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Permits Division
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Water

EPA

Industrial Permit Quality Review Procedures Guide

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INDUSTRIAL PERMIT QUALITY REVIEW
PROCEDURES GUIDE

Prepared for:

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THE PERMIT QUALITY REVIEW CONCEPT

The Permit Quality Review (PQR) was developed in 1983 by the EPA Office of Water Enforcement and Permits. The need for a "product quality assurance" program is not unique to the permits program. Everything from computers to cosmetics are routinely checked for consistency or accuracy. In addition to filling a quality assurance need, PQR was designed to provide national information on permit contents and program operations. This information is necessary for responses to Congress, developing budget and resource requests, and to identify areas for guidance or training activities.

The PQR process is an on-site evaluation of permit files and program operations. PQR is a technical and policy information exchange as well as a quality assurance check. By using a consistent format for the review, based on the regulatory requirements, each program can be evaluated in a similar manner. The PQR usually concludes with a discussion between the permit program managers on strengths, concerns and suggestions to improve the program.

The PQR program can benefit both the reviewer and the program under review. No two permit programs are the same. This means that separate States or Regions can approach the same problem and develop different solutions. For example, one State uses on-site inspections to verify or supplement information on the application form. Another State uses DMR information and the completed applications to get the same information. By evaluating the results and not concentrating on the form of the permit program operation, new or alternative methods to develop permit decisions can be found. The PQR team should use the visit as an opportunity to evaluate, learn and discuss issues and new ideas.

The Office of Water has developed other quality programs for pretreatment and municipal permits. EPA will continue to use the PQR process and encourages State program offices to implement PQR report recommendations.

Suggestions, additions or comments to improve the PQR program should be addressed to:

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Permits Division (EN-336)
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PLANNING A PQR

EPA has conducted industrial PQRs for several years and has developed a general industrial PQR checklist (Appendix 1) for permit reviews. In addition, specific checklists have been developed for the petroleum refining, coal mining, inorganic chemical, organic chemical, and steam electric power industries (Appendices 2 through 6 respectively). The general PQR checklist should only be used for industries where a specific checklist is not available. All staff members should become familiar with the appropriate checklist for the specific industry under review before the review visit.

The checklist is a summary of the regulatory requirements and also contains items designed to gather information on other conditions that may be included in NPDES permits at the option of the State (BMPs, etc.) Items not required in permits are labeled as "Information" in the checklist. Reviewers should refer to Parts 40 CFR 122 thru 125 if questions arise on NPDES permit requirements.

The selection of permits for review is a key activity that will involve some prior planning. Typically an industrial PQR is conducted for a specific industry. Since PQR is intended to be a random check of permit quality, the selection of specific permits for review (based on prior knowledge of permit or facility) is not recommended. Rather a group of recently issued permits, for the industry under review, should be identified by use of PCS (see Appendix 7 for sample PCS printout). In general, permits issued over two years ago should not be selected because they may not represent current procedures.

In addition, permits might be selected based on industry subcategories. For example, a mix of underground and surface coal mines might be selected for review. However, the top priority in permit selection should be recent issuance rather than industry cross-section.

Draft permit reviews may provide valuable background information for the review team before the PQR visit. (See Appendix 12 for a sample draft permit review checklist.) These draft permits should be used by the Regions to identify where issues are not resolved by the states between draft and final permits. The Regions should not use the draft permits reviews to pick permits for review during the PQR since this will not provide a cross-section of permits.

The number of permits to be reviewed during the review visit is a case-by-case decision based on the size and complexity of the facilities under review. For example, a PQR of petroleum refining permits might cover only a few facilities where as for another industry such as a steam power PQR might cover a half dozen or more facilities. The exact number selected will also depend on the number of reviewers available, length of the visit, and the experience of the review team. Typically, 3 days is the minimum time needed to review a representative number of permits and be able to spot any chronic problems.

The team leader or Permit Branch Chief should notify the State in writing after the PQR has been tentatively schedule with the State staff. At least three weeks notice should be given to the State. This will allow time to locate files and the State permit personnel can plan their schedules to allow time for PQR meetings. The letter to the State should discuss the purpose of the PQR and identify the group of permits to be evaluated. The need for entrance and exit briefings with program managers should also be clearly stated.

Planning a PQR includes some logistical tasks that should be completed by the team leader. First, extra copies of the checklist should be duplicated for the team members (Copy centers at State offices are often overworked). The checklists and other materials (regulations, guideline development

documents, note pads, etc.) can be forwarded to the State (with return mailing bags also enclosed) so that team members are not "overloaded" while traveling. Team members should all be briefed on procedures, meeting schedules, and the need for PQR summaries. Special assignments such as production basis review or biomonitoring requirements review should be made by the team leader before the trip.

MATERIAL FOR A PQR

The following is a list of suggested materials for the PQR evaluation. As mentioned earlier the bulk of these can be mailed to the State offices prior to the PQR.

- PQR checklists (Appendices 1 through 6)
- Evaluation summary forms (Appendix 9)
- "Permits for review listing" from PCS (Appendix 7)
- Code of Federal Regulations - Parts - 122, 123, 124, and 125
- Guideline Development Documents for categories to be reviewed
- Training Manual for NPDES Permit Writers (March 1986) or a Regional permits policy book
- Permit Writer's Guide to Water Quality-Based Permitting for Toxic Pollutants
- Selected permits from the Permits Abstract document (Appendix 11)
- Draft permit review checklists, if available (Appendix 12)
- Calculator, note paper, etc.
- Return envelopes (mailing bags) for mailing PQR materials back to the Regional office

TEAM COMPOSITION AND EXPERIENCE

Because the PQR is designed for two-way communication on permits issues, all permits employees are encouraged to participate in at least one PQR. The majority of PQR team members should be permit writers (if possible) to facilitate understanding of the PQR process.

It is advantageous to have specialists on the team familiar with the specific industry under review and also people qualified to address biomonitoring permit issues. While the PQR can be used as a training tool for new Regional permit writers, this is not the primary reason for PQR visits. States should have confidence in the PQR team and this dictates the use of experienced personnel.

LOGISTICS

As stated earlier, the PQR team should schedule the evaluation visit to produce a minimum of disruption to normal State program operation. To accomplish this, the number of meetings between team members and State personnel should be minimized. A typical PQR would consist of short entrance and exit meetings with State managers[1] and a daily conference between reviewers and State permit writers to resolve questions on individual permits or State procedures. Before the conference, the team leader should ask the State coordinator to arrange for specific permit writers or other personnel to attend the conference. This should allow State permit writers to continue their duties with few interruptions.

The PQR team should ask for a conference room or other office space where files can be reviewed. If possible, the team should be kept together during the review to allow discussions between reviewers when questions arise.

CHECKLIST PROCEDURES

A PQR checklist should be completed for each permit that is reviewed. The checklist used should be one developed for the specific industry under review if available, otherwise the general industrial checklist should be used. The checklists follow a general format which is described below; the industry-specific checklist must be consulted for individual requirements. The checklists are divided into several sections.

1/ At the entrance meeting the State managers should be asked to appoint a permit coordinator from the staff to act as a liaison with the PQR team.

The front page of the checklist is a summary sheet which gives basic information on the permit. The next several pages are used to summarize the results from the main portion of the checklist. Although the summary section is in the front, it is actually completed last, after the other checklist questions are answered. The specific sections in the checklists are:

Topic/Section	Checklist
Administrative	A-1
Public Notice and Comment	A-2
State Certification	A-3
Records of Modification	A-4
Enforcement Information	A-5
Boilerplate	B-1
Special Conditions	B-2
Translating the Permit Application to Permit Limitations	C-1
Basis for Limitations	C-2
Applicable Effluent Guidelines	C-3
Best Professional Judgment (General industrial checklist only)	C-4
Water Quality Based Limitations	C-4/C-5
Discharge Sampling	D-1
Discharge Reporting	D-2
Compliance Schedules	E

If a section does not apply to a specific permit being reviewed, the section should be marked "N/A".

The section on water quality-based permit limits (checklist C-4) contains questions on wasteload allocation and mixing zones which often cannot be answered by the permits staff. If possible, the water quality modeling group should be consulted to answer these questions.

The boilerplate questions (checklist B-1) need only be completed for one permit which contains the current State boilerplate language. This should save some time during the permit review. The special conditions section (checklist B-2) is designed to give some basic information to EPA on current innovations by the States. Special conditions can be used to address State-specific issues (BMPs, subsidence control at underground mines) or national priority items like biomonitoring requirements.

CHECKLIST AREAS OF SPECIAL INTEREST

Based on EPA Regional and State PQRs conducted to date, the following areas of the checklist are highlighted for special attention by review personnel. These areas are:

- Permit Modification - Checklist A-4

  (1) Was the modification properly public noticed (unless a minor mod.) per 122.62 and 124.5?

  (2) Was the modification request by permittee documented in the permit file (including denials of modification requests)?

- Boilerplate - Checklist B-1

  (1) Permit actions (122.41(f)) - "The filing of a request by the permittee for a permit mondification, . . . does not stay any permit condition."

  (2) Inspection and entry (122.41(i)) - (inspectors may) "Sample or monitor . . . for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location."

  (3) Monitoring requirements (122.41(l)(4)) - "If the permittee monitors any pollutant more frequently than required by the permit, . . . the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR."

  (4) Bypass - (122.41(m)) - Bypass is prohibited unless specific conditions [A, B, and C] are satisfied. Unanticipated bypasses must be reported in accordance with 24-hour reporting requirement - 122.41(l)(6).

- Special Conditions - Checklist B

  (1) Are best management practices (BMP's) included in this permit?

(2) Does the permit include any biological toxicity testing requirements?

(3) Besides BMP's and toxicity, are there any other special conditions? For example: for underground coal mines - subsidence control requirements in permit.

(4) Are there any special conditions? For example: the intermittent discharge of toxic substances by coal mines.

o Basis for Limitations - Checklist C

(1) Limits for continuous dischargers must be expressed as both maximum daily and average monthly values at a minimum per 122.45(d)(1), unless non-continuous discharger.

(2) For non-continuous dischargers, does the permit consider the following factors per 40 CFR122.45(e): frequency, total mass of pollutants discharged per discharge, and prohibition or limitation of specified pollutants?

(3) If permit effluent limitations are imposed on internal waste streams, are the conditions of 40CFR122.45(h) satisfied and documented?

(4) Does the permit allow backsliding (122.44(l)) from the previous permit? If yes, is the justification for the current limit adequately documented?

(5) Is the basis for the limits the appropriate effluent guidelines, water quality standards, or BPJ? Is the basis adequately documented in the permit fact sheet or Statement of Basis? Are copies of the limits calculations included in the permit documentation? Chapter III of the Training Manual for NPDES Permit Writers provides guidance on limitation development.

(6) Does the permit file adequately document the basis of any water quality-based limitations? Are the appropriate State water quality standards referenced in the fact sheet or rationale?

(7) If the effluent guidelines are production based, are the limitations calculations ". . . based on a reasonable measure of actual production of the facility" per 122.45(b)(2)? Is the data available which supports the production levels used in the limit calculations? (See Appendix 13)

(8) Are BPJ limits clearly documented showing both the need for the permit condition and the basis for it's establishment. The Training Manual for NPDES Permit Writers, page 44, provides extensive guidance on BPJ limit requirements.

(9) Have the limits been based on an economic FDF, or water quality variance request submitted by the permittee? Is the decision to grant the variance documented and in accordance with 124.62.

See Chapter IV of the Training Manual for NPDES Permit Writers for additional guidance.

(10) Have the permit limitations been adjusted to reflect the presence of pollutants in the intake water? If so, have the requirements of 40CFR122.45(g) been satisfied and documented?

(11) Does the permit include toxicity limits? Is the basis and calculations for those limits documented? Are the limits based on EPA guidance: Permit Writer's Guide to Water Quality-Based Permitting for Toxic Pollutants?

- Discharge Sampling - Checklist D-1

  (1) Are EPA approved test procedures (40 CRF Part 136) or CWA Section 304(h) referenced in the permit or specified for each parameter?

  (2) Do sampling frequencies match the averaging period for the limit (e.g., daily limits for residual chlorine but only once per week sampling indicates inconsistency)?

- Compliance Schedules - Checklist E

  (1) Are milestone dates in compliance schedule less than one year apart per 122.47(a)(3)?

  (2) Is a compliance schedule contained in a separate Administrative Order?

Special attention to these checklist areas will result in more comprehensive reviews and can reduce the chances for permit challenges due to "weak" permits or procedural errors. Where additional checklist items are deemed necessary by the Region, they should be added. Regions are encouraged to send the checklist to State personnel to get their comments.

SUMMARY AND EVALUATION OF FINDINGS

After the file reviews, when the team has completed checklists for all permits, the task of summary and evaluation can begin. This phase of the PQR is generally the responsibility of the team leader, in consultation with the other members. To complete the PQR, the team leader should produce a short but complete account of the review findings before the team leaves.

The "raw material" for the evaluation is the summary section in the checklist and any notes from the review. The format for the PQR summary is shown in Appendix 9.

To produce a summary report the team leader must decide what "Strengths", "Concerns" and "Suggestions" should be raised with the State to highlight areas of permit excellence, weakness or potential improvement. The "nit-picking" of individual permit errors is not the intent, rather a constructive critique of the overall program operation should be the objective.

If something in the permit is wrong, a correction to program procedures, training, etc., must be made. The State should be told what is wrong and where the problem may be coming from, if possible. Unresolved questions, that have not been clarified after discussions with individual (State) permit writers should be included in the summary write-up.

The State should also clearly understand what is good about its permits. Don't overlook the good points; if a State is innovative, the staff and management should be given credit for it!

In general, the summary should be written for the staff level permit writers. Individual permits should be named as examples where possible. This summary should then be condensed for the exit briefing with the State management. All of the team members should read and comment on the draft summary before it is shown to the State staff.

PRESENTATION OF FINDINGS

The presentation to the State is generally conducted in two sections, one for the staff (permit writers) and one for the management. These can be combined if the State wishes.

The staff presentation should contain details from the review to support the summary findings. Specific comments on individual permits can be presented by the team member who reviewed that particular file. Feedback to comments should be encouraged and discussed in the staff meeting, this is intended to be a two-way communication. After discussion, the State staff should be given details on what will be presented to the State management at the final exit briefing.

The team leader should present the highlights of the PQR findings to management at the exit briefing. The exit briefing is a concise review of the findings, the results of the staff/EPA meeting and any issues for follow-up action. Where the review team and the State disagree on findings, the management should be advised. The exit briefing need not be longer than 30 minutes. A handwritten copy of the summary (Appendix 9) should be left with the management and staff for their records. The State managers should be assured that nothing will appear in the final PQR report that did not appear in the summary.

The approximate timetable for the final PQR report and any follow-up activities (mid-year reviews, etc.) should be discussed with the State management. The need for immediate action by the State to address gross problems, such as lost files or extreme staffing shortages, should also be discussed with the managers.

The State managers should also be asked for their comments, issues or questions for EPA response.

FOLLOW-UP ACTIVITIES

The team leader is responsible for follow-up actions to implement the PQR findings. These activities can include:

- Final report preparation and transmittal to the State;
- Answering questions from the State staff on the report;
- Monitoring progress by the State in addressing concerns or problems;
- Briefing Regional managers when problems are not resolved;
- Providing status information from the PQR to Regional managers prior to the Office of Water mid-year evaluation by Headquarters.

In addition, the team leader should fulfill any information requests that were made by the State staff during the PQR.

The final PQR report should be sent to the State within one month of the team visit. (Where EPA Headquarters has assisted the Region on a State PQR,

the Region should receive a copy of the Headquarter's file report on the PQR within one month of the team visit.] An example of a final report is contained in Appendix 10 as a guide.

A follow-up item that is many times overlooked is the need to update the State permit boilerplate (standard conditions). Since outdated boilerplate often indicates outdated legal authorities, legislative or regulatory action by the State might be necessary to resolve deficiencies. If substantial State program changes are needed to correct problems found by the PQR, the Region should contact Headquarters (Permits Division) for assistance.

OFFICE OF WATER MID-YEAR EVALUATION

As with other Regional activities the results of State PQRs will be discussed during the annual Office of Water mid-year program evaluation visit. Specific qualitative and quantitative measures for PQRs have not been included in the FY88 Guide to the Office of Water Accountability System and Mid-Year Evaluations (see cover next page). However, the qualitative questions contained in the Permits and Enforcement section of Mid-Year Evaluations Guide can be addressed during a State PQR. This will allow the Region to obtain data needed for the mid-year evaluation and will result in a more comprehensive evaluation of State activities. The specific questions that pertain to industrial permits are enclosed in boxes on the following pages.

PERMIT QUALITY REVIEW CHECKLIST

CHECKLIST A-1
Procedural Requirements: ADMINISTRATIVE RECORDS

Question

1. List any of the following items that have been omitted inappropriately from the file.

   a. Permit application and any supporting data furnished by applicant;
   b. Draft permit;
   c. Statement of basis or fact sheet;
   d. All documents cited in statement of basis or fact sheet;
   e. If a new source, any environmental assessment, environmental impact statement, finding of no significant impact or environmental information document and any supplement to an EIS that was prepared;
   f. All comments received during public comment;
   g. Tape or transcript of any hearings held and any written materials submitted at hearing;
   h. Response to significant comments raised during comment period and/or hearing;
   i. Final permit;
   j. Explanation of changes from draft to final permit.
   k. Where appropriate, materials relating to
      - o Consistency determinations under the CZMA
      - o Consultation under the Endangered Species Act
      - o Determination under section 403(c) of the CWA

CHECKLIST A-2
Procedural Requirements: PUBLIC NOTICE AND COMMENT

Question

1. Was a public notice issued of the preparation of draft permit and providing an opportunity for comment at least 30 days prior to final permit decision?

2. Was a public hearing held?
   (If "no", skip to #4)

3. Was a notice of public hearing issued at least 30 days prior to hearing?

4. Was a summary response to significant comments raised during comment period and/or hearing prepared and issued at time of final permit decision?

CHECKLIST A-3
Procedural Requirements: STATE CERTIFICATION

Question

1. Was a state certification or waiver of state certification received?

2. List any conditions in the state certification not included in the permit. Indicate any reasons provided for omissions.

CHECKLIST A-4
Procedural Requirements: RECORDS OF MODIFICATION

Question

1. Does the permit documentation indicate that the permit was modified, revoked or reissued?
   (If "no", skip to Checklist A-5)

2. Was the permit modified pursuant to 40 CFR 122.62(a)?
   If "yes", specify the basis identified in the permit documentation:
   (alterations; new information; new regulations; compliance schedules; variance request; 307(a) toxic standard; net limits; reopener; nonlimited pollutants (level of discharge of any pollutant not limited in permit exceeds the level which can be achieved by technology-based treatment); use or manufacture of toxics (permittee has begun or expects to begin to use or manufacture a toxic pollutant); notification levels (permit has been modified to establish a "notification level"))

3. Did cause exist for modification or revocation and reissuance pursuant to 40 CFR 122.62(b)?
   Specify cause:
   a. Cause exists for termination, as provided in 40 CFR 122.64 (noncompliance; misrepresentation of or failure to disclose facts; endangerment to human health or environment; change in condition);
   b. Transfer of permit;
   c. Other (specify)

4. Does the permit documentation indicate that the procedures of 40 CFR 124.5 for permit modification, revocation and reissuance or termination were followed?

CHECKLIST A-5
Procedural Requirements: ENFORCEMENT CONSIDERATIONS

Question

1. Does the permit documentation indicate that any enforcement actions have been taken?
   Briefly describe (nature of action(s), date(s)):_____
   _____

2. Did the Regional Counsel review or sign off on the permit?

CHECKLIST B-1
Permit Conditions: BOILERPLATE

Question

1. Identify whether the following general conditions been incorporated into the permit, either directly or by reference to 40 CFR Part 122.41 (or, if permit was issued prior to April 1983, by reference to 40 CFR Parts 122.7 and 122.60). Identify any variation from the regulation language in 122.41.

   a. Duty to comply;
   b. Duty to reapply;
   c. Duty to halt or reduce activity;
   d. Duty to mitigate;
   e. Program operation and maintenance;
   f. Permit actions;
   g. Property rights;
   h. Duty to provide information;
   i. Inspection and entry;
   j. Monitoring and records;
   k. Signatory requirement;
   l. Reporting requirements;
   m. Bypass; and
   n. Upset.

2. If the general conditions are included by reference, is the CFR citation, date and copy of the regulations provided? If "no", specify missing item(s): _____ (Skip to #5)

3. Does the permit require notification to the Director as soon as the permitee knows or has reason to believe that any activity has occurred or will occur which would result in the discharge of any toxic pollutant, if that discharge will exceed the "notification levels" specified in 40 CFR Part 122.42(a)(1)?

4. Does the permit require notification to the Director as soon as the permitee knows or has reason to believe that it has begun or expects to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application?

5. Is the permit effective for a fixed term which does not exceed 5 years from date of issuance?

CHECKLIST B-2
Permit Conditions: SPECIAL CONDITIONS

Question

1. Are any special conditions requiring best management practices (BMP's) included in the permit? Identify and specify reason for inclusion (part of guideline, substitute for numeric limitations, etc.).

2. Does the permit application indicate that permittee does or expects to use or manufacture any toxic substance as an intermediate or final product or byproduct? (See Form 2C, Item VI-A.) Have any conditions for the substances so indicated been included in the permit? If not, does permit documentation explain the omission?

3. Does the permit application indicate that there are intermittent discharges at the outfall? (See Form 2C, Item II-C) Are they addressed in the permit? Identify any unexplained omissions.

4. Does the permit include any biological toxicity testing requirements? Briefly describe the requirements and their basis.

5. Does the permit include any limitations or conditions for internal waste streams? Describe the limitations/conditions and the circumstances that make them necessary.

CHECKLIST C-1
Effluent Limitations: TRANSLATING THE PERMIT APPLICATION TO PERMIT LIMITATIONS

Introduction: Question #1 applies to all outfalls. For the remaining questions, complete one checklist for each individual outfall selected by the review team for review.

Question

1. Have a set of effluent limitations or conditions been included in the permit for every outfall? (See Form 2C, Item III-B.)

2. For which pollutants are limitations or conditions included in the permit for:
   a. BPT;
   b. BAT; and
   c. BCT?
   (Identify in an attachment)

3. Are there pollutants for which limitations or conditions are not included but which might be appropriate to limit? Identify the pollutants and the reasons for including limitations.

CHECKLIST C-2
Effluent Limitations: BASIS FOR LIMITATIONS

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Question

1. Are the pollutant limitations based on any of the following:
   a. BPT;
   b. BCT;
   c. BAT;
   d. NSPS;
   e. Water quality standards?
   f. Previous permit
   g. Other
   (Specify) _____

2. Are limitations for all pollutants in continuous discharges expressed as both maximum daily values and average monthly values?
   (If "yes," skip to #4)

3. List those pollutants for which either limit is omitted, where the omission is inappropriate.

4. List any pollutants limited by mass or concentration that should have been limited in the other form and indicate the reason it should have been listed in the other form.

CHECKLIST C-3

Effluent Limitations: APPLICABLE EFFLUENT GUIDELINES

Introduction: Complete one checklist for each individual outfall selected by the review team for review, if effluent guidelines are applicable.

Question

1. Were promulgated effluent guidelines applicable to the source category at the time permit was under consideration? (See Form 1, Items III and XII.) (If "no," skip to Checklist C-4) If not, does the permit contain a reopener clause?

2. Were effluent guideline limitations used as a basis for permit effluent limitations at the outfall?

3. Did the permittee receive a variance based on the presence of "fundamentally different factors" from those on which the guideline was based?
   (If "yes," skip to Checklist C-4)

4. Are applicable effluent guidelines limitations based on production?
   (If "no," skip to #9)

5. Was production basis in the permit a reasonable measure of average actual production, not design production capacity? (See Form 2C, Items III-B and C.)
   Specify production basis:
   a. Maximum production during high month of previous year:
   b. Monthly average for the highest of previous
   c. Other: _____.

CHECKLIST C-3 (Continued)
Effluent Limitations: APPLICABLE EFFLUENT GUIDELINES

Question

6. Does the permit documentation indicate the means used to determine actual production?
   Specify:
   a. In permit application:
   b. Other: _____

7. Does the permit documentation indicate that the permit writer conducted any follow-up activities to confirm production estimates?

8. Have alternate permit limitations been included to address different production levels?
   Specify the number of tiers of limits: _____

9. Are all pollutant limitations in the applicable guidelines included in the permit? List any that are not.

10. Was the adjustment formula for disposal to wells, POTW's, or land application applicable (40 CFR 122.50)? (If no, go to C-4) Was it used?

CHECKLIST C-4

Effluent Limitations: BEST PROFESSIONAL JUDGMENT

Introduction: This checklist is intended to point review team inquiry toward those questions which can help in determining whether or not the BPJ analysis was "reasonable." Review team should provide a qualitative explanation of the limitation development process on the evaluation form. Complete one checklist for each individual outfall selected by the review team for review.

Question

1. Is a BPJ analysis (for BPT, BAT, or BCT) missing where it seems to be required? Identify the outfall, pollutant(s), and type of limitation.

2. Indicate which of the following sources were used in establishing any BPJ limitations:

   a. Promulgated Guideline
   b. Proposed Guideline
   c. Development Document
   d. Treatability Manual
   e. Other (specify)

3. Identify any significant sources not used which should have been.

4. Indicate what method was used to establish BPJ/BCT for conventional pollutants.

5. Have effluent guidelines been promulgated since the time of permit issuance? If "yes," indicate the relative stringency of guideline limitations in permit: _____ _____
   (Note if unable to determine this.)

CHECKLIST C-5

Effluent Limitations: WATER QUALITY BASED LIMITATIONS

Introduction: This checklist is intended to point review team inquiry toward those questions which can help in determining whether or not the water quality analysis was was "reasonable." Review team should provide a qualitative explanation of the limitation development process on the evaluation form. Complete one checklist for each individual outfall selected by the review team for review.

Question

1. Is a water quality analysis missing where it seems to be required? Identify outfall(s) and pollutants.

2. Identify type of water quality limitation in permit ("free from", numerical, or both).

3. Is basis of the water quality based limitation identified in the permit file?
   Specify:
   a. State certification
   b. Water quality modeling
   c. Other: _____

4. Were water quality standards included in the permit in lieu of effluent limitations?

5. Have all applicable water quality standards toward which water quality analysis is directed been clearly identified?

6. Are current water quality conditions clearly identified? If possible, specify basis:
   a. Actual water quality
   b. Estimated water quality

7. Does the permit document that water quality-based limitations are at least as stringent as BPT, BCT or BAT standard?

8. Were water quality modeling and a mixing zone used in establishing the limitation?
   (If "no," skip to #20)

b. Inputs to Quantitative Analysis:

9. Has the outfall discharge rate used in analysis been clearly identified? (See Form 2C, Item II.)
   a. Average discharge rate
   b. Maximum discharge rate
   c. Other: _____

CHECKLIST C-5 (Continued)
Effluent Limitations: WATER QUALITY BASED LIMITATIONS

10. Has the stream flow rate used in the analysis been clearly identified?
(If possible, specify whether:
a. Low flow rate (years of record)
b. Average flow rate
c. Other: _____

11. Was the analysis directed toward water quality within a mixing zone?
(If "yes," skip to #13)

12. Was the analysis directed toward water quality beyond the mixing zone (i.e., wasteload allocation modeling)
(If "yes," skip to #17)

c. Quantitative Analysis: Mixing Zone

13. Are the size and configuration of the mixing zone clearly identified?

14. Has the water quality model used been clearly identified?
Specify: _____

15. Were the impacts of other major dischargers taken into account in the analysis?

16. Does the permit documentation demonstrate that, based on modeling conclusions, applicable water quality standards were met in the mixing zone?
(If "yes," skip to #20)

d. Quantitative Analysis: Wasteload Allocation

17. Has the water quality model used been clearly identified?
Specify: _____

18. Were the impacts of other major dischargers taken into account in the analysis?

19. Does the permit documentation indicate the level of discharges and limitations assumed for other major sources?

20. Does the permit documentation demonstrate that, based on modeling conclusions, applicable water quality standards are met? If not, does the permit documentation explain why the limitation was used in spite of modeling results?
Specify: _____

CHECKLIST D-1
Monitoring Requirements: DISCHARGE SAMPLING

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Question

1. Does the permit require monitoring for every pollutant for which limitations are included in the permit? List any inappropriate omissions.

2. Does the permit stipulate, either in the general conditions or in the permit limitations, that monitoring for all pollutants with limitations be conducted according to test procedures approved under 40 CR Part 136? Identify any exceptions.

3. Does the permit require monitoring the volume of effluent discharged from the outfall? If not, is an explanation provided?

4. Are effluent sampling frequencies specified for every pollutant for which monitoring is required? Specify for each pollutant (e.g., daily, weekly, quarterly, etc.): _____

CHECKLIST D-2
Monitoring Requirements: DISCHARGE REPORTING

Question

1. Are there any pollutants for which discharge monitoring reports are not required at least once a year? List them.

2. Is reporting on discharge monitoring report (DMR) forms required?

3. Specify discharge reporting frequency or frequencies required in permit for the outfall under review (e.g., monthly, quarterly, etc.): _____

CHECKLIST E-1
Compliance Schedules: INCLUSION IN PERMIT

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Question

1. Does the permit include a compliance schedule(s) for each outfall which is not in compliance with the limitations specified in the permit

2. Does the permit documentation provide an explanation of why compliance schedules were not included where necessary? Identify if an explanation was not provided.

CHECKLIST E-2
Compliance Schedules: INTERIM AND FINAL REQUIREMENTS

Question

1. Are distinct interim requirements (milestones) with specific dates included in compliance schedule(s)?

2. Does the compliance schedule provide for compliance by ceasing the regulated activity? If so, is a date certain identified?

3. Does the compliance schedule include:
   a. A date certain for the permittee to decide whether or not to cease the regulated activity;
   b. A compliance schedule in the event that the decision is to continue the regulated activity, and
   c. A schedule for cessation of the regulated activity in the event that the decision is to cease the activity?

4. Is the time between each interim date in the compliance schedule(s) less than one year? If not, does the permit specify interim dates for submission of reports?

5. Does the compliance schedule provide for final compliance by the appropriate time? (7-1-84 in most cases)

6. Has the source received a section 301(k) (innovative technology) waiver to extend the compliance date up to 7-1-87?

7. Was an ECSL or Section 309(a)(5)(A) order with a compliance schedule ever issued? If so:
   a. Did the facility meet the criteria for issuance of the ECSL/order?
   b. Was the facility in compliance with the ECSL/order?
   c. Was a subsequent enforcement action brought?

APPENDIX 2

Petroleum Refining PQR Checklist

Date_____

Petroleum Industry
Permit Quality Review Checklist

General Information

Region_____ State_____

NPDES #_____

Discharger_____

Issuance Date _____

Applicable Regulations_____

New discharger?_____

Contractor assistance used to write permit?_____

General Comments & Basis of Permit Selection:

_____

_____

_____

HQ Reviewer_____

Regional Permit staff representative_____

Permit file complete?_____

Follow-up necessary?_____

Petroleum Industry Permit Quality Review

REVIEWER SUMMARY

A. Procedural Requirements (Administrative Records, Public Notice, State Certification, Modifications, Enforcement Considerations)

B. Permit Conditions (Boilerplate, Special Conditions)

C. <u>Effluent Limitations</u> (Coverage, Basis, Water Quality)

D. <u>Monitoring</u> (Sampling, Reporting)

E. <u>Compliance</u> (Inclusion of Schedule)

F. <u>Other</u> (Specify)

CHECKLIST A-1
Procedural Requirements: ADMINISTRATIVE RECORDS

Question

1. List any of the following items that have been omitted inappropriately from the file, or provide explanation.

   a. Permit application and any support data furnished by applicant;____
   b. Draft permit;____
   c. Statement of basis or fact sheet;____
   d. All documents cited in statement of basis or fact sheet;____
   e. All comments received during public comment;____
   f. Tape or transcript of any hearings held and any written materials submitted at hearing;____
   g. Response to significant comments raised during comment period and/or hearing;____
   h. Final permit;____
   i. Explanation of changes from draft to final permit.____

CHECKLIST A-2
Procedural Requirements: PUBLIC NOTICE AND COMMENT

Question

1. Was a public notice issued of the preparation of draft permit and providing an opportunity for comment at least 30 days prior to final permit decision?

2. Was a public hearing held?

3. Was a notice of public hearing issued at least 30 days prior to hearing?

4. Was a summary response to significant comments raised during comment period and/or hearing prepared and issued at time of final permit decision?

CHECKLIST A-3
Procedural Requirements: STATE CERTIFICATION

Question

1. Was a state certification or waiver of state certification received?

2. List any conditions in the state certification not included in the permit. Indicate any reasons provided for omissions.

CHECKLIST A-4
Procedural Requirements: RECORDS OF MODIFICATION

Question

1. Does the permit documentation indicate that the permit was modified, or revoked and reissued?

2. Was the permit modified pursuant to 40 CFR 122.62(a)?
   If "yes", specify the basis identified in the permit documentation: (alterations; new information; new regulation; compliance schedules; variance request; reopener; pretreatment).

3. Did cause exist for modification or revocation and reissuance pursuant to 40 CRF 122.62(b)? Specify cause:

   a. Cause exists for termination, as provided in 40 CFR 122.64 (noncompliance; misrepresentation of or failure to disclose facts; endanagerment to human health or environment; change in condition);
   b. Transfer of permit; (122.61)
   c. Other (specify)

4. Does the permit documentation indicate that the procedures of 40 CRF 124.5 for permit modification, revocation and reissuance or termination were followed?

CHECKLIST A-5
ENFORCEMENT INFORMATION

Question

1. Does the permit documentation indicate that any enforcement actions have been taken?
   Briefly describe (nature of action(s), date(s): _____

   _____

   _____

CHECKLIST B-1
Permit Conditions: BOILERPLATE

Question

1. Identify whether the following general conditions have been incorporated into the permit, either directly or by reference to 40 CFR Part 122.41 (or, if permit was issued prior to April 1983, by reference to 40 CFR Parts 122.7 and 122.60). Identify any variation from the regulation language.

122.41-
- (a) Duty to comply;____
- (b) Duty to reapply;____
- (c) Duty to halt or reduce activity;____
- (d) Duty to mitigate;____
- (e) Proper operation and maintenance;____
- (f) Permit actions;____
- (g) Property rights;____
- (h) Duty to provide information;____
- (i) Inspection and entry;____
- (j) Monitoring and records (Including the requirement to report more frequent sampling);____
- (k) Signatory requirement;____
- (l) Reporting requirements (including compliance schedule, noncompliance, and DMR reporting);____
- (m) Bypass;____ and
- (n) Upset.____

2. If the general conditions are included by reference, is the CFR citation, date and copy of the regualtions provided? If "no", specify missing item(s):_____

3. Does the permit require notification to the Director as soon as the permittee knows or has reason to believe that any activity has occured or will occur which would result in the discharge of any toxic pollutant, if that discharge will exceed the "notification levels" specified in 40 CFR Part 122.42(a)(1)?

4. Does the permit require notification to the Director as soon as the permittee knows or has reason to believe that it has begun or expects to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application?

5. Is the permit effective for a fixed term which does not exceed five (5) years from date of issuance?

CHECKLIST B-2

Permit Conditions: SPECIAL CONDITIONS if appropriate:

Question

1. Are any special conditons requiring best management practice (BMPs) included in the permit? Identify and specify reason for inclusion.

2. Does the permit include any biological toxicity testing requirements? Briefly describe the requirements and their basis.

3. Besides BMPs and toxicity, are there any other special conditons. Briefly describe the requirements and their basis.

CHECKLIST C-1

Effluent Limitations: TRANSLATING THE PERMIT APPLICATION TO PERMIT LIMITATIONS

Introduction: Question #1 applies to all outfalls. For the remaining questions, complete one checklist for each individual outfall selected by the review team for review.

Outfall # _____

Question

1. Have a set of effluent limitations or conditons been included in the permit for every outfall? (see Permit Application)

2. Are there pollutants for which limitations or conditons are not included but which might be appropriate to limit? Identify the pollutants and the reasons for not including limitations.

CHECKLIST C-2

Effluent limitations: BASIS FOR LIMITATIONS

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Question

1. Are the pollutant limitations based on the petroleum effluent guidelines the EPA settlement agreement, and/or water quality standards?

2. Are limitations for all pollutants in continuous discharges expressed as both maximum daily values and average monthly values?

3. For those limitations not expressed as both maximum daily values and average monthly values, does the permit documentation indicate that it would be impracticable to set both?

4. Are limitations for all pollutants (except pH, temperature and/or radiation) expressed in mass terms?

5. If limitations are expressed in units other than mass, does the permit documentation demonstrate that (specify):

   a. The pollutants(s) itself cannot be appropriately expressed in mass terms;

b. If an effluent guideline applies, the applicable limitations are expressed in alternative units; or

c. The pollutant discharged cannot be related to a measure of operation (e.g., TSS for certain mining operations), and a special condition has been included to ensure that dilution will not be used as a substitute for treatment.

CHECKLIST C-3
Effluent Limitations: APPLICABLE EFFLUENT GUIDELINES

Introduction: Complete one checklist for each individual outfall selected by the review team for review, if effluent guidelines and EPA settlement agreement are applicable.

Question

1. Were promulgated effluent guidelines and/or EPA settlement agreement applicable to the source category at the time permit was under consideratio

2. Were effluent guideline limitations and EPA settlement agreement used as the basis for permit effluent limitations at the outfall?

3. Are applicable effluent guidelines limitations based on production?

4. Was production basis in the permit a reasonable measure of average actual production, not design production capacity? The bases for each production process should be documented.

   Specify production basis:
   a. Maximum production during high month of previous year;
   b. Monthly average for the highest of previous 5 years;
   c. Other:_____

5. Are all pollutant limitations in the effluent guidelines and EPA settlement agreement included in the permit?

6. Is the petroleum refinery categorized under the proper subcategory of the petroleum effluent guidelines?

7. Are the production based limitations based on the correct size and capacity factors included in the effluent guidelines? (See Tables 1 and 2; examples are provided for each Table.)

8. Are the calculations for the production based limitations verifyable and documented? (See Tables 3,4, and 5; examples are provided for each Table)

9. Does the permit contain allocations for contaminated stormwater as provided in the EPA settlement agreement? If so, was allocation for contaminated stormwater determined by:

   a. Continuous allocation;
   b. Variable allocation based directly upon measurement or calculation of actual contaminated runoff volume;
   c. Dual wet weather/dry weather allocations;
   d. Other methods (specify)_____

10. Was a best professional judgemnt (BPJ) analysis the basis for the permit effluent limitation at the outfall?

11. Can all major inputs to the BPJ analysis be identified? (Note: Inputs may include: permit application, state certification, contractor reports, special reports from permittee, effuent guidelines development documents.)

12. Were water quality standards basis for the permit effluent limitations at the outfall?

13. Is the basis of the water quality-based limitation identified in the permit file?

    Specify:
    a. State certification
    b. Other:_____

14. Have all applicable water quality standards toward which water quality analysis is directed been clearly identified?

15. Does the permit documentation explain any changes in the pollutant limitations between the draft and the final permits? Specify basis:

    a. Final limitations are the same as in the draft permit;
    b. Limitations in the draft permit were revised based on issues raised during the comment period;
    c. Limitations in the draft permit were revised based on negotiations with the permittee;
    d. Other:_____

EXAMPLE PERMIT CALCULATIONS

PROCESS WASTEWATER

HYPOTHETICAL LUBE OIL REFINERY

STEP 1: DETERMINE SIZE FACTOR

THE SIZE FACTOR IS BASED ON THE REFINERY FEEDSTOCK RATE. THE REFINERY FEEDSTOCK RATE IS THE LARGEST OF ANY OF THE CRUDE PROCESS FEEDSTOCK RATES. FOR THE EXAMPLE, THE REFINERY FEEDSTOCK RATE (IN 1000 BBLS/DAY) IS 125.

FROM THE SIZE FACTOR TABLE:

1000 BBL OF FEEDSTOCK	SIZE FACTOR
.	.
.	.
.	.
100.0 to 124.9	0.88
125.0 to 149.9	0.97
150.0 to 174.9	1.05
.	.
.	.
.	.

THE VALUE 0.97 IS OBTAINED.

TABLE 1

STEP 1: DETERMINE SIZE FACTOR

THE SIZE FACTOR IS BASED ON THE REFINERY FEEDSTOCK RATE. THE REFINERY FEEDSTOCK RATE IS THE LARGEST OF ANY OF THE CRUDE PROCESS FEEDSTOCK RATES.

FROM THE SIZE FACTOR TABLE:

1000 BBL OF FEEDSTOCK	SIZE FACTOR

THE VALUE ____ IS OBTAINED.

EXAMPLE PERMIT CALCULATIONS
PROCESS WASTEWATER
HYPOTHETICAL LUBE OIL REFINERY

STEP 2: DETERMINE PROCESS FACTOR

THE PROCESS FACTOR IS BASED ON THE PROCESS CONFIGURATION. THIS VALUE IS CALCULATED AS FOLLOWS:

PROCESS	PROCESS FEEDSTOCK RATE	PROCESS FEEDSTOCK RATE RELATIVE TO REFINERY FEEDSTOCK RATE	WEIGHT FACTOR	PROCESS CONFIGURATION
CRUDE:				
Atm. Dist.	128.0	1.0		
Vac. Dist.	60.0	0.46		
Desalting	128.0	1.0		
TOTAL		2.46	X 1	= 2.46
CRACKING:				
FCC	41.0	0.320		
Hydrocracking	20.0	0.160		
TOTAL		0.480	X 6	= 2.83
LUBE:				
Lube Hydro.	5.3	0.042		
Furfural Extr	4.0	0.032		
Phenol Extr.	4.8	0.038		
TOTAL		0.113	X 13	= 1.47
ASPHALT:				
Asphalt Prod.	4.0	0.032		
TOTAL		0.032	X 12	= 0.38
TOTAL REFINERY				= 7.26

TABLE 2

STEP 2: DETERMINE PROCESS FACTOR

THE PROCESS FACTOR IS BASED ON THE PROCESS CONFIGURATION. THIS VALUE IS CALCULATED AS FOLLOWS:

PROCESS	PROCESS FEEDSTOCK RATE	PROCESS FEEDSTOCK RATE RELATIVE TO REFINERY FEEDSTOCK RATE	WEIGHT FACTOR	PROCESS CONFIGURATION
CRUDE: Atm. Dist. Vac. Dist. Desalting TOTAL			X 1	=
CRACKING: FCC Hydrocracking TOTAL			X 6	=
LUBE: Lube Hydro. Furfural Extr Phenol Extr. TOTAL			X 13	=
ASPHALT: Asphalt Prod. TOTAL			X 12	=
TOTAL REFINERY				=

EXAMPLE PERMIT CALCULATIONS

HYPOTHETICAL LUBE OIL REFINERY

STEP 2: DETERMINE PROCESS FACTOR (CONTINUED)

FROM THE PROCESS FACTOR TABLE:

PROCESS CONFIGURATION	PROCESS FACTOR
Less than 6.49	0.81
6.50 to 7.49	0.88
7.50 to 7.99	1.00
8.00 to 8.49	1.09
.	.
.	.
.	.

THE VALUE 0.88 IS OBTAINED.

TABLE 2 (CONT'D)

STEP 2: DETERMINE PROCESS FACTOR

FROM THE PROCESS FACTOR TABLE:

PROCESS CONFIGURATION	PROCESS FACTOR

THE VALUE ____ IS OBTAINED.

EXAMPLE PERMIT CALCULATIONS
PROCESS WASTEWATER
HYPOTHETICAL LUBE OIL REFINERY

STEP 3: CALCULATE EFFLUENT LIMITS

BASED ON THE PRECEDING RESULTS, MAXIMUM DAILY BCT LIMITS AND BAT LIMITS (FOR AMMONIA, SULFIDE AND COD ONLY) WOULD BE CALCULATED AS FOLLOWS:

POLLUTANT PARAMETER	EFFLUENT LIMITATION FACTOR (Lb/1000bbl)	SIZE FACTOR	PROCESS FACTOR	REFINERY FEEDSTOCK RATE (1000 bbl/day)	EFFLUENT LIMIT (Lb/day)
BCT:					
BOD-5	17.9	0.97	0.88	125.0	1900.
TSS	12.5	0.97	0.88	125.0	1330.
O & G	5.7	0.97	0.88	125.0	608.
BAT:					
Ammonia	8.3	0.97	0.88	125.0	886.
Sulfide	0.118	0.97	0.88	125.0	12.6
COD	127.0	0.97	0.88	125.0	13600.

TABLE 3

STEP 3: CALCULATE EFFLUENT LIMITS

BASED ON THE PRECEDING RESULTS, MAXIMUM DAILY BCT LIMITS AND BAT LIMITS (FOR AMMONIA, SULFIDE AND COD ONLY) WOULD BE CALCULATED AS FOLLOWS:

POLLUTANT PARAMETER	EFFLUENT LIMITATION FACTOR (Lb/1000bbl)	SIZE FACTOR	PROCESS FACTOR	REFINERY FEEDSTOCK RATE (1000 bbl/day)	EFFLUENT LIMIT (Lb/day)
BCT:					
BOD-5	17.9				
TSS	12.5				
O & G	5.7				
BAT:					
Ammonia	8.3				
Sulfide	0.118				
COD	127.0				

EXAMPLE PERMIT CALCULATIONS

PROCESS WASTEWATER

HYPOTHETICAL LUBE OIL REFINERY

STEP 4: CALCULATE AMENDED BAT LIMITS

BAT LIMITS FOR PHENOLIC COMPOUNDS, TOTAL CHROMIUM AND HEXAVALENT CHROMIUM ARE BASED ON A REVISED (1979 FLOW MODEL) PROCEDURE. THESE LIMITS ARE CALCULATED ON THE BASIS OF TOTAL PROCESS FEEDSTOCK RATE FOR FIVE DISTINCT PROCESS CATEGORIES AS FOLLOWS:

PROCESS CATEGORY	PROCESSES UTILIZED	PROCESS FEEDSTOCK RATE (1000BBLS)	
CRUDE	ATM. DISTILLATION	125	USE SUM TO DETERMINE HIGH YEAR
	VAC. DISTILLATION	60	
	DESALTING	125	
TOTAL		310	
CRACKING & COKING	FCC	41	USE SAME YEAR'S DATA AS ABOVE
	HYDROCRACKING	20	
TOTAL		61	
LUBE	LUBE HYDROFINING	5.3	
	FURFURAL EXTRACT.	4.0	
	PHENOL EXTRACT.	4.9	
TOTAL		14.2	
ASPHALT	ASPHALT PROD.	4.0	
TOTAL		4.0	
REFORMING & ALKYLATION	NONE	0.0	

TABLE 4

STEP 4: CALCULATE AMENDED BAT LIMITS - EPA SETTLEMENT AGREEMENT

BAT LIMITS FOR PHENOLIC COMPOUNDS, TOTAL CHROMIUM AND HEXAVALENT CHROMIUM ARE BASED ON A REVISED (1979 FLOW MODEL) PROCEDURE. THESE LIMITS ARE CALCULATED ON THE BASIS OF TOTAL PROCESS FEEDSTOCK RATE FOR FIVE DISTINCT PROCESS CATEGORIES AS FOLLOWS:

PROCESS CATEGORY	PROCESSES UTILIZED	PROCESS FEEDSTOCK RATE (1000BBLS)	
CRUDE	ATM. DISTILLATION VAC. DISTILLATION DESALTING		USE SUM TO DETERMINE HIGH YEAR
TOTAL			
CRACKING & COKING	FCC HYDROCRACKING		
TOTAL			
LUBE	LUBE HYDROFINING FURFURAL EXTRACT. PHENOL EXTRACT.		USE SAME YEAR'S DATA AS ABOVE
TOTAL			
ASPHALT	ASPHALT PROD.		
TOTAL			
REFORMING & ALKYLATION	NONE		

EXAMPLE PERMIT CALCULATIONS

PROCESS WASTEWATER

HYPOTHETICAL LUBE OIL REFINERY

DAILY MAXIMUM BAT LIMITS FOR PHENOLIC COMPOUNDS, TOTAL CHROMIUM AND HEXAVALENT CHROMIUM USING 1979 FLOW MODEL

POLLUTANT	CRUDE PROCESS LIMIT (lb/day)	CRACKING AND COKING PROCESS LIMIT (lb/day)	ASPHALT PROCESS LIMIT (lb/day)	LUBE PROCESS LIMIT (lb/day)	REFORMING AND ALKYLATION PROCESS LIMIT (lb/day)	TOTAL REFINERY LIMIT (lb/day)
Phenolic Compounds	310 x 0.013 = 4.03	61 x 0.147 = 8.97	4 x 0.079 = 0.32	14.2 x 0.369 = 5.24	0.0 x 0.132 = 0.0	18.56
Total Chromium	310 x 0.011 = 3.41	61 x 0.119 = 7.26	4 x 0.064 = 0.26	14.2 x 0.299 = 4.25	0.0 x 0.107 = 0.0	15.18
Hexavalent Chromium	310 x 0.0007 = 0.217	61 x 0.0076 = 0.464	4 x 0.0041 = 0.016	14.2 x 0.0192 = 0.273	0.0 x 0.0069 = 0.0	0.97

Note: For 30-Day Average Limits, Use Same Production Data As For Daily Maximum Calculations

TABLE 4 (CONT'D)

STEP 4

DAILY MAXIMUM BAT LIMITS FOR PHENOLIC COMPOUNDS, TOTAL CHROMIUM AND HEXAVALENT CHROMIUM USING 1979 FLOW MODEL

POLLUTANT	CRUDE PROCESS LIMIT (lb/day)	CRACKING AND COKING PROCESS LIMIT (lb/day)	ASPHALT PROCESS LIMIT (lb/day)	LUBE PROCESS LIMIT (lb/day)	REFORMING AND ALKYLATION PROCESS LIMIT (lb/day)	TOTAL REFINERY LIMIT (lb/day)
Phenolic Compounds	x 0.013 =	x 0.147 =	x 0.079 =	x 0.388 =	x 0.132 =	
Total Chromium	x 0.011 =	x 0.119 =	x 0.064 =	x 0.299 =	x 0.107 =	
Hexavalent Chromium	x 0.0007 =	x 0.0076 =	x 0.0041 =	x 0.0192 =	x 0.0069 =	

Note: For 30-Day Average Limits, Use Same Production Data As For Daily Maximum Calculations

EXAMPLE PERMIT CALCULATIONS

PROCESS WASTEWATER

HYPOTHETICAL LUBE OIL REFINERY

STEP 5: COMPARE AMENDED BAT LIMITS FOR PHENOLIC COMPOUNDS, TOTAL CHROMIUM AND HEXAVALENT CHROMIUM WITH BPT LIMITS

FOR THE EXAMPLE REFINERY:

	DAILY MAXIMUM (LB/DAY)		30-DAY AVERAGE (LB/DAY)	
	BPT	BAT	BPT	BAT
PHENOLIC COMPOUNDS	14.19	18.56	6.94	4.48
TOTAL CHROMIUM	29.13	15.18	17.07	5.31
HEXAVALENT CHROMIUM	2.56	0.97	1.17	0.43

- SET DAILY MAXIMUM LIMIT TO BPT (I.E., 14.19 LB/DAY) FOR PHENOLIC COMPOUNDS, BECAUSE BAT CANNOT BE LESS STRINGENT THAN BPT.

TABLE 5

STEP 5: COMPARE AMENDED BAT LIMITS FOR PHENOLIC COMPOUNDS, TOTAL CHROMIUM AND HEXAVALENT CHROMIUM WITH BPT LIMITS

	DAILY MAXIMUM (LB/DAY)		30-DAY AVERAGE (LB/DAY)	
	BPT	BAT	BPT	BAT
PHENOLIC COMPOUNDS				
TOTAL CHROMIUM				
HEXAVALENT CHROMIUM				

- SET LIMITATIONS TO THE MORE STRINGENT QUANTITIES

CHECKLIST D-1
Monitoring Requirements: DISCHARGE SAMPLING

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Outfall # _____

Question:

1. Does the permit require monitoring for every pollutant for which limitations are included in the permit? List any inappropriate omissions. Are there pollutants for which limitations or conditions are not included but which might be appropriate to monitor? Identify the pollutants and the reasons for including monitoring.

2. Does the permit stipulate, either in the general conditions or in the permit limitations, that monitoring for all pollutants with limitations be conducted according to test procedures approved under 40 CFR Part 136? Identify any exceptions.

3. Does the permit require monitoring the volume of effluent discharged form the outfall? If not, is an explanation provided?

4. Are effluent sampling frequencies specified for every pollutant for which monitoring is required? Are these frequencies appropriate to give accurate results? Specify for each pollutant (e.g., daily, weekly, quarterly, etc.): _____

5. Are appropriate sampling procedures (i.e., grab, composite) used?

CHECKLIST D-2
Monitoring Requirements: DISCHARGE REPORTING

Question

1. Are there any pollutants for which discharge monitoring reports are not required at least once a year? List them.

2. Is reporting on discharge monitoring report (DMR) forms required? (122.41 (1)(4))

3. Specify discharge reporting frequency or frequencies required in permit for the outfall under review (e.g., monthly, quarterly, etc.):

_____

CHECKLIST E-1

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Question

1. Does the permit include a compliance schedule(s) for each outfall which is not in compliance with the limitations specified in the permit?

2. Are distinct interim requirements (milestones) with specific dates included in compliance schedule(s)?

3. What is the basis for interim limitations? Was actual plant performance reviewed prior to developing interim limitations?

4. Is the time between each interim date in the compliance schedule(s) less than one year? If not, does the permit specify interim dates for submission of reports?

t. Does the compliance schedule provide for final compliance of BPT, BCT, and BAT permit limitations?

APPENDIX 3

Coal Mining PQR Checklist

Date _____

Coal Mining Industry
Permit Quality Review Checklist

General Information

Region _____ State _____

NPDES # _____

Discharger _____

Issuance Date _____

Applicable Regulations _____

New discharger? _____

Contractor assistance used to write permit? _____

General Comments & Basis of Permit Selection:

_____

_____

_____

HQ Reviewer _____

Regional Permit staff representative _____

Permit file complete? _____

Follow-up necessary? _____

Coal Mining Industry Permit Quality Review

REVIEWER SUMMARY

A. Procedural Requirements (Administrative Records, Public Notices, State Certification, Modifications, Enforcement Considerations)

B. Permit Conditions (Boilerplate, Special Conditions)

C. Effluent Limitations (Coverage, Basis, Water Quality)

D. Monitoring (Sampling, Reporting)

E. Compliance (Inclusion of Schedule)

F. <u>Other</u> (Specify)

CHECKLIST A-1

Procedural Requirements: ADMINISTRATIVE RECORDS

Question

1. List any of the following items that have been omitted inappropriately from the file, or provide explanation.

   a. Permit application and any support data furnished by applicant: _____
   b. Draft permit; _____
   c. Statement of basis or fact sheet; _____
   d. All documents cited in statement of basis or fact sheet; _____
   e. All comments received during public comment; _____
   f. Tape or transcript of any hearings held and any written materials submitted at hearing; _____
   g. Response to significant comments raised during comment period and/or hearing; _____
   h. Final permit; _____
   i. Explanation of changes from draft to final permit. _____

CHECKLIST A-2
Procedural Requirements: PUBLIC NOTICE AND COMMENT

Question

1. Was a public notice issued of the preparation of draft permit and providing an opportunity for comment at least 30 days prior to final permit decision?

2. Was a public hearing held?

3. Was a notice of public hearing issued at least 30 days prior to hearing?

4. Was a summary response to significant comments raised during comment period and/or hearing prepared and issued at time of final permit decision?

CHECKLIST A-3
Procedural Requirements: STATE CERTIFICATION

Question

1. Was a state certification or waiver of state certification received?

2. List any conditions in the state certification not included in the permit. Indicate any reasons provided for omissions.

CHECKLIST A-4
Procedural Requirements: RECORDS OF MODIFICATION

Question

1. Does the permit documentation indicate that the permit was modified, or revoked and reissued?

2. Was the permit modified pursuant to 40 CFR 122.62(a)?
   If "yes", specify the basis identified in the permit documentation: (alterations; new information; new regulation; compliance schedules; variance request; reopener; pretreatment).

3. Did cause exist for modification or revocation and reissuance pursuant to 40 CFR 122.62(b)? Specify cause:

   a. Cause exists for termination, as provided in 40 CFR 122.64 (noncompliance; misrepresentation of or failure to disclose facts; endangerment to human health or environment; change in condition);
   b. Transfer of permit; (122.61)
   c. Other (specify)

4. Does the permit documentation indicate that the procedures of 40 CFR 124.5 for permit modification, revocation and reissuance or termination were followed?

CHECKLIST A-5
ENFORCEMENT INFORMATION

Question

1. Does the permit documentation indicate that any enforcement actions have been taken?
   Briefly describe nature of action(s), date(s): _____

   _____

   _____

CHECKLIST B-1
Permit Conditions: BOILERPLATE

Question

1. Identify whether the following general conditions have been incorporated into the permit, either directly or by reference to 40 CFR Part 122.41 (or, if permit was issued prior to April 1983, by reference to 40 CFR Parts 122.7 and 122.60). Identify any variation from the regulation language.

122.41-

(a) Duty to comply; _____
(b) Duty to reapply; _____
(c) Duty to halt or reduce activity; _____
(d) Duty to mitigate; _____
(e) Proper operation and maintenance; _____
(f) Permit actions; _____
(g) Property rights; _____
(h) Duty to provide information; _____
(i) Inspection and entry; _____
(j) Monitoring and records (including the requirement to report more frequent sampling); _____
(k) Signatory requirement; _____
(l) Reporting requirements (including compliance schedule, noncompliance, and DMR reporting); _____
(m) Bypass; _____ and
(n) Upset. _____

2. If the general conditions are included by reference, is the CFR citation, date and copy of the regulations provided? If "no", specify missing item(s): _____

3. Does the permit require notification to the Director as soon as the permittee knows or has reason to believe that any activity has occured or will occur which would result in the discharge of any toxic pollutant, if that discharge will exceed the "notification levels" specified in 40 CFR Part 122.42(a)(1)?

4. Does the permit require notification to the Director as soon as the permittee knows or has reason to believe that it has begun or expects to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application?

5. Is the permit effective for a fixed term which does not exceed five (5) years from date of issuance?

CHECKLIST B-2

Permit Conditions: SPECIAL CONDITIONS if appropriate:

1. Are best management practices (BMPs) included in the permit to:

   a. Minimize surface runoff volumes?
   b. Prevent the addition of dilution water to comply with effluent requirements?
      Briefly describe BMPs included in permit.

2. Are any other special conditions requiring BMPs included in the permit? Identify and specify reason for inclusion.

3. If the mine is an underground mine, does the permit contain any subsidence control requirements? Briefly describe the requirements and their basis.

4. Does the permit include any biological toxicity testing requirements? Briefly describe the requirements and their basis.

5. Besides BMPs, subsidence control and toxicity, are there any other special conditions. Briefly describe the requirements and their basis.

6. If the facility has closed mining operations, are precipitation events, post-mining discharge limitations and revegetation requirements included in the permit? Briefly describe the requirements and their basis.

CHECKLIST C-1
Effluent Limitations: TRANSLATING THE PERMIT APPLICATION TO PERMIT LIMITATIONS

Introduction: Question #1 applies to all outfalls. For the remaining questions, complete one checklist for each individual outfall selected by the review team for review.

Outfall # _____

Question

1. Have a set of effluent limitations or conditions been included in the permit for every outfall? (See Permit Application)

2. Are there pollutants for which limitations or conditions are not included but which might be appropriate to limit? Identify the pollutants and the reasons for not including limitations.

CHECKLIST C-2
Effluent Limitations: BASIS FOR LIMITATIONS

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Question

1. Are the pollutant limitations based on the coal mining effluent guidelines, and/or water quality standards?

2. Are limitations for all pollutants in continuous discharges expressed as both maximum daily values and average monthly values?

3. For those limitations not expressed as both maximum daily values and average monthly values, does the permit documentation indicate that it would be impracticable to set both?

4. Are limitations for all pollutants (except pH, temperature and/or radiation) expressed in mass terms or as concentrations?

5. If limitations are expressed in mass units, does the permit documentation demonstrate (specify):

   a. If an effluent guideline applies, the applicable limitations are expressed in mass units; or

b. The relationship of the pollutant discharged to a measure of operation.

c. That the production or throughput basis in the permit is a reasonable measure of average actual production or throughput of mine or preparation plant. The bases for each production process should be documented.

Specify production or throughput basis:

- Maximum production or throughput during high month of previous year;
- Monthly average for the highest of previous 5 years;
- Other: _____

CHECKLIST C-3
Effluent Limitations: APPLICABLE EFFLUENT GUIDELINES

Introduction: Complete one checklist for each individual outfall selected by the review team for review, if effluent guidelines are applicable.

Question

1. Were promulgated effluent guidelines applicable to the source category at the time permit was under consideration?

2. Were effluent guideline limitations used as the basis for permit effluent limitations at the outfall?

3. Are all pollutant limitations in the effluent guidelines included in the permit?

4. Does the permit contain alternate limitations during precipitation events in accordance with 40CFR 434 Subpart F?

5. Are wastestreams from different facilities (i.e., coal preparation plants and coal preparation plant associated areas, active mining areas and post-mining areas) commingled? If yes, have the most stringent effluent limits for each pollutant been applied?

6. Has the mine drainage been categorized as acidic or alkaline, and the analyses documenting that determination in the file? Have the appropriate effluent guidelines been applied based on the pH of the mine drainage?

7. Was a best professional judgement (BPJ) analysis the basis for the permit effluent limitation at the outfall?

8. Can all major inputs to the BPJ analysis be identified? (Note: Inputs may include: permit application, state certification, contractor reports, special reports from permittee, effluent guidelines development documents.)

9. Were water quality standards the basis for the permit effluent limitations at the outfall?

10. Is the basis of the water quality-based limitation identified in the permit file?

    Specify:
    a. State certification
    b. Other: _____

11. Have all applicable water quality standards toward which water quality analysis is directed been clearly identified?

12. Does the permit documentation explain any changes in the pollutant limitations between the draft and the final permits? Specify basis:

a. Final limitations are the same as in the draft permit;
b. Limitations in the draft permit were revised based on issues raised during the comment period;
c. Limitations in the draft permit were revised based on negotiations with the permittee;
d. Other: _____

CHECKLIST C-4

Effluent Limitations: WATER QUALITY BASED LIMITATIONS

Introduction: This checklist is intended to point review team inquiry toward those questions which can help in determining whether or not the water quality analysis was "reasonable." Review Team should provide a qualitative explanation of the limitation development process on the evaluation form. Complete one checklist for each individual outfall selected by the review team for review. If limits are based on approved State Water Quality standards and if EPA did not participate in the WLA process, some information on modeling may not be available at the Regional Office.

Outfall # _____

Question

1. Under what mechanism are toxics controls required?

   a. State law
   b. State regulation
   c. State policy (written)
   d. State guidance (written)

2. Have all applicable water quality standards and criteria toward which water quality analysis is directed been clearly identified?

3. Is a water quality analysis missing where it seems to be required? Identify pollutants.

4. How are toxicity limits expressed?

   a. Narrative statement
   b. Monitoring requirements

      i. Chemical-specific limitations
      ii. Whole effluent toxicity limitations

5. What is the water quality-based permit limit designed to protect?

   a. Aquatic life
   b. Human health
   c. Bioaccumulation

6. Does the permit document that water quality-based limitations are at least as stringent as Federal categorical effluent limitations?

7. Is a toxicity reduction evaluation required?

8. What factors are considered in establishing monitoring requirements?

9. Were water quality modeling and a mixing zone used in establishing the limitations? (If "no", skip to #23)

10. Is instream pollutant monitoring required by the permit? Are the monitoring points identified?

11. Are current water quality conditions clearly identified? If possible, specify basis:

    a. Actual water quality
    b. Estimated water quality

Inputs to Quantitative Analysis:

12. Has the outfall discharge rate used in analysis been clearly identified? (See Application)

    a. Average discharge rate
    b. Maximum discharge rate
    c. Other: _____

13. Has the stream flow rate used in the analysis been clearly identified? If possible, specify whether:

    a. Low flow rate (years of record)
    b. Average flow rate
    c. Other: _____

14. Was the analysis directed toward water quality within a mixing zone? (If "yes", skip to #16)

15. Was the analysis directed toward water quality beyond the mixing zone (i.e., wasteload allocation modeling) (If "yes", skip to #20)

Quantitative Analysis: Mixing Zone

16. Are the size and configuration of the mixing zone clearly identified? Is it appropriate?

17. Has the water quality model used been clearly identified? Specify: _____

18. Were the impacts of other major dischargers taken into account in the analysis?

19. Does the permit documentation demonstrate that, based on modeling conclusions, applicable water quality standards were met in the mixing zone? (If "yes", skip to #23)

Quantitative Analysis: Wasteload Allocation

20. Has the water quality model used been clearly identified? Specify: _____

21. Were the impacts of other major dischargers taken into account in the analysis?

22. Does the permit documentation indicate the level of discharges and limitations assumed for other major sources?

23. Does the permit documentation demonstrate that, based on modeling conclusions, applicable water quality standards will be met? If not, does the permit documentation explain why the limitation was used in spite of modeling results?
Specify: _____

CHECKLIST D-1
Monitoring Requirements: DISCHARGE SAMPLING

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Outfall # _____

Question

1. Does the permit require monitoring for every pollutant for which limitations are included in the permit? List any inappropriate omissions. Are there pollutants for which limitations or conditions are not included but which might be appropriate to monitor? Identify the pollutants and the reasons for including monitoring.

2. Does the permit stipulate, either in the general conditions or in the permit limitations, that monitoring for all pollutants with limitations be conducted according to test procedures approved under 40 CFR part 136? Identify any exceptions.

3. Does the permit require monitoring the volume of effluent discharged from the outfall? If not, is an explanation provided?

4. Are effluent sampling frequencies specified for every pollutant for which monitoring is required? Are these frequencies appropriate to give accurate results? Specify for each pollutant (e.g., daily, weekly, quarterly, etc.): _____

5. Are appropriate sampling procedures (i.e., grab, composite) used?

CHECKLIST D-2
Monitoring Requirements: DISCHARGE REPORTING

Question

1. Are there any pollutants for which discharge monitoring reports are not required at lest once a year? List them.

2. Is reporting on discharge monitoring report (DMR) forms required? (122.41 [1][4])

3. Specify discharge reporting frequency or frequencies required in permit for the outfall under review (e.g., monthly, quarterly, etc.):

_____

CHECKLIST E-1

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Question

1. Does the permit include a compliance schedule(s) for each outfall which is not in compliance with the limitations specified in the permit?

2. Are distinct interim requirements (milestones) with specific dates included in compliance schedule(s)?

3. What is the basis for interim limitations? Was actual plant performance reviewed prior to developing interim limitations?

4. Is the time between each interim date in the compliance schedule(s) less than one year? If not, does the permit specify interim dates for submission of reports?

5. Does the compliance schedule provide for final compliance of BPT, BCT, and BAT permit limitations?

APPENDIX 4

Inorganic Chemicals PQR Checklist

Date_____

Inorganic Chemicals Manufacturing Industry
Permit Quality Review Checklist

General Information

Region_____ State_____

NPDES #_____

Discharger_____

Issuance Date _____

Applicable Regulations_____

New discharger?_____

Contractor assistance used to write permit?_____

General Comments & Basis of Permit Selection:

_____

_____

_____

HQ Reviewer_____

Regional Permit staff representative_____

Permit file complete?_____

Follow-up necessary?_____

Inorganic Chemicals Manufacturing Industry Permit Quality Review

REVIEWER SUMMARY

A. Procedural Requirements (Administrative Records, Public Notice, State Certification, Modifications, Enforcement Considerations)

B. Permit Conditions (Boilerplate, Special Conditions)

C. Effluent Limitations (Coverage, Basis, Water Quality)

D. Monitoring (Sampling, Reporting)

E. Compliance (Inclusion of Schedule)

F. <u>Other</u> (Specify)

CHECKLIST A-1

Procedural Requirements: ADMINISTRATIVE RECORDS

Question

1. List any of the following items that have been omitted inappropriately from the file, or provide explanation.

   a. Permit application and any support data furnished by applicant;____
   b. Draft permit;____
   c. Statement of basis or fact sheet;____
   d. All documents cited in statement of basis or fact sheet;____
   e. All comments received during public comment;____
   f. Tape or transcript of any hearings held and any written materials submitted at hearing;____
   g. Response to significant comments raised during comment period and/or hearing;____
   h. Final permit;____
   i. Explanation of changes from draft to final permit.

CHECKLIST A-2
Procedural Requirements: PUBLIC NOTICE AND COMMENT

Question

1. Was a public notice issued of the preparation of draft permit and providing an opportunity for comment at least 30 days prior to final permit decision?

2. Was a public hearing held?

3. Was a notice of public hearing issued at least 30 days prior to hearing?

4. Was a summary response to significant comments raised during comment period and/or hearing prepared and issued at time of final permit decision?

CHECKLIST A-3
Procedural Requirements: STATE CERTIFICATION

Question

1. Was a state certification or waiver of state certification received?

2. List any conditions in the state certification not included in the permit. Indicate any reasons provided for omissions.

CHECKLIST A-4
Procedural Requirements: RECORDS OF MODIFICATION

Question

1. Does the permit documentation indicate that the permit was modified, or revoked and reissued?

2. Was the permit modified pursuant to 40 CFR 122.62(a)?
   If "yes", specify the basis identified in the permit documentation: (alterations; new information; new regulation; compliance schedules; variance request; reopener; pretreatment).

3. Did cause exist for modification or revocation and reissuance pursuant to 40 CRF 122.62(b)? Specify cause:

   a. Cause exists for termination, as provided in 40 CFR 122.64 (noncompliance; misrepresentation of or failure to disclose facts; endanagerment to human health or environment; change in condition);
   b. Transfer of permit; (122.61)
   c. Other (specify)

4. Does the permit documentation indicate that the procedures of 40 CRF 124.5 for permit modification, revocation and reissuance or termination were followed?

CHECKLIST A-5
ENFORCEMENT INFORMATION

Question

1. Does the permit documentation indicate that any enforcement actions have been taken?
   Briefly describe (nature of action(s), date(s): _____

   _____

   _____

CHECKLIST B-1
Permit Conditions: BOILERPLATE

Question

1. Identify whether the following general conditions have been incorporated into the permit, either directly or by reference to 40 CFR Part 122.41 (or, if permit was issued prior to April 1983, by reference to 40 CFR Parts 122.7 and 122.60). Identify any variation from the regulation language.

122.41-

(a) Duty to comply;____
(b) Duty to reapply;____
(c) Duty to halt or reduce activity;____
(d) Duty to mitigate;____
(e) Proper operation and maintenance;____
(f) Permit actions;____
(g) Property rights;____
(h) Duty to provide information;____
(i) Inspection and entry;____
(j) Monitoring and records (Including the requirement to report more frequent sampling);____
(k) Signatory requirement;____
(l) Reporting requirements (including compliance schedule, noncompliance, and DMR reporting);____
(m) Bypass;____ and
(n) Upset.____

2. If the general conditions are included by reference, is the CFR citation, date and copy of the regulations provided? If "no", specify missing item(s): _____

3. Does the permit require notification to the Director as soon as the permittee knows or has reason to believe that any activity has occured or will occur which would result in the discharge of any toxic pollutant, if that discharge will exceed the "notification levels" specified in 40 CFR Part 122.42(a)(1)?

4. Does the permit require notification to the Director as soon as the permittee knows or has reason to believe that it has begun or expects to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application?

5. Is the permit effective for a fixed term which does not exceed five (5) years from date of issuance?

CHECKLIST B-2

Permit Conditions: SPECIAL CONDITIONS if appropriate:

Question

1. Are any special conditons requiring best management practice (BMPs) included in the permit? Identify and specify reason for inclusion.

2. Does the permit include any biological toxicity testing requirements? Briefly describe the requirements and their basis.

3. Besides BMPs and toxicity, are there any other special conditons. Briefly describe the requirements and their basis.

CHECKLIST C-1
Effluent Limitations: TRANSLATING THE PERMIT APPLICATION TO PERMIT LIMITATIONS

Introduction: Question #1 applies to all outfalls. For the remaining questions, complete one checklist for each individual outfall selected by the review team for review.

Outfall # _____

Question

1. Have a set of effluent limitations or conditons been included in the permit for every outfall? (See Permit Application)

2. Are there pollutants for which limitations or conditons are not included but which might be appropriate to limit? Identify the pollutants and the reasons for not including limitations.

CHECLKIST C-2
Effluent limitations: BASIS FOR LIMITATIONS

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Question

1. Are the pollutant limitations based on the inorganic chemicals effluent guidelines, and/or water quality standards?

2. Are limitations for all pollutants in continuous discharges expressed as both maximum daily values and average monthly values?

3. For those limitations not expressed as both maximum daily values and average monthly values, does the permit documentation indicate that it would be impracticable to set both?

4. Are limitations for all pollutants (except pH, temperature and/or radiation) expressed in mass terms?

5. If limitations are expressed in units other than mass, does the permit documentation demonstrate that (specify):

   a. The pollutants(s) itself cannot be appropriately expressed in mass terms;

b. If an effluent guideline applies, the applicable limitations are expressed in alternative units; or

c. The pollutant discharged cannot be related to a measure of operation (e.g., TSS for certain mining operations), <u>and</u> a special condition has been included to ensure that dilution will not be used as a substitute for treatment.

CHECKLIST C-3
Effluent Limitations: APPLICABLE EFFLUENT GUIDELINES

Introduction: Complete one checklist for each individual outfall selected by the review team for review, if effluent guidelines and EPA settlement agreement are applicable.

Question

1. Were promulgated effluent guidelines applicable to any/all of the inorganic chemical(s) manufactured at the plant at the time permit was under considerat

2. Were effluent guideline limitations used as the basis for permit effluent limitations at the outfall?

3. Are applicable effluent guidelines limitations based on production?

4. Was production basis in the permit a reasonable measure of average actual production for each chemical produced, not design production capacity? The bases for each production process should be documented.

   Specify production basis:
   a. Maximum production during high month of previous year;
   b. Monthly average for the highest of previous 5 years;
   c. Other: _____

5. Are all pollutant limitations in the effluent guidelines included in the permit?

6. Does the inorganic chemical plant have a single or multi product operation?

7. If the inorganic chemical plant is a multiproduct facility:

   a. Have effluent guidelines been promulgated for all product lines?
   b. Are the calculations to determine combined wastestream limitations verifiable and documented?
   c. If unregulated chemicals are manufactured, how were combined limits determined? Is BPJ analysis, wastewater flowrates and pollutant concentrations used for the unregulated chemicals documented? Are calculations combining concentration limits and mass limits documented?

8. Were process methods identified and proper effluent guidelines applied for those chemicals with alternate limits for different processing methods? (Boric Acid, Calcium Carbonate, Chlor-Alkali, Hydrogen Peroxide, Lithium Carbonate, Sodium Chloride, and Titanium Dioxide).

9. Do the applicable effluent guidelines address stormwater runoff? If not, how is stormwater handled?

10. Was a best professional judgement (BPJ) analysis the basis for the permit effluent limitation at the outfall?

11. Can all major inputs to the BPJ analysis be identified? (Note: Inputs may include: permit application, state certification, contractor reports, special reports from permittee, effluent guidelines development documents.)

12. Does the permit documentation explain any changes in the pollutant limitations between the draft and the final permits? Specify basis:

    a. Final limitations are the same as in the draft permit;
    b. Limitations in the draft permit were revised based on issues raised during the comment period;
    c. Limitations in the draft permit were revised based on negotiations with the permittee;
    d. Other: _____

CHECKLIST D-1
Monitoring Requirements: DISCHARGE SAMPLING

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Outfall # _____

Question:

1. Does the permit require monitoring for every pollutant for which limitations are included in the permit? List any inappropriate omissions. Are there pollutants for which limitations or conditions are not included but which might be appropriate to monitor? Identify the pollutants and the reasons for including monitoring.

2. Does the permit stipulate, either in the general conditions or in the permit limitations, that monitoring for all pollutants with limitations be conducted according to test procedures approved under 40 CFR Part 136? Identify any exceptions.

3. Does the permit require monitoring the volume of effluent discharged from the outfall? If not, is an explanation provided?

4. Are effluent sampling frequencies specified for every pollutant for which monitoring is required? Are these frequencies appropriate to give accurate results? Specify for each pollutant (e.g., daily, weekly, quarterly, etc.): _____

5. Are appropriate sampling procedures (i.e., grab, composite) used?

CHECKLIST D-2
Monitoring Requirements: DISCHARGE REPORTING

Question

1. Are there any pollutants for which discharge monitoring reports are not required at least once a year? List them.

2. Is reporting on discharge monitoring report (DMR) forms required? (122.41 (1)(4))

3. Specify discharge reporting frequency or frequencies required in permit for the outfall under review (e.g., monthly, quarterly, etc.):

_____

CHECKLIST D-1
Monitoring Requirements: DISCHARGE SAMPLING

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Outfall # _____

Question:

1. Does the permit require monitoring for every pollutant for which limitations are included in the permit? List any inappropriate omissions. Are there pollutants for which limitations or conditions are not included but which might be appropriate to monitor? Identify the pollutants and the reasons for including monitoring.

2. Does the permit stipulate, either in the general conditions or in the permit limitations, that monitoring for all pollutants with limitations be conducted according to test procedures approved under 40 CFR Part 136? Identify any exceptions.

3. Does the permit require monitoring the volume of effluent discharged from the outfall? If not, is an explanation provided?

4. Are effluent sampling frequencies specified for every pollutant for which monitoring is required? Are these frequencies appropriate to give accurate results? Specify for each pollutant (e.g., daily, weekly, quarterly, etc.): _____

5. Are appropriate sampling procedures (i.e., grab, composite) used?

CHECKLIST D-2
Monitoring Requirements: DISCHARGE REPORTING

Question

1. Are there any pollutants for which discharge monitoring reports are not required at least once a year? List them.

2. Is reporting on discharge monitoring report (DMR) forms required? (122.41 (1)(4))

3. Specify discharge reporting frequency or frequencies required in permit for the outfall under review (e.g., monthly, quarterly, etc.):

_____

CHECKLIST E-1

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Question

1. Does the permit include a compliance schedule(s) for each outfall which is not in compliance with the limitations specified in the permit?

2. Are distinct interim requirements (milestones) with specific dates included in compliance schedule(s)?

3. What is the basis for interim limitations? Was actual plant performance reviewed prior to developing interim limitations?

4. Is the time between each interim date in the compliance schedule(s) less than one year? If not, does the permit specify interim dates for submission of reports?

t. Does the compliance schedule provide for final compliance of BPT, BCT, and BAT permit limitations?

ATTACHMENT 1

ATTACHMENT 1

Effluent Limitations - Inorganic Chemicals Manufacturing Industry

40 CFR 415, Inorganic Chemicals Manufacturing Point Source Category addresses discharges from the manufacturing of eighty inorganic chemcials. Of these eighty chemicals, sixty have promulgated effluent limits and twenty are reserved. Table 1 lists the chemicals and summarizes the status of the regulations.

The most important pollutants found in inorganic industry wastewaters are (a) toxic pollutants (chromium, nickel, cadmium, lead, mercury, copper, zinc and cyanide), (b) conventional pollutants (TSS, pH) and (c) nonconventional pollutants (COD, fluoride, iron, and ammonia). The pollutant loading at a particular plant depends on the inorganic chemicals manufactured and in some cases, the process methods used. The regulations have subcategorized the industry to reflect these variations in wastewater quality.

All of the effluent guidelines, except zinc chloride (subcategory BO), are production based mass limits. The zinc chloride guidelines are concentration based because wastewater flow rates fluctuate depending on the product water content. Zinc chloride may be produced for sale as solutions of varying concentration and as solid zinc chloride. The volume of wastewater generated increases with increased product concentation. Zinc chloride manufacturer's typically produce all grades of zinc chloride. A single mass-bound limit cannot cover this range of operating conditions, therefore concentration-based limits are used.

A substantial number of inorganic chemicals have zero pollutant discharge requirements. Some chemicals have allowances for large rainfalls or brine

recycle. These chemicals are highlighted in Table 1 with notes 1 through 5.

Most inorganic chemicals manufacturing plants are multiproduct operations. For these plants, the effluent limits for each chemical produced are combined to determine the total discharge limits. If effluent guidelines have been promulgated for each chemcial, then the plant's total limits are simply a sum of the individual limits. However, if one or more of the chemicals produced is unregulated, the limits for the plant will be based in part on a BPJ analysis. Mass limits for unregulated chemicals are based on BPJ concentration based effluent limits and the wastewater flow rate attributable to that chemical. The mass limits of the regulated and unregulated chemicals are then combined to determine the total plant discharge limits. Rain water runoff is included in the regulations for most of chemicals. Most plants commingle rainwater runoff and process wastewaters. Best Management Practices (BMPs) are usually employed to minimize the amount of surface runoff. If rainwater is not commingled with process wastewaters, or is not addresseed in the regulations for a given chemical, then it should be addressed in the permit.

TABLE 1

Summary of Regulatory Status 40 CFR 415
Inorganic Chemicals Manufacturing Industry

Chemical	40 CFR 415 Subpart	BPT	BCT	BAT	PSES
1. Aluminum Chloride	A	-	-	-	X
2. Aluminum Fluoride	W	X	X	X	-
3. Aluminum Sulfate	B	X(1)	-	X(2)	X
4. Ammonium Chloride	X				
- Ammonia/Hydrogen Chloride		X(3)	-	-	-
- Solvay Process Waste Recovery		X	-	-	-
5. Ammonium Hydroxide	Y	------- Reserved -------			
6. Barium Carbonate	Z	------- Reserved -------			
7. Borax	AA	X(5)	-	-	-
8. Boric Acid	AB				
- Trona Process		X(5)	-	-	-
- Mined Borax Process		X	-	-	-
9. Bromine	AC	X(5)	-	-	-
10. Cadmium Pigments	BL	X	X	X	X
11. Cadmium Chloride	BL	X	X	X	X
12. Cadmium Nitrate	BL	X	X	X	X
13. Cadmium Sulfate	BL	X	X	X	X
14. Calcium Carbide	C	X(3)	-	X(3)	-
15. Calcium Carbonate	AD				
- Milk of Lime Process		X	-	-	-
- Solvay Recovery Process		X	-	-	-
16. Calcium Chloride	D	X	-	X(3)	-
17. Calcium Hydroxide	AE	X(3)	-	-	-
18. Calcium Oxide	E	X(1)	-	X(2)	-
19. Carbon Dioxide	AF	------- Reserved -------			
20. Carbon Monoxide	AG	X	-	-	-
21. Chlor-Alkali	F				
- Mercury Cell Process		X	X	X	-
- Diaphram Cell Process		X	-	X	X
22. Chrome Pigments	AH	X	X	X	X
23. Chromic Acid	AI	X(3)	-	-	X
24. Copper Carbonate	AJ	X	X	X	X
25. Copper Chloride	AJ	X	X	X	X
26. Copper Iodide	AJ	X	X	X	X
27. Copper Nitrate	AJ	X	X	X	X
28. Copper Sulfate	AJ	X	X	X	X
29. Cobalt Chloride	BM	X	X	X	X
30. Cobalt Sulfate	BM	X	X	X	X
31. Cuprous Oxide	AK	------- Reserved -------			
32. Ferric Chloride	AL	X(3)	-	-	X
33. Ferrous Sulfate	AM	------- Reserved -------			
34. Fluorine	AN	X(3)	-	-	-
35. Hydrochloric Acid	G	------- Reserved -------			
36. Hydrofluoric Acid	H	X	-	X	-
37. Hydrogen	AO	(6)	-	-	-

TABLE 1 (Continued)

Summary of Regulatory Status 40 CFR 415
Inorganic Chemicals Manufacturing Industry

Chemical	40 CFR 415 Subpart	BPT	BCT	BAT	PSES
38. Hydrogen Cyanide	AP	X	X	X	-
39. Hydrogen Peroxide	I				
- Organic Process		X	-	-	-
- Electrolyte Process		X	-	-	-
40. Iodine	AQ	X(3)	-	-	-
41. Lead Monoxide	AR	X(3)	-	-	X
42. Lithium Carbonate	AS				
- Trona Process		X(5)	-	-	-
- Spodumene Ore		X	-	-	-
43. Manganese Sulfate	AT	------- Reserved -------			
44. Nickel Carbonate	AU	X	X	X	X
45. Nickel Chloride	AU	X	X	X	X
46. Nickel Fluoborate	AU	X	X	X	X
47. Nickel Nitrate	AU	X	X	X	X
48. Nickel Sulfate	AU	X	X	X	X
49. Nitric Acid	J	------- Reserved -------			
50. Strong Nitric Acid	AV	------- Reserved -------			
51. Oxygen	AW	X	-	-	-
52. Nitrogen	AW	X	-	-	-
53. Potassium Chloride	AX	X(5)	-	-	-
54. Potassium Dichromate	L	X(3)	-	X(3)	X
55. Potassium Iodine	AY	X	-	-	-
56. Potassium Metal	K	X(3)	-	X(3)	-
57. Potassium Permanganate	AZ	------- Reserved -------			
58. Potassium Sulfate	M	X(1)	-	X(2)	-
59. Silver Nitrate	BA	X	-	-	X
60. Sodium Bicarbonate	N	X(3)	-	X(3)	-
61. Sodium Bisulfate	BB	X	X	X	-
62. Sodium Carbonate	O	------- Reserved -------			
63. Sodium Chlorate	BN	X	X	X	-
64. Sodium Chloride	P				
- Solar Evaporation Process		X(4)	-	X(4)	-
- Brine Mining Process		X	-	-	-
65. Sodium Dichromate	Q	X	X	X	-
66. Sodium Fluoride	BC	X(3)	-	-	X
67. Sodium Hydrosulfide	BD	------- Reserved -------			
68. Sodium Hydrosulfite	BE	------- Reserved -------			
69. Sodium Metal	R	------- Reserved -------			
70. Sodium Silicate	S	------- Reserved -------			
71. Sodium Silicofluoride	BF	------- Reserved -------			
72. Sodium Sulfite	T	X	X	X	-
73. Sodium Thiosulfate	BG	------- Reserved -------			
74. Stannic Acid	BH	X(3)	-	-	-
75. Sulfur Dioxide	BI	------- Reserved -------			
76. Sulfuric Acid	U	------- Reserved -------			

TABLE 1 (Continued)

Summary of Regulatory Status 40 CFR 415
Inorganic Chemicals Manufacturing Industry

Chemical	40 CFR 415 Subpart	BPT	BCT	BAT	PSES
77. Titanium Dioxide	V				
- Sulfate Process		X	X	X	-
- Chloride Process		X	X	X	-
- Chloride/Ilmenite Process		X	X	X	-
78. Zinc Chloride	BO	X	X	X	X
79. Zinc Oxide	BJ	------- Reserved -------			
80. Zinc Sulfate	BK	X(3)	-	-	-

NOTES

X = Promulgated limits.

(1) No discharge of process wastewater pollutants except in the event of a storm greater than the 10 year, 24 hour rainfall.

(2) No discharge of process wastewater pollutants except in the event of a storm greater than the 25 year, 24 hour rainfall.

(3) No discharge of process wastewater pollutants into navigable waters.

(4) No discharge of process wastewater pollutants except unused bitterns which may be returned to the body of water from which the brine solution was originally withdrawn provided no additional pollutants were added.

(5) No discharge of process wastewater pollutants except residual brine and depleted liquor which may be returned to the body of water from which the process brine solution was originally drawn.

(6) No discharge except as provided for in 40 CFR 419, Petroleum Refineries.

APPENDIX 5

Organic Chemicals PQR Checklist

Date _____

Organic Chemicals and Plastics and Synthetic Fibers (OCPSF) Manufacturing Industry
Permit Quality Review Checklist

General Information

Region _____ State _____

NPDES # _____

Discharger _____

Issuance Date _____

Applicable Regulations _____

New discharger? _____

Contractor assistance used to write permit? _____

General Comments & Basis of Permit Selection:

_____

_____

_____

HQ Reviewer _____

Regional Permit staff representative _____

Permit file complete? _____

Follow-up necessary? _____

OCPSF Industry Permit Quality Review

REVIEWER SUMMARY

A. Procedural Requirements (Administrative Records, Public Notices, State Certification, Modifications, Enforcement Considerations)

B. Permit Conditions (Boilerplate, Special Conditions)

C. <u>Effluent Limitations</u> (Coverage, Basis, Water Quality)

D. <u>Monitoring</u> (Sampling, Reporting)

E. <u>Compliance</u> (Inclusion of Schedule)

F. Other (Specify)

CHECKLIST A-1

Procedural Requirements: ADMINISTRATIVE RECORDS

Question

1. List any of the following items that have been omitted inappropriately from the file, or provide explanation.

   a. Permit application and any support data furnished by applicant
   b. Draft permit
   c. Statement of basis or fact sheet
   d. All documents cited in statement of basis or fact sheet
   e. All comments received during public comment
   f. Tape or transcript of any hearings held and any written materials submitted at hearing
   g. Response to significant comments raised during comment period and/or hearing
   h. Final permit
   i. Explanation of changes from draft to final permit

CHECKLIST A-2
Procedural Requirements: PUBLIC NOTICE AND COMMENT

Question

1. Was a public notice issued of the preparation of draft permit and providing an opportunity for comment at least 30 days prior to final permit decision?

2. Was a public hearing held?

3. Was a notice of public hearing issued at least 30 days prior to hearing?

4. Was a summary response to significant comments raised during comment period and/or hearing prepared and issued at time of final permit decision?

CHECKLIST A-3
Procedural Requirements: STATE CERTIFICATION

Question

1. Was a state certification or waiver of state certification received?

2. List any conditions in the state certification not included in the permit. Indicate any reasons provided for omissions.

CHECKLIST A-2
Procedural Requirements: PUBLIC NOTICE AND COMMENT

Question

1. Was a public notice issued of the preparation of draft permit and providing an opportunity for comment at least 30 days prior to final permit decision?

2. Was a public hearing held?

3. Was a notice of public hearing issued at least 30 days prior to hearing?

4. Was a summary response to significant comments raised during comment period and/or hearing prepared and issued at time of final permit decision?

CHECKLIST A-3
Procedural Requirements: STATE CERTIFICATION

Question

1. Was a state certification or waiver of state certification received?

2. List any conditions in the state certification not included in the permit. Indicate any reasons provided for omissions.

CHECKLIST B-1
Permit Conditions: BOILERPLATE

Question

1. Identify whether the following general conditions have been incorporated into the permit, either directly or by reference to 40 CFR Part 122.41 (or, if permit was issued prior to April 1983, by reference to 40 CFR Parts 122.7 and 122.60). Identify any variation from the regulation language.

122.41-
(a) Duty to comply
(b) Duty to reapply
(c) Duty to halt or reduce activity
(d) Duty to mitigate
(e) Proper operation and maintenance
(f) Permit actions
(g) Property rights
(h) Duty to provide information
(i) Inspection and entry
(j) Monitoring and records (Including the requirement to report more frequent sampling)
(k) Signatory requirement
(l) Reporting requirements (including compliance schedule, noncompliance, and DMR reporting)
(m) Bypass
(n) Upset

2. If the general conditions are included by reference, is the CFR citation, date and copy of the regulations provided? If "no", specify missing item(s): _____

3. Does the permit require notification to the Director as soon as the permittee knows or has reason to believe that any activity has occurred or will occur which would result in the discharge of any toxic pollutant, if that discharge will exceed the "notification levels" specified in 40 CFR Part 122.42(a)(1)?

4. Does the permit require notification to the Director as soon as the permittee knows or has reason to believe that it has begun or expects to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application?

5. Is the permit effective for a fixed term which does not exceed five (5) years from date of issuance?

CHECKLIST B-2

Permit Conditions: SPECIAL CONDITIONS if appropriate

1. Are best management practices (BMPs) included in the permit to:

   a. Minimize surface runoff volumes?
   b. Prevent the addition of dilution water to comply with effluent requirements?

2. Are any other special conditions requiring BMPs included in the permit? Identify and specify reason for inclusion.

3. Besides BMPs, are there any other special conditions? Briefly describe the requirements and their basis.

CHECKLIST C-1
Effluent Limitations: TRANSLATING THE PERMIT APPLICATION TO PERMIT LIMITATIONS

Introduction: Question #1 applies to all outfalls. For the remaining questions, complete one checklist for each individual outfall selected by the review team for review.

Outfall # _____

Question

1. Have a set of effluent limitations or conditions been included in the permit for every outfall? (See Permit Application)

2. Are there pollutants for which limitations or conditions are not included but which might be appropriate to limit? Identify the pollutants and the reasons for not including limitations.

CHECKLIST C-2
Effluent Limitations: BASIS FOR LIMITATIONS

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Question

1. Are the pollutant limitations based on the effluent guidelines, best professional judgement, and/or water quality criteria and standards?

2. Are limitations for all pollutants in continuous discharges expressed as both maximum daily values and average monthly values?

3. For those limitations not expressed as both maximum daily values and average monthly values, does the permit documentation indicate that it would be impracticable to set both?

4. Are limitations for all pollutants (except pH, temperature, and/or radiation) expressed in mass terms or as concentrations?

5. If limitations are expressed in mass units, does the permit documentation demonstrate (specify):

   a. If an effluent guideline applies, the applicable limitations are expressed in mass units.

b. The relationship of the pollutant discharged to a measure of operation.

c. That the production or throughput basis in the permit is a reasonable measure of average actual production or throughput of mine or preparation plant. The bases for <u>each</u> production process should be documented.

Specify production or throughput basis:

- Maximum production or throughput during high month of previous year
- Monthly average for the highest of previous 5 years
- Other: _____

CHECKLIST C-3

Effluent Limitations: THE USE OF BEST PROFESSIONAL JUDGEMENT

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Outfall # _____

Question

1. Was a best professional judgement (BPJ) analysis the basis for the permit effluent limitation at the outfall?

2. Can all major inputs to the BPJ analysis be identified? (Note: Inputs may include: permit application, state certification, contractor reports, special reports from permittee, effluent guidelines development documents.)

3. Does the permit documentation explain any changes in the pollutant limitations between the draft and the final permits? Specify basis:

   a. Final limitations are the same as in the draft permit

   b. Limitations in the draft permit were revised based on issues raised during the comment period

   c. Limitations in the draft permit were revised based on negotiations with the permittee

   d. Other: _____

4. a. Is a description provided for all operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water?

   b. Is the average flow contributed by each source described?

   c. Is the treatment received by each source described?

5. a. Except for storm water, leaks, or spills, are any of the discharges intermittent or seasonal?

   b. Are the frequency and flow duration described for each intermittent or seasonal discharge?

6. a. Are wastewaters from different sources comingled prior to monitoring?

   b. Are pollutant loads from the different sources accounted for in the derivation of a combined wastestream effluent limitation?

Non-OCPSF Process Wastewater

7. Is non-OCPSF process wastewater discharged through this outfall?

8. Are promulgated effluent guidelines applicable to the non-OCPSF process wastewater?

9. Were effluent guideline limitations used as the basis for allocating pollutant loads to the non-OCPSF process wastewaters?

10. Are all of the pollutant limitations in the effluent guidelines included in the permit?

11. If effluent guidelines were not used or if none are promulgated for the non-OCPSF process wastewater, are the bases for pollutant selection and effluent limitations adequately discussed?

OCPSF Process Wastewater

12. Is OCPSF process wastewater discharged through this outfall?

13. Place a check next to the source(s) of information listed below that were used to provide a basis for pollutant parameter selection for the OCPSF process wastewater.

    a. _____ Effluent guidelines proposed on March 21, 1983

    b. _____ Tables L-1 through L-8 in the July 17, 1985 OCPSF Notice of Availability

    c. _____ Sampling and analysis of the influent to the end-of-pipe treatment system

    d. _____ Sampling and analysis of the effluent from the end-of-pipe treatment system (Form 2C Parts V-A , -B, and -C)

    e. _____ Pollutants identified in Form 2C Part V-D

    f. _____ NPDES permits for comparable facilities

    g. _____ Literature or analyses that show relationships between process chemistry and pollutants in process wastewater

    h. _____ Other (please describe): _____

    _____

14. Place a check next to the method(s) used to determine effluent limitations for the OCPSF process wastewater.

    a. _____ BPT OCPSF effluent guidelines proposed on March 21, 1983 (48 FR 11828)

b. _____ BAT OCPSF effluent guidelines proposed on March 21, 1983 (48 FR 11828)

c. _____ BPT OCPSF effluent guidelines presented on July 17, 1985 (50 FR 29068) or corrected on October 11, 1985 (50 FR 41528)

d. _____ BAT OCPSF effluent guidelines presented on July 17, 1985 (50 FR 29068) or corrected on October 11, 1985 (50 FR 41528)

e. _____ Old permit limitations

f. _____ A statistical analysis of treatment system performance

g. _____ Adaptation of NPDES permits for similar facilities

h. _____ Adaptation of Federal standards that regulate similar wastestreams

i. _____ Performance of treatment technologies as documented in engineering literature

j. _____ Other (please describe): _____

_____

15. Did the permit writer consider the control of volatile organic air emissions from in-plant or end-of-pipe wastewater treatment systems?

Noncontact Cooling Water

16. Is noncontact cooling water discharged through this outfall?

17. Do Parts V or VI of the Form 2C indicate the presence of pollutants that may be the result of condenser leaks, water treatment chemicals, or other sources?

18. If effluent limitations and monitoring requirements are specified for the noncontact cooling water discharge, list the parameters covered:

_____

_____

Storm Water

19. Is storm water discharged through this outfall?

20. Is storm water from plant-associated areas discharged through this outfall? Plant-associated areas mean industrial plant yards, immediate access roads, drainage ponds, refuse piles, storage piles or areas, and materials or products loading and unloading areas. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots.

21. Is treatment provided for the storm water discharge?

22. If effluent limitations and monitoring requirements are specified for the storm water discharge, list the parameters covered: _____

_____

CHECKLIST C-4

Effluent Limitations: WATER QUALITY-BASED LIMITATIONS

Introduction: This checklist is intended to point review team inquiry toward those questions which can help in determining whether or not the water quality analysis was "reasonable." Review Team should provide a qualitative explanation of the limitation development process on the evaluation form. Complete one checklist for each individual outfall selected by the review team for review. If limits are based on approved State water quality standards and if EPA did not participate in the WLA process, some information on modeling may not be available at the Regional Office.

Outfall # _____

Question

Water Quality Standards and Designated Uses

1. Under what mechanism are toxics controls required?

   a. State law
   b. State regulation
   c. State policy (written)
   d. State guidance (written)

2. How/why was this permit selected for water quality-based toxics control?

   a. Effluent toxicity screening
   b. Ambient stream monitoring results
   c. Inspection
   d. DMR data
   e. Results of dilution evaluation
   f. Pretreatment program
   g. Identified water '87 SPMS
   h. 208 WQM plan
   i. Other

3. What is the designated water use or classification?

   a. Industrial
   b. Potable water source
   c. Body contact recreation
   c. Limited contact recreation
   d. Commercial fishing, cold water/warm water fishery
   e. Sport fishing
   g. Agricultural
   h. Other (explain)

4. Is there a State toxics control strategy? Yes/No. If yes, are permit derivation procedures specifically included in the State's toxic control strategy? Yes/No.

5. What is the basis for pollutant-specific limits, such as heavy metals, organics, etc.?

   a. State water quality standards/criteria
   b. Narrative state water quality/criteria
   c. EPA criteria
   d. EPA water quality advisories
   e. FDA action levels
   f. Drinking water RMCLs/MCLs
   g. Other

6. Complete the chart for each pollutant parameter with specific limits: (attach additional sheet if necessary)

	Parameters		
Basis of Limit	Metals	Organics	Non-Conventionals
State WQS			
State Narrative WQ Criteria			
EPA Criteria			
WQ Advisory			
FDA Action Levels			
DW Standards			
Promulgated Effluent Guidelines			
Best Professional Judgement			
Other			

7. a. If applicable, what is the basis for whole effluent toxicity limits? (Attach copy of permit language showing form of limit)

   i. State Water Quality Standards
   ii. EPA Technical Support Document (TSD) as toxic units/NOEL
   iii. Other

b. If applicable, identify toxicity testing methods:

i. type (e.g. acute/chronic, flow through/static) _____
ii. species (e.g., Ceriodaphnia, Celenastrum fathead minnow) _____
iii. duration (e.g. 7 day, 96 hour) _____
iv. methods described in attachment _____

8. Specify the magnitude, duration, and frequency for State Water Quality Standards (for whole effluent toxicity limits) if different from EPA recommended criteria and specify where applied.

9. Was EPA criteria for toxic units used (e.g. 0.3 acute and 1.0 chronic toxic units)? Were both criteria used? Where are the criteria applied (e.g. chronic TU at edge of mixing zone)? Explain.

Exposure Assessment/Wasteload Allocation

10. What types of data gathering mechanisms were used for the WLA?

a. Application form information (e.g. Form 2C)
b. Discharge monitoring reports (DMRs)
c. 208 WQM plan
d. 308 letters (ambient/effluent monitoring)
e. Administrative orders (AOs)
f. Intensive stream survey
g. Ambient fixed station monitoring
h. Other sources (specify)

11. Was a mixing zone concept used for this permit? Yes/No. Is it a complete mixing zone? Yes/No. Where do the toxicity limits apply?

12. How were the mixing zones determined?

a. Dye studies
b. Desktop calculations
c. Other (specify)

13. For this permit, was wasteload allocation modeling beyond dilution calculation for toxicity performed? Yes/No. If no, go to 13. If yes, describe the type of calculation used and identify the parameters that are modeled?

a. Whole effluent
b. Chemical specific
c. Both

14. What type of model was used to perform the WLA?

a. Steady-state Model name _____
b. Dynamic
c. Other (explain)

15. Are models calibrated? Yes/No. Verified? Yes/No. Has the State established minimum data requirements before a wasteload allocation model can be considered calibrated and verified? Yes/No. If yes, what data were used?

    a. Data from selected sites extrapolated to other areas
    b. Site-specific data collected from each WLA
    c. Other (explain)

16. What stream design flow is specified? Is this a seasonal flow?

    a. 1Q10 applied to acute criteria _____ CFS
    b. 7Q10 applied to chronic criteria
    c. Others (specify)

17. Was nonpoint source contribution estimated? If so, how?

    a. As low flow background/headwater concentration
    b. Other (explain)

18. Were contributions of toxicants from sediments to overlying water included in the assessment? Yes/No. If yes, explain how.

19. Is the valence of permitted pollutants assessed (e.g. hexavalent chromium or trivalent chromium)? Yes/No.

20. Were the effects of hardness/temperature/pH determined for heavy metals, ammonia, etc.? Explain.

21. Was production basis in the permit a reasonable measure of average actual production, not design production capacity? (See Form 2C, Items III-B and C.) Specify production basis.

    a. Maximum production during high month of previous year _____
    b. Monthly average for the highest of previous year _____
    c. Other (explain): _____

22. Based on question 21, what is the representative flow from this facility?

    _____ MGD or _____ CFS

    a. How was representative flow determined? _____
    b. Specify how determined (e.g. actual measurements, production, etc.)

    _____

    _____

Permit Derivation Procedures

23. How were the toxicant and toxicity limits for this permit derived from the WLA?

    a. EPA Technical Support Document

i. Required effluent performance
ii. Single valule from a steady state analysis
iii. Steady state values with a specified duration or with a specified permit limit probability basis.

b. State toxic control strategy procedures
c. Other (explain): _____

_____

24. Specify what statistical methods were used and explain what calculations were performed to develop limits.

25. Were daily maximum and daily average developed for each parameter? Yes/No. If so, are they different? Yes/No. Was long-term average calculated? Yes/No.

26. Is monitoring frequency adequate to judge compliance?

27. Are drinking water intakes near discharge? Yes/No. Have they been considered in permit derivation? Yes/No. Were human health concerns addressed?

28. Were BMPs used to address toxicant/toxicity concerns?

29. Are the water quality-based permit limits at least as stringent as Federal technology-based requirements, as required by the Clean Water Act (301(b) and (c))? If not, explain why.

30. a. How are controls established for pollutants which are present in 2C application, monitoring reports, or other documents, but are not limited specifically in the permit?

    b. Are there pollutants for which limitations are appropriate but the permit only requires monitoring (e.g. toxicity limits as well as whole-effluent testing)? Why?

31. Have the toxicity-based limits associated with this permit been entered into the PCS database?

32. Is a Toxicity Identification Evaluation (TIEs) and/or Toxicity Reduction Evaluation (TREs) required? If so, describe the plan in an attachment. Is there a compliance schedule for the TIE/TRE requirements?

33. Is follow-up toxicity testing required after the TRE?

34. What steps are planned after collecting the results of toxicity tests?

CHECKLIST D-1
Monitoring Requirements: DISCHARGE SAMPLING

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Outfall # _____

Question

1. Does the permit require monitoring for every pollutant for which limitations are included in the permit? List any inappropriate omissions. Are there pollutants for which limitations or conditions are not included but which might be appropriate to monitor? Identify the pollutants and the reasons for including monitoring.

2. Does the permit stipulate, either in the general conditions or in the permit limitations, that monitoring for all pollutants with limitations be conducted according to test procedures approved under 40 CFR part 136? Identify any exceptions.

3. Does the permit require monitoring the volume of effluent discharged from the outfall? If not, is an explanation provided?

4. Are effluent sampling frequencies specified for every pollutant for which monitoring is required? Are these frequencies appropriate to give accurate results? Specify for each pollutant (e.g., daily, weekly, quarterly, etc.): _____

5. Are appropriate sampling procedures (i.e., grab, composite) used?

CHECKLIST D-2
Monitoring Requirements: DISCHARGE REPORTING

Question

1. Are there any pollutants for which discharge monitoring reports are not required at least once a year? List them.

2. Is reporting on discharge monitoring report (DMR) forms required? (122.41 [1][4])

3. Specify discharge reporting frequency or frequencies required in permit for the outfall under review (e.g., monthly, quarterly, etc.):

_____

CHECKLIST E-1

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Outfall # _____

Question

1. Does the permit include a compliance schedule(s) for each outfall that is not in compliance with the limitations specified in the permit?

2. Are distinct interim requirements (milestones) with specific dates included in compliance schedule(s)?

3. What is the basis for interim limitations? Was actual plant performance reviewed prior to developing interim limitations?

4. Is the time between each interim date in the compliance schedule(s) less than one year? If not, does the permit specify interim dates for submission of reports?

5. Does the compliance schedule provide for final compliance of BPT, BCT, and BAT permit limitations?

APPENDIX 6

Steam Electric Power PQR Checklist

Date _____

Steam Electric Power Generating Industry
Permit Quality Review Checklist

General Information

Region _____ State _____

NPDES # _____

Discharger _____

Issuance Date _____

Date "Start of Construction" _____

New Source, 1974 - 1982? _____

New Source, Post 1982? _____

Applicable Regulations _____

Contractor assistance used to write permit? _____

General Comments & Basis of Permit Selection:

_____

_____

_____

HQ Reviewer _____

Regional Permit staff representative _____

Permit file complete? _____

Follow-up necessary? _____

Steam Electric Power Generating Industry Permit Quality Review

REVIEWER SUMMARY

A. Procedural Requirements (Administrative Records, Public Notices, State Certification, Modifications, Enforcement Considerations)

B. Permit Conditions (Boilerplate, Special Conditions)

C. Effluent Limitations (Coverage, Basis, Water Quality)

D. Monitoring (Sampling, Reporting)

E. Compliance (Inclusion of Schedule)

F. <u>Other</u> (Specify)

CHECKLIST A-1

Procedural Requirements: ADMINISTRATIVE RECORDS

Question

1. List any of the following items that have been omitted inappropriately from the file, or provide explanation.

   a. Permit application and any support data furnished by applicant
   b. Draft permit
   c. Statement of basis or fact sheet
   d. All documents cited in statement of basis or fact sheet
   e. 316(a) and (b) documentation and decision
   f. 301(g) modification documentation and decision
   g. Basis for interval limitation/monitoring point (per 122.45)
   h. All comments received during public comment
   i. Tape or transcript of any hearings held and any written materials submitted at hearing
   j. Response to significant comments raised during comment period and/or hearing
   k. Final permit
   l. Explanation of changes from draft to final permit

CHECKLIST A-2
Procedural Requirements: PUBLIC NOTICE AND COMMENT

Question

1. Was a public notice issued of the preparation of draft permit and providing an opportunity for comment at least 30 days prior to final permit decision?

2. Was a public hearing held?

3. Was a notice of public hearing issued at least 30 days prior to hearing?

4. Was a summary response to significant comments raised during comment period and/or hearing prepared and issued at time of final permit decision?

CHECKLIST A-3
Procedural Requirements: STATE CERTIFICATION

Question

1. Was a state certification or waiver of state certification received?

2. List any conditions in the state certification not included in the permit. Indicate any reasons provided for omissions.

CHECKLIST A-4
Procedural Requirements: RECORDS OF MODIFICATION

Question

1. Does the permit documentation indicate that the permit was modified, or revoked and reissued?

2. Was the permit modified pursuant to 40 CFR 122.62(a)?
   If "yes", specify the basis identified in the permit documentation: (alterations; new information; new regulation; compliance schedules; variance request; reopener; pretreatment).

3. Did cause exist for modification or revocation and reissuance pursuant to 40 CFR 122.62(b)? Specify cause:

   a. Cause exists for termination, as provided in 40 CFR 122.64 (noncompliance; misrepresentation of or failure to disclose facts; endangerment to human health or environment; change in condition);
   b. Transfer of permit; (122.61)
   c. Other (specify)

4. Does the permit documentation indicate that the procedures of 40 CFR 124.5 for permit modification, revocation and reissuance or termination were followed?

   Major modification: _____ List public notice steps

   Minor modification: _____

CHECKLIST A-5
ENFORCEMENT INFORMATION

Question

1. Do DMR's show violation with permit? Yes ___ No ___
2. Do inspection reports show violation with permit? Yes ___ No ___
3. Do DMR's show violation with Guidelines? Yes ___ No ___
4. Do inspection reports show violation with Guidelines? Yes ___ No ___
5. Does the permit documentation indicate that any enforcement actions have been taken?
   Briefly describe nature of action(s), date(s): _____

   _____

   _____

CHECKLIST B-1
Permit Conditions: BOILERPLATE

Question

1. Identify whether the following general conditions have been incorporated into the permit, either directly or by reference to 40 CFR Part 122.41 (or, if permit was issued prior to April 1983, by reference to 40 CFR Parts 122.7 and 122.60). Identify any variation from the regulation language.

122.41-
(a) Duty to comply
(b) Duty to reapply
(c) Duty to halt or reduce activity
(d) Duty to mitigate
(e) Proper operation and maintenance
(f) Permit actions
(g) Property rights
(h) Duty to provide information
(i) Inspection and entry
(j) Monitoring and records (Including the requirement to report more frequent sampling)
(k) Signatory requirement
(l) Reporting requirements (including compliance schedule, noncompliance, and DMR reporting)
(m) Bypass
(n) Upset

2. If the general conditions are included by reference, is the CFR citation, date and copy of the regulations provided? If "no", specify missing item(s): _____

3. Does the permit require notification to the Director as soon as the permittee knows or has reason to believe that any activity has occured or will occur which would result in the discharge of any toxic pollutant, if that discharge will exceed the "notification levels" specified in 40 CFR Part 122.42(a)(1)?

4. Does the permit require notification to the Director as soon as the permittee knows or has reason to believe that it has begun or expects to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application?

5. Is the permit effective for a fixed term which does not exceed five (5) years from date of issuance?

CHECKLIST B-2

Permit Conditions: SPECIAL CONDITIONS if appropriate:

1. Are best management practices (BMPs) included in the permit to:

   a. Minimize surface runoff volumes?
   b. Prevent the addition of dilution water to comply with effluent requirements?
   Briefly describe BMPs included in permit.

2. Are any other special conditions requiring BMPs included in the permit? Identify and specify reason for inclusion.

3. Besides BMPs, are there any other special conditions? Briefly describe the requirements and their basis.

CHECKLIST C-1
Effluent Limitations: TRANSLATING THE PERMIT APPLICATION TO PERMIT LIMITATIONS

Introduction: Question #1 applies to all outfalls. For the remaining questions, complete one checklist for each individual outfall selected by the review team for review.

Outfall # _____

Question

1. Have a set of effluent limitations or conditions been included in the permit for every outfall? (See Permit Application)

2. Are there pollutants for which limitations or conditions are not included but which might be appropriate to limit? Identify the pollutants and the reasons for not including limitations.

CHECKLIST C-2
Effluent Limitations: BASIS FOR LIMITATIONS

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Question

1. Are the pollutant limitations based on the effluent guidelines, best professional judgement and/or water quality standards?

2. Are limitations for all pollutants in continuous discharges expressed as both maximum daily values and average monthly values?

3. For those limitations not expressed as both maximum daily values and average monthly values, does the permit documentation indicate that it would be impracticable to set both?

4. Are limitations for all pollutants (except pH, temperature and/or radiation) expressed in mass terms or as concentrations?

5. If limitations are expressed in mass units, does the permit documentation demonstrate (specify):

   a. If an effluent guideline applies, the applicable limitations are expressed in mass units; or

b. The relationship of the pollutant discharged to a measure of operation.
c. That the flowrate basis in the permit is a reasonable measure of average actual flowrate of power plant wastewater. The bases for <u>each</u> wastestream should be documented.

6. Is increased chlorine discharge permitted due to:

a. "Cannot operate at or below this level" per 40 CFR 423.12(b)(8), 423.13(c)(2), 423.13(d)(2) or 423.15(i)(2) or (j)(2).
b. "Macroinvertebrate control per 423.15(h)(2).

7. Was a variance issued as a result of a 316(a) or (b) determination?

CHECKLIST C-3

Effluent Limitations: APPLICABLE EFFLUENT GUIDELINES

Introduction: Complete one checklist for each individual outfall selected by the review team for review, if effluent guidelines are applicable. (See Appendix A for Applicable Definitions and Guidelines).

Question

1. Is the facility a New Source? 1974 ____ 1982 ____

2. Were effluent guideline limitations used as the basis for permit effluent limitations at the outfall?

3. Are all pollutant limitations in the effluent guidelines included in the permit? (TSS, Oil & Grease, C_4, Fe, FAC, TRC, Cr, Zn, pH, PCBs)

4. If 1974 NSPS applies, are all of the provisions in Appendix B addressed? Are the more stringent 1982 BAT provisions shown in Appendix A, also addressed for the same facilities?

5. Are permit limits expressed as mass limits or concentration limits as allowed per 40 CFR 423.12(b)(11), 423.13(g) or 423.15(m)? If mass limits are used, are the flow rates used to calculate the limits documented? If 1974 NSPS applies, are mass limitation specified?

6. What is the basis for determining wastestream flows used in mass limit or flow weighted concentration calculations?

_____

7. Does the permit allow untreated overflow during 10 year 24 hour precipitation events per 40 CFR 423.12(b)(10) and 423.15(1)? If yes, is the volume of the treatment pond documented and the calculations available which check its capacity during 10 year 24 hour storms?

8. Are various wastestreams combined for treatment or discharge? Are combined limits determined in accordance with EPA "Guidance for NPDES Permits Issued to Steam Electric Power Plants", August 22, 1985?

   a. If commingled streams do not include stormwater runoff, are concentration limits flow weighted? Is credit given for pollutants present in unregulated flows? Is the basis for that credit documented including adequate supporting data and consideration for removal provided in treatment facility?
   b. If commingled streams include stormwater runoff, has the capacity of the treatment system been determined, and the appropriate limits been applied? (See example calculations in Appendix C). Alternatively, have flow weighted limitations been included for wet weather?
   c. If cooling tower blowdown is discharged to the ash pond, have free available chlorine effluent limits been applied prior to mixing?

9. Are nonchemical metal cleaning wastes included with the metal cleaning waste sources? If not, what is the basis for exclusion? Is treatment provided?

10. Is once through cooling water present? Is BAT or BPT more stringent? Are the more stringent limitations applied?

11. Was a best professional judgement (BPJ) analysis the basis for the permit effluent limitation at the outfall?

12. Can all major inputs to the BPJ analysis be identified? (Note: Inputs may include: permit application, state certification, contractor reports, special reports from permittee, effluent guidelines development documents.)

13. Were water quality standards the basis for the permit effluent limitations at the outfall?

14. Is the basis of the water quality-based limitation identified in the permit file?

    Specify:
    a. State certification
    b. Other: _____

15. Have all applicable water quality standards toward which water quality analysis is directed been clearly identified?

16. Does the permit documentation explain any changes in the pollutant limitations between the draft and the final permits? Specify basis:

    a. Final limitations are the same as in the draft permit;
    b. Limitations in the draft permit were revised based on issues raised during the comment period;
    c. Limitations in the draft permit were revised based on negotiations with the permittee;
    d. Other: _____

17. Do 316(a) and (b) or 301(g) decisions affect monitoring and/or effluent limitations? How? _____

CHECKLIST C-4

Effluent Limitations: WATER QUALITY BASED LIMITATIONS

Introduction: This checklist is intended to point review team inquiry toward those questions which can help in determining whether or not the water quality analysis was "reasonable." Review Team should provide a qualitative explanation of the limitation development process on the evaluation form. Complete one checklist for each individual outfall selected by the review team for review. If limits are based on approved State Water Quality standards and if EPA did not participate in the WLA process, some information on modeling nay not be available at the Regional Office.

Outfall # _____

Question

Water Quality Standards and Designated Uses

1. Under what mechanism are toxics controls required?

   a. State law
   b. State regulation
   c. State policy (written)
   d. State guidance (written)

2. How/why was this permit selected for water quality-based toxics control?

   a. Effluent toxicity screening
   b. Ambient stream monitoring results
   c. Inspection
   d. DMR data
   e. Results of dilution evaluation
   f. Pretreatment program
   g. Identified water '87 SPMS
   h. 208 WQM plan
   i. Other

3. What is the designated water use or classification?

   a. Industrial
   b. Potable water source
   c. Body contact recreation
   d. Limited contact recreation
   e. Commercial fishing, cold water/warm water fishery
   f. Sport fishing
   g. Agricultural
   h. Other (explain)

4. Is there a State toxics control strategy? Yes/No. If yes, are permit derivation procedures specifically included in the State's toxic control strategy? Yes/No.

5. What is the basis for pollutant-specific limits, such as heavy metals, organics, etc?

   a. State water quality standards/criteria
   b. Narrative state water quality/criteria
   c. EPA criteria
   d. EPA water quality advisories
   e. FDA action levels
   f. Drinking water RMCLs/MCLs
   g. Other

6. Complete the chart for each pollutant parameter with specific limits: (attach additional sheet is necessary)

	Parameters		
Basis of Limit	Metals	Organics	Non-Conventionals
State WQS			
State Narrative WQ Criteria			
EPA Criteria			
WQ Advisory			
FDA Action Levels			
DW Standards			
Promulgated Effluent Guidelines			
Best Professional Judgement			
Other			

7. a. If applicable, what is the basis for whole effluent toxicity limits? (Attach copy of permit language showing form of limit).

   i. State Water Quality Standards
   ii. EPA Technical Support Document (TSD) as toxic units/NOEL
   iii. Other

   b. If applicable, identify toxicity testing methods:

   i. Type (e.g., acute/chronic, flow through/static) _____
   ii. Species (e.g., Ceriodaphnia, Celenastrum fathead minnow) _____
   iii. Duration (e.g., 7 day, 96 hour) _____
   iv. Methods described in attachment _____

8. Specify the magnitude, duration, and frequency for State Water Quality Standards (for whole effluent toxicity limits) if different from EPA recommended criteria and specify where applied.

9. Was EPA criteria for toxic units used (e.g. 0.3 acute and 1.0 chronic toxic units)? Were both criteria used? Where are the criteria applied (e.g., chronic TU at edge of mixing zone)? Explain.

Exposure Assessment/Wasteload Allocation

10. What types of data gathering mechanisms were used for the WLA?

    a. Application form information (e.g. Form 2C)
    b. Discharge monitoring reports (DMRs)
    c. 208 WQM plan
    d. 308 letters (ambient/effluent monitoring)
    e. Administrative orders (AOs)
    f. Intensive stream survey
    g. Ambient fixed station monitoring
    h. Other sources (specify)

11. Was a chemical mixing zone concept used for this permit? Yes/No. Is it a complete mixing zone? Yes/No. Where do the toxicity limits apply? Was a thermal mixing zone concept used for this permit? Yes/No.

12. How were the mixing zones determined?

    a. Dye studies
    b. Desktop calculations
    c. Modeling
    d. Thermal monitoring
    e. Other _____

12. For this permit, was wasteload allocation modeling beyond dilution calculation for toxicity performed? Yes/No. If no, go to 13. If yes, describe the type of calculation used and identify the parameters that are modeled?

    a. Whole effluent
    b. Chemical specific
    c. Both

14. What type of model was used to perform the WLA?

    a. Steady-state Model name _____
    b. Dynamic
    c. Other (explain)

15. Are models calibrated? Yes/No. Verified? Yes/No. Has the State established minimum data requirements before a wasteload allocation model can be considered calibrated and verified? Yes/No. If yes, what data were used?

    a. Data from selected sites extrapolated to other areas
    b. Site-specific data collected from each WLA
    c. Other (explain)

16. What stream design flow is specified? Is this a seasonal flow?

    a. 1Q10 applied to acute criteria _____ CFS
    b. 7Q10 applied to chronic criteria
    c. Others (specify)

17. Was nonpoint source contribution estimated? If so, how?

    a. As low flow background/headwater concentration
    b. Other (explain)

18. Were contributions of toxicants from sediments to overlying water included in the assessment? Yes/No. If yes, explain how.

19. Is the valence of permitted pollutants assessed (e.g. hexavalent chromium or trivalent chromium)? Yes/No.

20. Were the effects of hardness/temperature/pH determined for heavy metals, ammonia, etc.? Explain.

21. What is the basis for determining wastestream flows used in the exposure assessment/wasteload allocation? _____

    _____

Permit Derivation Procedures

22. How were the toxicant and toxicity limits for this permit derived from the WLA?

    a. EPA Technical Support Document

        i. Required effluent performance
        ii. Single value from a steady state analysis
        iii. Steady state values with a specified duration or with a specified permit limit probability basis.

    b. State toxic control strategy procedures
    c. Other (explain): _____

    _____

23. Specify what statistical methods were used and explain what calculations were performed to develop limits.

24. Were daily maximum and daily average developed for each parameter? Yes/No. If so, are they different? Yes/No. Was long-term average calculated? Yes/No.

25. Is monitoring frequency adequate to judge compliance?

26. Are drinking water intakes near discharge? Yes/No. Have they been considered in permit derivation? Yes/No. Were human health concerns addressed?

27. Were BMPs used to address toxicant/toxicity concerns?

28. Are the water quality-based permit limits at least as stringent as Federal technology-based requirements, as required by the Clean Water Act (301(b) and (c))? If not, explain why.

29. a. How are controls established for pollutants which are present in 2C application, monitoring reports, or other documents, but are not limited specifically in the permit?
    b. Are there pollutants for which limitations are appropriate but the permit only requires monitoring (e.g. toxicity limits as well as whole-effluent testing)? Why?

30. Have the toxicity-based limits associated with this permit been entered into the PCS database?

31. Is a Toxicity Identification Evaluation (TIEs) and/or Toxicity Reduction Evaluation (TREs) required? If so, describe the plan in an attachment. Is there a compliance schedule for the TIE/TRE requirements?

32. Is follow-up toxicity testing required after the TRE?

33. What steps are planned after collecting the results of toxicity tests?

CHECKLIST D-1
Monitoring Requirements: DISCHARGE SAMPLING

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Outfall # ____

Question

1. Does the permit require monitoring for every pollutant for which limitations are included in the permit? List any inappropriate omissions. Are there pollutants for which limitations or conditions are not included but which might be appropriate to monitor? Identify the pollutants and the reasons for including monitoring.

2. Does the permit stipulate, either in the general conditions or in the permit limitations, that monitoring for all pollutants with limitations be conducted according to test procedures approved under 40 CFR Part 136? Identify any exceptions.

3. Does the permit require monitoring the volume of effluent discharged from the outfall? If not, is an explanation provided?

4. Are effluent sampling frequencies specified for every pollutant for which monitoring is required? Are these frequencies appropriate to give accurate results? Specify for each pollutant (e.g., daily, weekly, quarterly, etc.): _____

5. Are appropriate sampling procedures (i.e., grab, composite) used?

6. Is there a provision for monitoring/reporting the 120 minute per day per unit discharge time for chlorine?

CHECKLIST D-2
Monitoring Requirements: DISCHARGE REPORTING

Question

1. Are there any pollutants for which discharge monitoring reports are not required at lest once a year? List them.

2. Is reporting on discharge monitoring report (DMR) forms required? (122.41 [1][4])

3. Specify discharge reporting frequency or frequencies required in permit for the outfall under review (e.g., monthly, quarterly, etc.):

_____

CHECKLIST E-1

Introduction: Complete one checklist for each individual outfall selected by the review team for review.

Question

1. Does the permit include a compliance schedule(s) for each outfall which is not in compliance with the limitations specified in the permit?

2. Are distinct interim requirements (milestones) with specific dates included in compliance schedule(s)?

3. What is the basis for interim limitations? Was actual plant performance reviewed prior to developing interim limitations?

4. Is the time between each interim date in the compliance schedule(s) less than one year? If not, does the permit specify interim dates for submission of reports?

5. Does the compliance schedule provide for final compliance of BPT, BCT, and BAT permit limitations?

APPENDIX A

Specialized Definitions and Applicable Effluent Guidelines

APPENDIX A

Specialized Definitions

1. The term "total residual chlorine" (or total residual oxidants for intake water with bromides) means the value obtained using the amperometric method for total residual chlorine described in 40 CFR Part 136.

2. The term "low volume waste sources" means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations are otherwise established in this part. Low volume wastes sources include, but are not limited to: wastewaters from wet scrubber air pollution control systems, ion exchange water treatment system, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, and recirculating house service water systems. Sanitary and air conditioning wastes are not included.

3. The term "chemical metal cleaning waste" means any wastewater resulting from the cleaning of any metal process equipment with chemical compounds including, but not limited to, boiler tube cleaning.

4. The term "metal cleaning waste" means any wastewater resulting from cleaning (with or without chemical cleaning compounds) any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.

5. The term "fly ash" means the ash that is carried out of the furnace by the gas stream and collected by mechanical precipitators, electrostatic precipitators, and/or fabric filters. Economizer ash is included when it is collected with fly ash.

6. The term "bottom ash" means the ash that drops out of the furnace gas stream in the furnace and in the economizer sections. Economizer ash is included when it is collected with bottom ash.

7. The term "once through cooling water" means water passed through the main cooling condensers in one or two passes for the purpose of removing waste heat.

8. The term "recirculated cooling water" means water which is passed through the main condensers for the purpose of removing waste heat passed through a cooling device for the purpose of removing such heat from the water and then passed again, except for blowdown, through the main condenser.

9. The term "10 year, 24/hour rainfall event" means a rainfall event with a probable recurrence interval of once in ten years as defined by the National Weather Service in Technical Paper No. 40. "Rainfall Frequency Atlas of the United States," May 1961 or equivalent regional rainfall probability information developed therefrom.

APPENDIX A (Continued)

Specialized Definitions

10. The term "blowdown" means the minimum discharge of recirculating water for the purpose of discharging materials contained in the water, the further buildup of which would cause concentration in amounts exceeding limits established by best engineering practices.

11. The term "average concentration" as it relates to chlorine discharge means the average of analyses made over a single period of chlorine release which does not exceed two hours.

12. The term "free available chlorine" shall mean the value obtained using the amperometric titration method for free available chlorine described in "Standard Methods for the Examination of Water and Wastewater." page 112 (13th edition).

13. The term "coal pile runoff" means the rainfall runoff from or through any coal storage pile.

APPENDIX A (Continued)

40 CFR 423.12 and 423.13 Summary
Mass Limits Based on Concentration Guidelines

Wastestream	BPT	BAT
All	pH = 6-9	N.A.
All	PCBs prohibited	PCBs prohibited
Low Volume Wastes	TSS = 100/30 mg/l(max/avg) O&G = 20/15 mg/l(max/avg)	N.A. N.A.
Fly Ash and Bottom Ash	TSS = 100/30 mg/l(max/avg) O&G = 20/15 mg/l(max/avg)	N.A. N.A.
Metal Cleaning	TSS = 100/30 mg/l(max/avg) O&G = 20/15 mg/l(max/avg) Cu = 1/1 mg/l(max/avg) Fe = 1/1 mg/l(max/avg)	N.A. N.A. N.A. N.A.
Chemical Metal Cleaning		Cu = 1/1 mg/l(max/avg) Fe = 1/1 mg/l(max/avg)
Once Through Cooling	FAC = 0.5/0.2 mg/l(max/avg)	For plants > 25 megawatts TRC = 0.2 max For plants < 25 megawatts FAC = 0.5/0.2 mg/l (max/avg)
Cooling Tower Blowdown	FAC = 0.5/0.2 mg/l(max/avg)	FAC = 0.5/0.2 mg/l(max/avg) Cr = 0.2/0.2 mg/l(max/avg) Zn = 1.0/1.0 mg/l(max/avg) All other P.P. = zero
Chlorine Discharge Period	2 hours/day, only 1 unit/day No simultaneous discharge	2 hours/day, only 1 unit/day Simultaneous discharge permit
Coal Pile Runoff	TSS = 50 mg/l instantaneous maximum	N.A.

Notes:

1. Max refers to the 24 hour average except for FAC and TRC where it means instantaneous maximum.

2. Avg refers to the 30 day average except for FAC where it means to the average over an individual FAC discharge period.

3. Check simultaneous vs. sequential unit chlorination requirements.

APPENDIX B

1974 NSPS Standards for Facilities that Commenced Construction Between 1974 and 1982

§ 423.15 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

(a) The pH of all discharges, except once through cooling water, shall be within the range of 6.0 9.0.

(b) There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

(c) The quantity of pollutants discharged from low volume waste sources shall not exceed the quantity determined by multiplying the flow of low volume waste sources times the concentration listed in the following table:

Effluent characteristic	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100	30
Oil and Grease	20	15

(d) The quantity of pollutants discharged in bottom ash transport water shall not exceed the quantity determined by multiplying the flow of bottom ash transport water times the concentration listed in the following table and dividing the product by 20:

Effluent characteristic	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100	30
Oil and Grease	20	15

(e) There shall be no discharge of TSS or oil and grease in fly ash transport water. [REMANDED]

(f) The quantity of pollutants discharged from metal cleaning wastes shall not exceed the quantity determined by multiplying the flow of metal cleaning wastes times the concentration listed in the following table:

Effluent characteristic	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100	30
Oil and Grease	20	15
Copper, Total	1.0	1.0
Iron, Total	1.0	1.0

(g) The quantity of pollutants discharged in boiler blowdown shall not exceed the quantity determined by multiplying the flow of boiler blowdown times the concentration listed in the following table:

Effluent characteristic	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100	30
Oil and Grease	20	15
Copper, Total	1.0	1.0
Iron, Total	1.0	1.0

(h) The quantity of pollutants discharged in once through cooling water shall not exceed the quantity determined by multiplying the flow of once through cooling water times the concentration listed in the following table:

Effluent characteristic	Maximum concentration (mg/l)	Average concentration (mg/l)
Free available chlorine	0.5	0.2

(i) The quantity of pollutants discharged in cooling tower blowdown shall not exceed the quantity determined by multiplying the flow of cooling tower blowdown sources times the concentration listed in the following table:

Effluent characteristic	Maximum concentration (mg/l)	Average concentration (mg/l)
Free available chlorine	0.5	0.2

Effluent characteristic	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
Materials added for corrosion inhibition including but not limited to zinc, chromium, phosphorous	(1)	(1)

[1] No detectable amount.

(j) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the regional administrator or state, if the state has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level of chlorination.

(k) In the event that waste streams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property controlled in paragraphs (a) through (j) of this section attributable to each controlled waste source shall not exceed the specified limitation for that waste source.

(l) There shall be no discharge of heat from the main condensers except:

(1) Heat may be discharged in blowdown from recirculated cooling water systems provided the temperature at which the blowdown is discharged does not exceed at any time the lowest temperature of recirculated cooling water prior to the addition of the make up water.

(2) Heat may be discharged in blowdown from cooling ponds provided the temperature at which the blowdown is discharged does not exceed at any time the lowest temperature of recirculated cooling water prior to the addition of the make up water.

(39 FR 36198, Oct. 8, 1974, as amended at 40 FR 7096, Feb. 19, 1975; 40 FR 23987, June 4, 1975)

§ 423.16 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the generating unit subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standards set forth in 40 CFR Part 128, except that, for the purpose of this section, 40 CFR 128.133 shall be amended to read as follows:

In addition to the prohibitions set forth in 40 CFR 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in 40 CFR 423.15 except for the following pollutants or pollutant parameters for which the following pretreatment standards are established:

Pollutant or pollutant parameter	Pretreatment standard
Heat	No limitation
Free available chlorine	Do.
Total residual chlorine	Do.

If the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant.

(39 FR 36198, Oct. 8, 1974, as amended at 40 FR 7096, Feb. 19, 1975)

NOTE: 40 CFR 423.45 REGULATIONS FOR COAL PILE RUNOFF ARE APPLICABLE.

APPENDIX C

Sample Effluent Limitations Calculations
Commingled Wastestreams with or without Stormwater Runoff

5/23/85
CHK

PLANT EXAMPLE

Available information

Low volume wastes	10.0 MGD
Ash transport water	20.0
Cooling tower blowdown	5.0
Auxiliary cooling water	5.0
Metal cleaning waste	0.2 MG/cleaning(1)
Total plant dry weather flow	40.0 MGD
Coal pile area	30.0 acres
Parking lot area	16.0
Roof and yard drain, etc. area	35.0
Ash pond area(2)	100.0
Total runoff area	181.0 acres
10-year, 24-hour storm (10Y24H)	5.5 inches/day
Annual rainfall	60.0 inches (0.164 inch/day)

Calculations

Runoff from 10Y24H storm at a runoff coefficient of 1.0(3) = 27.0 MG
Total ash pond volume necessary for use of alternate approach = 67.0 MG
= 206 A-ft

Notes:

1. Not used in calculations since metal cleaning wastes and ash transport water do not normally occur simultaneously.
2. Including ash delta and interior dike slopes.
3. A runoff coefficient of 1.0 is recommended since (1) the 10Y24H storm is generally part of a larger storm system and the ground is likely to be nearly saturated and (2) storms of larger magnitude than the 10Y24H will occur but are not being considered in the calculations.

Source: Hanmer, R.W., EPA Office of Water Enforcement and Permits, August 22, 1985. Guidance for NPDES Permits Issued to Steam and Electric Power Plants.

5/23/85
CHK

CASE I

Ash pond water surface area (acres)	80.0
Average water depth (feet)	3.25
Available volume (A-ft)	260.0

Since the pond volume exceeds the necessary storage volume of 206 A-ft required to use the alternate approach, only dry weather flows need be used in calculating effluent limitations.

Sources	Flow (MGD)	Daily Average Limitations (mg/l)		Daily Maximum Limitations (mg/l)	
		TSS	O&G	TSS	O&G
Low volume wastes	10.0	30	15	100	20
Ash transport water	20.0	30	15	100	20
Auxiliary cooling water	5.0	5(1)	0(1)	10(1)	1(1)
Cooling tower blowdown	5.0	30(1)	0	60(1)	3(1)
Flow weighted concentrations	(40.0)	26.9	11.3	83.8	15.5
Effluent limitations		27	11	84	16

Note:
1. Based on BPJ and/or available data

6/26/85
CHK

CASE II

Ash pond water surface area (acres)	50.0
Average water depth (feet)	3.00
Available volume (A-ft)	150.0

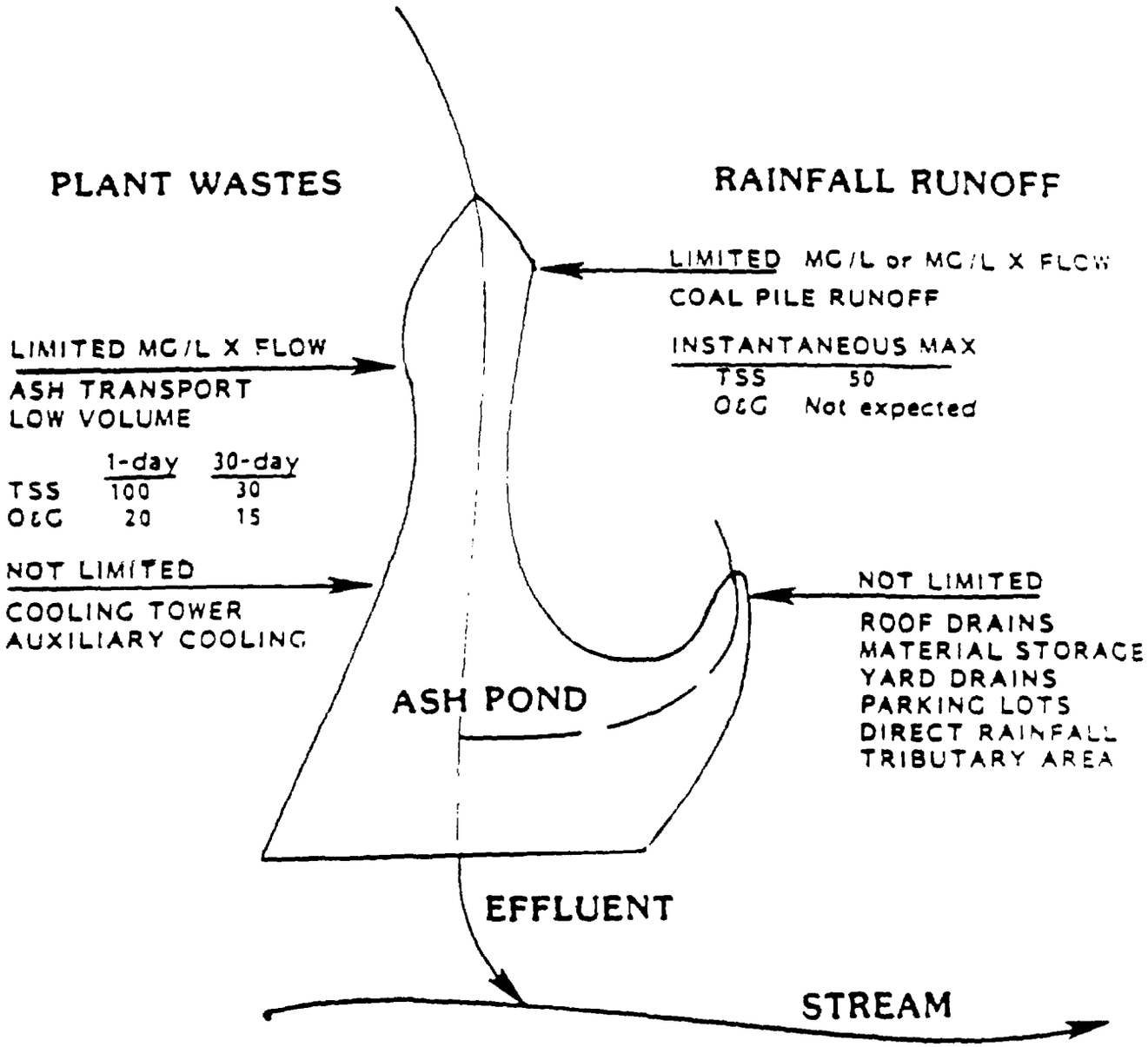
Since the pond volume is less than the necessary storage volume of 206 A-ft required to use the alternative approach, wet weather flows must be used in calculating effluent limitations unless the permittee is willing to increase the available volume.

Sources	DA Flow (MGD)	Daily Average Limitations (mg/l) TSS	Daily Average Limitations (mg/l) O&G	DM Flow (MGD)	Daily Maximum Limitations (mg/l) TSS	Daily Maximum Limitations (mg/l) O&G
ow volume wastes	10.0	30	15	10.0	100	20
sh transport water	20.0	30	15	20.0	100	20
uxiliary cooling water	5.0	5(2)	0(2)	5.0	10(2)	1(2)
ooling tower blowdown	5.0	30(2)	0(2)	5.0	60(2)	3(2)
oal pile runoff	0.13(1)	30(3)	0(5)	4.48(6)	30(3)	0(5)
arking lot runoff	0.07(1)	20(2)	5(2)	2.39(6)	30(2)	3(2)
oof and yard drains, etc.	0.16(1)	20(2)	0(2)	5.23(6)	30(2)	0(2)
sh pond surface rainfall	0.45(1)	20(4)	0(4)	14.93(6)	50(4)	0(4)
low weighted concentrations	(40.81)	26.8	11.03	(67.03)	66.53	9.4
ffluent limitations(7)		27(7)	9(7,8)		67(7)	9(7,8)

OTES:

1. Runoff flows based on annual average rainfall of 0.164 inch per day with a runoff coefficient of 1.0. Another rainfall rate based on BPJ might be used such as the average rainfall rate for the maximum month, etc.
2. Based on BPJ and/or available data.
3. BPJ that 30 mg/l as both daily average and daily maximum is equivalent to the guideline limitation of 50 mg/l as an instantaneous maximum.
4. BPJ that partial credit for TSS is applicable for runoff on the pond surface which provides dilution, but also tends to "push" water already in the pond out. (Note that the pond surface is only 50% of the pond acreage.) No credit is given for O&G from direct rainfall.
5. Guideline provides no O&G contribution from this source.
6. Runoff flows based on 10Y24H rainfall of 5.5 inches per day with a runoff coefficient of 1.0.
7. Limitation must be less than or equal to the limitation derived for Case I.
8. Since the calculated daily maximum value [illegible] is less than [illegible]

GUIDELINE REQUIREMENTS



APPENDIX 7

PCS List Example

MAJOR MUNIS ISSUED OHIO IN 84 AND 85

QL ********** Q

FNMS	NPID	PERD	PERE
CHILLICOTHE - EASTERLY	OH0024406	01/09/85	01/06/90
CIRCLEVILLE WTR POL CONT PLT	OH0024465	06/26/85	06/23/90
COLUMBUS-JACKSON PIKE PLT	OH0024732	07/12/85	07/08/90
COLUMBUS-SOUTHERLY PLT	OH0024741	07/12/85	07/08/90
CONNEAUT, CITY OF	OH0024767	03/26/84	01/01/88
COSHOCTON WTR POLL CONTROL	OH0024775	12/31/84	12/28/89
DEFIANCE SEWAGE TRMT PLT	OH0024899	09/23/85	09/20/90
DELAWARE POL CON FAC	OH0024911	06/06/85	06/03/90
DELPHOS WWTP	OH0024929	08/23/84	08/20/89
ENGLEWOOD CITY OF	OH0025011	09/12/85	09/09/90
FINDLAY WSTEWTR TRMT PLT	OH0025135	05/01/85	04/28/90
MCD FRANKLIN AREA	OH0025275	05/08/85	05/05/90
FREMONT WSTWTR TRMT PLT	OH0025291	05/13/85	05/10/90
GALION-CITY OF	OH0025313	06/21/84	01/28/86
GREENE COUNTY COMM-BEAVER CREE	OH0025381	02/27/85	02/24/90
GREENVILLE-CITY OF	OH0025429	10/23/84	10/20/89
HAMILTON CITY OF WSTEWTR PLT	OH0025445	09/26/85	09/23/90
HEATH STP	OH0025763	08/22/85	08/19/90
KENTON WASTEWATER TREATMENT PL	OH0025925	08/23/84	08/20/89
LIMA DEPT OF UTILITIES WSWTR	OH0026069	05/08/85	05/05/90
LORAIN-EAST SIDE	OH0026093	11/28/84	11/25/89
MIDDLEBURG HEIGHTS, CITY OF	OH0026506	07/26/84	07/23/89
MIDDLETOWN-CITY OF	OH0026522	09/24/85	09/21/90
NEW PHILADELPHIA-CITY OF	OH0026727	03/28/85	03/25/90
NORTH ROYALTON WSTWTR TRMT PLT	OH0026794	07/26/84	07/23/89
OXFORD-CITY OF	OH0026930	03/28/85	09/25/89
SANDUSKY WTR POL CONT	OH0027332	08/23/84	08/20/89
STRUTHERS WSTWTR TRMT PLT	OH0027600	04/19/84	01/15/89
SUMMIT CNTY COMM-MACEDONIA IS	OH0027642	07/26/84	07/01/89
TROY WSTWTR POL CONTROL CENTER	OH0027758	08/23/84	08/20/89
TWINSBURG-CITY OF	OH0027863	10/30/85	10/27/90
VAN WERT STP	OH0027910	09/30/85	09/27/90
WAPAKONETA WASTE WATER WORKS	OH0027952	10/23/84	10/20/89
WASHINGTON COURT HOUSE WSTEWTR	OH0028002	06/10/85	06/07/90
WILMINGTON WTR PLT	OH0028134	03/05/84	03/02/89
WOOSTER WTR POL CONT	OH0028185	10/03/84	09/30/89
XENIA CITY OF-FORD ROAD WASTEW	OH0028193	02/19/85	02/16/90
XENIA CITY OF-GLADY RUN WASTEW	OH0028207	02/19/85	02/16/90
ELCO CORPORATION	OH0029089	07/26/85	07/23/90
DIAMOND SHAMROCK	OH0029149	09/28/84	09/27/86
NORTHEAST OHIO REGIONAL SEWER	OH0033693	07/27/84	07/23/89
PLASKON ELECTRONIC MATERIALS	OH0033731	03/29/85	03/26/90
LUCAS CO-MAUMEE RIVER WWTP	OH0034223	09/18/85	09/15/90
HAYES-ALBION CORP-BRYAN	OH0034380	08/20/85	08/17/90
LAKE COUNTY-MADISON SWD TRMT P	OH0036790	08/02/84	07/30/89
MAHONING COUNTY-BOARDMAN PLT	OH0037249	08/30/84	08/27/89
BROOKPARK-CITY OF	OH0038024	07/26/84	07/23/89
GREENE CNTY COMM-SUGAR CREEK	OH0040592	02/27/85	02/24/90

APPENDIX 8

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INDEX TO NPDES REGULATIONS

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APPENDIX 9

Evaluation Summary Form

MUNICIPAL

PERMIT QUALITY REVIEW

Evaluation Summary

Date: _____
Region:
State: _____

Review Team:

_____
_____
_____

Principal Observations

A. Positive Aspects

_____
_____
_____
_____

B. Errors and Omissions

_____
_____
_____
_____
_____

C. Suggestions

_____
_____
_____
_____
_____
_____
_____
_____

APPENDIX 10

Sample PQR Report

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 20 1985

OFFICE OF WATER

MEMORANDUM

SUBJECT: Maryland PQR Evaluation Report

FROM: Gregory T. McBrien
Municipal Programs Branch

TO: Martha G. Prothro, Director
Permits Division

THRU: James D. Gallup, Chief
Municipal Programs Branch

Thomas Laverty, Chief
Program Implementation Section

Attached for your review is my report on the permit evaluation from the Maryland PQR which was conducted with Region III on July 23-24, 1985. The industrial permits evaluation part of the report was provided by Bob Cantilli.

In general the permits are adequate and the permit files, especially the justifications for water quality-based limits, are self-explanatory. Two issues require follow-up by Permits Division. First, the boilerplate used by Maryland for municipal and industrial permits should be updated to reflect the regulation changes promulgated on April 1, 1983 and September 26, 1984. I will send a copy of the draft model permit developed by Bill Diamond's branch to Jeff Haas at Region III. Jeff can assist Maryland with their boilerplate revisions. Second, the last municipal permit that was reviewed (after the exit meeting was conducted) indicated some poor procedures with regard to interim permit limits. The permit (Havre de Grace) appeared on the Enforcement Division exceptions list because the interim limits are relaxed in the new permit (issued on July 24). Region III recommended the new interim limits in a letter to the State dated February 28, 1984. The Region informed me after the PQR that new information revealed that the old interim limits were miscalculated. However, the justification for less stringent interim limits does not appear in the permit file. Evidently the plant

can not meet the old limits but no enforcement actions were indicated. The Region/State should be notified that all future permit actions must be properly documented. The Havre de Grace permit was questioned by both the Chesapeake Bay Foundation and the EPA Chesapeake Bay Program Office (Annapolis) after the public comment period had closed. Without procedure changes at the Region and State such problems could reoccur in the future.

I suggest that copies of the report be sent to Jeff Haas and Joe Galda.

Attachment

cc: Bill Diamond
Geoff Grubbs
Steve Bugbee

Permit Quality Review (PQR)

State of Maryland
Department of Health and Mental Hygiene
Office of Environmental Programs
Baltimore, MD
July 23 - 24, 1985

Participants:

State of Maryland - Office of Environmental Programs

Richard B. Sellars, Jr., Director	- Water Management Administrat
Dane Bauer, Program Administrator	- Inspection and Compliance
Jeffrey Rein, Chief	- Division of Sewerage
Georgina Havlik, Chief	- Division of Industrial Permi
Arcadio Sincero, Chief	- Municipal Permits Division

EPA Region III Water Management Division

Jeffrey Haas, Chief - MD, D.C., VA Section
Jon Hundertmark
Charlene Harrison

EPA Headquarters - Permits Division - Office of Water Enforcement and Permits

Gregory McBrien
Robert Cantilli
LeAnne Hammer

Introduction

The PQR was conducted in conjunction with a program audit of the Water Management Administration which is responsible for regulation of municipal dischargers (permitting, compliance, construction grants, water and sewer plans, etc.). Although industrial permitting and compliance are handled by the Waste Management Administration (which will be audited next year), the PQR covered industrial as well as municipal permits.

Because of the short duration of the program audit, the normal PQR evaluation was shortened. In addition only four reviewers were available for this PQR, with Bob Cantilli and Charlene Harrison reviewing industrial permits and LeAnne Hammer and Greg McBrien reviewing permits. Both Charlene and LeAnne were on their first PQR, as a training exercise. The industrial team reviewed seven permits in the following categories:

- Steam Electric
- Petroleum Refining
- Nonferrous Metals
- Metal Finishing
- Food Processing

The municipal team completed seven permits and started on an eighth. Of the eight municipals, four are majors and four are minors.

In general the permits were well written. The administrative records are complete and the permit fact sheets (rationales) are self-explanatory.

Headquarters staff would like to thank Region III for their invitation to participate in the Maryland program audit. Also the cooperation and assistance provided by the staff of the Office of Environmental Programs, State of Maryland, was greatly appreciated.

Municipal Permit Summary

The review team worked with Arcadio Sincero, Chief of the Municipal Permits Division. Maryland has a large percentage of water-quality based permits and the files generally contained a substantial amount of information on water quality modeling results. A number of files contained correspondence with EPA Region III giving results from the EPA - DIURNAL computer model.

The State of Maryland has adopted a practice of holding public hearings for all permits, including minors. A hearing officer attends each hearing and is responsible for preparing and maintaining the records of hearings. The hearing officer submits a short form to the permits group to indicate if there were comments and recommending changes or additional actions based on the comments received. The actual comments were usually not in the permit file, but were stored by the hearing officer.

The following items are the findings of the review team, which were presented at the exit meeting on July 24.

Positive Aspects

(1) The permits and files are generally complete.

(2) The permit rationale (fact sheet) format used by Maryland gives complete information on permit development. The rationale includes a log of correspondence and meetings during permit development, which is unique.

(3) There is good communication between the permits and compliance staffs during permit development. The content of compliance schedules and the appropriate interim limits are developed in consultation with the compliance group.

Errors and Omissions

(1) The permit General Conditions (boilerplate) should be updated to reflect the 4/1/83 & 9/26/84 changes to Part 122. A draft model permit produced by EPA Headquarters will be sent to EPA Region III as a basis for revision of boilerplate in Maryland and other NPDES States. Region should work with Maryland to revise the current General Conditions and add any necessary State requirements. Appendix #1 lists the boilerplate deficiencies for both municipal and industrial permits.

(2) The secondary treatment permits that were reviewed did not contain the 85% removal requirement as specified in 40 CFR Part 133*. The State originally had a boilerplate condition which referenced Part 133 but this was evidently dropped (inadvertently) between 1975 and 1980. The State should revise the standard boilerplate to include an 85% removal requirement or include it with the permit limitations and monitoring requirements in Part I of the permit form.

(3) The interim dates in the compliance schedule for Frederick City are more than one year apart (see 40 CFR 122.47(a)(3)(i)).

Suggestions

(1) To complete the permit record a brief summary of the comments and issues raised during public hearings should be kept in the permit file. The State keeps tapes or other records of hearing separately from the permit files. Often these hearings do not result in any substantive issues, but a record of the issues discussed would be helpful to permit writers if the permit is challenged or a modification request is submitted. A one page summary of the hearing would probably be sufficient.

(2) Include a section in the standard fact sheet (rationale) to clarify what has changed from the previous permit. [Evidently a change has been made recently in the Public Notice format to indicate if the new permit is a reissuance of the previous permit.] Some files already contain a handwritten copy of the permit which shows the old permit, new permit and actual performance numbers. We encourage all permit writers to include a summary like this in the file, preferably as a part of the permit rationale.

*Note: Recent changes to Part 133 published in the Federal Register on June 3, 1985 now allow modification of the 85% removal requirement in limited situations.

Follow-up

Region III should assist Maryland with boilerplate revisions for both municipal and industrial permits. A draft model permit will be forwarded to Jeffrey Haas to aid in the revisions.

Industrial Permit Summary

The review team worked with Georgina Havlik, Chief of the Industrial Permits Division. The permits were properly written on a technical (guideline/BPJ) and water quality (standards/ toxicity testing) basis and combinations of the two. There is generally good use of several sources in writing permits and developing permit limit bases.

The following items are findings of the review team, which were presented at the exit meeting on July 24, 1985.

Positive Aspects

(1) The permits and files are generally complete - all materials could be found easily.

(2) There was a good, logical use of biomonitoring and water quality modeling.

(3) There was a good use of a variety of materials in developing permit limits on either a water quality basis or BPJ basis (e.g., Development Documents, water quality data)

Errors and Omissions

(1) In some cases biomonitoring was not applied where it was necessary.

(2) Some permits were written with quarterly average permit limits rather than monthly averages.

(3) Several sections were missing from the boilerplate. (See attachment #1.)

Suggestions.

(1) Greater use of biomonitoring is encouraged especially where there is any concern of adverse impact. For example, large COD discharges may contain toxics or unknown potentially hazardous pollutants.

(2) Permit limit bases should be clearer. In some cases the bases for BAT/BPJ or water quality limits are not clearly identified.

(3) More recent water quality data should be used when making water quality analyses. Red Book (1976) criteria were used when new 1980 criteria for the same pollutants existed.

(4) No explanation was given of what is done with bioassay results. Recommend setting toxicity-based limits (e.g., .10 x LC50).

Attachment #1 - Permit Boilerpoint Review

Attachment #2 - Review of Havre de Grace Municipal Permit File

Permit Boilerplate Review

The following Standard Conditions contain errors or omissions that were noted during the Maryland PQR.

- Duty to Comply - 40 CFR 122.41(a)

  - missing from current boilerplate.

- Permit actions - 122.41(f)

  - the following phrase is missing from the current boilerplate: "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."

- Duty to provide information - 122.41(h)

  - missing

- Inspection and entry - 122.41(i)

  - the language used in the sampling and monitoring section is too restrictive; only discharged substances can be sampled under the current boilerplate. Item (4) in the Federal regulations refers to: "any substances or parameter at any location."

- Signatory requirements - 122.41(k)

  - missing

- Upset - 122.41(n)

  - missing from current boilerplate. The State suggested that upset should not apply to municipal treatment works because redundant equipment is available at POTWs to provide treatment. The Region should explore this issue with the State Attorney Generals office and the permit program staff. It is possible that only certain treatment works, such as dischargers to shellfish waters, have redundant equipment requirements.

- Toxics notification - 122.42(a)(1)

  - missing from current industrial boilerplate.

- <u>Notification of indirect dischargers</u> - 122.42(b)(1)

  - this requirement appeared in some permits (non-pretreatment program cities) but not in the form shown in the regulations. The State should revise the requirements in section I.C. of the current boilerplate by including references to Sections 301 and 306 of the Clean Water Act.

APPENDIX 11

Sample Abstract Document

United States
Environmental Protection
Agency

Permits Division
(EN-336)
Washington DC 20460

OWEP 86-01
July 1986

Water

EPA

Abstracts of Industrial NPDES Permits

AL0003115: Union Camp Corporation, located in Prattville, Alabama, is a facility where the Kraft (sulfate) process is used to produce pulp, sulfate turpentine, and wood fat soaps from wood chips. Wastepaper is also converted to pulp which is converted to linerboard and the facility produces crude tall oil by acidulation of wood fat soaps (SIC 2611, 2861, 2631). Production is 2,326 tons per day. There are two discharges (Outfalls 001 and 002) to the Alabama River, and one (Outfall 003) to Autauga Creek. Outfall 001 consists of process wastewater and sanitary wastewater and the average flow rate reported on application form 2C is 25.5 mgd. Treatment at this outfall is by sedimentation in aerated lagoons and a stabilization pond. Untreated noncontact cooling water discharges from Outfall 002 (0.7 mgd average) and from Outfall 003 (0.007 mgd average). Effluent limitations at Outfall 001 are based on BPT/BAT effluent guidelines for the Pulp, Paper and Paper Board Category (40 CFR 430). Temperature limits at Outfalls 002 and 003 and the stream sampling requirement for dissolved oxygen are based on water quality standards. A BMP Plan and biomonitoring requirements are not included in the permit.

Effective Date: May 1, 1982 — Final Permit
Expiration Date: May 1, 1987 — Abstract Date: April 23, 1985

EFFLUENT LIMITS (FINAL)

AL0003115: Union Camp Corporation

Pollutants	Outfall	Avg./Max. Limits and Units	Monitoring
Flow	001	report	1/d total
BOD-5		11771/19942 kg/d (121.8/206.3 mg/l*)	" 24 hr comp
TSS		21649/41648 " (223.9/430.8 " *)	" "
Pentachlorophenol**		—/2.7 lb/d (—/0.028 " *)	1/q grab
Trichlorophenol**		—/2.5 " (—/0.010 " *)	" "
Instream Dissolved Oxygen			
(4/15-11/15)		5.0 mg/l minimum	1/w***
pH		6.0 - 9.0	1/d grab
Flow	002	report	1/w instant
Temperature		40/44 °C	" "
Flow	003	report	2/m "
Temperature		35/40 °C	" grab

*Equivalent concentrations based on 25.5 mgd flow, but not included in permit.
**Requirement applies only if phenolic-containing biocides are being used, effective on modification date: July 1, 1984.
***Stream monitoring required twice per week when minimum dissolved oxygen is less than 5.9 mg/l, and once daily when dissolved oxygen values is less than 5.4 mg/l.

APPENDIX 12

Region V NPDES Permit Review Checklist

INDUSTRIAL

NPDES PERMIT REVIEW CHECKLIST

GENERAL INFORMATION

Facility: _____ Permit #: _____

Location: _____

Type of Facility

/___/ Industrial /___/ Municipal

/___/ Federal /___/ Semi-public

Type of Permit

/___/ Original /___/ Major

/___/ Reissuance /___/ Minor

/___/ Modification /___/ General

STATE SUBMITTAL (Is it complete?)

Form 1 ____ Form 2C ____ Form A ____ State Application ____ Other ____

Public Notice ____ Factsheet/Briefing Memo ____

Additional Information Needed (e/g/. WLAs, special studies, etc.) _____

_____

Receiving Waters(s) _____

Designated Uses: _____

PWR /___/ Yes /___/ No WLA /___/ Yes /___/ No

Receiving Water

7Q10 Flow: _____ Hardness (mg/l): _____ _____

1/4 7Q10 Flow: _____ Temperature (C): Summer _____

pH: _____ Temperature (C): Winter _____

State Permit Writer: _____

EPA Reviewer: _____ Date _____

EPA Region V 11-86

NPDES PERMIT REVIEW

INDUSTRIAL

Permit No. _____

Industrial Category: _____ SIC Code _____

Subcategory: _____ SIC Code _____

Applicable Regulations: _____

Major manufacturing operations: _____

_____

_____

No. of outfalls to surface waters: _____

Discharges to other systems and type: _____

_____

(POTW, land, deep well, seepage lagoon, etc.)

Limitations Review (Final)

Outfall Number	Flow MGD	Parameter	BCT Conv.	BAT Toxic	BAT Non-Conv.	BPJ

(Use other side of sheet for additional parameters)

Code for limits

x- effective guideline
1- proposed guideline
2- 402(a)(1) determination
3- 208 plan
4- W.Q. criteria
5- State W.Q. reg.
6- Agency guidance
7- Other (list reason)

Permit No. _____

Municipal Compliance Schedules Review

1. Fixed date schedule ☐ Yes ☐ No ☐ NA
2. Final compliance date prior to July 1, 1988 ☐ Yes ☐ No

   If no, describe reasons _____
3. Schedules consistent with ☐ A.O. ☐ MCP ☐ Grant

   Consent Decree
4. Schedules with Progress Report, if needed ☐ Yes ☐ No

Compliance Section Reviewer _____ Date _____

ANTIDEGRADATION AND WATER QUALITY

Are the State's/Region's antidegradation guidelines applied:

Will any permit limits violate water quality standards? ☐ Yes ☐ No

Are the proposed permit limits based on a formal WLA? ☐ Yes ☐ No

Are the proposed permit limits consistent with State water quality standards? ☐ Yes ☐ No

Will increased limits result in a "significant" lowering of water quality? ☐ Yes ☐ No ☐ NA

Has the permittee demonstrated necessary social or economic development will result from the proposed increase? ☐ Yes ☐ No ☐

Planning/Standard Reviewer _____ Date _____

BACKSLIDING

Are proposed limits as stringent as existing permit limits? ☐ Yes ☐ No

Is the permittee in compliance with existing permit limits? ☐ Yes ☐ No

Identify changes (increases/descreases): _____

TOXIC SUBSTANCES

Are toxic substances present in the discharger? /__/ Yes /__/ No

Are toxic substances present above levels of concern (based on Region V screening procedures)? /__/ Yes /__/ No

If yes, list toxic pollutants above level of concern: _____

List toxic pollutants that require additonal monitoring to determine if discharge concentrations are above levels of concern: _____

List toxic pollutants that are limited in proposed permit: _____

List toxic pollutants that are monitored in proposed permit: _____

Basis for State's proposed toxic pollutant limits are: BAT /__/ BPJ /__/ WQ

Basis for Region's proposed toxic pollutant limits are: BAT /__/ BPJ /__/ WQ

In the absence of specific numeric State standards, do the permit limits adequately implement the narrative standard of "no toxic substances in toxic amounts"? /__/ Yes /__/ No

Is the proposed monitoring frequency adequate? /__/ Yes /__/ No

Is the permit reopener language adequate in the event additional toxicity or toxicity limits/monitoring are required? /__/ Yes /__/ No

If no, explain: _____

SUMMARY

BIOMONITORING

Is biosurvey data available for the receiving water? /__/ Yes /__/ No

If yes, does the data indicate a biological impact? /__/ Yes /__/ No

Has toxicity testing been conducted on any discharges from the facility? /__/ Yes /__/ No

If yes, was the testing conducted by:

Dates:	PERMITTEE	STATE	REGION
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

Is discharge acutely toxic (>20% mortality in 100% effluent)? /__/ Yes /__/ No

Is discharge chronically toxic (NOEL < IWC)? /__/ Yes /__/ No

Is the discharge Ames positive? /__/ Yes /__/ No

Does the discharge cause excessive algal gowth (>300%)? /__/ Yes /__/ No

If the answer to any of the above questions is yes, indicate the outfalls tested: _____

_____

Are whole effluent toxicity limits included in the permit? /__/ Yes /__/ No

Are limits needed? /__/ Yes /__/ No

Are biological monitoring requirements included in the permit? /__/ Yes /__/ No

If no, are monitoring requirements needed? /__/ Yes /__/ No

Is the monitoring frequency adequate? /__/ Yes /__/ No

Comments

Biomonitoring Reviewer _____ Date _____

APPENDIX 13

Memorandum: Calculations of Production - Based Effluent Limits

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC 19 1984

OFFICE OF WATER

MEMORANDUM

SUBJECT: Calculation of Production-Based Effluent Limits

FROM: J. William Jordan, Chief
NPDES Technical Support Branch (EN-336)

TO: Regional Permits Branch Chiefs

The purpose of this memorandum is to clarify the procedure for calculating production-based effluent limitations and to provide guidance on the use of alternate limitations. Many effluent guidelines are expressed in terms of allowable pollutant discharge rate per unit of production. To determine permit limits, these standards are multiplied by an estimate of the facility's actual average production.

Section 122.45(b) of the NPDES permit program regulations sets forth the requirements for calculating production-based effluent limitations. The central feature of this section is the requirement that limitations be based upon a "reasonable measure of the actual production of the facility", rather than upon design capacity. Interpretation of this requirement has proven confusing in the past. This memorandum provides recommendations for developing production-based limitations and alternate limitations. The Agency is also planning to revise this portion of the regulations, and has revised Part III of Application Form 2C, in order to clarify language which might lead to the use of inappropriate production-based limitations.

Background

The proper application of production-based effluent limitation guidelines is dependent upon the methodology that is used to develop the guidelines. When most guidelines are developed, a single long term average daily production value and its relationship to flow are determined. This is combined with effluent concentration data collected from plants to form the basis of the guideline standards. Variability factors are developed on concentration data obtained from samples taken during periods of varying production. The variability factors and performance data are then used to derive the guideline standards.

Calculation of Limitations

To apply these guidelines, permit writers should determine

a single estimate of the expected production over the life of the permit using the long term average production from the plant's historical records. Usually, a five year production history would be used to derive this value. This single production value is then multiplied by both the daily maximum and monthly average guidelines limitations to obtain permit limits. In determining this single estimate, the permit writer should take into account the distribution of production by analyzing data taken as frequently as possible. For most cases, monthly data compiled from daily data would be sufficient.

The permit writer should avoid the use of a limited amount of production data in estimating the production for a specific facility. For example, the data from a particular month may be unusually high and thus lead to the derivation of effluent limitations which are not actually reflective of normal plant operations. As previously explained, effluent limitations guidelines already account for some of the variations which occur within long term production rates. Therefore, the use of too short a time frame in the calculation of production based limitations for a specific industrial facility may lead to "double accounting" of the variability factors.

In some cases, the historical data may show large random or cyclic fluctuations in production rates, of either a short or long term nature. In those situations, it may be appropriate to have alternate limits which are applicable at some increased production rate (see discussion of Alternate Limits) or setting the limit based upon a level of production higher than the average (e.g. 10-20 percent or higher).

However, the primary objective is to determine a production estimate for a facility which approximates the long term average production rate (in terms of mass of product per day) which can reasonably be expected to prevail during the next term of the permit. The following example illustrates the proper application of guidelines:

> Example: Company A has produced 331,500 tons, 292,000 tons, 304,000 tons, 284,000 tons, and 312,000 tons per year for the previous five years. The use of the highest year of production (331,500 tons per year) might be an appropriate and reasonable measure of expected production. One check on this could be to determine if maximum yearly values are within a certain percent of the average, such as 20 percent.
>
> One of several methods may be appropriate to convert from the annual production rate to average daily production. One method takes the annual production rate and divides it by the number of production days per year. To determine the number of production days, the total number of normally scheduled non-production days are subtracted from the total days in a year.
>
> This method is appropriate in cases where the plant

discharges intermittently as a direct result of production flows. In cases where the plant discharges continuously, even on days when there are no production activities, other methods may be appropriate.

If Company A normally has 255 production days per year, which are approximately equal to the number of discharge days, the annual production rate of 331,500 tons per year would yield an average daily rate of 1,300 tons per day. If pollutant X has an effluent limitation guideline of 0.10 lbs./1000 lbs. for the monthly average and 0.15 lbs./1000 lbs. for the maximum daily average, the effluent limitations would be calculated as follows:

Monthly Average Limit (Pollutant X)

$$1{,}300 \ \frac{\text{tons}}{\text{day}} \times \frac{2000 \text{ lbs.}}{\text{ton}} \times \frac{0.10 \text{ lbs.}}{1000 \text{ lbs.}} = 260 \text{ lbs./day}$$

Daily Maximum Limit (Pollutant X)

$$1{,}300 \ \frac{\text{tons}}{\text{day}} \times \frac{2000 \text{ lbs.}}{\text{ton}} \times \frac{0.15 \text{ lbs.}}{1000 \text{ lbs.}} = 390 \text{ lbs./day}$$

In the example above, the production during the highest year of the last five years was used as the estimate of production. This estimate is appropriate when production is not expected to change significantly during the permit term. However, if historical trends, market forces, or company plans indicate that a different level of production will prevail during the permit term, a different basis for estimating production should be used.

Alternate Limits

If production rates are expected to change significantly during the life of the permit, the permit can include alternate limits. These alternate limits would become effective when production exceeds a threshold value, such as during seasonal production variations. Definitive guidance is not available with respect to the threshold value which should "trigger" alternate limits. However, it is generally agreed that a 10 to 20 percent fluctuation in production is within the range of normal variability, while changes in production substantially higher than this range (such as 50 percent) could warrant consideration of alternate limitations. The major characteristics of alternate limits are best described by illustration and example:

Example: Plant B has produced 486,000 tons, 260,400 tons, 220,000 tons, 240,800 tons, and 206,500 tons per year for the previous five years. The high year is significantly higher than the rest and the permittee has made a plausible argument that production is expected to return to that level. The guideline for pollutant X is 0.8 lbs./1000 lbs. for the monthly average and 0.14 lbs./1000 lbs. for the daily maxi-

mum. The alternate effluent limitations could be calculated as follows:

Primary Limits:

- o Basis of calculation: 260,400 tons/yr. = 1,050 tons/day (248 production days per year)

- o Applicable level of production: less than 1,050 tons per day average production rate for the month

Monthly Average Limit

$$1{,}050 \frac{\text{tons}}{\text{day}} \times 2000 \frac{\text{lbs.}}{\text{ton}} \times \frac{0.08 \text{ lbs.}}{1000 \text{ lbs.}} = 168 \text{ lbs./day}$$

Daily Maximum Limit

$$1{,}050 \frac{\text{tons}}{\text{day}} \times 2000 \frac{\text{lbs.}}{\text{ton}} \times \frac{0.14 \text{ lbs.}}{1000 \text{ lbs.}} = 294 \text{ lbs./day}$$

Alternate Limits:

- o Applicable threshold level of production = more than 1,260 tons/day average production rate for the month (20 percent above normal production levels)

- o Basis of calculation: 486,000 tons/yr. = 1,350 tons/day (based upon historical data and to be applicable beyond a 20 percent increase in production)

Monthly Average Limit = 216 lbs./day

Daily Maximum Limit = 378 lbs./day

Alternate limits should be used only after careful consideration and only when a substantial increase or decrease in production is likely to occur. In the example above, the primary limits would be in effect when production was at normal levels. During periods of significantly higher production, the alternate limits would be in effect. When production reverted to normal levels, the primary limits would have to be met. The thresholds, measures of production, and special reporting requirements must be detailed in the permit.

If you have any questions concerning the calculation of production-based limitations or the use of alternate limitations, please call me or have your staff contact James Taft at (202/FTS-426-7010).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
WATER

MEMORANDUM

SUBJECT: Draft Industrial Permit Quality Review (PQR) Procedures Guide

FROM: James D. Gallup, Chief
Technical Support Branch
Permits Division (EN-336)

TO: Regional Permits Branch Chiefs

Attached for your review and comment is a draft Industrial PQR Procedures Guide. The industrial guide is similar to the municipal manual that was sent to you in draft form on February 4, 1987. It provides new staff members, or staff unfamiliar with the PQR concept, with a comprehensive manual-of-practice for review of State-issued permits.

The manual is a result of our experience in conducting (or assisting) numerous PQR evaluations over the past four years. Use of the guide should promote comprehensive and systematic permit reviews so that a nationwide permit quality system can be maintained.

Our goal is to merge the industrial and municipal PQR guidance into one final document in early FY88, with revisions to address your comments and suggestions on both manuals.

We encourage your staff to use the draft guide and provide us with any comments. Please send any comments to me or to Greg McBrien.

Attachment

cc: Dev Barnes, ITD
J. William Jordan