401 M Street, S.W., Washington, DC 20460. There is no specific EPA application form for a group application, but the information required is provided at encl 3. The final portion of the group application, Part 2 (refer to encl 4) must be submitted to EPA within one year after Part 1 is approved.

d. Installations and facilities required to prepare an individual permit application must do so by 18 Nov 91 and follow the procedures delineated in encl 2. Applications must be submitted to either the EPA Regional Office or State Director, whichever administers the NPDES permit program within your facility location.

ENVR-EP (200-1a)

SUBJECT: National Pollutant Discharge Elimination System (NPDES)  
Permit Application Regulations for Storm Water Discharges

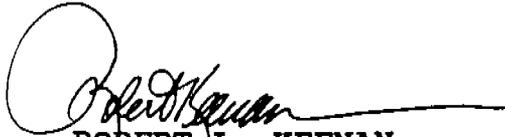
4. EPA application forms must be used only when applying in States where the NPDES permits program is administered by EPA. For installations and facilities located in States which are approved to administer the NPDES permits program, the State environmental agency should be contacted for proper permit application forms and instructions.
5. These new NPDES permitting requirements must be identified in the 1383 Report Spring 91 submittal. Actions to collect data for permit application should be identified under the pollutant category, "PRMT", while projects associated with storm water discharges (end-of-pipe treatment, run-off control, source control, routine monitoring program, etc.) should be identified under "SWPS". EPA estimates that the average preparation cost of an individual industrial permit application would be \$1,007 (28.6 hours). Average group application will cost \$74.00 per facility (2.1 hours). The average cost of the notification and notice of intent to be covered by general permit is \$17.00 (0.5 hours). These costs do not reflect the cost of sampling and analysis, which the EPA did not provide in reference 1a.
6. Technical support needed in the preparation of NPDES permit applications for storm water discharges associated with industrial activity may be requested from the following agencies:
  - a. On sampling and analysis requirements, contact the U.S. Army Environmental Hygiene Agency, ATTN: HSHB-MS-W, Aberdeen Proving Ground, MD 21010-5422, DSN 584-3289/3554 or (301) 671-3289/3554.
  - b. On questions dealing with the regulations, contact the U.S. Army Toxic and Hazardous Materials Agency, ATTN: CETHA-EC, Aberdeen Proving Ground, MD 21010-5401, DSN 584-2427 or (301) 671-2427.
7. Request that a list of installations/facilities and associated type of NPDES permit application being sought (individual, group, or general) be submitted to the Army Environmental Office, ATTN: ENVR-EP, Rm 1E685, Pentagon, Washington, D.C. 20310-2600 by 8 Mar 91.

ENVR-EP (200-1a)

SUBJECT: National Pollutant Discharge Elimination System (NPDES)  
Permit Application Regulations for Storm Water Discharges

8. Point of contact is Mr. George Leng, ENVR-EP, (703) 693-5032  
or DSN 223-5032.

FOR THE CHIEF OF ENGINEERS:



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ROBERT L. KEENAN  
Colonel, EN  
Chief, Army Environmental Office

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