

**AMENDMENT TO THE FACT SHEET AT THE TIME OF FINAL ISSUANCE OF THE NPDES PERMITS FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES THAT ARE CLASSIFIED AS “ASSOCIATED WITH INDUSTRIAL ACTIVITY”**

**Changes to Permit from Draft Permit to Final Permit Stage:**

- The web site for downloading the document, "Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices," U.S. EPA, 1992, has changed to (<http://cfpub1.epa.gov/npdes/stormwater/swppp.cfm>).
- EPA has made available the electronic submittal and tracking of NOIs. Please refer to the web site located at <http://cfpub.epa.gov/npdes/stormwater/cgp.cfm> for more information on submitting NOIs electronically and checking the status of their approval.
- The deadlines for submitting NOIs have changed to accommodate the electronic submittal of the NOIs. Authorization of coverage is seven (7) days from the date of the acknowledgment letter rather than two (2) days from the postmark of the NOI. Refer to Part 2.2 for revised deadlines and to Part 2.4 for revised authorization to discharge dates.
- Part 3.2.A. has been changed to allow the off site retention of storm water pollution prevention plan (SWPPP) off when necessary.
- The trigger for site inspection in the previous permit of 0.25 inches was based on the 401 certification of the permit by the State of Florida from the 1992 permit issuance. Since the issuance of the previous permit, the State of Florida has assumed NPDES permitting responsibility for dischargers with the State and the EPA issued permit no longer covers those facilities. As the certification impetus for the increased frequency of inspection has been removed, the current permit has been revised to require inspections after a 0.5 inch rain event which is consistent with EPA’s National general permit.
- The following resources are made available to the applicant to assist them in evaluating whether the facility discharges to a 303(d) listed water body.

**Alabama:**

ADEM web site: <http://www.adem.state.al.us/WaterDivision/WQuality/303d/WQ303d.htm>

EPA contact for Alabama: Maggie Pierce, 404-562-9414

**Florida:**

State web site: [http://www.dep.state.fl.us/water/tmdl/2002\\_303d\\_update.htm](http://www.dep.state.fl.us/water/tmdl/2002_303d_update.htm)

EPA contact for Florida: Kim Pierce, 404-562-9261

**Mississippi:**

MS DEQ web site: [http://www.deq.state.ms.us/MDEQ.nsf/page/WQAB\\_Total\\_Maximum\\_Daily\\_Load\\_Section](http://www.deq.state.ms.us/MDEQ.nsf/page/WQAB_Total_Maximum_Daily_Load_Section)

EPA contact for Mississippi: Kenneth Dean, 404-562-9378

**North Carolina:**

NC DHNR web site: [http://h2o.enr.state.nc.us/tmdl/General\\_303d.htm](http://h2o.enr.state.nc.us/tmdl/General_303d.htm)

EPA Contact for North Carolina: Craig Hesterlee, 404-562-9263

- The web sites for listed and proposed listed species have changed to: <http://cfpub.epa.gov/npdes/stormwater/endangersearch.cfm> and <http://endangered.fws.gov/wildlife.html#Species>

- Addendum F, a list of reportable quantities of hazardous substances, has been added to the permit.

### **Response to Comments Received on the Draft**

#### 1. Comment:

It is not clear when a permittee is allowed to begin discharging because Part 2.2 of the permit requires submission of the Notice of Intent (NOI) 48 hours prior to the commencement of construction where Part 2.4 states that the authorization to discharge will be granted back to the post mark date.

#### Response:

The discrepancy between Part 2.2 and Part 2.4 has been corrected. Authorization to discharge is seven days after the acknowledgment of receipt of the NOI. The seven day window is consistent with the nationally issued general permit and is necessary to allow review of the applicant information by the U.S. Fish and Wildlife Service (FWS) prior to granting permit coverage. (See Part 2.4 of the permit.)

#### 2. Comment:

Part 3.2 should be amended to allow the offsite storage of the pollution prevention plan (PPP) like the national general permit for the discharge of storm water from construction activities (CGP) does.

#### Response:

Part 3.2.A has been changed to allow for the off site storage of the PPP where a trailer (office) is unavailable.

#### 3. Comment:

Suggests correcting a typographical error in Part 3.11. The words temporarily stabilized should replace the words finally stabilized.

#### Response:

The word “finally” was not a typographical error in Part 3.11. The previous permit and the permit previous to that both contained the provision that inspections of finally stabilized facilities would continue at a frequency of once per month. However, the current national EPA issued permit changes this requirement. To be consistent with the nationally issued permit, the EPA Region 4 issued permit has been changed. The word “finally” has been replaced with “temporarily.”

#### 4. Comment:

NAHB urges EPA to change the trigger for inspections from a 0.25 inch rain event to a 0.5 inch rain event citing the lack of evidence for the necessity of a trigger at 0.25 where NC, SC, GA, MS, FL, TN and KY all use a 0.5 inch event.

#### Response:

The trigger for site inspection in the previous permit of 0.25 inches was based on the 401 certification of the permit by the State of Florida from the 1992 permit issuance. Since the issuance of the previous permit, the State of Florida has assumed NPDES permitting responsibility for dischargers with the State and the EPA issued permit no longer covers those facilities. As the certification impetus for the increased frequency of inspection has been removed, the current permit has been revised to require inspections after a 0.5 inch rain event which is consistent with EPA’s National general permit.

#### 5. Comment:

NAHB urges EPA to change the inspection schedule from once every 7 days AND after every trigger event to once every 7 days regardless of when the event occurred or once every 14 days AND after every trigger event to reflect the requirements of the nationally issued EPA permit.

Response:

The previous permit, most of the State issued general permits in Region 4 and the previously issued national general permit all contained the requirement to inspect every seven (7) days and after a qualifying event. It is important to ensure that the integrity of structural controls are maintained prior to a storm event. There is a lot of activity at construction sites during dry weather that can affect the location, movement and type of best management practices (BMPs) employed. For these reasons, the inspection as required will remain as a permit condition.

6. Comment:

A correction of a discrepancy with the fact sheet, which discusses the requirement for temporary stabilization where activities have ceased but will not resume within 21 days, and Part 3.14 of the permit, which requires temporary stabilization for areas where activity has ceased but will not resume within 14 days, was requested. NAHB requests the 21 day window.

Response:

The reference in the fact sheet to 21 days was a typographical error which has been corrected. The 14 day window is consistent with the previous permit issued by Region 4 and the current permit issued nationally and therefore remains in the permit. However, language has been added to suggest that operators use their judgement in making the decision not to temporarily stabilize a site in consideration of the slope of the land and the proximity of the site to a surface water body or a municipal separate storm sewer system (MS4).

7. Comment:

Clarification of what constitutes a “reportable quantity” in Part 4.3 of the permit by way of a chart so that the permittee will not have to search through the CFR and can quickly see whether or not the provision applies to the particular facility.

Response:

Reportable quantities are defined as releases of hazardous materials amount equal to or exceeding the amounts identified in 40 CFR 110, 117 and 302 and should be referred to with each NOI submittal. The Code of Federal Regulations are available in local public libraries or online at the web addresses listed below.

<http://www.epa.gov/docs/epacfr40/chapt-I.info/subch-D.htm>

For the convenience of the applicants the list has been added as an appendix to the permit. Also, this web address above has been included with the appendix.

8. Comment:

NAHB urges EPA Region 4 to allow the list of approved non-storm water discharges which may discharge under the permit to still be authorized if they have a reportable quantity (see page 30 of the fact sheet) since the same provision of the national EPA permit does not exclude non-storm water discharges.

Response:

The purpose of the fact sheet is to clarify EPA’s intent and to state the basis for permit requirements. Removing the requested language from the fact sheet would not allow a permittee

to discharge non-storm water which contains reportable quantities of hazardous materials. Neither does the July 2003 permit's omission of the language imply that releases of reportable quantities in non-storm water discharges are allowable. To the contrary, Part 1.3.B. of the July 2003 permit and of the Region 4 permit do not include spills in any form. It is the express intent of the allowable non-storm water discharges provision to give relief to permittees who may need to discharge non-storm water only where the source is uncontaminated and would not require alternate permit coverage. However, a discharge of non-storm water which is a release of a reportable quantity cannot be considered uncontaminated and would by itself require alternate permit coverage (e.g. the Multi-Sector General Permit or an individual NPDES permit). Such a discharge could not be covered under this permit. Therefore, the fact sheet is unchanged. If the spills at a site add up to a reportable quantity but the spills were completely removed such that the resulting wash down water did not contain the hazardous substance, then that discharge would still be allowed under the provisions of Part 1.3.B.7 of the permit. The permittee may still have a reporting responsibility to the National Response Center (NRC).

9. Comment:

NAHB requests the deletion of the requirements to monitor discharges to 303(d) listed water bodies from the permit since neither the EPA national permit nor any of the state permits contain these requirements. NAHB claims that the monitoring requirements are contrary to EPA's position on storm water monitoring cited in the proposed construction EGLs, which recognizes the difficulty monitoring imposes on a majority of sites.

Response:

There is a clear difference between a technology based effluent guideline, which would be broadly applicable to all projects, and a specific permit requirement for discharges to a 303(d) listed water where water quality standards are not being met. Monitoring is only required at sites where there are discharges to 303(d) listed water bodies. The monitoring will show the potential for the discharge to cause or contribute to the impairment. One of the criteria for obtaining coverage under this permit is that the NOI should only be submitted if the operator knows the discharge will not cause or contribute to a violation of a water quality standard. The monitoring requirement has not been deleted.

10. Comment:

If EPA intends to retain the monitoring requirements, NAHB requests statistical proof that the additional layer of protection provided by monitoring is necessary.

Response:

Section 308 of the Clean Water Act (CWA) gives EPA the authority to require monitoring. The data that caused a water body to be listed supports the additional layer of protection in this permit. EPA intends the monitoring to be demonstrative. If the monitoring indicates that the BMPs are not protective, then the facility will not be eligible for general permit coverage. There is no requirement for discharges from construction sites to obtain coverage under this general permit; alternatively, an individual application can be submitted.

11. Comment:

If the monitoring requirements are retained, NAHB request clarification of sampling protocols including, how to determine a qualifying event, what to do if the facility is unmanned during a qualifying event for the month, how will personnel know during the first 30 minutes when collection of a sample is required that the event will become a qualifying event.

Response:

Sampling is required once per month for a qualifying storm event. Weather forecasting has become sophisticated enough to eliminate the majority of events which will never qualify for sampling. For those that will surely qualify for sampling, the permittee can plan to collect a sample. For those very few rain events which may border on qualifying according to the forecast, it is recommended that samples be collected as a precaution should the event become qualifying. After a successful collection for a qualifying event occurs, no more samples need to be taken in the month, regardless of the event size. Therefore, time spent collecting samples can be minimized by collecting a qualifying sample as early in the month as possible. It is the opinion of EPA that very few months will pass where precautionary samples taken will not be used.

12. Comment:

NAHB requests the deletion of the requirement to determine if historic properties will be adversely affected citing redundancy with the SWPPP which requires measures to protect against the negative affects from discharges from construction activities.

Response:

It is a requirement of 40 CFR § 122.49(b) that prior to providing coverage under an NPDES permit, EPA must adopt measures to mitigate potential adverse effects on properties listed or eligible for listing in the National Register of Historic Places. However, it is §106 of the NHPA itself that imposes the mitigating measures to prevent adverse effects to listed or proposed listed places. The SWPPP should record those measures but does not redundantly impose them. The references to the NHPA in the permit are included to define eligibility under the permit as prescribed by 40 CFR §122.49(b). If there are historic places that could be adversely affected, the SWPPP should identify them and discuss what measures will be implemented to protect them. The references to NHPA have not been removed from the permit.

13. Comment:

NAHB requests a revision of the definition of adverse effects given on page 87 to “include damage, deterioration, alteration or destruction of the historic property or place due to a storm water discharge from the permitted construction site that makes direct contact with the property.”

Response:

The definition given on page 87 serves as an educational tool for the permittee who may not be aware of the NHPA. It is not a legal definition nor even a litmus for eligibility. Only the administrator of the NHPA can provide the definition of adverse effects. While anyone, including EPA may consult with a Historic Preservation Officer to make the determination, the condition of the permit becomes activated only after that adverse effect determination is made. In other words, the permit has no regulatory basis to define an adverse effect. A discharge would still be ineligible for coverage under the permit once an adverse effect determination is made independently of the permit even if the discharge meet any guiding language included in the fact sheet of the permit.

14. Comment:

The commentor requested direction on how to make an NHPA adverse effect determination and requested that EPA provide resources for making a effect determination.

Response:

Consultation with a Historic Preservation Officer is the only way to conclusively determine adverse effect. The permit does not provide a shield against an independent effect determination. The permit condition only speaks to eligibility under the permit not regulatory foundation for determination. Therefore, any specific methodology determining effects would imply a legal compliance with NHPA and would be misleading. However, if no historic places are present they cannot be adversely effected. And if the permittee has already obtained NHPA permitting necessarily considering adverse effects, then the permittee can reasonably claim eligibility. The purpose of the NHPA eligibility requirement does not extend beyond the courtesy of letting the applicant know that 40 CFR § 122.49(b) does not allow the EPA to issue any federal action which would authorize an activity which would be illegal under another law. In other words, if the general permit did not exist, the discharge would still not be allowed to adversely affect a historic place. It would be inappropriate for EPA to determine the permittees eligibility and provide resource to do so since legal responsibility for the decision under the NHPA (which is not administered by the EPA) still rests on the applicant.

15. Comment:

NAHB requests that the low rainfall and soil erosivity waivers be extended to all classes of permittee and not be limited to those facilities which disturb between 1 and 5 acres.

Response:

The Phase II rule published in the December 8, 1999 Federal Register (64 FR 68722) and codified in 40 CFR § 122.26(b)(15) provides a waiver for small construction activities, those that disturb more than one acre but less than five acres or that are less than one acre but are part of a plan of development which will disturb one or more acres but less than five acres. There is no corresponding waiver provided for construction activities disturbing five acres or more nor activities which are less than five acres that are part of a larger plan of development disturbing five acres or more.

16. Comment:

The commentor urged EPA to develop guidance showing how to obtain the equivalent analysis waiver.

Response:

The equivalent analysis waiver was included under the Phase II rule, without any conditions on what constitutes a valid analysis. It is incumbent upon the applicant to produce the analysis. However, general guidance on all of the waiver options, including the alternative analysis waiver, are available online at the address below:

[http://cfpub1.epa.gov/npdes/docs.cfm?program\\_id=6&view=allprog&sort=name](http://cfpub1.epa.gov/npdes/docs.cfm?program_id=6&view=allprog&sort=name)

### **Section 401 Certifications**

Section 401 of the CWA provides that no Federal license or permit, including NPDES permits, to conduct any activity that may result in any discharge into navigable waters shall be granted until the State/Tribe in which the discharge originates certifies that the discharge will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA. Section 401 certification of the proposed has been waived by the Seminole Tribe of Florida and the Miccosukee Tribe of Indians of Florida in accordance with the provisions of 40 CFR § 124.53(c)(3). In addition, Section 401 certification of the proposed permit was not required from the Eastern Band of Cherokee Indians or the Mississippi Band of Choctaw Indians since the referenced tribes do not have water quality standards with which to certify the permit. However,

EPA believes the conditions of the permit to be protective of water quality.

## **FINAL NPDES PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES THAT ARE CLASSIFIED AS “ASSOCIATED WITH INDUSTRIAL ACTIVITY”**

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The Clean Water Act (CWA) provides that storm water discharges associated with industrial activity from a point source (including discharges through a municipal separate storm sewer system (MS4)) to waters of the United States are unlawful, unless authorized by a National Pollutant Discharge Elimination System (NPDES) permit. The terms "storm water discharge associated with industrial activity," "point source," and "waters of the United States" are critical to determining whether a facility is subject to this requirement. Complete definitions of these terms are found in the definition section (Part 10) of this permit. The following is the reissuance of the previously issued NPDES general permit for the discharges of storm water from construction activities (issued March 31, 1993; 63 FR 15622 and modified on April 28, 2000; 64 FR 25122.)

### **Part 1: COVERAGE UNDER THIS PERMIT**

**1.1 Introduction.** This general permit authorizes eligible discharges of storm water from large and small construction activities that result in a total land disturbance equal to or greater than one (1) acre or less than one (1) acre that are part of a larger plan of development. Discharges are defined in Part 10 of this permit as discrete conveyances of storm water, coming in contact with the construction related activities to waters of the United States.

**1.2 Permit Area.** The permit covers all areas subject to administration by Region 4:  
All Indian Country Lands within the State of Alabama; NPDES Permit No. ALR10\*##I  
All Indian Country Lands within the State of Florida; NPDES Permit No. FLR10\*##I  
All Indian Country Lands within the State of Mississippi; NPDES Permit No. MSR10\*##I  
All Indian Country Lands within the State of North Carolina; NPDES Permit No. NCR10\*##I

All Indian Country Lands within any other EPA Region 4 State (except Catawba lands in South Carolina).

### **1.3 Eligibility**

This permit authorizes all discharges identified in the pollution prevention plan for storm water discharges associated with industrial activity from construction sites occurring after the effective date of this permit, except for discharges identified under paragraph 1.3.C. Permit eligibility is limited to discharges from “large” and “small” construction activities as defined in Part 10. This includes activities less than one acre if the Director designates the site under Section 402(p)(2)(e) of the CWA or if they are part of a larger common plan of development. Henceforth, these sites will be referred to as storm water discharges from construction activities.

#### **A. Allowable Storm Water Discharges.**

Subject to compliance with the terms and conditions of this permit, an operator of construction activity covered under this permit is authorized to discharge:

1. Storm water runoff associated with large and small construction activities as defined in Part 10;
2. From activities designated by EPA as needing a storm water permit under 40 Code of Federal Regulations (C.F.R.) §122.26(a)(1)(v), §122.26(b)(15)(ii) or §122.26(a)(9);
3. From support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided:
  - a. The support activity is directly related to a construction site required to have NPDES permit coverage for discharges of storm water associated with construction activity;
  - b. The support activity is not a commercial operation serving multiple unrelated construction projects by different operators, and does not operate beyond the completion of the construction activity at the last construction project it supports; and
  - c. Appropriate controls and measures are identified in a SWPPP covering the discharges from the support activity areas.
4. Non-storm water as noted in Subpart 1.3.B or otherwise specifically allowed by the permit.

#### **B. Allowable Non-Storm Water Discharges.**

Operators covered under this permit are also authorized for the following non-storm water discharges, provided the non-storm water component of the discharge is in compliance with Part 3.5 (Non-Storm Water Discharge Management):

1. Discharges from fire-fighting activities;
2. Fire hydrant flushings;
3. Waters used to wash vehicles where detergents are not used;
4. Water used to control dust in accordance with Subpart 3.4.G;
5. Potable water including uncontaminated water line flushings;
6. Routine external building wash down that does not use detergents;
7. Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents

- are not used;
- 8. Uncontaminated air conditioning or compressor condensate;
- 9. Uncontaminated ground water or spring water;
- 10. Foundation or footing drains where flows are not contaminated with process materials such as solvents.

### **C. Limitations on Coverage**

1. *Post-Construction Discharges.* This permit does not authorize post-construction discharges that originate from the site after construction activities have been completed and the site has undergone final stabilization, including any temporary support activity. Post-construction storm water discharges from industrial sites may need to be covered by a separate NPDES permit.
2. *Discharges of Non-Storm Water.* This permit does not authorize discharges mixed with non-storm water. This exclusion does not apply to discharges identified in Part 1.3.B, provided the discharges are in compliance with Part 3.5 (Non-Storm Water Discharge Management).
3. *Alternate Permit.* This permit does not authorize storm water discharges associated with construction activity that have been covered under an individual permit or required to obtain coverage under an alternative permit in accordance with Part 4.2.
4. *Maintaining WQS.* To be eligible to discharge under this permit, Best Management Practices (BMPs) must be designed and implemented so that they will be adequate and sufficient to ensure water quality standards will not be violated as a result of the discharge. This permit does not authorize discharges that will cause or contribute to non-attainment of water quality standards, including failure to protect and maintain existing designated uses of receiving waters. EPA may require an application for an individual permit or alternative general permit to authorize discharges of storm water from any activity that EPA determines to cause or contribute to an exceedance of water quality standards or that EPA determines to cause or contribute to the loss of a designated use of receiving waters.
5. *Discharging into Receiving Waters With an Approved Total Maximum Daily Load(s):*  
Discharges to waters for which there is a total maximum daily load (TMDL) allocation for sediment or a parameter that addresses sediment (such as total suspended solids (TSS), turbidity, or siltation) are not eligible for coverage under this permit unless you develop and certify a SWPPP that is consistent with the assumptions and requirements in the approved TMDL. This excludes facilities for which there is a specific numerical load allocation (including percent reductions) applicable. To be eligible for coverage under this general permit, operators must incorporate into their SWPPP any conditions applicable to their discharges necessary for consistency with the assumptions and requirements of the TMDL within any time frames established in the TMDL.
6. *Endangered and Threatened Species and Critical Habitat Protection*
  - a. Coverage under this permit is available only if your storm water

discharges, allowable non-storm water discharges, and discharge-related activities are not likely to jeopardize the continued existence of any species that are listed as endangered or threatened (“listed”) under the Endangered Species Act (ESA) or result in the adverse modification or destruction of habitat that is designated as critical under the ESA (“critical habitat.”)

b. Operators are not eligible to discharge if the discharges or discharge-related activities would cause a prohibited “take” of endangered or threatened species (as defined under Section 3 of the ESA and 50 C.F.R. § 17.3), unless such takes are authorized under sections 7 or 10 of the ESA.

c. “Discharge-related activities” are defined in Part 10.

d. Determining Eligibility: The operator must use the process in Addendum A (ESA Screening Process) to determine eligibility *PRIOR* to submittal of the NOI. An operator must meet one or more of the following five criteria (A-E) for the entire term of coverage under the permit:

*Criterion A.* No Federally-listed threatened or endangered species or their designated critical habitat are in the project area as defined in Addendum A; or

*Criterion B.* Formal or informal consultation with the Fish and Wildlife Service and/or the National Marine Fisheries Service under section 7 of the ESA has been concluded and that consultation:

- i. Addressed the effects of the project’s storm water discharges, allowable non-storm water discharges, and discharge-related activities on listed species and critical habitat, and
- ii. The consultation resulted in either:
  - c. Biological opinion finding no jeopardy to listed species or destruction/adverse modification of designated critical habitat, or
  - d. written concurrence from the Service with a finding that the storm water discharges, allowable non-storm water discharges, and discharge-related activities are not likely to adversely affect listed species or critical habitat; or

*Criterion C.* The construction activities are authorized under section 10 of the ESA, and that authorization addresses the effects of the storm water discharges, allowable non-storm water discharges, and discharge-related activities on listed species and critical habitat; or

*Criterion D.* Storm water discharges, allowable non-storm water

discharges, and discharge-related activities are not likely to adversely affect any listed threatened or endangered species or result in the destruction or adverse modification of designated critical habitat; or

*Criterion E.* The project's storm water discharges, allowable non-storm water discharges, and discharge-related activities were already addressed in another operator's valid certification of eligibility under Criteria A-D which included your construction activities and there is no reason to believe that listed species or designated critical habitat not considered in the prior certification may be present or located in the project area. By certifying eligibility under this Subpart, the operator agrees to comply with any measures or controls upon which the other operator's certification was based.

- e. Applicants must comply with any applicable terms, conditions, or other requirements developed in the process of meeting the eligibility requirements of the criteria in Part 1.3.C.6 above to remain eligible for coverage under this permit. Such terms and conditions must be documented and incorporated into the applicant's storm water pollution prevention plan.
- f. Operators who conduct informal consultation to meet the eligibility requirements of Criterion B are automatically designated as non-Federal representatives under this permit. See 50 C.F.R. §402.08. Operators who choose to conduct informal consultation as a non-Federal representative must notify EPA and the appropriate Service office in writing of that decision.

7. *Historic Properties*

- a. To be eligible for coverage under this permit, operators must meet one or more of the following three criteria (A-C) pursuant to the National Historic Preservation Act:

*Criterion A.* The operator has evaluated the effects of storm water discharges and allowable non-storm water discharges on properties that are listed or are eligible for listing and does not have reason to believe that construction activities will affect a property that is listed or has been officially reviewed and determined to be eligible for listing on the National Register of Historic Places as maintained by the Secretary of the Interior. Also, the operator has no knowledge of any properties that may be eligible for listing occurring on the construction site; or

*Criterion B.* The operator has obtained and is in compliance with a written agreement with the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer

- (THPO) that outlines all measures to be taken to mitigate or prevent adverse effects to historic property; or
- Criterion C.* The project's storm water discharges, allowable non-storm water discharges, and discharge-related activities were already addressed in another operator's certification of eligibility under Criteria A-B which included your construction activities. By certifying eligibility under this Subpart, the operator agrees to comply with any measures or controls upon which the other operator's certification was based.
- b. Addendum B of this permit provides references to assist you with determining eligibility under this provision.

#### **1.4 Waivers for Certain Small Construction Activities**

Three scenarios exist under which operators of small construction activity (see definition in Part 10) may be waived from the requirements in a general permit. These exemptions are predicated on certain criteria being met and proper notification procedures being followed. Details of the waiver options and procedures for requesting a waiver are provided in Addendum C.

#### **1.5 Applying for Coverage**

- A. A discharger must submit a Notice of Intent (NOI) in accordance with the requirements of Part 2 of this permit, using the EPA approved NOI form in order for storm water discharges from construction sites to be authorized to discharge under this general permit.<sup>1</sup>
- B. Only complete and accurate Notices of Intent will constitute a sufficient submittal under Part 1.5.A. of this permit.

### **Part 2: AUTHORIZATIONS FOR DISCHARGES OF STORM WATER FROM CONSTRUCTION ACTIVITIES (NOTICE OF INTENT REQUIREMENTS)**

#### **2.1 Discharge Authorization**

- A.
1. It is the responsibility of the operator to submit a complete and accurate NOI for coverage under this permit, using the approved NOI Form. If notified by EPA (either directly, by public notice, or by making information available on the Internet), dischargers may take advantage of other NOI form options (e.g., electronic submission of forms) to satisfy the NOI use and submittal requirements of Part 2.
  2. Signing the NOI is making the certification statements of Part 2.1.B.12.
- B. The operator of the construction activity, you must provide the following information on the NOI form:
1. Name, address and telephone number of the construction site operator;
  2. Whether the site is a Federal project or location on Federal lands;
  3. Nature of construction project (e.g., commercial, industrial, residential, agricultural, oil and gas, or mining project);
  4. Name (or other identifier), address, county or similar governmental subdivision,

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<sup>23</sup> A copy of the currently approved NOI form is provided in Addendum D of this permit.

- and latitude/longitude of the construction project or site;
5. Whether the site is located on Indian Country and if so, the name of the Reservation or for lands that are not part of a Reservation, the Tribal affiliation;
  6. The location where the SWPPP may be viewed and the name and telephone number of a contact person for scheduling viewing times;
  7. Name of the receiving water(s) or if the discharge is through a MS4, the name of the municipal operator of the storm sewer;
  8. Indication whether the discharge is to a water body with an approved TMDL and if so, if the TMDL is for sediment or a parameter that addresses sediment (such as TSS, turbidity, or siltation);
  9. Estimated project start and completion dates, and total acreage (to the nearest quarter acre) to be disturbed by the operator submitting this NOI and whether this project is part of a larger common plan of development or sale and if so, whether the larger common plan is considered large construction (5 acres or more) or small construction (1-5 acres);
  10. Whether any listed threatened or endangered species, or designated critical habitat are in the project area to be covered by this permit, and affirm eligibility for permit coverage based on the instructions in Addendum A;
  11. Whether any historic property listed or eligible for listing on the National Register of Historic Places is located on the construction site or in proximity to the discharge, and affirm eligibility for permit coverage based on the instructions in Addendum B;
  12. The certification statements below, signed and dated by an authorized representative as defined in Part 8.11, and the name and title of that authorized representative:

“I certify, under penalty of law, that I have read and understand the Part 1.3. eligibility requirements for coverage under the general permit for storm water discharges from construction activities, including those requirements relating to the protection of endangered species identified in Addendum A.”

“To the best of my knowledge the discharges covered under this permit, and the construction and operation of BMPs to control storm water runoff, are not likely to adversely affect any species identified in Addendum A of this permit, or are otherwise eligible for coverage under this permit, in accordance with Part 1.3.C.6. of the permit, due to previous authorization under the Endangered Species Act, or agreement to implement protective measures required by the Director as a condition of eligibility.”

“I further certify, to the best of my knowledge, that such discharges, and construction of BMPs to control storm water runoff, do not have an effect on properties listed or eligible for listing on the National Register of Historic Places under the National Historic Preservation Act, or are otherwise eligible for coverage, in accordance with Part 1.3.C.7. of the permit, due to a previous agreement under the National Historic Preservation Act.”

“I understand that continued coverage under this storm water general permit is contingent upon maintaining eligibility as provided for in Part 1.3.”

**2.2 Submission Deadlines**

A. Except as provided in paragraphs 2.2.B, 2.2.C, 2.2.D, and 2.2.E, individuals who intend to obtain coverage under this general permit for storm water discharges from a large or small construction site, including unpaved rural roads, where disturbances associated with the construction project commence before the effective date of this permit, shall submit a Notice of Intent (NOI) in accordance with the requirements of this Part within 60 days after the effective date of this permit;

B. Individuals who intend to obtain coverage under this general permit for storm water discharges from a construction site, including unpaved rural roads, where disturbances associated with the construction project commence after the effective date of this permit, shall submit a complete and accurate NOI in accordance with the requirements of Part 2.1 prior to the commencement of construction activities (e.g. the initial disturbance of soils associated with clearing, grading, excavation activities, or other construction activities). Discharge(s) shall not occur prior to authorization under Part 2.4 of this permit.

C. For storm water discharges from construction sites, including unpaved rural roads, where the operator changes (including projects where an operator is selected after an NOI has been submitted under Parts 2.2.A or 2.2.B), an NOI in accordance with the requirements of Part 2.1 shall be submitted prior to when the operator commences work at the site. Discharge(s) shall not occur prior to authorization under Part 2.4 of this permit.

D. EPA will accept an NOI in accordance with the requirements of this Part after the dates provided in Parts 2.2.A, B or C of this permit. EPA shall, in such instances, use its discretion in initiating any appropriate enforcement actions.

E. Applicants who have submitted a completed NOI for renewal according to Part VII.B. of the previous permit and have received coverage under the administratively continued previous general permit, issued March 31, 1998 (63 FR 15622) and modified on April 28, 2000 (64 FR 25122), or applicants who have submitted a completed NOI for coverage under the general permit after its expiration shall automatically receive coverage under this permit. If the applicant cannot certify that they meet all applicable eligibility requirements of Part 1.3 of this permit or cannot be covered by, or comply with, the terms and conditions of this permit, then the applicant must apply for an individual NPDES permit within 90 days of the effective date of this permit.

**2.3. Where to Submit.**

A. Complete and accurate NOIs as detailed in Subpart 2.1 must be sent to the following address:

Regular U.S. Mail Delivery  
Storm Water Notice of Intent  
Mail Code 4203M  
U.S. EPA  
1200 Pennsylvania Avenue  
Washington, DC 20460

Overnight/Express Mail Delivery  
Storm Water Notice of Intent  
Room 7329  
U.S. EPA  
1201 Constitution Avenue  
Washington, DC 20004

B. A copy of the NOI, or other indication that storm water discharges from the site are covered under an NPDES permit, and a brief description of the project shall be posted at the construction

site in a prominent place for public viewing (such as alongside a building permit.)

#### **2.4 *Effective Date of Permit Coverage***

The operator of a construction activity is authorized to discharge storm water from those construction activities under the terms and conditions of this permit as specified below.

Discharges are not authorized if your NOI is incomplete or incorrect or if your discharge(s) was not eligible for coverage by the permit.

A. If you submit an NOI for coverage under this permit, prior to the expiration date of this permit, you are authorized to discharge storm water from construction activities under the terms and conditions of this permit seven (7) calendar days after acknowledgment of receipt of your complete NOI is posted on EPA's NPDES website <http://www.epa.gov/npdes/stormwater/cgp>, except as noted in Subpart 2.1.C.

B. EPA may delay your authorization based on eligibility considerations of Subpart 1.3 (e.g., ESA concerns). In these instances, you are not authorized for coverage under this permit until you receive notice from EPA of your eligibility.

#### **2.5 *Permit Renewal***

If this general permit is not reissued prior to its expiration date, all facilities desiring to retain continued coverage shall submit another NOI form at least 180 days prior to the expiration of this permit.

### **Part 3: STORM WATER POLLUTION PREVENTION PLANS**

A storm water pollution prevention plan shall be developed for each construction site covered by this permit. Storm water pollution prevention plans shall be prepared in accordance with good engineering practices. The plan shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from the construction site. In addition, the plan shall describe and ensure the implementation of practices which will be used to reduce the pollutants in storm water discharges associated with industrial activity at the construction site and to assure compliance with the terms and conditions of this permit. Facilities must implement the provisions of the storm water pollution prevention plan required under this part as a condition of this permit.

#### **3.1. *Deadlines for Plan Preparation and Compliance.***

The plan shall:

- A. Be completed (including certifications required under Part V.E) prior to the submittal of an NOI to be covered under this permit and updated as appropriate;
- B. For activities that have begun on or before the effective date of the permit, the plan shall provide for compliance with the conditions of this permit beginning on the effective date of this permit.
- C. For activities that begin after the effective date of the permit, the plan shall provide for compliance with the terms and schedule of the plan beginning with the initiation of construction activities.

#### **3.2 *Signature and Plan Review***

A. A copy of the SWPPP (including a copy of the permit), NOI, and acknowledgment letter from EPA must be retained at the construction site (or other location, if a trailer (office) is not onsite, easily accessible during normal business hours to EPA, a state, tribal or local agency approving sediment and erosion plans, grading plans, or storm water management plans; local government officials; the operator of a municipal separate storm sewer receiving discharges from

the site; and representatives of the U.S. Fish and Wildlife Service or the National Marine Fisheries Service) from the date of commencement of construction activities to the date of final stabilization. If you have day-to-day operational control over SWPPP implementation, you must have a copy of the SWPPP available at a central location on-site for the use of all those identified as having responsibilities under the SWPPP whenever they are on the construction site. If an on-site location is unavailable to store the SWPPP when no personnel are present, notice of the plan's location must be posted near the main entrance at the construction site.

B. The permittee shall make plans available upon request to the Director; a Tribal or local agency approving sediment and erosion plans, grading plans, or storm water management plans; or in the case of a storm water discharge associated with industrial activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the municipal operator of the system.

C. The Director may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this Part. Such notification shall identify those provisions of the permit which are not being met by the plan, and identify which provisions of the plan requires modifications in order to meet the minimum requirements of this Part. Within time period specified in the notification from the Director, or authorized representative, the permittee shall make the required changes to the plan and shall submit to the Director a written certification that the requested changes have been made.

### **3.3 Contents of Plan: Site and Activity Description**

The storm water pollution prevention plan shall include the following items:

A. The SWPPP must identify all operators for the project site, and the areas of the site over which each operator has control.

B. Each plan shall provide a description of the nature of the construction activity, including:

1. a description of the function of the construction or ultimate use of the project;
2. a description of the intended sequence of major activities which disturb soils for major portions of the site (e.g., grubbing, excavation, grading);
3. estimates of the total area of the site and the total area of the site that is expected to be disturbed by excavation, grading, or other activities;
4. a site map indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of soil disturbance, an outline of areas which may not be disturbed, the location of major structural and nonstructural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands), and locations where storm water is discharged to a surface water;
5. an estimate of the runoff coefficient of the site before, during and after construction activities are completed using "C" from the Rational Method, and existing data describing the soil or the quality of any discharge from the site and an estimate of the size of the drainage area for each outfall; and
6. the location in terms of latitude and longitude, to the nearest 15 seconds, of each outfall and the name of the receiving water(s) for each outfall.

### **3.4 Contents of Plan: Controls to Reduce Pollutants**

Each plan shall include a description of appropriate controls and measures that will be implemented at the construction site. The plan will clearly describe for each major activity

identified in Part 3.3.B.2 appropriate control measures and the timing during the construction process that the measures will be implemented. (For example, perimeter controls for one portion of the site will be installed after the clearing and grubbing necessary for installation of the measure, but before the clearing and grubbing for the remaining portions of the site. Perimeter controls will be actively maintained until final stabilization of those portions of the site upward of the perimeter control. Temporary perimeter controls will be removed after final stabilization.)

The description and implementation of controls shall address the following minimum components:

**A. *Erosion and Sediment Controls.***

1. *Stabilization Practices.* The plan shall provide a description of interim and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans should ensure that existing vegetation is preserved where attainable and that disturbed portions of the site are stabilized. Stabilization practices may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site and when stabilization measures are initiated shall be included in the plan. Stabilization measures shall be initiated as soon as practicable, but in no case more than 14 days, in portions of the site where construction activities have temporarily or permanently ceased.
2. *Structural Practices.* The plan shall provide a description of structural practices or controls, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. Structural practices should be placed on upland soils unless specifically authorized by Section 404 of the CWA. The installation of these devices may be subject to Section 404 of the CWA.
  1. For common drainage locations that serve an area with more than 10 disturbed acres at one time, a temporary (or permanent) sediment basin providing 3,600 cubic feet of storage per acre drained, or equivalent control measures, shall be provided where attainable until final stabilization of the site. The 3,600 cubic feet of storage area per acre drained does not apply to flows from offsite areas and flows from onsite areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. For drainage locations which serve more than 10 disturbed acres at one time and where a temporary sediment basin providing 3,600 cubic feet of storage per acre drained, or equivalent controls are not attainable, smaller sediment basins and/or sediment traps should be used. At a minimum, silt fences, or equivalent sediment

controls are required for all sideslope and downslope boundaries of the construction area.

2. For drainage locations serving less than 10 acres, sediment basins and/or sediment traps should be used. At a minimum, silt fences or equivalent sediment controls are required for all sideslope and downslope boundaries of the construction area unless or a sediment basin providing storage for 3,600 cubic feet of storage per acre drained is provided.

### **B. Storm Water Management.**

A description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the CWA. This NPDES permit only addresses the installation of storm water management measures, and not the ultimate operation and maintenance of such structures after the construction activities have been completed and the site has undergone final stabilization. Permittees are only responsible for the installation and maintenance of storm water management measures prior to final stabilization of the site, and are not responsible for maintenance after storm water discharges associated with industrial activity have been eliminated from the site.

2. Such practices may include: storm water detention structures (including wet ponds); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems, which combine several practices. The pollution prevention plan shall include an explanation of the technical basis used to select the practices to control pollution where flows exceed pre-development levels.
3. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel for the purpose of providing a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., no significant changes in the hydrological regime of the receiving water.) Equalization of the predevelopment and post-development storm water peak discharge rate and volume shall be a goal in the design of the post-development storm water management system.

### **C. Other Controls.**

1. *Waste Disposal.* No solid materials, including building materials, shall be discharged to waters of the United States, except as authorized by a Section 404 permit.
2. Off-site vehicle tracking of sediments and the generation of dust shall be minimized.
3. The plan shall ensure and demonstrate compliance with any applicable Tribal or local waste disposal, sanitary sewer or septic system regulations.
4. The plan shall address the proper application rates and methods for the use of fertilizers and pesticides at the construction site and set forth how these procedures will be implemented and enforced. Nutrients will be applied only at rates necessary to establish and maintain vegetation such that discharges will not cause or contribute to violations of any applicable surface or ground water quality

standards.

5. The plan shall ensure that the application, generation, and migration of toxic substances are limited and that toxic materials are properly stored and disposed.

**D. *Approved Tribal Plans.***

1. Facilities which discharge storm water associated with construction activity must include in their storm water pollution prevention plan procedures and requirements specified in applicable sediment and erosion site plans or site permits, or storm water management site plans or site permits approved by Tribal officials. Permittees shall provide a certification in their storm water pollution prevention plan that their storm water pollution prevention plan reflects requirements applicable to protecting surface water resources in sediment and erosion site plans or site permits, or storm water management site plans or site permits approved by Tribal officials. Permittees shall comply with any such requirements during the term of the permit. This provision does not apply to provisions of master plans, comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit that is issued for the construction site.
2. Storm water pollution prevention plans must be amended to reflect any change applicable to protecting surface water resources in sediment and erosion site plans or site permits, or storm water management site plans or site permits, approved by Tribal officials, for which the permittee receives written notice. Where the permittee receives such written notice of a change, the permittee shall provide a re-certification in the storm water pollution plan that the storm water pollution prevention plan has been modified to address such changes.

**3.5. *Non-Storm Water Discharge Management***

- A. The SWPPP must identify the location and description of any storm water discharge associated with industrial activity other than construction at the site. This includes storm water discharges from dedicated asphalt plants and dedicated concrete plants, that are covered by this permit.
- B. The SWPPP must identify all allowable sources of non-storm water discharges listed in Subpart 1.3.B of this permit that are combined with storm water discharges associated with construction activity at the site, except for flows from fire fighting activities. Non-storm water discharges should be eliminated or reduced to the extent feasible. The SWPPP must identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.
- C. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

**3.6. *Maintenance***

- A. All erosion and sediment control measures and other protective measures identified in the SWPPP must be maintained in effective operating condition. If site inspections required by Subpart 3.11 identify BMPs that are not operating effectively, maintenance must be performed before the next anticipated storm event, or to the extent practicable to maintain the continued effectiveness of storm water controls.
- B. If existing BMPs need to be modified or if additional BMPs are necessary for any reason,

implementation must be completed before the next anticipated storm event. If implementation before the next anticipated storm event is impracticable, the situation must be documented in the SWPPP and alternative BMPs must be implemented as soon as practicable.

C. A description of procedures to ensure the timely maintenance of vegetation, erosion and sediment controls and other protective measures must be identified in the site plan.

### **3.7 Documentation of Permit Eligibility Related to Endangered Species**

The SWPPP must include documentation supporting a determination of permit eligibility with regard to Endangered Species, including:

A. Information on whether listed endangered or threatened species, or designated critical habitat, may be in the project area;

B. Whether such species or critical habitat may be adversely affected by storm water discharges or storm water discharge-related activities from the project;

C. Results of the Addendum A listed species and critical habitat screening determinations; and

D. A description of measures necessary to protect listed endangered or threatened species, or critical habitat, including any terms and conditions that are imposed under the eligibility requirements of Subpart 1.3.C.6. The permittee must describe and implement such measures to maintain eligibility for coverage under this permit.

### **3.8 Documentation of Permit Eligibility Related to Historic Places**

The SWPPP must include documentation supporting a determination of permit eligibility with regard to Historic Properties, including:

A. Information on whether storm water discharges or storm water discharge-related activities from the site would have an effect on a property that is listed or eligible for listing on the National Register of Historic Places;

B. Where effects may occur, any written agreements that have been made by the owner/operator with the State Historic Preservation Officer, Tribal Historic Preservation Officer, or other Tribal leader to mitigate those effects; and

C. A description of measures necessary to avoid or minimize adverse impacts on places listed, or eligible for listing, on the National Register of Historic Places, including any terms or conditions that are imposed under (other plans) the eligibility requirements of Subpart 1.3.C.7.

The measures must include procedures for properties discovered during the course of construction. The permittee must describe and implement such measures to maintain eligibility for coverage under this permit.

### **3.9 Copy of Permit Requirements**

Copies of this permit and of the signed and certified NOI form that was submitted to EPA must be included in the SWPPP. Also, upon receipt, a copy of the letter from the NOI Processing Center acknowledging receipt of an administratively complete NOI must also be included as a component of the SWPPP.

### **3.10 Applicable Tribal Programs**

The SWPPP must be consistent with all applicable federal, Tribal, or local requirements for soil and erosion control and storm water management, including updates to the SWPPP as necessary to reflect any revisions to applicable federal, Tribal or local requirements for soil and erosion control.

### **3.11 Inspections**

All points of discharge into waters of the United States or to a municipal separate storm

sewer system and all disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site shall be inspected at least once every seven calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater. Where sites have been temporarily stabilized; such inspection shall be conducted at least once every month.

A. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the storm water system.

The storm water management system and erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

B. Based on the results of the inspection, the site description identified in the plan in accordance with paragraph 3.3 of this permit and pollution prevention measures identified in the plan in accordance with paragraph 3.4 of this permit shall be revised, as appropriate, within a specified time period following the inspection. Such modifications shall provide for timely implementation of any changes to the plan..

C. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with Part 3.11.B of the permit shall be made and retained as part of the storm water pollution prevention plan for at least three (3) years from the date that the site is finally stabilized. Such reports shall identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with Part 8.11. of this permit.

### **3.12 Keeping Plans Current.**

The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States, including the addition of, or change in the location of storm water discharge points, and which has not otherwise been addressed in the plan or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified under Part 3.4 of this permit, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity. In addition, the plan shall be amended to identify any new contractor and/or subcontractor that will implement a measure of the storm water pollution prevention plan (see Part 3.13). Amendments to the plan shall be prepared, dated, and kept as separate documents from the original plan. The amendments to the plan may be reviewed by EPA in the same manner as Part 3.2 above.

### **3.13. Contractors**

A. The storm water pollution prevention plan must clearly identify, for each measure identified in the plan, the contractor(s) and/or subcontractor(s) that will implement the measure. All contractors and subcontractors identified in the plan must sign a copy of the certification statement in Part 3.13.B of this permit in accordance with Part 8.11 of this permit. All certifications must be included in the storm water pollution prevention plan.

B. *Certification Statement.* All contractors and subcontractors identified in a storm water

pollution prevention plan in accordance with Part 3.13.A of this permit shall sign a copy of the following certification statement before conducting any professional service identified in the storm water pollution prevention plan:

"I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification."

The certification must include the name and title of the person providing the signature in accordance with Part 8.11 of this permit; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification is made.

### **3.14 Management Practices**

- A. Erosion and sediment controls should be designed to retain sediment on-site.
- B. All control measures must be properly selected, installed, and maintained in accordance with manufacturer specifications and good engineering practices. If periodic inspections or other information indicates a control has been used inappropriately, or incorrectly, the operator must replace or modify the control for site situations as soon as practicable.
- C. If sediment escapes the construction site, offsite accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts.
- D. Litter, construction debris, and construction chemicals exposed to storm water must be prevented from becoming a pollutant source in storm water discharges.
- E. Except as provided below, stabilization measures must be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.
  - 1. Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions, stabilization measures must be initiated as soon as practicable.
  - 2. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 14 days, temporary stabilization measures do not have to be initiated on that portion of the site.
  - 3. In drought-stricken areas, where initiating perennial vegetative stabilization measures is not possible within 14 days after construction activity has temporarily or permanently ceased, final vegetative stabilization measures must be initiated as soon as practicable.
- F. Any structural practices to retain storm runoff onsite should be located in upland areas. A combination of sediment and erosion control measures are required to achieve maximum pollutant removal.
- G. Velocity dissipation devices must be placed at discharge locations and along the length of any outfall channel to provide a non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., no significant changes in the hydrological regime of the receiving water.)

### **3.15 Documentation of Permit Eligibility Related to Total Maximum Daily Loads**

The SWPPP must include documentation supporting a determination of permit eligibility with regard to waters that have an established TMDL, including:

- A. Information on whether storm water discharges from the site enter a water body with an approved TMDL;
- B. Identification of the pollutants that the TMDL addresses, specifically whether the TMDL addresses sediment or a parameter that addresses sediment (such as TSS, turbidity, or siltation);
- C. Identification of whether the operator's discharge is identified, either specifically or generally, in the TMDL and any associated assumptions and allocations identified for the discharge; and
- D. Measures taken by the operator to ensure that its discharge of pollutants from the site is consistent with the assumptions and allocations of the TMDL.

#### **Part 4: SPECIAL CONDITIONS, MANAGEMENT PRACTICES, AND OTHER NON-NUMERIC LIMITATIONS**

##### **4.1 *Prohibition on non-storm water discharges.***

- A. Except as provided in Part 1.3.B. and Part 4.1.B, all discharges covered by this permit shall be composed entirely of storm water.
- B.
  - 1. Except as provided in Part 4.1.B.2, discharges of material other than storm water must be in compliance with an NPDES permit (other than this permit) issued for the discharge.
  - 2. The following non-storm water discharges may be authorized by this permit provided the non-storm water component of the discharge is in compliance with Part 3.5. and the storm water management system is designed to accept these discharges and provide treatment of the non-storm water component sufficient to meet water quality standards: discharges from fire fighting activities; fire hydrant flushings; waters used to spray off loose solids from vehicles (waste waters from a more thorough cleaning, including the use of detergents or other cleaners is not authorized by this part) or control dust in accordance with Part 3.4.C.2.; potable water sources including waterline flushings; irrigation drainage; routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; springs; and foundation or footing drains where flows are not contaminated with process materials such as solvents. Discharges resulting from ground water dewatering activities at construction sites are not covered by this permit.

##### **4.2 Requiring an Individual Permit or an Alternative General Permit**

- A. EPA may require any person covered by this permit to apply for and/or obtain either an individual NPDES permit or an alternative NPDES general permit. Any interested person may petition EPA to take action under this paragraph. When EPA requires a permittee authorized to discharge under this permit to apply for an individual NPDES permit, EPA will notify the permittee in writing that a permit application is required. This notification shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline to file the application, and a statement that on the effective date of issuance or denial of the individual NPDES permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate. Applications must be submitted to the address indicated in Part 6.3 of this permit. EPA may grant additional time to submit the application upon request of the operator. If a permittee fails to submit in a timely

manner an individual NPDES permit application as required by EPA, then the applicability of this permit to the individual NPDES permittee is automatically terminated at the end of the day specified by EPA as the deadline for application submittal.

B. Any permittee covered by this permit may request to be excluded from the coverage of this general permit by applying for an individual permit. In such cases, a permittee must submit an individual application in accordance with the requirements of 40 C.F.R. §122.26(c)(1)(ii), with reasons supporting the request, to EPA at the address listed in the instruction to the NOI or at the EPA Regional address listed in Part 6.3 of this permit. The request may be granted by issuance of an individual permit or an alternative general permit if the reasons cited by the permittee are adequate to support the request.

C. When an individual NPDES permit is issued to a permittee, otherwise subject to this permit, or the permittee is authorized to discharge under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual NPDES permit is denied to an owner or operator otherwise subject to this permit, or the owner or operator is denied for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the date of such denial, unless otherwise specified by EPA.

D. The procedures in Parts 4.2.A, 4.2.B, and 4.2.C do not apply where an operator does not meet the general permit eligibility requirements described in Part 1.3.

#### **4.3 *Releases in Excess of Reportable Quantities.***

The discharge of hazardous substances or oil in the storm water discharge(s) from a facility shall be prevented or minimized in accordance with the applicable storm water pollution prevention plan for the facility. This permit does not relieve the permittee of the reporting requirements of 40 C.F.R. part 117 and 40 C.F.R. part 302. Where a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity established under either 40 C.F.R. § 117 or 40 C.F.R. § 302, occurs during a 24-hour period:

A. The permittee is required to notify the National Response Center (NRC) (800-424-8802 or for Region 4, 404-562-8702) in accordance with the requirements of 40 C.F.R. § 117 and 40 C.F.R. § 302 as soon as he or she has knowledge of the discharge;

B. The permittee shall submit within 14 calendar days of knowledge of the release a written description of: the release (including the type and estimate of the amount of material released), the date that such release occurred, the circumstances leading to the release, and steps to be taken in accordance with Part 4.3.C of this permit to EPA Region 4 Office at the address provided in Part 6.3. of this permit; and

C. The storm water pollution prevention plan required under Part 3 of this permit must be modified within 14 calendar days of knowledge of the release to: provide a description of the release, the circumstances leading to the release, and the date of the release. In addition, the plan must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

**4.4. *Spills.*** This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

**4.5. *Discharges to Impaired Waters***

Upon the effective date of this permit, facilities that apply for coverage under the general permit which proposes to discharge storm water from construction activities directly to waters of the United States which are listed on the EPA approved 303(d) list (or any subsequently approved list, hereafter referenced as EPA approved 303(d) list) for TSS, or other indicators of solids transportation such as turbidity, siltation or sedimentation, shall comply with the following:

- A. The permittee shall monitor by grab sample, during regular working hours, once per month within the first 30 minutes of a qualifying event or within the first 30 minutes of the beginning of the discharge of a previously collected qualifying event for Settleable Solids (ml/l), Total Suspended Solids (mg/l), Turbidity (NTUs) and Flow (MGD.)
- B. Where the receiving water has flow upstream from the discharge, a background sample for Settleable Solids, TSS and Turbidity shall be taken instream at middepth and immediately upstream from the influence of the discharge of storm water from the site.
- C. The soil type and average slope of the drainage area for each outfall shall be reported with the Discharge Monitoring Report (DMR) form submitted in accordance with Part 4.5.E of the permit.
- D. A qualifying event for the purpose of this section is a rain event of 0.5 inches or greater in a 24-hour period.
- E. Data collected in accordance with Part 4.5 of the permit shall be submitted to EPA, Region 4, at the address listed in Part 6.3. of this permit, once per month on a DMR form.

This permit does not authorize the discharge of storm water, from construction activities, which causes or contributes to violations of water quality standards or to the impairment of the designated use of waters of the United States.

#### **4.6 Unpaved Rural Roads**

- A. *Applicability.* Except roads constructed and associated with silviculture and agricultural activities as defined by 40 C.F.R. Part 122, the provisions of this part are applicable to the construction of one (1) acre or more of unpaved rural roads, that will remain unpaved after construction is complete, where the possibility of a point source discharge to surface waters exists during construction.
- B. *Notice of Termination (NOT).* Where a site has been finally stabilized and all storm water discharges from construction activities that are authorized by this permit are eliminated (see Part 5.2.B. for the definition of eliminated), or where the operator of all storm water discharges at a facility changes, the operator of the facility may submit the EPA approved NOT Form that is signed in accordance with Part 8.11 of this permit.

### **Part 5: TERMINATION OF COVERAGE**

#### **5.1 Requirements**

Permittees may only submit a NOT after one or more of the following conditions have been met:

- A. Final stabilization has been achieved on all portions of the site for which the operator is responsible (see Part 10 for the definition of final stabilization);
- B. Another operator has assumed control according to Subpart 8.11.C over all areas of the site that have not been finally stabilized;
- C. Coverage under an alternative NPDES permit has been obtained; or
- D. For residential construction only, temporary stabilization has been completed and the

residence has been transferred to the homeowner.

The NOT must be submitted within 30 days of one of the above conditions being met.

Authorization to discharge terminates at midnight of the day the NOT is signed.

### **5.2 Submitting a Notice of Termination**

It is the responsibility of the operator to submit a complete and accurate NOT. If EPA notifies dischargers (either directly, by public notice, or by making information available on the Internet) of other NOT form options (e.g., electronic submission of forms), you may take advantage of those options to satisfy the NOT use and submittal requirements of Part 5.

A. The Notice of Termination must include the following information:

1. The NPDES permit tracking number for the storm water discharge identified by the NOT;
2. The basis for submission of the NOT, including: final stabilization has been achieved on all portions of the site for which the permittee is responsible; another operator/permittee has assumed control over all areas of the site that have not been finally stabilized; coverage under an alternative NPDES permit has been obtained; or for residential construction only, temporary stabilization has been completed and the residence has been transferred to the homeowner;
3. The name, address and telephone number of the permittee submitting the NOT;
4. The name of the project and street address (or a description of location if no street address is available) of the construction site for which the notification is submitted;
5. The latitude and longitude of the project site; and
6. A certification statement, signed and dated by an authorized representative as defined in Subpart 8.11 and the name and title of that authorized representative.

B. For the purposes of this certification, elimination of storm water discharges associated with construction activity means that all disturbed soils at the portion of the construction site where the operator had control have been finally stabilized as defined in Part 10, or that all storm water discharges associated with construction activities have otherwise been eliminated from the portion of the construction site where the operator had control.

### **5.3 Where to Submit**

All NOTs must be submitted to the following address:

<u>Regular U.S. Mail Delivery</u>	<u>Overnight/Express Mail Delivery</u>
Storm Water Notice of Termination	Storm Water Notice of Termination
Mail Code 4203M	Room 7329
U.S. EPA	U.S. EPA
1200 Pennsylvania Avenue	1201 Constitution Avenue
Washington, DC 20460	Washington, DC 20004

## **Part 6: RETENTION OF RECORDS**

### **6.1 Documents**

The permittee shall retain copies of storm water pollution prevention plans and all reports required by this permit, and records of all data used to complete the NOI to be covered by this permit, for a period of at least three years from the date that the site is finally stabilized. This period may be extended by request of the Director at any time.

## **6.2 Accessibility**

The permittee shall retain a copy of the storm water pollution prevention plan required by this permit at the construction site from the date of project initiation to the date of final stabilization.

## **6.3 Addresses.**

Except for the submittal of NOIs (Part 2) and NOTs (Part 5), all written correspondence directed to the U.S. Environmental Protection Agency concerning discharges on Indian lands located in Region 4, and subject to coverage under this permit, including the submittal of individual permit applications, shall be sent to the address listed below:

U.S. EPA Region 4  
NPDES and Biosolids Permits Section  
Water Management Division  
Atlanta Federal Center  
61 Forsyth St., SW  
Atlanta, GA 30303

## **Part 7:**

[Reserved]

## **Part 8:. STANDARD PERMIT CONDITIONS**

### **8.1 Duty to Comply.**

A. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the CWA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

B. *Penalties for Violations of Permit Conditions.*

#### *1. Criminal*

1. *Negligent Violations.* The CWA, the Act, provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$2,750 and not more than \$27,500 per day of violation, or by imprisonment for not more than 1 year, or both.
2. *Knowing Violations.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$5,000 and not more than \$50,000 per day of violation, or by imprisonment for not more than 3 year, or both.
3. *Knowing Endangerment.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than \$250,000, or by imprisonment for not more than 15 years, or both.
4. *False Statement.* The CWA provides that any person who knowingly

makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, 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 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. (See Section 309.c.4 of the Act.)

2. *Civil Penalties* - The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed \$25,000 per day for each violation.
3. *Administrative Penalties* - The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:
  1. *Class I penalty*. Not to exceed \$10,000 per violation nor shall the maximum amount exceed \$25,000.
  2. *Class II penalty*. Not to exceed \$10,000 per day for each day during which the violation continues nor shall the maximum amount exceed \$125,000.

## **8.2 *Duty to Reapply***

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

## **8.3 *Need to halt or reduce activity not a defense.***

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

## **8.4 *Duty to Mitigate***

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

## **8.5 *Proper Operation and Maintenance***

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance require the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

## **8.6 *Permit Actions***

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or

termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

**8.7 *Property Rights***

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

**8.8 *Duty to Provide Information***

The permittee shall furnish within a reasonable time to the Director, an authorized representative of the Director or Tribal agency approving sediment and erosion plans, grading plans, or storm water management plans; or in the case of a storm water discharge associated with industrial activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the municipal operator of the system, any information which is requested to determine compliance with this permit or other information.

**8.9 *Inspection and Entry***

The permittee shall allow the Director or an authorized representative of EPA, the Tribe or, in the case of a construction site which discharges through a municipal separate storm sewer, an authorized representative of the municipal operator or the separate storm sewer receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

- A. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
- B. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
- C. Inspect, at reasonable times, any facilities or equipment (including monitoring and control equipment); and
- D. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameter at any location on the site.

**8.10 *Other Information***

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- B. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 C.F.R. part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of EPA at any time.
- C. Records of monitoring information shall include:
  - 1. The date, exact place, and time of sampling or measurements;
  - 2. The individual(s) who performed the sampling or measurements;
  - 3. The date(s) analyses were performed
  - 4. The individual(s) who performed the analyses;
  - 5. The analytical techniques or methods used; and

6. The results of such analyses.

D. Monitoring results must be conducted according to test procedures approved under 40 C.F.R. Part 136 or, in the case of sludge use or disposal, approved under 40 C.F.R. Part 136 unless otherwise specified in 40 C.F.R. Part 503, unless other test procedures have been specified in the permit.

**8.11 Signatory Requirements**

All Notices of Intent, storm water pollution prevention plans, reports, certifications or information either submitted to the Director or the operator of a large or medium municipal separate storm sewer system, or that this permit requires be maintained by the permittee, shall be signed as follows:

A. All Notices of Intent shall be signed as follows:

1. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
  1. 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
  2. the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where 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 delegations of authority to responsible corporate officers identified in 40 C.F.R. § 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 positions under 40 C.F.R. § 122.22(a)(1)(ii) rather than to specific individuals.

2. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
3. 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 (1) the chief executive officer of the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA.)

B. All reports required by the permit and other information requested by the Director or

authorized representative of the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above and submitted to the Director.
2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
3. *Changes to authorization.* If an authorization under paragraph Part 2.1.B. is no longer accurate because a different operator has responsibility for the overall operation of the construction site, a new notice of intent satisfying the requirements of Part 2.1.B. must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. *Certification.* Any person signing documents under Part 8.11 shall make the following certification:  
"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

#### **8.12 *Planned changes***

The permittee shall amend the pollution prevention plan as soon as possible identifying any planned physical alterations or additions to the permitted facility.

#### **8.13 *Bypass***

##### *A. Definitions.*

1. Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
2. Severe property damage means substantial physical damage to property which causes them to become inoperable or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

##### *B. Bypass not exceeding limitations.*

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part 8.12.

*C. Notice.*

1. *Anticipated bypass.* If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
2. *Unanticipated bypass.* The permittee shall submit notice of an unanticipated bypass as required in Part 8.22 (24-hour reporting.)

*D. Prohibition of bypass.*

1. Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:
  1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
  2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
  3. the permittee submitted notices as required under Part 8.12. of this section.
2. The Director may approve an anticipated bypass after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in Part 8.12. of this section.

**8.14 Upset**

A. Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

B. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Part 8.14.C are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

C. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An upset occurred and that the permittee can identify the cause(s) of the upset;
2. The permitted facility was at the time being properly operated; and
3. The permittee submitted notice of the upset as required in Part 8.22 (24 hour notice).
4. The permittee complied with any remedial measures required under Subpart 8.4.

D. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

**8.15 Penalties for Falsification of Reports**

A. Section 309(c)(4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including reports of compliance or noncompliance 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.

B. When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report to the Director, he or she shall promptly submit such facts or information.

**8.16 Penalties for Falsification of Monitoring Systems**

The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

**8.17 Oil and Hazardous Substance Liability**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under section 311 of the CWA or section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA.)

**8.18 Severability**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

**8.19 Transfers**

Coverage under this permit is not transferable to any person except after notice to the Director. The Director may require termination of permit coverage by the current permittee in accordance with Part 5 of this permit; and the subsequent submission a Notice of Intent to receive coverage under the permit by the new applicant in accordance with Part 2 of this permit.

**8.20 Requiring an individual permit or an alternative general permit**

A. The Director may require any person authorized by this permit to apply for and/or obtain either an individual NPDES permit or an alternative NPDES general permit. Any interested person may petition the Director to take action under this paragraph. Where the Director requires a discharger authorized to discharge under this permit to apply for an individual NPDES permit, the Director shall notify the discharger in writing that a permit application is required. This notification shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the discharger to file the application, and a statement that on the effective date of issuance or denial of the individual NPDES permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate. Applications shall be submitted to the appropriate Regional Office indicated in Part 6.3 of this permit. The Director may grant additional time to submit the

application upon request of the applicant. If a discharger fails to submit an individual NPDES permit application in a timely manner as required by the Director under this paragraph, then the applicability of this permit to the individual NPDES permittee is automatically terminated at the end of the day specified by the Director for application submittal.

B. Any discharger authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. In such cases, the permittee shall submit an individual application in accordance with the requirements of 40 C.F.R. § 122.26(c)(1)(ii), with reasons supporting the request, to the Director at the address for the appropriate Regional Office indicated in Part 6.3 of this permit. The request may be granted by issuance of any individual permit or an alternative general permit if the reasons cited by the permittee are adequate to support the request.

C. When an individual NPDES permit is issued to a discharger otherwise subject to this permit, or the discharger is authorized to discharge under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual NPDES permit is denied to an owner or operator otherwise subject to this permit, or the owner or operator is denied for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the date of such denial, unless otherwise specified by the Director.

### **8.21 Tribal or State Environmental Laws**

A. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable Tribal or State law or regulation under authority preserved by Section 510 of the Act.

B. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

### **8.22 Twenty-four hour reporting**

The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause: the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

### **8.23 Continuation of the Expired General Permit**

This permit shall expire February 28, 2009. An NOI requesting subsequent coverage under the reissuance of this general permit must be submitted no later than the expiration date this permit. If reissuance of this general permit does not occur before its expiration date and the permittee has submitted a timely and complete NOI, continued coverage under this permit will be allowed until the effective date of the reissued general permit. If the permittee is notified by EPA of the need to submit application forms for an individual permit and a timely and complete

NOI was submitted, continued coverage under this general permit will be allowed until the effective date of the individual permit issued to the applicable facility. If the initial NOI(s) requesting coverage under this permit was submitted within one (1) year of the expiration date of this permit and the information is still current, the permittee may resubmit that NOI(s) with a letter explaining their intent. Permittees that fail to notify the Director, during the term of this permit, of their intent to be covered by a subsequently issued permit cannot obtain continued authorization to discharge after the expiration date of this permit and will be operating without NPDES permit coverage until they apply for and obtain coverage under the subsequently issued general permit or apply for and receive an effective individual NPDES permit.

The authorization to discharge under the administratively continued previous general permit, issued on March 31, 1998 (63 FR 15622) and modified on April 28, 2000 (64 FR 25122), expires on the effective date of this permit.

**Part 9: REOPENER CLAUSE**

**9.1.** If there is evidence indicating potential or realized impacts on water quality due to any storm water discharge associated with industrial activity covered by this permit, the discharger may be required to obtain an individual permit or an alternative general permit in accordance with Part 2.1 of this permit or the permit may be modified to include different limitations and/or requirements.

**9.2.** Permit modification or revocation will be conducted according to 40 C.F.R. § 122.62, 122.63, 122.64 and 124.5.

**Part 10: DEFINITIONS**

*“Best Management Practices”* (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practice to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

*“Control Measure”* as used in this permit, refers to any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to waters of the United States.

*“Commencement of Construction Activities”* means the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction-related activities (e.g., stockpiling of fill material.)

*“CWA”* means the Clean Water Act or the Federal Water Pollution Control Act, 33 U.S.C. section 1251 et seq.

*“Dedicated portable asphalt plant”* - A portable asphalt plant that is located on or contiguous to a construction site and that provides only asphalt to the construction site that the plant is located on or adjacent to. The term dedicated portable asphalt plant does not include facilities that are subject to the asphalt emulsion effluent limitation guideline at 40 C.F.R. § 443.

*“Dedicated portable concrete plant”* - A portable concrete plant that is located on or contiguous to a construction site and that provides only concrete to the construction site that the plant is located on or adjacent to.

*“Director”* means the Regional Administrator of the Environmental Protection Agency or an authorized representative.

*“Discharge”* when used without qualification means the “discharge of a pollutant.”

*“Discharge of Storm Water Associated with Construction Activity”* as used in this

permit, refers to a discharge of pollutants in storm water runoff from areas where soil disturbing activities (e.g., clearing, grading, or excavation), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck washout, fueling), or other industrial storm water directly related to the construction process (e.g., concrete or asphalt batch plants) are located.

*“Discharge-related activities”* as used in this permit, include: activities that cause, contribute to, or result in storm water point source pollutant discharges, including but not limited to: excavation, site development, grading and other surface disturbance activities; and measures to control storm water including the siting, construction and operation of BMPs to control, reduce or prevent storm water pollution.

*“Eligible”* means qualified for authorization to discharge storm water under this general permit.

*“Facility” or “Activity”* means any NPDES “point source” or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.

*“Final Stabilization”* means that:

1. All soil disturbing activities at the site have been completed and either of the two following criteria are met:
  - a. A uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or
  - b. equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.
2. When background native vegetation will cover less than 100 percent of the ground (e.g., arid areas, beaches), the 70 percent coverage criteria is adjusted as follows: if the native vegetation covers 50 percent of the ground, 70 percent of 50 percent ( $0.70 \times 0.50 = 0.35$ ) would require 35 percent total cover for final stabilization. On a beach with no natural vegetation, no stabilization is required.
3. For individual lots in residential construction, final stabilization means that either:
  - a. The homebuilder has completed final stabilization as specified above, or
  - b. The homebuilder has established temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for, and benefits of, final stabilization.
4. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land, staging areas for highway construction, etc.), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to “water of the United States,” and areas which are not being returned to their preconstruction agricultural use must meet the final stabilization criteria 1. or 2. or 3. above.

*“Flow-weighted composite sample”* means a composite sample consisting of a mixture of

aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

*“Large and Medium Municipal Separate Storm Sewer System”* means all municipal separate storm sewers that are either:

1. Located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities are listed in Appendices F and G of 40 C.F.R. Part 122); or
2. Located in the counties with unincorporated urbanized populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties (these counties are listed in Appendices H and I of 40 C.F.R. Part 122); or
3. Owned or operated by a municipality other than those described in paragraphs 1. and 2. of this definition and that are designated by EPA as part of the large or medium municipal separate storm sewer system.

*“Large Construction Activity”* is defined at 40 C.F.R. §122.26(b)(14)(x) and incorporated here by reference. A large construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than five acres of land or will disturb less than five acres of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than five acres.

*“Operator”* for the purpose of this permit and in the context of storm water associated with construction activity, means any party associated with a construction project that meets either of the following two criteria:

1. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
2. The party has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions.) This definition is provided to inform permittees of EPA’s interpretation of how the regulatory definitions of “owner or operator” and “facility or activity” are applied to discharges of storm water associated with construction activity.

*“Owner or operator”* means the owner or operator of any “facility or activity” subject to regulation under the NPDES program.

*“Permitting Authority”* means the United States Environmental Protection Agency (EPA), a Regional Administrator of the EPA, or an authorized representative.

*“Point Source”* means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

*“Pollutant”* is defined at 40 C.F.R. §122.2. A partial listing from this definition includes: dredged spoil, solid waste, sewage, garbage, sewage sludge, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial or municipal waste.

“*Receiving water*” means the “Water of the United States” as defined in 40 C.F.R. §122.2 into which the regulated storm water discharges directly.

“*Runoff coefficient*” means the fraction of total rainfall that will appear at the conveyance as runoff.

“*Regulated Small Municipal Separate Sewer System*” means all municipal separate storm sewers that are not already defined as medium or large. Regulated small MS4s are automatically designated if they are located in "urbanized areas" defined by the Bureau of the Census based on the last decennial census. Other small MS4s located outside urbanized areas may be designated on a case-by-case basis by EPA if it determines that the MS4s discharges cause or have a potential to cause an adverse impact on water quality.

“*Small Construction Activity*” is defined at 40 C.F.R. §122.26(b)(15) and incorporated here by reference. A small construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than one (1) acre and less than five (5) acres of land or will disturb less than one (1) acre of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than one (1) acre and less than five (5) acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site.

“*Storm Water*” means storm water runoff, snow melt runoff, and surface runoff and drainage.

“*Storm Water 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 manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program. For the categories of industries identified in paragraphs (i) through (x) of this definition, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 C.F.R. § 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. The term includes only storm water discharges from all areas (except access roads and rail lines) listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery *are exposed to storm water*. For the purposes of this paragraph, material handling activities include the: storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are Federally or municipally owned or operated that meet the description of the facilities listed in this paragraph

(i)-(xi) of this definition) include those facilities designated under 40 C.F.R. § 122.26(a)(1)(v). The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this subsection:

(i) Facilities subject to storm water effluent guidelines, new source performance standards, or toxic pollutant effluent standards under 40 C.F.R. Subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category (xi) of this definition);

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283), 29, 311, 32 (except 323), 33, 3441, 373;

(iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 C.F.R. § 434.11(l) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator;

(iv) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of RCRA;

(v) Landfills, land application sites, and open dumps that have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under Subtitle D of RCRA;

(vi) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;

(vii) Steam electric power generating facilities, including coal handling sites;

(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under paragraphs (i)-(vii) or (ix)-(xi) of this subsection are associated with industrial activity;

(ix) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 MGD or more, or required to have an approved pretreatment program under 40 C.F.R. § 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with 40 C.F.R. § 503;

(x) Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than five acres of total land area which are not part of a larger common plan of development or sale;

(xi) Facilities under Standard Industrial Classifications 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, 4221-25, (and which are not otherwise included within categories (i)-(x)).

“*Storm Water Pollution Prevention Plan*” or “*SWPPP*” means a plan that includes site map(s), an identification of construction/contractor activities that could cause pollutants in the storm water, and a description of measures or practices to control these pollutants.

“*Waters of the United States,*” defined in 40 C.F.R. § 122.2, means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(b) All interstate waters, including interstate "wetlands";

(c) All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

(1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;

(2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(3) Which are used or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters otherwise defined as waters of the United States under this definition;

(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;

(f) The territorial sea; and

(g) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA are not waters of the United States.

“*Wetland*” means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

#### **PART 11: ACRONYMS**

BMP - Best Management Practices

C.F.R. - Code of Federal Regulations

CWA - Clean Water Act

EPA - United States Environmental Protection Agency

FWS - United States Fish and Wildlife Service

MS4 - Municipal Separate Storm Sewer System

NMFS - United States National Marine Fisheries Service

NOI - Notice of Intent  
NOT - Notice of Termination  
NPDES - National Pollutant Discharge Elimination System  
SHPO - State Historic Preservation Officer  
SWPPP - Storm Water Pollution Prevention Plan  
THPO - Tribal Historic Preservation Officer  
TMDL - Total Maximum Daily Load

## **Addendum A–Endangered Species Act Instructions for Operators**

### **A. Background**

To meet its obligations under the Clean Water Act and the Endangered Species Act (ESA), as codified at 40 C.F.R. §122.49(c), the Environmental Protection Agency (EPA) is seeking to ensure the activities regulated by the Construction General Permit (CGP) are protective of listed endangered and threatened species and designated critical habitat. To ensure that those goals are met, construction site operators must assess the impacts of their storm water discharges and storm water discharge-related activities on Federally listed endangered and threatened species, called “listed species,” and designated critical habitat by following Steps One through Five listed below. EPA strongly recommends that operators follow these steps at the earliest possible stage to ensure that measures to protect listed threatened and endangered species and designated critical habitat are incorporated early in the planning process. At a minimum, the procedures must be followed and fully documented prior to submittal of the Notice of Intent (NOI.)

Operators also have an independent ESA obligation to ensure that their activities do not result in any prohibited “takes” of listed species.<sup>2</sup> Many of the measures required in the CGP and in these instructions to protect species may also assist operators in ensuring that their construction activities do not result in a prohibited take of species in violation of Section 9 of the ESA. Operators who plan construction activities in areas that harbor endangered and threatened species are advised to ensure that they are protected from potential takings liability under ESA Section 9 by obtaining either an ESA Section 10 permit or by requesting formal consultation under ESA Section 7 (as described in more detail in Step Five below.) Operators who seek protection from takings liability should be aware that it is possible that some specific construction activities may be too unrelated to storm water discharges to be afforded incidental take coverage through an ESA Section 7 consultation that is performed to meet the eligibility requirements for CGP coverage. In such instances, operators should apply for an ESA Section 10 permit. Where operators are not sure whether to pursue a Section 10 permit or a Section 7 consultation for takings protection, they should confer with the appropriate U.S. Fish and Wildlife Service (FWS) or National Marine Fisheries Service (NMFS) office.

This permit provides for the possibility of multiple permittees at a construction site. Operators should be aware that in many cases they can meet the CGP eligibility requirements by relying on another operator’s certification of eligibility as specified in Criterion E under Part 1.3.C.6 of the CGP. However, other certifications must apply to the operator’s project area and must address the effects from the operator’s storm water discharges and storm water discharge-related activities on listed species and critical habitat.

By certifying eligibility under Criterion E of Part 1.3.C.6, the operator agrees to comply with any measures or controls upon which the other operator’s certification under Criterion A, B, C, or D of Part 1.3.C.6 was based. This situation will typically occur where a developer or

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Section 9 of the ESA prohibits any person from “taking” a listed species (e.g., harassing or harming it) unless: (1) the taking is authorized through a “incidental take statement” as part of undergoing ESA Sec. 7 formal consultation; (2) where an incidental take permit is obtained under ESA Sec. 10 (that requires the development of a habitat conservation plan); or (3) where otherwise authorized or exempted under the ESA. This prohibition applies to all entities including private individuals, businesses, and governments.

primary contractor, such as one for construction of a subdivision or industrial plant, conducts a comprehensive assessment of effects on listed species and critical habitat for the entire construction project, certifies eligibility under Criterion A, B, C, or D, and that certification is relied upon by other operators (i.e., contractors) at the site. However, operators that consider relying on another operator's certification should carefully review that certification and any supporting information, and assess whether there is any reason to believe that listed species or designated critical habitat not considered in the prior certification may be present or located in the project area (due, for example, to a new species listing or critical habitat designation.) If an operator does not believe that the other operator's certification provides adequate coverage for the operator's storm water discharges and storm water discharge-related activities or for the operator's particular project area, the operator must provide its own independent certification under Criterion A, B, C, or D.

### **B. Procedures**

Operators must meet at least one of the five criteria in Part 1.3.C.6 to be eligible for coverage under this permit. Failure to continue to meet at least one of these criteria during the term of the permit will render a permittee ineligible for coverage under this permit, causing coverage under the permit to lapse. Operators must follow the procedures in this addendum to assess the potential effects of their storm water discharges and storm water discharge-related activities on listed species and their critical habitat. When evaluating these potential effects, operators need to evaluate the entire project area.

For purposes of this Addendum, the term "project area" is inclusive of the term "Action Area." Action area is defined in 50 C.F.R. §402.02 as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. This includes areas beyond the footprint of the construction area that may be affected by storm water discharges and storm water discharge related activities.

The project area consists of:

- D. The areas on the construction site where storm water discharges originate and flow toward the point of discharge into the receiving waters (including areas where excavation, site development, or other ground disturbance activities occur) and the immediate vicinity.

Example(s):

- 1. Where bald eagles nest in a tree that is on or bordering a construction site and could be disturbed by the construction activity.
- 2. Where grading causes storm water to flow into a small wetland or other habitat that is on the site that contains listed species.

- B. The areas where storm water discharges flow from the construction site to the point of discharge into receiving waters.

Example(s):

- 1. Where storm water flows into a ditch, swale, or gully that leads to receiving waters and where listed species (such as amphibians) are found in the ditch, swale, or gully.

- C. The areas where storm water from construction activities discharge into receiving waters and the areas in the immediate vicinity of the point of discharge.

Example(s):

1. Where storm water from construction activities discharges into a stream segment that is known to harbor listed aquatic species.
- D. The areas where storm water BMPs will be constructed and operated, including any areas where storm water flows to and from BMPs.
- Example(s):
1. Where a storm water retention pond would be built.
- E. The areas upstream and/or downstream from construction activities discharges into a stream segment that may be affected by the said discharges.
- Example(s):
1. Where sediment discharged to a receiving stream settles downstream and impacts a breeding area of a listed aquatic species.

To make this assessment, operators must follow the steps outlined below prior to completing and submitting the NOI form. Operators who are eligible and able to certify eligibility under Criterion B, C, or E of Part 1.3.C.6 because of a previously issued ESA Section 10 permit, a previously completed ESA Section 7 consultation, or because the operator's activities were already addressed in another operator's certification of eligibility may proceed directly to Step Five.

**Step One: Determine if Designated Critical Habitat for Listed Species are Present in the Project Area**

The FWS and NMFS are responsible for administration of the ESA and as such are responsible for maintaining a list of protected species and critical habitat. Once listed as endangered or threatened, a species is afforded the full range of protections available under the ESA, including prohibitions on killing, harming or otherwise taking a species. In certain instances, FWS or NMFS may establish a critical habitat for a threatened or endangered species as a means to further protect those species. Critical habitat are areas determined to be essential for the conservation of a species and may not necessarily be in an area currently occupied by the species. Some, but not all, listed species have designated critical habitat. Exact locations of such critical habitat are provided in the Services regulations at 50 C.F.R. Parts 17 and 226.

Applicants must determine whether their project area is in designated critical habitat. To make this determination, applicants should do one or more of the following, as appropriate:

- A. Contact FWS and NMFS in-person, in-writing, via telephone or Internet. A link to FWS and NMFS offices is available on EPA's web site at [www.epa.gov/npdes/stormwater](http://www.epa.gov/npdes/stormwater). Additionally, FWS and NMFS support a number of regional Internet sites that maintain up-to-date lists of listed threatened and endangered species and critical habitat, or
- B. Contact appropriate State or Tribal Natural Heritage Centers in-person, in-writing, via telephone or Internet. These centers compile and disseminate information on Federally listed species and critical habitat. A link to these centers is available at [www.epa.gov/npdes/stormwater](http://www.epa.gov/npdes/stormwater). Many of these centers will provide site-specific information on the presence of listed species in a project area. Some of these centers will charge a fee for researching data requests although many centers also maintain Internet sites with current information on listed species and critical habitat.
- C. Review the applicable Service regulations at 50 C.F.R. Parts 17 and 226 that specify critical habitat (which can be found in many larger libraries as well as on the Government Printing Office website at [www.access.gpo.gov](http://www.access.gpo.gov)) in lieu of or in addition to contact with

the Services or Natural Heritage Centers.

If no designated critical habitat are located in the project area, then the operator does not need to consider impacts to critical habitat when following Steps Two through Five. Note that many but not all measures imposed to protect listed species under these steps will also protect critical habitat. Thus, meeting the eligibility requirements of this permit may require measures to protect critical habitat that are separate from those to protect listed species.

**Step Two: Determine if Listed Threatened or Endangered Species are Present in the Project Area**

The project area will vary with the size and structure of the construction activity, the nature and quantity of the storm water discharges, the storm water discharge-related activities and the type of receiving water. Given the number of construction activities potentially covered by the CGP, no specific method to determine whether listed species may be located in the project area is required for coverage under the CGP. Instead, operators must use the method that allows them to determine, to the best of their knowledge, whether listed species are located in their project area. To determine if listed threatened or endangered species are present in the project area, operators must:

- A. Conduct visual inspections: This method may be particularly suitable for construction sites that are smaller in size or located in non-natural settings such as highly urbanized areas or industrial parks where there is little or no natural habitat, or for construction activities that discharge directly into municipal storm water collection systems.
- B. Contact FWS and NMFS in-person, in-writing, via telephone or Internet. A link to FWS and NMFS offices is available on EPA's web site at [www.epa.gov/npdes/stormwater](http://www.epa.gov/npdes/stormwater). Additionally, FWS and NMFS support a number of regional Internet sites that maintain up-to-date lists of listed threatened and endangered species and critical habitat. Many endangered and threatened species are found in well-defined areas or habitats. Such information is frequently known to State, Tribal, or Federal wildlife agencies.
- C. Contact appropriate State or Tribal Natural Heritage Centers in-person, in-writing, via telephone or Internet. These centers compile and disseminate information on Federally listed species and critical habitat. A link to these centers is available at [www.epa.gov/npdes/stormwater](http://www.epa.gov/npdes/stormwater). Many of these centers will provide site-specific information on the presence of listed species in a project area. Some of these centers will charge a fee for researching data requests although many centers also maintain Internet sites with current information on listed species and critical habitat. The Natural Heritage Centers inventory species and their locations and maintain lists of sightings and habitats.
- D. Conduct a formal biological survey. In some cases, particularly for larger construction sites with extensive storm water discharges, biological surveys may be an appropriate way to assess whether species are located in the project area and whether there are likely adverse effects to such species. Biological surveys are frequently performed by environmental consulting firms. A biological survey may in some cases be useful in conjunction with Steps Three, Four, and Five of these instructions.
- E. Conduct an environmental assessment under the National Environmental Policy Act (NEPA). Some construction activities may require environmental assessments under NEPA. Such assessments may indicate if listed species are in proximity to the project area. Coverage under the CGP does not trigger such an assessment because the CGP does

not regulate any dischargers subject to New Source Performance Standards under Section 306 of the CWA, and is thus statutorily exempted from NEPA. See CWA Section 511(c). However, some construction activities might require review under NEPA because of Federal funding or other Federal involvement in the project.

If listed threatened or endangered species or critical habitat are present in the project area, then the operator must look at impacts to species and/or habitat when following Steps Two through Four. Note that many but not all measures imposed to protect listed species under these steps will also protect critical habitat. Thus, meeting the eligibility requirements of this CGP may require measures to protect critical habitat that are separate from those to protect listed species.

If listed endangered or threatened species or designated critical habitat are not present in the project area, then the operator does not need to consider impacts to species or habitat and does not need to proceed through Steps Three through Five and can certify accordingly in the NOI.

**Step Three: Determine if the Construction Activity's Storm Water Discharges or Storm Water Discharge-Related Activities Are Likely to Adversely Affect Listed Threatened or Endangered Species or Designated Critical Habitat**

To receive CGP coverage, operators must assess whether their storm water discharges or storm water discharge-related activities may adversely affect listed threatened or endangered species or designated critical habitat. "Storm water discharge-related activities" include:

- A. Activities that cause, contribute to, or result in point source storm water pollutant discharges, including but not limited to excavation, site development, grading, and other surface disturbance activities; and
- B. Measures to control storm water discharges including the siting, construction, operation of best management practices (BMPs) to control, reduce or prevent storm water pollution.

Potential adverse effects from storm water discharges and storm water discharge-related activities include:

- A. *Hydrological.* Storm water discharges may cause siltation, sedimentation or induce other changes in receiving waters such as temperature, salinity or pH. These effects will vary with the amount of storm water discharged and the volume and condition of the receiving water. Where a storm water discharge constitutes a minute portion of the total volume of the receiving water, adverse hydrological effects are less likely. Construction activity itself may also alter drainage patterns on a site where construction occurs that can impact listed species or critical habitat.
- B. *Habitat.* Excavation, site development, grading, and other surface disturbance activities from construction activities, including the installation or placement of storm water BMPs, may adversely affect listed species or their habitat. Storm water may drain or inundate listed species habitat.
- C. *Toxicity.* In some cases, pollutants in storm water may have toxic effects on listed species.

The scope of effects to consider will vary with each site. If the operator is having difficulty in determining whether his or her project is likely to adversely affect listed species or critical habitat, then the appropriate office of the FWS, NMFS or Natural Heritage Center should be contacted for assistance. If adverse effects are not likely, then the operator should make the

appropriate certification on the revised NOI form and apply for coverage under the CGP. If adverse effects are likely, the operator must follow Step Four.

**Step Four: Determine if Measures Can Be Implemented to Avoid Any Likely Adverse Effects**

If an operator makes a preliminary determination that adverse effects are likely to occur, it can still receive coverage under Criterion D of Part 1.3.C.6 of the CGP if appropriate measures are undertaken to avoid or eliminate the likelihood of adverse effects prior to applying for CGP coverage. These measures may involve relatively simple changes to construction activities such as re-routing a storm water discharge to bypass an area where species are located, relocating BMPs, or by changing the “footprint” of the construction activity. Operators should contact the FWS and/or NMFS to see what appropriate measures might be suitable to avoid or eliminate the likelihood of adverse impacts to listed species and/or critical habitat. (See 50 C.F.R. §402.13(b).) This can entail the initiation of informal consultation with the FWS and/or NMFS (described in more detail in Step Five.)

If operators adopt measures to avoid or eliminate adverse effects, they must continue to abide by those measures during the course of CGP coverage. These measures must be described in the SWPPP and are enforceable CGP conditions and/or conditions for meeting the eligibility criteria in Part 1.3. If appropriate measures to avoid the likelihood of adverse effects are not available to the operator, the operator must follow Step Five.

**Step Five: Determine if the Eligibility Requirements of Criterion B, C, or E of Part 1.3.C.6 Can Be Met**

Where adverse effects are likely, the operator must contact the FWS and/or NMFS. Operators may still be eligible for CGP coverage if any likely adverse effects can be addressed through meeting Criterion B, C, or E of Part 1.3.C.6 of the CGP. These criteria are as follows:

*1. An ESA Section 7 Consultation Is Performed for the Operator’s Activity (See Criterion B of Part 1.3.C.6 of the CGP.)*

Formal or informal ESA Section 7 consultation is performed with the FWS and/or NMFS that addresses the effects of the operator’s storm water discharges and storm water discharge-related activities on listed species and designated critical habitat. The formal consultation must result in either a “no jeopardy opinion” or a “jeopardy opinion” that identifies reasonable and prudent alternatives to avoid jeopardy that are to be implemented by the operator. The informal consultation must result in a written concurrence by the Service(s) on a finding that the operator’s storm water discharge(s) and storm water discharge-related activities are not likely to adversely affect listed species or critical habitat (for informal consultation, see 50 C.F.R. §402.13.)

Most consultations are accomplished through informal consultation. By the terms of this CGP, EPA has automatically designated operators as non-Federal representatives for the purpose of conducting informal consultations. See Part 1.3.C.6 and 50 C.F.R. §402.08 and §402.13. When conducting informal ESA Section 7 consultation as a non-Federal representative, operators must follow the procedures found in 50 C.F.R. Part 402 of the ESA regulations. Operators must notify FWS and/or NMFS of their intention and agreement to conduct consultation as a non-Federal representative.

Consultation may occur in the context of another Federal action at the construction site (e.g., where ESA Section 7 consultation was performed for issuance of a wetlands dredge and fill

permit for the project or where a NEPA review is performed for the project that incorporates a Section 7 consultation). Any terms and conditions developed through consultations to protect listed species and critical habitat must be incorporated into the SWPPP. As noted above, operators may, if they wish, initiate consultation with the Services at Step Four.

Whether ESA Section 7 consultation must be performed with either the FWS, NMFS or both Services depends on the listed species that may be affected by the operator's activity. In general, NMFS has jurisdiction over marine, estuaries, and anadromous species. Operators should also be aware that while formal Section 7 consultation provides protection from incidental takings liability, informal consultation does not.

*2. An Incidental Taking Permit Under Section 10 of the ESA is Issued for the Operators Activity (See Criterion C of Part 1.3.C.6 of the CGP.)*

The operator's construction activities are authorized through the issuance of a permit under Section 10 of the ESA and that authorization addresses the effects of the operator's storm water discharge(s) and storm water discharge-related activities on listed species and designated critical habitat. Operators must follow FWS and/or NMFS procedures when applying for an ESA Section 10 permit (see 50 C.F.R. §17.22(b)(1) for FWS and §222.22 for NMFS.) Application instructions for Section 10 permits for FWS and NMFS can be obtained by accessing the FWS and NMFS websites ([www.fws.gov](http://www.fws.gov) and [www.nmfs.noaa.gov](http://www.nmfs.noaa.gov)) or by contacting the appropriate FWS and NMFS regional office.

*3. The Operator is Covered Under the Eligibility Certification of Another Operator for the Project Area (See Criterion E of Part 1.3.C.6 of the CGP.)*

The operator's storm water discharges and storm water discharge related activities were already addressed in another operator's certification of eligibility under Criterion B or C of Part 1.3.C.6 which also included the operator's project area. By certifying eligibility under Criterion E of Part 1.3.C.6, the operator agrees to comply with any measures or controls upon which the other operator's certification under Criterion B, C, or D of Part 1.3.C.6 was based. Certification under Criterion E of Part 1.3.C.6 is discussed in more detail in Part A of this addendum.

The operator must comply with any terms and conditions imposed under the eligibility requirements of Criterion A through E to ensure that its storm waters discharges and storm water discharge-related activities are protective of listed species and/or critical habitat. Such terms and conditions must be incorporated in the project's SWPPP. If the eligibility requirements of Part 1.3.C.6 cannot be met, then the operator is not eligible for coverage under the CGP. Such operators may consider applying to EPA for an individual permit.

### **Addendum B - Historic Properties Guidance**

Operators must determine whether their storm water discharges, allowable non-storm water discharges, or construction of best management practices (BMPs) to control such discharges, have the potential to affect a property that is either listed or eligible for listing on the National Register of Historic Places. Operators should first determine whether there are any historic properties or places listed on the National Register or if any are eligible for listing on the register.

Due to the large number of entities seeking coverage under this permit and the limited number of personnel available to State and Tribal Historic Preservation Officers nationwide to respond to inquiries concerning the location of historic properties, EPA suggests that operators first access the “National Register of Historic Places” information listed on the National Park Service's web page ([www.cr.nps.gov/nr](http://www.cr.nps.gov/nr)). Addresses for State Historic Preservation Officers and Tribal Historic Preservation Officers can be found there as well. In instances where a Tribe does not have a Tribal Historic Preservation Officer, operators should contact the appropriate Tribal government office when responding to this permit eligibility condition. Operators may also contact city, county or other local historical societies for assistance, especially when determining if a place or property is eligible for listing on the register.

The following three scenarios describe how operators can meet the permit eligibility criteria for protection of historic properties under this permit:

- (1) If historic properties are not identified in the area of the operator’s storm water and allowable non-storm water discharges or where construction activities are planned to install BMPs to control such discharges (e.g., diversion channels or retention ponds), then the operator has met the permit eligibility criteria under Part 1.3.C.7;
- (2) If historic properties are identified but it is determined that they will not be affected by the discharges or construction of BMPs to control the discharge, the operator has met the permit eligibility criteria under Part 1.3.C.7; or
- (3) If historic properties are identified in the area of the operator’s storm water and allowable non-storm water discharges or where construction activities are planned to install BMPs to control such discharges, and it is determined that there is the potential to adversely affect the property, the operator can still meet the permit eligibility criteria under Part 1.3.C.7 if he/she obtains and complies with a written agreement with the appropriate State or Tribal Historic Preservation Officer which outlines measures the operator will follow to mitigate or prevent those adverse effects. The contents of such a written agreement must be included in the operator’s storm water pollution prevention plan.

In situations where an agreement cannot be reached between an operator and the State or Tribal Historic Preservation Officer, operators should contact the Advisory Council on Historic Preservation (1100 Pennsylvania Avenue, NW., Suite 809, Washington, DC 20004, Telephone: (202) 606-8503/8505, Fax: (202) 606-8647/8672, E-mail: [achp@achp.gov](mailto:achp@achp.gov).)

The term “adverse effects” includes but is not limited to damage, deterioration, alteration or destruction of the historic property or place. EPA does not make official determinations of adverse effects. Applicants must consult with the appropriate State or Tribal Historic Preservation Officer when the listing or potential listing of a property is identified.

### **Addendum C - Small Construction Waivers and Instructions**

As the operator of a small construction activity, you may be able to qualify for a waiver in lieu of needing to obtain coverage under this general permit based on: (1) a low rainfall erosivity factor or (2) a TMDL or equivalent analysis that determines allocations for small construction sites are not needed. Only one operator need submit a permit waiver certification for a single construction site. Other same-site operators can rely on the original certification of eligibility for the waiver. Procedures for obtaining a permit waiver are detailed below.

It is the responsibility of those individuals wishing to obtain a waiver from coverage under this general permit to submit a complete and accurate waiver certification form as described below. Where the operator changes or another is added during the construction project, the new operator must also submit a waiver certification form to be authorized.

#### **A. Rainfall Erosivity Waiver**

Under this scenario the small construction project's rainfall erosivity factor calculation ("R" in the Revised Universal Soil Loss Equation) is less than five (5) during the period of construction activity. The operator must certify to the Permitting Authority that construction activity will occur only when the rainfall erosivity factor is less than five (5.) The period of construction activity begins at initial earth disturbance and ends with final stabilization. Where vegetation will be used for final stabilization, the date of installation of a stabilization practice that will provide interim non-vegetative stabilization can be used for the end of the construction period, provided the operator commits (as a condition of waiver eligibility) to periodically inspect and properly maintain the area until the criteria for vegetative final stabilization as defined in the construction general permit have been met. If use of this interim stabilization eligibility condition was relied on to qualify for the waiver, signature of the waiver form with its certification statement constitutes acceptance of and commitment to complete the final stabilization process. The operator must submit a waiver certification form to EPA prior to commencing construction activities.

*Note: The rainfall erosivity factor "R" is determined in accordance with Chapter 2 of Agriculture Handbook Number 703, Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE), pages 21-64, dated January 1997; United States Department of Agriculture (USDA), Agricultural Research Service.*

Methods for determining the R factor for a small construction site are provided in detail on an EPA Fact Sheet (Low Rainfall Erosivity Waiver (Fact Sheet 3.1) that is currently under revision. EPA is also evaluating a calculator that could be used in several ways. As envisioned, the calculator would easily determine the "R" factor for a specific location and time period. It would also be useful in determining the time periods during which construction activity could be waived from permit coverage. Construction operators may find that moving their construction activity by a few weeks or expediting site stabilization will allow them to be waived. A calculator could also interpolate between the R-Factor distribution numbers used in the USDA Handbook for two week periods. Interpolating to day-by-day erosivity factors allows for waivers for many one or two week construction projects. It is also possible that consideration of the slope at the construction site could be taken into account by the calculator, since construction on a flat area is less likely to result in storm water run-off and an adjustment to R-Factor can be allowed under RUSLE.

If you are the operator of the construction activity and eligible for a waiver based on low erosivity potential, you must provide the following information on the Waiver Certification form in order to be waived from permitting requirements:

1. Name, address and telephone number of the construction site operator(s);
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest acre) to be disturbed;
4. The rainfall erosivity factor calculation that applies to the active construction phase at your project site; and
5. A statement, signed and dated by an authorized representative as provided by 40 C.F.R. §122.22, that certifies that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five.

[Low Erosivity Waiver Form and instructions are under development. New form will be included in final permit or subsequent Federal Register notice.]

*Note: If the R factor is 5 or greater, you cannot apply for the permitting waiver, and must apply for permit coverage as per Part 2.1 of the construction general permit, unless you qualify for the Water Quality Waiver as described below.*

If your small construction project continues beyond the projected completion date given on the Permit Waiver Certification, you must recalculate the rainfall erosivity factor for the new project duration. If the R factor is below five (5), you must update all applicable information on the Permit Waiver Certification form and retain a copy of the revised form as part of the site SWPPP. The new Permit Waiver Certification form must be submitted prior to the projected completion date listed on the original NOI submission to assure your exemption from permitting requirements is uninterrupted. If the new R factor is five (5) or above, you must submit an NOI as per Parts 2.1 and 2.3.

#### **B. TMDL Waiver**

This waiver is available if EPA has established or approved a TMDL that addresses the pollutant(s) of concern and has determined that controls on storm water discharges from small construction activity are not needed to protect water quality. The pollutant(s) of concern include sediment (such as TSS, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. Information on TMDLs that have been prepared is available from EPA online at <http://www.epa.gov/owow/tmdl/> and from State and Tribal water quality agencies.

If you are the operator of the construction activity and eligible for a waiver based on compliance with a TMDL, you must provide the following information on the Waiver Certification form in order to be waived from permitting requirements:

1. Name, address and telephone number of the construction site operator(s);
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest acre) to be disturbed;

4. The name of the water bodies that would be receiving storm water discharges from your construction project;
5. The name and approval date of the TMDL;

A statement, signed and dated by an authorized representative as provided by 40 C.F.R. §122.22(a), that certifies that the construction activity will take place and that the storm water discharges will occur, within the drainage area addressed by the TMDL.

**C. Equivalent Analysis Waiver**

This waiver is available when a TMDL for the pollutants of concern has not been established. The operator can develop an equivalent analysis that determines allocations for his small construction site for the pollutant(s) of concern or determines that such allocations are not needed to protect water quality. This waiver requires a small construction operator to develop an equivalent analysis based on existing in-stream concentrations, expected growth in pollutant concentrations from all sources, and a margin of safety.

To use this waiver, an owner/operator must develop an equivalent analysis and provide the following information on the Waiver Certification form in order to be waived from permitting requirements:

1. Name, address and telephone number of the construction site operator(s);
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest acre) to be disturbed;
4. The name of the water bodies that would be receiving storm water discharges from your construction project;
5. Your equivalent analysis;
6. A statement, signed and dated by an authorized representative as provided by 40 C.F.R. §122.22(a), that certifies that the construction activity will take place and that the storm water discharges will occur, within the drainage area addressed by the equivalent analysis.

**D. Waiver Deadlines and Submissions**

1. Waiver Certification forms must be submitted prior to commencement of construction activities.
2. Operators submitting an equivalent analysis must wait for EPA to review and approve their analysis before starting construction.
3. Late Notifications: Operators are not prohibited from submitting Permit Waiver Certifications after initiating clearing, grading, excavation activities, or other construction activities. The Agency reserves the right to take enforcement for any unpermitted discharges or permit noncompliance that occur between the time construction commenced and waiver authorization is granted.

Submittal of a Permit Waiver Certification is an optional alternative to obtaining a permit for discharges of storm water associated with small construction activity, provided the discharge qualifies for the waiver. Any discharge of storm water associated with small construction activity not covered by either a permit or a waiver may be considered an unpermitted discharge under the Clean Water act. As mentioned above, the Permitting Authority reserves the right to take enforcement for any unpermitted discharges or permit noncompliance that occur between

the time construction commenced and either discharge authorization is granted or a complete and accurate Permit Waiver Certification is submitted. The Permitting Authority may notify any operator covered by a waiver that they must apply for a permit. The Permitting Authority may notify any operator who has been in non-compliance with a waiver that they may no longer use the waiver for future projects. Any member of the public may petition the Permitting Authority to take action under this provision by submitting written notice along with supporting justification.

Complete and accurate Waiver Certifications must be sent to the following address:

Regular U.S. Mail Delivery  
Storm Water Notice of Intent  
Mail Code 4203M  
U.S. EPA  
1200 Pennsylvania Avenue  
Washington, DC 20460

Overnight/Express Mail Delivery  
Storm Water Notice of Intent  
Room 7329  
U.S. EPA  
1201 Constitution Avenue  
Washington, DC 20004

**Addendum D**

NOTICE OF INTENT (NOI) FORM

NOI and instructions available at:

[www.epa.gov/region4/water/permits/downloads/noi\\_2003.pdf](http://www.epa.gov/region4/water/permits/downloads/noi_2003.pdf)

**Addendum E**

NOTICE OF TERMINATION (NOT) FORM

NOT and instructions available at:

[www.epa.gov/region4/water/permits/downloads/not\\_2003.pdf](http://www.epa.gov/region4/water/permits/downloads/not_2003.pdf)

**Addendum F**

**List of Reportable Quantities**

The tables listed in this addendum are intended to be a guide only. Please refer to the applicable regulation for officially prescribed quantities of hazardous materials for the purposes of determining if they are reportable.

**From 40 CFR § 110:**

Discharges of oil that violate an applicable water quality standard; or  
That cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

**From 40 CFR § 117:**

TABLE 117.3—REPORTABLE QUANTITIES OF HAZARDOUS SUBSTANCES DESIGNATED PURSUANT TO SECTION 311 OF THE CLEAN WATER ACT

Material	Category	RQ in pounds (kilograms)
Acetaldehyde	C	1,000 (454)
Acetic acid	D	5,000 (2,270)
Acetic anhydride	D	5,000 (2,270)
Acetone cyanohydrin	A	10 (4.54)
Acetyl bromide	D	5,000 (2,270)
Acetyl chloride	D	5,000 (2,270)
Acrolein	X	1 (0.454)
Acrylonitrile	B	100 (45.4)
Adipic acid	D	5,000 (2,270)
Aldrin	X	1 (0.454)
Allyl alcohol	B	100 (45.4)
Allyl chloride	C	1,000 (454)
Aluminum sulfate	D	5,000 (2,270)
Ammonia	B	100 (45.4)
Ammonium acetate	D	5,000 (2,270)
Ammonium benzoate	D	5,000 (2,270)
Ammonium bicarbonate	D	5,000 (2,270)
Ammonium bichromate	A	10 (4.54)
Ammonium bifluoride	B	100 (45.4)
Ammonium bisulfite	D	5,000 (2,270)
Ammonium carbamate	D	5,000 (2,270)
Ammonium carbonate	D	5,000 (2,270)
Ammonium chloride	D	5,000 (2,270)
Ammonium chromate	A	10 (4.54)
Ammonium citrate dibasic	D	5,000 (2,270)
Ammonium fluoborate	D	5,000 (2,270)
Ammonium fluoride	B	100 (45.4)
Ammonium hydroxide	C	1,000 (454)
Ammonium oxalate	D	5,000 (2,270)
Ammonium silicofluoride	C	1,000 (454)
Ammonium sulfamate	D	5,000 (2,270)
Ammonium sulfide	B	100 (45.4)
Ammonium sulfite	D	5,000 (2,270)
Ammonium tartrate	D	5,000 (2,270)
Ammonium thiocyanate	D	5,000 (2,270)
Amyl acetate	D	5,000 (2,270)
Aniline	D	5,000 (2,270)
Antimony pentachloride	C	1,000 (454)
Antimony potassium tartrate	B	100 (45.4)
Antimony tribromide	C	1,000 (454)
Antimony trichloride	C	1,000 (454)
Antimony trifluoride	C	1,000 (454)
Antimony trioxide	C	1,000 (454)
Arsenic disulfide	X	1 (0.454)
Arsenic pentoxide	X	1 (0.454)
Arsenic trichloride	X	1 (0.454)
Arsenic trioxide	X	1 (0.454)
Arsenic trisulfide	X	1 (0.454)

Barium cyanide .....	A .....	10 (4.54)
Benzene .....	A .....	10 (4.54)
Benzoic acid .....	D .....	5,000 (2,270)
Benzonitrile .....	D .....	5,000 (2,270)
Benzoyl chloride .....	C .....	1,000 (454)
Benzyl chloride .....	B .....	100 (45.4)
Beryllium chloride .....	X .....	1 (0.454)
Beryllium fluoride .....	X .....	1 (0.454)
Beryllium nitrate .....	X .....	1 (0.454)
Butyl acetate .....	D .....	5,000 (2,270)
Butylamine .....	C .....	1,000 (454)
n-Butyl phthalate .....	A .....	10 (4.54)
Butyric acid .....	D .....	5,000 (2,270)
Cadmium acetate .....	A .....	10 (4.54)
Cadmium bromide .....	A .....	10 (4.54)
Cadmium chloride .....	A .....	10 (4.54)
Calcium arsenate .....	X .....	1 (0.454)
Calcium arsenite .....	X .....	1 (0.454)
Calcium carbide .....	A .....	10 (4.54)
Calcium chromate .....	A .....	10 (4.54)
Calcium cyanide .....	A .....	10 (4.54)
Calcium dodecylbenzenesulfonate .....	C .....	1,000 (454)
Calcium hypochlorite .....	A .....	10 (4.54)
Captan .....	A .....	10 (4.54)
Carbaryl .....	B .....	100 (45.4)
Carbofuran .....	A .....	10 (4.54)
Carbon disulfide .....	B .....	100 (45.4)
Carbon tetrachloride .....	A .....	10 (4.54)
Chlordane .....	X .....	1 (0.454)
Chlorine .....	A .....	10 (4.54)
Chlorobenzene .....	B .....	100 (45.4)
Chloroform .....	A .....	10 (4.54)
Chlorosulfonic acid .....	C .....	1,000 (454)
Chlorpyrifos .....	X .....	1 (0.454)
Chromic acetate .....	C .....	1,000 (454)
Chromic acid .....	A .....	10 (4.54)
Chromic sulfate .....	C .....	1,000 (454)
Chromous chloride .....	C .....	1,000 (454)
Cobaltous bromide .....	C .....	1,000 (454)
Cobaltous formate .....	C .....	1,000 (454)
Cobaltous sulfamate .....	C .....	1,000 (454)
Coumaphos .....	A .....	10 (4.54)
Cresol .....	B .....	100 (45.4)
Crotonaldehyde .....	B .....	100 (45.4)
Cupric acetate .....	B .....	100 (45.4)
Cupric acetoarsenite .....	X .....	1 (0.454)
Cupric chloride .....	A .....	10 (4.54)
Cupric nitrate .....	B .....	100 (45.4)
Cupric oxalate .....	B .....	100 (45.4)
Cupric sulfate .....	A .....	10 (4.54)
Cupric sulfate, ammoniated .....	B .....	100 (45.4)
Cupric tartrate .....	B .....	100 (45.4)
Cyanogen chloride .....	A .....	10 (4.54)
Cyclohexane .....	C .....	1,000 (454)
2,4-D Acid .....	B .....	100 (45.4)
2,4-D Esters .....	B .....	100 (45.4)
DDT .....	X .....	1 (0.454)
Diazinon .....	X .....	1 (0.454)
Dicamba .....	C .....	1,000 (454)
Dichlobenil .....	B .....	100 (45.4)
Dichlone .....	X .....	1 (0.454)
Dichlorobenzene .....	B .....	100 (45.4)
Dichloropropane .....	C .....	1,000 (454)
Dichloropropene .....	B .....	100 (45.4)
Dichloropropene-Dichloropropane (mixture) .....	B .....	100 (45.4)
2,2-Dichloropropionic acid .....	D .....	5,000 (2,270)
Dichlorvos .....	A .....	10 (4.54)

Dicofol .....	A .....	10 (4.54)
Dieldrin .....	X .....	1 (0.454)
Diethylamine .....	B .....	100 (45.4)
Dimethylamine .....	C .....	1,000 (454)
Dinitrobenzene (mixed) .....	B .....	100 (45.4)
Dinitrophenol .....	A .....	10 (45.4)
Dinitrotoluene .....	A .....	10 (4.54)
Diquat .....	C .....	1,000 (454)
Disulfoton .....	X .....	1 (0.454)
Diuron .....	B .....	100 (45.4)
Dodecylbenzenesulfonic acid .....	C .....	1,000 (454)
Endosulfan .....	X .....	1 (0.454)
Endrin .....	X .....	1 (0.454)
Epichlorohydrin .....	B .....	100 (45.4)
Ethion .....	A .....	10 (4.54)
Ethylbenzene .....	C .....	1,000 (454)
Ethylenediamine .....	D .....	5,000 (2,270)
Ethylenediamine-tetraacetic acid (EDTA) .....	D .....	5,000 (2,270)
Ethylene dibromide .....	X .....	1 (0.454)
Ethylene dichloride .....	B .....	100 (45.4)
Ferric ammonium citrate .....	C .....	1,000 (454)
Ferric ammonium oxalate .....	C .....	1,000 (454)
Ferric chloride .....	C .....	1,000 (454)
Ferric fluoride .....	B .....	100 (45.4)
Ferric nitrate .....	C .....	1,000 (454)
Ferric sulfate .....	C .....	1,000 (454)
Ferrous ammonium sulfate .....	C .....	1,000 (454)
Ferrous chloride .....	B .....	100 (45.4)
Ferrous sulfate .....	C .....	1,000 (454)
Formaldehyde .....	B .....	100 (45.4)
Formic acid .....	D .....	5,000 (2,270)
Fumaric acid .....	D .....	5,000 (2,270)
Furfural .....	D .....	5,000 (2,270)
Guthion .....	X .....	1 (0.454)
Heptachlor .....	X .....	1 (0.454)
Hexachlorocyclopentadiene .....	A .....	10 (4.54)
Hydrochloric acid .....	D .....	5,000 (2,270)
Hydrofluoric acid .....	B .....	100 (45.4)
Hydrogen cyanide .....	A .....	10 (4.54)
Hydrogen sulfide .....	B .....	100 (45.4)
Isoprene .....	B .....	100 (45.4)
Isopropanolamine dodecylbenzenesulfonate .....	C .....	1,000 (454)
Kepone .....	X .....	1 (0.454)
Lead acetate .....	A .....	10 (4.54)
Lead arsenate .....	X .....	1 (0.454)
Lead chloride .....	A .....	10 (4.54)
Lead fluoborate .....	A .....	10 (4.54)
Lead fluoride .....	A .....	10 (4.54)
Lead iodide .....	A .....	10 (4.54)
Lead nitrate .....	A .....	10 (4.54)
Lead stearate .....	A .....	10 (4.54)
Lead sulfate .....	A .....	10 (4.54)
Lead sulfide .....	A .....	10 (4.54)
Lead thiocyanate .....	A .....	10 (4.54)
Lindane .....	X .....	1 (0.454)
Lithium chromate .....	A .....	10 (4.54)
Malathion .....	B .....	100 (45.4)
Maleic acid .....	D .....	5,000 (2,270)
Maleic anhydride .....	D .....	5,000 (2,270)
Mercaptodimethur .....	A .....	10 (4.54)
Mercuric cyanide .....	X .....	1 (0.454)
Mercuric nitrate .....	A .....	10 (4.54)
Mercuric sulfate .....	A .....	10 (4.54)
Mercuric thiocyanate .....	A .....	10 (4.54)
Mercurous nitrate .....	A .....	10 (4.54)
Methoxychlor .....	X .....	1 (0.454)
Methyl mercaptan .....	B .....	100 (45.4)

Methyl methacrylate .....	C .....	1,000 (454)
Methyl parathion .....	B .....	100 (45.4)
Mevinphos .....	A .....	10 (4.54)
Mexacarbate .....	C .....	1,000 (454)
Monoethylamine .....	B .....	100 (45.4)
Monomethylamine .....	B .....	100 (45.4)
Naled .....	A .....	10 (4.54)
Naphthalene .....	B .....	100 (45.4)
Naphthenic acid .....	B .....	100 (45.4)
Nickel ammonium sulfate .....	B .....	100 (45.4)
Nickel chloride .....	B .....	100 (45.4)
Nickel hydroxide .....	A .....	10 (4.54)
Nickel nitrate .....	B .....	100 (45.4)
Nickel sulfate .....	B .....	100 (45.4)
Nitric acid .....	C .....	1,000 (454)
Nitrobenzene .....	C .....	1,000 (454)
Nitrogen dioxide .....	A .....	10 (4.54)
Nitrophenol (mixed) .....	B .....	100 (45.4)
Nitrotoluene .....	C .....	1,000 (454)
Paraformaldehyde .....	C .....	1,000 (454)
Parathion .....	A .....	10 (4.54)
Pentachlorophenol .....	A .....	10 (4.54)
Phenol .....	C .....	1,000 (454)
Phosgene .....	A .....	10 (4.54)
Phosphoric acid .....	D .....	5,000 (2,270)
Phosphorus .....	X .....	1 (0.454)
Phosphorus oxychloride .....	C .....	1,000 (454)
Phosphorus pentasulfide .....	B .....	100 (45.4)
Phosphorus trichloride .....	C .....	1,000 (454)
Polychlorinated biphenyls .....	X .....	1 (0.454)
Potassium arsenate .....	X .....	1 (0.454)
Potassium arsenite .....	X .....	1 (0.454)
Potassium bichromate .....	A .....	10 (4.54)
Potassium chromate .....	A .....	10 (4.54)
Potassium cyanide .....	A .....	10 (4.54)
Potassium hydroxide .....	C .....	1,000 (454)
Potassium permanganate .....	B .....	100 (45.4)
Propargite .....	A .....	10 (4.54)
Propionic acid .....	D .....	5,000 (2,270)
Propionic anhydride .....	D .....	5,000 (2,270)
Propylene oxide .....	B .....	100 (45.4)
Pyrethrins .....	X .....	1 (0.454)
Quinoline .....	D .....	5,000 (2,270)
Resorcinol .....	D .....	5,000 (2,270)
Selenium oxide .....	A .....	10 (4.54)
Silver nitrate .....	X .....	1 (0.454)
Sodium .....	A .....	10 (4.54)
Sodium arsenate .....	X .....	1 (0.454)
Sodium arsenite .....	X .....	1 (0.454)
Sodium bichromate .....	A .....	10 (4.54)
Sodium bifluoride .....	B .....	100 (45.4)
Sodium bisulfite .....	D .....	5,000 (2,270)
Sodium chromate .....	A .....	10 (4.54)
Sodium cyanide .....	A .....	10 (4.54)
Sodium dodecylbenzenesulfonate .....	C .....	1,000 (454)
Sodium fluoride .....	C .....	1,000 (454)
Sodium hydrosulfide .....	D .....	5,000 (2,270)
Sodium hydroxide .....	C .....	1,000 (454)
Sodium hypochlorite .....	B .....	100 (45.4)
Sodium methylate .....	C .....	1,000 (454)
Sodium nitrite .....	B .....	100 (45.4)
Sodium phosphate, dibasic .....	D .....	5,000 (2,270)
Sodium phosphate, tribasic .....	D .....	5,000 (2,270)
Sodium selenite .....	B .....	100 (45.4)
Strontium chromate .....	A .....	10 (4.54)
Strychnine .....	A .....	10 (4.54)
Styrene .....	C .....	1,000 (454)

Sulfuric acid	C	1,000 (454)
Sulfur monochloride	C	1,000 (454)
2,4,5-T acid	C	1,000 (454)
2,4,5-T amines	D	5,000 (2,270)
2,4,5-T esters	C	1,000 (454)
2,4,5-T salts	C	1,000 (454)
TDE	X	1 (0.454)
2,4,5-TP acid	B	100 (45.4)
2,4,5-TP acid esters	B	100 (45.4)
Tetraethyl lead	A	10 (4.54)
Tetraethyl pyrophosphate	A	10 (4.54)
Thallium sulfate	B	100 (45.4)
Toluene	C	1,000 (454)
Toxaphene	X	1 (0.454)
Trichlorfon	B	100 (45.4)
Trichloroethylene	B	100 (45.4)
Trichlorophenol	A	10 (4.54)
Triethanolamine dodecylbenzenesulfonate	C	1,000 (454)
Triethylamine	D	5,000 (2,270)
Trimethylamine	B	100 (45.4)
Uranyl acetate	B	100 (45.4)
Uranyl nitrate	B	100 (45.4)
Vanadium pentoxide	C	1,000 (454)
Vanadyl sulfate	C	1,000 (454)
Vinyl acetate	D	5,000 (2,270)
Vinylidene chloride	B	100 (45.4)
Xylene (mixed)	B	100 (45.4)
Xylenol	C	1,000 (454)
Zinc acetate	C	1,000 (454)
Zinc ammonium chloride	C	1,000 (454)
Zinc borate	C	1,000 (454)
Zinc bromide	C	1,000 (454)
Zinc carbonate	C	1,000 (454)
Zinc chloride	C	1,000 (454)
Zinc cyanide	A	10 (4.54)
Zinc fluoride	C	1,000 (454)
Zinc formate	C	1,000 (454)
Zinc hydrosulfite	C	1,000 (454)
Zinc nitrate	C	1,000 (454)
Zinc phenolsulfonate	D	5,000 (2,270)
Zinc phosphide	B	100 (45.4)
Zinc silicofluoride	D	5,000 (2,270)
Zinc sulfate	C	1,000 (454)
Zirconium nitrate	D	5,000 (2,270)
Zirconium potassium fluoride	C	1,000 (454)
Zirconium sulfate	D	5,000 (2,270)
Zirconium tetrachloride	D	5,000 (2,270)

[50 FR 13513, Apr. 4, 1985, as amended at 51 FR 34547, Sept. 29, 1986; 54 FR 33482, Aug. 14, 1989; 58 FR 35327, June 30, 1993; 60 FR 30937, June 12, 1995]

**From 40 CFR § 302:**

**TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES**

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code dagger;	RCRA waste No.	Final RQ pounds (Kg)
Acenaphthene	83-32-9	2	100	(45.4)
Acenaphthylene	208-96-8	2	5000	(2270)
Acetaldehyde	75-07-0	1,3,4	U001	1000 (454)
Acetaldehyde, chloro-	107-20-0	4	P023	1000 (454)
Acetaldehyde, trichloro-	75-87-6	4	U034	5000 (2270)
Acetamide	60-35-5	3	100	(45.4)
Acetamide, N-(aminothioxomethyl)-	591-08-2	4	P002	1000 (454)
Acetamide, N-(4-ethoxyphenyl)-	62-44-2	4	U187	100 (45.4)
Acetamide, N-9H-fluoren-2-yl-	53-96-3	3,4	U005	1 (0.454)
Acetamide, 2-fluoro-	640-19-7	4	P057	100 (45.4)
Acetic acid	64-19-7	1	5000	(2270)
Acetic acid, (2,4-dichlorophenoxy)-, salts & esters	94-75-7	1,3,4	U240	100 (45.4)
Acetic acid, ethyl ester	141-78-6	4	U112	5000 (2270)

Acetic acid, fluoro-, sodium salt .....	62-74-8 4 P058 10 (4.54)
Acetic acid, lead(2+) salt .....	301-04-2 1,4 U144 10 (4.54)
Acetic acid, thallium(1+) salt .....	563-68-8 4 U214 100 (45.4)
Acetic acid, (2,4,5-trichlorophenoxy)- .....	93-76-5 1,4 See F027 1000 (454)
Acetic anhydride .....	108-24-7 1 5000 (2270)
Acetone .....	67-64-1 4 U002 5000 (2270)
Acetone cyanohydrin .....	75-86-5 1,4 P069 10 (4.54)
Acetonitrile .....	75-05-8 3,4 U003 5000 (2270)
Acetophenone .....	98-86-2 3,4 U004 5000 (2270)
2-Acetylaminofluorene .....	53-96-3 3,4 U005 1 (0.454)
Acetyl bromide .....	506-96-7 1 5000 (2270)
Acetyl chloride .....	75-36-5 1,4 U006 5000 (2270)
1-Acetyl-2-thiourea .....	591-08-2 4 P002 1000 (454)
Acrolein .....	107-02-8 1,2,3,4 P003 1 (0.454)
Acrylamide .....	79-06-1 3,4 U007 5000 (2270)
Acrylic acid .....	79-10-7 3,4 U008 5000 (2270)
Acrylonitrile .....	107-13-1 1,2,3,4 U009 100 (45.4)
Adipic acid .....	124-04-9 1 5000 (2270)
Aldicarb .....	116-06-3 4 P070 1 (0.454)
Aldrin .....	309-00-2 1,2,4 P004 1 (0.454)
Allyl alcohol .....	107-18-6 1,4 P005 100 (45.4)
Allyl chloride .....	107-05-1 1,3 1000 (454)
Aluminum phosphide .....	20859-73-8 4 P006 100 (45.4)
Aluminum sulfate .....	10043-01-3 1 5000 (2270)
4-Aminobiphenyl .....	92-67-1 3 1 (0.454)
5-(Aminomethyl)-3-isoxazolol .....	2763-96-4 4 P007 1000 (454)
4-Aminopyridine .....	504-24-5 4 P008 1000 (454)
Amitrole .....	61-82-5 4 U011 10 (4.54)
Ammonia .....	7664-41-7 1 100 (45.4)
Ammonium acetate .....	631-61-8 1 5000 (2270)
Ammonium benzoate .....	1863-63-4 1 5000 (2270)
Ammonium bicarbonate .....	1066-33-7 1 5000 (2270)
Ammonium bichromate .....	7789-09-5 1 10 (4.54)
Ammonium bifluoride .....	1341-49-7 1 100 (45.4)
Ammonium bisulfite .....	10192-30-0 1 5000 (2270)
Ammonium carbamate .....	1111-78-0 1 5000 (2270)
Ammonium carbonate .....	506-87-6 1 5000 (2270)
Ammonium chloride .....	12125-02-9 1 5000 (2270)
Ammonium chromate .....	7788-98-9 1 10 (4.54)
Ammonium citrate, dibasic .....	3012-65-5 1 5000 (2270)
Ammonium fluoroborate .....	13826-83-0 1 5000 (2270)
Ammonium fluoride .....	12125-01-8 1 100 (45.4)
Ammonium hydroxide .....	1336-21-6 1 1000 (454)
Ammonium oxalate .....	6009-70-7 1 5000 (2270)
	5972-73-6
	14258-49-2
Ammonium picrate .....	131-74-8 4 P009 10 (4.54)
Ammonium silicofluoride .....	16919-19-0 1 1000 (454)
Ammonium sulfamate .....	7773-06-0 1 5000 (2270)
Ammonium sulfide .....	12135-76-1 1 100 (45.4)
Ammonium sulfite .....	10196-04-0 1 5000 (2270)
Ammonium tartrate .....	14307-43-8 1 5000 (2270)
	3164-29-2
Ammonium thiocyanate .....	1762-95-4 1 5000 (2270)
Ammonium vanadate .....	7803-55-6 4 P119 1000 (454)
Amyl acetate .....	628-63-7 1 5000 (2270)
iso-Amyl acetate .....	123-92-2
sec-Amyl acetate .....	626-38-0
tert-Amyl acetate .....	625-16-1
Aniline .....	62-53-3 1,3,4 U012 5000 (2270)
o-Anisidine .....	90-04-0 3 100 (45.4)
Anthracene .....	120-12-7 2 5000 (2270)
Antimonydagger;dagger; .....	7440-36-0 2 5000 (2270)
ANTIMONY AND COMPOUNDS .....	N.A. 2,3 **
Antimony Compounds .....	N.A. 2,3 **
Antimony pentachloride .....	7647-18-9 1 1000 (454)
Antimony potassium tartrate .....	28300-74-5 1 100 (45.4)

Antimony tribromide .....	7789-61-9 1 1000 (454)
Antimony trichloride .....	10025-91-9 1 1000 (454)
Antimony trifluoride .....	7783-56-4 1 1000 (454)
Antimony trioxide .....	1309-64-4 1 1000 (454)
Argentate(1-), bis(cyano-C)-, potassium .....	506-61-6 4 P099 1 (0.454)
Aroclor 1016 .....	12674-11-2 1,2,3 1 (0.454)
Aroclor 1221 .....	11104-28-2 1,2,3 1 (0.454)
Aroclor 1232 .....	11141-16-5 1,2,3 1 (0.454)
Aroclor 1242 .....	53469-21-9 1,2,3 1 (0.454)
Aroclor 1248 .....	12672-29-6 1,2,3 1 (0.454)
Aroclor 1254 .....	11097-69-1 1,2,3 1 (0.454)
Aroclor 1260 .....	11096-82-5 1,2,3 1 (0.454)
Aroclors .....	1336-36-3 1,2,3 1 (0.454)
Arsenic dagger; dagger; .....	7440-38-2 2,3 1 (0.454)
Arsenic acid H <sub>3</sub> AsO <sub>4</sub> .....	7778-39-4 4 P010 1 (0.454)
ARSENIC AND COMPOUNDS .....	N.A. 2,3 **
Arsenic Compounds (inorganic including arsine) .....	N.A. 2,3 **
Arsenic disulfide .....	1303-32-8 1 1 (0.454)
Arsenic oxide As <sub>2</sub> O <sub>3</sub> .....	1327-53-3 1,4 P012 1 (0.454)
Arsenic oxide As <sub>2</sub> O <sub>5</sub> .....	1303-28-2 1,4 P011 1 (0.454)
Arsenic pentoxide .....	1303-28-2 1,4 P011 1 (0.454)
Arsenic trichloride .....	7784-34-1 1 1 (0.454)
Arsenic trioxide .....	1327-53-3 1,4 P012 1 (0.454)
Arsenic trisulfide .....	1303-33-9 1 1 (0.454)
Arsine, diethyl- .....	692-42-2 4 P038 1 (0.454)
Arsinic acid, dimethyl- .....	75-60-5 4 U136 1 (0.454)
Arsonous dichloride, phenyl- .....	696-28-6 4 P036 1 (0.454)
Asbestos dagger; dagger; dagger; .....	1332-21-4 2,3 1 (0.454)
Auramine .....	492-80-8 4 U014 100 (45.4)
Azaserine .....	115-02-6 4 U015 1 (0.454)
Aziridine .....	151-56-4 3,4 P054 1 (0.454)
Aziridine, 2-methyl- .....	75-55-8 3,4 P067 1 (0.454)
Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8- [[ (aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b- hexahydro-8a-methoxy-5- methyl-, [1aS- (1aalpha,8beta,8aalpha,8balpha)]-.....	50-07-7 4 U010 10 (4.54)
Barium cyanide .....	542-62-1 1,4 P013 10 (4.54)
Benz[j]aceanthrylene, 1,2-dihydro-3-methyl- .....	56-49-5 4 U157 10 (4.54)
Benz[c]acridine .....	225-51-4 4 U016 100 (45.4)
Benzal chloride .....	98-87-3 4 U017 5000 (2270)
Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)- .....	23950-58-5 4 U192 5000 (2270)
Benz[a]anthracene .....	56-55-3 2,4 U018 10 (4.54)
1,2-Benzanthracene .....	56-55-3 2,4 U018 10 (4.54)
Benz[a]anthracene, 7,12-dimethyl- .....	57-97-6 4 U094 1 (0.454)
Benzenamine .....	62-53-3 1,3,4 U012 5000 (2270)
Benzenamine, 4,4'-carbonimidoylbis (N,N dimethyl- .....	492-80-8 4 U014 100 (45.4)
Benzenamine, 4-chloro- .....	106-47-8 4 P024 1000 (454)
Benzenamine, 4-chloro-2-methyl-, hydrochloride .....	3165-93-3 4 U049 100 (45.4)
Benzenamine, N,N-dimethyl-4-(phenylazo)- .....	60-11-7 3,4 U093 10 (4.54)
Benzenamine, 2-methyl- .....	95-53-4 3,4 U328 100 (45.4)
Benzenamine, 4-methyl- .....	106-49-0 4 U353 100 (45.4)
Benzenamine, 4,4'-methylenebis [2-chloro- .....	101-14-4 3,4 U158 10 (4.54)
Benzenamine, 2-methyl-, hydrochloride .....	636-21-5 4 U222 100 (45.4)
Benzenamine, 2-methyl-5-nitro- .....	99-55-8 4 U181 100 (45.4)
Benzenamine, 4-nitro- .....	100-01-6 4 P077 5000 (2270)
Benzene a .....	71-43-2 1,2,3,4 U019 10 (4.54)
Benzeneacetic acid, 4-chloro-a-(4-chlorophenyl)- a-hydroxy-, ethyl ester.....	510-15-6 3,4 U038 10 (4.54)
Benzene, 1-bromo-4-phenoxy- .....	101-55-3 2,4 U030 100 (45.4)
Benzenobutanoic acid, 4-[bis(2- chloroethyl)amino]- .....	305-03-3 4 U035 10 (4.54)
Benzene, chloro- .....	108-90-7 1,2,3,4 U037 100 (45.4)
Benzene, (chloromethyl)- .....	100-44-7 1,3,4 P028 100 (45.4)
Benzenediamine, ar-methyl- .....	95-80-7 3,4 U221 10 (4.54)
	496-72-0
	823-40-5
	25376-45-8
1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester .....	117-81-7 2,3,4 U028 100 (45.4)

1,2-Benzenedicarboxylic acid, dibutyl ester .....	84-74-2 1,2,3,4 U069 10 (4.54)
1,2-Benzenedicarboxylic acid, diethyl ester .....	84-66-2 2,4 U088 1000 (454)
1,2-Benzenedicarboxylic acid, dimethyl ester .....	131-11-3 2,3,4 U102 5000 (2270)
1,2-Benzenedicarboxylic acid, dioctyl ester .....	117-84-0 2,4 U107 5000 (2270)
Benzene, 1,2-dichloro- .....	95-50-1 1,2,4 U070 100 (45.4)
Benzene, 1,3-dichloro- .....	541-73-1 2,4 U071 100 (45.4)
Benzene, 1,4-dichloro- .....	106-46-7 1,2,3,4 U072 100 (45.4)
Benzene, 1,1'-(2,2-dichloroethylidene) bis[4-chloro- .....	72-54-8 1,2,4 U060 1 (0.454)
Benzene, (dichloromethyl)- .....	98-87-3 4 U017 5000 (2270)
Benzene, 1,3-diisocyanatomethyl- .....	91-08-7 3,4 U223 100 (45.4)
	584-84-9
	26471-62-5
Benzene, dimethyl- .....	1330-20-7 1,3,4 U239 100 (45.4)
1,3-Benzenediol .....	108-46-3 1,4 U201 5000 (2270)
1,2-Benzenediol,4-[1-hydroxy-2-(methyl amino)ethyl]- .....	51-43-4 4 P042 1000 (454)
Benzeneethanamine, alpha,alpha-dimethyl- .....	122-09-8 4 P046 5000 (2270)
Benzene, hexachloro- .....	118-74-1 2,3,4 U127 10 (4.54)
Benzene, hexahydro- .....	110-82-7 1,4 U056 1000 (454)
Benzene, methyl- .....	108-88-3 1,2,3,4 U220 1000 (454)
Benzene, 1-methyl-2,4-dinitro- .....	121-14-2 1,2,3,4 U105 10 (4.54)
Benzene, 2-methyl-1,3-dinitro- .....	606-20-2 1,2,4 U106 100 (45.4)
Benzene, (1-methylethyl)- .....	98-82-8 3,4 U055 5000 (2270)
Benzene, nitro- .....	98-95-3 1,2,3,4 U169 1000 (454)
Benzene, pentachloro- .....	608-93-5 4 U183 10 (4.54)
Benzene, pentachloronitro- .....	82-68-8 3,4 U185 100 (45.4)
Benzenesulfonic acid chloride .....	98-09-9 4 U020 100 (45.4)
Benzenesulfonyl chloride .....	98-09-9 4 U020 100 (45.4)
Benzene,1,2,4,5-tetrachloro- .....	95-94-3 4 U207 5000 (2270)
Benzenethiol .....	108-98-5 4 P014 100 (45.4)
Benzene,1,1'-(2,2,2-trichloroethylidene) bis[4-chloro- .....	50-29-3 1,2,4 U061 1 (0.454)
Benzene, 1,1'-(2,2,2-trichloroethylidene) bis[4-methoxy- .....	72-43-5 1,3,4 U247 1 (0.454)
Benzene, (trichloromethyl)- .....	98-07-7 3,4 U023 10 (4.54)
Benzene, 1,3,5-trinitro- .....	99-35-4 4 U234 10 (4.54)
Benzidine .....	92-87-5 2,3,4 U021 1 (0.454)
1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide, & salts .....	81-07-2 4 U202 100 (45.4)
Benzo[a]anthracene .....	56-55-3 2,4 U018 10 (4.54)
1,3-Benzodioxole, 5-(1-propenyl)-1 .....	120-58-1 4 U141 100 (45.4)
1,3-Benzodioxole, 5-(2-propenyl)- .....	94-59-7 4 U203 100 (45.4)
1,3-Benzodioxole, 5-propyl- .....	94-58-6 4 U090 10 (4.54)
1,3-Benzodioxol-4-ol, 2,2-dimethyl-, (Bendiocarb phenol) ..	22961-82-6 4 U364 ##
1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate	
(Bendiocarb).....	22781-23-3 4 U278 ##
Benzo[b]fluoranthene .....	205-99-2 2 1 (0.454)
Benzo(k)fluoranthene .....	207-08-9 2 5000 (2270)
7-Benzofuranol, 2,3-dihydro-2,2-dimethyl- (Carbofuran	
phenol).....	1563-38-8 4 U367 ##
7-Benzofuranol, 2,3-dihydro-2,2- dimethyl-,	
methylcarbamate.....	1563-66-2 1,4 P127 10 (4.54)
Benzoic acid .....	65-85-0 1 5000 (2270)
Benzoic acid, 2-hydroxy-, compd. with (3aS- cis)-	
1,2,3,3a,8,8a- hexahydro-1,3a,8- trimethylpyrrolo [2,3-	
b]indol-5-yl methylcarbamate ester (1:1) (Physostigmine	
salicylate).....	57-64-7 4 P188 ##
Benzonitrile .....	100-47-0 1 5000 (2270)
Benzo[rs]pentaphene .....	189-55-9 4 U064 10 (4.54)
Benzo[ghi]perylene .....	191-24-2 2 5000 (2270)
2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo- 1-	
phenylbutyl)-, & salts.....	81-81-2 4 P001 100 (45.4)
Benzo[a]pyrene .....	50-32-8 2,4 U022 1 (0.454)
3,4-Benzopyrene .....	50-32-8 2,4 U022 1 (0.454)
r-Benzoquinone .....	106-51-4 3,4 U197 10 (4.54)
Benzotrichloride .....	98-07-7 3,4 U023 10 (4.54)
Benzoyl chloride .....	98-88-4 1 1000 (454)
Benzyl chloride .....	100-44-7 1,3,4 P028 100 (45.4)
Beryllium dagger;dagger; .....	7440-41-7 2,3,4 P015 10 (4.54)
BERYLLIUM AND COMPOUNDS .....	N.A. 2,3 **
Beryllium chloride .....	7787-47-5 1 1 (0.454)

Beryllium compounds .....	N.A. 2,3 **
Beryllium fluoride .....	7787-49-7 1 1 (0.454)
Beryllium nitrate .....	13597-99-4 1 1 (0.454)
	7787-55-5
Beryllium powder dagger;dagger; .....	7440-41-7 2,3,4 P015 10 (4.54)
alpha-BHC .....	319-84-6 2 10 (4.54)
beta-BHC .....	319-85-7 2 1 (0.454)
delta-BHC .....	319-86-8 2 1 (0.454)
gamma-BHC .....	58-89-9 1,2,3,4 U129 1 (0.454)
2,2-Bioxirane .....	1464-53-5 4 U085 10 (4.54)
Biphenyl .....	92-52-4 3 100 (45.4)
[1,1-Biphenyl]-4,4-diamine .....	92-87-5 2,3,4 U021 1 (0.454)
[1,1-Biphenyl]-4,4-diamine,3,3-dichloro- .....	91-94-1 2,3,4 U073 1 (0.454)
[1,1-Biphenyl]-4,4-diamine,3,3-dimethoxy- .....	119-90-4 3,4 U091 100 (45.4)
[1,1-Biphenyl]-4,4-diamine,3,3-dimethyl- .....	119-93-7 3,4 U095 10 (4.54)
Bis(2-chloroethoxy) methane .....	111-91-1 2,4 U024 1000 (454)
Bis(2-chloroethyl) ether .....	111-44-4 2,3,4 U025 10 (4.54)
Bis(chloromethyl) ether .....	542-88-1 2,3,4 P016 10 (4.54)
Bis(2-ethylhexyl) phthalate .....	117-81-7 3,4 U028 100 (45.4)
Bromoacetone .....	598-31-2 4 P017 1000 (454)
Bromoform .....	75-25-2 2,3,4 U225 100 (45.4)
Bromomethane .....	74-83-9 2,3,4 U029 1000 (454)
4-Bromophenyl phenyl ether .....	101-55-3 2,4 U030 100 (45.4)
Brucine .....	357-57-3 4 P018 100 (45.4)
1,3-Butadiene .....	106-99-0 3 10 (4.54)
1,3-Butadiene, 1,1,2,3,4,4-hexachloro- .....	87-68-3 2,3,4 U128 1 (0.454)
1-Butanamine, N-butyl-N-nitroso- .....	924-16-3 4 U172 10 (4.54)
1-Butanol .....	71-36-3 4 U031 5000 (2270)
2-Butanone .....	78-93-3 3,4 U159 5000 (2270)
2-Butanone, 3,3-dimethyl-1(methylthio)-, O- [(methylamino)carbonyl] oxime.....	39196-18-4 4 P045 100 (45.4)
2-Butanone peroxide .....	1338-23-4 4 U160 10 (4.54)
2-Butenal .....	123-73-9 1,4 U053 100 (45.4)
	4170-30-3
2-Butene, 1,4-dichloro- .....	764-41-0 4 U074 1 (0.454)
2-Butenoic acid, 2-methyl-, 7-[[[2,3-dihydroxy-2-(1- methoxyethyl)-3- methyl-1-oxobutoxy] methyl]-2,3, 5,7atetrahydro- 1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z), 7(2S*,3R*),7alpha]]-.....	303-34-4 4 U143 10 (4.54)
Butyl acetate .....	123-86-4 1 5000 (2270)
iso-Butyl acetate .....	110-19-0
sec-Butyl acetate .....	105-46-4
tert-Butyl acetate .....	540-88-5
n-Butyl alcohol .....	71-36-3 4 U031 5000 (2270)
Butylamine .....	109-73-9 1 1000 (454)
iso-Butylamine .....	78-81-9
sec-Butylamine .....	513-49-5
	13952-84-6
tert-Butylamine .....	75-64-9
Butyl benzyl phthalate .....	85-68-7 2 100 (45.4)
n-Butyl phthalate .....	84-74-2 1,2,3,4 U069 10 (4.54)
Butyric acid .....	107-92-6 1 5000 (2270)
iso-Butyric acid .....	79-31-2
Cacodylic acid .....	75-60-5 4 U136 1 (0.454)
Cadmium dagger;dagger; .....	7440-43-9 2 10 (4.54)
Cadmium acetate .....	543-90-8 1 10 (4.54)
CADMIUM AND COMPOUNDS .....	N.A. 2,3 **
Cadmium bromide .....	7789-42-6 1 10 (4.54)
Cadmium chloride .....	10108-64-2 1 10 (4.54)
Cadmium compounds .....	N.A. 2,3 **
Calcium arsenate .....	7778-44-1 1 1 (0.454)
Calcium arsenite .....	52740-16-6 1 1 (0.454)
Calcium carbide .....	75-20-7 1 10 (4.54)
Calcium chromate .....	13765-19-0 1,4 U032 10 (4.54)
Calcium cyanamide .....	156-62-7 3 1000 (454)
Calcium cyanide Ca(CN) <sub>2</sub> .....	592-01-8 1,4 P021 10 (4.54)
Calcium dodecylbenzenesulfonate .....	26264-06-2 1 1000 (454)

Calcium hypochlorite .....	7778-54-3 1 10 (4.54)
Captan .....	133-06-2 1,3 10 (4.54)
Carbamic acid, 1H-benzimidazol-2-yl, methyl ester (Carbendazim).....	10605-21-7 4 U372 ##
Carbamic acid, [1-[(butylamino)carbonyl]-1H-benzimidazol- 2-yl]-, methyl ester (Benomyl).....	17804-35-2 4 U271 ##
Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester (Barban).....	101-27-9 4 U280 ##
Carbamic acid, [(dibutylamino)thio]methyl-, 2,3-dihydro- 2,2-dimethyl-7-benzofuranyl ester (Carbosulfan).....	55285-14-8 4 P189 ##
Carbamic acid, dimethyl-, 1-[(dimethylamino)carbonyl]-5- methyl-1H-pyrazol-3-yl ester (Dimetilan).....	644-64-4 4 P191 ##
Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1Hpyrazol- 5-yl ester (Isolan).....	119-38-0 4 P192 ##
Carbamic acid, ethyl ester .....	51-79-6 3,4 U238 100 (45.4)
Carbamic acid, methyl-, 3-methylphenyl ester (Metolcarb) .....	1129-41-5 4 P190 ##
Carbamic acid, methylnitroso-, ethyl ester .....	615-53-2 4 U178 1 (0.454)
Carbamic acid, [1,2-phenylenebis(iminocarbonothioyl)] bis- , dimethyl ester (Thiophanate-methyl).....	23564-05-8 4 U409 ##
Carbamic acid, phenyl-, 1-methylethyl ester (Propham) ....	122-42-9 4 U373 ##
Carbamic chloride, dimethyl- .....	79-44-7 3,4 U097 1 (0.454)
Carbamodithioic acid, 1,2-ethanediyibis-, salts & esters ....	111-54-6 4 U114 5000 (2270)
Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2- propenyl) ester.....	2303-16-4 4 U062 100 (45.4)
Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro- 2-propenyl) ester (Triallate).....	2303-17-5 4 U389 ##
Carbamothioic acid, dipropyl-, S - (phenylmethyl) ester (Prosulfocarb).....	52888-80-9 4 U387 ##
Carbaryl .....	63-25-2 1,3,4 U279 100 (45.4)
Carbofuran .....	1563-66-2 1,4 P127 10 (4.54)
Carbon disulfide .....	75-15-0 1,3,4 P022 100 (45.4)
Carbonic acid, dithallium(1+) salt .....	6533-73-9 4 U215 100 (45.4)
Carbonic dichloride .....	75-44-5 1,3,4 P095 10 (4.54)
Carbonic difluoride .....	353-50-4 4 U033 1000 (454)
Carbonochloridic acid, methyl ester .....	79-22-1 4 U156 1000 (454)
Carbon oxyfluoride .....	353-50-4 4 U033 1000 (454)
Carbon tetrachloride .....	56-23-5 1,2,3,4 U211 10 (4.54)
Carbonyl sulfide .....	463-58-1 3 100 (45.4)
Catechol .....	120-80-9 3 100 (45.4)
Chloral .....	75-87-6 4 U034 5000 (2270)
Chloramben .....	133-90-4 3 100 (45.4)
Chlorambucil .....	305-03-3 4 U035 10 (4.54)
Chlordane .....	57-74-9 1,2,3,4 U036 1 (0.454)
Chlordane, alpha & gamma isomers .....	57-74-9 1,2,3,4 U036 1 (0.454)
CHLORDANE (TECHNICAL MIXTURE AND METABOLITES).....	57-74-9 1,2,3,4 U036 1 (0.454)
CHLORINATED BENZENES .....	N.A. 2 **
Chlorinated camphene .....	8001-35-2 1,2,3,4 P123 1 (0.454)
CHLORINATED ETHANES .....	N.A. 2 **
CHLORINATED NAPHTHALENE .....	N.A. 2 **
CHLORINATED PHENOLS .....	N.A. 2 **
Chlorine .....	7782-50-5 1,3 10 (4.54)
Chlornaphazine .....	494-03-1 4 U026 100 (45.4)
Chloroacetaldehyde .....	107-20-0 4 P023 1000 (454)
Chloroacetic acid .....	79-11-8 3 100 (45.4)
2-Chloroacetophenone .....	532-27-4 3 100 (45.4)
CHLOROALKYL ETHERS .....	N.A. 2 **
p-Chloroaniline .....	106-47-8 4 P024 1000 (454)
Chlorobenzene .....	108-90-7 1,2,3,4 U037 100 (45.4)
Chlorobenzilate .....	510-15-6 3,4 U038 10 (4.54)
p-Chloro-m-cresol .....	59-50-7 2,4 U039 5000 (2270)
Chlorodibromomethane .....	124-48-1 2 100 (45.4)
1-Chloro-2,3-epoxypropane .....	106-89-8 1,3,4 U041 100 (45.4)
Chloroethane .....	75-00-3 2,3 100 (45.4)
2-Chloroethyl vinyl ether .....	110-75-8 2,4 U042 1000 (454)
Chloroform .....	67-66-3 1,2,3,4 U044 10 (4.54)
Chloromethane .....	74-87-3 2,3,4 U045 100 (45.4)
Chloromethyl methyl ether .....	107-30-2 3,4 U046 10 (4.54)

beta-Chloronaphthalene .....	91-58-7 2,4 U047 5000 (2270)
2-Chloronaphthalene .....	91-58-7 2,4 U047 5000 (2270)
2-Chlorophenol .....	95-57-8 2,4 U048 100 (45.4)
o-Chlorophenol .....	95-57-8 2,4 U048 100 (45.4)
4-Chlorophenyl phenyl ether .....	7005-72-3 2 5000 (2270)
1-(o-Chlorophenyl)thiourea .....	5344-82-1 4 P026 100 (45.4)
Chloroprene .....	126-99-8 3 100 (45.4)
3-Chloropropionitrile .....	542-76-7 4 P027 1000 (454)
Chlorosulfonic acid .....	7790-94-5 1 1000 (454)
4-Chloro-o-toluidine, hydrochloride .....	3165-93-3 4 U049 100 (45.4)
Chlorpyrifos .....	2921-88-2 1 1 (0.454)
Chromic acetate .....	1066-30-4 1 1000 (454)
Chromic acid .....	11115-74-5 1 10 (4.54) 7738-94-5
Chromic acid H2CrO4, calcium salt .....	13765-19-0 1,4 U032 10 (4.54)
Chromic sulfate .....	10101-53-8 1 1000 (454)
Chromium dagger;dagger; .....	7440-47-3 2 5000 (2270)
CHROMIUM AND COMPOUNDS .....	N.A. 2,3 **
Chromium Compounds .....	N.A. 2,3 **
Chromous chloride .....	10049-05-5 1 1000 (454)
Chrysene .....	218-01-9 2,4 U050 100 (45.4)
Cobalt Compounds .....	N.A. 3 **
Cobaltous bromide .....	7789-43-7 1 1000 (454)
Cobaltous formate .....	544-18-3 1 1000 (454)
Cobaltous sulfamate .....	14017-41-5 1 1000 (454)
Coke Oven Emissions .....	N.A. 3 1 (0.454)
Copper dagger;dagger; .....	7440-50-8 2 5000 (2270)
COPPER AND COMPOUNDS .....	N.A. 2 **
Copper cyanide Cu(CN) .....	544-92-3 4 P029 10 (4.54)
Coumaphos .....	56-72-4 1 10 (4.54)
Creosote .....	N.A. 4 U051 1 (0.454)
Cresol (cresylic acid) .....	1319-77-3 1,3,4 U052 100 (45.4)
m-Cresol .....	108-39-4 3 100 (45.4)
o-Cresol .....	95-48-7 3 100 (45.4)
p-Cresol .....	106-44-5 3 100 (45.4)
Cresols (isomers and mixture) .....	1319-77-3 1,3,4 U052 100 (45.4)
Cresylic acid (isomers and mixture) .....	1319-77-3 1,3,4 U052 100 (45.4)
Crotonaldehyde .....	123-73-9 1,4 U053 100 (45.4) 4170-30-3
Cumene .....	98-82-8 3,4 U055 5000 (2270)
Cupric acetate .....	142-71-2 1 100 (45.4)
Cupric acetoarsenite .....	12002-03-8 1 1 (0.454)
Cupric chloride .....	7447-39-4 1 10 (4.54)
Cupric nitrate .....	3251-23-8 1 100 (45.4)
Cupric oxalate .....	5893-66-3 1 100 (45.4)
Cupric sulfate .....	7758-98-7 1 10 (4.54)
Cupric sulfate, ammoniated .....	10380-29-7 1 100 (45.4)
Cupric tartrate .....	815-82-7 1 100 (45.4)
Cyanide Compounds .....	N.A. 2,3 **
CYANIDES .....	N.A. 2,3 **
Cyanides (soluble salts and complexes) not otherwise specified.....	N.A. 4 P030 10 (4.54)
Cyanogen .....	460-19-5 4 P031 100 (45.4)
Cyanogen bromide (CN)Br .....	506-68-3 4 U246 1000 (454)
Cyanogen chloride (CN)Cl .....	506-77-4 1,4 P033 10 (4.54)
2,5-Cyclohexadiene-1,4-dione .....	106-51-4 3,4 U197 10 (4.54)
Cyclohexane .....	110-82-7 1,4 U056 1000 (454)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1a, 2a, 3b-, 4a, 5a, 6b).....	58-89-9 1,2,3,4 U129 1 (0.454)
Cyclohexanone .....	108-94-1 4 U057 5000 (2270)
2-Cyclohexyl-4,6-dinitrophenol .....	131-89-5 4 P034 100 (45.4)
1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro- .....	77-47-4 1,2,3,4 U130 10 (4.54)
Cyclophosphamide .....	50-18-0 4 U058 10 (4.54)
2,4-D Acid .....	94-75-7 1,3,4 U240 100 (45.4)
2,4-D Ester .....	94-11-1 1 100 (45.4) 94-79-1 94-80-4 1320-18-9 1928-38-7

	1928-61-6	
	1929-73-3	
	2971-38-2	
	25168-26-7	
	53467-11-1	
2,4-D, salts and esters .....	94-75-7 1,3,4 U240	100 (45.4)
Daunomycin .....	20830-81-3 4 U059	10 (4.54)
DDD .....	72-54-8 1,2,4 U060	1 (0.454)
4,4>-DDD .....	72-54-8 1,2,4 U060	1 (0.454)
DDE b .....	72-55-9 2 1	(0.454)
DDE b .....	3547-04-4 3 5000	(2270)
4,4>-DDE .....	72-55-9 2 1	(0.454)
DDT .....	50-29-3 1,2,4 U061	1 (0.454)
4,4>-DDT .....	50-29-3 1,2,4 U061	1 (0.454)
DDT AND METABOLITES .....	N.A. 2 **	
DEHP .....	117-81-7 2,3,4 U028	100 (45.4)
Diallylate .....	2303-16-4 4 U062	100 (45.4)
Diazinon .....	333-41-5 1 1	(0.454)
Diazomethane .....	334-88-3 3 100	(45.4)
Dibenz[a,h]anthracene .....	53-70-3 2,4 U063	1 (0.454)
1,2:5,6-Dibenzanthracene .....	53-70-3 2,4 U063	1 (0.454)
Dibenzo[a,h]anthracene .....	53-70-3 2,4 U063	1 (0.454)
Dibenzofuran .....	132-64-9 3 100	(45.4)
Dibenzo[a,i]pyrene .....	189-55-9 4 U064	10 (4.54)
1,2-Dibromo-3-chloropropane .....	96-12-8 3,4 U066	1 (0.454)
Dibromoethane .....	106-93-4 1,3,4 U067	1 (0.454)
Dibutyl phthalate .....	84-74-2 1,2,3,4 U069	10 (4.54)
Di-n-butyl phthalate .....	84-74-2 1,2,3,4 U069	10 (4.54)
Dicamba .....	1918-00-9 1 1000	(454)
Dichlobenil .....	1194-65-6 1 100	(45.4)
Dichlone .....	117-80-6 1 1	(0.454)
Dichlorobenzene .....	25321-22-6 1 100	(45.4)
1,2-Dichlorobenzene .....	95-50-1 1,2,4 U070	100 (45.4)
1,3-Dichlorobenzene .....	541-73-1 2,4 U071	100 (45.4)
1,4-Dichlorobenzene .....	106-46-7 1,2,3,4 U072	100 (45.4)
m-Dichlorobenzene .....	541-73-1 2,4 U071	100 (45.4)
o-Dichlorobenzene .....	95-50-1 1,2,4 U070	100 (45.4)
p-Dichlorobenzene .....	106-46-7 1,2,3,4 U072	100 (45.4)
DICHLOROBENZIDINE .....	N.A. 2 **	
3,3>-Dichlorobenzidine .....	91-94-1 2,3,4 U073	1 (0.454)
Dichlorobromomethane .....	75-27-4 2 5000	(2270)
1,4-Dichloro-2-butene .....	764-41-0 4 U074	1 (0.454)
Dichlorodifluoromethane .....	75-71-8 4 U075	5000 (2270)
1,1-Dichloroethane .....	75-34-3 2,3,4 U076	1000 (454)
1,2-Dichloroethane .....	107-06-2 1,2,3,4 U077	100 (45.4)
1,1-Dichloroethylene .....	75-35-4 1,2,3,4 U078	100 (45.4)
1,2-Dichloroethylene .....	156-60-5 2,4 U079	1000 (454)
Dichloroethyl ether .....	111-44-4 2,3,4 U025	10 (4.54)
Dichloroisopropyl ether .....	108-60-1 2,4 U027	1000 (454)
Dichloromethane .....	75-09-2 2,3,4 U080	1000 (454)
Dichloromethoxyethane .....	111-91-1 2,4 U024	1000 (454)
Dichloromethyl ether .....	542-88-1 2,3,4 P016	10 (4.54)
2,4-Dichlorophenol .....	120-83-2 2,4 U081	100 (45.4)
2,6-Dichlorophenol .....	87-65-0 4 U082	100 (45.4)
Dichlorophenylarsine .....	696-28-6 4 P036	1 (0.454)
Dichloropropane .....	26638-19-7 1 1000	(454)
1,1-Dichloropropane .....	78-99-9	
1,3-Dichloropropane .....	142-28-9	
1,2-Dichloropropane .....	78-87-5 1,2,3,4 U083	1000 (454)
Dichloropropane—Dichloropropene (mixture) .....	8003-19-8 1 100	(45.4)
Dichloropropene .....	26952-23-8 1 100	(45.4)
2,3-Dichloropropene .....	78-88-6	
1,3-Dichloropropene .....	542-75-6 1,2,3,4 U084	100 (45.4)
2,2-Dichloropropionic acid .....	75-99-0 1 5000	(2270)
Dichlorvos .....	62-73-7 1,3 10	(4.54)
Dicofol .....	115-32-2 1 10	(4.54)
Dieldrin .....	60-57-1 1,2,4 P037	1 (0.454)

1,2:3,4-Diepoxybutane .....	1464-53-5 4 U085 10 (4.54)
Diethanolamine .....	111-42-2 3 100 (45.4)
Diethylamine .....	109-89-7 1 100 (45.4)
N,N-Diethylaniline .....	91-66-7 3 1000 (454)
Diethylarsine .....	692-42-2 4 P038 1 (0.454)
1,4-Diethyleneoxide .....	123-91-1 3,4 U108 100 (45.4)
Diethylhexyl phthalate .....	117-81-7 2,3,4 U028 100 (45.4)
N,N <sub>3</sub> -Diethylhydrazine .....	1615-80-1 4 U086 10 (4.54)
O,O-Diethyl S-methyl dithiophosphate .....	3288-58-2 4 U087 5000 (2270)
Diethyl-p-nitrophenyl phosphate .....	311-45-5 4 P041 100 (45.4)
Diethyl phthalate .....	84-66-2 2,4 U088 1000 (454)
O,O-Diethyl O-pyrazinyl phosphorothioate .....	297-97-2 4 P040 100 (45.4)
Diethylstilbestrol .....	56-53-1 4 U089 1 (0.454)
Diethyl sulfate .....	64-67-5 3 10 (4.54)
Dihydrosafrole .....	94-58-6 4 U090 10 (4.54)
Diisopropylfluorophosphate (DFP) .....	55-91-4 4 P043 100 (45.4)
1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro- 1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha, 8alpha,8abeta)-.....	309-00-2 1,2,4 P004 1 (0.454)
1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro- 1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta, 5beta,8beta,8abeta)-.....	465-73-6 4 P060 1 (0.454)
2,7:3,6-Dimethanonaphth[2,3- b]oxirene,3,4,5,6,9,9- hexachloro-1a,2,2a,3,6,6a,7,7a- octahydro- ,(1alpha,2beta, 2aalpha,3beta,6beta,6alpha, 7beta,7aalpha)-.....	60-57-1 1,2,4 P037 1 (0.454)
2,7:3,6-Dimethanonaphth[2, 3-b]oxirene,3,4,5,6,9,9- hexachloro-1a,2,2a,3,6,6a,7,7a- octahydro- ,(1alpha,2beta, 2abeta,3alpha,6alpha, 6abeta,7beta,7aalpha)-, & metabolites.....	72-20-8 1,2,4 P051 1 (0.454)
Dimethoate .....	60-51-5 4 P044 10 (4.54)
3,3 <sub>3</sub> -Dimethoxybenzidine .....	119-90-4 3,4 U091 100 (45.4)
Dimethylamine .....	124-40-3 1,4 U092 1000 (454)
Dimethyl aminoazobenzene .....	60-11-7 3,4 U093 10 (4.54)
p-Dimethylaminoazobenzene .....	60-11-7 3,4 U093 10 (4.54)
N,N-Dimethylaniline .....	121-69-7 3 100 (45.4)
7,12-Dimethylbenz[a]anthracene .....	57-97-6 4 U094 1 (0.454)
3,3 <sub>3</sub> -Dimethylbenzidine .....	119-93-7 3,4 U095 10 (4.54)
alpha,alpha-Dimethylbenzylhydroperoxide .....	80-15-9 4 U096 10 (4.54)
Dimethylcarbamoyl chloride .....	79-44-7 3,4 U097 1 (0.454)
Dimethylformamide .....	68-12-2 3 100 (45.4)
1,1-Dimethylhydrazine .....	57-14-7 3,4 U098 10 (4.54)
1,2-Dimethylhydrazine .....	540-73-8 4 U099 1 (0.454)
alpha,alpha-Dimethylphenethylamine .....	122-09-8 4 P046 5000 (2270)
2,4-Dimethylphenol .....	105-67-9 2,4 U101 100 (45.4)
Dimethyl phthalate .....	131-11-3 2,3,4 U102 5000 (2270)
Dimethyl sulfate .....	77-78-1 3,4 U103 100 (45.4)
Dinitrobenzene (mixed) .....	25154-54-5 1 100 (45.4)
m-Dinitrobenzene .....	99-65-0
o-Dinitrobenzene .....	528-29-0
p-Dinitrobenzene .....	100-25-4
4,6-Dinitro-o-cresol, and salts .....	534-52-1 2,3,4 P047 10 (4.54)
Dinitrophenol .....	25550-58-7 1 10 (4.54)
2,5-Dinitrophenol .....	329-71-5
2,6-Dinitrophenol .....	573-56-8
2,4-Dinitrophenol .....	51-28-5 1,2,3,4 P048 10 (4.54)
Dinitrotoluene .....	25321-14-6 1,2 10 (4.54)
3,4-Dinitrotoluene .....	610-39-9
2,4-Dinitrotoluene .....	121-14-2 1,2,3,4 U105 10 (4.54)
2,6-Dinitrotoluene .....	606-20-2 1,2,4 U106 100 (45.4)
Dinoseb .....	88-85-7 4 P020 1000 (454)
Di-n-octyl phthalate .....	117-84-0 2,4 U107 5000 (2270)
1,4-Dioxane .....	123-91-1 3,4 U108 100 (45.4)
DIPHENYLHYDRAZINE .....	N.A. 2 **
1,2-Diphenylhydrazine .....	122-66-7 2,3,4 U109 10 (4.54)
Diphosphoramidate, octamethyl- .....	152-16-9 4 P085 100 (45.4)
Diphosphoric acid, tetraethyl ester .....	107-49-3 1,4 P111 10 (4.54)

Dipropylamine .....	142-84-7 4 U110 5000 (2270)
Di-n-propylnitrosamine .....	621-64-7 2,4 U111 10 (4.54)
Diquat .....	85-00-7 1 1000 (454)
	2764-72-9
Disulfoton .....	298-04-4 1,4 P039 1 (0.454)
Dithiobiuret .....	541-53-7 4 P049 100 (45.4)
1,3-Dithiolane-2- carboxaldehyde, 2,4- dimethyl-O- [(methylamino)carbonyl] oxime (Tirpate).....	26419-73-8 4 P185 ##
Diuron .....	330-54-1 1 100 (45.4)
Dodecylbenzenesulfonic acid .....	27176-87-0 1 1000 (454)
Endosulfan .....	115-29-7 1,2,4 P050 1 (0.454)
alpha-Endosulfan .....	959-98-8 2 1 (0.454)
beta-Endosulfan .....	33213-65-9 2 1 (0.454)
ENDOSULFAN AND METABOLITES .....	N.A. 2 **
Endosulfan sulfate .....	1031-07-8 2 1 (0.454)
Endothall .....	145-73-3 4 P088 1000 (454)
Endrin .....	72-20-8 1,2,4 P051 1 (0.454)
Endrin aldehyde .....	7421-93-4 2 1 (0.454)
ENDRIN AND METABOLITES .....	N.A. 2 **
Endrin, & metabolites .....	72-20-8 1,2,4 P051 1 (0.454)
Epichlorohydrin .....	106-89-8 1,3,4 U041 100 (45.4)
Epinephrine .....	51-43-4 4 P042 1000 (454)
1,2-Epoxybutane .....	106-88-7 3 100 (45.4)
Ethanal .....	75-07-0 1,3,4 U001 1000 (454)
Ethanamine, N,N-diethyl- .....	121-44-8 1,3,4 U404 5000 (2270)
Ethanamine, N-ethyl-N-nitroso- .....	55-18-5 4 U174 1 (0.454)
1,2-Ethanediamine, N,N-dimethyl-N <sub>2</sub> -2- pyridinyl-N <sub>2</sub> -(2- thienylmethyl)-.....	91-80-5 4 U155 5000 (2270)
Ethane, 1,2-dibromo- .....	106-93-4 1,3,4 U067 1 (0.454)
Ethane, 1,1-dichloro- .....	75-34-3 2,3,4 U076 1000 (454)
Ethane, 1,2-dichloro- .....	107-06-2 1,2,3,4 U077 100 (45.4)
Ethanedinitrile .....	460-19-5 4 P031 100 (45.4)
Ethane, hexachloro- .....	67-72-1 2,3,4 U131 100 (45.4)
Ethane, 1,1,1-[methylenebis(oxy)]bis[2- chloro- .....	111-91-1 2,4 U024 1000 (454)
Ethane, 1,1,1-oxybis- .....	60-29-7 4 U117 100 (45.4)
Ethane, 1,1,1-oxybis[2-chloro- .....	111-44-4 2,3,4 U025 10 (4.54)
Ethane, pentachloro- .....	76-01-7 4 U184 10 (4.54)
Ethane, 1,1,1,2-tetrachloro- .....	630-20-6 4 U208 100 (45.4)
Ethane, 1,1,2,2-tetrachloro- .....	79-34-5 2,3,4 U209 100 (45.4)
Ethanethioamide .....	62-55-5 4 U218 10 (4.54)
Ethane, 1,1,1-trichloro- .....	71-55-6 2,3,4 U226 1000 (454)
Ethane, 1,1,2-trichloro- .....	79-00-5 2,3,4 U227 100 (45.4)
Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo- , methyl ester (A2213).....	30558-43-1 4 U394 ##
Ethanimidothioic acid, 2-(dimethylamino)-N- [[[(methylamino)carbonyl]oxy]-2-oxo-, methyl ester (Oxamy)].....	23135-22-0 4 P194 ##
Ethanimidothioic acid, N-[[[(methylamino) carbonyl]oxy]-, methyl ester.....	16752-77-5 4 P066 100 (45.4)
Ethanimidothioic acid, N,N <sub>2</sub> [thiobis[(methylimino) carbonyloxy]]bis-, dimethyl ester (Thiodicarb).....	59669-26-0 4 U410 ##
Ethanol, 2-ethoxy- .....	110-80-5 4 U359 1000 (454)
Ethanol, 2,2,2-(nitrosoimino)bis- .....	1116-54-7 4 U173 1 (0.454)
Ethanol, 2,2,2-oxybis-, dicarbamate (Diethylene glycol, dicarbamate).....	5952-26-1 4 U395 ##
Ethanone, 1-phenyl- .....	98-86-2 3,4 U004 5000 (2270)
Ethene, chloro- .....	75-01-4 2,3,4 U043 1 (0.454)
Ethene, (2-chloroethoxy)- .....	110-75-8 2,4 U042 1000 (454)
Ethene, 1,1-dichloro- .....	75-35-4 1,2,3,4 U078 100 (45.4)
Ethene, 1,2-dichloro-(E) .....	156-60-5 2,4 U079 1000 (454)
Ethene, tetrachloro- .....	127-18-4 2,3,4 U210 100 (45.4)
Ethene, trichloro- .....	79-01-6 1,2,3,4 U228 100 (45.4)
Ethion .....	563-12-2 1 10 (4.54)
Ethyl acetate .....	141-78-6 4 U112 5000 (2270)
Ethyl acrylate .....	140-88-5 3,4 U113 1000 (454)
Ethylbenzene .....	100-41-4 1,2,3 1000 (454)
Ethyl carbamate .....	51-79-6 3,4 U238 100 (45.4)

Ethyl chloride .....	75-00-3 2,3 100 (45.4)
Ethyl cyanide .....	107-12-0 4 P101 10 (4.54)
Ethylenebisdithiocarbamic acid, salts & esters .....	111-54-6 4 U114 5000 (2270)
Ethylenediamine .....	107-15-3 1 5000 (2270)
Ethylenediamine-tetraacetic acid (EDTA) .....	60-00-4 1 5000 (2270)
Ethylene dibromide .....	106-93-4 1,3,4 U067 1 (0.454)
Ethylene dichloride .....	107-06-2 1,2,3,4 U077 100 (45.4)
Ethylene glycol .....	107-21-1 3 5000 (2270)
Ethylene glycol monoethyl ether .....	110-80-5 4 U359 1000 (454)
Ethylene oxide .....	75-21-8 3,4 U115 10 (4.54)
Ethylenethiourea .....	96-45-7 3,4 U116 10 (4.54)
Ethylenimine .....	151-56-4 3,4 P054 1 (0.454)
Ethyl ether .....	60-29-7 4 U117 100 (45.4)
Ethylidene dichloride .....	75-34-3 2,3,4 U076 1000 (454)
Ethyl methacrylate .....	97-63-2 4 U118 1000 (454)
Ethyl methanesulfonate .....	62-50-0 4 U119 1 (0.454)
Famphur .....	52-85-7 4 P097 1000 (454)
Ferric ammonium citrate .....	1185-57-5 1 1000 (454)
Ferric ammonium oxalate .....	2944-67-4 1 1000 (454)
	55488-87-4
Ferric chloride .....	7705-08-0 1 1000 (454)
Ferric fluoride .....	7783-50-8 1 100 (45.4)
Ferric nitrate .....	10421-48-4 1 1000 (454)
Ferric sulfate .....	10028-22-5 1 1000 (454)
Ferrous ammonium sulfate .....	10045-89-3 1 1000 (454)
Ferrous chloride .....	7758-94-3 1 100 (45.4)
Ferrous sulfate .....	7720-78-7 1 1000 (454)
	7782- 63-0
Fine mineral fibers c .....	N.A. 3 **
Fluoranthene .....	206-44-0 2,4 U120 100 (45.4)
Fluorene .....	86-73-7 2 5000 (2270)
Fluorine .....	7782-41-4 4 P056 10 (4.54)
Fluoroacetamide .....	640-19-7 4 P057 100 (45.4)
Fluoroacetic acid, sodium salt .....	62-74-8 4 P058 10 (4.54)
Formaldehyde .....	50-00-0 1,3,4 U122 100 (45.4)
Formic acid .....	64-18-6 1,4 U123 5000 (2270)
Fulminic acid, mercury(2+)salt .....	628-86-4 4 P065 10 (4.54)
Fumaric acid .....	110-17-8 1 5000 (2270)
Furan .....	110-00-9 4 U124 100 (45.4)
2-Furancarboxaldehyde .....	98-01-1 1,4 U125 5000 (2270)
2,5-Furandione .....	108-31-6 1,3,4 U147 5000 (2270)
Furan, tetrahydro- .....	109-99-9 4 U213 1000 (454)
Furfural .....	98-01-1 1,4 U125 5000 (2270)
Furfuran .....	110-00-9 4 U124 100 (45.4)
Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-,D- .....	18883-66-4 4 U206 1 (0.454)
D-Glucose, 2-deoxy-2-[(methylnitrosoamino)-carbonyl] .....	18883-66-4 4 U206 1 (0.454)
amino]- .....	18883-66-4 4 U206 1 (0.454)
Glycidylaldehyde .....	765-34-4 4 U126 10 (4.54)
Glycol ethers d .....	N.A. 3 **
Guanidine, N-methyl-N'-nitro-N-nitroso- .....	70-25-7 4 U163 10 (4.54)
Guthion .....	86-50-0 1 1 (0.454)
HALOETHERS .....	N.A. 2 **
HALOMETHANES .....	N.A. 2 **
Heptachlor .....	76-44-8 1,2,3,4 P059 1 (0.454)
HEPTACHLOR AND METABOLITES .....	N.A. 2 **
Heptachlor epoxide .....	1024-57-3 2 1 (0.454)
Hexachlorobenzene .....	118-74-1 2,3,4 U127 10 (4.54)
Hexachlorobutadiene .....	87-68-3 2,3,4 U128 1 (0.454)
HEXACHLOROCYCLOHEXANE (all isomers) .....	608-73-1 2 **
Hexachlorocyclopentadiene .....	77-47-4 1,2,3,4 U130 10 (4.54)
Hexachloroethane .....	67-72-1 2,3,4 U131 100 (45.4)
Hexachlorophene .....	70-30-4 4 U132 100 (45.4)
Hexachloropropene .....	1888-71-7 4 U243 1000 (454)
Hexaethyl tetraphosphate .....	757-58-4 4 P062 100 (45.4)
Hexamethylene-1,6-diisocyanate .....	822-06-0 3 100 (45.4)
Hexamethylphosphoramide .....	680-31-9 3 1 (0.454)
Hexane .....	110-54-3 3 5000 (2270)

Hexone .....	108-10-1 3,4 U161 5000 (2270)
Hydrazine .....	302-01-2 3,4 U133 1 (0.454)
Hydrazinecarbothioamide .....	79-19-6 4 P116 100 (45.4)
Hydrazine, 1,2-diethyl- .....	1615-80-1 4 U086 10 (4.54)
Hydrazine, 1,1-dimethyl- .....	57-14-7 3,4 U098 10 (4.54)
Hydrazine, 1,2-dimethyl- .....	540-73-8 4 U099 1 (0.454)
Hydrazine, 1,2-diphenyl- .....	122-66-7 2,3,4 U109 10 (4.54)
Hydrazine, methyl- .....	60-34-4 3,4 P068 10 (4.54)
Hydrochloric acid .....	7647-01-0 1,3 5000 (2270)
Hydrocyanic acid .....	74-90-8 1,4 P063 10 (4.54)
Hydrofluoric acid .....	7664-39-3 1,3,4 U134 100 (45.4)
Hydrogen chloride .....	7647-01-0 1,3 5000 (2270)
Hydrogen cyanide .....	74-90-8 1,4 P063 10 (4.54)
Hydrogen fluoride .....	7664-39-3 1,3,4 U134 100 (45.4)
Hydrogen phosphide .....	7803-51-2 3,4 P096 100 (45.4)
Hydrogen sulfide H2S .....	7783-06-4 1,4 U135 100 (45.4)
Hydroperoxide, 1-methyl-1-phenylethyl- .....	80-15-9 4 U096 10 (4.54)
Hydroquinone .....	123-31-9 3 100 (45.4)
2-Imidazolidinethione .....	96-45-7 3,4 U116 10 (4.54)
Indeno(1,2,3-cd)pyrene .....	193-39-5 2,4 U137 100 (45.4)
Iodomethane .....	74-88-4 3,4 U138 100 (45.4)
1,3-Isobenzofurandione .....	85-44-9 3,4 U190 5000 (2270)
Isobutyl alcohol .....	78-83-1 4 U140 5000 (2270)
Isodrin .....	465-73-6 4 P060 1 (0.454)
Isophorone .....	78-59-1 2,3 5000 (2270)
Isoprene .....	78-79-5 1 100 (45.4)
Isopropanolamine dodecylbenzenesulfonate .....	42504-46-1 1 1000 (454)
Isosafrole .....	120-58-1 4 U141 100 (45.4)
3(2H)-Isoxazolone, 5-(aminomethyl)- .....	2763-96-4 4 P007 1000 (454)
Kepon .....	143-50-0 1,4 U142 1 (0.454)
Lasiocarpine .....	303-34-4 4 U143 10 (4.54)
Lead†† .....	7439-92-1 2 10 (4.54)
Lead acetate .....	301-04-2 1,4 U144 10 (4.54)
LEAD AND COMPOUNDS .....	N.A. 2,3 **
Lead arsenate .....	7784-40-9 1 1 (0.454)
	7645-25-2
	10102-48-4
Lead, bis(acetato-O)tetrahydroxytri- .....	1335-32-6 4 U146 10 (4.54)
Lead chloride .....	7758-95-4 1 10 (4.54)
Lead compounds .....	N.A. 2,3 **
Lead fluoborate .....	13814-96-5 1 10 (4.54)
Lead fluoride .....	7783-46-2 1 10 (4.54)
Lead iodide .....	10101-63-0 1 10 (4.54)
Lead nitrate .....	10099-74-8 1 10 (4.54)
Lead phosphate .....	7446-27-7 4 U145 10 (4.54)
Lead stearate .....	1072-35-1 1 10 (4.54)
	7428-48-0
	52652-59-2
	56189-09-4
Lead subacetate .....	1335-32-6 4 U146 10 (4.54)
Lead sulfate .....	7446-14-2 1 10 (4.54)
	15739-80-7
Lead sulfide .....	1314-87-0 1 10 (4.54)
Lead thiocyanate .....	592-87-0 1 10 (4.54)
Lindane .....	58-89-9 1,2,3,4 U129 1 (0.454)
Lindane (all isomers) .....	58-89-9 1,2,3,4 U129 1 (0.454)
Lithium chromate .....	14307-35-8 1 10 (4.54)
Malathion .....	121-75-5 1 100 (45.4)
Maleic acid .....	110-16-7 1 5000 (2270)
Maleic anhydride .....	108-31-6 1,3,4 U147 5000 (2270)
Maleic hydrazide .....	123-33-1 4 U148 5000 (2270)
Malononitrile .....	109-77-3 4 U149 1000 (454)
Manganese, bis(dimethylcarbamodithioato-S,S <sub>3</sub> )-Manganese dimethyldithio- carbamate).....	15339-36-3 4 P196 ##
Manganese Compounds .....	N.A. 3 **
MDI .....	101-68-8 3 5000 (2270)
MEK .....	78-93-3 3,4 U159 5000 (2270)

Melphalan .....	148-82-3 4 U150 1 (0.454)
Mercaptodimethur .....	2032-65-7 1,4 P199 10 (4.54)
Mercuric cyanide .....	592-04-1 1 1 (0.454)
Mercuric nitrate .....	10045-94-0 1 10 (4.54)
Mercuric sulfate .....	7783-35-9 1 10 (4.54)
Mercuric thiocyanate .....	592-85-8 1 10 (4.54)
Mercurous nitrate .....	10415-75-5 1 10 (4.54) 7782-86-7
Mercury .....	7439-97-6 2,3,4 U151 1 (0.454)
MERCURY AND COMPOUNDS .....	N.A. 2,3 **
Mercury, (acetato-O)phenyl- .....	62-38-4 4 P092 100 (45.4)
Mercury Compounds .....	N.A. 2,3 **
Mercury fulminate .....	628-86-4 4 P065 10 (4.54)
Methacrylonitrile .....	126-98-7 4 U152 1000 (454)
Methanamine, N-methyl- .....	124-40-3 1,4 U092 1000 (454)
Methanamine, N-methyl-N-nitroso- .....	62-75-9 2,3,4 P082 10 (4.54)
Methane, bromo- .....	74-83-9 2,3,4 U029 1000 (454)
Methane, chloro- .....	74-87-3 2,3,4 U045 100 (45.4)
Methane, chloromethoxy- .....	107-30-2 3,4 U046 10 (4.54)
Methane, dibromo- .....	74-95-3 4 U068 1000 (454)
Methane, dichloro- .....	75-09-2 2,3,4 U080 1000 (454)
Methane, dichlorodifluoro- .....	75-71-8 4 U075 5000 (2270)
Methane, iodo- .....	74-88-4 3,4 U138 100 (45.4)
Methane, isocyanato- .....	624-83-9 3,4 P064 10 (4.54)
Methane, oxybis(chloro- .....	542-88-1 2,3,4 P016 10 (4.54)
Methanesulfonyl chloride, trichloro- .....	594-42-3 4 P118 100 (45.4)
Methanesulfonic acid, ethyl ester .....	62-50-0 4 U119 1 (0.454)
Methane, tetrachloro- .....	56-23-5 1,2,3,4 U211 10 (4.54)
Methane, tetranitro- .....	509-14-8 4 P112 10 (4.54)
Methanethiol .....	74-93-1 1,4 U153 100 (45.4)
Methane, tribromo- .....	75-25-2 2,3,4 U225 100 (45.4)
Methane, trichloro- .....	67-66-3 1,2,3,4 U044 10 (4.54)
Methane, trichlorofluoro- .....	75-69-4 4 U121 5000 (2270)
Methanimidamide, N,N-dimethyl-N-[3- [[[(methylamino)carbonyl]oxy]phenyl]- monohydrochloride (Formetanate hydrochloride).....	23422-53-9 4 P198 ##
Methanimidamide, N,N-dimethyl-N-[2-methyl-4- [[[(methylamino)carbonyl]oxy]phenyl]- (Formparanate).....	17702-57-7 4 P197 ##
6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10- hexachloro- 1,5,5a,6,9,9a-hexahydro-, 3-oxide.....	115-29-7 1,2,4 P050 1 (0.454)
4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro- 3a,4,7,7a-tetrahydro-.....	76-44-8 1,2,3,4 P059 1 (0.454)
4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro- 2,3,3a,4,7,7a-hexahydro-.....	57-74-9 1,2,3,4 U036 1 (0.454)
Methanol .....	67-56-1 3,4 U154 5000 (2270)
Methapyrilene .....	91-80-5 4 U155 5000 (2270)
1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5a,5b,6-decachlorooctahydro-.....	143-50-0 1,4 U142 1 (0.454)
Methiocarb .....	2032-65-7 1,4 P199 10 (4.54)
Methomyl .....	16752-77-5 4 P066 100 (45.4)
Methoxychlor .....	72-43-5 1,3,4 U247 1 (0.454)
Methyl alcohol .....	67-56-1 3,4 U154 5000 (2270)
2-Methyl aziridine .....	75-55-8 3,4 P067 1 (0.454)
Methyl bromide .....	74-83-9 2,3,4 U029 1000 (454)
1-Methylbutadiene .....	504-60-9 4 U186 100 (45.4)
Methyl chloride .....	74-87-3 2,3,4 U045 100 (45.4)
Methyl chlorocarbonate .....	79-22-1 4 U156 1000 (454)
Methyl chloroform .....	71-55-6 2,3,4 U226 1000 (454)
3-Methylcholanthrene .....	56-49-5 4 U157 10 (4.54)
4,4-Methylenebis(2-chloroaniline) .....	101-14-4 3,4 U158 10 (4.54)
Methylene bromide .....	74-95-3 4 U068 1000 (454)
Methylene chloride .....	75-09-2 2,3,4 U080 1000 (454)
4,4-Methylenedianiline .....	101-77-9 3 10 (4.54)
Methylene diphenyl diisocyanate .....	101-68-8 3 5000 (2270)
Methyl ethyl ketone .....	78-93-3 3,4 U159 5000 (2270)
Methyl ethyl ketone peroxide .....	1338-23-4 4 U160 10 (4.54)
Methyl hydrazine .....	60-34-4 3,4 P068 10 (4.54)
Methyl iodide .....	74-88-4 3,4 U138 100 (45.4)

Methyl isobutyl ketone .....	108-10-1 3,4 U161 5000 (2270)
Methyl isocyanate .....	624-83-9 3,4 P064 10 (4.54)
2-Methylactonitrile .....	75-86-5 1,4 P069 10 (4.54)
Methyl mercaptan .....	74-93-1 1,4 U153 100 (45.4)
Methyl methacrylate .....	80-62-6 1,3,4 U162 1000 (454)
Methyl parathion .....	298-00-0 1,4 P071 100 (45.4)
4-Methyl-2-pentanone .....	108-10-1 3,4 U161 5000 (2270)
Methyl tert-butyl ether .....	1634-04-4 3 1000 (454)
Methylthiouracil .....	56-04-2 4 U164 10 (4.54)
Mevinphos .....	7786-34-7 1 10 (4.54)
Mexacarbate .....	315-18-4 1,4 P128 1000 (454)
Mitomycin C .....	50-07-7 4 U010 10 (4.54)
MNNG .....	70-25-7 4 U163 10 (4.54)
Monoethylamine .....	75-04-7 1 100 (45.4)
Monomethylamine .....	74-89-5 1 100 (45.4)
Naled .....	300-76-5 1 10 (4.54)
5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-.....	20830-81-3 4 U059 10 (4.54)
1-Naphthalenamine .....	134-32-7 4 U167 100 (45.4)
2-Naphthalenamine .....	91-59-8 4 U168 10 (4.54)
Naphthalenamine, N,N'-bis(2-chloroethyl)- .....	494-03-1 4 U026 100 (45.4)
Naphthalene .....	91-20-3 1,2,3,4 U165 100 (45.4)
Naphthalene, 2-chloro- .....	91-58-7 2,4 U047 5000 (2270)
1,4-Naphthalenedione .....	130-15-4 4 U166 5000 (2270)
2,7-Naphthalenedisulfonic acid, 3,3>[(3,3>-dimethyl-(1,1>-biphenyl)-4,4>-diyl)-bis(azo)]bis(5-amino-4-hydroxy)-tetrasodium salt.....	72-57-1 4 U236 10 (4.54)
1-Naphthalenol, methylcarbamate .....	63-25-2 1,3,4 U279 100 (45.4)
Naphthenic acid .....	1338-24-5 1 100 (45.4)
1,4-Naphthoquinone .....	130-15-4 4 U166 5000 (2270)
alpha-Naphthylamine .....	134-32-7 4 U167 100 (45.4)
beta-Naphthylamine .....	91-59-8 4 U168 10 (4.54)
alpha-Naphthylthiourea .....	86-88-4 4 P072 100 (45.4)
Nickel†† .....	7440-02-0 2 100 (45.4)
Nickel ammonium sulfate .....	15699-18-0 1 100 (45.4)
NICKEL AND COMPOUNDS .....	N.A. 2,3 **
Nickel carbonyl Ni(CO)4, (T-4)- .....	13463-39-3 4 P073 10 (4.54)
Nickel chloride .....	7718-54-9 1 100 (45.4) 37211-05-5
Nickel compounds .....	N.A. 2,3 **
Nickel cyanide Ni(CN)2 .....	557-19-7 4 P074 10 (4.54)
Nickel hydroxide .....	12054-48-7 1 10 (4.54)
Nickel nitrate .....	14216-75-2 1 100 (45.4)
Nickel sulfate .....	7786-81-4 1 100 (45.4)
Nicotine, & salts .....	54-11-5 4 P075 100 (45.4)
Nitric acid .....	7697-37-2 1 1000 (454)
Nitric acid, thallium (1+) salt .....	10102-45-1 4 U217 100 (45.4)
Nitric oxide .....	10102-43-9 4 P076 10 (4.54)
p-Nitroaniline .....	100-01-6 4 P077 5000 (2270)
Nitrobenzene .....	98-95-3 1,2,3,4 U169 1000 (454)
4-Nitrobiphenyl .....	92-93-3 3 10 (4.54)
Nitrogen dioxide .....	10102-44-0 1,4 P078 10 (4.54) 10544-72-6
Nitrogen oxide NO .....	10102-43-9 4 P076 10 (4.54)
Nitrogen oxide NO2 .....	10102-44-0 1,4 P078 10 (4.54) 10544-72-6
Nitroglycerine .....	55-63-0 4 P081 10 (4.54)
Nitrophenol (mixed) .....	25154-55-6 1 100 (45.4)
m-Nitrophenol .....	554-84-7
o-Nitrophenol .....	88-75-5 1,2 100 (45.4)
p-Nitrophenol .....	100-02-7 1,2,3,4 U170 100 (45.4)
2-Nitrophenol .....	88-75-5 1,2 100 (45.4)
4-Nitrophenol .....	100-02-7 1,2,3,4 U170 100 (45.4)
NITROPHENOLS .....	N.A. 2 **
2-Nitropropane .....	79-46-9 3,4 U171 10 (4.54)
NITROSAMINES .....	N.A. 2 **

N-Nitrosodi-n-butylamine .....	924-16-3 4 U172 10 (4.54)
N-Nitrosodiethanolamine .....	1116-54-7 4 U173 1 (0.454)
N-Nitrosodiethylamine .....	55-18-5 4 U174 1 (0.454)
N-Nitrosodimethylamine .....	62-75-9 2,3,4 P082 10 (4.54)
N-Nitrosodiphenylamine .....	86-30-6 2 100 (45.4)
N-Nitroso-N-ethylurea .....	759-73-9 4 U176 1 (0.454)
N-Nitroso-N-methylurea .....	684-93-5 3,4 U177 1 (0.454)
N-Nitroso-N-methylurethane .....	615-53-2 4 U178 1 (0.454)
N-Nitrosomethylvinylamine .....	4549-40-0 4 P084 10 (4.54)
N-Nitrosomorpholine .....	59-89-2 3 1 (0.454)
N-Nitrosopiperidine .....	100-75-4 4 U179 10 (4.54)
N-Nitrosopyrrolidine .....	930-55-2 4 U180 1 (0.454)
Nitrotoluene .....	1321-12-6 1 1000 (454)
m-Nitrotoluene .....	99-08-1
o-Nitrotoluene .....	88-72-2
p-Nitrotoluene .....	99-99-0
5-Nitro-o-toluidine .....	99-55-8 4 U181 100 (45.4)
Octamethylpyrophosphoramidate .....	152-16-9 4 P085 100 (45.4)
Osmium oxide OsO <sub>4</sub> , (T-4)- .....	20816-12-0 4 P087 1000 (454)
Osmium tetroxide .....	20816-12-0 4 P087 1000 (454)
7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid .....	145-73-3 4 P088 1000 (454)
1,2-Oxathiolane, 2,2-dioxide .....	1120-71-4 3,4 U193 10 (4.54)
2H-1,3,2-Oxazaphosphorin-2-amine, N,N- bis(2-chloroethyl)tetrahydro-, 2-oxide .....	50-18-0 4 U058 10 (4.54)
Oxirane .....	75-21-8 3,4 U115 10 (4.54)
Oxiranecarboxyaldehyde .....	765-34-4 4 U126 10 (4.54)
Oxirane, (chloromethyl)- .....	106-89-8 1,3,4 U041 100 (45.4)
Paraformaldehyde .....	30525-89-4 1 1000 (454)
Paraldehyde .....	123-63-7 4 U182 1000 (454)
Parathion .....	56-38-2 1,3,4 P089 10 (4.54)
PCBs .....	1336-36-3 1,2,3 1 (0.454)
PCNB .....	82-68-8 3,4 U185 100 (45.4)
Pentachlorobenzene .....	608-93-5 4 U183 10 (4.54)
Pentachloroethane .....	76-01-7 4 U184 10 (4.54)
Pentachloronitrobenzene .....	82-68-8 3,4 U185 100 (45.4)
Pentachlorophenol .....	87-86-5 1,2,3,4 See F027 10 (4.54)
1,3-Pentadiene .....	504-60-9 4 U186 100 (45.4)
Perchloroethylene .....	127-18-4 2,3,4 U210 100 (45.4)
Phenacetin .....	62-44-2 4 U187 100 (45.4)
Phenanthrene .....	85-01-8 2 5000 (2270)
Phenol .....	108-95-2 1,2,3,4 U188 1000 (454)
Phenol, 2-chloro- .....	95-57-8 2,4 U048 100 (45.4)
Phenol, 4-chloro-3-methyl- .....	59-50-7 2,4 U039 5000 (2270)
Phenol, 2-cyclohexyl-4,6-dinitro- .....	131-89-5 4 P034 100 (45.4)
Phenol, 2,4-dichloro- .....	120-83-2 2,4 U081 100 (45.4)
Phenol, 2,6-dichloro- .....	87-65-0 4 U082 100 (45.4)
Phenol, 4,4>(1,2-diethyl-1,2-ethenediyl)bis-, (E) .....	56-53-1 4 U089 1 (0.454)
Phenol, 2,4-dimethyl- .....	105-67-9 2,4 U101 100 (45.4)
Phenol, 4-(dimethylamino)-3,5-dimethyl-, 4-methylcarbamate (ester).....	315-18-4 1,4 P128 1000 (454)
Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate .....	2032-65-7 1,4 P199 10 (4.54)
Phenol, 2,4-dinitro- .....	51-28-5 1,2,3,4 P048 10 (4.54)
Phenol, methyl- .....	1319-77-3 1,3,4 U052 100 (45.4)
Phenol, 2-methyl-4,6-dinitro-, & salts .....	534-52-1 2,3,4 P047 10 (4.54)
Phenol, 2,2>methylenebis[3,4,6- trichloro- .....	70-30-4 4 U132 100 (45.4)
Phenol, 2-(1-methylethoxy)-, methylcarbamate .....	114-26-1 3,4 U411 100 (45.4)
Phenol, 3-(1-methylethyl)-, methyl carbamate (m-Cumenyl methylcarbamate).....	64-00-6 4 P202 ##
Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate (Promecarb).....	2631-37-0 4 P201 ##
Phenol, 2-(1-methylpropyl)-4,6-dinitro- .....	88-85-7 4 P020 1000 (454)
Phenol, 4-nitro- .....	100-02-7 1,2,3,4 U170 100 (45.4)
Phenol, pentachloro- .....	87-86-5 1,2,3,4 See F027 10 (4.54)
Phenol, 2,3,4,6-tetrachloro- .....	58-90-2 4 See F027 10 (4.54)
Phenol, 2,4,5-trichloro- .....	95-95-4 1,3,4 See F027 10 (4.54)
Phenol, 2,4,6-trichloro- .....	88-06-2 1,2,3,4 See F027 10 (4.54)
Phenol, 2,4,6-trinitro-, ammonium salt .....	131-74-8 4 P009 10 (4.54)

L-Phenylalanine, 4-[bis(2-chloroethyl)amino]- .....	148-82-3 4 U150 1 (0.454)
p-Phenylenediamine .....	106-50-3 3 5000 (2270)
Phenylmercury acetate .....	62-38-4 4 P092 100 (45.4)
Phenylthiourea .....	103-85-5 4 P093 100 (45.4)
Phorate .....	298-02-2 4 P094 10 (4.54)
Phosgene .....	75-44-5 1,3,4 P095 10 (4.54)
Phosphine .....	7803-51-2 3,4 P096 100 (45.4)
Phosphoric acid .....	7664-38-2 1 5000 (2270)
Phosphoric acid, diethyl 4-nitrophenyl ester .....	311-45-5 4 P041 100 (45.4)
Phosphoric acid, lead(2+) salt (2:3) .....	7446-27-7 4 U145 10 (4.54)
Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester.....	298-04-4 1,4 P039 1 (0.454)
Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester.....	298-02-2 4 P094 10 (4.54)
Phosphorodithioic acid, O,O-diethyl S-methyl ester .....	3288-58-2 4 U087 5000 (2270)
Phosphorodithioic acid, O,O-dimethyl S-[2(methylamino)- 2-oxoethyl] ester.....	60-51-5 4 P044 10 (4.54)
Phosphorofluoric acid, bis(1-methylethyl) ester .....	55-91-4 4 P043 100 (45.4)
Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester .....	56-38-2 1,3,4 P089 10 (4.54)
Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester .....	297-97-2 4 P040 100 (45.4)
Phosphorothioic acid, O-[4-[(dimethylamino) sulfonyl]phenyl] O,O-dimethyl ester.....	52-85-7 4 P097 1000 (454)
Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester.....	298-00-0 1,4 P071 100 (45.4)
Phosphorus .....	7723-14-0 1,3 1 (0.454)
Phosphorus oxychloride .....	10025-87-3 1 1000 (454)
Phosphorus pentasulfide .....	1314-80-3 1,4 U189 100 (45.4)
Phosphorus sulfide .....	1314-80-3 1,4 U189 100 (45.4)
Phosphorus trichloride .....	7719-12-2 1 1000 (454)
PTHALATE ESTERS .....	N.A. 2 **
Phthalic anhydride .....	85-44-9 3,4 U190 5000 (2270)
2-Picoline .....	109-06-8 4 U191 5000 (2270)
Piperidine, 1-nitroso- .....	100-75-4 4 U179 10 (4.54)
Plumbane, tetraethyl- .....	78-00-2 1,4 P110 10 (4.54)
POLYCHLORINATED BIPHENYLS .....	1336-36-3 1,2,3 1 (0.454)
Polycyclic Organic Matter e .....	N.A. 3 **
POLYNUCLEAR AROMATIC HYDROCARBONS .....	N.A. 2 **
Potassium arsenate .....	7784-41-0 1 1 (0.454)
Potassium arsenite .....	10124-50-2 1 1 (0.454)
Potassium bichromate .....	7778-50-9 1 10 (4.54)
Potassium chromate .....	7789-00-6 1 10 (4.54)
Potassium cyanide K(CN) .....	151-50-8 1,4 P098 10 (4.54)
Potassium hydroxide .....	1310-58-3 1 1000 (454)
Potassium permanganate .....	7722-64-7 1 100 (45.4)
Potassium silver cyanide .....	506-61-6 4 P099 1 (0.454)
Pronamide .....	23950-58-5 4 U192 5000 (2270)
Propanal, 2-methyl-2-(methylsulfonyl)-, O- [(methylamino)carbonyl] oxime (Aldicarb sulfone).....	1646-88-4 4 P203 ##
Propanal, 2-methyl-2-(methylthio)-, O- [(methylamino)carbonyl]oxime.....	116-06-3 4 P070 1 (0.454)
1-Propanamine .....	107-10-8 4 U194 5000 (2270)
1-Propanamine, N-propyl- .....	142-84-7 4 U110 5000 (2270)
1-Propanamine, N-nitroso-N-propyl- .....	621-64-7 2,4 U111 10 (4.54)
Propane, 1,2-dibromo-3-chloro- .....	96-12-8 3,4 U066 1 (0.454)
Propane, 1,2-dichloro- .....	78-87-5 1,2,3,4 U083 1000 (454)
Propanedinitrile .....	109-77-3 4 U149 1000 (454)
Propanenitrile .....	107-12-0 4 P101 10 (4.54)
Propanenitrile, 3-chloro- .....	542-76-7 4 P027 1000 (454)
Propanenitrile, 2-hydroxy-2-methyl- .....	75-86-5 1,4 P069 10 (4.54)
Propane, 2-nitro- .....	79-46-9 3,4 U171 10 (4.54)
Propane, 2,2'-oxybis[2-chloro- .....	108-60-1 2,4 U027 1000 (454)
1,3-Propane sultone .....	1120-71-4 3,4 U193 10 (4.54)
1,2,3-Propanetriol, trinitrate .....	55-63-0 4 P081 10 (4.54)
Propanoic acid, 2-(2,4,5-trichlorophenoxy).....	93-72-1 1,4 See F027 100 (45.4)
1-Propanol, 2,3-dibromo-, phosphate (3:1) .....	126-72-7 4 U235 10 (4.54)
1-Propanol, 2-methyl- .....	78-83-1 4 U140 5000 (2270)
2-Propanone .....	67-64-1 4 U002 5000 (2270)
2-Propanone, 1-bromo- .....	598-31-2 4 P017 1000 (454)
Propargite .....	2312-35-8 1 10 (4.54)
Propargyl alcohol .....	107-19-7 4 P102 1000 (454)

2-Propenal .....	107-02-8 1,2,3,4 P003 1 (0.454)
2-Propenamide .....	79-06-1 3,4 U007 5000 (2270)
1-Propene, 1,3-dichloro- .....	542-75-6 1,2,3,4 U084 100 (45.4)
1-Propene, 1,1,2,3,3,3-hexachloro- .....	1888-71-7 4 U243 1000 (454)
2-Propenenitrile .....	107-13-1 1,2,3,4 U009 100 (45.4)
2-Propenenitrile, 2-methyl- .....	126-98-7 4 U152 1000 (454)
2-Propenoic acid .....	79-10-7 3,4 U008 5000 (2270)
2-Propenoic acid, ethyl ester .....	140-88-5 3,4 U113 1000 (454)
2-Propenoic acid, 2-methyl-, ethyl ester .....	97-63-2 4 U118 1000 (454)
2-Propenoic acid, 2-methyl-, methyl ester .....	80-62-6 1,3,4 U162 1000 (454)
2-Propen-1-ol .....	107-18-6 1,4 P005 100 (45.4)
beta-Propiolactone .....	57-57-8 3 10 (4.54)
Propionaldehyde .....	123-38-6 3 1000 (454)
Propionic acid .....	79-09-4 1 5000 (2270)
Propionic anhydride .....	123-62-6 1 5000 (2270)
Propoxur (Baygon) .....	114-26-1 3,4 U411 100 (45.4)
n-Propylamine .....	107-10-8 4 U194 5000 (2270)
Propylene dichloride .....	78-87-5 1,2,3,4 U083 1000 (454)
Propylene oxide .....	75-56-9 1,3 100 (45.4)
1,2-Propylenimine .....	75-55-8 3,4 P067 1 (0.454)
2-Propyn-1-ol .....	107-19-7 4 P102 1000 (454)
Pyrene .....	129-00-0 2 5000 (2270)
Pyrethrins .....	121-29-9 1 1 (0.454)
	121-21-1
	8003-34-7
3,6-Pyridazinedione, 1,2-dihydro- .....	123-33-1 4 U148 5000 (2270)
4-Pyridinamine .....	504-24-5 4 P008 1000 (454)
Pyridine .....	110-86-1 4 U196 1000 (454)
Pyridine, 2-methyl- .....	109-06-8 4 U191 5000 (2270)
Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, & salts .....	54-11-5 4 P075 100 (45.4)
2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]- .....	66-75-1 4 U237 10 (4.54)
4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo- .....	56-04-2 4 U164 10 (4.54)
Pyrrolidine, 1-nitroso- .....	930-55-2 4 U180 1 (0.454)
Pyrrolo[2,3-b] indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)-(Physostigmine).....	57-47-6 4 P204 ##
Quinoline .....	91-22-5 1,3 5000 (2270)
Quinone .....	106-51-4 3,4 U197 10 (4.54)
Quintobenzene .....	82-68-8 3,4 U185 100 (45.4)
Radionuclides (including radon) .....	N.A. 3 §
Reserpine .....	50-55-5 4 U200 5000 (2270)
Resorcinol .....	108-46-3 1,4 U201 5000 (2270)
Saccharin, & salts .....	81-07-2 4 U202 100 (45.4)
Safrole .....	94-59-7 4 U203 100 (45.4)
Selenious acid .....	7783-00-8 4 U204 10 (4.54)
Selenious acid, dithallium (1+) salt .....	12039-52-0 4 P114 1000 (454)
Seleniumdagger;dagger; .....	7782-49-2 2 100 (45.4)
SELENIUM AND COMPOUNDS .....	N.A. 2,3 **
Selenium Compounds .....	N.A. 2,3 **
Selenium dioxide .....	7446-08-4 1,4 U204 10 (4.54)
Selenium oxide .....	7446-08-4 1,4 U204 10 (4.54)
Selenium sulfide SeS2 .....	7488-56-4 4 U205 10 (4.54)
Selenourea .....	630-10-4 4 P103 1000 (454)
L-Serine, diazoacetate (ester) .....	115-02-6 4 U015 1 (0.454)
Silver dagger;dagger; .....	7440-22-4 2 1000 (454)
SILVER AND COMPOUNDS .....	N.A. 2 **
Silver cyanide Ag(CN) .....	506-64-9 4 P104 1 (0.454)
Silver nitrate .....	7761-88-8 1 1 (0.454)
Silvex (2,4,5-TP) .....	93-72-1 1,4 See F027 100 (45.4)
Sodium .....	7440-23-5 1 10 (4.54)
Sodium arsenate .....	7631-89-2 1 1 (0.454)
Sodium arsenite .....	7784-46-5 1 1 (0.454)
Sodium azide .....	26628-22-8 4 P105 1000 (454)
Sodium bichromate .....	10588-01-9 1 10 (4.54)
Sodium bifluoride .....	1333-83-1 1 100 (45.4)
Sodium bisulfite .....	7631-90-5 1 5000 (2270)
Sodium chromate .....	7775-11-3 1 10 (4.54)
Sodium cyanide Na(CN) .....	143-33-9 1,4 P106 10 (4.54)

Sodium dodecylbenzenesulfonate .....	25155-30-0 1 1000 (454)
Sodium fluoride .....	7681-49-4 1 1000 (454)
Sodium hydrosulfide .....	16721-80-5 1 5000 (2270)
Sodium hydroxide .....	1310-73-2 1 1000 (454)
Sodium hypochlorite .....	7681-52-9 1 100 (45.4) 10022-70-5
Sodium methylate .....	124-41-4 1 1000 (454)
Sodium nitrite .....	7632-00-0 1 100 (45.4)
Sodium phosphate, dibasic .....	7558-79-4 1 5000 (2270) 10039-32-4 10140-65-5
Sodium phosphate, tribasic .....	7601-54-9 1 5000 (2270) 7758-29-4 7785-84-4 10101-89-0 10124-56-8 10361-89-4
Sodium selenite .....	7782-82-3 1 100 (45.4) 10102-18-8
Streptozotocin .....	18883-66-4 4 U206 1 (0.454)
Strontium chromate .....	7789-06-2 1 10 (4.54)
Strychnidin-10-one, & salts .....	57-24-9 1,4 P108 10 (4.54)
Strychnidin-10-one, 2,3-dimethoxy- .....	357-57-3 4 P018 100 (45.4)
Strychnine, & salts .....	57-24-9 1,4 P108 10 (4.54)
Styrene .....	100-42-5 1,3 1000 (454)
Styrene oxide .....	96-09-3 3 100 (45.4)
Sulfuric acid .....	7664-93-9 1 1000 (454) 8014-95-7
Sulfuric acid, dimethyl ester .....	77-78-1 3,4 U103 100 (45.4)
Sulfuric acid, dithallium (1+) salt .....	7446-18-6 1,4 P115 100 (45.4) 10031-59-1
Sulfur monochloride .....	12771-08-3 1 1000 (454)
Sulfur phosphide .....	1314-80-3 1,4 U189 100 (45.4)
2,4,5-T .....	93-76-5 1,4 See F027 1000 (454)
2,4,5-T acid .....	93-76-5 1,4 See F027 1000 (454)
2,4,5-T amines .....	2008-46-0 1 5000 (2270) 1319-72-8 3813-14-7 6369-96-6 6369-97-7
2,4,5-T esters .....	93-79-8 1 1000 (454) 1928-47-8 2545-59-7 25168-15-4 61792-07-2
2,4,5-T salts .....	13560-99-1 1 1000 (454)
TCDD .....	1746-01-6 2,3 1 (0.454)
TDE .....	72-54-8 1,2,4 U060 1 (0.454)
1,2,4,5-Tetrachlorobenzene .....	95-94-3 4 U207 5000 (2270)
2,3,7,8-Tetrachlorodibenzo-p-dioxin .....	1746-01-6 2,3 1 (0.454)
1,1,1,2-Tetrachloroethane .....	630-20-6 4 U208 100 (45.4)
1,1,2,2-Tetrachloroethane .....	79-34-5 2,3,4 U209 100 (45.4)
Tetrachloroethylene .....	127-18-4 2,3,4 U210 100 (45.4)
2,3,4,6-Tetrachlorophenol .....	58-90-2 4 See F027 10 (4.54)
Tetraethyl pyrophosphate .....	107-49-3 1,4 P111 10 (4.54)
Tetraethyl lead .....	78-00-2 1,4 P110 10 (4.54)
Tetraethyldithiopyrophosphate .....	3689-24-5 4 P109 100 (45.4)
Tetrahydrofuran .....	109-99-9 4 U213 1000 (454)
Tetranitromethane .....	509-14-8 4 P112 10 (4.54)
Tetraphosphoric acid, hexaethyl ester .....	757-58-4 4 P062 100 (45.4)
Thallic oxide .....	1314-32-5 4 P113 100 (45.4)
Thallium dagger;dagger; .....	7440-28-0 2 1000 (454)
THALLIUM AND COMPOUNDS .....	N.A. 2 **
Thallium (I) acetate .....	563-68-8 4 U214 100 (45.4)
Thallium (I) carbonate .....	6533-73-9 4 U215 100 (45.4)
Thallium chloride TICl .....	7791-12-0 4 U216 100 (45.4)
Thallium (I) nitrate .....	10102-45-1 4 U217 100 (45.4)

Thallium oxide Tl <sub>2</sub> O <sub>3</sub> .....	1314-32-5 4 P113 100 (45.4)
Thallium (I) selenite .....	12039-52-0 4 P114 1000 (45.4)
Thallium (I) sulfate .....	7446-18-6 1,4 P115 100 (45.4) 10031-59-1
Thioacetamide .....	62-55-5 4 U218 10 (4.54)
Thiodiphosphoric acid, tetraethyl ester .....	3689-24-5 4 P109 100 (45.4)
Thiofanox .....	39196-18-4 4 P045 100 (45.4)
Thioimidodicarbonic diamide [(H <sub>2</sub> N)C(S)] <sub>2</sub> NH .....	541-53-7 4 P049 100 (45.4)
Thiomethanol .....	74-93-1 1,4 U153 100 (45.4)
Thioperoxydicarbonic diamide [(H <sub>2</sub> N)C(S)] <sub>2</sub> S <sub>2</sub> , tetramethyl-.....	137-26-8 4 U244 10 (4.54)
Thiophenol .....	108-98-5 4 P014 100 (45.4)
Thiosemicarbazide .....	79-19-6 4 P116 100 (45.4)
Thiourea .....	62-56-6 4 U219 10 (4.54)
Thiourea, (2-chlorophenyl)- .....	5344-82-1 4 P026 100 (45.4)
Thiourea, 1-naphthalenyl- .....	86-88-4 4 P072 100 (45.4)
Thiourea, phenyl- .....	103-85-5 4 P093 100 (45.4)
Thiram .....	137-26-8 4 U244 10 (4.54)
Titanium tetrachloride .....	7550-45-0 3 1,2,41000 (45.4)
Toluene .....	108-88-3 1,2,3,4 U220 1000 (45.4)
Toluenediamine .....	95-80-7 3,4 U221 10 (4.54) 496-72-0 823-40-5 25376-45-8
2,4-Toluene diamine .....	95-80-7 3,4 U221 10 (4.54) 496-72-0 823-40-5 25376-45-8
Toluene diisocyanate .....	91-08-7 3,4 U223 100 (45.4) 584-84-9 26471-62-5
2,4-Toluene diisocyanate .....	91-08-7 3,4 U223 100 (45.4) 584-84-9 26471-62-5
o-Toluidine .....	95-53-4 3,4 U328 100 (45.4)
p-Toluidine .....	106-49-0 4 U353 100 (45.4)
o-Toluidine hydrochloride .....	636-21-5 4 U222 100 (45.4)
Toxaphene .....	8001-35-2 1,2,3,4 P123 1 (0.454)
2,4,5-TP acid .....	93-72-1 1,4 See F027 100 (45.4)
2,4,5-TP esters .....	32534-95-5 1 100 (45.4)
1H-1,2,4-Triazol-3-amine .....	61-82-5 4 U011 10 (4.54)
Trichlorfon .....	52-68-6 1 100 (45.4)
1,2,4-Trichlorobenzene .....	120-82-1 2,3 100 (45.4)
1,1,1-Trichloroethane .....	71-55-6 2,3,4 U226 1000 (45.4)
1,1,2-Trichloroethane .....	79-00-5 2,3,4 U227 100 (45.4)
Trichloroethylene .....	79-01-6 1,2,3,4 U228 100 (45.4)
Trichloromethanesulfonyl chloride .....	594-42-3 4 P118 100 (45.4)
Trichloromonofluoromethane .....	75-69-4 4 U121 5000 (2270)
Trichlorophenol .....	25167-82-2 1 10 (4.54)
2,3,4-Trichlorophenol .....	15950-66-0
2,3,5-Trichlorophenol .....	933-78-8
2,3,6-Trichlorophenol .....	933-75-5
3,4,5-Trichlorophenol .....	609-19-8
2,4,5-Trichlorophenol .....	95-95-4 1,3,4 See F027 10 (4.54)
2,4,6-Trichlorophenol .....	88-06-2 1,2,3,4 See F027 10 (4.54)
Triethanolamine dodecylbenzenesulfonate .....	27323-41-7 1 1000 (45.4)
Triethylamine .....	121-44-8 1,3,4 U404 5000 (2270)
Trifluralin .....	1582-09-8 3 10 (4.54)
Trimethylamine .....	75-50-3 1 100 (45.4)
2,2,4-Trimethylpentane .....	540-84-1 3 1000 (45.4)
1,3,5-Trinitrobenzene .....	99-35-4 4 U234 10 (4.54)
1,3,5-Trioxane, 2,4,6-trimethyl- .....	123-63-7 4 U182 1000 (45.4)
Tris(2,3-dibromopropyl) phosphate .....	126-72-7 4 U235 10 (4.54)
Trypan blue .....	72-57-1 4 U236 10 (4.54)
Unlisted Hazardous Wastes Characteristic of Corrosivity ..	N.A. 4 D002 100 (45.4)
Unlisted Hazardous Wastes Characteristic of Ignitability ...	N.A. 4 D001 100 (45.4)
Unlisted Hazardous Wastes Characteristic of Reactivity ...	N.A. 4 D003 100 (45.4)
Unlisted Hazardous Wastes Characteristic of Toxicity:	

Arsenic (D004)	N.A. 4 D004 1 (0.454)
Barium (D005)	N.A. 4 D005 1000 (454)
Benzene (D018)	N.A. 1,2,3,4 D018 10 (4.54)
Cadmium (D006)	N.A. 4 D006 10 (4.54)
Carbon tetrachloride (D019)	N.A. 1,2,4 D019 10 (4.54)
Chlordane (D020)	N.A. 1,2,4 D020 1 (0.454)
Chlorobenzene (D021)	N.A. 1,2,4 D021 100 (45.4)
Chloroform (D022)	N.A. 1,2,4 D022 10 (4.54)
Chromium (D007)	N.A. 4 D007 10 (4.54)
o-Cresol (D023)	N.A. 4 D023 100 (45.4)
m-Cresol (D024)	N.A. 4 D024 100 (45.4)
p-Cresol (D025)	N.A. 4 D025 100 (45.4)
Cresol (D026)	N.A. 4 D026 100 (45.4)
2,4-D (D016)	N.A. 1,4 D016 100 (45.4)
1,4-Dichlorobenzene (D027)	N.A. 1,2,4 D027 100 (45.4)
1,2-Dichloroethane (D028)	N.A. 1,2,4 D028 100 (45.4)
1,1-Dichloroethylene (D029)	N.A. 1,2,4 D029 100 (45.4)
2,4-Dinitrotoluene (D030)	N.A. 1,2,4 D030 10 (4.54)
Endrin (D012)	N.A. 1,4 D012 1 (0.454)
Heptachlor (and epoxide) (D031)	N.A. 1,2,4 D031 1 (0.454)
Hexachlorobenzene (D032)	N.A. 2,4 D032 10 (4.54)
Hexachlorobutadiene (D033)	N.A. 2,4 D033 1 (0.454)
Hexachloroethane (D034)	N.A. 2,4 D034 100 (45.4)
Lead (D008)	N.A. 4 D008 10 (4.54)
Lindane (D013)	N.A. 1,4 D013 1 (0.454)
Mercury (D009)	N.A. 4 D009 1 (0.454)
Methoxychlor (D014)	N.A. 1,4 D014 1 (0.454)
Methyl ethyl ketone (D035)	N.A. 4 D035 5000 (2270)
Nitrobenzene (D036)	N.A. 1,2,4 D036 1000 (454)
Pentachlorophenol (D037)	N.A. 1,2,4 D037 10 (4.54)
Pyridine (D038)	N.A. 4 D038 1000 (454)
Selenium (D010)	N.A. 4 D010 10 (4.54)
Silver (D011)	N.A. 4 D011 1 (0.454)
Tetrachloroethylene (D039)	N.A. 2,4 D039 100 (45.4)
Toxaphene (D015)	N.A. 1,4 D015 1 (0.454)
Trichloroethylene (D040)	N.A. 1,2,4 D040 100 (45.4)
2,4,5-Trichlorophenol (D041)	N.A. 1,4 D041 10 (4.54)
2,4,6-Trichlorophenol (D042)	N.A. 1,2,4 D042 10 (4.54)
2,4,5-TP (D017)	N.A. 1,4 D017 100 (45.4)
Vinyl chloride (D043)	N.A. 2,3,4 D043 1 (0.454)
Uracil mustard	66-75-1 4 U237 10 (4.54)
Uranyl acetate	541-09-3 1 100 (45.4)
Uranyl nitrate	10102-06-4 1 100 (45.4) 36478-76-9
Urea, N-ethyl-N-nitroso-	759-73-9 4 U176 1 (0.454)
Urea, N-methyl-N-nitroso-	684-93-5 3,4 U177 1 (0.454)
Urethane	51-79-6 3,4 U238 100 (45.4)
Vanadic acid, ammonium salt	7803-55-6 4 P119 1000 (454)
Vanadium oxide V2O5	1314-62-1 1,4 P120 1000 (454)
Vanadium pentoxide	1314-62-1 1,4 P120 1000 (454)
Vanadyl sulfate	27774-13-6 1 1000 (454)
Vinyl acetate	108-05-4 1,3 5000 (2270)
Vinyl acetate monomer	108-05-4 1,3 5000 (2270)
Vinylamine, N-methyl-N-nitroso-	4549-40-0 4 P084 10 (4.54)
Vinyl bromide	593-60-2 3 100 (45.4)
Vinyl chloride	75-01-4 2,3,4 U043 1 (0.454)
Vinylidene chloride	75-35-4 1,2,3,4 U078 100 (45.4)
Warfarin, & salts	81-81-2 4 P001, U248 100 (45.4)
Xylene	1330-20-7 1,3,4 U239 100 (45.4)
m-Xylene	108-38-3 3 1000 (454)
o-Xylene	95-47-6 3 1000 (454)
p-Xylene	106-42-3 3 100 (45.4)
Xylene (mixed)	1330-20-7 1,3,4 U239 100 (45.4)
Xylenes (isomers and mixture)	1330-20-7 1,3,4 U239 100 (45.4)
Xylenol	1300-71-6 1 1000 (454)
Yohimban-16-carboxylic acid,11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester	

(3beta,16beta,17alpha, 18beta,20alpha).....	50-55-54 4 U200 5000 (2270)
Zinc dagger;dagger; .....	7440-66-6 2 1000 (454)
ZINC AND COMPOUNDS .....	N.A. 2 **
Zinc acetate .....	557-34-6 1 1000 (454)
Zinc ammonium chloride .....	52628-25-8 1 1000 (454)
	14639-97-5
	14639-98-6
Zinc, bis(dimethylcarbamodithioato-S,S'), (Ziram) .....	137-30-4 4 P205 ##
Zinc borate .....	1332-07-6 1 1000 (454)
Zinc bromide .....	7699-45-8 1 1000 (454)
Zinc carbonate .....	3486-35-9 1 1000 (454)
Zinc chloride .....	7646-85-7 1 1000 (454)
Zinc cyanide Zn(CN)2 .....	557-21-1 1,4 P121 10 (4.54)
Zinc fluoride .....	7783-49-5 1 1000 (454)
Zinc formate .....	557-41-5 1 1000 (454)
Zinc hydrosulfite .....	7779-86-4 1 1000 (454)
Zinc nitrate .....	7779-88-6 1 1000 (454)
Zinc phenolsulfonate .....	127-82-2 1 5000 (2270)
Zinc phosphide Zn3P2 .....	1314-84-7 1,4 P122, U249 100 (45.4)
Zinc silicofluoride .....	16871-71-9 1 5000 (2270)
Zinc sulfate .....	7733-02-0 1 1000 (454)
Zirconium nitrate .....	13746-89-9 1 5000 (2270)
Zirconium potassium fluoride .....	16923-95-8 1 1000 (454)
Zirconium sulfate .....	14644-61-2 1 5000 (2270)
Zirconium tetrachloride .....	10026-11-6 1 5000 (2270)
F001 .....	4 F001 10 (4.54)

The following spent halogenated solvents used in degreasing; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the halogenated solvents listed below or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.

(a) Tetrachloroethylene .....	127-18-4 2,3,4 U210 100 (45.4)
(b) Trichloroethylene .....	79-01-6 1,2,3,4 U228 100 (45.4)
(c) Methylene chloride .....	75-09-2 2,3,4 U080 1000 (454)
(d) 1,1,1-Trichloroethane .....	71-55-6 2,3,4 U226 1000 (454)
(e) Carbon tetrachloride .....	56-23-5 1,2,3,4 U211 10 (4.54)
(f) Chlorinated fluorocarbons .....	N.A. 5000 (2270)
F002 .....	4 F002 10 (4.54)

The following spent halogenated solvents; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the halogenated solvents listed below or those solvents listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.

(a) Tetrachloroethylene .....	127-18-4 2,3,4 U210 100 (45.4)
(b) Methylene chloride .....	75-09-2 2,3,4 U080 1000 (454)
(c) Trichloroethylene .....	79-01-6 1,2,3,4 U228 100 (45.4)
(d) 1,1,1-Trichloroethane .....	71-55-6 2,3,4 U226 1000 (454)
(e) Chlorobenzene .....	108-90-7 1,2,3,4 U037 100 (45.4)
(f) 1,1,2-Trichloro-1,2,2-trifluoroethane .....	76-13-1 5000 (2270)
(g) o-Dichlorobenzene .....	95-50-1 1,2,4 U070 100 (45.4)
(h) Trichlorofluoromethane .....	75-69-4 4 U121 5000 (2270)
(i) 1,1,2-Trichloroethane .....	79-00-5 2,3,4 U227 100 (45.4)
F003 .....	4 F003 100 (45.4)

The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents.

(a) Xylene .....	1330-20-7 1000 (454)
(b) Acetone .....	67-64-1 5000 (2270)
(c) Ethyl acetate .....	141-78-6 5000 (2270)
(d) Ethylbenzene .....	100-41-4 1000 (454)
(e) Ethyl ether .....	60-29-7 100 (45.4)
(f) Methyl isobutyl ketone .....	108-10-1 5000 (2270)
(g) n-Butyl alcohol .....	71-36-3 5000 (2270)
(h) Cyclohexanone .....	108-94-1 5000 (2270)
(i) Methanol .....	67-56-1 5000 (2270)

F004	4 F004 100 (45.4)
The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents:	
(a) Cresols/Cresylic acid	1319-77-3 1,3,4 U052 100 (45.4)
(b) Nitrobenzene	98-95-3 1,2,3,4 U169 1000 (454)
F005	4 F005 100 (45.4)
The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents:	
(a) Toluene	108-88-3 1,2,3,4 U220 1000 (454)
(b) Methyl ethyl ketone	78-93-3 3,4 U159 5000 (2270)
(c) Carbon disulfide	75-15-0 1,3,4 P022 100 (45.4)
(d) Isobutanol	78-83-1 4 U140 5000 (2270)
(e) Pyridine	110-86-1 4 U196 1000 (454)
F006	4 F006 10 (4.54)
Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum, (2) tin plating on carbon steel, (3) zinc plating (segregated basis) on carbon steel, (4) aluminum or zinc-aluminum plating on carbon steel, (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel, and (6) chemical etching and milling of aluminum.	
F007	4 F007 10 (4.54)
Spent cyanide plating bath solutions from electroplating operations.	
F008	4 F008 10 (4.54)
Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.	
F009	4 F009 10 (4.54)
Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.	
F010	4 F010 10 (4.54)
Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.	
F011	4 F011 10 (4.54)
Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.	
F012	4 F012 10 (4.54)
Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.	
F019	4 F019 10 (4.54)
Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process.	
F020	4 F020 1 (0.454)
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-trichlorophenol.)	
F021	4 F021 1 (0.454)
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol or of intermediates used to produce its derivatives.	
F022	4 F022 1 (0.454)
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use	

(as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.	
F023 .....	4 F023 1 (0.454)
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or a component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5-trichlorophenol.)	
F024 .....	4 F024 1 (0.454)
Process wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (This listing does not include wastewaters, wastewater treatment sludges, spent catalysts, and wastes listed in 40 CFR 261.31 or 261.32.)	
F025 .....	4 F025 1 (0.454)
Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	
F026 .....	4 F026 1 (0.454)
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.	
F027 .....	4 F027 1 (0.454)
Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5- trichlorophenol as the sole component.)	
F028 .....	4 F028 1 (0.454)
Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027.	
F032 .....	4 F032 1 (0.454)
Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with § 261.35 of this chapter or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	
F034 .....	4 F034 1 (0.454)

Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.

F035 ..... 4 F035 1 (0.454)

Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.

F037 ..... 4 F037 1 (0.454)

Petroleum refinery primary oil/water/solids separation sludge-Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to those generated in oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in § 261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing. This listing does include residuals generated from processing or recycling oil-bearing hazardous secondary materials excluded under § 261.4(a)(12)(i), if those residuals are to be disposed of.

F038 ..... 4 F038 1 (0.454)

Petroleum refinery secondary (emulsified) oil/water/solids separation sludge-Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from noncontact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in § 261.31(b)(2) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and F037, K048, and K051 wastes are not included in this listing.

F039 ..... 4 F039 1 (0.454)

Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under subpart D of 40 CFR part 261. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other hazardous wastes retains

its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028.)

K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.	4 K001 1 (0.454)
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments.	4 K002 10 (4.54)
K003	Wastewater treatment sludge from the production of molybdate orange pigments.	4 K003 10 (4.54)
K004	Wastewater treatment sludge from the production of zinc yellow pigments.	4 K004 10 (4.54)
K005	Wastewater treatment sludge from the production of chrome green pigments.	4 K005 10 (4.54)
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).	4 K006 10 (4.54)
K007	Wastewater treatment sludge from the production of iron blue pigments.	4 K007 10 (4.54)
K008	Oven residue from the production of chrome oxide green pigments.	4 K008 10 (4.54)
K009	Distillation bottoms from the production of acetaldehyde from ethylene.	4 K009 10 (4.54)
K010	Distillation side cuts from the production of acetaldehyde from ethylene.	4 K010 10 (4.54)
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile.	4 K011 10 (4.54)
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile.	4 K013 10 (4.54)
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile.	4 K014 5000 (2270)
K015	Still bottoms from the distillation of benzyl chloride.	4 K015 10 (4.54)
K016	Heavy ends or distillation residues from the production of carbon tetrachloride.	4 K016 1 (0.454)
K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.	4 K017 10 (4.54)
K018	Heavy ends from the fractionation column in ethyl chloride production.	4 K018 1 (0.454)
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.	4 K019 1 (0.454)
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.	4 K020 1 (0.454)
K021	Aqueous spent antimony catalyst waste from fluoromethanes production.	4 K021 10 (4.54)
K022	Distillation bottom tars from the production of phenol/acetone from cumene.	4 K022 1 (0.454)
K023	Distillation light ends from the production of phthalic anhydride	4 K023 5000 (2270)

from naphthalene.	
K024 .....	4 K024 5000 (2270)
Distillation bottoms from the production of phthalic anhydride from naphthalene.	
K025 .....	4 K025 10 (4.54)
Distillation bottoms from the production of nitrobenzene by the nitration of benzene.	
K026 .....	4 K026 1000 (454)
Stripping still tails from the production of methyl ethyl pyridines.	
K027 .....	4 K027 10 (4.54)
Centrifuge and distillation residues from toluene diisocyanate production.	
K028 .....	4 K028 1 (0.454)
Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.	
K029 .....	4 K029 1 (0.454)
Waste from the product steam stripper in the production of 1,1,1- trichloroethane.	
K030 .....	4 K030 1 (0.454)
Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.	
K031 .....	4 K031 1 (0.454)
By-product salts generated in the production of MSMA and cacodylic acid.	
K032 .....	4 K032 10 (4.54)
Wastewater treatment sludge from the production of chlordane.	
K033 .....	4 K033 10 (4.54)
Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.	
K034 .....	4 K034 10 (4.54)
Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.	
K035 .....	4 K035 1 (0.454)
Wastewater treatment sludges generated in the production of creosote.	
K036 .....	4 K036 1 (0.454)
Still bottoms from toluene reclamation distillation in the production of disulfoton.	
K037 .....	4 K037 1 (0.454)
Wastewater treatment sludges from the production of disulfoton.	
K038 .....	4 K038 10 (4.54)
Wastewater from the washing and stripping of phorate production.	
K039 .....	4 K039 10 (4.54)
Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.	
K040 .....	4 K040 10 (4.54)
Wastewater treatment sludge from the production of phorate.	
K041 .....	4 K041 1 (0.454)
Wastewater treatment sludge from the production of toxaphene.	
K042 .....	4 K042 10 (4.54)
Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.	
K043 .....	4 K043 10 (4.54)
2,6-Dichlorophenol waste from the production of 2,4-D.	
K044 .....	4 K044 10 (4.54)
Wastewater treatment sludges from the manufacturing and processing of explosives.	
K045 .....	4 K045 10 (4.54)
Spent carbon from the treatment of wastewater containing explosives.	

K046 .....	4 K046 10 (4.54)
Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.	
K047 .....	4 K047 10 (4.54)
Pink/red water from TNT operations.	
K048 .....	4 K048 10 (4.54)
Dissolved air flotation (DAF) float from the petroleum refining industry.	
K049 .....	4 K049 10 (4.54)
Slop oil emulsion solids from the petroleum refining industry.	
K050 .....	4 K050 10 (4.54)
Heat exchanger bundle cleaning sludge from the petroleum refining industry.	
K051 .....	4 K051 10 (4.54)
API separator sludge from the petroleum refining industry.	
K052 .....	4 K052 10 (4.54)
Tank bottoms (leaded) from the petroleum refining industry.	
K060 .....	4 K060 1 (0.454)
Ammonia still lime sludge from coking operations.	
K061 .....	4 K061 10 (4.54)
Emission control dust/sludge from the primary production of steel in electric furnaces.	
K062 .....	4 K062 10 (4.54)
Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332).	
K064 .....	4 K064 10 (4.54)
Acid plant blowdown slurry/sludge resulting from the thickening of blowdown slurry from primary copper production.	
K065 .....	4 K065 10 (4.54)
Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities.	
K066 .....	4 K066 10 (4.54)
Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production.	
K069 .....	4 K069 10 (4.54)
Emission control dust/sludge from secondary lead smelting.	
(Note: This listing is stayed administratively for sludge generated from secondary acid scrubber systems. The stay will remain in effect until further administrative action is taken. If EPA takes further action effecting the stay, EPA will publish a notice of the action in the <b>Federal Register</b> .)	
K071 .....	4 K071 1 (0.454)
Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.	
K073 .....	4 K073 10 (4.54)
Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.	
K083 .....	4 K083 100 (45.4)
Distillation bottoms from aniline production.	
K084 .....	4 K084 1 (0.454)
Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	
K085 .....	4 K085 10 (4.54)
Distillation or fractionation column bottoms from the production of chlorobenzenes.	
K086 .....	4 K086 10 (4.54)
Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.	
K087 .....	4 K087 100 (45.4)

Decanter tank tar sludge from coking operations.	
K088 .....	4 K088 10 (4.54)
Spent potliners from primary aluminum reduction.	
K090 .....	4 K090 10 (4.54)
Emission control dust or sludge from ferrochromiumsilicon production.	
K091 .....	4 K091 10 (4.54)
Emission control dust or sludge from ferrochromium production.	
K093 .....	4 K093 5000 (2270)
Distillation light ends from the production of phthalic anhydride from ortho-xylene.	
K094 .....	4 K094 5000 (2270)
Distillation bottoms from the production of phthalic anhydride from ortho-xylene.	
K095 .....	4 K095 100 (45.4)
Distillation bottoms from the production of 1,1,1-trichloroethane.	
K096 .....	4 K096 100 (45.4)
Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.	
K097 .....	4 K097 1 (0.454)
Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.	
K098 .....	4 K098 1 (0.454)
Untreated process wastewater from the production of toxaphene.	
K099 .....	4 K099 10 (4.54)
Untreated wastewater from the production of 2,4-D.	
K100 .....	4 K100 10 (4.54)
Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.	
K101 .....	4 K101 1 (0.454)
Distillation tar residues from the distillation of anilinebased compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	
K102 .....	4 K102 1 (0.454)
Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	
K103 .....	4 K103 100 (45.4)
Process residues from aniline extraction from the production of aniline.	
K104 .....	4 K104 10 (4.54)
Combined wastewater streams generated from nitrobenzene/aniline production.	
K105 .....	4 K105 10 (4.54)
Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.	
K106 .....	4 K106 1 (0.454)
Wastewater treatment sludge from the mercury cell process in chlorine production.	
K107 .....	4 K107 10 (4.54)
Column bottoms from product separation from the production of 1,1- dimethylhydrazine (UDMH) from carboxylic acid hydrazines.	
K108 .....	4 K108 10 (4.54)
Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1- dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	
K109 .....	4 K109 10 (4.54)
Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	
K110 .....	4 K110 10 (4.54)
Condensed column overheads from intermediate separation from the production of 1,1- dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	

K111 .....	4 K111 10 (4.54)
Product washwaters from the production of dinitrotoluene via nitration of toluene.	
K112 .....	4 K112 10 (4.54)
Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.	
K113 .....	4 K113 10 (4.54)
Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	
K114 .....	4 K114 10 (4.54)
Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	
K115 .....	4 K115 10 (4.54)
Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	
K116 .....	4 K116 10 (4.54)
Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.	
K117 .....	4 K117 1 (0.454)
Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.	
K118 .....	4 K118 1 (0.454)
Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	
K123 .....	4 K123 10 (4.54)
Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salts.	
K124 .....	4 K124 10 (4.54)
Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts.	
K125 .....	4 K125 10 (4.54)
Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.	
K126 .....	4 K126 10 (4.54)
Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts.	
K131 .....	4 K131 100 (45.4)
Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide.	
K132 .....	4 K132 1000 (454)
Spent absorbent and wastewater separator solids from the production of methyl bromide.	
K136 .....	4 K136 1 (0.454)
Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	
K141 .....	4 K141 1 (0.454)
Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke from coal or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank tar sludges from coking operations).	
K142 .....	4 K142 1 (0.454)
Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal.	
K143 .....	4 K143 1 (0.454)
Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters,	

and wash oil recovery units from the recovery of coke by-products produced from coal.	
K144 .....	4 K144 1 (0.454)
Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal.	
K145 .....	4 K145 1 (0.454)
Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.	
K147 .....	4 K147 1 (0.454)
Tar storage tank residues from coal tar refining.	
K148 .....	4 K148 1 (0.454)
Residues from coal tar distillation, including, but not limited to, still bottoms.	
K149 .....	4 K149 10 (4.54)
Distillation bottoms from the production of alpha-(or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. [This waste does not include still bottoms from the distillation of benzyl chloride.]	
K150 .....	4 K150 10 (4.54)
Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	
K151 .....	4 K151 10 (4.54)
Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of waste-waters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	
K156 .....	4 K156 ##
Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)	
K157 .....	4 K157 ##
Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)	
K158 .....	4 K158 ##
Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)	
K159 .....	4 K159 ##
Organics from the treatment of thiocarbamate wastes.	
K161 .....	4 K161 ##
Purification solids (including filtration, evaporation, and centrifugation solids), baghouse dust and floor sweepings from the production of dithiocarbamate acids and their salts. (This does not include K125 or K126.)	
K169f .....	4 K169 10 (4.54)
Crude oil storage tank sediment from petroleum refining operations.	
K170f .....	4 K170 1 (0.454)
Clarified slurry oil tank sediment and/or in-line filter/separation solids from petroleum refining operations.	
K171f .....	4 K171 1 (0.454)

Spent hydrotreating catalyst from petroleum refining operations.  
(This listing does not include inert support media.)

K172f ..... 4 K172 1 (0.454)

Spent hydrorefining catalyst from petroleum refining operations.  
(This listing does not include inert support media.)

K174f ..... 4 K174 1 (0.454)

K175f ..... 4 K175 1 (0.454)

K176 .....

Baghouse filters from the production of antimony oxide, including filters from the production of intermediates (e.g., antimony metal or crude antimony oxide)

..... 4 K176 1 (0.454)

K177 .....

Slag from the production of antimony oxide that is speculatively accumulated or disposed, including slag from the production of intermediates (e.g., antimony metal or crude antimony oxide)

..... 4 K177 5,000 (2270)

K178 .....

Residues from manufacturing and manufacturing-site storage of ferric chloride from acids formed during the production of titanium dioxide using the chloride ilmenite process

..... 4 K178 1 (0.454)

dagger; Indicates the statutory source defined by 1,2,3, and 4, as described in the note preceding Table 302.4.

dagger;dagger; No reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers (0.004 inches).

dagger;dagger;dagger; The RQ for asbestos is limited to friable forms only.

## The Agency may adjust the statutory RQ for this hazardous substance in a future rulemaking; until then the statutory onepound RQ applies.

§ The adjusted RQs for radionuclides may be found in Appendix B to this table.

\*\* Indicates that no RQ is being assigned to the generic or broad class.

a Benzene was already a CERCLA hazardous substance prior to the CAA Amendments of 1990 and received an adjusted 10-pound RQ based on potential carcinogenicity in an August 14, 1989, final rule (54 FR 33418). The CAA Amendments specify that "benzene (including benzene from gasoline)" is a hazardous air pollutant and, thus, a CERCLA hazardous substance.

b The CAA Amendments of 1990 list DDE (3547-04-4) as a CAA hazardous air pollutant. The CAS number, 3547-04-4, is for the chemical, p,p'-dichlorodiphenylethane. DDE or p,p'-dichlorodiphenyldichloroethylene, CAS number 72-55-9, is already listed in Table 302.4 with a final RQ of 1 pound. The substance identified by the CAS number 3547-04-4 has been evaluated and listed as DDE to be consistent with the CAA section 112 listing, as amended.

c Includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less.

d Includes mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub>-OR' where:

n = 1, 2, or 3;

R = alkyl C7 or less; or

R = phenyl or alkyl substituted phenyl;

R' = H or alkyl C7 or less; or

OR' consisting of carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate.

e Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100

°C.

f See 40 CFR 302.6(b)(1) for application of the mixture rule to this hazardous waste.

#### APPENDIX B TO § 302.4—RADIONUCLIDES

Radionuclide	AtomicNumber	Final RQ Ci (Bq)
Radionuclides@ .....		1&(3.7E 10)
Actinium-224 .....	89 100	(3.7E 12)
Actinium-225 .....	89 1	(3.7E 10)
Actinium-226 .....	89 10	(3.7E 11)
Actinium-227 .....	89 0.001	(3.7E 7)
Actinium-228 .....	89 10	(3.7E 11)
Aluminum-26 .....	13 10	(3.7E 11)
Americium-237 .....	95 1000	(3.7E 13)
Americium-238 .....	95 100	(3.7E 12)
Americium-239 .....	95 100	(3.7E 12)
Americium-240 .....	95 10	(3.7E 11)

Americium-241 .....	95 0.01 (3.7E 8)
Americium-242m .....	95 0.01 (3.7E 8)
Americium-242 .....	95 100 (3.7E 12)
Americium-243 .....	95 0.01 (3.7E 8)
Americium-244m .....	95 1000 (3.7E 13)
Americium-244 .....	95 10 (3.7E 11)
Americium-245 .....	95 1000 (3.7E 13)
Americium-246m .....	95 1000 (3.7E 13)
Americium-246 .....	95 1000 (3.7E 13)
Antimony-115 .....	51 1000 (3.7E 13)
Antimony-116m .....	51 100 (3.7E 12)
Antimony-116 .....	51 1000 (3.7E 13)
Antimony-117 .....	51 1000 (3.7E 13)
Antimony-118m .....	51 10 (3.7E 11)
Antimony-119 .....	51 1000 (3.7E 13)
Antimony-120 (16 min) .....	51 1000 (3.7E 13)
Antimony-120 (5.76 day) .....	51 10 (3.7E 11)
Antimony-122 .....	51 10 (3.7E 11)
Antimony-124m .....	51 1000 (3.7E 13)
Antimony-124 .....	51 10 (3.7E 11)
Antimony-125 .....	51 10 (3.7E 11)
Antimony-126m .....	51 1000 (3.7E 13)
Antimony-126 .....	51 10 (3.7E 11)
Antimony-127 .....	51 10 (3.7E 11)
Antimony-128 (10.4 min) .....	51 1000 (3.7E 13)
Antimony-128 (9.01 hr) .....	51 10 (3.7E 11)
Antimony-129 .....	51 100 (3.7E 12)
Antimony-130 .....	51 100 (3.7E 12)
Antimony-131 .....	51 1000 (3.7E 13)
Argon-39 .....	18 1000 (3.7E 13)
Argon-41 .....	18 10 (3.7E 11)
Arsenic-69 .....	33 1000 (3.7E 13)
Arsenic-70 .....	33 100 (3.7E 12)
Arsenic-71 .....	33 100 (3.7E 12)
Arsenic-72 .....	33 10 (3.7E 11)
Arsenic-73 .....	33 100 (3.7E 12)
Arsenic-74 .....	33 10 (3.7E 11)
Arsenic-76 .....	33 100 (3.7E 12)
Arsenic-77 .....	33 1000 (3.7E 13)
Arsenic-78 .....	33 100 (3.7E 12)
Astatine-207 .....	85 100 (3.7E 12)
Astatine-211 .....	85 100 (3.7E 12)
Barium-126 .....	56 1000 (3.7E 13)
Barium-128 .....	56 10 (3.7E 11)
Barium-131m .....	56 1000 (3.7E 13)
Barium-131 .....	56 10 (3.7E 11)
Barium-133m .....	56 100 (3.7E 12)
Barium-133 .....	56 10 (3.7E 11)
Barium-135m .....	56 1000 (3.7E 13)
Barium-139 .....	56 1000 (3.7E 13)
Barium-140 .....	56 10 (3.7E 11)
Barium-141 .....	56 1000 (3.7E 13)
Barium-142 .....	56 1000 (3.7E 13)
Berkelium-245 .....	97 100 (3.7E 12)
Berkelium-246 .....	97 10 (3.7E 11)
Berkelium-247 .....	97 0.01 (3.7E 8)
Berkelium-249 .....	97 1 (3.7E 10)
Berkelium-250 .....	97 100 (3.7E 12)
Beryllium-7 .....	4 100 (3.7E 12)
Beryllium-10 .....	4 1 (3.7E 10)
Bismuth-200 .....	83 100 (3.7E 12)
Bismuth-201 .....	83 100 (3.7E 12)
Bismuth-202 .....	83 1000 (3.7E 13)
Bismuth-203 .....	83 10 (3.7E 11)
Bismuth-205 .....	83 10 (3.7E 11)
Bismuth-206 .....	83 10 (3.7E 11)
Bismuth-207 .....	83 10 (3.7E 11)

Bismuth-210m	83	0.1	(3.7E 9)
Bismuth-210	83	10	(3.7E 11)
Bismuth-212	83	100	(3.7E 12)
Bismuth-213	83	100	(3.7E 12)
Bismuth-214	83	100	(3.7E 12)
Bromine-74m	35	100	(3.7E 12)
Bromine-74	35	100	(3.7E 12)
Bromine-75	35	100	(3.7E 12)
Bromine-76	35	10	(3.7E 11)
Bromine-77	35	100	(3.7E 12)
Bromine-80m	35	1000	(3.7E 13)
Bromine-80	35	1000	(3.7E 13)
Bromine-82	35	10	(3.7E 11)
Bromine-83	35	1000	(3.7E 13)
Bromine-84	35	100	(3.7E 12)
Cadmium-104	48	1000	(3.7E 13)
Cadmium-107	48	1000	(3.7E 13)
Cadmium-109	48	1	(3.7E 10)
Cadmium-113m	48	0.1	(3.7E 9)
Cadmium-113	48	0.1	(3.7E 9)
Cadmium-115m	48	10	(3.7E 11)
Cadmium-115	48	100	(3.7E 12)
Cadmium-117m	48	10	(3.7E 11)
Cadmium-117	48	100	(3.7E 12)
Calcium-41	20	10	(3.7E 11)
Calcium-45	20	10	(3.7E 11)
Calcium-47	20	10	(3.7E 11)
Californium-244	98	1000	(3.7E 13)
Californium-246	98	10	(3.7E 11)
Californium-248	98	0.1	(3.7E 9)
Californium-249	98	0.01	(3.7E 8)
Californium-250	98	0.01	(3.7E 8)
Californium-251	98	0.01	(3.7E 8)
Californium-252	98	0.1	(3.7E 9)
Californium-253	98	10	(3.7E 11)
Californium-254	98	0.1	(3.7E 9)
Carbon-11	6	1000	(3.7E 13)
Carbon-14	6	10	(3.7E 11)
Cerium-134	58	10	(3.7E 11)
Cerium-135	58	10	(3.7E 11)
Cerium-137m	58	100	(3.7E 12)
Cerium-137	58	1000	(3.7E 13)
Cerium-139	58	100	(3.7E 12)
Cerium-141	58	10	(3.7E 11)
Cerium-143	58	100	(3.7E 12)
Cerium-144	58	1	(3.7E 10)
Cesium-125	55	1000	(3.7E 13)
Cesium-127	55	100	(3.7E 12)
Cesium-129	55	100	(3.7E 12)
Cesium-130	55	1000	(3.7E 13)
Cesium-131	55	1000	(3.7E 13)
Cesium-132	55	10	(3.7E 11)
Cesium-134m	55	1000	(3.7E 13)
Cesium-134	55	1	(3.7E 10)
Cesium-135m	55	100	(3.7E 12)
Cesium-135	55	10	(3.7E 11)
Cesium-136	55	10	(3.7E 11)
Cesium-137	55	1	(3.7E 10)
Cesium-138	55	100	(3.7E 12)
Chlorine-36	17	10	(3.7E 11)
Chlorine-38	17	100	(3.7E 12)
Chlorine-39	17	100	(3.7E 12)
Chromium-48	24	100	(3.7E 12)
Chromium-49	24	1000	(3.7E 13)
Chromium-51	24	1000	(3.7E 13)
Cobalt-55	27	10	(3.7E 11)
Cobalt-56	27	10	(3.7E 11)

Cobalt-57	27 100 (3.7E 12)
Cobalt-58m	27 1000 (3.7E 13)
Cobalt-58	27 10 (3.7E 11)
Cobalt-60m	27 1000 (3.7E 13)
Cobalt-60	27 10 (3.7E 11)
Cobalt-61	27 1000 (3.7E 13)
Cobalt-62m	27 1000 (3.7E 13)
Copper-60	29 100 (3.7E 12)
Copper-61	29 100 (3.7E 12)
Copper-64	29 1000 (3.7E 13)
Copper-67	29 100 (3.7E 12)
Curium-238	96 1000 (3.7E 13)
Curium-240	96 1 (3.7E 10)
Curium-241	96 10 (3.7E 11)
Curium-242	96 1 (3.7E 10)
Curium-243	96 0.01 (3.7E 8)
Curium-244	96 0.01 (3.7E 8)
Curium-245	96 0.01 (3.7E 8)
Curium-246	96 0.01 (3.7E 8)
Curium-247	96 0.01 (3.7E 8)
Curium-248	96 0.001 (3.7E 7)
Curium-249	96 1000 (3.7E 13)
Dysprosium-155	66 100 (3.7E 12)
Dysprosium-157	66 100 (3.7E 12)
Dysprosium-159	66 100 (3.7E 12)
Dysprosium-165	66 1000 (3.7E 13)
Dysprosium-166	66 10 (3.7E 11)
Einsteinium-250	99 10 (3.7E 11)
Einsteinium-251	99 1000 (3.7E 13)
Einsteinium-253	99 10 (3.7E 11)
Einsteinium-254m	99 1 (3.7E 10)
Einsteinium-254	99 0.1 (3.7E 9)
Erbium-161	68 100 (3.7E 12)
Erbium-165	68 1000 (3.7E 13)
Erbium-169	68 100 (3.7E 12)
Erbium-171	68 100 (3.7E 12)
Erbium-172	68 10 (3.7E 11)
Europium-145	63 10 (3.7E 11)
Europium-146	63 10 (3.7E 11)
Europium-147	63 10 (3.7E 11)
Europium-148	63 10 (3.7E 11)
Europium-149	63 100 (3.7E 12)
Europium-150 (12.6 hr)	63 1000 (3.7E 13)
Europium-150 (34.2 yr)	63 10 (3.7E 11)
Europium-152m	63 100 (3.7E 12)
Europium-152	63 10 (3.7E 11)
Europium-154	63 10 (3.7E 11)
Europium-155	63 10 (3.7E 11)
Europium-156	63 10 (3.7E 11)
Europium-157	63 10 (3.7E 11)
Europium-158	63 1000 (3.7E 13)
Fermium-252	100 10 (3.7E 11)
Fermium-253	100 10 (3.7E 11)
Fermium-254	100 100 (3.7E 12)
Fermium-255	100 100 (3.7E 12)
Fermium-257	100 1 (3.7E 10)
Fluorine-18	9 1000 (3.7E 13)
Francium-222	87 100 (3.7E 12)
Francium-223	87 100 (3.7E 12)
Gadolinium-145	64 100 (3.7E 12)
Gadolinium-146	64 10 (3.7E 11)
Gadolinium-147	64 10 (3.7E 11)
Gadolinium-148	64 0.001 (3.7E7)
Gadolinium-149	64 100 (3.7E 12)
Gadolinium-151	64 100 (3.7E 12)
Gadolinium-152	64 0.001 (3.7E 7)
Gadolinium-153	64 10 (3.7E 11)

Gadolinium-159	64	1000	(3.7E 13)
Gallium-65	31	1000	(3.7E 13)
Gallium-66	31	10	(3.7E 11)
Gallium-67	31	100	(3.7E 12)
Gallium-68	31	1000	(3.7E 13)
Gallium-70	31	1000	(3.7E 13)
Gallium-72	31	10	(3.7E 11)
Gallium-73	31	100	(3.7E 12)
Germanium-66	32	100	(3.7E 12)
Germanium-67	32	1000	(3.7E 13)
Germanium-68	32	10	(3.7E 11)
Germanium-69	32	10	(3.7E 11)
Germanium-71	32	1000	(3.7E 13)
Germanium-75	32	1000	(3.7E 13)
Germanium-77	32	10	(3.7E 11)
Germanium-78	32	1000	(3.7E 13)
Gold-193	79	100	(3.7E 12)
Gold-194	79	10	(3.7E 11)
Gold-195	79	100	(3.7E 12)
Gold-198m	79	10	(3.7E 11)
Gold-198	79	100	(3.7E 12)
Gold-199	79	100	(3.7E 12)
Gold-200m	79	10	(3.7E 11)
Gold-200	79	1000	(3.7E 13)
Gold-201	79	1000	(3.7E 13)
Hafnium-170	72	100	(3.7E 12)
Hafnium-172	72	1	(3.7E 10)
Hafnium-173	72	100	(3.7E 12)
Hafnium-175	72	100	(3.7E 12)
Hafnium-177m	72	1000	(3.7E 13)
Hafnium-178m	72	0.1	(3.7E 9)
Hafnium-179m	72	100	(3.7E 12)
Hafnium-180m	72	100	(3.7E 12)
Hafnium-181	72	10	(3.7E 11)
Hafnium-182m	72	100	(3.7E 12)
Hafnium-182	72	0.1	(3.7E 9)
Hafnium-183	72	100	(3.7E 12)
Hafnium-184	72	100	(3.7E 12)
Holmium-155	67	1000	(3.7E 13)
Holmium-157	67	1000	(3.7E 13)
Holmium-159	67	1000	(3.7E 13)
Holmium-161	67	1000	(3.7E 13)
Holmium-162m	67	1000	(3.7E 13)
Holmium-162	67	1000	(3.7E 13)
Holmium-164m	67	1000	(3.7E 13)
Holmium-164	67	1000	(3.7E 13)
Holmium-166m	67	1	(3.7E 10)
Holmium-166	67	100	(3.7E 12)
Holmium-167	67	100	(3.7E 12)
Hydrogen-3	1	100	(3.7E 12)
Indium-109	49	100	(3.7E 12)
Indium-110 (69.1 min)	49	100	(3.7E 12)
Indium-110 (4.9 hr)	49	10	(3.7E 11)
Indium-111	49	100	(3.7E 12)
Indium-112	49	1000	(3.7E 13)
Indium-113m	49	1000	(3.7E 13)
Indium-114m	49	10	(3.7E 11)
Indium-115m	49	100	(3.7E 12)
Indium-115	49	0.1	(3.7E 9)
Indium-116m	49	100	(3.7E 12)
Indium-117m	49	100	(3.7E 12)
Indium-117	49	1000	(3.7E 13)
Indium-119m	49	1000	(3.7E 13)
Iodine-120m	53	100	(3.7E 12)
Iodine-120	53	10	(3.7E 11)
Iodine-121	53	100	(3.7E 12)
Iodine-123	53	10	(3.7E 11)

Iodine-124	53	0.1	(3.7E 9)
Iodine-125	53	0.01	(3.7E 8)
Iodine-126	53	0.01	(3.7E 8)
Iodine-128	53	1000	(3.7E 13)
Iodine-129	53	0.001	(3.7E 7)
Iodine-130	53	1	(3.7E 10)
Iodine-131	53	0.01	(3.7E 8)
Iodine-132m	53	10	(3.7E 11)
Iodine-132	53	10	(3.7E 11)
Iodine-133	53	0.1	(3.7E 9)
Iodine-134	53	100	(3.7E 12)
Iodine-135	53	10	(3.7E 11)
Iridium-182	77	1000	(3.7E 13)
Iridium-184	77	100	(3.7E 12)
Iridium-185	77	100	(3.7E 12)
Iridium-186	77	10	(3.7E 11)
Iridium-187	77	100	(3.7E 12)
Iridium-188	77	10	(3.7E 11)
Iridium-189	77	100	(3.7E 12)
Iridium-190m	77	1000	(3.7E 13)
Iridium-190	77	10	(3.7E 11)
Iridium-192m	77	100	(3.7E 12)
Iridium-192	77	10	(3.7E 11)
Iridium-194m	77	10	(3.7E 11)
Iridium-194	77	100	(3.7E 12)
Iridium-195m	77	100	(3.7E 12)
Iridium-195	77	1000	(3.7E 13)
Iron-52	26	100	(3.7E 12)
Iron-55	26	100	(3.7E 12)
Iron-59	26	10	(3.7E 11)
Iron-60	26	0.1	(3.7E 9)
Krypton-74	36	10	(3.7E 11)
Krypton-76	36	10	(3.7E 11)
Krypton-77	36	10	(3.7E 11)
Krypton-79	36	100	(3.7E 12)
Krypton-81	36	1000	(3.7E 13)
Krypton-83m	36	1000	(3.7E 13)
Krypton-85m	36	100	(3.7E 12)
Krypton-85	36	1000	(3.7E 13)
Krypton-87	36	10	(3.7E 11)
Krypton-88	36	10	(3.7E 11)
Lanthanum-131	57	1000	(3.7E 13)
Lanthanum-132	57	100	(3.7E 12)
Lanthanum-135	57	1000	(3.7E 13)
Lanthanum-137	57	10	(3.7E 11)
Lanthanum-138	57	1	(3.7E 10)
Lanthanum-140	57	10	(3.7E 11)
Lanthanum-141	57	1000	(3.7E 13)
Lanthanum-142	57	100	(3.7E 12)
Lanthanum-143	57	1000	(3.7E 13)
Lead-195m	82	1000	(3.7E 13)
Lead-198	82	100	(3.7E 12)
Lead-199	82	100	(3.7E 12)
Lead-200	82	100	(3.7E 12)
Lead-201	82	100	(3.7E 12)
Lead-202m	82	10	(3.7E 11)
Lead-202	82	1	(3.7E 10)
Lead-203	82	100	(3.7E 12)
Lead-205	82	100	(3.7E 12)
Lead-209	82	1000	(3.7E 13)
Lead-210	82	0.01	(3.7E 8)
Lead-211	82	100	(3.7E 12)
Lead-212	82	10	(3.7E 11)
Lead-214	82	100	(3.7E 12)
Lutetium-169	71	10	(3.7E 11)
Lutetium-170	71	10	(3.7E 11)
Lutetium-171	71	10	(3.7E 11)

Lutetium-172	71	10	(3.7E 11)
Lutetium-173	71	100	(3.7E 12)
Lutetium-174m	71	10	(3.7E 11)
Lutetium-174	71	10	(3.7E 11)
Lutetium-176m	71	1000	(3.7E 13)
Lutetium-176	71	1	(3.7E 10)
Lutetium-177m	71	10	(3.7E 11)
Lutetium-177	71	100	(3.7E 12)
Lutetium-178m	71	1000	(3.7E 13)
Lutetium-178	71	1000	(3.7E 13)
Lutetium-179	71	1000	(3.7E 13)
Magnesium-28	12	10	(3.7E 11)
Manganese-51	25	1000	(3.7E 13)
Manganese-52m	25	1000	(3.7E 13)
Manganese-52	25	10	(3.7E 11)
Manganese-53	25	1000	(3.7E 13)
Manganese-54	25	10	(3.7E 11)
Manganese-56	25	100	(3.7E 12)
Mendelevium-257	101	100	(3.7E 12)
Mendelevium-258	101	1	(3.7E 10)
Mercury-193m	80	10	(3.7E 11)
Mercury-193	80	100	(3.7E 12)
Mercury-194	80	0.1	(3.7E 9)
Mercury-195m	80	100	(3.7E 12)
Mercury-195	80	100	(3.7E 12)
Mercury-197m	80	1000	(3.7E 13)
Mercury-197	80	1000	(3.7E 13)
Mercury-199m	80	1000	(3.7E 13)
Mercury-203	80	10	(3.7E 11)
Molybdenum-90	42	100	(3.7E 12)
Molybdenum-93m	42	10	(3.7E 11)
Molybdenum-93	42	100	(3.7E 12)
Molybdenum-99	42	100	(3.7E 12)
Molybdenum-101	42	1000	(3.7E 13)
Neodymium-136	60	1000	(3.7E 13)
Neodymium-138	60	1000	(3.7E 13)
Neodymium-139m	60	100	(3.7E 12)
Neodymium-139	60	1000	(3.7E 13)
Neodymium-141	60	1000	(3.7E 13)
Neodymium-147	60	10	(3.7E 11)
Neodymium-149	60	100	(3.7E 12)
Neodymium-151	60	1000	(3.7E 13)
Neptunium-232	93	1000	(3.7E 13)
Neptunium-233	93	1000	(3.7E 13)
Neptunium-234	93	10	(3.7E 11)
Neptunium-235	93	1000	(3.7E 13)
Neptunium-236 (1.2 E 5 yr)	93	0.1	(3.7E 9)
Neptunium-236 (22.5 hr)	93	100	(3.7E 12)
Neptunium-237	93	0.01	(3.7E 8)
Neptunium-238	93	10	(3.7E 11)
Neptunium-239	93	100	(3.7E 12)
Neptunium-240	93	100	(3.7E 12)
Nickel-56	28	10	(3.7E 11)
Nickel-57	28	10	(3.7E 11)
Nickel-59	28	100	(3.7E 12)
Nickel-63	28	100	(3.7E 12)
Nickel-65	28	100	(3.7E 12)
Nickel-66	28	10	(3.7E 11)
Niobium-88	41	100	(3.7E 12)
Niobium-89 (66 min)	41	100	(3.7E 12)
Niobium-89 (122 min)	41	100	(3.7E 12)
Niobium-90	41	10	(3.7E 11)
Niobium-93m	41	100	(3.7E 12)
Niobium-94	41	10	(3.7E 11)
Niobium-95m	41	100	(3.7E 12)
Niobium-95	41	10	(3.7E 11)
Niobium-96	41	10	(3.7E 11)

Niobium-97	41	100	(3.7E 12)
Niobium-98	41	1000	(3.7E 13)
Osmium-180	76	1000	(3.7E 13)
Osmium-181	76	100	(3.7E 12)
Osmium-182	76	100	(3.7E 12)
Osmium-185	76	10	(3.7E 11)
Osmium-189m	76	1000	(3.7E 13)
Osmium-191m	76	1000	(3.7E 13)
Osmium-191	76	100	(3.7E 12)
Osmium-193	76	100	(3.7E 12)
Osmium-194	76	1	(3.7E 10)
Palladium-100	46	100	(3.7E 12)
Palladium-101	46	100	(3.7E 12)
Palladium-103	46	100	(3.7E 12)
Palladium-107	46	100	(3.7E 12)
Palladium-109	46	1000	(3.7E 13)
Phosphorus-32	15	0.1	(3.7E 9)
Phosphorus-33	15	1	(3.7E 10)
Platinum-186	78	100	(3.7E 12)
Platinum-188	78	100	(3.7E 12)
Platinum-189	78	100	(3.7E 12)
Platinum-191	78	100	(3.7E 12)
Platinum-193m	78	100	(3.7E 12)
Platinum-193	78	1000	(3.7E 13)
Platinum-195m	78	100	(3.7E 12)
Platinum-197m	78	1000	(3.7E 13)
Platinum-197	78	1000	(3.7E 13)
Platinum-199	78	1000	(3.7E 13)
Platinum-200	78	100	(3.7E 12)
Plutonium-234	94	1000	(3.7E 13)
Plutonium-235	94	1000	(3.7E 13)
Plutonium-236	94	0.1	(3.7E 9)
Plutonium-237	94	1000	(3.7E 13)
Plutonium-238	94	0.01	(3.7E 8)
Plutonium-239	94	0.01	(3.7E 8)
Plutonium-240	94	0.01	(3.7E 8)
Plutonium-241	94	1	(3.7E 10)
Plutonium-242	94	0.01	(3.7E 8)
Plutonium-243	94	1000	(3.7E 13)
Plutonium-244	94	0.01	(3.7E 8)
Plutonium-245	94	100	(3.7E 12)
Polonium-203	84	100	(3.7E 12)
Polonium-205	84	100	(3.7E 12)
Polonium-207	84	10	(3.7E 11)
Polonium-210	84	0.01	(3.7E 8)
Potassium-40	19	1	(3.7E 10)
Potassium-42	19	100	(3.7E 12)
Potassium-43	19	10	(3.7E 11)
Potassium-44	19	100	(3.7E 12)
Potassium-45	19	1000	(3.7E 13)
Praseodymium-136	59	1000	(3.7E 13)
Praseodymium-137	59	1000	(3.7E 13)
Praseodymium-138m	59	100	(3.7E 12)
Praseodymium-139	59	1000	(3.7E 13)
Praseodymium-142m	59	1000	(3.7E 13)
Praseodymium-142	59	100	(3.7E 12)
Praseodymium-143	59	10	(3.7E 11)
Praseodymium-144	59	1000	(3.7E 13)
Praseodymium-145	59	1000	(3.7E 13)
Praseodymium-147	59	1000	(3.7E 13)
Promethium-141	61	1000	(3.7E 13)
Promethium-143	61	100	(3.7E 12)
Promethium-144	61	10	(3.7E 11)
Promethium-145	61	100	(3.7E 12)
Promethium-146	61	10	(3.7E 11)
Promethium-147	61	10	(3.7E 11)
Promethium-148m	61	10	(3.7E 11)

Promethium-148	61 10 (3.7E 11)
Promethium-149	61 100 (3.7E 12)
Promethium-150	61 100 (3.7E 12)
Promethium-151	61 100 (3.7E 12)
Protactinium-227	91 100 (3.7E 12)
Protactinium-228	91 10 (3.7E 11)
Protactinium-230	91 10 (3.7E 11)
Protactinium-231	91 0.01 (3.7E 8)
Protactinium-232	91 10 (3.7E 11)
Protactinium-233	91 100 (3.7E 12)
Protactinium-234	91 10 (3.7E 11)
Radium-223	88 1 (3.7E 10)
Radium-224	88 10 (3.7E 11)
Radium-225	88 1 (3.7E 10)
Radium-226 <sup>F</sup>	88 0.1 (3.7E 9)
Radium-227	88 1000 (3.7E 13)
Radium-228	88 0.1 (3.7E 9)
Radon-220	86 0.1 (3.7E 9)
Radon-222	86 0.1 (3.7E 9)
Rhenium-177	75 1000 (3.7E 13)
Rhenium-178	75 1000 (3.7E 13)
Rhenium-181	75 100 (3.7E 12)
Rhenium-182 (12.7 hr)	75 10 (3.7E 11)
Rhenium-182 (64.0 hr)	75 10 (3.7E 11)
Rhenium-184m	75 10 (3.7E 11)
Rhenium-184	75 10 (3.7E 11)
Rhenium-186m	75 10 (3.7E 11)
Rhenium-186	75 100 (3.7E 12)
Rhenium-187	75 1000 (3.7E 13)
Rhenium-188m	75 1000 (3.7E 13)
Rhenium-188	75 1000 (3.7E 13)
Rhenium-189	75 1000 (3.7E 13)
Rhodium-99m	45 100 (3.7E 12)
Rhodium-99	45 10 (3.7E 11)
Rhodium-100	45 10 (3.7E 11)
Rhodium-101m	45 100 (3.7E 12)
Rhodium-101	45 10 (3.7E 11)
Rhodium-102m	45 10 (3.7E 11)
Rhodium-102	45 10 (3.7E 11)
Rhodium-103m	45 1000 (3.7E 13)
Rhodium-105	45 100 (3.7E 12)
Rhodium-106m	45 10 (3.7E 11)
Rhodium-107	45 1000 (3.7E 13)
Rubidium-79	37 1000 (3.7E 13)
Rubidium-81m	37 1000 (3.7E 13)
Rubidium-82m	37 10 (3.7E 11)
Rubidium-83	37 10 (3.7E 11)
Rubidium-84	37 10 (3.7E 11)
Rubidium-86	37 10 (3.7E 11)
Rubidium-88	37 1000 (3.7E 13)
Rubidium-89	37 1000 (3.7E 13)
Rubidium-87	37 10 (3.7E 11)
Ruthenium-94	44 1000 (3.7E 13)
Ruthenium-97	44 100 (3.7E 12)
Ruthenium-103	44 10 (3.7E 11)
Ruthenium-105	44 100 (3.7E 12)
Ruthenium-106	44 1 (3.7E 10)
Samarium-141m	62 1000 (3.7E 13)
Samarium-141	62 1000 (3.7E 13)
Samarium-142	62 1000 (3.7E 13)
Samarium-145	62 100 (3.7E 12)
Samarium-146	62 0.01 (3.7E 8)
Samarium-147	62 0.01 (3.7E 8)
Samarium-151	62 10 (3.7E 11)
Samarium-153	62 100 (3.7E 12)
Samarium-155	62 1000 (3.7E 13)
Samarium-156	62 100 (3.7E 12)

Scandium-43 .....	21	1000	(3.7E 13)
Scandium-44m .....	21	10	(3.7E 11)
Scandium-44 .....	21	100	(3.7E 12)
Scandium-46 .....	21	10	(3.7E 11)
Scandium-47 .....	21	100	(3.7E 12)
Scandium-48 .....	21	10	(3.7E 11)
Scandium-49 .....	21	1000	(3.7E 13)
Selenium-70 .....	34	1000	(3.7E 13)
Selenium-73m .....	34	100	(3.7E 12)
Selenium-73 .....	34	10	(3.7E 11)
Selenium-75 .....	34	10	(3.7E 11)
Selenium-79 .....	34	10	(3.7E 11)
Selenium-81m .....	34	1000	(3.7E 13)
Selenium-81 .....	34	1000	(3.7E 13)
Selenium-83 .....	34	1000	(3.7E 13)
Silicon-31 .....	14	1000	(3.7E 13)
Silicon-32 .....	14	1	(3.7E 10)
Silver-102 .....	47	100	(3.7E 12)
Silver-103 .....	47	1000	(3.7E 13)
Silver-104m .....	47	1000	(3.7E 13)
Silver-104 .....	47	1000	(3.7E 13)
Silver-105 .....	47	10	(3.7E 11)
Silver-106m .....	47	10	(3.7E 11)
Silver-106 .....	47	1000	(3.7E 13)
Silver-108m .....	47	10	(3.7E 11)
Silver-110m .....	47	10	(3.7E 11)
Silver-111 .....	47	10	(3.7E 11)
Silver-112 .....	47	100	(3.7E 12)
Silver-115 .....	47	1000	(3.7E 13)
Sodium-22 .....	11	10	(3.7E 11)
Sodium-24 .....	11	10	(3.7E 11)
Strontium-80 .....	38	100	(3.7E 12)
Strontium-81 .....	38	1000	(3.7E 13)
Strontium-83 .....	38	100	(3.7E 12)
Strontium-85m .....	38	1000	(3.7E 13)
Strontium-85 .....	38	10	(3.7E 11)
Strontium-87m .....	38	100	(3.7E 12)
Strontium-89 .....	38	10	(3.7E 11)
Strontium-90 .....	38	0.1	(3.7E 9)
Strontium-91 .....	38	10	(3.7E 11)
Strontium-92 .....	38	100	(3.7E 12)
Sulfur-35 .....	16	1	(3.7E 10)
Tantalum-172 .....	73	100	(3.7E 12)
Tantalum-173 .....	73	100	(3.7E 12)
Tantalum-174 .....	73	100	(3.7E 12)
Tantalum-175 .....	73	100	(3.7E 12)
Tantalum-176 .....	73	10	(3.7E 11)
Tantalum-177 .....	73	1000	(3.7E 13)
Tantalum-178 .....	73	1000	(3.7E 13)
Tantalum-179 .....	73	1000	(3.7E 13)
Tantalum-180m .....	73	1000	(3.7E 13)
Tantalum-180 .....	73	100	(3.7E 12)
Tantalum-182m .....	73	1000	(3.7E 13)
Tantalum-182 .....	73	10	(3.7E 11)
Tantalum-183 .....	73	100	(3.7E 12)
Tantalum-184 .....	73	10	(3.7E 11)
Tantalum-185 .....	73	1000	(3.7E 13)
Tantalum-186 .....	73	1000	(3.7E 13)
Technetium-93m .....	43	1000	(3.7E 13)
Technetium-93 .....	43	100	(3.7E 12)
Technetium-94m .....	43	100	(3.7E 12)
Technetium-94 .....	43	10	(3.7E 11)
Technetium-96m .....	43	1000	(3.7E 13)
Technetium-96 .....	43	10	(3.7E 11)
Technetium-97m .....	43	100	(3.7E 12)
Technetium-97 .....	43	100	(3.7E 12)
Technetium-98 .....	43	10	(3.7E 11)

Technetium-99m .....	43	100	(3.7E 12)
Technetium-99 .....	43	10	(3.7E 11)
Technetium-101 .....	43	1000	(3.7E 13)
Technetium-104 .....	43	1000	(3.7E 13)
Tellurium-116 .....	52	1000	(3.7E 13)
Tellurium-121m .....	52	10	(3.7E 11)
Tellurium-121 .....	52	10	(3.7E 11)
Tellurium-123m .....	52	10	(3.7E 11)
Tellurium-123 .....	52	10	(3.7E 11)
Tellurium-125m .....	52	10	(3.7E 11)
Tellurium-127m .....	52	10	(3.7E 11)
Tellurium-127 .....	52	1000	(3.7E 13)
Tellurium-129m .....	52	10	(3.7E 11)
Tellurium-129 .....	52	1000	(3.7E 13)
Tellurium-131m .....	52	10	(3.7E 11)
Tellurium-131 .....	52	1000	(3.7E 13)
Tellurium-132 .....	52	10	(3.7E 11)
Tellurium-133m .....	52	1000	(3.7E 13)
Tellurium-133 .....	52	1000	(3.7E 13)
Tellurium-134 .....	52	1000	(3.7E 13)
Terbium-147 .....	65	100	(3.7E 12)
Terbium-149 .....	65	100	(3.7E 12)
Terbium-150 .....	65	100	(3.7E 12)
Terbium-151 .....	65	10	(3.7E 11)
Terbium-153 .....	65	100	(3.7E 12)
Terbium-154 .....	65	10	(3.7E 11)
Terbium-155 .....	65	100	(3.7E 12)
Terbium-156m (5.0 hr) .....	65	1000	(3.7E 13)
Terbium-156m (24.4 hr) .....	65	1000	(3.7E 13)
Terbium-156 .....	65	10	(3.7E 11)
Terbium-157 .....	65	100	(3.7E 12)
Terbium-158 .....	65	10	(3.7E 11)
Terbium-160 .....	65	10	(3.7E 11)
Terbium-161 .....	65	100	(3.7E 12)
Thallium-194m .....	81	100	(3.7E 12)
Thallium-194 .....	81	1000	(3.7E 13)
Thallium-195 .....	81	100	(3.7E 12)
Thallium-197 .....	81	100	(3.7E 12)
Thallium-198m .....	81	100	(3.7E 12)
Thallium-198 .....	81	10	(3.7E 11)
Thallium-199 .....	81	100	(3.7E 12)
Thallium-200 .....	81	10	(3.7E 11)
Thallium-201 .....	81	1000	(3.7E 13)
Thallium-202 .....	81	10	(3.7E 11)
Thallium-204 .....	81	10	(3.7E 11)
Thorium-226 .....	90	100	(3.7E 12)
Thorium-227 .....	90	1	(3.7E 10)
Thorium-228 .....	90	0.01	(3.7E 8)
Thorium-229 .....	90	0.001	(3.7E 7)
Thorium-230 .....	90	0.01	(3.7E 8)
Thorium-231 .....	90	100	(3.7E 12)
Thorium-232 <sup>F</sup> .....	90	0.001	(3.7E 7)
Thorium-234 .....	90	100	(3.7E 12)
Thulium-162 .....	69	1000	(3.7E 13)
Thulium-166 .....	69	10	(3.7E 11)
Thulium-167 .....	69	100	(3.7E 12)
Thulium-170 .....	69	10	(3.7E 11)
Thulium-171 .....	69	100	(3.7E 12)
Thulium-172 .....	69	100	(3.7E 12)
Thulium-173 .....	69	100	(3.7E 12)
Thulium-175 .....	69	1000	(3.7E 13)
Tin-110 .....	50	100	(3.7E 12)
Tin-111 .....	50	1000	(3.7E 13)
Tin-113 .....	50	10	(3.7E 11)
Tin-117m .....	50	100	(3.7E 12)
Tin-119m .....	50	10	(3.7E 11)
Tin-121m .....	50	10	(3.7E 11)

Tin-121	50 1000 (3.7E 13)
Tin-123m	50 1000 (3.7E 13)
Tin-123	50 10 (3.7E 11)
Tin-125	50 10 (3.7E 11)
Tin-126	50 1 (3.7E 10)
Tin-127	50 100 (3.7E 12)
Tin-128	50 1000 (3.7E 13)
Titanium-44	22 1 (3.7E 10)
Titanium-45	22 1000 (3.7E 13)
Tungsten-176	74 1000 (3.7E 13)
Tungsten-177	74 100 (3.7E 12)
Tungsten-178	74 100 (3.7E 12)
Tungsten-179	74 1000 (3.7E 13)
Tungsten-181	74 100 (3.7E 12)
Tungsten-185	74 10 (3.7E 11)
Tungsten-187	74 100 (3.7E 12)
Tungsten-188	74 10 (3.7E 11)
Uranium-230	92 1 (3.7E 10)
Uranium-231	92 1000 (3.7E 13)
Uranium-232	92 0.01 (3.7E 8)
Uranium-233	92 0.1 (3.7E 9)
Uranium-234 <sub>j</sub>	92 0.1 (3.7E 9)
Uranium-235 <sub>j</sub>	92 0.1 (3.7E 9)
Uranium-236	92 0.1 (3.7E 9)
Uranium-237	92 100 (3.7E 12)
Uranium-238 <sub>j</sub>	92 0.1& (3.7E 9)
Uranium-239	92 1000 (3.7E 13)
Uranium-240	92 1000 (3.7E 13)
Vanadium-47	23 1000 (3.7E 13)
Vanadium-48	23 10 (3.7E 11)
Vanadium-49	23 1000 (3.7E 13)
Xenon-120	54 100 (3.7E 12)
Xenon-121	54 10 (3.7E 11)
Xenon-122	54 100 (3.7E 12)
Xenon-123	54 10 (3.7E 11)
Xenon-125	54 100 (3.7E 12)
Xenon-127	54 100 (3.7E 12)
Xenon-129m	54 1000 (3.7E 13)
Xenon-131m	54 1000 (3.7E 13)
Xenon-133m	54 1000 (3.7E 13)
Xenon-133	54 1000 (3.7E 13)
Xenon-135m	54 10 (3.7E 11)
Xenon-135	54 100 (3.7E 12)
Xenon-138	54 10 (3.7E 11)
Ytterbium-162	70 1000 (3.7E 13)
Ytterbium-166	70 10 (3.7E 11)
Ytterbium-167	70 1000 (3.7E 13)
Ytterbium-169	70 10 (3.7E 11)
Ytterbium-175	70 100 (3.7E 12)
Ytterbium-177	70 1000 (3.7E 13)
Ytterbium-178	70 1000 (3.7E 13)
Yttrium-86m	39 1000 (3.7E 13)
Yttrium-86	39 10 (3.7E 11)
Yttrium-87	39 10 (3.7E 11)
Yttrium-88	39 10 (3.7E 11)
Yttrium-90m	39 100 (3.7E 12)
Yttrium-90	39 10 (3.7E 11)
Yttrium-91m	39 1000 (3.7E 13)
Yttrium-91	39 10 (3.7E 11)
Yttrium-92	39 100 (3.7E 12)
Yttrium-93	39 100 (3.7E 12)
Yttrium-94	39 1000 (3.7E 13)
Yttrium-95	39 1000 (3.7E 13)
Zinc-62	30 100 (3.7E 12)
Zinc-63	30 1000 (3.7E 13)
Zinc-65	30 10 (3.7E 11)
Zinc-69m	30 100 (3.7E 12)

Zinc-69 .....	30	1000	(3.7E 13)
Zinc-71m .....	30	100	(3.7E 12)
Zinc-72 .....	30	100	(3.7E 12)
Zirconium-86 .....	40	100	(3.7E 12)
Zirconium-88 .....	40	10	(3.7E 11)
Zirconium-89 .....	40	100	(3.7E 12)
Zirconium-93 .....	40	1	(3.7E 10)
Zirconium-95 .....	40	10	(3.7E 11)
Zirconium-97 .....	40	10	(3.7E 11)

