# PENNSYLVANIA BULLETIN 

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## Latest Pennsylvania Code Reporter

 (Master Transmittal Sheet):
## PENNSYLVANIA



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## READER'S GUIDE TO THE PENNSYLVANIA BULLETIN AND THE PENNSYLVANIA CODE

## Pennsylvania Bulletin

The Pennsylvania Bulletin is the official gazette of the Commonwealth of Pennsylvania. It is published every week and includes a table of contents. A cumulative subject matter index is published quarterly.
The Pennsylvania Bulletin serves several purposes. First, it is the temporary supplement to the Pennsylvania Code, which is the official codification of agency rules and regulations and other statutorily authorized documents. Changes in the codified text, whether by adoption, amendment, repeal or emergency action must be published in the Pennsylvania Bulletin. Further, agencies proposing changes to the codified text do so in the Pennsylvania Bulletin.
Second, the Pennsylvania Bulletin also publishes: Governor's Executive Orders; State Contract Notices; Summaries of Enacted Statutes; Statewide and Local Court Rules; Attorney General Opinions; Motor Carrier Applications before the Pennsylvania Public Utility Commission; Applications and Actions before the Department of Environmental Protection; Orders of the Independent Regulatory Review Commission; and other documents authorized by law.
The text of certain documents published in the Pennsylvania Bulletin is the only valid and enforceable text. Courts are required to take judicial notice of the Pennsylvania Bulletin.

## Adoption, Amendment or Repeal of Regulations

Generally an agency wishing to adopt, amend or repeal regulations must first publish in the Pennsylvania Bulletin a Notice of Proposed Rulemaking. There are limited instances when the agency may omit the proposal step; it still must publish the adopted version.
The Notice of Proposed Rulemaking contains the full text of the change, the agency contact person, a fiscal note required by law and background for the action.
The agency then allows sufficient time for public comment before taking final action. An adopted proposal must be published in the Pennsylvania Bulletin before it can take effect. If the agency
wishes to adopt changes to the Notice of Proposed Rulemaking to enlarge the scope, it must repropose.

## Citation to the Pennsylvania Bulletin

Cite material in the Pennsylvania Bulletin by volume number, a page number and date. Example: Volume 1, Pennsylvania Bulletin, page 801, January 9, 1971 (short form: 1 Pa.B. 801 (January 9, 1971)).

## Pennsylvania Code

The Pennsylvania Code is the official codification of rules and regulations issued by Commonwealth agencies and other statutorily authorized documents. The Pennsylvania Bulletin is the temporary supplement to the Pennsylvania Code, printing changes as soon as they occur. These changes are then permanently codified by the Pennsylvania Code Reporter, a monthly, loose-leaf supplement.

The Pennsylvania Code is cited by title number and section number. Example: Title 10 Pennsylvania Code, § 1.1 (short form: 10 Pa . Code § 1.1).

Under the Pennsylvania Code codification system, each regulation is assigned a unique number by title and section. Titles roughly parallel the organization of Commonwealth government. Title 1 Pennsylvania Code lists every agency and its corresponding Code title location.

## How to Find Documents

Search for your area of interest in the Pennsylvania Code. The Pennsylvania Code is available at www.pacode.com.
Source Notes give the history of regulations. To see if there have been recent changes, not yet codified, check the List of Pennsylvania Code Chapters Affected in the most recent issue of the Pennsylvania Bulletin.
A chronological table of the history of Pennsylvania Code sections may be found at www.legis.state. pa.us/cfdocs/legis/CH/Public/pcde_index.cfm.
The Pennsylvania Bulletin also publishes a quarterly List of Pennsylvania Code Sections Affected which lists the regulations in numerical order, followed by the citation to the Pennsylvania Bulletin in which the change occurred. The Pennsylvania Bulletin is available at www.pabulletin.com.

## Printing Format

Material proposed to be added to an existing rule or regulation is printed in bold face and material proposed to be deleted from a rule or regulation is enclosed in brackets [ ] and printed in bold face. Asterisks indicate ellipsis of Pennsylvania Code text retained without change. Proposed new or additional regulations are printed in ordinary style face.

## Fiscal Notes

Section 612 of The Administrative Code of 1929 ( 71 P. S. § 232) requires that the Office of Budget prepare a fiscal note for regulatory actions and administrative procedures of the administrative departments, boards, commissions or authorities receiving money from the State Treasury stating whether the proposed action or procedure causes a loss of revenue or an increase in the cost of programs for the Commonwealth or its political subdivisions; that the fiscal note be published in the Pennsylvania Bulletin at the same time as the proposed change is advertised. A fiscal note provides the following information: (1) the designation of the fund out of which the appropriation providing for expenditures under the action or procedure shall be made; (2) the probable cost for the fiscal year the program is implemented; (3) projected cost estimate of the program for each of the 5 succeeding fiscal years; (4) fiscal history of the program for which expenditures are to be made; (5) probable loss of revenue for the fiscal year of its implementation; (6) projected loss of revenue from the program for each of the 5 succeeding fiscal years; (7) line item, if any, of the General Appropriation Act or other appropriation act out of which expenditures or losses of Commonwealth funds shall occur as a result of the action or procedures; (8) recommendation, if any, of the Secretary of the Budget and the reasons therefor.

The required information is published in the foregoing order immediately following the proposed change to which it relates; the omission of an item indicates that the agency text of the fiscal note states that there is no information available with respect thereto. In items (3) and (6) information is set forth for the first through fifth fiscal years; in that order, following the year the program is implemented, which is stated. In item (4) information is set forth for the current and two immediately preceding years, in that order. In item (8) the recommendation, if any, made by the Secretary of Budget is published with the fiscal note. See 4 Pa . Code $\S 7.231$ et seq. Where "no fiscal impact" is published, the statement means no additional cost or revenue loss to the Commonwealth or its local political subdivision is intended.

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## List of Pa. Code Chapters Affected

The following numerical guide is a list of the chapters of each title of the Pennsylvania Code affected by documents published in the Pennsylvania Bulletin during 2016.




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# THE COURTS 

# 201—RULES OF JUDICIAL ADMINISTRATION 

[ 201 PA. CODE CH. 40 ]<br>Amendment of Rules 4001-4016 of the Rules of Judicial Administration; No. 466 Judicial Administration Doc.

Order<br>Per Curiam

And Now, this 12th day of August, 2016, It Is Ordered pursuant to Article V, Section 10 of the Constitution of Pennsylvania that Rules 4001-4016 of the Pennsylvania Rules of Judicial Administration are amended in the following form.
This Order shall be processed in accordance with Pa.R.J.A. No. 103(b), and shall be effective January 1, 2017, except in the First Judicial District, in which it shall be effective July 1, 2017. For the period from January 1, 2017 through July 1, 2017, the First Judicial District shall be governed by Pa.R.J.A. Nos. 5000.15000.13 , which are rescinded as to all other judicial districts as of January 1, 2017.

## Annex $A$ <br> TITLE 201. RULES OF JUDICIAL ADMINISTRATION <br> CHAPTER 40. UNIFORM RULES GOVERNING COURT REPORTING AND TRANSCRIPTS

Rule 4001. Scope of Rules[.] and Policy.
(A) These rules shall govern the making, preserving and transcribing of the record of proceedings [before any trial court of record] in the judicial districts within the Unified Judicial System.
(B) Because complete and verbatim notes of testimony and transcripts are integral to the official record of court proceedings, it is the policy of the Unified Judicial System to ensure that (1) qualified court reporting services are available in each judicial district and that court reporters are fairly compensated, (2) transcripts are timely produced and are affordable to all litigants, and (3) efficient technologies are employed to reduce litigation costs and conserve public resources.

## Comment

These rules are promulgated pursuant to the administrative and supervisory authority granted to the Supreme Court by Article V, $\S 10$ of the Pennsylvania Constitution. See also 42 Pa.C.S.A. § 1724(a)(10).

Pursuant to Order No. 466 Judicial Administration Docket (August 12, 2016), Pa.R.J.A. Nos. 40014016 shall become effective in the First Judicial District on July 1, 2017. For the period from January 1, 2017 through July 1, 2017, the First Judicial District shall be governed by Pa.R.J.A. Nos. 5000.15000.13, which are rescinded as to all other judicial districts as of January 1, 2017.

## Rule 4002. Definitions.

Condensed transcript means a miniaturized copy of the original transcript printed in such a way as to place more than one page of transcript on a single sheet of paper.

Court Administrator means the Court Administrator of Pennsylvania.

Court recorder means an individual employed, contracted or utilized by a court to record testimony by electronic means (audio or audio-visual).

Court reporter means an individual employed, contracted or utilized by a court to record testimony whether through use of a stenotype machine, stenomask equipment, written symbols, or otherwise.

Court reporter's dictionary is a computer file that matches a court reporter's steno strokes with English text. A court reporter's personal dictionary is an essential part of a computer aided transcription (CAT) system.

Court reporting personnel includes court reporters, court recorders, transcriptionists and any other personnel whether employed or contracted who make the court record for use in any Pennsylvania court.
Daily transcript means a transcript delivered within eighteen (18) hours of an official request, not including weekends or official court holidays. For the purposes of additional payment, a transcript is a daily transcript only if it is in fact delivered within the above time limit.
Digital audio files are those files created by digital recording systems and saved in a format that allows storage and playback through computer applications.

## District Court Administrator means the County Court Administrator.

Electronic transcript means an official transcript delivered in an electronic, non-paper medium.
Expedited transcript means a transcript delivered within seventy-two (72) hours of an official request, not including weekends or official court holidays. For the purposes of additional payment, a transcript is an expedited transcript only if it is in fact delivered within the above time limit.

Filing office refers to an office without regard to title that has the responsibility and function in each judicial district to maintain the official dockets and case files of the court.
[ Financial institution account identifiers means financial institution account numbers, credit card numbers, debit card numbers, PINS or passwords to secure accounts, and other account identifying information.]

Notes of testimony means the official recording of an oral proceeding made whether through use of an electronic device, stenomask equipment, stenotype machine, written symbols, or otherwise; and includes the dictionary, media storage files, and other documentation needed to prepare a transcript.

Ordinary transcript means a transcript [ ordered for delivery within the time limits set forth in Rule 4011] necessary for an appeal or to otherwise advance litigation and required under a time frame set by a Pennsylvania Rule of Court regarding the delivery of court transcripts or by court order. An example of a non-ordinary transcript is one requested by a litigant when no matters are open before the court or where the transcript is ordered by a third party.

President Judge means the president judge in each judicial district, his or her designee, or any judicial officer recognized by the Court Administrator as having administrative authority.
Rough draft transcript (computer diskette, hard paper copy, or electronically distributed) is an unedited and uncertified transcript that may contain untranslated or mistranslated stenotype symbols. This also includes notes that appear on paper, unedited electronic data, tapes or other media in the original state in which they existed when they were taken at the time of testimony.

Same day delivery means transcripts delivered within 6 hours of the close of the court session, divided by morning and afternoon with the line of demarcation being lunch or mid-day recess.

Transcript means a certified, written, verbatim record of a proceeding.
Transcriptionist means any person employed, contracted or utilized by a court to prepare a transcript of a proceeding from an electronic or other recording. A court recorder and a court reporter may also serve as a transcriptionist.
Rule 4003. Committee on Court Reporting and Transcripts.
(A) The Committee on Court Reporting and Transcripts shall consist of the following members appointed by the Supreme Court of Pennsylvania, one of whom shall be designated as Chair and one of whom shall be designated as Vice-Chair:
(1) One representative of the Superior Court of Pennsylvania;
(2) One representative of the Commonwealth Court of Pennsylvania;
(3) Two president judges of the courts of common pleas chosen from among the judicial districts of the Commonwealth;
(4) Two members of the County Commissioners Association of Pennsylvania;
[ (4)] (5) The district court administrator of the Philadelphia County Court of Common Pleas;
[(5)] (6) The district court administrator of the Allegheny County Court of Common Pleas;
[(6)] (7) Two district court administrators chosen from among the judicial districts of the Commonwealth other than Philadelphia and Allegheny;
[(7)] (8) Two providers of court reporting services representing the various methods currently in usage within Pennsylvania; and
[(8)] (9) Two members of the Pennsylvania Bar.
(B) Initial appointments shall be for one-, two- or three-year terms, and these members may serve one additional three-year term. Thereafter appointments shall be for three years and members shall serve no more than two consecutive three-year terms. A replacement appointee shall serve for the balance of the unexpired term.
(C) The Committee shall review current rules and practices, and, upon concurrence of the Court Administrator, recommend revisions to the Uniform Rules Governing Court Reporting and Transcripts as may be necessary to effectuate the policy of these rules.
(D) The Administrative Office shall provide staff support to the Committee.
Rule 4004. Qualifications [ and Certification] of Court Reporters and Court Recorders.
(A) No person shall be employed or utilized by a court as a court reporter or court recorder unless [ certified] approved by the president judge or his or her designee as meeting the minimum criteria set forth in subdivision (B)(1), (B)(2), or (C) except
(1) those persons already employed or utilized by a court at the time of the adoption of these rules or
(2) those court reporters who hold and maintain a professional certification.
(B) The minimum criteria for [ certification] qualification of a court reporter, for both stenographic and voice writing, are the following:
(1) stenographic requirements: the court reporter is capable of recording proceedings at a $95 \%$ accuracy level at the following speeds:
(a) literary at 180 w.p.m.
(b) jury charge at 200 w.p.m.
(c) testimony and question and answer at 225 w.p.m.
(2) voice writing requirements: the court reporter is capable of recording proceedings at a $95 \%$ accuracy level at the following speeds:
(a) literary at 200 w.p.m.
(b) jury charge at 225 w.p.m.
(c) two-voice question and answer at 250 w.p.m.
(C) The minimum criteria for [ certification] qualification of a court recorder are the following:
(1) full familiarity with the controls of the electronic audio or audio-visual equipment;
(2) adequate hearing acuity to assure a high quality recording;
(3) insistence on clarity of the recording;
(4) ability to quickly diagnose and correct routine malfunctions;
(5) proficiency in note taking; and
(6) understanding of courtroom procedures and vocabulary.
(D) All persons employed or utilized by a court as a court reporter or court recorder, including those employed or utilized prior to the adoption of these rules, shall be [ recertified] requalified as meeting the above criteria at least every three (3) years.
(1) Court reporters shall be [ recertified] requalified every three (3) years upon completion of thirty (30) hours of continuing professional education [ every three (3) years ] which has been properly accredited or certified by the National Court Reporters Association. Proof of attendance shall be submitted to the president judge or his or her designee.
(2) Court recorders shall be [recertified] requalified every three (3) years. The president judge may rely upon reports of the district court administrator and the judicial district's judges and quasi-judicial officers to determine whether the requirements set forth in subdivision (C) are satisfactorily met. Those reports must be
based on recent courtroom experience and a review of work products (e.g., lists, log notes, CD recordings) for accuracy, timeliness and quality.
(E) Any person who fails to meet the minimum criteria at the time of [ recertification] requalification shall be given six months to comply. Anyone who fails to comply with this subdivision shall be prohibited from serving as a court reporter or court recorder.
[ (F) The president judge shall verify annually to the Court Administrator compliance with this rule on forms developed by the Administrative Office.] Rule 4005. Approval of Transcriptionists.

No person or organization shall be employed or utilized by a court as a transcriptionist unless approved by the president judge.

## [ Comment

The American Association of Electronic Reporters and Transcribers (AAERT) recommends the following criteria for transcriptionists: (a) scores at least $70 \%$ on an examination with a timed, 100 -question, written examination on technical aspects of electronic reporting, courtroom procedures, and vocabulary; and (b) scores at least $98 \%$ accuracy on at least ten text pages produced during a half-hour AAERT-prepared audiotape in ASCII, Word, WordPerfect, or WordStar.]

Rule 4006. Employment and Duties of Court Reporting Personnel.
(A) The president judge or his or her designee shall select, appoint, and supervise court reporting personnel for the district. The number of court reporting personnel in any district shall be adequate to support the full and unrestricted operation of the courts.
(B) The president judge or his or her designee shall assign court reporting personnel in a manner as to
(1) cover all proceedings and timely produce all transcripts; and
(2) substantially equalize the workload of recording testimony, and of transcript production and generating fees.
(C) All court reporting personnel are officers of the court with a duty to comply with all court regulations and orders and to maintain the highest standards of professional and ethical conduct.
(D) No court reporting personnel shall work outside his or her official duties [ unless in full compliance with all rules regarding timeliness of transcripts] unless such work is permitted under the Code of Conduct For Employees of the Unified Judicial System (see Section VI (F)) and he or she is in substantial compliance with these rules regarding timeliness of transcripts as determined by the president judge.
(E) [ All court reporters using computer-aided transcription are required to submit to the president judge or his or her designee a copy of the reporter's dictionary upon employment or contractual engagement. An updated dictionary must be provided to the president judge or his or her designee at least quarterly.] All court reporters must ensure that the court will have access and the ability to obtain the notes of testimony and all
other record proceedings of the court in the event of the inability, unavailability, or unwillingness of the court reporter to do so within the time frame established by these rules.

## Comment

The Committee recommends that court reporters assure, in the event of unavailability or incapacity, that the court is able to access court reporter notes or work product so that all transcripts can be recovered. The Committee recommends that each court reporter should provide certification every 6 months that at a minimum, the court reporter has provided one of the following methods or mechanisms for recovering transcripts:
(1) contracting with an available scopist capable of translating the court reporter's notes;
(2) generating court reporter notes on a software program recognized by the court/district court administrator;
(3) providing the district court administrator with a current copy of the court reporter's dictionary; and/or
(4) providing translated steno notes in ASCII format.
(F) Court reporters, court recorders and transcriptionists shall file a monthly report with the district court administrator of all ordered or requested transcripts for matters on appeal, in chronological order indicating the date of each order or request, the case name and number, whether the transcript requires rapid completion (e.g., a Children's Fast Track appeal), the approximate length of the record to be transcribed, the status of the transcription, and the expected date of the filing of the transcript. A court reporter, court recorder or transcriptionist must coordinate with the district court administrator or his or her designee whenever courtroom coverage must be arranged in order to timely deliver the transcript.
(G) [ The district court administrator shall prepare a summary statistical report of the number of transcripts requested, delivered and pending, as well as the age of all pending transcripts, which shall be forwarded to the Administrative Office quarterly on forms designed by the Court Administrator.] The president judge shall determine the internal procedure in his or her judicial district for tracking the timely fulfillment of all other requests and orders for transcript of court proceedings in matters not under appeal. It is the duty of each president judge or his or her designee to assure compliance with the timely delivery of all transcripts as required by these rules.
(H) The district court administrator shall prepare a summary statistical report of all cases under appeal including the number of transcripts requested, delivered and pending, as well as the age of all pending transcripts, which shall be forwarded to the Administrative Office quarterly on forms designed by the Court Administrator.
[(H)] (I) All court reporting personnel and county administrative personnel are required to comply with all standing and special requests of the Administrative Office for information, including information on transcript cost and fee payments and data relative to transcript production, delivery, and delay.

## Rule 4007. Requests for Transcripts.

(A) All requests for transcripts shall be set forth on a standardized form provided by the Court Administrator. The form shall indicate the current rates authorized to be charged for transcripts under these rules.
(B) For an ordinary transcript, the party requesting a full or partial transcript of a trial or other proceeding shall file the original request with the district court administrator or other appropriate filing office of the court. [ Copies of the formal request shall be delivered] The requesting party shall also serve copies of the formal request to:
(1) the judge presiding over the matter;
(2) the court reporter, court recorder or transcriptionist;
(3) the district court administrator or his or her designee (if not filed with the district court administrator); and
(4) opposing counsel, but if not represented, the opposing party.
(C) In courts where daily, expedited, same day or rough draft transcripts are available, requests for these transcripts shall be filed in writing in the appropriate filing office at least 10 days prior to the proceeding. Copies of the written request shall be delivered as required by subsection (B). In the event of an emergency, a party may request by oral motion a daily, expedited or rough draft transcript.
(D) When a [ private litigant who is responsible for the costs ] litigant requests a transcript,
(1) the litigant ordering a transcript shall make partial payment [ of the estimated cost of the transcript to the court's designee ] in an amount established by local rule. Deposit checks are to be made payable to the judicial district or county, as set by local rule, and shall be delivered to the district court administrator or other court designee.
(2) the court reporter or transcriptionist shall prepare the transcript upon direction of the court's designee.
(3) the court reporter, court recorder or transcriptionist shall notify the ordering party and the court's designee of the completion of the transcript and deliver a copy of the transcript to the judge presiding over the matter. Checks for the final balance are to be made payable to the judicial district or county.
(4) upon payment of any balance owed, the court reporter, court recorder or transcriptionist shall deliver the original transcript to the appropriate filing office and copies to the parties. Checks for the final balance are to be made payable to the judicial district or county, as set by local rule, and shall be delivered to the district court administrator or other court designee.
(E) When a litigant requests a transcript, but cannot pay for the transcript because of alleged economic hardship, the court shall determine economic hardship pursuant to the procedure set forth in Rule 4008(B). In cases of economic hardship, where the matter is under appeal or a transcript is necessary to advance the litigation, the costs of procuring the transcript shall be waived or otherwise adjusted by the court. In cases of economic hardship where there is no appeal pending or there
exists no obvious need for the transcript to advance the litigation, the requesting party must demonstrate reasonable need before the court shall waive or adjust the cost of obtaining the transcript.
[(E)] (F) When a transcript is requested for which the court or county is responsible for the cost, the court reporter, court recorder or transcriptionist shall prepare the transcript [ upon receipt of the request ] without the necessity of a deposit.

## Comment

Nothing in this rule prevents a local court from adopting an electronic filing request procedure provided the request is effectively communicated to the listed persons.

Within the framework of these rules, the particular methods and logistics for receiving and accounting for costs is left to the discretion of the president judge and district court administration. Note, however, that deposit checks and final payment checks are to be made payable to the judicial district or county, not to the individual court reporter or transcriptionist preparing the transcript.

It is anticipated that court reporters shall continue to be compensated for the preparation of transcripts pursuant to local rule or practice. It is not contemplated that this rule shall interfere with or otherwise limit the income of court reporters. In this regard, the Committee recognizes that in certain jurisdictions, court reporters earn a substantial portion of their income through the preparation of transcripts. It shall remain the duty of the president judge and district court administrator to assure that the implementation of these rules does not unfairly limit the ability of court reporters to be properly compensated for their professional services.

The rule also recognizes that unreasonable demands for free or reduced-cost transcripts can result in a significant economic burden on the court system; for this reason, the rule attempts to distinguish necessary and nonessential requests.
Rule 4008. Transcript Costs Payable by a Requesting Party Other Than the Commonwealth or a Subdivision Thereof.
(A) Costs
(1) The costs payable by a requesting party, other than the Commonwealth or a subdivision thereof, for [ an electronic ] a transcript in an electronic format shall not exceed:
(a) for an ordinary transcript, [ \$2.25 ] \$2.50 per page;
(b) for an expedited transcript, [\$3.25] \$3.50 per page; [ and]
(c) for a daily transcript, [ \$4.25] \$4.50 per page[ . ]; and
(d) for same day delivery, $\$ 6.50$ per page.
(2) When the transcript is prepared in bound paper format, the costs shall be in accordance with paragraph (1) relating to electronic format plus a surcharge of $\$ 0.25$ per page.

## Comment

The rules encourage the use of electronic transcripts which will result in reduced costs for preparing and distributing transcripts. No-cost, user-friendly software is available for converting text files into PDF format (see

Rule 4010(B)). Unlike paper transcripts, electronic transcripts can offer features such as keyword searches, copy and paste functions, and speedy transmission. Moreover, the ability to store transcripts and reporters' notes on disks and networks should greatly reduce the courts' storage costs. Electronic systems support the business trend of moving toward paperless operations and also respond to ecological concerns by reducing paper waste.
Many [judges] attorneys/litigants prefer to read paper transcripts, including condensed transcripts, and these rules do not inhibit the practice. However, when a condensed paper transcript is ordered by a party, the surcharge of $\$ 0.25$ per page in Rule 4008(A)(2) shall refer to $\$ 0.25$ per sheet of paper, regardless of the number of pages of transcript on the sheet.
(B) Economic hardship-minimum standards
(1) Transcript costs for ordinary transcripts in matters under appeal or where the transcript is necessary to advance the litigation shall be waived for a litigant who has been permitted by the court to proceed in forma pauperis or whose income is [below] less than 125 percent of the poverty line as defined by the U.S. Department of Health and Human Services (HHS) poverty guidelines for the current year.
(2) Transcript costs for ordinary transcripts in matters under appeal or where the transcript is necessary to advance the litigation shall be reduced by one-half for a litigant whose income is less than 200 percent of the poverty line as defined by the HHS poverty guidelines for the current year.
(3) [ The court shall advise litigants of the procedure for requesting a waiver or reduction of costs. ] Transcript costs for ordinary transcripts in matters that are not subject to an appeal, where the transcript is not necessary to advance the litigation, or for expedited, daily, rough draft or same day transcripts may be waived at the court's discretion for parties who qualify for economic hardship under subdivision (B)(1) or (B)(2) and upon good cause shown.
(4) The application to waive all or a portion of costs for ordinary transcripts shall be supported by an affidavit substantially in the form required by Rule 240(h) of the Pennsylvania Rules of Civil Procedure.

## Comment

Transcript costs can be quite expensive. By establishing minimum standards, subdivision (B) is intended to ensure that costs do not effectively deny access to the court system to impoverished persons and persons of limited financial means when further proceedings necessitate a transcript. The rule also recognizes that unreasonable demands for free or reduced-cost transcripts can result in a significant economic burden on the court system; for this reason, the rule attempts to distinguish necessary and nonessential requests. Procedures for waiving or reducing transcripts costs must be published by the court and clearly communicated to litigants.
Litigants who have been approved for representation by legal aid services are not required to prove economic hardship. Legal aid clients shall be entitled to obtain ordinary transcripts for no cost.
(C) Assignment and allocation of transcript costs
(1) Assignment of costs. The requesting party, or party required by general rule to file a transcript, shall be responsible for the cost of the transcript. Costs shall not be assessed against any party for transcripts prepared at the initiation of the court.
(2) Allocation of costs. When more than one party requests the transcript, or are required by general rule to file the transcript, the cost shall be divided equally among the parties.
(D) Copies of transcript
[ (1) An electronic copy of the transcript shall be provided without charge to all parties other than the requesting party. A paper copy may be purchased at the surcharge rate specified in Rule 4008(A)(2).
(2) The cost of copies prepared for the court or filing office are included in the costs set forth in Rule $4008(\mathrm{~A})$ and shall not be charged to any party.
(3) The cost charged to the public for a copy of a transcript that has been filed of record shall not exceed $\$ 0.25$ per page.]

A request for a copy of any transcript previously ordered, transcribed and filed of record shall be provided according to the following schedule:
(1) $\$ 0.75$ per page bound, paper format; and,
(2) $\$ 0.50$ per page electronic copy.

## Comment

[ As no additional effort is needed to produce a copy of an electronic transcript, no copy charges may be levied upon the parties. With respect to a non-party (i.e., general public) request for a photocopy of a transcript, Rule 4007(D)(4) anticipates that the filing offices of the judicial district are the proper custodians of court case records and transcripts. Rule 4008(D)(3) provides that the cost charged to the public for a transcript copy that has been filed of record shall not exceed $\$ 0.25$ per page, regardless of the form or location in which the transcript is filed or stored. At this time, the rules do not require the sale of electronic transcripts to the public.]

With respect to a non-party (i.e., general public) request for a photocopy of a transcript, Rule 4007(D)(4) anticipates that the filing offices of the judicial district are the proper custodians of court case records and transcripts. Rule 4008(D) provides that the cost charged to the public for a transcript copy that has been filed of record shall not exceed $\$ 0.75$ per page, regardless of the form or location in which the transcript is filed or stored.

## (E) Additional Costs

No transcript or related costs may be charged to the parties or the public other than those listed in subdivisions (A), (B) and (D) without the written approval of the Court Administrator, except that a judicial district may enact a local rule that permits a trial judge to impose a reasonable surcharge in cases such as mass tort, medical malpractice or other unusually complex litigation, where there is a need for court reporters to significantly expand their dictionary.

## Comment

Pursuant to local rule, a reasonable fee may be charged for a secure electronic feed which instantaneously delivers the translated notes from the court reporter to a laptop, tablet, phone, or other portable electronic device via cable, wifi, router, or Bluetooth to parties, the media, or other interested individuals. There shall be no fee charged to the court for such a connection.

## (F) Requests for Rate Increases

The president judge of a judicial district may request an increase in the rates prescribed in subdivision (A) or (D) by submitting a written request to the Committee on Court Reporting and Transcripts. The request shall only be approved where it is established that the judicial district faces an economic hardship caused by the current rates and that the requested rates are reasonable. If the Committee approves the request by majority vote, it shall be forwarded to the Court Administrator for review. If the Court Administrator determines that the increase is necessary, the request shall be forwarded to the Supreme Court.

## Comment

These rules do not supersede any existing Pennsylvania Rule of Court regarding the delivery of court transcripts. If there appears to be a conflict with an existing Pennsylvania Rule of Court, such rule remains in full force and effect. However, if there appears to be a conflict with any local rule of court for the delivery of transcripts, these rules take precedence.
Rule 4009. Fees [ Payable to the Court Reporter or Transcriptionist by the Judicial District] and Procedures. Local Rule.
Each judicial district shall promulgate and publish a local rule establishing the fees to be paid [ to court reporters and transcriptionists for all court reporting products ] for all court reporting products, the procedure for requesting a transcript, and the procedure for requesting a full or partial fee waiver pursuant to Rule 4008(B).

Official Note: For rules governing the promulgation of local rules, see Pa.R.J.A. No. [ 103(c) ] 103.

## [ Comment

By local rule, each judicial district shall set forth a comprehensive schedule of fees to be paid to court reporting personnel for all transcript products. While the maximum costs that may be charged to litigants or the public is fixed by Rule 4008, and may not be exceeded, a judicial district has the discretion to pay court reporters and transcriptionists a differing amount. In sum, these rules provide that litigants pay the transcript costs to the court according to the statewide schedule set forth in Rule 4008. The court, in turn, pays transcript fees to the court reporting personnel according to the fee schedule set by the judicial district.

The fee schedule of a judicial district must specify the fees that court reporters and transcriptionists are paid for both transcripts requested by litigants and transcripts requested by the Commonwealth or a subdivision thereof. Therefore, at a minimum, the local rule required in Rule 4009 must include the fees payable to court reporters and
transcriptionists for (1) private-party transcripts, (2) transcripts ordered by governmental entities, (3) indigency and economic hardship cases, and (4) accelerated delivery surcharges.]
Rule 4010. Format of Transcript.
(A) The format of paper transcripts shall be as follows:
[(1) Size. Paper size shall be 8 1/2 $\mathbf{x} 11$ inches.
(2) Paper. Paper shall be opaque, white, archival quality paper, at least 13 pounds for both originals and copies.
(3) Preprinted Marginal Lines. Pages shall contain preprinted solid left and right marginal lines. Preprinted top and bottom marginal lines are optional.
(4) Line Numbers. Each page shall bear numbers indicating each line of transcription on the page.
(5) Number of Lines per Page. Each page shall contain 25 lines of text. The last page may contain fewer lines if it is less than a full page of transcription. Page numbers or notations (e.g., page headers) shall not be considered part of the 25 lines of text.
(6) Margins. Typing shall begin on each page at the $13 / 4$ inch left margin and continue to the $3 / 8$ inch right margin.
(7) Type Size. The letter character size is to be 12 point with 10 letters to the inch. This type size provides for approximately 63 characters to each line. Courier 12 point type is recommended.
(8) Spacing. Lines of text shall be double spaced.
(9) Indentations.
(a) $Q$ and $A$. All " $Q$ " and " $A$ " designations shall begin at the left margin. The statement following the " $Q$ " and " $A$ " shall begin on the fifth space from the left margin. Subsequent lines shall begin at the left margin. Since depositions read at a trial have the same effect as oral testimony, the indentations for " $Q$ " and " $A$ " should be the same as described above. In the transcript, each question and answer read should be preceded by a quotation mark. At the conclusion of the reading, a closing quotation mark should be used.
(b) Colloquy. Speaker identification shall begin on the tenth space from the left margin followed directly by a colon. The statement shall begin on the third space after the colon. Subsequent lines shall begin at the left margin.
(c) Quotations. Quoted material other than depositions shall begin on the tenth space from the left margin, with additional quoted lines beginning at the tenth space from the left margin, with appropriate quotation marks used.
(d) Interruptions of Speech and Simultaneous Discussions. Interruptions of speech shall be denoted by the use of a dash at the point of interruption, and again at the point the speaker resumes speaking.
(e) Page Heading (also known as "Headers"). A page heading is brief descriptive information noted to aid in locating a person and/or event in a transcript. Page headings shall appear above line 1 on the same line as the page number. This information shall not to be counted as a line of transcript.
(f) Parentheses. Parenthetical notations shall be marked by parentheses. They shall begin with an open parenthesis on the fifth space from the left margin, with the remark beginning on the sixth space from the left margin. Parentheses are used for customary introductory statements such as call to order of court or swearing in a witness. Parentheses are also used for indicating non-verbal behavior, pauses, and readback/playback.]
(1) No fewer than 25 typed lines on standard 8-1/2 $\times 11$ paper.
(2) No fewer than nine or 10 characters to the typed inch.
(3) Left-hand margin to be set at no more than 1-3/4 inches.
(4) Right-hand margin to be set at no more than 3/8 inch.
(5) Each question and answer to begin on a separate line.
(6) Each question and answer to begin no more than five spaces from the left-hand margin with no more than five spaces from the $Q$ and $A$ to the text.
(7) Carry-over $Q \& A$ lines to begin at the lefthand margin.
(8) Colloquy material to begin no more than 15 spaces from the left-hand margin, with carry-over colloquy to the left-hand margin.
(9) Quoted material to begin no more than 15 spaces from the left-hand margin, with carry-over lines to begin no more than 10 spaces from the left-hand margin.
(10) Parentheticals and exhibit markings to begin no more than 15 spaces from the left-hand margin, with carry-over lines to begin no more than 15 spaces from the left-hand margin.
(B) Electronic transcripts shall comply with the format standards set forth in Rule 4010(A)(3) through [ (9)] (10) for paper transcripts and, in addition, shall be in PDF format with the following settings:
(1) functions disabled: content changes; and
(2) functions enabled: search, select, copy, paste and print.

## Comment

Rule 4010 standards for both paper and electronic transcripts, which [ closely follow federal court standards ] follow the standards of the National Court Reporters Association, assure that all transcripts of proceedings before the Pennsylvania courts are formatted in the same way, whether prepared by official court reporters or transcriptionists, contract or per diem personnel, or by transcription companies.
Rule 4011. Deadline for Delivery of Transcript.
(A) [ The ] Unless otherwise ordered by the court, the court reporter or transcriptionist shall deliver the transcript [ within 30 calendar days of receiving notice to prepare the transcript as provided by Rule 4007, unless an accelerated timeframe is mandated by law ] for those cases under appeal within 14 days of receiving notice from the district court administrator or the court's designee, as required by Pa.R.A.P. 1922(a). [ The court reporter or tran-
scriptionist, upon a showing of good cause to the president judge or his or her designee, may request an extension of the deadline for a period of time not to exceed an additional 30 days. In no case shall more than one extension be granted.]
(B) The court reporter or transcriptionist shall deliver transcripts for all other requests within 30 calendar days of receiving notice from the district court administrator or the court's designee, as provided by Rule 4007, unless an accelerated time frame is mandated by court order, law or local rule.
(C) For requests made by a party required to post a deposit under Rule 4007, the 30 -day period for delivery of the transcript shall not commence until the Rule 4007 deposit is received by the court. In those cases involving economic hardship under Rule 4008, the 30 -day period for delivery of the transcript shall not commence until disposition of the application for waiver or reduction of costs. In cases where a reduction of costs is granted, the time frame commences once the reduced deposit is received by the court.
(D) The court reporter or transcriptionist, upon a showing of good cause to the president judge, may request an extension of the deadline for a period of time not to exceed an additional 30 days. In no case shall more than one extension be granted.
[(B)] (E) Transcripts prepared pursuant to the Children's Fast Track Appeal program shall be given priority.

Official Note: For rules governing children's fast track appeals, see Pa.R.A.P. 102 et seq.
(F) Requests for transcripts unrelated to cases under appeal or in cases where no court order has been entered directing transcription shall not be given priority. However, in any event such transcripts shall be filed and delivered within 45 days, absent an extension for good cause approved by the President Judge.

## Comment

These rules do not supersede any existing Pennsylvania Rule of Court regarding the delivery of court transcripts. If there appears to be a conflict with an existing Pennsylvania Rule of Court, such Rule remains in full force and effect. However, if there appears to be a conflict with any local rule of court for the delivery of transcripts, these Rules take precedence.

## Rule 4012. Sanctions for Delayed Transcript.

(A) The president judge may take disciplinary action[, including reassignment, reduction of fees, contempt of court, or decertification ] against any court reporter, court recorder, or transcriptionist [ who impedes the prompt administration of justice, whether by protracted delinquency in a single case or by engaging in a pattern of delinquency in a number of cases] where noncompliance with these Rules impedes the prompt administration of justice, whether by protracted delinquency in a single case or by engaging in a pattern of delinquency in a number of cases.
[ (B) The failure of a court reporter or transcriptionist to complete the notes within the time imposed by these rules or by court order, which delays transmission of the complete record to the
appellate court, interferes with the reviewing court's proceedings. The appellate court may enter an order to compel the preparation, filing and transmission of the notes and may take disciplinary action including contempt of court or reduction of fees.
(C) A district court administrator or his or her designee may cause a transcript to be prepared by another court reporter or transcriptionist from notes in the event of the inability, unavailability, or unwillingness of the individual who took the notes to do so within the time ordered by the court.
(D) ] (B) The Court Administrator shall notify the Supreme Court of Pennsylvania of instances of unreasonable delay in preparing transcripts. The Court Administrator may recommend imposition of sanctions, including [ decertification] disqualification of individual court reporters or transcriptionists.
[(E)] (C) The president judge shall ensure that the number, proficiency and organization of court reporting personnel in any district are adequate to support the full and unrestricted operation of the courts. When transcript delay is caused by an insufficient supply of qualified court reporters or other staff resources, or inefficient management of the court reporting operation, the Supreme Court may direct the president judge to take immediate corrective actions.

## Rule 4013. Certification of Transcript.

Court reporting personnel who take the notes, record or transcribe a proceeding shall certify that the transcript of proceedings is true and correct and meets the format specifications established by the Supreme Court of Pennsylvania in Rule 4010. When more than one person was engaged in the production of the transcript, each shall certify as to his or her contribution.
Rule 4014. Redaction of Personal Data Identifiers.
(A) On its own motion, or upon motion of any party, the court may order the court reporter or transcriptionist preparing the transcript to redact [ the following personal data identifiers:] confidential, personal and/or financial data and other identifiers.
[ (1) Social Security numbers;
(2) financial institution account identifiers;
(3) dates of birth;
(4) names of minor children;
(5) home addresses and telephone numbers; and
(6) other identifiers as privacy and security may require.]
(B) Information that is redacted shall, unless otherwise directed by the court, appear in transcripts that are provided to the court and to the parties, but not in any transcript filed in the appropriate filing office or provided to any other requestor.

## Rule 4015. Ownership of Notes.

Notes of testimony of court proceedings, stenographic notes, tapes, rough draft transcripts or other media used by court reporting personnel to record or monitor a proceeding in or for a court as well as any transcriptions thereof, are the exclusive property of the judicial district.

## Comment

Nothing in these rules prohibits someone who has lawfully obtained a transcript from making a copy.

The ownership of court reporting software and equipment, when purchased by the court reporter, shall remain the property of the court reporter, unless the terms of employment with the district court provide otherwise.

Rule 4016. Storage and Retention.
(A) Each judicial district shall make provision for the archiving, storage and retention of transcribed and untranscribed notes of testimony, rough draft transcripts, reporter and recorder log notes, tapes, other electronic or digital audio files, and any hardware, software, tools or dictionaries necessary for proper transcription.
(B) Notes of testimony and other materials specified in subdivision (A) shall be retained in compliance with the Record Retention and Disposition Schedule with Guidelines adopted by the Supreme Court.

## Comment

Each judicial district is responsible for the preservation of the transcript production materials listed in Rule 4016(A) in a form that guarantees their accuracy, authenticity, and accessibility. These materials must be protected from loss arising from personnel turnover in the court, environmental hazards, or unsecured access.
[ Exhibits admitted into evidence are part of the court record and must be maintained with the official court record in the appropriate filing office. Excluded here are drugs, weapons, and other dangerous materials kept in secure locations by law enforcement for production on appeal or for a new trial, or pending forfeiture or destruction order of the court. Original materials shall not be maintained in the personal files of court reporting personnel.]
[Pa.B. Doc. No. 16-1476. Filed for public inspection August 26, 2016, 9:00 a.m.]

## Title 231-RULES OF CIVIL PROCEDURE

PART II. ORPHANS' COURT RULES [ 231 PA. CODE PART II]
Order Amending the Index and Rescinding and Replacing Forms OC-01 through OC-06 and RW-06 through RW-10 in the Appendix to the Orphans' Court Rules; No. 702 Supreme Court Rules Doc.

## Order

## Per Curiam

And Now, this 9th day of August, 2016, upon the recommendation of the Orphans' Court Procedural Rules Committee; the proposal having been submitted without publication pursuant to Pa.R.J.A. No. 103(a)(3) in the interest of justice and efficient administration:

It Is Ordered pursuant to Article V, Section 10 of the Constitution of Pennsylvania that:

1) The Index to the Appendix of the Pennsylvania Orphans' Court Rules is amended; and
2) Forms OC-01 through OC-06 and RW-06 through RW-10 in the Appendix to the Pennsylvania Orphans' Court Rules are rescinded and replaced
in the following form.
This Order shall be processed in accordance with Pa.R.J.A. No. 103(b) and shall be effective September 1, 2016 for all legal papers, pleadings, or notices filed or served as of that date.
Annex A
TITLE 231. RULES OF CIVIL PROCEDURE
PART II. ORPHANS' COURT RULES
INDEX TO APPENDIX
ORPHANS' COURT AND REGISTER OF WILLS FORMS
ADOPTED BY SUPREME COURT
PURSUANT TO Pa. O.C. Rule [ 1.3 ] 1.8
Available as Fill-in Forms on Website
of Administrative Office of Pennsylvania Courts
http://www.pacourts.us/Forms/OrphansCourtForms.htm
Orphans' Court and Administration Forms
A. Audit and Administration Forms
[ 1. Petition for Adjudication-Decedent's Estate
(Pa.O.C. Rule 6.9) . .................................... . . OC-01
2. Petition for Adjudication-Trust Estate
(Pa.O.C. Rule 6.9) . . . . . . . . . . . . . . . . . . . . . . . . . . . . OC-02
3. Petition for Adjudication-Guardian of Estate
of Incapacitated Person (Pa.O.C. Rule 6.9) ... OC-03
4. Petition for Adjudication-Guardian of Estate
of Minor (Pa.O.C. Rule 6.9) . . . . . . . . . . . . . . . . . . OC-04
5. Petition for Adjudication-Principal's Estate
under POA (Pa.O.C. Rule 6.9. . . . . . . . . . . . . . . . OC-05 ]
6. Decedent's Estate: Petition for Adjudication/ Statement of Proposed Distribution Pursuant to Pa. O.C. Rule 2.4 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . OC-01
7. Trust: Petition for Adjudication/Statement of Proposed Distribution Pursuant to Pa. O.C.
Rule 2.4
8. Guardianship of Incapacitated Person: Petition for Adjudication/Statement of Proposed Distribution Pursuant to Pa. O.C. Rule 2.4............. . OC-03
9. Guardianship of Minor: Petition for Adjudication/Statement of Proposed Distribution Pursuant to Pa. O.C. Rule 2.4 . . . . . . . . . . . . . . . . . . . . . . OC-04
10. Principal's Estate (Under Power of Attorney): Petition for Adjudication/Statement of Proposed Distribution Pursuant to Pa. O.C. Rule 2.4 . . OC-05
11. Notice of Charitable Gift [ (Pa. O.C. Rule 5.5)] (In Accordance with Pa. O.C. Rule 4.4) . . . . . . . . . . . . OC-06
12. Notice of Claim . . . . . . . . . . . . . . . . . . . . . . . . . . . . OC-07
B. Guardianship Forms
13. Important Notice-Citation with Notice (Pa. O.C.

14. Annual Report-Guardian of Estate. . . . . . . . . . . G-02
15. Annual Report-Guardian of Person ........... G-03
16. Guardian's Inventory . . . . . . . . . . . . . . . . . . . . . . . . G-04
[ 5. Petition for Adjudication-Guardian of Estate of Incapacitated Person OC-03*
17. Petition for Adjudication-Guardian of Estate of Minor . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . OC-04** ${ }^{*}$ ]
18. Guardianship of Incapacitated Person: Petition for Adjudication/Statement of Proposed Distribution Pursuant to Pa. O.C. Rule 2.4............ . OC-03*
19. Guardianship of Minor: Petition for Adjudication/Statement of Proposed Distribution Pursuant to Pa. O.C. Rule 2.4........................ . . OC-04**

* Form OC-3 is not reprinted here and is located under Audit and Administration Forms at No. 3.
** Form OC-4 is not reprinted here and is located under Audit and Administration Forms at No. 4.
C. Abortion Control Act Forms

1. Minor's Application for Judicial Authorization of an Abortion (Pa. O.C. Rule 16.10).

ACA-01
2. Confidential Unsworn Verification by a Minor (Pa.
O.C. Rule 16.10)

ACA-02
D. Register of Wills Forms

1. Estate Information Sheet

RW-01
(Not adopted by Supreme Court; form promulgated by Department of Revenue and maintained with Register of Wills forms for convenience)
2. Petition for Grant of Letters . . . . . . . . . . . . . . . . RW-02
3. Oath of Subscribing Witness(es).............. . . RW-03
4. Oath of Non-subscribing Witness(es) ......... RW-04
5. Oath of Witness(es) to Will Executed by

Mark
RW-05
6. Renunciation . . . . . . . . . . . . . . . . . . . . . . . . . . . . . RW-06
7. [ Pa. O.C. Rule 5.6 Notice] Notice of Estate Administration Pursuant to Pa. O.C. Rule
10.5.

RW-07
8. Certification of Notice under Pa. O.C. Rule [ 5.6(a)]
10.5. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . RW-08
9. [Estate] Inventory . . . . . . . . . . . . . . . . . . . . . . RW-09
10. Pa. O.C. Rule [ 6.12] 10.6 Status Report . . RW-10
E. Model Forms of Account

1. National Fiduciary Accounting Standards Project1983 Report of Fiduciary Accounting Standards Committee
2. Model Estate Account
3. Model Trust Account
4. Model Charitable Remainder Unitrust Account
F. [ Foreign] Adoption Forms
[ 1. Registration Forms-Pa.O.C. Rule 15.8
a. Petition to Register Foreign Adoption Decree
b. Final Decree-Granted
c. Final Decree-Denied
d. Instructions for Filing Petition
5. Completion of Foreign Adoption FormsPa.O.C. Rule 15.9
a. Preliminary Decree
b. Final Decree
c. Petition for Adoption of a Foreign Born Child
d. Report of the Intermediary
e. Verification of Translator ]
6. Notice of Orphans' Court Proceedings to be Filed With Clerk in Dependency Proceeding by Solicitor of County Agency (Pa. O.C. Rule 15.6(b)
a. Praecipe to Clerk in Dependency Proceeding of Filing of a Petition to Terminate Parental Rights, Confirm Consent, or Adopt
b. Praecipe to Clerk in Dependency Proceeding of Entry of Decision Disposing of Petition
c. Praecipe to Clerk in Dependency Proceeding of Filing of Notice of Appeal
d. Praecipe to Clerk in Dependency Proceeding of Entry of Decision Disposing of Appeal
7. Foreign Adoption Forms
a. Form for Registration of Foreign Adoption Decree (Pa. O.C. Rule 15.8), including Instructions for Filing Petition, Petition to Register Foreign Adoption Decree, and Proposed Final Decrees
b. Form Petition for Adoption of a Foreign Born Child (Pa. O.C. 15.9), including the Petition for Adoption of a Foreign Born Child, Report of the Intermediary, Verification of Translator, Preliminary Decree, and Final Decree

# DECEDENT'S ESTATE 

COURT OF COMMON PLEAS OF

ORPHANS' COURT DIVISION

ESTATE OF $\qquad$ , DECEASED

No. $\qquad$

## PETITION FOR ADJUDICATION / <br> STATEMENT OF PROPOSED DISTRIBUTION <br> PURSUANT TO Pa. O.C. Rule 2.4

This form shall be used in all cases involving the Audit or Confirmation of the Account of a Decedent's Estate. If space is insufficient, riders may be attached. Attach the papers required under items $1,2,4,8,10,16-19$, as applicable, and any instrument pertinent to the adjudication.

## INCLUDE ATTACHMENTS AT THE BACK OF THIS FORM.

Name of Counsel: $\qquad$
Supreme Court I.D. No.: $\qquad$
Name of Law Firm: $\qquad$
Address: $\qquad$

Telephone: $\qquad$
Fax: $\qquad$
Email: $\qquad$

Estate of Deceased

1. Name(s) and address(es) of Petitioner(s):
$\qquad$ Petitioner:

Identify any Executors or Administrators who have not joined in the Petition for Adjudication/Statement of Proposed Distribution and/or the Account and state reason:

Is this the first accounting for this estate? $\square$ Yes $\qquad$
If not, identify prior accountings, the accounting periods covered, and the dates of adjudication of the prior accountings.
$\qquad$
$\qquad$
Pursuant to 20 Pa.C.S. § 3501.2, if property from a trustee, guardian, or agent acting under a power of attorney is being received into the estate, an Account of the administration of such trust, guardianship, or principal's estate may be annexed to the Estate Account. Is any such Account annexed to this Estate Account? . . . . . . . . . . .. . . . . . . . . . $\square$ Yes $\square$ No

If so, the annexed Account and the appropriate fully completed Petition for Adjudication/ Statement of Proposed Distribution for the annexed matter should be filed as Exhibits to this Petition.
2. Decedent died on $\qquad$ .
$\square$ Letters Testamentary or $\square$ Letters of Administration were granted to Petitioner(s) on Date of Will (if applicable):

Date(s) of Codicil(s) (if applicable):
Date of probate (if different from date Letters granted):
Was a bond required? $\square$ Yes $\square$ No If yes, state amount: Are proofs of advertising of the grant of Letters attached? ......... $\square$ Yes $\square$ No
Dates of advertising of the grant of Letters:

Estate of , Deceased
3. Was decedent survived by a spouse? $\qquad$ $\square$ Yes $\square$ No

Ifyes, name of the surviving spouse: $\qquad$
4. Has the surviving spouse filed to take an elective share? ....... $\square$ Yes $\square$ No $\square$ N/A (see 20 Pa.C.S. § 2201 et seq.)

If yes, attach a copy of the election and state date of election:
5. In the case of an intestacy, state the names of the decedent's surviving children or surviving issue of deceased children (if none, so state):
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
6. Did decedent marry after execution of Will or Codicil(s)? . . . . . . . . . . . $\square$ Yes $\square$ No $\square$ N/A

Were any children born to decedent after execution of Will or Codicil(s)? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $\square$ Yes $\square$ No $\square$ N/A

If yes, give names and dates of birth:
Name:
Date of Birth:
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
7. Was a request for a statement of claim, as required by the Medical Assistance Estate Recovery Act, 62 P.S. § 1412, sent to the Department of Human Services? . . . . . . . . . . . . . . . . . . . . . . . . . . $\square$ Yes $\square$ No $\square$ N/A
$\qquad$ , Deceased
8. Written notice of the Account's filing as required by Pa. O.C. Rule 2.5 has been or will be given to all interested parties listed in item 9 below, all unpaid creditors and all claimants listed in item 10 below. In addition, notice of any questions requiring adjudication as discussed in item 15 below has been or will be given to all persons affected thereby. If one of the beneficiaries is a trust or another estate and any of the accountants is also a fiduciary of the receiving trust or estate, provide written notice of the Account's filing to the beneficiaries of the trust or receiving estate, as applicable, if known.
A. If Notice has been given, attach a copy of the Notice as well as a list of the names and addresses of the parties receiving such Notice.
B. If Notice is yet to be given, a copy of the Notice as well as a list of the names and addresses of the parties receiving such Notice shall be submitted at the Audit or filed before the date of the last day for filing objections in counties without separate Orphans' Court Divisions together with a statement executed by a Petitioner or counsel certifying that such Notice has been given.
C. If any such interested person is not sui juris (e.g., minors or incapacitated persons), Notice has been or will be given to the appropriate representative on such party's behalf as required by Pa . O.C. Rule 4.2.
D. If any charitable interest is involved, Notice has been or will also be given to the Attorney General as required under Pa. O.C. Rule 4.4. In addition, the Attorney General's clearance certificate (or proof of service of Notice and a copy of such Notice) must be submitted herewith or at the Audit or filed before the date of the last day for filing objections in counties without separate Orphans' Court Divisions.
9. List all parties (charitable and non-charitable) of whom Petitioner(s) has/have notice or knowledge, having or claiming any interest in the estate as beneficiaries under the Will (if beneficiary is a trust, name the trust and trustee as the Interested Party ) or Codicil(s) or as intestate heirs if there is a complete or partial intestacy. This list shall:
A. State each party's relationship to the decedent and the nature of each party's interest(s):

| Name and Address of Each Interested Party | Relationship and Comments, if any | Interest |
| :--- | :--- | :--- | :--- |
|  |  |  |
|  |  |  |


B. Identify each party who is not sui juris (e.g., minors or incapacitated persons). For each such party, give date of birth, the name of each Guardian and how each Guardian was appointed. If no Guardian has been appointed, identify the next of kin of such party, giving the name, address and relationship of each.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
C. State why a Petition for Guardian/Trustee Ad Litem has or has not been filed (see Pa. O.C. Rule 5.5).
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Estate of $\qquad$ Deceased
D. If distribution is to be made to the personal representative of a deceased party, state date of death, date and place of grant of Letters and type of Letters granted.
$\qquad$
10. Other than the claim for the family exemption, list the names of all known claimants and the amount of their claims and state whether each claim is admitted.


If the estate is insolvent, attach a schedule setting forth the order of preference under $20 \mathrm{~Pa} . \mathrm{C} . \mathrm{S}$. § 3392 and the proposed payments.

Estate of Deceased
11. Was family exemption claimed? ....................................................... $\square$ Yes $\square$ No

Was family exemption allowed? ...................................................... $\square$ Yes $\square$ No
Family exemption claimant's name and relationship:

Name:
Relationship: $\qquad$
12. The amount of Pennsylvania Transfer Inheritance Tax paid, the date(s) of payment(s), and the interest(s) upon which paid, are as follows:

|  | Payment | Interest |
| :--- | :---: | :---: |
|  |  |  |

13. On the date of death, was the decedent a fiduciary (personal representative, trustee, guardian, agent under power of attorney) or surety on the bond of a fiduciary? . . . . . . . . . . . . . . . . . $\square$ Yes $\square$ No

If yes, provide the name of the estate, indicate whether an Account has been filed and confirmed and all awards performed, or, in the alternative, how the decedent's estate will be discharged for the decedent's fiduciary administration of the estate.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Estate of , Deceased
14. On the date of death, was the decedent a party (as a plaintiff or defendant) in any litigation? $\square$ Yes $\square$ No

If yes, provide the caption of the litigation, docket number, where the matter is currently pending, and its status.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
15. A. Describe in detail any questions requiring adjudication and state the position of the Petitioner(s) as to each question:
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
B. Has notice of the question requiring adjudication been given to the parties identified in Paragraph 9 above? ................ $\square$ Yes $\square$ No
16. If Petitioner(s) has/have knowledge that a share has been assigned, renounced, disclaimed or attached, provide a copy of the assignment, renunciation, disclaimer or attachment, together with any relevant supporting documentation.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Estate of $\qquad$ , Deceased
17. Had the decedent been adjudicated an incapacitated person? ......... $\square$ Yes $\square$ No

If yes, attach a copy of the Order if available; otherwise state the Court, docket number, date, and name of Hearing Judge.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
18. A. List or attach a separate list of additional receipts and disbursements since the closing date of the Account.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
B. Has notice of the additional receipts and disbursements been given to the parties identified in Paragraph 9 above? $\square \mathrm{Ye}$ $\square$ No
19. If a reserve is requested, state amount and purpose.

Amount: $\qquad$
Purpose: $\qquad$
$\qquad$
$\qquad$
$\qquad$

If a reserve is requested for counsel fees, has notice of the amount of fees to be paid from the reserve been given to the interested parties ? ................................................ $\square$ Yes $\square$ No

If so, attach a copy of the notice.

Estate of $\qquad$ , Deceased
20. If prescribed by local rule as permitted by Pa. O.C. Rule 2.9, is the Court being asked to direct the filing of a Schedule of Distribution?. . . . . $\square$ Yes $\square$ No

As to real estate only? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $\square$ Yes $\square$ No
Wherefore, your Petitioner(s) ask(s) that distribution be awarded to the parties entitled and suggest(s) that the distributive shares of income and principal (residuary shares being stated in proportions, not amounts) are as follows:
A. Income:

Proposed Distributee(s)
$\qquad$
$\qquad$
$\qquad$
B. Principal:

Proposed Distributee(s)
$\qquad$
$\qquad$
$\qquad$

Submitted By:
(All petitioners must sign. Place additional signatures on attachment if necessary):

Corporate Fiduciary (if applicable)

Name of Corporate Fiduciary

Name of Representative and Title

Signature of Officer/Representative

Name of Petitioner

Signature of Petitioner

Name of Petitioner

Signature of Petitioner

Estate of $\qquad$ , Deceased
(Verification must be by at least one petitioner.)

## Verification for Individual Petitioner

The undersigned hereby verifies that the averment of facts set forth in the foregoing Petition for Adjudication/Statement of Proposed Distribution which are within the personal knowledge of the Petitioner are true, and as to facts based on the information of others, the Petitioner, after diligent inquiry, believes them to be true; and that any false statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

## Date

## Signature of Petitioner

## Verification for Corporate Petitioner

The undersigned hereby verifies that he/she $\qquad$ is title $\qquad$ of the above-named name of corporation $\qquad$ and that the averment of facts set forth in the foregoing Petition for Adjudication/Statement of Proposed Distribution which are within the personal knowledge of the Petitioner are true, and as to facts based on the information of others, the Petitioner, after diligent inquiry, believes them to be true; and that any false statements herein are made subject to the penalties of 18 Pa .C.S. § 4904 (relating to unsworn falsification to authorities).

## Date

Signature of Representative for Corporate Petitioner

## Certification of Counsel

The undersigned counsel hereby certifies that the foregoing Petition for Adjudication/ Statement of Proposed Distribution is a true and accurate reproduction of the form Petition authorized by the Supreme Court, and that no changes to the form have been made beyond the responses herein.

## Date

[^0]
## TRUST

## COURT OF COMMON PLEAS OF

## ORPHANS' COURT DIVISION

## NAME OF TRUST

(TRUST UNDER WILL OF $\qquad$
or
TRUST UNDER DEED OF $\qquad$ DATED $\qquad$ )

No. $\qquad$

# PETITION FOR ADJUDICATION / STATEMENT OF PROPOSED DISTRIBUTION <br> PURSUANT TO Pa. O.C. Rule 2.4 

This form shall be used in all cases involving the Audit or Confirmation of Trust Accounts. If space is insufficient, riders may be attached. Attach the papers required under items 2, 4, 15-19, as applicable, and any instrument pertinent to the adjudication.

## INCLUDE ATTACHMENTS AT THE BACK OF THIS FORM.

Name of Counsel: $\qquad$
Supreme Court I.D. No.: $\qquad$
Name of Law Firm: $\qquad$
Address: $\qquad$

Telephone: $\qquad$
Fax: $\qquad$
Email: $\qquad$

Name of Trust: $\qquad$

1. Name(s) and address(es) of Petitioner(s):

Petitioner:

Name: $\qquad$
Address: $\qquad$
$\qquad$

Identify any Trustees who have not joined in the Petition for Adjudication/Statement of Proposed Distribution and/or the Account and state reason:
2. Pursuant to $20 \mathrm{~Pa} . \mathrm{C} . \mathrm{S}$. § 7799.1, if property from a personal representative or a trustee of another trust is being received by this Trust, an Account of the administration of such estate or trust may be annexed to the Trust Account. Is any such Account annexed to this Trust Account? $\square$ $\square$ No
If so, the annexed Account and the appropriate fully completed Petition for Adjudication/Statement of Proposed Distribution for the annexed matter should be filed as Exhibits to this Petition.
3. Check if any of the following issues are involved in this case:
A. Appointment of Trustee . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

C. Discharge of Trustee . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
D. Transfer of Situs
E. Appointment of Ad Litem
F. Minor, Unborn or Unascertained Beneficiary(ies)
$\square$
G. Principal Distribution

H. Partial/Full Termination of Trust

I. Missing Beneficiary(ies)

J. Cy Pres

K. Other Issues

List:
$\qquad$
$\qquad$
$\qquad$

Name of Trust: $\qquad$

Please note:
A detailed explanation of issues checked should be set forth at item 15 below.

## 4. Testamentary Trust:

Decedent's date of death: $\qquad$
Date of Decedent's Will: $\qquad$
Date(s) of Codicil(s): $\qquad$
Date of probate: $\qquad$
Judicial District or County where Letters were issued: $\qquad$
or

## Inter Vivos Trust:

Date of Trust: $\qquad$
Date(s) of Amendment(s): $\qquad$
If Settlor is deceased and letters were not issued or the personal representative did not advertise the estate, state dates when the Trustee advertised Settlor's death and attach proofs of advertising:
$\qquad$

Is this inter vivos trust a Special Needs Trust established under
42 U.S.C. § 1396p(d)(4)? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $\square$ Yes $\square$ No
5. Explain why venue is proper before this Court (see 20 Pa.C.S. § 7714), and why the Trust's situs is located in this judicial district or county (see 20 Pa.C.S. § 7708).
$\qquad$
$\qquad$
$\qquad$
$\qquad$
6. A. If any other Court has taken jurisdiction of any matter relating to this Trust, explain:
$\qquad$
B. Is this the first accounting of this Trust? . . . . . . . . . . . . . . . . . . . . . $\square$ Yes $\square$ No

Name of Trust: $\qquad$
C. If not, identify prior accountings, the accounting periods covered, and the dates of adjudication of the prior accountings.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
7. A. State how each Trustee was appointed:
$\qquad$
$\qquad$
$\qquad$
$\qquad$
B. If a Petitioner is not a Trustee (e.g., executor or administrator of deceased trustee, agent or guardian of an incapaciated trustee), explain:
$\qquad$
8. State how and when the present fund was awarded to Trustee(s):
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
9. Period covered by this Account: $\qquad$ to $\qquad$ .
10. Current fair market value of the Trust principal is \$ $\qquad$ (see page _of Account.)
11. State concisely the dispositive provisions of the Trust:


Name of Trust: $\qquad$
12. Explain the reason for filing this Account (if filed because of the death of a party, state name of person, relationship to Trust and date of death):
$\qquad$
13. A. State the amount of Pennsylvania Transfer Inheritance Tax paid (including postponed tax on remainder interests), the dates of payment and the interests upon which such amounts were paid:

B. If any such taxes remain unpaid or are in dispute, explain:
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
14. Describe any questions requiring adjudication and state the position of Petitioner(s) as to each question and give details of any issues identified in item 3:
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
15. Written notice of the Account's filing as required by Pa. O.C. Rule 2.5 has been or will be given to all interested parties listed in item 16 below. If any person is being asked to represent the interests of another interested party (whether sui juris or not), the person asked to serve as a representative has been so notified and given an opportunity to decline pursuant to $20 \mathrm{Pa.C.S}$. § 7725. In addition, notice of any questions requiring adjudication as discussed in item 14 above has been or will be given to all persons affected thereby. If one of the beneficiaries is a trust or estate and any of the accountants is also a fiduciary of the receiving trust or estate, provide written notice of the Account's filing to the beneficiaries of the receiving trust or estate, as applicable, if known.

Name of Trust:
A. If Notice has been given, attach a copy of the Notice as well as a list of the names and addresses of the parties receiving such notice. Unless contained in the attached Notice, attach a copy of the written notice provided to any person who is being asked to represent another or attach such person's consent to serve.
B. If Notice is yet to be given, a copy of the Notice as well as a list of the names and addresses of the parties receiving such Notice shall be submitted at the Audit or filed before the date of the last day for filing objections in counties without separate Orphans' Court Divisions together with a statement executed by Petitioner(s) or counsel certifying that such Notice has been given. Unless contained in the Notice or previuosly attached, a copy of the written notice provided to any person who is being asked to represent another or such person's consent to serve shall be submitted at the Audit or filed before the date of the last day for filing objections in counties without separate Orphans' Court Divisions.
C. If any such interested party is not sui juris (e.g., minors or incapacitated persons), Notice has been or will be given to the appropriate representative on such party's behalf as required by Pa. O.C. Rule 4.2.
D. If any charitable interest is involved, Notice has been or will also be given to the Attorney General as required under Pa. O.C. Rule 4.4. In addition, the Attorney General's clearance certificate (or proof of service of Notice and a copy of such Notice) must be submitted herewith or at the Audit or filed before the date of the last day for filing objections in counties without separate Orphans' Court Divisions.
E. If the Account before the Court is a Special Needs Trust established under 42 U.S.C. § 1396p(d)(4), Notice has been or will also be given to the Pennsylvania Department of Human Services, Special Needs Trust Depository and to the applicable department of any other state that has provided the special needs beneficiary with medical care under a state medical assistance program ("Department"). In addition, the Department's letter of no objection (or proof of service of Notice and a copy of such Notice) must be submitted herewith or at the Audit or filed before the date of the last day for filing objections in counties without separate Orphans' Court Divisions.
16. List all parties of whom Petitioner(s) has/have notice or knowledge, having or claiming any interest in the Trust (if beneficiary is a trust, name the trust and trustee as the Interested Party), whether such interest is vested or contingent, charitable or non-charitable. This list shall:
A. State each party's relationship to the Settlor/Decedent and the nature of each party's interest(s);

| Name and Address of Each Interested Party | Relationship and Comments, if any | Interest |
| :--- | :--- | :--- | :--- |
|  |  |  |
|  |  |  |

Name of Trust:

| Name and Address of Each Interested Party | Relationship and Comments, if any | Interest |
| :---: | :---: | :---: |
|  |  |  |
|  |  |  |
|  |  |  |

B. If any interested party (whether sui juris or not) is not receiving Notice of the filing of the Account and the Petition for Adjudication/Statement of Proposed Distribution because another individual is proposed to represent such interested party pursuant to $20 \mathrm{~Pa} . \mathrm{C} . \mathrm{S}$. §§ 7721-7726, provide the information below for each proposed representative. If there is more than one proposed representative, attach a rider setting forth the information below for each additional proposed representative:
(i) Name of Proposed Representative: $\qquad$
Describe Proposed Representative's Interest(s) in Trust:
$\qquad$
$\qquad$
Name of the interested parties or description of the class of interested parties whom the person named above is to represent and describe such persons' interest in Trust:
$\qquad$
$\qquad$
$\qquad$
(ii) Has any person who is proposed to be represented as identified in the question above notified a Trustee in writing that he or she objects to such representation? $\square \mathrm{Y}$ $\square$ No If yes, provide Name(s) of Person(s) objecting to being represented:
$\qquad$
$\qquad$
$\qquad$
(iii) Specify the subparagraph(s) under 20 Pa . C.S. § 7723 authorizing representation:
(iv) Is there any conflict of interest? . . . . . . . . . . . . . . . . . . . . . . $\square$ Yes $\square$ No

If yes, explain conflict and why representation should be permitted:
$\qquad$

Name of Trust: $\qquad$
(v) Has Proposed Representative provided writen consent? ..... $\square$ Yes $\square$ No

If no, has Proposed Representative declined in writing to act in the representative capacity as requested? ............... $\square$ Yes $\square$ No

If Proposed Representative has neither consented to act in writing nor declined in writing to act, provide date of the letter in which Proposed Representative was notified that he or she is to represent another person or class of interested parties: $\qquad$
C. Identify each party who is not sui juris (e.g., minors or incapacitated persons). For each such party, give date of birth, the name of each Guardian and how each Guardian was appointed. If no Guardian has been appointed, identify the next of kin of such party, giving the name, address and relationship of each.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
D. State why a Petition for Guardian/Trustee $A d$ Litem has or has not been filed (see Pa. O.C. Rule 5.5).
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
E. If distribution is to be made to the personal representative of a deceased party, state date of death, date and place of grant of Letters and type of Letters granted
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Name of Trust: $\qquad$
17. If Petitioner(s) has/have knowledge that a Trust share has been assigned, renounced, disclaimed or attached, provide a copy of the assignment, renunciation, disclaimer or attachment, together with any relevant supporting documentation.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
18. If a Trustee's principal commission is claimed:
A. If based on a written agreement, attach a copy thereof.
B. If a principal commission is claimed, state amount. $\$$ $\qquad$
C. If a principal commission is claimed, state the amounts and dates of any principal commissions previously paid in prior accounting periods.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
19. If a reserve is requested, state amount and purpose.

Amount: $\qquad$
Purpose: $\qquad$
$\qquad$
$\qquad$

If a reserve is requested for counsel fees, has notice of the amount of fees to be paid from the reserve been given to the interested parties?


If so, attach a copy of the notice.
20. If prescribed by local rule as permitted by Pa . O.C. Rule 2.9 , is the Court being asked to direct the filing of a Schedule of Distribution?. . $\square$ Yes $\quad \square$ No

Name of Trust: $\qquad$

Wherefore, your Petitioner(s) ask(s) that distribution be awarded to the parties entitled and suggest(s) that the distributive shares of income and principal (residuary shares being stated in proportions, not amounts) are as follows:
A. Income:
$\qquad$
B. Principal:

Proposed Distributee(s)
Amount/Proportion
$\qquad$
$\qquad$
$\qquad$
Submitted By:
(All petitioners must sign. Place additional signatures on attachment if necessary):
Corporate Fiduciary (if applicable)

Name of Corporate Fiduciary
Name of Petitioner

## Name of Representative and Title

Signature of Officer/Representative

Signature of Petitioner

Signature of Petitioner
(Verification must be by at least one petitioner.)
Verification for Individual Petitioner
The undersigned hereby verifies that the averment of facts set forth in the foregoing Petition for Adjudication/Statement of Proposed Distribution which are within the personal knowledge of the Petitioner are true, and as to facts based on the information of others, the Petitioner, after diligent inquiry, believes them to be true; and that any false statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

## Date

Signature of Petitioner

## Verification for Corporate Petitioner

The undersigned hereby verifies that he/she $\qquad$ is title $\qquad$ of the above-named name of corporation and that the averment of facts set forth in the foregoing Petition for Adjudication/Statement of Proposed Distribution which are within the personal knowledge of the Petitioner are true, and as to facts based on the information of others, the Petitioner, after diligent inquiry, believes them to be true; and that any false statements herein are made subject to the penalties of 18 Pa.C.S. $\S 4904$ (relating to unsworn falsification to authorities).

## Date

Signature of Representative for Corporate Petitioner

## Certification of Counsel

The undersigned counsel hereby certifies that the foregoing Petition for Adjudication/ Statement of Proposed Distribution is a true and accurate reproduction of the form Petition authorized by the Supreme Court, and that no changes to the form have been made beyond the responses herein.

## Date

Signature of Counsel for Petitioner

# GUARDIANSHIP OF INCAPACITATED PERSON 

COURT OF COMMON PLEAS OF<br>ORPHANS' COURT DIVISION

ESTATE OF $\qquad$ , AN INCAPACITATED PERSON

ACCOUNT OF $\qquad$ , GUARDIAN

No. $\qquad$

# PETITION FOR ADJUDICATION / STATEMENT OF PROPOSED DISTRIBUTION PURSUANT TO Pa. O.C. Rule 2.4 

This form shall be used in all cases involving the Audit or Confirmation of the Account of a Guardian of the Estate of an incapacitated person. If space is insufficient, riders may be attached. Attach the papers required under items 2, 3, and 5, as applicable, and any additional decree or instrument pertinent to the adjudication.

INCLUDE ATTACHMENTS AT THE BACK OF THIS FORM.

Name of Counsel: $\qquad$
Supreme Court I.D. No.: $\qquad$
Name of Law Firm: $\qquad$
Address: $\qquad$

Telephone: $\qquad$
Fax: $\qquad$
Email: $\qquad$

Estate of $\qquad$ , An Incapacitated Person

1. Name(s) and address(es) of Petitioner(s):

Petitioner:
Petitioner:
Name:
$\qquad$
Identify any Guardians of the Estate who have not joined in the Petition for Adjudication/ Statement of Proposed Distribution and/or the Account and state reason:
$\qquad$
2. Judicial District or County issuing Adjudication of Incapacity:

Date of Adjudication of Incapacity: $\qquad$
Date of Appointment as Guardian: $\qquad$
Attach copy(ies) of Decree(s).
3. A. Explain the reason for filing this Account (if incapacitated person has died, state date of death, name and address of personal representative and of his or her counsel and attach a Short Certificate if available. If incapacitated person has been adjudged to have regained capacity, state date of Decree and attach a copy. If Account is filed for any other reason, state address of incapacitated person):
$\qquad$
B. Is this the first accounting for this estate? $\square$ Yes $\square$ No
If not, identify prior accountings, the accounting periods covered, and the dates of adjudication of the prior accountings.
$\qquad$
4. A. Identify each unpaid claim against the incapacitated person or the incapacitated person's estate and describe each in detail (if none, so state):
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Estate of $\qquad$ , An Incapacitated Person
B. Describe in detail any questions requiring adjudication and state the position of the Petitioner(s) as to each question:
$\qquad$
$\qquad$
$\qquad$
C. If guardian or attorney fees are being claimed, state amount and the period covered for the requested fees:
$\qquad$
5. Written Notice of the Account's filing as required by Pa. O.C. Rule 2.5 has been or will be given to all interested parties listed in item 6 below. In addition, notice of any known unpaid claim not admitted, all questions requiring adjudication and any requested fees as discussed in item 4 above has been or will be given to all persons affected thereby.
A. If Notice has been given, attach a copy of the Notice as well as a list of the names and addresses of the parties receiving such Notice.
B. If Notice is yet to be given, a copy of the Notice as well as a list of the names and addresses of the parties receiving such Notice shall be submitted at the Audit or filed before the date of the last day for filing objections in counties without separate Orphans' Court Divisions together with a statement executed by a Petitioner or counsel certifying that such Notice has been given.
C. If any such interested party is not sui juris (e.g., minors or incapacitated persons), Notice of the Account's filing has been or will be given to the appropriate representative on such party's behalf as required by Pa . O.C. Rule 4.2.

Estate of $\qquad$ , An Incapacitated Person
6. List all parties of whom Petitioner(s) has/have notice or knowledge, having or claiming any interest in the estate, including the incapacitated person's heirs at law. This list shall:
A. State each party's relationship to the incapacitated person and the nature of each party's interest(s):

B. Identify each party who is not sui juris (e.g., minors or incapacitated persons). For each such party, give date of birth, the name of each Guardian and how each Guardian was appointed. If no Guardian has been appointed, identify the next of kin of such party, giving the name, address and relationship of each.
$\qquad$
C. State why a Petition for Guardian/Trustee Ad Litem has or has not been filed (see Pa. O.C. Rule 5.5).
$\qquad$
$\qquad$
$\qquad$
7. If prescribed by local rule as permitted by Pa. O.C. Rule 2.9, is the Court being asked to direct the filing of a Schedule of Distribution? ...... $\square$ Yes $\square$ No

Estate of $\qquad$ , An Incapacitated Person

Wherefore, your Petitioner(s) ask(s) that distribution be awarded to the parties entitled and suggest(s) that the distributive shares of income and principal (residuary shares being stated in proportions, not amounts) are as follows:
A. Income:

Proposed Distributee(s)
$\qquad$
$\qquad$
B. Principal:
$\qquad$
$\qquad$

Submitted By:
(All petitioners must sign. Place additional signatures on attachment if necessary):

Corporate Fiduciary (if applicable)

## Name of Corporate Fiduciary

Name of Petitioner

Name of Representative and Title
Signature of Petitioner

Signature of Officer/Representative
Name of Petitioner

Signature of Petitioner

Estate of $\qquad$ , An Incapacitated Person
(Verification must be by at least one petitioner.)
Verification for Individual Petitioner
The undersigned hereby verifies that the averment of facts set forth in the foregoing Petition for Adjudication/Statement of Proposed Distribution which are within the personal knowledge of the Petitioner are true, and as to facts based on the information of others, the Petitioner, after diligent inquiry, believes them to be true; and that any false statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

Date
Signature of Petitioner

## Verification for Corporate Petitioner

The undersigned hereby verifies that he/she $\qquad$ is title $\qquad$ of the above-named name of corporation and that the averment of facts set forth in the foregoing Petition for Adjudication/Statement of Proposed Distribution which are within the personal knowledge of the Petitioner are true, and as to facts based on the information of others, the Petitioner, after diligent inquiry, believes them to be true; and that any false statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

Date
Signature of Representative for Corporate Petitioner

## Certification of Counsel

The undersigned counsel hereby certifies that the foregoing Petition for Adjudication/ Statement of Proposed Distribution is a true and accurate reproduction of the form Petition authorized by the Supreme Court, and that no changes to the form have been made beyond the responses herein.

## Date

[^1]
## GUARDIANSHIP OF MINOR

COURT OF COMMON PLEAS OF

ORPHANS' COURT DIVISION

ESTATE OF $\qquad$ , A MINOR

ACCOUNT OF $\qquad$ , GUARDIAN

No. $\qquad$

## PETITION FOR ADJUDICATION / STATEMENT OF PROPOSED DISTRIBUTION

## PURSUANT TO Pa. O.C. Rule 2.4

This form shall be used in all cases involving the Audit or Confirmation of the Account of a Guardian of the Estate of a minor or late minor. If space is insufficient, riders may be attached. Attach the papers required under items 2 and 5, as applicable, and any instrument pertinent to the adjudication.

INCLUDE ATTACHMENTS AT THE BACK OF THIS FORM.

Name of Counsel: $\qquad$
Supreme Court I.D. No.: $\qquad$
Name of Law Firm: $\qquad$
Address: $\qquad$
$\qquad$
Telephone: $\qquad$
Fax: $\qquad$
Email: $\qquad$

Estate of $\qquad$ , A Minor

1. Name(s) and address(es) of Petitioner(s):

Petitioner: Petitioner:
Name: $\qquad$
$\qquad$
Address: $\qquad$
$\qquad$
$\qquad$
Identify any Guardian of the Estate who have not joined in the Petition for Adjudication/Statement of Proposed Distribution and/or the Account and state reason:
$\qquad$
$\qquad$
$\qquad$
2. Judicial District or County Appointing Guardian: $\qquad$
Date of Appointment as Guardian: $\qquad$ Attach copy(ies) of Decree(s).
3. A. Explain the reason for filing this Account (if minor has come of age, state date minor attained majority).
$\qquad$
$\qquad$
$\qquad$
B. Is this the first accounting for this estate? . . . . . . . . . . . . . . . . . . . $\square$ Yes $\square$ No

If not, identify prior accountings, the accounting periods covered, and the dates of adjudication of the prior accountings.
$\qquad$
$\qquad$
4. A. Identify each unpaid claim against the minor or the minor's estate and describe in detail (if none, so state):
$\qquad$
$\qquad$
$\qquad$
B. Describe in detail any questions requiring adjudication and state the position of the Petitioner(s) as to each question:
$\qquad$
C. If guardian or attorney fees are being claimed, state amount and the period covered for the requested fees:
5. Written Notice of the Account's filing as required by Pa. O.C. Rule 2.5 has been or will be given to all interested parties listed in item 6 below. In addition, notice of any unpaid claim not admitted, all questions requiring adjudication, and any requested fees as discussed in item 4 above has been or will be given to all persons affected thereby.
A. If Notice has been given, attach a copy of the Notice as well as a list of the names and addresses of the parties receiving such Notice.
B. If Notice is yet to be given, a copy of the Notice as well as a list of the names and addresses of the parties receiving such Notice shall be submitted at the Audit or filed before the date of the last day for filing objections in counties without separate Orphans' Court Divisions together with a statement executed by a Petitioner or counsel certifying that such Notice has been given.
C. If any such interested party is not sui juris (e.g., minors or incapacitated persons), Notice of the Account's filing has been or will be given to the appropriate representative on such party's behalf as required by Pa . O.C. Rule 4.2.

Estate of A Minor
6. List all parties of whom Petitioner(s) has/have notice or knowledge, having or claiming any interest in the estate, including the minor's heirs at law. This list shall:
A. State each party's relationship to the minor and the nature of each party's interest(s):

| Name and Address of Fach Ineresesed Party | Relationship and Comments, ifany | Interest |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

B. Identify each party who is not sui juris (e.g., minors or incapacitated persons). For each such party, give date of birth, the name of each Guardian and how each Guardian was appointed. If no Guardian has been appointed, identify the next of kin of such party, giving the name, address and relationship of each.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
C. State why a Petition for Guardian/Trustee Ad Litem has or has not been filed (see Pa. O.C. Rule 5.5).
$\qquad$
$\qquad$
$\qquad$
7. If prescribed by local rule as permitted by Pa. O.C. Rule 2.9, is the

Court being asked to direct the filing of a Schedule of Distribution? ...... $\square$ Yes $\square$ No

Estate of $\qquad$ , A Minor

Wherefore, your Petitioner(s) ask(s) that distribution be awarded to the parties entitled and suggest(s) that the distributive shares of income and principal (residuary shares being stated in proportions, not amounts) are as follows:
A. Income:

Proposed Distributee(s)
$\qquad$
$\qquad$
B. Principal:

Proposed Distributee(s)
$\qquad$
$\qquad$

Submitted By:
(All petitioners must sign. Place additional signatures on attachment if necessary):

## Corporate Fiduciary (if applicable)

| Name of Corporate Fiduciary | Name of Petitioner |
| :---: | :---: |
| Name of Representative and Title | Signature of Petitioner |
| Signature of Officer/Representative | Name of Petitioner |
|  | Signature of Petitioner |
| Form OC-04 eff. 09.01.16 | Page 5 of 6 |

(Verification must be by at least one petitioner.)

## Verification for Individual Petitioner

The undersigned hereby verifies that the averment of facts set forth in the foregoing Petition for Adjudication/Statement of Proposed Distribution which are within the personal knowledge of the Petitioner are true, and as to facts based on the information of others, the Petitioner, after diligent inquiry, believes them to be true; and that any false statements herein are made subject to the penalties of $18 \mathrm{~Pa} . \mathrm{C} . \mathrm{S}$. $\S 4904$ (relating to unsworn falsification to authorities).

Date
Signature of Petitioner

## Verification for Corporate Petitioner

The undersigned hereby verifies that he/she $\qquad$ is title $\qquad$ of the above-named name of corporation and that the averment of facts set forth in the foregoing Petition for Adjudication/Statement of Proposed Distribution which are within the personal knowledge of the Petitioner are true, and as to facts based on the information of others, the Petitioner, after diligent inquiry, believes them to be true; and that any false statements herein are made subject to the penalties of $18 \mathrm{~Pa} . \mathrm{C} . \mathrm{S} . \S$ 4904 (relating to unsworn falsification to authorities).

## Date

Signature of Representative for Corporate Petitioner

## Certification of Counsel

The undersigned counsel hereby certifies that the foregoing Petition for Adjudication/ Statement of Proposed Distribution is a true and accurate reproduction of the form Petition authorized by the Supreme Court, and that no changes to the form have been made beyond the responses herein.

## Date

Signature of Counsel for Petitioner

# PRINCIPAL'S ESTATE 

(Under Power of Attorney)

COURT OF COMMON PLEAS OF

ORPHANS' COURT DIVISION
$\qquad$ No._

## PETITION FOR ADJUDICATION / <br> STATEMENT OF PROPOSED DISTRIBUTION <br> PURSUANT TO Pa. O.C. Rule 2.4

This form shall be used in all cases involving the Audit or Confirmation of the Account of one or more Agents acting under a Power of Attorney. If space is insufficient, riders may be attached. Attach the papers required under items 3, 4 and 9, as applicable, and any instrument pertinent to the adjudication.

INCLUDE ATTACHMENTS AT THE BACK OF THIS FORM.

Name of Counsel: $\qquad$
Supreme Court I.D. No.: $\qquad$
Name of Law Firm: $\qquad$
Address: $\qquad$

Telephone: $\qquad$
Fax: $\qquad$
Email: $\qquad$

[^2]Estate of $\qquad$ , Principal

1. Name(s) and address(es) of Petitioner(s):

| Petitioner: |  | Petitioner: |
| :--- | :--- | :--- |
| Name: |  |  |
| Address: |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Name(s) and address(es) of Agent(s) (if not Petitioner(s)):
Agent:
Agent:

Name: $\qquad$
$\qquad$
Address: $\qquad$
$\qquad$

Identify any Agents who have not joined in the Petition for Adjudication/Statement of Proposed Distribution and/or the Account and state reason:
$\qquad$
2. Name and address of Principal (and, if applicable, of any Guardian appointed for Principal, of each personal representative for any Principal or Agent who has died, and of his or her counsel, identifying the capacity of each):
$\qquad$
Judicial District or County where Principal resides, or if Principal is deceased, where Letters were issued: $\qquad$
3. A. Date of Principal's Power of Attorney under which Agent(s) acted:
$\qquad$
B. Date Agent(s) first exercised control of Principal's assets under Power of Attorney:
(Attach copy of each different Power of Attorney granted to Agent(s) by Principal and copy of any Decree involving Agent(s) for Principal).
4. A. Explain the reason for filing this Account (if Principal or Agent has died, state date of death, and attach a Short Certificate; if Principal has been adjudicated incapacitated, state date of Decree, and attach a copy):
$\qquad$
$\qquad$
$\qquad$
$\qquad$
B. Is this the first accounting for this Principal's estate?. ............ $\square$ Yes $\square$ No

If not, identify prior accountings, the accounting periods covered, and the dates of adjudication of the prior accountings.
$\qquad$
5. Describe all gifts/transfers for less than full and adequate consideration made under the Power of Attorney. Identify each recipient's name, address, and relationship to Principal and/or Agent, amount of each gift/transfer, nature of each (cash or kind), and date made, with any additional explanation deemed appropriate (if none, so state):
$\qquad$
6. Identify every asset or interest (include title or registration and value) of Principal known to Petitioner(s) and not identified in Account, whether or not in possession or control of Petitioner(s) (if none known, so state):
$\qquad$

## Estate of

$\qquad$ , Principal
7. Identify each existing safe deposit box of or for Principal and each one closed by Agent(s) (if not applicable, so state):

| Institution \& Address | Box No. | Title or Registration | Date Closed (if applicable) |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Are the entire contents of each safe deposit box identified in item 7
above included in the filed Account?


If not, explain:
$\qquad$
$\qquad$
$\qquad$
8. A. Identify each known unpaid claim against Principal or Principal's estate and describe each in detail (if none, so state):
$\qquad$
$\qquad$
$\qquad$
B. Describe in detail any questions requiring adjudication and state the position of the Petitioner(s) as to each question:
$\qquad$
$\qquad$
$\qquad$

Estate of $\qquad$ Principal
C. If fees are being claimed by the Agent or an attorney, state amount and the period covered for the requested fees:
$\qquad$
$\qquad$
9. Written Notice of the Account's filing as required by Pa. O.C. Rule 2.5 has been or will be given to each interested party in the matter. In addition, notice of any known unpaid claim not admitted, all questions requiring adjudication, and any requested fees as described in item 8 above has been or will be given to all parties affected thereby.
A. If Notice has been given, attach a copy of the Notice as well as a list of the names and addresses of the parties receiving such Notice.
B. If Notice is yet to be given, a copy of the Notice as well as a list of the names and addresses of the parties receiving such Notice shall be submitted at the Audit or filed before the date of the last day for filing objections in counties without separate Orphans' Court Divisions together with a statement executed by a Petitioner or counsel certifying that such Notice has been given.
C. If any such interested party is not sui juris (e.g., minors or incapacitated persons), Notice of the Account's filing has been or will be given to the appropriate representative on such party's behalf as required by Pa. O.C. Rule 4.2.
10. List all parties of whom Petitioner(s) has/have notice or knowledge, having or claiming any interest in the Principal's estate. This list shall:
A. State each party's relationship to the Principal and the nature of each party's interest(s):

| Name and Address of Each Interested Party | Relationship and Comments, if any | Interest |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Estate of $\qquad$ , Principal
B. Identify each party who is not sui juris (e.g., minors or incapacitated persons).

For each such party, give date of birth, the name of each Guardian and how each Guardian was appointed. If no Guardian has been appointed, identify the next of kin of such party, giving the name, address and relationship of each.
$\qquad$
$\qquad$
$\qquad$
C. State why a Petition for Guardian/Trustee Ad Litem has or has not been filed (see Pa. O.C. Rule 5.5).
$\qquad$
$\qquad$
$\qquad$
11. If prescribed by local rule as permitted by Pa. O.C. Rule 2.9, is the Court being asked to direct the filing of a Schedule of Distribution? ...... $\square$ Yes $\square$ No

Estate of $\qquad$ , Principal

Wherefore, your Petitioner(s) ask(s) that distribution be awarded to the parties entitled and suggest(s) that the distributive shares of income and principal (residuary shares being stated in proportions, not amounts) are as follows:
A. Income:

Proposed Distributee(s)
$\qquad$
$\qquad$
B. Principal:

> Proposed Distributee(s)
$\qquad$
$\qquad$

Submitted By:
(All petitioners must sign. Place additional signatures on attachment if necessary):

Corporate Fiduciary (if applicable)

Name of Corporate Fiduciary

Name of Representative and Title

Signature of Officer/Representative
Name of Petitioner

Signature of Petitioner

Estate of $\qquad$ , Principal
(Verification must be by at least one petitioner.)

## Verification for Individual Petitioner

The undersigned hereby verifies that the averment of facts set forth in the foregoing Petition for Adjudication/Statement of Proposed Distribution which are within the personal knowledge of the Petitioner are true, and as to facts based on the information of others, the Petitioner, after diligent inquiry, believes them to be true; and that any false statements herein are made subject to the penalties of $18 \mathrm{~Pa} . C . S$. § 4904 (relating to unsworn falsification to authorities).

## Verification for Corporate Petitioner

The undersigned hereby verifies that he/she $\qquad$ is title $\qquad$ of the above-named name of corporation and that the averment of facts set forth in the foregoing Petition for Adjudication/Statement of Proposed Distribution which are within the personal knowledge of the Petitioner are true, and as to facts based on the information of others, the Petitioner, after diligent inquiry, believes them to be true; and that any false statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).
$\overline{\text { Signature of Representative for Corporate Petitioner }}$

## Certification of Counsel

The undersigned counsel hereby certifies that the foregoing Petition for Adjudication/ Statement of Proposed Distribution is a true and accurate reproduction of the form Petition authorized by the Supreme Court, and that no changes to the form have been made beyond the responses herein.

## Date

Signature of Counsel for Petitioner

# NOTICE OF CHARITABLE GIFT 

(In Accordance with Pa. O.C. Rule 4.4)<br>COURT OF COMMON PLEAS OF<br>ORPHANS' COURT DIVISION

## ESTATE OF <br> $\qquad$ No. <br> $\qquad$

Chief, Charitable Trusts and Organizations Section
Office of the Attorney General

Dear Sir or Madam:
Notice is given of a charitable gift as follows:

1. The nature of the present proceeding is an Account: $\square$ Yes $\square$ No If no, please proceed to Question 2.
(a) The Account is filed in a court with a separate Orphans' Court Division and has been or will be listed for Audit on $\qquad$ ,
in $\qquad$ -
(State name of Courthouse and town/city.)

The time and place of the Audit is Court Room $\qquad$ at $\qquad$ o'clock. If not provided herein, the time and location will be provided upon request when that information becomes available.
(b) The Account is filed in a court without a separate Orphans' Court Division, and the last day for filing written objections is $\qquad$ , at
$\qquad$ o'clock.

Any objection shall be filed with on or before the date and time above.
(c) The Account concerns an estate or trust in which a charity has an interest or is a potential distributee.Yes $\square$ No
If NO, the Account concerns an estate or trust in which all or part of the balance of assets remaining on hand will be distributed to:
an estate in which a charity has an interest; ora trust in which a charity is named as a qualified beneficiary as defined in 20 Pa.C.S. § 7703.

Estate of $\qquad$ , $\square$ SETTLOR
2. If the proceedings are other than an Account, state the nature of the proceedings and the place, date and time fixed for hearing:
$\qquad$
3. Charitable gifts are made as follows:
(a) Give full names and addresses of charities, and the names and addresses of counsel for any charity who has received notice or has appeared for it:
$\qquad$
(b) If pecuniary legacies, state exact amounts and indicate whether legacies will be or have been paid in full; if not, give reasons therefor.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
(c) If the charitable interest is a future interest and the estimated present value of the charity's future interest exceeds $\$ 25,000$, a brief description thereof including the conditions precedent to its vesting in enjoyment and possession, the names and ages of persons known to have interests preceding such charitable interest, and the approximate market value of the property involved.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Estate of $\qquad$ $\square$ settior $\square$ DECEASED
(d) If residuary gift, state nature and value of share.
$\qquad$
4. Provide a brief statement of all pertinent questions to be presented to the Court for adjudication or other disposition, including unresolved claims and any material questions of interpretation or distribution which may affect the value of the charitable interest.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
5. The names and addresses of the fiduciaries are (state whether Executors and/or Trustees):
$\qquad$
6. The names and addresses of counsel for the fiduciaries:
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Estate of $\qquad$ SETTLOR
$\square$ DECEASED
7. (a) A copy of the instrument creating the gift is attached hereto.
(b) If the gift is other than a pecuniary legacy which will be paid in full, there is attached hereto:
(1) A copy of the Account, if one has been filed
(2) A copy of any other relevant documents

Very truly yours,
$\overline{\text { Date }}$

Signature

Name of Counsel

Supreme Court I.D. No.

Name of Law Firm

Address

Telephone

## Email

## RENUNCIATION

## REGISTER OF WILLS

Estate of $\qquad$ , Deceased

The undersigned, $\qquad$ , in the capacity/relationship as (Name or Corporate Name) of the above Decedent, hereby renounces the right to administer the Estate of the Decedent and, to the extent permitted by law pursuant to $20 \mathrm{~Pa} . \mathrm{C} . \mathrm{S}$. § 3155 , respectfully requests that Letters be issued to $\qquad$ .
(Date)

Name or Corporate Fiduciary (if applicable)

Signature of Officer/Representative

Title of Officer/Representative

Address
$\qquad$

Telephone
Email

## Executed in Register's Office

Sworn to or affirmed and subscribed
before me this $\qquad$ day of $\qquad$

Deputy for Register of Wills

Signature of Person

Address

Telephone

## Email

## Executed out of Register's Office

Before the undersigned personally appeared the party executing this Renunciation and certified that he or she executed the Renunciation for the purposes stated within on this $\qquad$ day
of $\qquad$

## Notary Public

My Commission Expires:
(Signature and Seal of Notary or other official qualified to administer oaths. Show date of expiration of Notary's Commission.)

## IMPORTANT NOTICE

## NOTICE OF ESTATE ADMINISTRATION PURSUANT TO Pa. O.C. Rule 10.5

## THIS NOTICE DOES NOT MEAN THAT YOU WILL RECEIVE ANY MONEY OR PROPERTY FROM THIS ESTATE OR OTHERWISE

Whether you will receive any money or property will be determined wholly or partly by the decedent's will. If the decedent died without a will, whether you will receive any money or property will be determined by the intestacy laws of Pennsylvania.

BEFORE THE REGISTER OF WILLS,

IN RE: ESTATE OF $\qquad$ , Deceased

File Number $\qquad$
TO: $\qquad$ (Beneficiary) (Address)
Please take notice of the death of the Decedent and the grant of Letters to the personal representative(s) named below. The Decedent died on $\qquad$ , a resident of

The Decedent died: $\quad \square$ testate (with a Will) or $\quad \square$ intestate (without a Will).
You may have a beneficial interest in the estate as follows:
$\qquad$
(If additional space is needed, use separate sheet)
The name(s), address(es) and telephone number(s) of all personal representatives appointed are:
NAME ADDRESS TELEPHONE

If the Decedent died testate, the Will has been filed with the Office of the Register of Wills of
If the Decedent died intestate, a Petition for the Grant of Letters of Administration was filed with the Office of the Register of Wills of

The Register's address is $\qquad$ , and telephone number is $\qquad$ .

A copy of the Will or Petition may be obtained by contacting the Register of Wills and paying the charges for duplication. Date $\qquad$ Capacity: $\qquad$ Counsel
Corporate Fiduciary (if applicable)

Name of Corporate Fiduciary
$\overline{\text { Name of Representative and Title }}$
$\qquad$
Telephone
Email

Signature of Officer/Representative
Form RW-07 eff. 09.01.16

| Name of Person |
| :--- |
| Address |
| Telephone |
| Email |
| Signature of Person |

## CERTIFICATION OF NOTICE UNDER Pa. O.C. Rule 10.5

## REGISTER OF WILLS

Name of Decedent: $\qquad$
Date of Death: $\qquad$ File Number: $\qquad$
Date Letters Granted: $\qquad$

To the Register:
I certify that Notice of Estate Administration required by Pa. O.C. Rule 10.5 of the Orphans' Court Rules was served on or mailed to the following beneficiaries of the above-captioned estate on
$\qquad$ :

(If more space is needed, attach separate sheet.)
Notice has now been given to all persons entitled thereto under Pa. O.C. Rule 10.5 except:


## INVENTORY

REGISTER OF WILLS OF

| COMMONWEALTH OF PENNSYLVANIA File Number |
| :--- |
| County of |

The undersigned,
Representative(s) of the Estate of
deceased, depose(s) and say(s) that the items appearing in the following Inventory include all of the personal assets wherever
situated and all of the real estate in the Commonwealth of Pennsylvania of said Decedent, that the valuation placed opposite each
item of said Inventory represents its fair value as of the date of Decedent's death, and that Decedent owned no real estate
outside of the Commowealth of Pennsylvania except that which appears in a memorandum at the end of this Inventory.

I verify that the statements made in this Inventory are true and correct. I understand that false statements herein are made subject to the penalties of $18 \mathrm{~Pa} . \mathrm{C} . \mathrm{S}$. § 4904 relating to unsworn falsification to authorities.

Corporate Fiduciary (if applicable)


Name of Corporate Fiduciary

Name of Representative and Title

Signature of Officer/Representative
Attorney -- (Name) $\qquad$ (Supreme Court I.D. No.) $\qquad$
(Name of Law Firm)
(Address) $\qquad$
(Telephone) $\qquad$
(Email)

| DATE OF DEATH | LAST RESIDENCE | DECEDENT'S SOC. SEC. NO. |
| :--- | :--- | :--- | :--- |

FIGURES MUST BE TOTALED
(Attach additional sheets as needed)

| (Attach additional sheets as needed) |  |  |
| :--- | ---: | ---: |
| TOTAL: | $\$ 0.00$ |  |

[^3] item, but such figures should not be extended into the total of the Inventory. (See 20 Pa. C.S. § 3301(b))

Form RW-09 eff. 09.01.16

# Pa. O.C. Rule 10.6 STATUS REPORT REGISTER OF WILLS OF 

Name of Decedent: $\qquad$

Date of Death: $\qquad$ File Number: $\qquad$

Pursuant to Pa. O.C. Rule 10.6, I report the following with respect to completion of the administration of the above-captioned estate:

1. State whether administration of the estate is complete: . . . . . . ................ $\square$ Yes $\square$ No
2. If the answer is No, state when the personal representative reasonably believes that the administration will be complete:
3. If the answer to No. 1 is YES, state the following:
a. Did the personal representative file a final account with the Court? ......... $\square$ Yes $\square$ No
b. The separate Orphans' Court No. (if any) for the personal representative's account is:
c. Did the personal representative state an account informally to the parties in interest?esNo
d. Copies of receipts, releases, joinders and approvals of formal or informal accounts may be filed with the Clerk of the Orphans' Court or may be attached to this report.

| Date | Capacity: $\square$ Personal Representative | Counsel |
| :---: | :---: | :---: |
| Corporate Fiduciary (if applicable) |  |  |
| Name of Corporate Fiduciary | Name of Person |  |
| Name of Representative and Title | Address |  |
| Address |  |  |
|  | Telephone |  |
| Telephone | Email |  |
| Email |  |  |
| Signature of Officer/Representative | Signature of Person |  |

[^4]
## Title 237—JUVENILE RULES

## PART I. RULES

[ 237 PA. CODE CH. 1]
Order Amending Rule 105 of the Rules of Juvenile Court Procedure; No. 703 Supreme Court Rules Doc.

## Order

## Per Curiam

And Now, this 11th day of August, 2016, upon the recommendation of the Juvenile Court Procedural Rules Committee, the proposal having been published for public comment at 45 Pa .B. 4902 (August 22, 2015):

It Is Ordered pursuant to Article V, Section 10 of the Constitution of Pennsylvania that Rule 105 of the Pennsylvania Rules of Juvenile Court Procedure is amended in the following form.

This Order shall be processed in accordance with Pa.R.J.A. No. 103(b), and shall be effective on October 1, 2016.

## Annex A

## TITLE 237. JUVENILE RULES

## PART I. RULES

## Subpart A. DELINQUENCY MATTERS

## CHAPTER 1. GENERAL PROVISIONS

## Rule 105. Search Warrants.

The Pennsylvania Rules of Criminal Procedure, Rules 200 through 211 and Rule 212(B), shall apply to search warrants in juvenile delinquency matters.

## Comment

Search warrants for juvenile cases are not available for public inspection. The search warrant is to be treated as a juvenile record and the provisions of Rule $160(A)$ apply. Once a search warrant is executed, it is filed with the Court of Common Pleas and becomes a part of the official court record. Also, information contained in the affidavit of probable cause attached to the search warrant is a part of law enforcement records, which is also confidential. See 42 Pa.C.S. §§ 6307 \& 6308 and Rule 160.

Official Note: Rule 105 adopted April 1, 2005, effective October 1, 2005. Amended August 11, 2016, effective October 1, 2016.

## Committee Explanatory Reports:

Final Report explaining the provisions of Rule 105 published with the Court's Order at 35 Pa .B. 2214 (April 16, 2005).

Final Report explaining the amendments to Rule 1608 published with the Court's Order at 46 Pa.B. 5533 (August 27, 2016).

## FINAL REPORT ${ }^{1}$

## Amendment of Pa.R.J.C.P. 105

On August 11, 2016, the Court amended Pennsylvania Rule of Juvenile Court Procedure 105 concerning search warrants in juvenile delinquency matters to incorporate by reference Pennsylvania Rule of Criminal Procedure 212(B).

On October 22, 2013, the Court amended Pa.R.Crim.P. 212 to add that unexecuted warrants and affidavit(s) are not public records and should be destroyed upon return to the issuing authority. This amendment prompted the Committee to examine whether Pa.R.J.C.P. 105 should be amended to extend the "incorporation by reference" of that rule to include all or part of Pa.R.Crim.P. 212.

In its present form, Pa.R.Crim.P. 212(A) acknowledges that a warrant and affidavit in criminal matters are publicly available, but it limits access until the warrant has been executed. The Committee did not recommend referencing Pa.R.Crim.P. 212(A) because it might suggest that such access, albeit limited, extends to juvenile cases. See also Pa.R.J.C.P. 105, Comment, as amended.

Regarding Pa.R.Crim.P. 212(B), the Committee favored incorporating that provision into Pa.R.J.C.P. 105. While the Committee did not believe this information would be available in juvenile cases, it did agree that unexecuted warrants should be destroyed "[g]iven the potential harm to the subject of a search warrant." See Pa.R.Crim.P. 212, Comment.
[Pa.B. Doc. No. 16-1478. Filed for public inspection August 26, 2016, 9:00 a.m.]

# 249—PHILADELPHIA RULES 

PHILADELPHIA COUNTY
Adoption of Philadelphia Criminal Rule 588. Motion for Return of Property. Post Deprivation Hearing; Administrative Order No. 02 of 2016

## Order

And Now, this 11th day of August, 2016, the Supreme Court Criminal Procedural Rules Committee having reviewed the following Philadelphia Criminal Rule 588. Motion for Return of Property. Post Deprivation Hearing as required by Pa.R.J.A. 103, and having determined that the said local rule is not inconsistent with the Statewide Rules of Criminal Procedures, it is hereby Ordered and Decreed that Philadelphia Criminal Rule 588. Motion for Return of Property. Post Deprivation Hearing is hereby adopted and shall become effective thirty (30) days after publication in the Pennsylvania Bulletin.

This Administrative Order is issued in accordance with the April 11, 1986 order of the Supreme Court of Pennsylvania, Eastern District, No. 55 Judicial Administration, Docket No. 1. As required by Pa.R.J.A. 103(d), this Administrative Order and the proposed local rule were

[^5]submitted to the Supreme Court of Pennsylvania Criminal Procedural Rules Committee for review and written notification has been received from the Rules Committee certifying that the proposed local rule is not inconsistent with any general rule of the Supreme Court. This Administrative Order and the following local rule shall be filed with the Office of Judicial Records (formerly the Prothonotary, Clerk of Courts and Clerk of Quarter Sessions) in a docket maintained for Administrative Orders issued by the First Judicial District of Pennsylvania. As required by Pa.R.J.A. 103(d)(5)(ii), two certified copies of this Administrative Order and the following local rule, as well as one copy of the Administrative Order and local rule shall be distributed to the Legislative Reference Bureau on a computer diskette for publication in the Pennsylvania Bulletin. As required by Pa.R.J.A. 103(d)(6) one certified copy of this Administrative Order and local rule shall be filed with the Administrative Office of Pennsylvania Courts, shall be published on the website of the First Judicial District at http://courts.phila.gov, and shall be incorporated in the compiled set of local rules no later than 30 days following publication in the Pennsylvania Bulletin. Copies of the Administrative Order and local rule shall also be published in The Legal Intelligencer and will be submitted to American Lawyer Media, Jenkins Memorial Law Library, and the Law Library for the First Judicial District.
By the Court
HONORABLE JACQUELINE F. ALLEN, Administrative Judge, Trial Division Court of Common Pleas, Philadelphia County

## PROPOSED NEW PHILADELPHIA CRIMINAL RULE

Rule 588. Motion for Return of Property. PostDeprivation Hearing.
(A) Any person aggrieved by a search and seizure may move for the return of the property seized by filing a motion with the Trial Division, Criminal regardless of whether criminal charges have been filed against the owner of the property or the person in possession of the property. The relief requested may be interim (i.e. return of the property pending disposition of the criminal case or the forfeiture petition), or permanent in nature.
(B) In the event criminal charges have been filed against the owner of the property or the person in possession of the property, the motion shall be filed utilizing the CPCMS number assigned to the underlying case. If criminal charges have not been filed against the owner or person in possession of the property, a Miscellaneous Docket number shall be assigned through CPCMS.
(C) The filer shall serve the Commonwealth through the District Attorney's Office, and shall file an Affidavit of Service.
(D) Upon receipt of the Affidavit of Service, the Office of Judicial Records shall schedule a prompt hearing on the motion and shall notify the Commonwealth and the filer.
(E) The assigned judge may require the filing of an Answer.
(F) In the event a forfeiture petition was filed by the Commonwealth before the filing of a motion for the return of property, the motion(s) shall be assigned to the same judge for disposition, as practicable.
[Pa.B. Doc. No. 16-1479. Filed for public inspection August 26, 2016, 9:00 a.m.]

# 255-LOCAL COURT RULES 

## BEDFORD COUNTY

Designation of a Central Location for Holding Preliminary Hearings in Court Cases; AD No. 3 for 2016

## Order of Court

And Now, this 4th day of August, 2016, because of the increase in criminal prosecution, involuntary detention after arrest, and the relatively large geographical area of this Judicial District, it is the opinion of this Court that the administration of justice may be more expeditiously accomplished by the establishment of a new central place within the Judicial District for the conduct of all preliminary hearings in court cases in which issuing Authorities of the various Magisterial District shall have jurisdiction.

Wherefore, it is the Order of the Court that, effective October 19, 2016, and continuing until further Order of Court, Courtroom Number 3 of the Bedford County Courthouse/Office Building, 200 South Juliana Street, Bedford, Pennsylvania, is hereby designated as the place for the conduct of all preliminary hearings within the 57th Judicial District of Pennsylvania, the same to be known as the "Central Court of Bedford County."

Court cases requiring a preliminary hearing shall be transferred forthwith as they are filed by the respective issuing Authorities to Magisterial District 57-3-04 in the West Providence Township Building, 500 State Street, Everett, Pennsylvania, to be brought by staff to "Central Court" Wednesday for further processing.

The "Central Court" shall convene for the holding of preliminary hearings at 9:00 o'clock a.m. on Wednesday of each week, unless such day shall be a legal holiday, in which event the regular session of "Central Court" for that week shall convene at 9:00 o'clock a.m. on the Thursday immediately following such holiday. Special sessions of said "Central Court" may be scheduled for other days of the week as the need arises.

This Court shall provide for the assignment of Magisterial District Justices to preside at said "Central Court", and also shall establish from time to time such procedures for the "Central Court" as the needs of justice and the efficient administration thereof may require.

The Magisterial District Justices, when assigned to preside at "Central Court", shall exercise all powers given to Magisterial District Justices by the laws of this Commonwealth and the Rules of Criminal Procedure promulgated by the Supreme Court of Pennsylvania.

The Court Administrator of this Court acting through the Central Court Manager shall exercise administrative control over the operation of the "Central Court", and shall supervise and administer the operation of the same.

The Sheriff of Bedford County shall ensure at all times when court is in session that a Deputy will be stationed on the first and second floor hallways adjacent to Courtroom No. 3 to facilitate the flow of persons, to provide security, and to minimize disruptions to the rest of the Courthouse. The assigned Deputies shall ensure that those attending "Central Court" remain in the hallway areas of the "Central Court Room" except as necessary to use the restrooms and to transact other legitimate business.

All incarcerated persons, absent good reason to the contrary, shall be conducted to the courtroom by way of the outside portico.

Food, beverage, and smoking shall not be permitted in the "Central Court" hallways, or adjacent outside areas.

The Commonwealth, police officers, victims, witnesses, support personnel, and associated persons shall be situated on the second floor and may make use of the waiting area on that floor. Defense counsel, accused persons, witnesses, family, and associated persons shall be situated on the first floor and may make use of the spaces on that level. Defendants shall proceed to the second floor for hearings and waivers only. Attorneys, including prosecution and defense counsel, may pass freely between the floors. All others should remain on the level assigned except for good cause. Defendant's family and friends shall be permitted to attend the hearings if they so desire. The press and public are permitted to attend preliminary hearings. Photography, video, and recordings are barred except as allowed by law.

For security reasons, parking outside the first floor hallway exit will be restricted to County personnel.
By the Court

## THOMAS S. LING,

President Judge
[Pa.B. Doc. No. 16-1480. Filed for public inspection August 26, 2016, 9:00 a.m.]

## BUCKS COUNTY

## Protection From Abuse Actions; Administrative Order No. 19

## Amended Administrative Order No. 19

And Now, this 8th day of August 2016, Administrative Order Number 22 is rescinded, and Administrative Order Number 19 is amended, in its entirety, as follows:

## Statement of Policy

It is the purpose and policy of the Court of Common Pleas of Bucks County by this Administrative Order to implement and effectuate the Protection From Abuse Act and the Protection of Victims of Sexual Violence or Intimidation Act, to streamline and facilitate enforcement, and to eliminate procedural obstacles and limitations where substantial justice requires forthright action on the part of the police, the Magisterial District Judge and this Court.

In order to implement the Protection From Abuse Act, 23 Pa.C.S.A. § 6101, et seq., as amended, and the Protection of Victims of Sexual Violence or Intimidation Act, 42 Pa.C.S.A. § 62A01, et seq., as amended, the following policies, practices and procedures are hereby approved.

1. Actions for Protection From Abuse shall be commenced and prosecuted in accordance with the provisions of Pa.R.C.P. No. 1901, et seq. and 23 Pa.C.S.A. § 6101 et seq. Actions for Protection of Victims of Sexual Violence or Intimidation shall be commenced and prosecuted in accordance with the provisions of Pa.R.C.P. No. 1951, et seq., and 42 Pa.C.S.A. § 62A01, et seq.
2. Actions seeking emergency relief under the Protection From Abuse Act shall be commenced and prosecuted pursuant to the provisions of Pa.R.C.P.M.D.J. No. 1201 et seq. and 23 Pa.C.S.A. § 6110 et seq. Actions seeking emergency relief under the Protection of Victims of Sexual Violence or Intimidation Act shall be commenced and prosecuted in accordance with the provisions of Pa.R.C.P.M.D.J. No. 1201, et seq., and 42 Pa.C.S.A. § 62A09, et seq.
3. Emergency orders for protection pursuant to either the Protection From Abuse Act or Protection of Victims of Sexual Violence or Intimidation Act may be issued by a Magisterial District Judge at the following times:
(a) on Monday through Thursday, from 4 p.m. to 8 a.m. on the next day the Court of Common Pleas is open for business; and
(b) during weekend periods, from 12:00 p.m. on Friday (or otherwise, 12:00 p.m. on the last day of the week on which the Court of Common Pleas is open for business) to 8 a.m. on the next day the Court of Common Pleas is open for business.
4. If an emergency order of protection has issued pursuant to either the Protection From Abuse Act or Protection of Victims of Sexual Violence or Intimidation Act, the plaintiff and, if available, the defendant, shall be informed of the following:
(a) that the Magisterial District Judge's order will expire at the close of the next Court of Common Pleas business day, and that a further order may be issued only by the Court of Common Pleas;
(b) that a certification of the Magisterial District Judge's record will be made immediately to the Court of Common Pleas and will have the effect of commencing proceedings in the Court of Common Pleas;
(c) that the plaintiff must complete a petition or a verified statement setting forth either the abuse by the defendant, as required in 23 Pa.C.S.A. § 6110(c), or the violence or intimidation by the defendant, as required by 42 Pa.C.S.A. § 62A09(c), which shall accompany the certified emergency order forwarded to the Court of Common Pleas as a basis for the extension of the emergency order, if granted by the Court of Common Pleas, and also serve as a record for a hearing;
(d) that a hearing will be held in the Court of Common Pleas within the next ten business days; and
(e) that if plaintiff fails to appear at the hearing, the petition may be dismissed.

If practicable, notice of the time and place of the hearing shall be hand-delivered to the parties and each shall sign a receipt.

In cases in which defendant is not present, the defendant shall be served with the information contained in this paragraph and notice of the hearing in the same manner and at the same time as service of the order of protection under Pa.R.C.P.M.D.J. No. 1209.
5. Actions for contempt of an order for Protection From Abuse shall be commenced in accordance with 23 Pa.C.S.A. § 6113 et seq. and Pa.R.C.P. No. 1901.5 et seq. Actions for contempt of an order for Protection of Victims of Sexual Violence or Intimidation shall be commenced in accordance with 42 Pa.C.S.A. § 62A14 et seq. and Pa.R.C.P. No. 1955 et seq.
6. If a defendant is arrested for violation of an order of protection issued pursuant to either the Protection From Abuse Act or Protection of Victims of Sexual Violence or Intimidation Act by a Court of Common Pleas Judge, an emergency order issued by a Magisterial District Judgepursuant to such Acts, or a duly registered foreign protection order, the defendant forthwith shall be preliminarily arraigned before a Magisterial District Judge.
7. At the preliminary arraignment, a defendant arrested for violation of an order of protection issued pursuant to either the Protection From Abuse Act or Protection of Victims of Sexual Violence or Intimidation Act shall be notified of the following:
(a) that the defendant is charged with criminal contempt for violation of the order of protection;
(b) that a hearing will be held in the Court of Common Pleas within the next ten business days;
(c) that defendant is entitled to be represented by counsel, and, if defendant is unable to afford counsel, counsel will be appointed at no cost to defendant; and
(d) that if defendant fails to appear at the hearing, a bench warrant may be issued for defendant's arrest.

Bail shall be set to insure defendant's presence at the contempt hearing in accordance with Pa.R.Crim.P. No. 4004 including, without limitation, the condition that defendant not contact the plaintiff or members of the plaintiff's household, directly or indirectly, in the meantime.

Notice of the time and place of the hearing shall be hand-delivered to the parties and each shall sign a receipt. The office of the Magisterial District Judge shall notify an unrepresented plaintiff that a lawyer may be obtained from Legal Aid of Southeastern PA and/or the Bucks County Bar Association Lawyer Referral Service.

Plaintiffs shall also be provided contact information for A Woman's Place, a domestic violence center, NOVA (Network of Victim Assistance), or for any other local public or private domestic violence/sexual assault agencies approved by the Court of Common Pleas.
8. The office of the Magisterial District Judge shall cause the emergency order and petition, together with any other documentation and the receipts for notice of the hearing, to be forwarded immediately to the Office of the Prothonotary, Family Court Division.
9. The Office of the Prothonotary, Family Court Division, shall be responsible for notifying the Court Administrator's Office of all cases to be scheduled for hearings.
10. In all cases commenced under either the Protection From Abuse Act or Protection of Victims of Sexual Violence or Intimidation Act, neither the fact of the plaintiff's or victim's presence within the jurisdiction or district, nor any address, telephone number, or any other demographic information about the plaintiff or victim (to include in appropriate cases, any minor children of the plaintiff) shall be disclosed by the court, the court filing office, or any relevant law enforcement agencies, human service agencies, and school districts to any third party except by order of court.

This Administrative Order shall be effective thirty days from the date of publication in the Pennsylvania Bulletin. By the Court

JEFFREY L. FINLEY, President Judge
[Pa.B. Doc. No. 16-1481. Filed for public inspection August 26, 2016, 9:00 a.m.]

## BUCKS COUNTY

## Rescission of Rule of Criminal Procedure 2002A*(1) and Promulgation of Rule of Criminal Procedure 202; AD-1-2016

## Order

And Now, this 8th day of August 2016, it is hereby Ordered and Decreed that Bucks County Rule of Criminal Procedure 2002A*(1) is rescinded and Bucks County Rule of Criminal Procedure 202 is promulgated as follows:
Rule 202. Approval of Search Warrant Applications by Attorney for the Commonwealth.
The District Attorney of Bucks County having filed a certification pursuant to Pa.R.Crim.P. No. 202, no search warrant shall hereafter be issued by any judicial officer in Bucks County unless the search warrant application has the approval of an attorney for the Commonwealth prior to filing, except for applications for search warrants which request legal blood testing of any person related to investigations or prosecutions of offenses under 75 Pa.C.S.A. § 3802. In such cases only, law enforcement shall not be required to seek or obtain prior approval from an attorney for the Commonwealth.

This Rule shall be effective thirty days after publication in the Pennsylvania Bulletin.
By the Court

## HONORABLE JEFFREY L. FINLEY,

President Judge
[Pa.B. Doc. No. 16-1482. Filed for public inspection August 26, 2016, 9:00 a.m.]

## WASHINGTON COUNTY

## Amendment to Local Civil Rule L-5000; No. 2016-1

## Order

And Now, this 10th day of August, 2016; It Is Hereby Ordered that Local Civil Rule L-5000 (Definitions) of the Assessment Appeals be amended as follows:

## Definitions:

Appeal-An appeal from the Washington County Board of Assessment Appeals as defined in the Consolidated County Assessment Law, 53 Pa.Cons.Stat. § 8854.

Board-The Washington County Board of Assessment Appeals.

Commercial Property—Any property whose purpose is to generate income for its owner, or is otherwise designated in the tax assessment records as commercial in use.

Date of Notification-The date of the Board's decision.

Party-Appellant, the Board, and any other person or entity entitled to notice of the appeal.

Property Owner-The record owner of the property as set forth in the tax assessment records.

Taxing Authority-Any county, city, borough, town, township, school district, or other public corporation having power and authority to levy taxes on the assessment of the real estate in question.

Verified-When used in reference to a written statement of fact by the signer, means supported by oath or
affirmation or made subject to the penalties of 18 Pa.Con.Stat. § 4904 relating to unsworn falsification to authorities.
These rules will become effective thirty days after publication in the Pennsylvania Bulletin.
By the Court
KATHERINE B. EMERY,
President Judge
[Pa.B. Doc. No. 16-1483. Filed for public inspection August 26, 2016, 9:00 a.m.]

## SUPREME COURT

Duty Assignment Schedule for Emergency Petitions in the Year 2016; No. 452 Judicial Administration Doc.

## Second Amended Order

## Per Curiam:

And Now, this 11th day of August, 2016, it is hereby ordered that the amended order at No. 452 Judicial Administration Docket, amended March 24, 2016, listing emergency duty assignments is hereby amended as follows:

| September | Justice Christine Donohue | (Eastern District) |
| :--- | :--- | :--- |
|  | Justice Sallie Updyke Mundy | (Western District) |
| October | Justice Debra Todd | (Eastern District) |
|  | Justice Kevin Dougherty | (Western District) |
| November | Justice Max Baer | (Eastern District) |
|  | Justice David Wecht | (Western District) |
| December | Justice Christine Donohue | (Eastern District) |
|  | Justice Sallie Updyke Mundy | (Western District) |

[Pa.B. Doc. No. 16-1484. Filed for public inspection August 26, 2016, 9:00 a.m.]

## RULES AND REGULATIONS

# 52-PUBLIC UTILITIES PENNSYLVANIA PUBLIC UTILITY COMMISSION 

## Advance Notice of Temporary Rulemaking for the Taxi and Limousine Industries; Request for Comments

Public Meeting held
August 11, 2016
Commissioners Present: Gladys M. Brown, Chairperson; Andrew G. Place, Vice Chairperson; John F. Coleman, Jr.; Robert F. Powelson; David W. Sweet

## Temporary Rulemaking for the Taxi and Limousine Industries; L-2016-2556432

## Advance Notice of Temporary Rulemaking Order

Act 85 of 2016, (effective July 13, 2016) provides, inter alia, that the Commission shall promulgate temporary regulations governing the taxi and limousine industries within 150 days of the effective date of Act 85. Act 85 exempted the temporary regulations from various procedural requirements established by the Commonwealth Documents Law, the Commonwealth Attorneys Act, and the Regulatory Review Act. ${ }^{1}$ Act 85 provides that the temporary regulations will expire upon the promulgation of final-form regulations or two years after the effective date of Act 85, whichever is earlier.
According to Act 85, the temporary regulations "shall address all of the following:
(I) the use of log sheets and manifests, including the storage of information on digital or other electronic devices.
(II) metering addressing the use of a variety of technologies.
(III) vehicles' age and mileage, including procedures to petition for exceptions to age and mileage standards.
(IV) marking of taxis, including advertising.
(V) the operation of lease-to-own taxi and limousine equipment subject to the following conditions:
(a) providing required levels of insurance on the vehicle.
(b) ensuring that the vehicle is subject to and complies with all vehicle inspection requirements.
(c) ensuring that the driver complies with all the requirements of 52 Pa . Code Ch. 29 subch. F (relating to driver regulations).
(d) terminating insurance provided to a driver who completes the purchase of the vehicle or who no longer provides driver services to the taxi or limousine company.
(VI) taxi tariffs, including rate and tariff change procedures for both meters and digital platforms. Regulations shall reflect reduced or flexible rates and tariffs as appropriate.
(VII) procedures for cancellations, no-shows and cleaning fees.
(VIII) limousine tariffs, including rate and tariff change procedures. Regulations shall reflect reduced or flexible rates and tariffs as appropriate.
(IX) driver requirements, including criminal history background check requirements and driving record requirements.
(X) vehicle requirements, including compliance with environmental, cleanliness, safety and customer service standards, including special safety requirements for children.
(XI) requirements for continuous service and exceptions for unexpected demand and personal health and safety."
Act 85, Section 1602-M. In the Commission's opinion, the enumeration of these subject areas is intended to facilitate an examination and implementation of updated regulatory requirements for the taxi and limousine industries in Pennsylvania in order to recognize changes in technology, customer demand and expectations, and competitive challenges. However, while we intend to fully address these subject areas and to make changes where warranted, we do not intend to diminish our commitment to vehicle safety, driver integrity and adequate insurance to protect the public.
The Commission hereby solicits all interested parties' comments regarding the temporary regulations. Comments must provide specific suggestions for any proposal, including suggested regulatory language, with appropriate citations to current regulations that address the particular comment. Additionally, comments must provide the underlying rationale to support any suggested temporary regulations.

Comments must be filed with the Commission within 30 days after the date of publication in the Pennsylvania Bulletin; Therefore,

## It Is Ordered That:

1. A rulemaking is opened to promulgate temporary regulations consistent with Act 85.
2. The Law Bureau shall deposit this Order with the Legislative Reference Bureau to be published in the Pennsylvania Bulletin.
3. An original of any written comments must reference the docket number and must be submitted within 30 days of publication in the Pennsylvania Bulletin to the Pennsylvania Public Utility Commission, Attn: Secretary, P.O. Box 3265, Harrisburg, PA 17105-3265.
4. The contact person for legal matters concerning this temporary rulemaking is John Herzog, Assistant Counsel, Law Bureau, (717) 783-3714. Alternate formats of this document are available to persons with disabilities and may be obtained by contacting Alyson Zerbe, Regulatory Coordinator, Law Bureau, (717) 772-4597.

## ROSEMARY CHIAVETTA,

Secretary
[Pa.B. Doc. No. 16-1485. Filed for public inspection August 26, 2016, 9:00 a.m.]

[^6]
## Title 58—RECREATION <br> FISH AND BOAT COMMISSION [ 58 PA. CODE CH. 65] <br> Fishing; Special Fishing Regulations

The Fish and Boat Commission (Commission) amends Chapter 65 (relating to special fishing regulations). The Commission is publishing this final-form rulemaking under the authority of 30 Pa.C.S. (relating to Fish and Boat Code) (code).

## A. Effective Date

The final-form rulemaking will go into effect on January $1,2017$.

## B. Contact Person

For further information on the final-form rulemaking, contact Laurie E. Shepler, Esq., P.O. Box 67000, Harrisburg, PA 17106-7000, (717) 705-7810. This final-form rulemaking is available on the Commission's web site at www.fish.state.pa.us.

## C. Statutory Authority

The amendment to $\S 65.24$ (relating to miscellaneous special regulations) is published under the statutory authority of section 2307 of the code (relating to waters limited to specific purposes).

## D. Purpose and Background

The final-form rulemaking is designed to improve, enhance and update the Commission's fishing regulations. The specific purpose of the amendment is described in more detail under the summary of change.

## E. Summary of Change

Foster Joseph Sayers Lake is located in Centre County and has been managed under $\S 65.11$ (relating to panfish enhancement) for black and white crappie ( 9 -inch minimum size limit and 20 fish/day creel limit). While there has been an increase in the trap net catch of legal-size crappie post panfish enhancement regulations, the proportion of legal-size fish is still relatively low at approximately $8 \%$. The majority of adult fish are in the 7 -inch and 8 -inch length groups, just under the legal size limit. Age and growth analyses for crappie indicate an overall reduction in growth rates, especially for these size groups. Angler use, harvest and opinion surveys conducted at the lake indicate high angler effort directed towards crappie with high catch rates but reduced harvest under panfish enhancement regulations. In addition, angler satisfaction has slowly declined with both the number and size of crappie caught.
The current status of the crappie fishery is not satisfactory to many anglers and may be improved through an alternate regulation. Sayers Lake is one of the most productive reservoirs in this Commonwealth and has the ability to produce a higher quality crappie fishery than currently exists.

The Commission reduced the daily creel limit from 20 fish/day to 10 fish/day and changed the number of fish both over and under 9 inches that can be harvested to better manage the population from overexploitation while also being acceptable to anglers. The amendment will allow anglers to harvest 10 crappies/day, of which no more than 5 crappies may be greater than or equal to 9
inches in length. For example, anglers will be able to harvest 10 crappies less than 9 inches, or 9 crappies less than 9 inches and 1 crappie greater than or equal to 9 inches, or 8 crappies less than 9 inches and 2 crappies greater than or equal to 9 inches, and so on. Under this amendment, anglers will have a reasonable expectation of harvesting 10 crappies/day should they choose to do so, while still providing some additional protection to the larger fish in the population. This was not the case under the prior regulation. The creel limit reduction from 20 fish to 10 fish is designed to prevent an overharvest given the number of anglers that are expected to harvest fish under a less restrictive length limit.

The Commission amends § 65.24 to read as set forth in the proposed rulemaking published at 46 Pa .B. 2557 (May 21, 2016).

## F. Paperwork

The final-form rulemaking will not increase paperwork and will not create new paperwork requirements.

## G. Fiscal Impact

The final-form rulemaking will not have adverse fiscal impacts on the Commonwealth or its political subdivisions. The final-form rulemaking will not impose new costs on the private sector or the general public.

## H. Public Involvement

In anticipation of a proposed change, Commission staff interviewed 111 ice anglers on January 30, 2016, to obtain their feedback. A significant majority (74\%) were in favor of a new regulation. A public information session was also held on February 23, 2016, at Bald Eagle State Park to gain additional angler input. Attendees were split between regulation options and preferred those that allowed more crappies to be harvested.

Notice of proposed rulemaking was published at 46 Pa.B. 2557. The Commission received one neutral comment during the formal public comment period. Copies of the public comment was provided to the Commissioners.

## Findings

(1) Public notice of intention to adopt the amendment adopted by this order has been given under sections 201 and 202 of the act of July 31, 1968 (P.L. 769, No. 240) (45 P.S. §§ 1201 and 1202) and the regulations promulgated thereunder, 1 Pa . Code §§ 7.1 and 7.2.
(2) A public comment period was provided and the public comment that was received was considered.
(3) The adoption of the amendment of the Commission in the manner provided in this order is necessary and appropriate for administration and enforcement of the authorizing statutes.

## Order

The Commission, acting under the authorizing statute, orders that:
(a) The regulations of the Commission, 58 Pa . Code Chapter 65, are amended by amending $\S 65.24$ to read as set forth at $46 \mathrm{~Pa} . \mathrm{B} .2557$.
(b) The Executive Director will submit this order and 46 Pa.B. 2557 to the Office of Attorney General for approval as to legality and form as required by law.
(c) The Executive Director shall certify this order and $46 \mathrm{Pa.B}$.2557 and deposit them with the Legislative Reference Bureau as required by law.
(d) This order shall take effect on January 1, 2017.

JOHN A. ARWAY,
Executive Director
Fiscal Note: Fiscal Note 48-271 remains valid for the final adoption of the subject regulation.
[Pa.B. Doc. No. 16-1486. Filed for public inspection August 26, 2016, 9:00 a.m.]

## Title 58—RECREATION

PENNSYLVANIA GAMING CONTROL BOARD
[ 58 PA. CODE CHS. 465a, 583, 585, 587, 588, 589, 590, 591, 592, 593, 611a, 668a, 669a, 670a, 671a, 672a, 673a, 674a, 675a AND 676a ]

Table Game Rules of Play

The Pennsylvania Gaming Control Board (Board), under the general authority in 4 Pa.C.S. § 1202(b)(30) (relating to general and specific powers) and the specific authority in 4 Pa.C.S. §§ 13A02(1), (2), (4) and (7) and 13A23(a) (relating to regulatory authority; and training of employees and potential employees), amends Chapters 465a and 611a (relating to accounting and internal controls; and table game minimum training standards), rescinds temporary Chapters $583,585,587,588,589,590$, 591, 592 and 593 and adds Chapters 668a, 669a, 670a, 671a, 672a, 673a, 674a, 675a and 676a to read as set forth in Annex A.

## Purpose of the Final-Form Rulemaking

This final-form rulemaking rescinds nine temporary table game chapters, transitions eight temporary table game chapters into permanent regulations, adds a new table game, updates the surveillance requirements to incorporate the additional table games and amends the dealer minimum training requirements.

## Explanation

## Surveillance requirements in Chapter $465 a$

The surveillance requirements in § 465a.9 (relating to surveillance system; surveillance department control; surveillance department restrictions) are amended to incorporate the nine additional table games in this final-form rulemaking. The provisions being added are consistent with surveillance requirements in the temporary regulations, which are rescinded in this final-form rulemaking.

## Dealer training in Chapter 611a

The dealer training requirements in § 611a. 2 (relating to minimum proficiency requirements) are amended to provide clarity to the regulated community, to include training on games not specifically incorporated into the regulations and to slightly reduce the number of hours of additional training required for experienced dealers when being trained on a new table game type.
The amendments to § 611a.2(a), regarding inexperienced dealer training, provide clarity by grouping like games together, eliminating the reference to Pai Gow Poker and Baccarat style games, as those games are
"other banked card games" which are already incorporated into the requirements under Blackjack training, and to include training on Big 6 Wheel and Sic Bo, game types not previously incorporated into the regulations.

Section 611a.2(b) addresses additional training for those dealers who are already trained and experienced in dealing table games. These provisions are applicable when a dealer is trained on one table type, card style games for example, and wish to be trained on a different table type, such as Craps or tiles. The amendments to subsection (b) are made for clarity and to reduce the number of hours of additional training an experienced dealer is required to complete to deal dice, Roulette or tile games.

Section 611a.2(d) is added to require licensees to specify the mechanism and the amount of additional training experienced dealers will be completing to deal a different game of the same table type. This provision is applicable when a dealer is already experienced to deal a table type, such as the card game Pai Gow Poker, but would like to deal the new game of the same table type, such as the new card game Go Fore It. All training programs are already required to be submitted in accordance with $\S 611 \mathrm{a} .4$ (relating to submission of training programs to the Board).

## Table games

The Board is transitioning temporary regulations for Props \& Hops, Raise It Up Stud Poker, Six Card Fortune Pai Gow Poker, Lunar Poker, Free Bet Blackjack, Double Back Jack, Criss-Cross Poker and High Roll Dice to permanent regulations. Go Fore It, a table game, is added.

For the rules of play for table games, most chapters are in the same basic format: section a. 1 contains the definitions used throughout the chapter; section a. 2 contains the table physical characteristics; section a. 3 details the number of cards and decks used to play the game; section a. 4 addresses the opening of the table for gaming; section a. 5 details how the cards are to be shuffled and cut; section a. 6 specifies the ranking of the hands; section a. 7 outlines the permissible wagers; sections a.8-a. 10 detail the procedures for dealing the cards; section a. 11 addresses how the round of play is to be completed; section a. 12 outlines the permissible payout odds for winning wagers; and section a. 13 addresses irregularities in play.

The Board approved some revisions between the temporary regulations and this final-form rulemaking. Specifically, Chapter 671a (relating to Lunar Poker) is a complete rewrite of the game as it was submitted to and approved by the Board in temporary form.

In Chapter 672a (relating to Free Bet Blackjack), optional surrender was removed from this Blackjack variation as players may split or double-down without placing an additional wager depending on the value of the player's hand.

Lastly, minor revisions were made to payout tables in Chapters 674a and 675a (relating to Criss-Cross Poker; and High Roll Dice).

## Comment and Response Summary

Notice of proposed rulemaking was published at 45 Pa.B. 4185 (August 1, 2015). Greenwood Gaming and Entertainment, Inc. d/b/a Parx (Parx) submitted comments on the proposed rulemaking. Additionally, on September 30, 2015, the Independent Regulatory Review Commission (IRRC) provided comments.

## Regulated Community

Parx provided the Board with two comments, both of which related to Criss-Cross Poker in Chapter 674a.
Parx requested that the dealing procedure when an automated dealing shoe is utilized in § 674a. 10 (relating to procedure for dealing the cards from an automated dealing shoe) be amended by deleting the provisions which dictate the placement of the community cards. The Board is in agreement with Parx's comment and amended this section for consistency with the dealing of the community cards when the cards are dealt by hand or from a manual dealing shoe in §§ 674a.8(d) and 674a.9(b) (relating to procedure for dealing the cards from a manual dealing shoe; and procedure for dealing the cards from the hand).
In addition, Parx requested that the Board add an optional aggregated payout limit to the game. A $\$ 50,000$ minimum payout limit was added provided that the limit is applicable on a per-player basis so each player's hand is considered independently of any other player's hand, thus multiple players could reach the aggregate payout in the same round of play.

## IRRC

## Comment

IRRC requested additional information regarding why the game of Lunar Poker was rewritten between the temporary regulations and this final-form rulemaking. The Board amended the rules in conformance with the proprietary owner's amendments to the rules of play for the game. For instance, in temporary form, the Super Wager (in which players wager against a posted payout table) was optional while in this final-form rulemaking the Super Wager is required, provided that in addition to the required Super Wager on the player's hand, the player may now place an optional Super Wager on the dealer's hand or any other player's hand, or both. Thus, if a player placed an optional Super Wager on the dealer's hand, for instance, and the dealer's hand is eligible for a payout in accordance with the posted paytable, the player would also be paid out for the dealer's winning hand.

Additionally, Lunar Poker was simplified slightly between temporary and this final-form rulemaking by eliminating the option of forcing the dealer to qualify. In temporary form, a player could, for an additional options fee, force the dealer who did not have at least an ace-king to try and qualify. If any player paid the options fee, the dealer that did not have at least an ace-king would discard the highest ranking card from the dealer's hand and replace it with a card from the deck. If the dealer's hand still did not qualify, the dealer returned the player's Ante and Bet Wagers. In this final-form rulemaking, if the dealer does not qualify with at least an ace-king in the first five cards dealt, the dealer returns the player's Bet Wager and pays the Ante Wager in accordance with a posted payout table.

Currently no casino operators are offering Lunar Poker as it appeared in temporary form.

## Comment

Proposed § 611a.2(d) required operators to specify how they were going to train their experienced dealers on different games of the same game type (for example, an experienced Blackjack dealer who wants to deal Lunar Poker). IRRC requested that the Board specify the standards that shall be met for a dealer to be considered an experienced dealer.

The Board added language at the end of final-form § 611a.2(d) specifying that for purposes of dealer training, an experienced dealer is an employee who has already completed a dealer training program and has dealt table games on the certificate holder's live gaming floor for at least 120 hours. The Board believes that at least 120 hours is a reasonable period as that equates to approximately 3 to 6 weeks of dealing table games to patrons on the live floor before a dealer could be considered experienced and could learn a new game of the same table type without having to complete a complete course of training as described in § 611a.2(a).

## Comment

In many of the Poker style card games, the description of the hands contains language identifying which hand would be considered the higher ranking hand of the same type. For example, § 671a.6(b) (relating to Lunar Poker rankings) describes a straight flush as a hand, other than a royal flush, consisting of five cards of the same suit in consecutive ranking, with king, queen, jack, 10 and 9 being the highest ranking straight flush and an ace, 2, 3, 4 and 5 being the lowest ranking straight flush (emphasis added). In other Poker style card games, however, that additional descriptive language is not included so a straight flush is described only as a hand, other than a royal flush, consisting of five cards of the same suit in consecutive ranking.

IRRC asked the Board to add the descriptive language (emphasized in the previous paragraph) to the games of Raise It Up Stud Poker and Criss-Cross Poker as that additional descriptive language was not included in the ranking of the hands in §§ 669a. 6 and 674a. 6 (relating to Raise It Up Stud Poker hand rankings; and Criss-Cross Poker rankings). The Board, however, did not add the descriptive language in either of the games as the additional language is unnecessary.

In Criss-Cross Poker and Raise it Up Stud Poker, players are competing only against posted payout tables and are not competing against the dealer's hand so a higher ranking hand of the same type is irrelevant-a player will receive a payout for a straight flush irrespective of how high the straight flush may be.

Only when the game calls for head-to-head play, as in Lunar Poker, is the additional descriptive language rel-evant-because when comparing the player's hand versus the dealer's hand, the higher ranking hand of the same type wins and the lower ranking hand of the same type loses.

In essence, if a player competes only against payout tables, the additional descriptive language is not relevant and will not be included. If the game calls for competitive play of player versus dealer, the additional descriptive language is relevant and would be included.

## Comment

IRRC raised three additional issues with respect to Lunar Poker in Chapter 671a.

First, as it relates to the payout for the Bet Wager in § 671a.11(f)(2)(ii) (relating to procedures for completion of each round of play), when a player's hand beats the dealer's hand, the player would be paid out for the winning Bet Wager and may be paid out if a player's winning hand also contained a second lower ranking Poker combination. IRRC questioned whether the player should be paid out for a second Poker hand if the second hand of the player did not beat the dealer's hand. For clarity, the Board added language in § 671a.11(f)(2)(ii)
specifying that the dealer shall pay a second winning Bet Wager even if the second combination did not beat the dealer's hand.

Additionally, the Board corrected the language in § 671a.11(f)(2)(iii) which addresses the circumstance in which a dealer's hand is equal in rank to the player's hand.

Lastly, § 671a.11(h)(2) requires the dealer to determine that the correct number of cards is in the deck after the round of play is concluded. IRRC inquired why the paragraph does not also direct the dealer to determine if the cards were misdealt.
The count of the cards in Lunar Poker is different than most other games because after the initial round of cards is dealt, the cards in the shoe or the dealer's hand are still in play. Players then make decisions to draw an additional card (to have six cards instead of five) or exchange any or all of their hands for new cards. It is not until all players have made their decisions about the draw/exchange of cards that the dealer can count the cards in the deck without compromising game security. However, once all players have exchanged/drawn cards, the round of play is in essence over and it is not possible to then count the cards to determine if they were misdealt.

## Comment

IRRC requested that the Board clarify the wagers associated with the game of Criss-Cross Poker. Language is added in § 674a.2(b)(2) (relating to Criss-Cross Poker table physical characteristics) specifying the five betting areas the table game layout is required to have are for placement of the Ante Down and Ante Across Wagers and the Across, Down and Middle Bets.

## Comment

An IRRC comment mirrored one Parx made regarding the dealing procedure in Criss-Cross Poker. As previously discussed, the dealing procedure in § 674a. 10 was amended for consistency with the dealing procedure in §§ 674a.8 and 674a.9.

## Comment

IRRC requested that the Board either adopt Parx's request to add a table game maximum amount to CrissCross Poker or explain why the language should not be included. As previously discussed, the table maximum per player, per round of play was added to the game.

## Comment

IRRC commented that High Roll Dice in Chapter 675a does not have a definition section unlike other table games in this final-form rulemaking. After reviewing the game, the Board does not believe it necessary to add a definition section. The terms used throughout the chapter are self-explanatory and the regulations for other similar style games are structured in the same way (Props \& Hops, Roulette, Sic Bo and Big Six Wheel).

## Comment

IRRC requested that the Board add clarity regarding the Gopher Wager in Chapter 676a (relating to Go Fore It). IRRC commented that the definition of the "Gopher Wager" in § 676a. 1 (relating to definitions) implies that only one ace out of a player's four-card hand is required for the Gopher Wager to be a winning wager, while the provisions applicable to completion of the round of play in § 676a. 11 (relating to procedures for completion of each
round of play) imply that all four of the player's cards would have to be an ace for the Gopher Wager to be a winning wager.

In response to IRRC's comments, the Board added language in §§ 676a.1 and 676a.11(d)(5) and § 676a.7(d)(4) (relating to wagers) specifying that if a player's four cards contains at least one ace, the Gopher Wager is a winning wager.

## Comment

IRRC requested that the Board amend the heading of Subpart E (relating to slot machine, table game and associated equipment testing and control; accounting and internal controls) to include table games. The Board complied with this request.

IRRC had two comments regarding proposed Chapter 667a, regarding Flop Poker. The Board withdrew Chapter 667a from this final-form rulemaking as Flop Poker is no longer included in the complement of games available for play in this Commonwealth.

IRRC commented about errors in § 670a.12(d)(2) (relating to payout odds; Envy Bonus; rate of progression) and § 671a.6(a), both of which are corrected in this final-form rulemaking.

## Additional Revisions

The Board made the following revisions in this finalform rulemaking.

In regard to dealer training, for consistency with the new provision on training for experienced dealers in § 611a.2(d), which requires a table test prior to dealing the new game on the live floor, the Board mirrored the requirement in § 611a.5(b) (relating to table test; employee personnel file).

As previously discussed, the Board withdrew Chapter 667a as Flop Poker is no longer authorized for play in this Commonwealth.

The Board made minor revisions to Chapter 668a (relating to Props \& Hops).

In Raise It Up Stud Poker, two payout tables for winning Pair Plus Wagers in § 669a.12(a) (relating to payout odds; Envy Bonus; rate of progression) were deleted as both had hold percentages higher than $25 \%$.

Chapter 670a (relating to Six-Card Fortune Pai Gow Poker) was amended slightly to account for the fact that the qualifying wager of $\$ 5$ is applicable only to the Fortune Bonus Wager and is not applicable to the Progressive Payout Wager.

The payout tables for Lunar Poker in § 671a.12 (relating to payout odds) were amended slightly to make the tables more advantageous to the player.

In Chapter 675a, regarding High Roll Dice, the Board authorized a similar aggregate payout limit per player, per round of play, as was added to Criss-Cross Poker. Additionally, language was amended for clarity and a new variation to the game was added in § 675a.6 (relating to High Roll Dice variation) so the game can now be played with six dice instead of ten dice, with the extra roll eliminated from the variation.

## Affected Parties

Slot machine licensees will be impacted by this finalform rulemaking as operators will have a greater number of side wagers and variations to offer at their facilities.

## Fiscal Impact

Commonwealth. The Board does not expect that this final-form rulemaking will have fiscal impact on the Board or other Commonwealth agencies. Updates to Rules Submission forms and internal control procedures will be reviewed by existing Board staff.
Political subdivisions. This final-form rulemaking will not have fiscal impact on political subdivisions of this Commonwealth.
Private sector. This final-form rulemaking will provide certificate holders with additional table game options. If a certificate holder decides to offer the games within the licensed facility, the certificate holder will be required to train their dealers on the rules of play and may need to purchase new equipment. Costs incurred to train employees or purchase/lease equipment should be offset by the proceeds of gaming.

General public. This final-form rulemaking will not have fiscal impact on the general public.

## Paperwork Requirements

If a certificate holder selects different options for the play of table games, the certificate holder will be required to submit an updated Rules Submission form reflecting the changes. These forms are available and submitted to Board staff electronically.

## Effective Date

The final-form rulemaking will become effective upon publication in the Pennsylvania Bulletin.

## Regulatory Review

Under section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on July 15, 2015, the Board submitted a copy of the notice of proposed rulemaking, published at 45 Pa.B. 4185, to IRRC and the Chairpersons of the House Gaming Oversight Committee and the Senate Community, Economic and Recreational Development Committee for review and comment.

Under section 5(c) of the Regulatory Review Act, the Board shall submit to IRRC and the House and Senate Committees copies of comments received during the public comment period, as well as other documents when requested. In preparing the final-form rulemaking, the Board considered comments from IRRC and the public.

Under section 5.1(j.2) of the Regulatory Review Act (71 P.S. § $745.5 \mathrm{a}(\mathrm{j} .2)$ ), on July 20, 2016, the final-form rulemaking was deemed approved by the House and Senate Committees. Under section 5.1(e) of the Regulatory Review Act, IRRC met on July 21, 2016, and approved the final-form rulemaking.

## Findings

The Board finds that:
(1) Public notice of intention to adopt these amendments was given under sections 201 and 202 of the act of July 31, 1968 (P.L. 769, No. 240) (45 P.S. §§ 1201 and 1202 ) and the regulations thereunder, 1 Pa . Code $\S \S 7.1$ and 7.2.
(2) The final-form rulemaking is necessary and appropriate for the administration and enforcement of 4 Pa.C.S. Part II (relating to gaming).

## Order

The Board, acting under 4 Pa.C.S. Part II, orders that:
(1) The regulations of the Board, 58 Pa . Code, are amended by amending §§ 465a.9, 611a. 2 and 611a.5,
deleting §§ 583.1—583.14, 585.1—585.5, 587.1-587.14, 588.1-588.13, 589.1—589.13, 590.1-590.13, 591.1— $591.13,592.1-592.13$ and 593.1-593.6 and by adding §§ 668a.1-668a.4, 669a.1—669a.13, 670a.1-670a.13, 671a.1-671a.13, 672a.1-672a.12, 673a.1-673a.13, 674a.1-674a.13, 675a.1-675a. 6 and 676a.1-676a. 13 to read as set forth in Annex A, with ellipses referring to the existing text of the regulations.
(Editor's Note: The amendment to § 611a. 5 and the addition of $\S 675$ a. 6 were not included in the proposed rulemaking. Chapter 667a included in the proposed rulemaking has been withdrawn by the Board.)
(2) The Chairperson of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau as required by law.
(3) This order shall take effect upon publication in the Pennsylvania Bulletin.

## DAVID M. BARASCH, Chairperson

(Editor's Note: See 46 Pa.B. 4899 (August 6, 2016) for IRRC's approval order.)

Fiscal Note: Fiscal Note 125-188 remains valid for the final adoption of the subject regulations.

## Annex A

TITLE 58. RECREATION

## PART VII. GAMIING CONTROL BOARD <br> Subpart E. SLOT MACHINE, TABLE GAME AND ASSOCIATED EQUIPMENT TESTING AND CONTROL; ACCOUNTING AND INTERNAL CONTROLS <br> CHAPTER 465a. ACCOUNTING AND INTERNAL CONTROLS

§ 465a.9. Surveillance system; surveillance department control; surveillance department restrictions.
(c) The surveillance system required in this section must include:
(1) Light sensitive cameras with lenses of sufficient magnification and $360^{\circ}$ pan, tilt and zoom capabilities, without camera stops, to allow the operator to clandestinely monitor in detail and from various vantage points the following:
(i) The gaming conducted at the slot machines and fully automated electronic gaming tables in the licensed facility with sufficient clarity to read information on a reel strip or electronic table layout and the credit meter.
(ii) The gaming conducted at each table game that is not a fully automated electronic gaming table in the licensed facility with sufficient clarity to identify patrons and dealers and sufficient coverage to simultaneously view the table and determine the configuration of wagers, card, dice and tile values and game outcomes.
(iii) The operations conducted at and in the main cage and any satellite cage.
(iv) The operations conducted at automated bill breaker machines, automated gaming voucher and coupon redemption machines, automated jackpot payout machines and automated teller machines.
(v) The count processes conducted in the count room.
(vi) The movement of cash, gaming chips and plaques, tip boxes, table game drop boxes, Bad Beat or High Hand Jackpot payout boxes and slot cash storage boxes within the licensed facility.
(vii) The entrances and exits to the licensed facility, the gaming floor and the count room.
(viii) Any other activity or areas designated by the Bureau of Casino Compliance.
(2) The following number of cameras dedicated to table games that are not fully automated electronic gaming tables:
(i) Except as provided in subparagraphs (ii)—(vii), at least one stationary camera for each table game offered by the licensed facility.
(ii) At least two stationary cameras for each Craps and Three Dice Football table, with one camera covering each end of the table.
(iii) At least two stationary cameras for each Baccarat table, with one camera covering each end of the table.
(iv) At least two stationary cameras for each Roulette table, with one camera covering the wheel and one camera covering the table layout.
(v) At least two stationary cameras for each Big Six Wheel, with one camera covering the wheel and one camera covering the table layout.
(vi) At least two stationary cameras for each Props \& Hops table with one camera covering the designated circle on the table layout for the placement of the uncovered shaker and one camera covering the table layout.
(vii) At least two stationary cameras for each High Roll Dice table with one camera covering the throw box and one camera covering the remainder of the table.
(3) Additional cameras as required by the Bureau of Casino Compliance. The additional cameras may include cameras with $360^{\circ}$ pan, tilt and zoom capabilities.

## Subpart K. TABLE GAMES CHAPTER 583. (Reserved)

§§ 583.1—583.14. (Reserved).
CHAPTER 585. (Reserved)
§§ 585.1-585.5. (Reserved).
CHAPTER 587. (Reserved)
§§ 587.1—587.14. (Reserved).
CHAPTER 588. (Reserved)
§§ 588.1—588.13. (Reserved).
CHAPTER 589. (Reserved)
§§ 589.1—589.13. (Reserved).
CHAPTER 590. (Reserved)
§§ 590.1—590.13. (Reserved).
CHAPTER 591. (Reserved)
§§ 591.1—591.13. (Reserved).
CHAPTER 592. (Reserved)
§§ 592.1—592.13. (Reserved).
CHAPTER 593. (Reserved)
§§ 593.1—593.6. (Reserved).

## CHAPTER 611a. TABLE GAME MINIMUM TRAINING STANDARDS

## § 611a.2. Minimum proficiency requirements.

(a) A curriculum related to the conduct of table games offered by a gaming school or by a certificate holder must, at a minimum, include:
(1) The following minimum hours of instruction on the conduct of table games in accordance with the regulations in this subpart:

## Table Game

Blackjack and other banked card games

Craps, Mini-Craps and other dice games
Nonbanked Poker
Roulette
Pai Gow Tiles
Sic Bo and Big 6 Wheel

## Minimum Hours of Instruction

100 hours over a 5 -week period, at least 80 hours of which shall be in Blackjack
160 hours over a 6 -week period
80 hours over a 4 -week period
80 hours over a 4-week period
160 hours over a 6 -week period
30 hours over a 2-week period
(2) The proper use, control and shuffling of playing cards for authorized games that involve the use of cards.
(3) The proper use and control of dice for authorized games that involve the use of dice.
(4) The proper use and control of tiles for authorized games that involve the use of tiles.
(b) A dealer who has completed a course of training in accordance with subsection (a) and would like to be trained to deal a different game type (for example, a dealer who is trained to deal banked card games but would like to deal Craps) shall successfully complete, at a gaming school as defined in section 1103 of the act (relating to definitions) or through training offered by the certificate holder:
(1) The following minimum hours of instruction required for the different game type:

| Additional Training on Different Game Type | Minimum Hours of Instruction |
| :---: | :---: |
| Blackjack and all banked and nonbanked card games | 60 hours over a 3 -week period |
| Craps, Mini-Craps and other dice games | 120 hours over a 5 -week period |
| Roulette | 30 hours over a 2 -week period |
| Pai Gow Tiles | 120 hours over a 5 -week period |
| Sic Bo and Big 6 Wheel | 15 hours over a 1 -week period |

(2) The table test required under § 611a. 5 (relating to table test; employee personnel file).
(c) The minimum hours of instruction required under subsection (a) or (b) may be completed over an alternative duration of time as approved by the Board's Executive Director. A certificate holder or gaming school requesting to offer an alternative schedule to complete the minimum
hours of instruction shall submit a written request to the Executive Director, in accordance with § 601a.10(a) (relating to approval of table game layouts, signage and equipment), which contains a detailed description of when the training will be conducted.
(d) For an experienced dealer who would like to be trained to deal a different game of the same game type (for example, an experienced Blackjack dealer who would like to be trained on another card game), the certificate holder shall specify in its training program submitted in accordance with § 611a. 4 (relating to submission of training programs to the Board) the mechanism and the amount of training an experienced dealer shall complete on the different game of the same game type. The dealer shall successfully complete the table test in accordance with § 611a. 5 on the new table game prior to dealing the new game on the certificate holder's gaming floor. For purposes of this subsection, an experienced dealer is an employee who has completed a course of table games training as described in subsection (a) and has previously dealt table games on the certificate holder's live gaming floor for at least 120 hours.

## § 611a.5. Table test; employee personnel file.

(a) Prior to conducting any table game on the certificate holder's gaming floor, a prospective dealer shall pass a table test on the table games that the dealer will be conducting. The table test must consist of the dealer demonstrating proficiency at the table game to the satisfaction of an employee of the certificate holder at the level of pit manager or higher.
(b) A certificate holder shall document the following in a dealer's personnel file:
(1) Completion of the minimum training or experience required under $\S \S 611 \mathrm{a} .1$ and 611a. 2 (relating to minimum training standards for dealers; minimum experience requirements for supervisors; and minimum proficiency requirements).
(2) Completion of the training program required under § 611a.3 (relating to employee training by certificate holders).
(3) Successful completion of the table test required under subsection (a).
(4) Completion of subsequent training on a different game type in accordance with § 611a.2(b).
(5) Completion of subsequent training for a different game of the same game type in accordance with § 611a.2(d).

## CHAPTER 668a. PROPS \& HOPS

Sec.
668a.1. Props \& Hops table; physical characteristics.
668a.2. Wagers.
668a.3. Dice; shaker; procedure for completion of each round of play. 668a.4. Payout odds.
§ 668a.1. Props \& Hops table; physical characteristics.
(a) Props \& Hops shall be played at a table having betting positions for six players on one side of the table and a place for the dealer on the opposite side of the table.
(b) The layout for a Props \& Hops table shall be submitted to the Bureau of Gaming Operations and approved in accordance with § 601a.10(a) (relating to approval of table game layouts, signage and equipment) and contain, at a minimum:
(1) The name or logo of the certificate holder.
(2) Areas that depict all wagers authorized under § 668a. 2 (relating to wagers).
(3) A separate circle located to the right of the dealer for the placement of the shaker.
(4) A player position diagram demonstrating the proper placement of each player's wagers.
(5) If offering the Six Eight Shake Wager, the requirements to win and the provision that player's may take down the wager at any time prior to a 7 being rolled.
(6) The payout odds, in accordance with § 668a. 4 (relating to payout odds), for all permissible wagers offered by the certificate holder. If the payout odds are not on the layout, a sign identifying the payout odds shall be posted at each Props \& Hops table.
(c) Each Props \& Hops table must have a drop box with a tip box attached on the same side of the gaming table as, but on opposite sides of, the dealer, as approved by the Bureau of Casino Compliance in accordance with § 601a.10(g).

## § 668a.2. Wagers.

(a) Wagers shall be made before the dice are shaken.
(b) Wagers shall be made by placing value chips or plaques on the appropriate areas of the layout. Verbal wagers accompanied by cash may not be accepted.
(c) Only players who are seated at a Props \& Hops table may place a wager at the game. Once a player has placed a wager, that player shall remain seated until the completion of the round of play.
(d) The following Double Wagers are authorized in the game of Props \& Hops:
(1) A Two the Hardway Bet placed in a box which depicts two dice, each of which displays a value of 1 . A Two the Hardway Bet shall win if a total of 2 is thrown on the next roll and shall lose if any other combination is thrown.
(2) A Four the Hardway Bet placed in a box which depicts two dice, each of which displays a value of 2 . A Four the Hardway Bet shall win if a total of 4 is thrown on the next roll with a 2 appearing on each die and shall lose if any other combination is thrown.
(3) A Six the Hardway Bet placed in a box which depicts two dice, each of which displays a value of 3 . A Six the Hardway Bet shall win if a total of 6 is thrown on the next roll with a 3 appearing on each die and shall lose if any other combination is thrown.
(4) An Eight the Hardway Bet placed in a box which depicts two dice, each of which displays a value of 4 . An Eight the Hardway Bet shall win if a total of 8 is thrown on the next roll with a 4 appearing on each die and shall lose if any other combination is thrown.
(5) A Ten the Hardway Bet placed in a box which depicts two dice, each of which displays a value of 5 . A Ten the Hardway Bet shall win if a total of 10 is thrown on the next roll with a 5 appearing on each die and shall lose if any other combination is thrown.
(6) A Twelve the Hardway Bet placed in a box which depicts two dice, each of which displays a value of 6 . A Twelve the Hardway Bet shall win if a total of 12 is thrown on the next roll and shall lose if any other combination is thrown.
(e) The following Any Number Wagers are authorized in the game of Props \& Hops:
(1) A One-Two Bet placed in a box which depicts two dice, one of which displays a value of 1 and the other displays a value of 2 . A One-Two Bet shall win if a total of 3 is thrown on the next roll and shall lose if any other combination is thrown.
(2) A One-Three Bet placed in a box which depicts two dice, one of which displays a value of 1 and the other displays a value of 3. A One-Three Bet shall win if on the next roll a total of 4 is thrown with a 1 appearing on one die and a 3 appearing on the other die and shall lose if any other combination is thrown.
(3) A One-Four Bet placed in a box which depicts two dice, one of which displays a value of 1 and the other displays a value of 4 . A One-Four Bet shall win if on the next roll a total of 5 is thrown with a 1 appearing on one die and a 4 appearing on the other die and shall lose if any other combination is thrown.
(4) A One-Five Bet placed in a box which depicts two dice, one of which displays a value of 1 and the other displays a value of 5 . A One-Five Bet shall win if on the next roll a total of 6 is thrown with a 1 appearing on one die and a 5 appearing on the other die and shall lose if any other combination is thrown.
(5) A One-Six Bet placed in a box which depicts two dice, one of which displays a value of 1 and the other displays a value of 6 . A One-Six Bet shall win if on the next roll a total of 7 is thrown with a 1 appearing on one die and a 6 appearing on the other die and shall lose if any other combination is thrown.
(6) A Two-Three Bet placed in a box which depicts two dice, one of which displays a value of 2 and the other displays a value of 3 . A Two-Three Bet shall win if on the next roll a total of 5 is thrown with a 2 appearing on one die and a 3 appearing on the other die and shall lose if any other combination is thrown.
(7) A Two-Four Bet placed in a box which depicts two dice, one of which displays a value of 2 and the other displays a value of 4. A Two-Four Bet shall win if on the next roll a total of 6 is thrown with a 2 appearing on one die and a 4 appearing on the other die and shall lose if any other combination is thrown.
(8) A Two-Five Bet placed in a box which depicts two dice, one of which displays a value of 2 and the other displays a value of 5 . A Two-Five Bet shall win if on the next roll a total of 7 is thrown with a 2 appearing on one die and a 5 appearing on the other die and shall lose if any other combination is thrown.
(9) A Two-Six Bet placed in a box which depicts two dice, one of which displays a value of 2 and the other displays a value of 6 . A Two-Six Bet shall win if on the next roll a total of 8 is thrown with a 2 appearing on one die and a 6 appearing on the other die and shall lose if any other combination is thrown.
(10) A Three-Four Bet placed in a box which depicts two dice, one of which displays a value of 3 and the other displays a value of 4 . A Three-Four Bet shall win if on the next roll a total of 7 is thrown with a 3 appearing on one die and a 4 appearing on the other die and shall lose if any other combination is thrown.
(11) A Three-Five Bet placed in a box which depicts two dice, one of which displays a value of 3 and the other
displays a value of 5 . A Three-Five Bet shall win if on the next roll a total of 8 is thrown with a 3 appearing on one die and a 5 appearing on the other die and shall lose if any other combination is thrown.
(12) A Three-Six Bet placed in a box which depicts two dice, one of which displays a value of 3 and the other displays a value of 6 . A Three-Six Bet shall win if on the next roll a total of 9 is thrown with a 3 appearing on one die and a 6 appearing on the other die and shall lose if any other combination is thrown.
(13) A Four-Five Bet placed in a box which depicts two dice, one of which displays a value of 4 and the other displays a value of 5 . A Four-Five Bet shall win if on the next roll a total of 9 is thrown with a 4 appearing on one die and a 5 appearing on the other die and shall lose if any other combination is thrown.
(14) A Four-Six Bet placed in a box which depicts two dice, one of which displays a value of 4 and the other displays a value of 6 . A Four-Six Bet shall win if on the next roll a total of 10 is thrown with a 4 appearing on one die and a 6 appearing on the other die and shall lose if any other combination is thrown.
(15) A Five-Six Bet placed in a box which depicts two dice, one of which displays a value of 5 and the other displays a value of 6. A Five-Six Bet shall win if on the next roll a total of 11 is thrown with a 5 appearing on one die and a 6 appearing on the other die and shall lose if any other combination is thrown.
(f) The following additional wagers are authorized in the game of Props \& Hops:
(1) A Field Wager placed in a Field box which depicts the numbers $2,3,4,9,10,11$ and 12 with the 2 and the 12 circled. A Field Bet shall win if on the next roll the combined total of the dice equals a $2,3,4,9,10,11$ or 12 and lose if any other combination is thrown.
(2) A Hop the Top Wager in the Hop the Top box which shall win if any of the combinations of dice in the top row of the layout are rolled.
(3) A Hop the Left Wager in the Hop the Left box which shall win if any combinations of dice on the left side of the layout are rolled.
(4) A Hop the Right Wager in the Hop the Right box which shall win if any combinations of dice on the right side of the layout are rolled.
(5) A Hop the Center Wager in the Hop the Center box which shall win if any combinations of dice on the center of the layout are rolled.
(6) A 1-6 and Under Wager in the box which depicts two dice, one of which displays a value of 1 and the other displays a value of 6 , and Under. This wager shall win if the 1-6 is rolled or any other combination of the two dice whose total is under 7.
(7) A 3-4 and Over Wager in the box which depicts two dice, one of which displays a value of 3 and the other displays a value of 4 , and Over. This wager shall win if the $3-4$ is rolled or any other combination of the two dice whose total is greater than 7.
(8) A Six Eight Shake Wager in the circles at the top of the table layout. This wager shall win if each combination of 6 (a 1-5, 2-4 and 3-3) and each combination of 8 (2-6, $3-5$ and 4-4) is thrown before a 7 . A player may remove this wager at any time prior to a 7 being rolled.
§ 668a.3. Dice; shaker; procedure for completion of each round of play.
(a) Props \& Hops shall be played with two dice that comply with § 603a.12(b) (relating to dice; physical characteristics) and the receipt and inspection requirements in § 603a. 13 (relating to dice; receipt, storage, inspection and removal from use).
(b) Props \& Hops shall be played with a dice shaker, approved in accordance with $\S$ 601a.10(a) (relating to approval of table game layouts, signage and equipment), which shall be used to shake the two dice to arrive at the winning combinations. The dice shaker shall be designed and constructed to maintain the integrity of the game and must:
(1) Be capable of housing two dice that when not being shaken must be maintained in the shaker. Dice that have been placed in a dice shaker for use in gaming may not remain on a table for more than 24 hours.
(2) Be designed to prevent the dice from being seen while being shaken.
(3) Have the name or logo of the certificate holder imprinted or impressed thereon.
(c) The dice shaker shall be the responsibility of the dealer and may not be left unattended while at the table.
(d) A shaker and two dice shall be presented at the Props \& Hops table for gaming. The floorperson, in the presence of the dealer, shall place the dice in the shaker. Prior to the commencement of play at the table and after each round of play, the dealer shall shake the covered shaker.
(e) After all players have placed their wagers, the dealer shall announce "no more bets." If any players placed a Six Eight Shake Wager, beginning with the player to the dealer's right, and continuing counterclockwise around the table, the dealer shall place the player's wager in the first designated Six Eight Shake circle on the dealer's right located at the top of the table layout. After all Six Eight Shake Wagers have been placed in the designated circles, the dealer shall then place a red lammer button on each two-dice combination of 6 and 8 (1-5, 2-4, 3-3, 2-6, 3-5 and 4-4).
(f) The dealer shall then offer the covered dice shaker to the player farthest to the dealer's left. The player shall shake the covered shaker at least three times to cause a random mixture of the dice. Once the player has shaken the dice, the player shall return the covered shaker to the layout. If the player shaking the dice removes the lid, the shaker shall be recovered and shaken again.
(g) The dealer shall then remove the lid and place the uncovered shaker in the designated circle on the table layout. The shaker shall remain uncovered in the designated area until all wagers have been settled. If the dealer uncovers the shaker and a die falls out of the shaker, the dealer shall call a "no roll." The dice shall then be shaken again in accordance with subsection (f).
(h) The dealer shall then announce the numbers on the uppermost or skyward sides of the two dice and place a pointer marker on the corresponding area of the layout. If one die comes to rest on top of the other or if the dice do not land flat on the bottom of the shaker after being tossed, the dealer shall call a "no roll." The dice shall be shaken again in accordance with subsection (f).
(i) After a valid roll, the dealer shall then collect all losing wagers before paying out winning wagers in accordance with § 668a.4 (relating to payout odds) provided
that if any player placed a Six Eight Shake Wager and if the number rolled corresponds to one of the boxes on the table layout that contains a lammer button, the dealer shall remove the lammer button and place it in the Six Eight Shake circle on the table layout furthest to the dealer's right. Each time one of the preselected numbers containing a lammer is rolled, the lammer will be collected and placed on the Six Eight Shake circle next to the previous lammer. If there is a wager in the Six Eight Shake circle, the lammer shall be placed on top of the wager. If all six combinations of dice are thrown and all six lammer buttons are placed on the designated Six Eight Shake circles before a 7 is thrown, the dealer shall pay each winning Six Eight Shake Wager in accordance with § 668a.4.
(j) After all losing wagers have been collected and all winning wagers have been paid, the dealer shall cover and shake the shaker.
(k) The same player who shook the dice shall continue to shake the dice during each subsequent round of play until the player shakes a 7 . Once the total of the dice is a 7, the dice shaker will be passed to the next player to the left at the next round of play.

## § 668a.4. Payout odds.

The certificate holder shall pay out winning Props \& Hops wagers as follows:
Wager Payout Odds

Double Wager 30 to 1
Any Number Wager 15 to 1
Field Wager:
2 or 12 is rolled 2 to 1
$3,4,9,10$ or 11 is rolled $\quad 1$ to 1
Hop the Top 3 to 2
Hop the Left 2 to 1
Hop the Right 2 to 1
Hop the Center 3 to 2
1-6 and Under 1 to 1
3-4 and Over
1 to 1
Six Eight Shake 150 to 1

## CHAPTER 669a. RAISE IT UP STUD POKER

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## § 669a.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

Community card—A card which is used by all players to form the best possible five-card Poker hand.

Envy Bonus-An additional fixed sum payout made to a player who placed a Progressive Payout Wager when another player at the Raise It Up Stud Poker table is the holder of an Envy Bonus Qualifying Hand.
Envy Bonus Qualifying Hand-A hand with a rank of an ace, king, queen straight flush as defined in $\S$ 669a.6(c) (relating to Raise It Up Stud Poker hand rankings).

Fold-The withdrawal of a player from a round of play by not making a Play Wager.
Push-A player's hand that results in neither payment on nor collection of the player's wagers.

## § 669a.2. Raise It Up Stud Poker table physical characteristics.

(a) Raise It Up Stud Poker shall be played on a table having betting positions for no more than six players on one side of the table and a place for the dealer on the opposite side of the table.
(b) The layout for a Raise It Up Stud Poker table shall be submitted to the Bureau of Gaming Operations and approved in accordance with § 601a.10(a) (relating to approval of table game layouts, signage and equipment) and contain, at a minimum:
(1) The name or logo of the certificate holder.
(2) Three separate betting areas designated for the placement of the Ante, Blind and Play Wagers for each player.
(3) Separate areas designated for the placement of the three community cards located directly in front of the table inventory container. One area must be inscribed 4th Street, a second area inscribed 5th Street and a third area inscribed 6th Street.
(4) If the certificate holder offers the optional Progressive Payout Wager authorized under § 669a.7(d)(4) (relating to wagers), a separate area designated for the placement of the Progressive Payout Wager for each player.
(5) If the certificate holder offers the optional Six Card Bonus Wager authorized under § 669a.7(d)(5), a separate area designated for the placement of the Six Card Bonus Wager for each player.
(6) Inscriptions that advise patrons of the payout odds or amounts for all permissible wagers and the rules governing the required amount of the Play Wager as a multiple of the player's Ante Wager. If the information is not inscribed on the layout, a sign that sets forth the required information must be posted at each Raise It Up Stud Poker table.
(c) If a certificate holder offers the Progressive Payout Wager, in accordance with § 669a.7(d)(4), the Raise It Up Stud Poker table must have a progressive table game system, in accordance with § 605a. 7 (relating to progressive table games), for the placement of Progressive Payout Wagers. The progressive table game system must include:
(1) A wagering device at each betting position that acknowledges or accepts the placement of the Progressive Payout Wager.
(2) A device that controls or monitors the placement of Progressive Payout Wagers at the gaming table including a mechanism, such as a lock-out button, that prevents the recognition of a Progressive Payout Wager that a player attempts to place after the dealer has announced "no more bets."
(d) Each Raise It Up Stud Poker table must have a drop box and a tip box attached on the same side of the gaming table as, but on opposite sides of, the dealer, as approved by the Bureau of Casino Compliance in accordance with § 601a.10(g). The Bureau of Casino Compliance may approve an alternative location for the tip box when a card shuffling device or other table game equipment
prevents the placement of the drop box and tip box on the same side of the gaming table as, but on opposite sides of, the dealer.
(e) Each Raise It Up Stud Poker table must have a discard rack securely attached to the top of the dealer's side of the table.

## § 669a.3. Cards; number of decks.

(a) Except as provided in subsection (b), Raise It Up Stud Poker shall be played with one deck of cards and one cover card.
(b) If an automated card shuffling device is utilized, Raise It Up Stud Poker may be played with two decks of cards in accordance with the following requirements:
(1) The cards in each deck must be of the same design. The backs of the cards in one deck must be of a different color than the cards included in the other deck.
(2) One deck shall be shuffled and stored in the automated card shuffling device while the other deck is being used to play the game.
(3) Both decks are continually alternated in and out of play, with each deck being used for every other round of play.
(4) The cards from only one deck shall be placed in the discard rack at any given time.
(c) The decks of cards used in Raise It Up Stud Poker shall be changed at least every:
(1) Four hours if the cards are dealt by hand.
(2) Eight hours if the cards are dealt from a manual or automated dealing shoe.

## § 669a.4. Opening of the table for gaming.

(a) After receiving one or more decks of cards at the table, the dealer shall inspect the cards for defects. The floorperson assigned to the table shall verify the inspection.
(b) After the cards are inspected, the cards shall be spread out face up on the table for visual inspection by the first player to arrive at the table. The cards shall be spread out in horizontal fan shaped columns by deck according to suit and in sequence.
(c) After the first player arriving at the table has been afforded an opportunity to visually inspect the cards, the cards shall be turned face down on the table, mixed thoroughly by a washing of the cards and stacked. Once the cards have been stacked, the cards shall be shuffled in accordance with § 669a. 5 (relating to shuffle and cut of the cards).
(d) If an automated card shuffling device is utilized and two decks of cards are received at the table, each deck of cards shall be spread for inspection, mixed, stacked and shuffled in accordance with subsections (a)-(c).
(e) If the decks of cards received at the table are preinspected and preshuffled in accordance with $\S$ 603a.16(u) or (v) (relating to cards; receipt, storage, inspection and removal from use), subsections (a)-(d) do not apply.

## § 669a.5. Shuffle and cut of the cards.

(a) Immediately prior to commencement of play, unless the cards were preshuffled in accordance with § 603a.16(u) or (v) (relating to cards; receipt, storage, inspection and removal from use), after each round of play has been completed or when directed by a
floorperson or above, the dealer shall shuffle the cards, either manually or by use of an automated card shuffling device, so that the cards are randomly intermixed. Upon completion of the shuffle, the dealer or automated card shuffling device shall place the deck of cards in a single stack. The certificate holder may use an automated card shuffling device which, upon completion of the shuffling of the cards, inserts the stack of cards directly into a dealing shoe.
(b) If an automated card shuffling device is being used, which counts the number of cards in the deck after the completion of each shuffle and indicates whether 52 cards are present, and the device reveals that an incorrect number of cards are present, the deck shall be removed from the table.
(c) After the cards have been shuffled and stacked, the dealer shall:
(1) If the cards were shuffled using an automated card shuffling device, deal the cards in accordance with $\S 669 \mathrm{a} .8, \S 669 \mathrm{a} .9$ or $\S 669 \mathrm{a} .10$ (relating to procedure for dealing the cards from a manual dealing shoe; procedure for dealing the cards from the hand; and procedures for dealing the cards from an automated dealing shoe).
(2) If the cards were shuffled manually or were preshuffled, cut the cards in accordance with subsection (d).
(d) If a cut of the cards is required, the dealer shall place the cover card in the stack at least ten cards in from the top of the stack. Once the cover card has been inserted, the dealer shall take all cards above the cover card and the cover card and place them on the bottom of the stack. The stack of cards shall then be inserted into the dealing shoe for the commencement of play.
(e) After the cards have been cut and before any cards have been dealt, a floorperson or above may require the cards to be recut if the floorperson determines that the cut was performed improperly or in any way that might affect the integrity or fairness of the game.
(f) If there is no gaming activity at a Raise It Up Stud Poker table that is open for gaming, the cards shall be removed from the dealing shoe and the discard rack and spread out on the table face down unless a player requests that the cards be spread face up on the table. After the first player is afforded an opportunity to visually inspect the cards, the procedures in § 669a.4(c) (relating to opening of the table for gaming) and this section shall be completed.
(g) A certificate holder may utilize a dealing shoe or other device that automatically reshuffles and counts the cards provided that the device is submitted and approved in accordance with § 461a. 4 (relating to submission for testing and approval) prior to its use in the licensed facility. If a certificate holder is utilizing the approved device, subsections (d)-(f) do not apply.

## § 669a.6. Raise It Up Stud Poker hand rankings.

(a) The rank of the cards used in Raise It Up Stud Poker, in order of highest to lowest rank, shall be: ace, king, queen, jack, $10,9,8,7,6,5,4,3$ and 2 . Notwithstanding the foregoing, an ace may be used to complete a straight flush or a straight formed with a $2,3,4$ and 5 but may not be combined with any other sequence of cards (for example: king, queen, ace, 2 and 3). All suits shall be equal in rank.
(b) The permissible five-card Poker hands in the game of Raise It Up Stud Poker, in order of highest to lowest rank, shall be:
(1) A royal flush, which is a hand consisting of an ace, king, queen, jack and 10 of the same suit.
(2) A straight flush, which is a hand, other than a royal flush, consisting of five cards of the same suit in consecutive ranking.
(3) A four-of-a-kind, which is a hand consisting of four cards of the same rank.
(4) A full house, which is a hand consisting of a three-of-a-kind and a pair.
(5) A flush, which is a hand consisting of five cards of the same suit, not in consecutive order.
(6) A straight, which is a hand consisting of five cards of more than one suit and of consecutive rank.
(7) A three-of-a-kind, which is a hand consisting of three cards of the same rank.
(8) Two pairs, which is a hand consisting of two pairs.
(9) One pair, which is a hand consisting of two cards of the same rank.
(c) For purposes of the Pair Plus Wager authorized under § 669a.7(d)(3) (relating to wagers) and the Progressive Payout Wager authorized under § 669a.7(d)(4), the permissible three-card Poker hands shall be:
(1) A straight flush, which is three cards of the same suit in consecutive rank.
(2) A three-of-a-kind, which is three cards of the same rank.
(3) A straight, which is three cards of consecutive rank.
(4) A flush, which is three cards of the same suit.
(5) A pair, which is two cards of the same rank.

## § 669a.7. Wagers.

(a) Wagers at Raise It Up Stud Poker shall be made by placing value chips, plaques or other Board-approved wagering instruments on the appropriate betting areas of the table layout. Verbal wagers accompanied by cash may not be accepted.
(b) Only players who are seated at the Raise It Up Stud Poker table may place a wager at the game. Once a player has placed a wager and received cards, that player shall remain seated until the completion of the round of play. If a player leaves the table during a round of play, any wagers made by the player may be considered abandoned and may be treated as losing wagers.
(c) All Ante, Blind, Pair Plus, Progressive Payout and Six Card Bonus Wagers shall be placed prior to the dealer announcing "no more bets" in accordance with the dealing procedure in § 669a.8, § 669a. 9 or § 669a. 10 (relating to procedure for dealing the cards from a manual dealing shoe; procedure for dealing the cards from the hand; and procedures for dealing the cards from an automated dealing shoe). Except as provided in § 669a.11(b), (d) and (f) (relating to procedures for completion of each round of play), a wager may not be made, increased or withdrawn after the dealer announces "no more bets" and begins dealing the cards.
(d) The following wagers may be placed in the game of Raise It Up Stud Poker:
(1) To participate in a round of play, a player shall place an Ante Wager and a Blind Wager, equal to the player's Ante Wager, that the three cards dealt to the player and the three community cards will form a pair of 10 s or better as described in $\S 669 \mathrm{a} .6(\mathrm{~b})$ (relating to Raise It Up Stud Poker hand rankings).
(2) In accordance with § 669a.11(b), (d) and (f), a Play Wager that the three cards dealt to the player and the three community cards will form a pair of 10 s or better as described in § 669a.6(b).
(3) A Pair Plus Wager that the three cards dealt to the player will form a pair or better as described in § 669a.6(c).
(4) If specified in its Rules Submission under § 601a. 2 (relating to table games Rules Submissions), a certificate holder may offer to each player at a Raise It Up Stud Poker table the option to make an additional Progressive Payout Wager that the three cards dealt to the player will form a pair or better as described in § 669a.6(c). After placing Ante and Blind Wagers, a player may make an additional Progressive Payout Wager by placing a value chip into the progressive wagering device designated for that player. Each player shall be responsible for verifying that the player's respective Progressive Payout Wager has been accepted.
(5) If specified in its Rules Submission under § 601a.2, a certificate holder may offer to each player at a Raise It Up Stud Poker table the option to make an additional Six Card Bonus Wager that the three cards dealt to the player and the three community cards will form a three-of-a-kind or better as described in § 669a.6(b).
(e) A player may not wager on more than one player position at a Raise It Up Stud Poker table.

## § 669a.8. Procedure for dealing the cards from a manual dealing shoe.

(a) If a manual dealing shoe is used, the dealing shoe must be located on the table in a location approved by the Bureau of Casino Compliance in accordance with $\S 601 \mathrm{a} .10(\mathrm{~g})$ (relating to approval of table game layouts, signage and equipment). Once the procedures required under § 669a. 5 (relating to shuffle and cut of the cards) have been completed, the stacked deck of cards shall be placed in the dealing shoe either by the dealer or by the automated card shuffling device.
(b) Prior to dealing the cards, the dealer shall announce "no more bets" and, if the Progressive Payout Wager is being offered, use the progressive table game system to prevent the placement of additional Progressive Payout Wagers. The dealer shall then collect any Progressive Payout Wagers and, on the layout in front of the table inventory container, verify that the number of value chips wagered equals the number of Progressive Payout Wagers accepted by the progressive table game system. The dealer shall then place the value chips into the table inventory container.
(c) Each card shall be removed from the dealing shoe with the hand of the dealer that is the closest to the dealing shoe and placed on the appropriate area of the layout with the opposite hand.
(d) The dealer shall, starting with the player farthest to the dealer's left and continuing around the table in a clockwise manner, deal the cards, face down, as follows:
(1) Deal one card at a time to each player who placed Ante and Blind Wagers in accordance with § 669a.7(d)(1) (relating to wagers) until each player who placed a wager has three cards.
(2) Three cards to the area designated for the placement of the community cards.
(e) After three cards have been dealt to each player and three cards have been dealt to the area designated for the community cards, the dealer shall remove the stub
from the manual dealing shoe and, except as provided in subsection (f), place the stub in the discard rack without exposing the cards.
(f) If an automated card shuffling device, which counts the number of cards in the deck after the completion of each shuffle and indicates whether 52 cards are present, is not being used, the dealer shall count the stub at least once every 5 rounds of play to determine if the correct number of cards are still present in the deck. The dealer shall determine the number of cards in the stub by counting the cards face down on the layout.
(g) If the count of the stub indicates that 52 cards are in the deck, the dealer shall place the stub in the discard rack without exposing the cards.
(h) If the count of the stub indicates that the number of cards in the deck is incorrect, the dealer shall determine if the cards were misdealt. If the cards were misdealt (a player has more or less than 3 cards or the area designated for the placement of the community cards has more or less than 3 cards) but 52 cards remain in the deck, all hands shall be void and all wagers shall be returned to the players. If the cards were not misdealt, all hands shall be void, all wagers shall be returned to the players and the entire deck of cards shall be removed from the table.

## § 669a.9. Procedure for dealing the cards from the hand.

(a) If the cards are dealt from the dealer's hand, the following requirements shall be observed:
(1) An automated shuffling device shall be used to shuffle the cards.
(2) After the procedures required under § 669a. 5 (relating to shuffle and cut of the cards) have been completed, the dealer shall place the stacked deck of cards in either hand. After the dealer has chosen the hand in which he will hold the cards, the dealer shall continue to use that hand whenever holding the cards during that round of play. The cards held by the dealer shall be kept over the table inventory container and in front of the dealer at all times.
(3) Prior to dealing the cards, the dealer shall announce "no more bets" and, if the Progressive Payout Wager is being offered, use the progressive table game system to prevent the placement of additional Progressive Payout Wagers. If any Progressive Payout Wagers have been made, the dealer shall then collect the wagers and, on the layout in front of the table inventory container, verify that the number of value chips wagered equals the number of Progressive Payout Wagers accepted by the progressive table game system. The dealer shall then place the value chips into the table inventory container.
(b) The dealer shall, starting with the player farthest to the dealer's left and continuing around the table in a clockwise manner, deal the cards, face down, as follows:
(1) Deal one card at a time to each player who placed Ante and Blind Wagers in accordance with § 669a.7(d)(1) (relating to wagers) until each player who placed a wager has three cards.
(2) Three cards to the area designated for the placement of the community cards.
(c) After three cards have been dealt to each player and three cards have been dealt to the area designated for the community cards, the dealer shall, except as provided in subsection (d), place the stub in the discard rack without exposing the cards.
(d) If an automated card shuffling device, which counts the number of cards in the deck after the completion of each shuffle and indicates whether 52 cards are present, is not being used, the dealer shall count the stub at least once every 5 rounds of play to determine if the correct number of cards are still present in the deck. The dealer shall determine the number of cards in the stub by counting the cards face down on the layout.
(e) If the count of the stub indicates that 52 cards are in the deck, the dealer shall place the stub in the discard rack without exposing the cards.
(f) If the count of the stub indicates that the number of cards in the deck is incorrect, the dealer shall determine if the cards were misdealt. If the cards were misdealt (a player has more or less than 3 cards or the area designated for the placement of the community cards has more or less than 3 cards) but 52 cards remain in the deck, all hands shall be void and all wagers shall be returned to the players. If the cards were not misdealt, all hands shall be void, all wagers shall be returned to the players and the entire deck of cards shall be removed from the table.

## § 669a.10. Procedures for dealing the cards from an automated dealing shoe.

(a) If the cards are dealt from an automated dealing shoe, the following requirements shall be observed:
(1) After the procedures required under § 669a. 5 (relating to shuffle and cut of the cards) have been completed, the cards shall be placed in the automated dealing shoe.
(2) Prior to the dealing shoe dispensing any stacks, the dealer shall announce "no more bets" and, if the Progressive Payout Wager is being offered, use the progressive table game system to prevent the placement of additional Progressive Payout Wagers. The dealer shall then collect any Progressive Payout Wagers and, on the layout in front of the table inventory container, verify that the number of value chips wagered equals the number of Progressive Payout Wagers accepted by the progressive table game system. The dealer shall then place the value chips into the table inventory container.
(b) The dealer shall deliver the first stack of three cards dispensed by the automated dealing shoe face down to the player farthest to the dealer's left who has placed Ante and Blind Wagers in accordance with § 669a.7(d)(1) (relating to wagers). As the remaining stacks are dispensed to the dealer by the automated dealing shoe, the dealer shall, moving clockwise around the table, deliver a stack face down to each of the other players who has placed Ante and Blind Wagers. The dealer shall then deliver a stack of three cards face down to the area designated for the placement of the three community cards.
(c) After each stack of three cards has been dispensed and delivered in accordance with subsection (b), the dealer shall remove the stub from the automated dealing shoe and, except as provided in subsection (d), place the stub in the discard rack without exposing the cards.
(d) If an automated card shuffling device that counts the number of cards in the deck after the completion of each shuffle and indicates whether 52 cards are present is not being used, the dealer shall count the stub at least once every 5 rounds of play to determine that the correct number of cards are still present in the deck. The dealer shall determine the number of cards in the stub by counting the cards face down on the layout.
(e) If the count of the stub indicates that 52 cards are in the deck, the dealer shall place the stub in the discard rack without exposing the cards.
(f) If the count of the stub indicates that the number of cards in the deck is incorrect, the dealer shall determine if the cards were misdealt. If the cards were misdealt (a player has more or less than 3 cards or the area designated for the placement of the community cards has more or less than 3 cards) but 52 cards remain in the deck, all hands shall be void and all wagers shall be returned to the players. If the cards were not misdealt, all hands shall be void, all wagers shall be returned to the players and the entire deck of cards shall be removed from the table.

## § 669a.11. Procedures for completion of each round of play.

(a) After the dealing procedures required under $\S 669 \mathrm{a} .8$, § 669a. 9 or § 669a. 10 (relating to procedure for dealing the cards from a manual dealing shoe; procedure for dealing the cards from the hand; and procedures for dealing the cards from an automated dealing shoe) have been completed, each player shall examine his cards, subject to the following limitations:
(1) Each player who wagers at Raise It Up Stud Poker shall be responsible for his own hand and no person other than the dealer and the player to whom the cards were dealt may touch the cards of that player.
(2) Each player shall keep his cards in full view of the dealer at all times.
(3) A player may not exchange or communicate information regarding his hand prior to the dealer revealing all of the community cards. A violation shall result in a forfeiture of all wagers on that round by that person.
(b) After each player has examined his cards and replaced them face down on the layout, the dealer shall, beginning with the player farthest to the dealer's left and moving clockwise around the table, ask each player who placed an Ante Wager if he wishes to check or place a Play Wager in an amount equal to one, two or three times the amount of the player's Ante Wager.
(c) Once all players have either checked or placed a Play Wager, the dealer shall turn over and reveal the first community card and place it in the 4th Street box on the layout.
(d) Each player shall then either check or place a Play Wager in an amount equal to one or two times the amount of the player's Ante Wager.
(e) Once all remaining players have either checked or placed a Play Wager, the dealer shall turn over and reveal the second community card and place it in the 5th Street box on the layout.
(f) Each player shall then either place a Play Wager in an amount equal to the amount of the player's Ante Wager or fold. If a player folds, the Ante and Blind Wagers shall be immediately collected and placed in the table inventory container and the folded hand shall be collected and placed in the discard rack unless the player made a Progressive Payout or Six Card Bonus Wager in which case the cards shall be left on the table until the Six Card Bonus Wager and any Envy Bonus is settled in accordance with subsection (i).
(g) If a player has placed a Progressive Payout or Six Card Bonus Wager but does not make a Play Wager, the player shall forfeit the right to receive a Progressive

Payout but does not forfeit the eligibility to receive an Envy Bonus under § 669a.12(e)(5) (relating to payout odds; Envy Bonus; rate of progression) or a Six Card Bonus payout under § 669a.12(f).
(h) Once all remaining players have either placed a Play Wager or folded, the dealer shall turn over and reveal the third community card and place it in the 6th Street box on the layout.
(i) Beginning with the player farthest to the dealer's right and continuing around the table in a counterclockwise direction, the dealer shall turn over and reveal the player's three cards and complete the following applicable procedures in succession for each player:
(1) If a player placed a Pair Plus Wager, the dealer shall form the highest possible ranking three-card hand. If the player's three cards form a pair or better, as described in § 669a.6(c) (relating to Raise It Up Stud Poker hand rankings), the dealer shall pay each winning Pairs Plus Wager in accordance with the payout odds in § 669a.12(a).
(2) The dealer shall form the highest possible ranking five-card hand from the player's three cards and the three community cards. If a player's highest ranking five-card hand:
(i) Does not contain a pair of 10 s or better, as described in § 669a.6(b), the dealer shall collect the player's Ante, Blind and Play Wagers.
(ii) Contains a pair of 10 s or better, as described in § 669a.6(b), the dealer shall pay each player's winning Ante, Play and Blind Wagers in accordance with § 669a.12(b)—(d).
(3) After settling the player's Pair Plus, Ante, Play and Blind Wagers, the dealer shall settle the Progressive Payout or Six Card Bonus Wager, if offered by the certificate holder, as follows:
(i) If a player placed a Progressive Payout Wager and the player's three cards contain a straight or better, the dealer shall:
(A) Verify that the hand is a winning hand.
(B) Verify that the appropriate light on the progressive table game system has been illuminated.
(C) Have a floorperson or above validate the progressive payout in accordance with the certificate holder's approved internal control procedures.
(D) Pay the winning Progressive Payout Wager in accordance with § 669a.12(e)(1). If a player has won a progressive payout that is $100 \%$ of the jackpot amount on the progressive meter, the progressive payout may not be paid from the table inventory container. If a player has won a progressive payout that is not being paid from the table inventory container, the cards of that player shall remain on the table until the necessary documentation has been completed.
(E) Pay any Envy Bonus won in accordance with § 669a.12(e)(5). Players making a Progressive Payout Wager shall receive an Envy Bonus when another player at the same Raise It Up Stud Poker table is the holder of an Envy Bonus Qualifying Hand. Players are entitled to multiple Envy Bonuses if more than one player is the holder of an Envy Bonus Qualifying Hand. A player is not entitled to an Envy Bonus for his own hand.
(ii) If a player has placed a Six Card Bonus Wager and the player's three cards and the three community cards form a three-of-a-kind or better, the dealer shall pay the winning Six Card Bonus Wager in accordance with § 669a.12(f).
(j) After all wagers have been settled, the dealer shall remove all remaining cards from the table and place them in the discard rack in a manner that permits the reconstruction of each hand in the event of a question or dispute.

## § 669a.12. Payout odds; Envy Bonus; rate of progression.

(a) A player placing a Pair Plus Wager shall be paid at the odds in one of the following paytables selected by the certificate holder in its Rules Submission filed in accordance with § 601a.2 (relating to table games Rules Submissions):
Hand Paytable A Paytable B
Straight flush 40 to $1 \quad 40$ to 1
Three-of-a-kind 30 to $1 \quad 25$ to 1
Straight 6 to $1 \quad 6$ to 1
Flush 4 to $1 \quad 4$ to 1
Pair 1 to 1 to 1
(b) A certificate holder shall pay each winning Ante Wager at odds of 1 to 1 .
(c) A certificate holder shall pay each winning Play Wager in accordance with the following odds:

| Hand | Payout |
| :--- | ---: |
| Royal flush | 100 to 1 |
| Straight flush | 20 to 1 |
| Four-of-a-kind | 10 to 1 |
| Full house | 6 to 1 |
| Flush | 5 to 1 |
| Straight | 4 to 1 |
| Three-of-a-kind | 3 to 1 |
| Two pair | 3 to 2 |
| Pair of 10s or better | 1 to 1 |

(d) A certificate holder shall pay each winning Blind Wager in accordance with the following odds:
Hand Payout
Royal flush $\quad 1,000$ to 1
Straight flush 200 to 1
Four-of-a-kind 30 to 1
Full house 4 to 1
Flush 3 to 1
Straight 2 to 1
Three-of-a-kind 1 to 1
Two pair Push
Pair of 10s or better Push
(e) If a certificate holder offers the Progressive Payout Wager:
(1) The certificate holder shall pay each winning Progressive Payout Wager in accordance with the following odds:
Hand Payout
Ace, king and queen of spades
$100 \%$ of meter
Ace, king and queen of hearts, diamonds 500 for 1 or clubs
Straight flush 70 for 1
Three-of-a-kind 60 for 1
Straight
Seed amount
1,000 for 1
Increment rate
(2) A player shall receive the payout for only the highest ranking hand formed from the player's three cards and the three community cards.
(3) The rate of progression for the meter used for the progressive payouts in paragraph (1) must be in the certificate holder's Rules Submission filed in accordance with $\S 601 \mathrm{a} .2$ and be at least $14 \%$. The initial and reset amount must also be in the certificate holder's Rules Submission and must be at least $\$ 1,000$.
(4) Winning Progressive Payout Hands shall be paid in accordance with the amount on the meter when it is the player's turn to be paid in accordance with § 669a.11(i)(3)(i) (relating to procedures for completion of each round of play).
(5) Envy Bonus payouts shall be made according to the following payout schedules for every Envy Bonus Qualifying Hand based upon the amount of the Progressive Payout Wager placed by the player receiving the Envy Bonus:
\$1 Progressive Payout Wager
Hand
Envy Bonus
Ace, king and queen of spades $\quad \$ 100$
Ace, king and queen of hearts, diamonds \$25 or clubs
\$5 Progressive Payout Wager

| Hand | Envy Bonus |
| :--- | ---: |
| Ace, king and queen of spades | $\$ 500$ |
| Ace, king and queen of hearts, diamonds | $\$ 125$ |
| or clubs |  |

(f) A certificate holder shall pay each winning Six Card Bonus Wager at the odds in one of the following paytables selected by the certificate holder in its Rules Submission filed in accordance with § 601a.2:

| Hand | Paytable A |
| :--- | ---: |
| Royal flush | 1,000 to 1 |
| Straight flush | 200 to 1 |
| Four-of-a-kind | 50 to 1 |
| Full house | 25 to 1 |
| Flush | 20 to 1 |
| Straight | 10 to 1 |
| Three-of-a-kind | 5 to 1 |

Paytable $B$
1,000 to 1
200 to 1
50 to 1
25 to 1
15 to 1
10 to 1
5 to 1

Paytable C
Paytable D
Royal flush
1,000 to 1
1,000 to 1
1,000 to 1
Four-of-a-kind
50 to 1
25 to 1
Flush
10 to 1
10 to 1
200 to 1
200 to 1
100 to $1 \quad 100$ to 1

Straight
5 to 1
20 to 1
15 to 1
9 to 1
20 to 1

## § 669a.13. Irregularities.

(a) A card that is found face up in the shoe or the deck while the cards are being dealt may not be used in that round of play and shall be placed in the discard rack. If more than one card is found face up in the shoe or the deck during the dealing of the cards, all hands shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(b) A card drawn in error without its face being exposed shall be used as though it were the next card from the shoe or the deck.
(c) If any player or the area designated for the placement of the community cards is dealt an incorrect number of cards, all hands shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(d) If any of the community cards are exposed prior to the dealer revealing the community cards in accordance with § 669a.11(c), (e) and (h) (relating to procedures for completion of each round of play), all hands shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(e) If an automated card shuffling device is being used and the device jams, stops shuffling during a shuffle or fails to complete a shuffle cycle, the cards shall be reshuffled.
(f) If an automated dealing shoe is being used and the device jams, stops dealing cards or fails to deal cards during a round of play, the round of play shall be void, all wagers shall be returned to the players and the cards shall be removed from the device and reshuffled with any cards already dealt.
(g) If an automated card shuffling device or automated dealing shoe malfunctions and cannot be used, the auto-
mated card shuffling device or automated dealing shoe shall be covered or have a sign indicating that the automated card shuffling device or automated dealing shoe is out of order placed on the device before any other method of shuffling or dealing may be utilized at that table.

## CHAPTER 670a. SIX-CARD FORTUNE PAI GOW POKER

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## § 670a.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

Envy Bonus-An additional fixed sum payout made to a player who placed a Progressive Payout Wager or a Qualifying Fortune Bonus Wager when another player at the Six-Card Fortune Pai Gow Poker table is the holder of an Envy Bonus Qualifying Hand.

## Envy Bonus Qualifying Hand-

(i) For purposes of the Fortune Bonus Wager, a player's hand with a rank of a full house or better formed from the six cards dealt to a player.
(ii) For purposes of the Progressive Payout Wager, a player's hand with a rank of a four-of-a-kind or better formed from the six cards dealt to a player.
High hand-The five-card hand that is formed from the six cards dealt so as to rank equal to or higher than the low hand.

Low hand-The one-card hand that is formed from the six cards dealt so as to rank equal to or lower than the high hand.

Qualifying Fortune Bonus Wager-A Fortune Bonus Wager of at least $\$ 5$ which may entitle a player to an Envy Bonus.
Setting the hands-The process of forming a high hand and low hand from the six cards dealt.

## § 670a.2. Six-Card Fortune Pai Gow Poker table; physical characteristics; shaker.

(a) Six-Card Fortune Pai Gow Poker shall be played at a table having betting positions for no more than six players on one side of the table and a place for the dealer on the opposite side of the table.
(b) The layout for a Six-Card Fortune Pai Gow Poker table shall be submitted to the Bureau of Gaming Operations and approved in accordance with § 601a.10(a) (relating to approval of table game layouts, signage and equipment) and contain, at a minimum:
(1) The name or logo of the certificate holder.
(2) A separate betting area designated for the placement of the Six-Card Fortune Pai Gow Poker Wager for each player.
(3) Two separate areas designated for the placement of the high and low hands of each player.
(4) Two separate areas designated for the placement of the high and low hands of the dealer.
(5) If the certificate holder offers the Double Down Wager authorized under § 670a.7(e)(1) (relating to wagers), a separate area designated for the placement of the Double Down Wager for each player.
(6) If the certificate holder offers the optional Fortune Bonus Wager authorized under § 670a.7(e)(2), a separate area designated for the placement of the Fortune Bonus Wager for each player.
(7) If the certificate holder offers the optional Insurance Wager authorized under § 670a.7(e)(3), a separate area designated for the placement of the Insurance Wager for each player.
(8) If the certificate holder offers the optional Progressive Payout Wager authorized under § 670a.7(e)(4), a separate area designated for the placement of the Progressive Payout Wager for each player.
(9) Inscriptions that advise patrons of the payout odds or amounts for all permissible wagers offered by the certificate holder. If the payout odds or amounts are not inscribed on the layout, a sign identifying the payout odds or amounts for all permissible wagers shall be posted at each Six-Card Fortune Pai Gow Poker table.
(c) If the certificate holder offers the optional Progressive Payout Wager in accordance with § 670a.7(e)(4), the Six-Card Fortune Pai Gow Poker table must have a progressive table game system in accordance with § 605a. 7 (relating to progressive table games) for the placement of Progressive Payout Wagers. The progressive table game system must include:
(1) A wagering device at each betting position that acknowledges or accepts the placement of the Progressive Payout Wager.
(2) A device that controls or monitors the placement of Progressive Payout Wagers at the gaming table, including a mechanism, such as a lock-out button, that prevents the placement of any Progressive Payout Wager that a player attempts to place after the dealer has announced "no more bets."
(d) To determine the starting position for the dealing or delivery of the cards, Six-Card Fortune Pai Gow Poker may be played with:
(1) A Pai Gow Poker shaker, approved in accordance with § 601a.10(a), which shall be designed and constructed to maintain the integrity of the game. The Pai Gow Poker shaker shall be the responsibility of the dealer, may not be left unattended while at the table and must:
(i) Be capable of housing three dice that when not being shaken must be maintained within the Pai Gow Poker shaker. Dice that have been placed in a Pai Gow Poker shaker for use in gaming may not remain on a table for more than 24 hours.
(ii) Be designed to prevent the dice from being seen while being shaken.
(iii) Have the name or logo of the certificate holder imprinted or impressed thereon.
(2) A computerized random number generator which shall be submitted to the Bureau of Gaming Laboratory Operations and approved in accordance with § 461a.4 (relating to submission for testing and approval) prior to its use.
(e) Each Six-Card Fortune Pai Gow Poker table must have a drop box and a tip box attached on the same side of the gaming table as, but on opposite sides of, the dealer, as approved by the Bureau of Casino Compliance in accordance with § 601a.10(g). The Bureau of Casino Compliance may approve an alternative location for the tip box when a card shuffling device or other table game equipment prevents the placement of the drop box and tip box on the same side of the gaming table as, but on opposite sides of, the dealer.
(f) Each Six-Card Fortune Pai Gow Poker table must have a discard rack securely attached to the top of the dealer's side of the table.

## § 670a.3. Cards; number of decks.

(a) Except as provided in subsection (b), Six-Card Fortune Pai Gow Poker shall be played with one deck of cards that are identical in appearance and two cover cards. The deck of cards used to play Six-Card Fortune Pai Gow Poker must include one joker. A certificate holder may use decks that are manufactured with two jokers provided that only one joker is used for gaming.
(b) If an automated card shuffling device is utilized, Six-Card Fortune Pai Gow Poker may be played with two decks of cards in accordance with the following requirements:
(1) The cards in each deck must be of the same design but the backs of the cards in one deck must be of a different color than the cards in the other deck.
(2) One deck of cards shall be shuffled and stored in the automated card shuffling device while the other deck is being used to play the game.
(3) Both decks of cards shall be continuously alternated in and out of play, with each deck being used for every other round of play.
(4) The cards from only one deck shall be placed in the discard rack at any given time.
(c) The decks of cards used in Six-Card Fortune Pai Gow Poker shall be changed at least every:
(1) Four hours if the cards are dealt by hand.
(2) Eight hours if the cards are dealt from a manual or automated dealing shoe.

## § 670a.4. Opening of the table for gaming.

(a) After receiving one or more decks of cards at the table, the dealer shall inspect the cards for any defects. The floorperson assigned to the table shall verify the inspection.
(b) If the deck of cards used by the certificate holder contains two jokers, the dealer and a floorperson shall ensure that only one joker is utilized and that the other joker is torn in half and placed in the box, envelope or container that the deck came from. After the cards are inspected, the cards shall be spread out face up on the table for visual inspection by the first player to arrive at the table. The cards shall be spread in horizontal fan shaped columns by deck according to suit and in sequence and include the one joker.
(c) After the first player is afforded an opportunity to visually inspect the cards, the cards shall be turned face down on the table, mixed thoroughly by a washing of the cards and stacked. Once the cards have been stacked, the cards shall be shuffled in accordance with § 670a.5 (relating to shuffle and cut of the cards; procedures for determining the starting position for dealing cards).
(d) If an automated card shuffling device is utilized and two decks of cards are received at the table, each deck of cards shall be spread for inspection, mixed, stacked and shuffled in accordance with subsections (a)—(c).
(e) If the decks of cards received at the table are preinspected and preshuffled in accordance with § 603a.16(u) or (v) (relating to cards; receipt, storage, inspection and removal from use), subsections (a)-(d) do not apply.

## § 670a.5. Shuffle and cut of the cards; procedures for determining the starting position for dealing cards.

(a) Immediately prior to commencement of play, unless the cards were preshuffled in accordance with $\S 603 \mathrm{a} .16(\mathrm{u})$ or (v) (relating to cards; receipt, storage, inspection and removal from use), after each round of play has been completed or when directed by the floorperson or above, the dealer shall shuffle the cards, either manually or by use of an automated card shuffling device, so that the cards are randomly intermixed. Upon completion of the shuffle, the dealer or device shall place the deck of cards in a single stack. The certificate holder may use an automated card shuffling device which, upon completion of the shuffling of the cards, inserts the stack of cards directly into a dealing shoe.
(b) After the cards have been shuffled and stacked, the dealer shall:
(1) If the cards were shuffled using an automated card shuffling device, determine the starting position in accordance with subsection (i), then deal the cards in accordance with § 670a.8, § 670a. 9 or § 670a. 10 (relating
to procedures for dealing the cards from a manual dealing shoe; procedures for dealing the cards from the hand; and procedures for dealing the cards from an automated dealing shoe).
(2) If the cards were shuffled manually, cut the cards in accordance with the procedures in subsections (c)-(e).
(c) Upon completion of a manual shuffle, the dealer shall place the stack of cards on top of one of the cover cards. The dealer shall offer the stack of cards to be cut, with the backs facing away from the dealer, to the player determined under subsection (d). If no player accepts the cut, the dealer shall cut the cards.
(d) The cut of the cards shall be offered to players in the following order:
(1) The first player arriving at the table, if the game is just beginning.
(2) The player at the farthest position to the right of the dealer. If this player refuses, the offer to cut the cards shall rotate to each player in a counterclockwise manner.
(e) The player or dealer making the cut shall place the second cover card in the stack at least ten cards from the top or the bottom of the deck. Once the second cover card has been inserted, the dealer shall take the second cover card and all the cards on top of the second cover card and place them on the bottom of the stack. The dealer shall then remove the first cover card and place it on the bottom of the stack. The dealer shall remove one of the cover cards and either place it in the discard rack or use it as an additional cover card to be inserted four cards from the bottom of the deck. The dealer shall then determine the starting position in accordance with subsection (i) and deal the cards in accordance with $\S 670 \mathrm{a} .8, \S 670 \mathrm{a} .9$ or § 670a. 10 .
(f) After the cards have been cut and before the cards have been dealt, a floorperson or above may require the cards to be recut if the floorperson determines that the cut was performed improperly or in any way that might affect the integrity or fairness of the game. If a recut is required, the cards shall be recut either by the player who last cut the cards, or by the next person entitled to cut the cards, as determined under subsection (d).
(g) If there is no gaming activity at a Six-Card Fortune Pai Gow Poker table which is open for gaming, the cards shall be removed from the dealing shoe and discard rack and spread out on the table face down unless a player requests that the cards be spread face up on the table. After the first player arriving at the table is afforded an opportunity to visually inspect the cards:
(1) If there is no automated shuffling device in use, the cards shall be mixed thoroughly by a washing of the cards, stacked, then shuffled and cut in accordance with this section.
(2) If an automated shuffling device is in use, the cards shall be stacked and placed into the automated shuffling device to be shuffled. The deck of cards already in the shuffler shall then be removed. Unless a player requests otherwise, the deck of cards removed from the shuffler does not need to be spread for inspection and reshuffled prior to being dealt, if the automated card shuffling device stores a single deck of shuffled cards inside the shuffler in a secure manner.
(h) A certificate holder may utilize a dealing shoe or other device that automatically reshuffles and counts the cards provided that the device is submitted to the Bureau of Gaming Laboratory Operations and approved in ac-
cordance with § 461a. 4 (relating to submission for testing and approval) prior to its use in the licensed facility. If a certificate holder is utilizing the approved device, subsections (b)-(g) do not apply.
(i) To determine the starting position for the dealing of cards, the certificate holder shall use one of the following:
(1) A Pai Gow Poker shaker in accordance with the following procedures:
(i) The dealer shall shake the Pai Gow Poker shaker at least three times to cause a random mixture of the dice.
(ii) The dealer shall then remove the lid covering the Pai Gow Poker shaker and place the uncovered shaker on the designated area of the table layout. The dealer shall then total the dice and announce the total.
(iii) To determine the starting position, the dealer shall count each betting position in order, regardless of whether there is a wager at the betting position, beginning with the dealer as number one and continuing around the table in a counterclockwise manner, until the count matches the total of the three dice.
(iv) After the dealing procedures required under § 670a.8, § 670a. 9 or § 670a. 10 have been completed, the dealer shall place the cover on the Pai Gow Poker shaker and shake the shaker once. The Pai Gow Poker shaker shall then be placed to the right of the dealer.
(2) A computerized random number generator to select and display a number from 1 to 7 . To determine the starting position, the dealer shall count each betting position in order, regardless of whether there is a wager at the betting position, beginning with the dealer as number one and continuing around the table in a counterclockwise manner until the count matches the number displayed by the random number generator.
(j) After the starting position for a round of play has been determined, a certificate holder may mark that position with an additional cover card, flat button or similar object.

## § 670a.6. Six-Card Fortune Pai Gow Poker rankings.

(a) The rank of the cards used in Six-Card Fortune Pai Gow Poker, in order of highest to lowest, shall be: ace, king, queen, jack, $10,9,8,7,6,5,4,3$ and 2 . Notwithstanding the foregoing, an ace may be used to complete a straight flush or a straight formed with a $2,3,4$ and 5 but may not be combined with any other sequence of cards (for example: queen, king, ace, 2 and 3). The joker shall be used and ranked as an ace or may be used as any card to complete a straight or a flush.
(b) The permissible five-card high hands at the game of Six-Card Fortune Pai Gow Poker, in order of highest to lowest rank, shall be:
(1) Five aces consisting of four aces and a joker.
(2) A royal flush consisting of an ace, king, queen, jack and 10 of the same suit or a king, queen, jack and 10 of the same suit and a joker.
(3) A straight flush consisting of five cards of the same suit in consecutive ranking, with ace, 2, 3, 4 and 5 being the highest ranking straight flush; king, queen, jack, 10 and 9 being the second highest ranking straight flush; and 2, 3, 4, 5 and 6 being the lowest ranking straight flush.
(4) A four-of-a-kind consisting of four cards of the same rank, with four aces being the highest ranking four-of-akind and four 2 s being the lowest ranking four-of-a-kind.
(5) A full house consisting of a three-of-a-kind and a pair, with three aces and two kings being the highest ranking full house and three 2 s and two 3 s being the lowest ranking full house.
(6) A flush consisting of five cards of the same suit. When comparing two flushes, the hand which contains the highest ranking card, as provided in subsection (a), which is not in the other hand, shall be considered the higher ranking hand.
(7) A straight consisting of five cards of consecutive rank, regardless of suit, with an ace, king, queen, jack and 10 being the highest ranking straight; an ace, 2, 3, 4 and 5 being the second highest ranking straight; and a 2 , $3,4,5$ and 6 being the lowest ranking straight.
(8) A three-of-a-kind containing three cards of the same rank, with three aces being the highest ranking three-of-a-kind and three 2 s being the lowest ranking three-of-akind.
(9) Two pair containing two pairs, with two aces and two kings being the highest ranking two pair hand and two 3 s and two 2 s being the lowest ranking two pair hand.
(10) A pair consisting of two cards of the same rank, with two aces being the highest ranking pair and two 2 s being the lowest ranking pair.
(c) When comparing two high hands or two low hands that are of identical hand rank under subsection (b), or contain none of the hands listed in subsection (b), the hand that contains the highest ranking card under subsection (a), which is not in the other hand, shall be considered the higher ranking hand. If a player uses a joker as the low hand, the player's hand shall be considered the higher ranking hand. If the two hands are of identical rank after the application of this section, the dealer's hand shall be considered the higher ranking hand.

## § 670a.7. Wagers.

(a) Wagers at Six-Card Fortune Pai Gow Poker shall be made by placing value chips, plaques or other Boardapproved wagering instruments on the appropriate areas of the Six-Card Fortune Pai Gow Poker layout. Verbal wagers accompanied by cash may not be accepted.
(b) Only players who are seated at a Six-Card Fortune Pai Gow Poker table may wager at the game. Once a player has placed a wager and received cards, that player shall remain seated until the completion of the round of play. If a player leaves the table during a round of play, any wagers made by the player may be considered abandoned and may be treated as losing wagers.
(c) Except the Double Down Wager, all wagers at Six-Card Fortune Pai Gow Poker shall be placed prior to the dealer announcing "no more bets" in accordance with the dealing procedures in § 670a.8, § 670a.9 or § 670a. 10 (relating to procedures for dealing the cards from a manual dealing shoe; procedures for dealing the cards from the hand; and procedures for dealing the cards from an automated dealing shoe). Except the Double Down Wager, a wager may not be made, increased or withdrawn after the dealer has announced "no more bets."
(d) To participate in a round of play and compete against the dealer's high and low hands, a player shall place a Six-Card Fortune Pai Gow Poker Wager.
(e) If specified in its Rules Submission under § 601a.2 (relating to table games Rules Submissions), a certificate holder may offer to each player who placed a Six-Card

Fortune Pai Gow Poker Wager, in accordance with subsection (d), the option of placing the following additional wagers:
(1) A Double Down Wager equal to the Six-Card Fortune Pai Gow Poker Wager that both the player's high and low hands will beat the dealer's high and low hands.
(2) A Fortune Bonus Wager that the six cards dealt to the player will form a five-card Poker hand with a rank of a three-of-a-kind or better as described in § 670a.6(b) (relating to Six-Card Fortune Pai Gow Poker rankings).
(3) An Insurance Wager that the six cards dealt to the player will form a five-card Poker hand with a rank of a king-high or less.
(4) A Progressive Payout Wager that the six cards dealt to the player will form a five-card Poker hand with a rank of a straight or better as described in § 670a.6(b).
(f) If specified in its Rules Submission under § 601a.2, a certificate holder may permit a player to wager on two adjacent betting areas at a Six-Card Fortune Pai Gow Poker table. If a certificate holder permits a player to wager on adjacent betting areas, the cards dealt to each betting area shall be played separately. If the two wagers are not equal, the player shall rank and set the hand with the larger wager before ranking and setting the other hand. If the amounts wagered are equal, each hand shall be played separately in a counterclockwise rotation with the first hand being ranked and set before the player proceeds to rank and set the second hand. Once a hand has been ranked, set and placed face down on the layout, the hands may not be changed.

## § 670a.8. Procedures for dealing the cards from a manual dealing shoe.

(a) If a manual dealing shoe is used, the dealing shoe must be located on the table in a location approved by the Bureau of Casino Compliance in accordance with $\S 601 \mathrm{a} .10(\mathrm{~g})$ (relating to approval of table game layouts, signage and equipment). Once the procedures required under § 670a. 5 (relating to shuffle and cut of the cards; procedures for determining the starting position for dealing cards) have been completed, the stacked deck of cards shall be placed in the dealing shoe either by the dealer or by an automated card shuffling device.
(b) Prior to dealing any cards, the dealer shall announce "no more bets" and:
(1) If the Fortune Bonus Wager is being offered and a player makes a Qualifying Fortune Bonus Wager, the dealer shall place an Envy lammer next to that player's wager.
(2) If the Progressive Payout Wager is being offered, the dealer shall use the progressive table game system to prevent the placement of any additional Progressive Payout Wagers. If any Progressive Payout Wagers have been made, the dealer shall collect the wagers and, on the layout in front of the table inventory container, verify that the number of value chips wagered equals the number of Progressive Payout Wagers accepted by the progressive table game system. The dealer shall then place the value chips into the table inventory container.
(c) The dealer shall determine the starting position for dealing the cards using one of the procedures authorized under § 670a.5(i).
(d) The dealer shall then deal the first card to the starting position as determined in subsection (c) and, continuing around the table in a clockwise manner, deal one card at a time to all other positions, regardless of
whether there is a wager at the position, and the dealer, until each position and the dealer has six cards. Each card dealt shall be removed from the dealing shoe with the hand of the dealer that is closest to the dealing shoe and placed face down on the appropriate area of the layout with the opposite hand.
(e) After 6 cards have been dealt to each position and the dealer, the dealer shall remove the stub from the manual dealing shoe and determine whether 11 cards are left by spreading them face down on the layout. The cards that remain may not be exposed to anyone and shall be placed in the discard rack.
(f) If more or less than 11 cards remain, the dealer shall determine if the cards were misdealt. If the cards were misdealt (a player position or the dealer has more or less than six cards), all hands shall be void and all wagers shall be returned to the players. If the cards were not misdealt, all hands shall be void, all wagers shall be returned to the players and the entire deck of cards shall be removed from the table.
(g) If the dealer determines the cards were dealt properly, the dealer shall collect any stacks dealt to a position where there was no wager and place them in the discard rack without exposing the cards.
§ 670a.9. Procedures for dealing the cards from the hand.
(a) If the cards are dealt from the dealer's hand, the following requirements shall be observed:
(1) An automated shuffling device shall be used to shuffle the cards.
(2) After the procedures required under § 670a.5 (relating to shuffle and cut of the cards; procedures for determining the starting position for dealing cards) have been completed, the dealer shall place the deck of cards in either hand. After the dealer has chosen the hand in which to hold the cards, the dealer shall continue to use that hand when holding the cards during that round of play. The cards held by the dealer shall be kept over the table inventory container and in front of the dealer at all times.
(3) Prior to dealing any cards, the dealer shall announce "no more bets" and:
(i) If the Fortune Bonus Wager is being offered and a player makes a Qualifying Fortune Bonus Wager, the dealer shall place an Envy lammer next to that player's wager.
(ii) If the Progressive Payout Wager is being offered, the dealer shall use the progressive table game system to prevent the placement of any additional Progressive Payout Wagers. If any Progressive Payout Wagers have been made, the dealer shall collect the wagers and, on the layout in front of the table inventory container, verify that the number of value chips wagered equals the number of Progressive Payout Wagers accepted by the progressive table game system. The dealer shall then place the value chips into the table inventory container.
(b) The dealer shall deal each card by holding the deck of cards in the chosen hand and use the other hand to remove the top card of the deck and place it face down on the appropriate area of the layout. The dealer shall then determine the starting position for dealing the cards using one of the procedures authorized under § 670a.5(i).
(c) The dealer shall then deal the first card to the starting position as determined in subsection (b) and, continuing around the table in a clockwise manner, deal
one card at a time to all other positions, regardless of whether there is a wager at the position, and the dealer, until each position and the dealer has six cards.
(d) After 6 cards have been dealt to each position and the dealer, the dealer shall determine whether 11 cards are left by spreading them face down on the layout. The 11 cards that remain may not be exposed to anyone and shall be placed in the discard rack.
(e) If more or less than 11 cards remain, the dealer shall determine if the cards were misdealt. If the cards were misdealt (a player position or the dealer has more or less than six cards), all hands shall be void and all wagers shall be returned to the players. If the cards were not misdealt, all hands shall be void, all wagers shall be returned to the players and the entire deck of cards shall be removed from the table.
(f) If the dealer determines the cards were dealt properly, the dealer shall collect any stacks dealt to a position where there was no wager and place them in the discard rack without exposing the cards.
§ 670a.10. Procedures for dealing the cards from an automated dealing shoe.
(a) If the cards are dealt from an automated dealing shoe, the following requirements shall be observed:
(1) After the procedures under § 670a. 5 (relating to shuffle and cut of the cards; procedures for determining the starting position for dealing cards) have been completed, the cards shall be placed in the automated dealing shoe.
(2) Prior to the shoe dispensing any stacks of cards, the dealer shall announce "no more bets" and:
(i) If the Fortune Bonus Wager is being offered and a player makes a Qualifying Fortune Bonus Wager, the dealer shall place an Envy lammer next to that player's wager.
(ii) If the Progressive Payout Wager is being offered, the dealer shall use the progressive table game system to prevent the placement of any additional Progressive Payout Wagers. If any Progressive Payout Wagers have been made, the dealer shall collect the wagers and, on the layout in front of the table inventory container, verify that the number of value chips wagered equals the number of Progressive Payout Wagers accepted by the progressive table game system. The dealer shall then place the value chips into the table inventory container.
(b) The dealer shall determine the starting position for delivering the stacks of cards using one of the procedures authorized under § 670a.5(i).
(c) After the starting position for delivering the cards has been determined, the dealer shall deliver the first stack of cards dispensed by the automated dealing shoe face down to that position. As the remaining stacks are dispensed to the dealer by the automated dealing shoe, the dealer shall, moving clockwise around the table, deliver a stack face down to each of the other positions, regardless of whether there is a wager at the position, and the dealer.
(d) After 6 cards have been dispensed and delivered to each position and the dealer, the dealer shall remove the remaining cards from the shoe and determine whether 11 cards are left by spreading them face down on the layout. The 11 cards that remain may not be exposed to anyone and shall be placed in the discard rack.
(e) If more or less than 11 cards remain, the dealer shall determine if the cards were misdealt. If the cards
were misdealt (a player position or the dealer has more or less than six cards), all hands shall be void and all wagers shall be returned to the players. If the cards were not misdealt, all hands shall be void, all wagers shall be returned to the players and the entire deck of cards shall be removed from the table.
(f) If the dealer determines the cards were dealt properly, the dealer shall collect any stacks dealt to a position where there was no wager and place them in the discard rack without exposing the cards.

## § 670a.11. Procedures for completion of each round of play.

(a) After the dealing procedures required under § 670a.8, § 670a. 9 or § 670a. 10 (relating to procedures for dealing the cards from a manual dealing shoe; procedures for dealing the cards from the hand; and procedures for dealing the cards from an automated dealing shoe) have been completed, each player shall examine his cards subject to the following limitations:
(1) Each player who wagers at a Six-Card Fortune Pai Gow Poker table shall be responsible for setting his own hands and no person other than the dealer and the player to whom the cards were dealt may touch the cards of that player. If a player requests assistance in the setting of his hands, the dealer shall inform the player of the manner in which the certificate holder requires the hands to be set.
(2) Each player shall keep his six cards in full view of the dealer at all times.
(3) Once each player has set a high and low hand and placed the two hands face down on the appropriate area of the layout, the player may not touch the cards again.
(b) Each player shall set his hands by arranging the cards into a high hand and a low hand. When setting the two hands, the five-card high hand must be equal to or higher in rank than the one-card low hand.
(c) After all players have examined their cards, the dealer shall offer each player the option to place an additional Double Down Wager equal to the player's Six-Card Fortune Pai Gow Poker Wager.
(d) After all players have set their hands and placed the cards on the table, the six cards of the dealer shall be turned over and the dealer shall arrange his cards into a high and low hand in accordance with the following requirements:
(1) The dealer may not break any sets as described in § 670a.6(b) (relating to Six-Card Fortune Pai Gow Poker rankings) to play a higher card in the dealer's low hand. Once the dealer has played the set, the dealer shall use the highest-ranking card in his low hand. Notwithstanding the following requirements:
(i) If the dealer has two three-of-a-kinds in his hand, the dealer shall play the lower ranking set as the three-of-a-kind and the higher one as a pair to play the higher card in the low hand.
(ii) If the dealer has three pairs, the dealer shall play the two lower ranking pairs as the high hand and the highest ranking card of the third pair as the low hand.
(2) If the dealer has a Six-Card Fortune straight, Six-Card Fortune flush or a Six-Card Fortune straight flush, the dealer shall play the lowest possible straight, flush or straight flush and place the highest ranking card in the low hand.
(3) If the dealer has both a straight and a flush, the dealer shall set the flush as the dealer's high hand.
(4) If the dealer has both a straight and a straight flush, the dealer shall set the straight flush as the dealer's high hand.
(5) If the dealer has both a Six-Card Fortune flush and a straight flush, the dealer shall play the straight flush as the high hand and the remaining card as the dealer's low hand.
(6) If the dealer does not have pairs, straights or flushes, the dealer shall play the highest ranking card, in accordance with § 670a.6(a), in the dealer's high hand, the second highest ranking card as the dealer's low hand and the remaining four cards in the dealer's high hand.
(e) After the dealer has set a high hand and a low hand, the dealer shall reveal both hands of each player, beginning with the player farthest to the dealer's right and continuing around the table in a counterclockwise direction. The dealer shall compare the high and low hand of each player to the high and low hand of the dealer and shall announce if the Six-Card Fortune Pai Gow Poker Wager of that player wins, loses or is a tie.
(f) A Six-Card Fortune Pai Gow Poker Wager shall:
(1) Lose and will immediately be collected if:
(i) The high hand of the player is lower in rank than the high hand of the dealer and the low hand of the player is lower in rank than the low hand of the dealer.
(ii) The high hand of the player is lower in rank than the high hand of the dealer and the low hand of the player is identical in rank to the low hand of the dealer.
(iii) The high hand of the player is identical in rank to the high hand of the dealer and the low hand of the player is lower in rank than the low hand of the dealer.
(iv) The high and low hands of the player are identical in rank to the high and low hands of the dealer.
(v) The high hand of the player was not set so as to rank equal to or higher than the low hand of that player.
(2) Tie and will be returned to the player if:
(i) The high hand of the player is higher in rank than the high hand of the dealer, but the low hand of the player is lower in rank than the low hand of the dealer.
(ii) The high hand of the player is lower in rank than the high hand of the dealer, but the low hand of the player is a joker or is higher in rank than the low hand of the dealer.
(3) Win if the high hand of the player is higher in rank than the high hand of the dealer and the low hand of the player is a joker or is higher in rank than the low hand of the dealer. The dealer shall pay the winning Six-Card Fortune Pai Gow Poker Wager in accordance with the payout odds in § 670a.12(a) (relating to payout odds; Envy Bonus; rate of progression).
(g) After settling the player's Six-Card Fortune Pai Gow Poker Wager, the dealer shall settle the player's optional Double Down Wager as follows:
(1) If the dealer's hand contains a pair of eights or better, as described in § 670a.6(b), the Double Down Wager shall win, lose or tie in accordance with subsection (f).
(2) If the dealer's hand does not contain a pair of eights or better, the Double Down Wager shall be returned to the player.
(h) If a player has placed a Fortune Bonus, Insurance or Progressive Payout Wager, the dealer shall rearrange the six cards of any player who placed an optional wager to form the highest ranking hand. If any player at the table has placed a Fortune Bonus or Progressive Payout Wager, the dealer shall rearrange the cards of all players regardless of whether the player placed a Fortune Bonus or Progressive Payout Wager. After rearranging the player's six cards, the dealer shall:
(1) Settle the player's Fortune Bonus Wager as follows:
(i) If a player:
(A) Placed a Six-Card Fortune Pai Gow Poker Wager but does not have a three-of-a-kind or higher, as described in § 670a.6(b), the dealer shall collect the Fortune Bonus Wager.
(B) Placed a Six-Card Fortune Pai Gow Poker Wager and has a three-of-a-kind or higher, the dealer shall pay the winning Fortune Bonus Wager in accordance with § 670a.12(b). If the player has an Envy Bonus Qualifying Hand, the dealer shall verbally acknowledge the Envy Bonus Qualifying Hand and leave the cards of the player face up on the table.
(C) Did not place a Fortune Bonus Wager but has an Envy Bonus Qualifying Hand, the dealer shall verbally acknowledge the Envy Bonus Qualifying Hand and leave the cards of the player face up on the table.
(ii) After all Fortune Bonus Wagers have been settled, if any player is the holder of an Envy Bonus Qualifying Hand, the dealer shall pay an Envy Bonus in accordance with § 670a.12(b) to each player who has an Envy lammer at the player's betting position. Players are entitled to multiple Envy Bonuses when another player at the same Six-Card Fortune Pai Gow Poker table is the holder of an Envy Bonus Qualifying Hand. A player is not entitled to an Envy Bonus for his own hand or the hand of the dealer.
(2) Settle the player's Insurance Wager. If a player has a hand ranked:
(i) Better than a king-high, the dealer shall collect the Insurance Wager.
(ii) A king-high or less, the dealer shall pay the winning Insurance Wager in accordance with § 670a.12(c).
(3) Settle the player's Progressive Payout Wager as follows:
(i) If a player:
(A) Placed a Progressive Payout Wager but does not have a straight or better, as described in $\S 670$ a.6(b), the dealer shall collect the cards of the player and place them in the discard rack.
(B) Placed a Progressive Payout Wager and has a straight or better, the dealer shall:
(I) Verify that the hand is a winning hand.
(II) Verify that the appropriate light on the progressive table game system has been illuminated.
(III) Have a floorperson or above validate the progressive payout in accordance with the certificate holder's approved internal control procedures.
(IV) Pay the winning Progressive Payout Wager in accordance with the payout odds in § 670a.12(d)(1). If a player has won a progressive payout that is a percentage of the progressive meter, the progressive payout may not be paid from the table inventory container. If a player has
won a progressive payout that is not being paid from the table inventory, the cards of that player shall remain on the table until the necessary documentation has been completed.
(C) Has an Envy Bonus Qualifying Hand and any player at the table placed a Progressive Payout Wager, the dealer shall verbally acknowledge the Envy Bonus Qualifying Hand and leave the cards of the player face up on the table.
(ii) After all Progressive Payout Wagers have been settled, if any player is the holder of an Envy Bonus Qualifying Hand, the dealer shall pay an Envy Bonus in accordance with § 670a.12(d)(4) to each player who placed a progressive payout wager. Players are entitled to multiple Envy Bonuses when another player at the same Six-Card Fortune Pai Gow Poker table is the holder of an Envy Bonus Qualifying Hand. A player is not entitled to an Envy Bonus for his own hand or the hand of the dealer.
(i) The dealer shall settle all of the player's optional wagers before placing the player's cards in the discard rack.
(j) All cards removed from the table shall be placed in the discard rack in a manner that permits the reconstruction of each hand in the event of a question or dispute.

## § 670a.12. Payout odds; Envy Bonus; rate of pro-

 gression.(a) A certificate holder shall pay each winning Six-Card Fortune Pai Gow Poker and Double Down Wager at odds of 1 to 1 .
(b) The certificate holder shall pay out winning Fortune Bonus Wagers and Envy Bonus payouts at the odds and amounts in the following paytables:
(1) Fortune Bonus Payout.
Hand Payout

Five aces
Royal flush
1,000 to 1
Straight flush 250 to 1
100 to 1
Four-of-a-kind $\quad 50$ to 1
Full house 15 to 1
Flush
10 to 1
Straight
8 to 1
Three-of-a-kind 5 to 1
(2) Envy Bonus Payouts. Envy Bonus Payouts shall be made according to the following payouts for Envy Bonus Qualifying Hands based upon the amount of the Fortune Bonus Wager placed by the player receiving the Envy Bonus:

|  | \$1 Fortune Bonus Wager |  |
| :--- | ---: | ---: |
| Hand |  | Envy Bonus |
| Five aces |  | $\$ 1,000$ |
| Royal flush |  | $\$ 200$ |
| Straight flush |  | $\$ 50$ |
| Four-of-a-kind |  | $\$ 15$ |
| Full house |  |  |
|  | $\$ 5$ Fortune Bonus Wager |  |
| Hand |  | Envy Bonus |
| Five aces |  | $\$ 5,000$ |
| Royal flush | $\$ 1,000$ |  |
| Straight flush | $\$ 250$ |  |
| Four-of-a-kind | $\$ 75$ |  |
| Full house | $\$ 25$ |  |

(c) The certificate holder shall pay out winning Insurance Wagers at the odds and amounts in the following paytable:

| Hand | Payout |
| :--- | ---: |
| Eight-high | 100 to 1 |
| Nine-high | 30 to 1 |
| Ten-high | 10 to 1 |
| Jack-high | 7 to 1 |
| Queen-high | 4 to 1 |
| King-high | 3 to 1 |

(d) The certificate holder shall pay out winning Progressive Payout Wagers and Envy Bonus Payouts in accordance with the following:
(1) The certificate holder shall pay out winning Progressive Payout Wagers at the odds in the following paytable:

Hand
Five aces
Royal flush
Straight flush
Four-of-a-kind
Full house
Flush
Straight
Seed amount
Increment rate
(2) The initial and reset amount must be in the certificate holder's Rules Submission filed in accordance with § 601a.2 (relating to table games Rules Submissions) and be at least $\$ 5,000$.
(3) Winning Progressive Payout Wagers shall be paid the amount on the meter when it is the player's turn to be paid in accordance with § 670a.11(h)(3) (relating to procedures for completion of each round of play) irrespective of the amount that was on the meter when the player placed the wager or when the dealer dealt the player's cards.
(4) Envy Bonus Payouts shall be made according to the following payouts for Envy Bonus Qualifying Hands based upon the amount of the Progressive Payout Wager placed by the player receiving the Envy Bonus:

## \$1 Progressive Payout Wager

| Hand | Envy |
| :--- | ---: |
| Five aces | $\$ 100$ |
| Royal flush | $\$ 50$ |
| Straight flush | $\$ 10$ |
| Four-of-a-kind | $\$ 5$ |

Four-of-a-kind \$5
\$5 Progressive Payout Wager
Hand
Envy Bonus
Five aces $\$ 500$
Royal flush \$250
Straight flush \$50
Four-of-a-kind
\$25

## § 670a.13. Irregularities; invalid roll of dice.

(a) If the dealer uncovers the Pai Gow Poker shaker and all three dice do not land flat on the bottom of the shaker, the dealer shall call a "no roll" and reshake the dice.
(b) If the dealer uncovers the Pai Gow Poker shaker and a die or dice fall out of the shaker, the dealer shall call a "no roll" and reshake the dice.
(c) If the dealer incorrectly totals the dice and deals the first card to the wrong position, all hands shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(d) If the dealer exposes any of the cards dealt to a player, the player may void the hand. The player shall make the decision to either play out the hand or to void the hand without looking at the unexposed cards.
(e) If a card or cards in the dealer's hand are exposed, all hands shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(f) A card that is found face up in the shoe or the deck while the cards are being dealt may not be used in that round of play and shall be placed in the discard rack. If more than one card is found face up in the shoe or the deck during the dealing of the cards, all hands shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(g) A card drawn in error without its face being exposed shall be used as though it were the next card from the shoe.
(h) If any player or the dealer is dealt an incorrect number of cards, all hands shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(i) If the dealer does not set his hands in accordance with § 670a.11(d) (relating to procedures for completion of each round of play), the hands shall be reset in accordance with § 670a.11(d) and the round of play shall be completed.
(j) If a card is exposed while the dealer is dealing the seven stacks in accordance with § 670a. 10 (relating to procedures for dealing the cards from an automated dealing shoe), all wagers shall be returned to the players and the cards shall be reshuffled.
(k) If any player position or the dealer is dealt an incorrect number of cards, all hand shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(l) If an automated card shuffling device is being used and the device jams, stops shuffling during a shuffle or fails to complete a shuffle cycle, the cards shall be reshuffled.
(m) If an automated dealing shoe is being used and the device jams, stops dealing cards or fails to deal all cards during a round of play, the round of play shall be void, all wagers shall be returned to the players and the cards shall be removed from the device and reshuffled with any cards already dealt.
(n) If an automated shuffling device or automated dealing shoe malfunctions and cannot be used, the automated card shuffling device or automated dealing shoe must be covered or have a sign indicating that the automated shuffling device or automated dealing shoe is out of order placed on the device before any other method of shuffling or dealing may be utilized at that table.

## CHAPTER 671a. LUNAR POKER

## Sec.

671a.1. Definitions.
671a.2. Lunar Poker table physical characteristics.
671a.3. Cards; number of decks.
671a.4. Opening of the table for gaming
671a.5. Shuffle and cut of the cards.
671a.6. Lunar Poker rankings.
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671a.9. Procedure for dealing the cards from the hand.

671a.10. Procedures for dealing the cards from an automated dealing shoe.
671a.11. Procedures for completion of each round of play.
671a.12. Payout odds.
671a.13. Irregularities.

## § 671a.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

Bet Wager-An additional wager that a player shall make if the player opts to remain in competition against the dealer after the player reviews his hand.
Draw-When a player exchanges between two and five of the cards held in his hand for an equal number of new cards from the deck or buys a sixth card.

Fold-The withdraw of a player from a round of play by refusing to make a Bet Wager.

Options fee-An additional payment made by a player to draw an additional card or cards.

Super Wager-An additional wager that a player shall make to play against a posted paytable.
§ 671a.2. Lunar Poker table physical characteristics.
(a) Lunar Poker shall be played at a table having betting positions for no more than five players on one side of the table and a place for the dealer on the opposite side of the table.
(b) The layout for a Lunar Poker table shall be submitted to the Bureau of Gaming Operations and approved in accordance with § 601a.10(a) (relating to approval of table game layouts, signage and equipment) and contain, at a minimum:
(1) The name or logo of the certificate holder.
(2) Separate betting areas designated for the placement of the Ante and Bet Wagers for each player.
(3) A separate betting area designated for the placement of the Super Wager for each player and betting areas for the placement of the Super Wager on the dealer's hand and on any other player's hand for each player.
(4) A separate area designated for the placement of the player's Options fees for each player. The Options area must be inscribed with the following:
(i) Exchange 2-5 cards.
(ii) Buy a 6th Card.
(5) Inscriptions that advise patrons of the payout odds or amounts for all permissible wagers offered by the certificate holder. If payout odds or amounts are not inscribed on the layout, a sign identifying the payout odds or amounts for all permissible wagers shall be posted at each Lunar Poker table.
(6) Inscriptions that advise patrons of the following:
(i) Dealer plays with an ace-king or higher.
(ii) Instant payout for a royal flush or straight flush on the first five cards dealt to the player.
(7) If the information in paragraph (6) is not on the layout, a sign which sets forth the required information shall be posted at each Lunar Poker table.
(c) Each Lunar Poker table must have a drop box and a tip box attached on the same side of the gaming table as, but on opposite sides of, the dealer, as approved by the Bureau of Casino Compliance in accordance with
§ 601a.10(g). The Bureau of Casino Compliance may approve an alternative location for the tip box when a card shuffling device or other table game equipment prevents the placement of the drop box and tip box on the same side of the gaming table as, but on opposite sides of, the dealer.
(d) Each Lunar Poker table must have a discard rack securely attached to the top of the dealer's side of the table.

## § 671a.3. Cards; number of decks.

(a) Except as provided in subsection (b), Lunar Poker shall be played with one deck of cards that are identical in appearance and one cover card.
(b) If an automated card shuffling device is utilized, Lunar Poker may be played with two decks of cards in accordance with the following requirements:
(1) The cards in each deck must be of the same design. The backs of the cards in one deck must be of a different color than the cards included in the other deck.
(2) One deck of cards shall be shuffled and stored in the automated card shuffling device while the other deck is being used to play the game.
(3) Both decks are continuously alternated in and out of play, with each deck being used for every other round of play.
(4) The cards from only one deck are placed in the discard rack at any given time.
(c) The decks of cards used in Lunar Poker shall be changed at least every:
(1) Four hours if the cards are dealt by hand.
(2) Eight hours if the cards are dealt from a manual or automated dealing shoe.

## § 671a.4. Opening of the table for gaming.

(a) After receiving one or more decks of cards at the table, the dealer shall inspect the cards for any defects. The floorperson assigned to the table shall verify the inspection.
(b) After the cards are inspected, the cards shall be spread out face up on the table for visual inspection by the first player to arrive at the table. The cards shall be spread in horizontal fan shaped columns by deck according to suit and in sequence.
(c) After the first player arriving at the table has been afforded an opportunity to visually inspect the cards, the cards shall be turned face down on the table, mixed thoroughly by a washing of the cards and stacked. Once the cards have been stacked, the cards shall be shuffled in accordance with § 671a.5 (relating to shuffle and cut of the cards).
(d) If an automated card shuffling device is utilized and two decks of cards are received at the table, each deck of cards shall be spread for inspection, mixed, stacked and shuffled in accordance with subsections (a)-(c).
(e) If the decks of cards received at the table are preinspected and preshuffled in accordance with § 603a.16(u) or (v) (relating to cards; receipt, storage, inspection and removal from use), subsections (a)-(d) do not apply.

## § 671a.5. Shuffle and cut of the cards.

(a) Immediately prior to commencement of play, unless the cards were preshuffled in accordance with
§ 603a.16(u) or (v) (relating to cards; receipt, storage, inspection and removal from use), after each round of play has been completed or when directed by a floorperson or above, the dealer shall shuffle the cards, either manually or by use of an automated card shuffling device, so that the cards are randomly intermixed. Upon completion of the shuffle, the dealer or automated shuffling device shall place the deck of cards in a single stack. The certificate holder may use an automated card shuffling device which, upon completion of the shuffling of the cards, inserts the stack of cards directly into a dealing shoe.
(b) If an automated card shuffling device is being used, which counts the number of cards in the deck after the completion of each shuffle and indicates whether 52 cards are present, and the device reveals that an incorrect number of cards are present, the deck shall be removed from the table.
(c) After the cards have been shuffled and stacked, the dealer shall:
(1) If the cards were shuffled using an automated card shuffling device, deal the cards in accordance with § 671a.8, § 671a. 9 or § 671a. 10 (relating to procedure for dealing the cards from a manual dealing shoe; procedure for dealing the cards from the hand; and procedures for dealing the cards from an automated dealing shoe).
(2) If the cards were shuffled manually or were preshuffled, cut the cards in accordance with the procedures in subsection (d).
(d) If a cut of the cards is required, the dealer shall place the cover card in the stack at least ten cards in from the top of the stack. Once the cover card has been inserted, the dealer shall take all cards above the cover card and the cover card and place them on the bottom of the stack. The stack of cards shall then be inserted into the dealing shoe for commencement of play.
(e) After the cards have been cut and before any cards have been dealt, a floorperson or above may require the cards to be recut if the floorperson determines that the cut was performed improperly or in any way that might affect the integrity or fairness of the game.
(f) If there is no gaming activity at a Lunar Poker table which is open for gaming, the cards shall be removed from the dealing shoe and discard rack and spread out on the table face down unless a player requests that the cards be spread face up on the table. After the first player arriving at the table is afforded an opportunity to visually inspect the cards, the procedures in § 671a.4(c) (relating to opening of the table for gaming) and this section shall be completed.
(g) A certificate holder may utilize a dealing shoe or other device that automatically reshuffles and counts the cards provided that the device is submitted and approved in accordance with § 461a. 4 (relating to submission for testing and approval) prior to its use in the licensed facility. If a certificate holder is utilizing the approved device, subsections (d)-(f) do not apply.

## § 671a.6. Lunar Poker rankings.

(a) The rank of the cards used in Lunar Poker, in order of highest to lowest rank, shall be: ace, king, queen, jack, $10,9,8,7,6,5,4,3$ and 2 . Notwithstanding the foregoing, an ace may be used to complete a straight flush or a straight with a $2,3,4$ and 5 but may not be combined with any other sequence of cards (for example: queen, king, ace, 2 and 3). All suits shall be equal in rank.
(b) The permissible Poker hands in the game of Lunar Poker, in order of highest to lowest rank, shall be:
(1) A royal flush, which is a hand consisting of an ace, king, queen, jack and 10 of the same suit.
(2) A straight flush, which is a hand, other than a royal flush, consisting of five cards of the same suit in consecutive ranking, with king, queen, jack, 10 and 9 being the highest ranking straight flush and ace, 2, 3, 4 and 5 being the lowest ranking straight flush.
(3) A four-of-a-kind, which is a hand consisting of four cards of the same rank, with four aces being the highest ranking four-of-a-kind and four 2 s being the lowest ranking four-of-a-kind.
(4) A full house, which is a hand consisting of a three-of-a-kind and a pair, with three aces and two kings being the highest ranking full house and three 2 s and two 3s being the lowest ranking full house.
(5) A flush, which is a hand consisting of five cards of the same suit, not in consecutive order, with ace, king, queen, jack and 9 being the highest ranking flush and 2, $3,4,5$ and 7 being the lowest ranking flush.
(6) A straight, which is a hand consisting of five cards of more than one suit and of consecutive rank, with an ace, king, queen, jack and 10 being the highest ranking straight and an ace, 2, 3, 4 and 5 being the lowest ranking straight.
(7) A three-of-a-kind, which is a hand consisting of three cards of the same rank, with three aces being the highest ranking three-of-a-kind and three 2 s being the lowest ranking three-of-a-kind.
(8) Two pairs, which is a hand consisting of two pairs, with two aces and two kings being the highest ranking two pair and two 3 s and two 2 s being the lowest ranking two pair.
(9) A pair, which is a hand consisting of two cards of the same rank, with two aces being the highest ranking pair and two 2 s being the lowest ranking pair.
(10) An ace-king, which is a hand consisting of an ace and a king.
(c) When comparing two Poker hands that are of identical rank under subsection (b), or that contain none of the hands listed in subsection (b), the hand that contains the highest ranking card under subsection (a), which is not in the other hand, shall be considered the higher ranking hand. If the hands are of equal rank after the application of this section, the hands shall be considered a tie.
(d) For the Super Wager, the five-card Poker hands eligible for a payout are:
(1) A four-of-a-kind, which is a hand consisting of four cards of the same rank.
(2) A five picture cards, which is a hand consisting of five cards of any combination of only kings, queens or jacks.
(3) A full house, which is a hand consisting of a three-of-a-kind and a pair.
(4) A flush, which is a hand consisting of five cards of the same suit, not in consecutive order.
(5) A straight, which is a hand consisting of five cards of more than one suit and of consecutive rank.
(6) A three-of-a-kind, which is a hand consisting of three cards of the same rank, with three aces being the
highest ranking three-of-a-kind and three 2 s being the lowest ranking three-of-a-kind.
(7) An ace-king-queen, which is a hand consisting of an ace, king and queen in any suit.
(8) Same colored five, which is a hand consisting of five cards of the same color.

## § 671a.7. Wagers.

(a) Wagers at Lunar Poker shall be made by placing value chips, plaques or other Board-approved wagering instruments on the appropriate areas of the table layout. Verbal wagers accompanied by cash may not be accepted.
(b) Only players who are seated at a Lunar Poker table may wager at the game. Once a player has placed a wager and received cards, that player shall remain seated until the completion of the round of play. If a player leaves the table during a round of play, any wagers made by the player may be considered abandoned and may be treated as losing wagers.
(c) The following wagers may be placed in the game of Lunar Poker:
(1) A player shall compete against the dealer's five-card Poker hand by placing both an Ante Wager, then a Bet Wager in accordance with § 671a.11(b) or (d) (relating to procedures for completion of each round of play).
(2) In addition to the Ante and Bet Wagers, a player shall place a Super Wager on the player's hand equal to or greater than the player's Ante Wager to compete against a posted paytable.
(3) If specified in its Rules Submission under § 601a. 2 (relating to table games Rules Submissions), a certificate holder may offer to each player at a Lunar Poker table the option to make an additional Super Wager on the dealer's hand and any other player's hand. After placing an Ante Wager, a player may make the additional Super Wager by placing a value chip on the designated betting area prior to the dealer announcing "no more bets." The additional Super Wager on the dealer or other player's hand may be made in any amount equal to or greater than the table minimum and is not required to be equal to or greater than the player's Ante Wager.
(d) The Ante and Super Wagers shall be placed prior to the dealer announcing "no more bets" in accordance with the dealing procedures in § 671a.8, § 671a. 9 or § 671a. 10 (relating to procedure for dealing the cards from a manual dealing shoe; procedure for dealing the cards from the hand; and procedures for dealing the cards from an automated dealing shoe). Except as provided in § 671a.11(b) and (d), a wager may not be made, increased or withdrawn after the dealer has announced "no more bets."
(e) A player may not wager on more than one player position at a Lunar Poker table.
§ 671a.8. Procedure for dealing the cards from a
manual dealing shoe.
(a) If a manual dealing shoe is used, the dealing shoe must be located on the table in a location approved by the Bureau of Casino Compliance in accordance with $\S 601 \mathrm{a} .10(\mathrm{~g})$ (relating to approval of table game layouts, signage and equipment). Once the procedures required under § 671a. 5 (relating to shuffle and cut of the cards) have been completed, the stacked deck of cards shall be placed in the dealing shoe by the dealer or by the automated card shuffling device.
(b) The dealer shall announce "no more bets" and begin dealing the cards. Each card shall be removed from the dealing shoe with the hand of the dealer that is closest to the dealing shoe and placed face down on the appropriate area of the layout with the opposite hand.
(c) Starting with the player farthest to the dealer's left and continuing around the table in a clockwise manner, the dealer shall deal one card at a time face down to each player who placed an Ante Wager and to the dealer until each player and the dealer have five cards. The last card of the dealer shall be turned face up on the layout.
$\S$ 671a.9. Procedure for dealing the cards from the hand.
(a) If the cards are dealt from the dealer's hand, the following requirements shall be observed:
(1) An automated shuffling device shall be used to shuffle the cards.
(2) After the procedures required under § 671a.5 (relating to shuffle and cut of the cards) have been completed, the dealer shall place the stacked deck of cards in either hand. After the dealer has chosen the hand in which to hold the cards, the dealer shall continue to use that hand whenever holding the cards during that round of play. The cards held by the dealer shall be kept over the table inventory container and in front of the dealer at all times.
(3) Prior to dealing any cards, the dealer shall announce "no more bets."
(b) The dealer shall deal each card by holding the deck of cards in the chosen hand and use the other hand to remove the top card of the deck and place it face down on the appropriate area of the layout. The dealer shall, starting with the player farthest to the dealer's left and continuing around the table in a clockwise manner, deal one card at a time to each player who placed and Ante Wager and to the dealer until each player and the dealer have five cards. The last card of the dealer shall be turned face up on the layout.

## § 671a.10. Procedures for dealing the cards from an automated dealing shoe.

(a) If the cards are dealt from an automated dealing shoe, the following requirements shall be observed:
(1) After the procedures required under § 671a. 5 (relating to shuffle and cut of the cards) have been completed, the cards shall be placed in the automated dealing shoe.
(2) Prior to the shoe dispensing any stacks of cards, the dealer shall announce "no more bets."
(b) The dealer shall deliver the first stack of cards dispensed by the automated dealing shoe face down to the player farthest to the dealer's left who has placed an Ante Wager. As the remaining stacks are dispensed to the dealer by the automated dealing shoe, the dealer shall, moving clockwise around the table, deliver a stack face down to each of the other players who has placed an Ante Wager. The dealer shall then deliver a stack of five cards face down to the dealer. The last card of the dealer shall be turned face up on the layout.

## § 671a.11. Procedures for completion of each round of play.

(a) After the dealing procedures required under § 671a.8, § 671a. 9 or § 671a. 10 (relating to procedure for dealing the cards from a manual dealing shoe; procedure for dealing the cards from the hand; and procedures for
dealing the cards from an automated dealing shoe) have been completed, each player shall examine his cards, subject to the following limitations:
(1) Each player who wagers at Lunar Poker shall be responsible for his own hand and no person other than the dealer and the player to whom the cards were dealt may touch the cards of that player.
(2) Each player shall keep his five cards in full view of the dealer at all times.
(3) After the dealer announces "all decisions are locked in," a player may not amend his decision to fold or increase, decrease or place any Bet Wager or Options fee except as provided in subsection (d).
(b) After five cards have been dealt to each player, the player shall examine his cards. If any player's hand is eligible for a Super Wager or an instant payout, the player shall declare the winning hand and place his cards face down in the player's betting area on the layout. Each player shall then elect to:
(1) Fold.
(2) Place a Bet Wager equal to twice the amount of the player's Ante Wager provided that if any player's hand contains a royal flush or a straight flush and is eligible for the instant payout, the player shall not place a Bet Wager.
(3) Place an Options fee, equal to the player's Ante Wager, to buy a sixth card or draw and exchange between two and five of the player's cards.
(c) After all players have made a decision to either fold or place a Bet Wager or Options fee, the dealer shall announce "all decisions are locked in." Once the dealer has announced "all decisions are locked in" a player may not change his decision. Prior to any additional cards being dealt, the dealer shall, beginning with the player to the dealer's left and continuing clockwise around the table:
(1) If the player did not declare a winning Super Wager, collect the player's losing Super Wager. If any other player placed a Super Wager on that player's hand, the dealer shall collect the player's losing Super Wager first then collect any other player's Super Wager who placed a Super Wager on that player's hand.
(2) If the player declared a winning Super Wager, the dealer shall verify the winning hand and pay the player's winning Super Wager in accordance with § 671a.12(b) (relating to payout odds). If any other player placed a Super Wager on that player's hand, the dealer shall pay out the winning player's hand first then any other player who also placed a Super Wager on that player's hand in accordance with § 671a.12(b).
(3) If any player is eligible for an instant payout, after verifying the player's hand, the dealer shall pay the player's winning Ante Wager in accordance with § 671a.12(a) and place the player's cards in the discard rack.
(4) For any player who did not make a Bet Wager or Options fee and folded, the dealer shall collect the player's Ante Wager and place the player's cards in the discard rack.
(d) Once all player Super Wagers and instant payouts have been settled and any player's cards who folded have been collected, beginning with the player to the dealer's left and moving clockwise around the table, for any player who placed an Options fee equal to the player's Ante Wager:
(1) The dealer shall collect the Options fee and:
(i) If the player elects to buy the sixth card, the dealer shall deal one additional card.
(ii) If the player elects to exchange cards, the player shall discard between two and five cards, which will thereafter be replaced by the dealer with the same number of cards from the deck.
(2) After dealing the additional cards, the player shall create the best possible five-card Poker hand.
(3) The dealer shall then ask the player if the player would like to fold and forfeit the player's Ante Wager or place a Bet Wager equal to twice the amount of the player's Ante Wager.
(4) If the player does not make a Bet Wager and forfeits his Ante Wager, the dealer shall collect the Ante Wager and place the player's cards in the discard rack.
(e) After all players have either folded or placed a Bet Wager, the dealer shall reveal the dealer's cards and form the highest ranking five-card Poker hand. The dealer shall then settle any Super Wagers placed on the dealer's hand. Beginning with the first player to the dealer's left who placed a Super Wager on the dealer's hand and continuing clockwise around the table, if the dealer's hand:
(1) Is not eligible for a Super Wager payout, the dealer shall collect each player's losing Super Wager placed on the dealer's hand.
(2) Is eligible for a Super Wager payout, the dealer shall pay the player's winning Super Wager in accordance with § 671a.12(b).
(f) After settling the Super Wager placed on the dealer's hand, if the dealer's hand:
(1) Does not qualify with an ace-king or better, as provided in § 671a.6(b) (relating to Lunar Poker rankings), the dealer shall return the player's Bet Wager, pay the player's Ante Wager in accordance with § 671a.12(c) and place the player's cards in the discard rack.
(2) Qualifies with an ace-king or better, as provided in § 671a.6(b), starting with the player farthest to the dealer's right and continuing around the table in a counterclockwise direction, the dealer shall turn the cards of each player who placed a Bet Wager face up on the layout and form the highest ranking five-card Poker hand. If the dealer's highest ranking five-card Poker hand is:
(i) Higher in rank than the player's five-card Poker hand, as provided in § 671a.6(b), the dealer shall collect the player's Ante and Bet Wagers and place the player's cards in the discard rack.
(ii) Lower in rank than the player's five-card Poker hand, as provided in § 671a.6(b), the dealer shall return the player's Ante Wager and pay the winning Bet Wager in accordance with § 671a.12(d). If a player's winning hand also contains a second Poker combination, where at least one card in the second combination was not included in the winning combination, the dealer shall pay a second winning Bet Wager in accordance with § 671a.12(d) for the second Poker combination even if the second combination does not beat the dealer's hand. For example, if a player's winning hand contained two aces, a king, 8 and 9 , the player would be paid out for the pair of aces that beat the dealer's hand but would also be paid out for the ace-king. If a player purchased a sixth card, all six cards may be considered for purposes of the second payout.
(iii) Equal in rank with the player's hand, as provided in § 671a.6(b), the dealer shall return the player's Ante and Bet Wagers.
(g) After all wagers have been settled, the dealer shall remove any remaining cards from the table and place them in the discard rack in a manner that permits the reconstruction of each hand in the event of a question or dispute.
(h) If an automated card shuffling device, which counts the number of cards in the deck after the completion of each shuffle and indicates whether 52 cards are present, is not being used, the dealer shall count the cards at least once after every 5 rounds of play to determine if the correct number of cards is still present in the deck. The dealer shall determine the number of cards by counting the cards face down on the layout. If the count indicates:
(1) That 52 cards are in the deck, the dealer shall place the cards in the discard rack.
(2) That 52 cards are not in the deck, the entire deck of cards shall be removed from the table.

## § 671a.12. Payout odds.

(a) The certificate holder shall pay an instant payout on a player's Ante Wager in accordance with one of the following paytables, selected by the certificate holder in its Rules Submission filed in accordance with § 601a. 2 (relating to table games Rules Submissions):

| Hand | Paytable A | Paytable B | Paytable C |
| :--- | ---: | ---: | ---: |
| Royal flush | 1,500 to 1 | 1,000 to 1 | 1,000 to 1 |
| Straight flush | 250 to 1 | 300 to 1 | 250 to 1 |

(b) A certificate holder shall pay the player's winning Super Wager at the following odds:

| Hand | Payout |
| :--- | ---: |
| Four-of-a-kind | 200 to 1 |
| Five picture cards | 150 to 1 |
| Full house | 100 to 1 |
| Flush | 60 to 1 |
| Straight | 30 to 1 |
| Three-of-a-kind | 8 to 1 |
| Ace-king-queen | 5 to 1 |
| Same colored five | 2 to 1 |

(c) When a dealer does not qualify with an ace and king or higher, a player's Ante Wager shall be paid at odds of 1 to 1 provided that if the player's hand is a straight or higher, the player's Ante Wager shall be paid at odds of 4 to 1 .
(d) A winning Bet Wager shall be paid at the following odds:

| Hand | Payout |
| :--- | ---: |
| Royal flush | 100 to 1 |
| Straight flush | 50 to 1 |
| Four-of-a-kind | 20 to 1 |
| Full house | 7 to 1 |
| Flush | 5 to 1 |
| Straight | 4 to 1 |
| Three-of-a-kind | 3 to 1 |
| Two pair | 2 to 1 |
| One pair | 1 to 1 |
| Ace-king | 1 to 1 |

## § 671a.13. Irregularities.

(a) A card that is found face up in the shoe or the deck while the cards are being dealt may not be used in that round of play and shall be placed in the discard rack. If more than one card is found face up in the shoe or the
deck during the dealing of the cards, all hands shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(b) A card drawn in error without its face being exposed shall be used as though it were the next card from the shoe or the deck.
(c) If any player or the dealer is dealt an incorrect number of cards, all hands shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(d) If any of the dealer's cards that are dealt face down on the layout are inadvertently exposed prior to each player having either folded or placed a Bet Wager as provided under § 671a. 11 (relating to procedures for completion of each round of play), all hands shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(e) If an automated card shuffling device is being used and the device jams, stops shuffling during a shuffle or fails to complete a shuffle cycle, the cards shall be reshuffled.
(f) If an automated dealing shoe is being used and the device jams, stops dealing cards or fails to deal cards during a round of play, the round of play shall be void, all wagers shall be returned to the players and the cards shall be removed from the device and reshuffled with any cards already dealt.
(g) If an automated card shuffling device or automated dealing shoe malfunctions and cannot be used, the automated card shuffling device or automated dealing shoe shall be covered or have a sign indicating that the automated card shuffling device or automated dealing shoe is out of order placed on the device before any other method of shuffling or dealing may be utilized at that table.

## CHAPTER 672a. FREE BET BLACKJACK

Sec.
672a.1. Definitions.
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## § 672a.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:
Blackjack-An ace and any card having a value of 10 dealt as the initial two cards to a player or the dealer.
Card reader device-A device which permits the dealer to determine if the hole card will give the dealer a Blackjack.

Hard total-The total point count of a hand which contains no aces or which contains aces that are each counted as 1 in value.
Hole card-The second card dealt face down to the dealer.
Soft total-The total point count of a hand containing an ace when the ace is counted as 11 in value.
§ 672a.2. Free Bet Blackjack table; card reader device; physical characteristics; inspections.
(a) Free Bet Blackjack shall be played at a table having betting positions for no more than six players on one side of the table and a place for the dealer on the opposite side of the table.
(b) The layout for a Free Bet Blackjack table shall be submitted to the Bureau of Gaming Operations and approved in accordance with § 601a.10(a) (relating to approval of table game layouts, signage and equipment) and contain, at a minimum:
(1) The name or logo of the certificate holder.
(2) A separate betting area designated for the placement of the Blackjack Wager for each player.
(3) The following inscriptions:
(i) Blackjack pays 3 to 2 .
(ii) Insurance pays 2 to 1 .
(iii) Dealer shall draw to 16 and stand on all 17 s or other similar language approved by the Executive Director in accordance with § 601a.10(a).
(iv) Blackjack Wagers will push if the dealer's hand has a total point count of 22 or other similar language.
(v) Surrender is not available on a Free Bet Blackjack table or other similar language. If the language is not inscribed on the layout, a sign specifying that surrender is not available shall be posted at each Free Bet Blackjack table.
(4) If the certificate holder offers the Push 22 Wager, a separate area designated for the placement of the wager for each player.
(5) Inscriptions that advise patrons of the payout odds or amounts for all permissible wagers offered by the certificate holder. If the payout odds or amounts are not inscribed on the layout, a sign identifying the payout odds or amounts for all permissible wagers shall be posted at each Free Bet Blackjack table.
(c) Each Free Bet Blackjack table must have a drop box and a tip box attached on the same side of the table as, but on opposite sides of, the dealer, as approved by the Bureau of Casino Compliance in accordance with § 601a.10(g). The Bureau of Casino Compliance may approve an alternative location for the tip box when a card shuffling device or other table game equipment prevents the placement of the drop box and tip box on the same side of the gaming table as, but on opposite sides of, the dealer.
(d) Each Free Bet Blackjack table must have a card reader device attached to the top of the dealer's side of the table. The floorperson assigned to the Free Bet Blackjack table shall inspect the card reader device at the beginning of each gaming day to ensure that there has been no tampering with the device and that it is in proper working order.
(e) Each Free Bet Blackjack table must have a discard rack securely attached to the top of the dealer's side of the table. The height of each discard rack must either:
(1) Equal the height of the cards, stacked one on top of the other, in the total number of decks that are to be used in the dealing shoe at that table.
(2) Be taller than the height of the total number of decks being used if the discard rack has a distinct and clearly visible mark on its side to show the exact height
for a stack of cards equal to the total number of cards in the number of decks to be used in the dealing shoe at that table.

## § 672a.3. Cards; number of decks; value of cards.

(a) Except as provided in subsection (b), Free Bet Blackjack shall be played with six or eight deck shoes of cards that are identical in appearance and at least one cover card.
(b) If an automated card shuffling device is utilized, other than a continuous shuffler, Free Bet Blackjack shall be played with at least two shoes of cards in accordance with the following requirements:
(1) The cards shall be separated into two batches with an equal number of decks included in each batch.
(2) The cards in each batch must be of the same design but the backs of the cards in one batch must be of a different color than the cards in the other batch.
(3) One batch of cards shall be shuffled and stored in the automated card shuffling device while the other batch is being used to play the game.
(4) Both batches of cards shall be continuously alternated in and out of play, with each batch being used for every other dealing shoe.
(5) The cards from only one batch shall be placed in the discard rack at any given time.
(c) The decks of cards opened for use at a Free Bet Blackjack table shall be changed at least once every 24 hours.
(d) The value of the cards shall be as follows:
(1) Any card from 2 to 10 shall have its face value.
(2) Any jack, queen or king shall have a value of 10 .
(3) An ace shall have a value of 11 unless that value would give a player or the dealer a score in excess of 21 , in which case the ace shall have a value of 1 .

## § 672a.4. Opening of the table for gaming.

(a) After receiving one or more decks of cards at the table, the dealer shall inspect the cards for any defects. The floorperson assigned to the table shall verify the inspection.
(b) After the cards are inspected, the cards shall be spread out face up on the table for visual inspection by the first player to arrive at the table. The cards shall be spread in horizontal fan shaped columns by deck according to suit and in sequence.
(c) After the first player arriving at the table has been afforded an opportunity to visually inspect the cards, the cards shall be turned face down on the table, mixed thoroughly by a washing of the cards and stacked. Once the cards have been stacked, the cards shall be shuffled in accordance with $\S 672 \mathrm{a} .5$ (relating to shuffle and cut of the cards).
(d) If an automated shuffling device is utilized, other than a continuous shuffler, all the decks in one batch of cards shall be spread for inspection, mixed, stacked and shuffled in accordance with subsections (a)-(c) separate from the decks in the other batch of cards.
(e) If the decks of cards received at the table are preinspected and preshuffled in accordance with $\S$ 603a.16(u) or (v) (relating to cards; receipt, storage, inspection and removal from use), subsections (a)-(d) do not apply.

## § 672a.5. Shuffle and cut of the cards.

(a) Immediately prior to commencement of play, unless the cards were preshuffled in accordance with $\S 603 \mathrm{a} .16(\mathrm{u})$ or (v) (relating to cards; receipt, storage, inspection and removal from use), after each shoe of cards is dealt or when directed by a floorperson or above, the dealer shall shuffle the cards, either manually or by use of an automated card shuffling device, so that the cards are randomly intermixed. Upon completion of the shuffle, the dealer or device shall place the decks of cards in a single stack. The certificate holder may use an automated card shuffling device which, upon completion of the shuffling of the cards, inserts the stack of cards directly into a dealing shoe.
(b) After the cards have been shuffled and stacked, the dealer shall offer the stack of cards to be cut, with the backs facing away from the dealer, to the player determined under subsection (c). If no player accepts the cut, the dealer shall cut the cards.
(c) The cut of the cards shall be offered to players in the following order:
(1) The first player arriving at the table, if the game is just beginning.
(2) The player on whose betting area the cover card appeared during the last round of play.
(3) If the cover card appeared on the dealer's hand during the last round of play, the player at the farthest position to the right of the dealer. If this player refuses, the offer to cut the cards shall rotate to each player in a counterclockwise manner.
(4) If the reshuffle was initiated at the direction of the floorperson or above, the player at the farthest position to the right of the dealer. If this player refuses, the offer to cut the cards shall rotate to each player in a counterclockwise manner.
(d) The player or dealer making the cut shall place the cover card in the stack at least ten cards from the top or bottom of the stack. Once the cover card has been inserted, the dealer shall take all cards on top of the cover card and place them on the bottom of the stack. The dealer shall then insert the cover card in the stack at a position at least $1 / 4$ of the way in from the bottom of the stack. The stack of cards shall then be inserted into the dealing shoe for commencement of play.
(e) After the cards have been cut and before the cards have been placed in the dealing shoe, a floorperson or above may require the cards to be recut if the floorperson determines that the cut was performed improperly or in any way that might affect the integrity or fairness of the game. If a recut is required, the cards shall be recut either by the player who last cut the cards or by the next person entitled to cut the cards, as determined under subsection (c). The stack of cards shall then be inserted into the dealing shoe for commencement of play.
(f) A reshuffle of the cards in the shoe shall take place after the cover card is reached in the shoe, as provided in § 672a.7(d) (relating to procedure for dealing the cards; completion of each round of play), except that a floorperson may determine that the cards should be reshuffled after any round of play.
(g) If there is no gaming activity at a Free Bet Blackjack table which is open for gaming, the cards shall be removed from the dealing shoe and the discard rack and spread out on the table face down unless a player requests that the cards be spread face up on the table.

After the first player arriving at the table is afforded an opportunity to visually inspect the cards, the cards shall be:
(1) Mixed thoroughly by a washing of the cards, stacked, then shuffled and cut in accordance with this section if there is no automated shuffling device in use.
(2) Stacked and placed into the automated shuffling device to be shuffled if an automated shuffling device is in use. The batch of cards already in the shuffler shall then be removed. Unless a player requests otherwise, the batch of cards removed from the shuffler does not need to be spread for inspection and reshuffled prior to being dealt provided that the automated card shuffling device stores a single batch of shuffled cards inside the shuffler in a secure manner.
(h) A certificate holder may utilize a dealing shoe or other device that automatically reshuffles and counts the cards provided that the device is submitted to the Bureau of Gaming Laboratory Operations and approved in accordance with § 461a.4 (relating to submission for testing and approval) prior to its use in the licensed facility. If a certificate holder is utilizing the approved device, subsections (b)-(g) do not apply.

## § 672a.6. Wagers.

(a) Wagers at Free Bet Blackjack shall be made by placing value chips, plaques or other Board-approved table game wagering instruments on the appropriate areas of the Free Bet Blackjack layout.
(b) After the cards have been shuffled as required under § 672a. 5 (relating to shuffle and cut of the cards), a certificate holder may prohibit any patron, whether seated at the gaming table or not, who does not make a wager on a given round of play from placing a wager on the next round of play and any subsequent round of play at that gaming table until either:
(1) The certificate holder chooses to permit the player to begin wagering again.
(2) A reshuffle of the cards has occurred.
(c) All wagers, except an Insurance Wager under § 672a.8 (relating to Insurance Wager), a wager to double down under § 672a.9 (relating to double down) or a wager on split pairs under § 672a. 10 (relating to splitting pairs), shall be placed prior to the first card being dealt for each round of play. A player may not handle, remove or alter any wagers that have been made until a decision has been rendered and implemented with respect to that wager.
(d) A player shall place a Blackjack Wager to participate in a round of play and compete against the dealer's hand.
(e) If specified in its Rules Submission under § 601a. 2 (relating to table games Rules Submissions), a certificate holder may offer to each player who placed a Blackjack Wager in accordance with subsection (d), the option of placing a Push 22 Wager which shall win if the dealer's hand has a total point count of 22 .
(f) The certificate holder shall specify in its Rules Submission under § 601a. 2 the number of adjacent boxes on which a player may place a Blackjack Wager in one round of play.
§ 672a.7. Procedure for dealing the cards; completion of each round of play.
(a) All cards shall be dealt from a dealing shoe which must be located on the table in a location approved by the

Bureau of Casino Compliance in accordance with § 601a.10(g) (relating to approval of table game layouts, signage and equipment). Once the procedures under § 672a.5 (relating to shuffle and cut of the cards) have been completed, the stacked cards shall be placed in the dealing shoe by the dealer or by an automated card shuffling device.
(b) Each card shall be removed from the dealing shoe with the hand of the dealer that is closest to the dealing shoe and placed on the appropriate area of the layout with the opposite hand. The dealer may deal cards to the two betting positions closest to the dealing shoe with the same hand.
(c) After each full batch of cards is placed in the shoe, the dealer shall remove the first card and place it in the discard rack. Each new dealer who comes to the table shall also remove one card and place it in the discard rack before dealing any cards to the players.
(d) If the cover card appears as the first card in the dealing shoe at the beginning of a round of play or appears during play, the cover card shall be removed and placed to the side and the hand will be completed. The dealer shall then:
(1) Collect and reshuffle the cards by removing the cards remaining in the shoe and placing them in the discard rack to ensure that no cards are missing.
(2) Shuffle the cards so that they are randomly intermixed.
(e) After all Blackjack and optional Push 22 Wagers have been placed, the dealer shall, starting with the player farthest to the dealer's left and continuing around the table in a clockwise manner, deal the cards as follows:
(1) One card face up to each box on the layout in which a Blackjack Wager is contained.
(2) One card face up to the dealer.
(3) A second card face up to each box in which a wager is contained.
(4) A second card face down to the dealer.
(f) Immediately after the second card is dealt to each player and the dealer, if the dealer's first card is an ace, the dealer shall offer the Insurance Wager or even money in accordance with § 672a.8 (relating to Insurance Wager).
(g) If the dealer's first card is an ace or a 10 value card, after the procedures in subsection (f) have been completed, if applicable, the dealer shall determine whether the hole card will give the dealer a Blackjack. The dealer shall insert the hole card into the card reader device by moving the card face down on the layout without exposing it to anyone at the table, including the dealer. If the dealer has a Blackjack, additional cards may not be dealt and if a player:
(1) Has a Blackjack, the dealer shall return the player's Blackjack Wager, collect the player's Push 22 Wager and pay out any Insurance Wager, if applicable.
(2) Does not have a Blackjack, the dealer shall collect the player's Blackjack and Push 22 Wagers and pay out any Insurance Wager, if applicable.
(h) If the dealer's up card was not an ace or 10 value card or if the dealer's hole card did not give the dealer Blackjack, the dealer shall start with the player farthest to the dealer's left and continue around the table in a clockwise direction and if the player:
(1) Has Blackjack, the dealer shall announce and pay the Blackjack in accordance with § 672a.11(a) (relating to payout odds) and remove the player's cards. If a player also placed a Push 22 Wager, the dealer shall tuck the player's cards under the player's Push 22 Wager until it is resolved in accordance with subsection (n).
(2) Does not have Blackjack, the player shall indicate whether he wishes to double down as permitted under $\S 672 \mathrm{a} .9$ (relating to double down), split pairs as permitted under § 672a. 10 (relating to splitting pairs), stand or draw additional cards. Players may not surrender in Free Bet Blackjack.
(i) As each player indicates his decision, the dealer shall deal face upwards whatever additional cards are necessary to effectuate the player's decision.
(j) A player may elect to draw additional cards whenever his point count total is less than 21, except that:
(1) A player having a hard or soft total of 21 may not draw additional cards.
(2) A player electing to double down in accordance with § 672a. 9 may draw only one additional card.
(k) After the decisions of each player have been implemented and all additional cards have been dealt, the dealer shall turn the hole card face up.
(l) Except as provided in subsection (m), the dealer shall draw additional cards until he has a hard or soft total of $17,18,19,20$ or 21 . Any additional cards required to be dealt to the hand of the dealer shall be dealt face up. The dealer shall announce the dealer's total point count after each additional card is dealt.
(m) If there are no Push 22 Wagers on the table, a dealer may not draw additional cards to his hand, regardless of the point count, if decisions have been made on all players' hands and the point count of the dealer's hand will not have an effect on the outcome of the round of play. If there are Push 22 Wagers still on the table and all player's hands are in excess of 21 or have Blackjack, the dealer shall draw additional cards to settle the Push 22 Wagers.
(n) After all additional cards have been drawn, if the total point count of the dealer's hand:
(1) Is a 22, the dealer shall return all remaining player's Blackjack Wagers, collect any Free Bet lammers, as provided in § 672a. 9 and § 672a.10, and pay out any Push 22 Wagers in accordance with § 672a.11(c).
(2) Is not a 22, the dealer shall collect any Push 22 Wagers and settle the player's Blackjack Wagers and Free Bet lammers in accordance with subsections (o)-(q).
(o) A player shall win and be paid in accordance with § 672a.11(a) for the Blackjack Wager and an equivalent amount for each Free Bet lammer, if applicable, if:
(1) The total point count of the player's hand is 21 or less and the total point count of the dealer's hand is in excess of 21 provided that if the total point count of the dealer's hand is 22, the Blackjack Wager shall be returned to the player and any Free Bet lammers shall be collected.
(2) The total point count of the player's hand exceeds the total point count of the dealer's hand without exceeding 21.
(p) A Blackjack Wager shall tie and be returned to the player and any Free Bet lammers collected if the total point count of the player's hand is the same as the total point count of the dealer's hand.
(q) A player's Blackjack Wager shall lose and any Free Bet lammers shall be collected if:
(1) The total point count of the dealer's hand is 21 or less and the total point count of the player's hand is in excess of 21 .
(2) The total point count of the dealer's hand exceeds the total point count of the player's hand without exceeding 21.
(r) The dealer shall collect all losing wagers and pay off all winning wagers in accordance with one of the following procedures designated in the certificate holder's Rules Submission under § 601a. 2 (relating to table games Rules Submissions):
(1) Collect all losing wagers beginning with the player farthest to the dealer's right and continuing around the table in a counterclockwise direction and then pay off all winning wagers.
(2) Collect each player's losing wagers and pay off each player's winning wagers beginning with the player farthest to the dealer's right and continuing around the table in a counterclockwise direction. The dealer shall place any losing wagers directly into the table inventory and may not pay off any player's winning wagers by using value chips collected from a losing wager.
(s) After all wagers have been settled, the dealer shall remove any remaining cards from the table and place them in the discard rack in a manner that permits the reconstruction of each hand in the event of a question or dispute.
(t) Players and spectators may not handle, remove or alter any cards used to play Free Bet Blackjack.

## § 672a.8. Insurance Wager.

(a) If the first card dealt to the dealer is an ace, each player may make an Insurance Wager which shall win if the dealer's hole card is a king, queen, jack or 10.
(b) An Insurance Wager may be made by placing a value chip on the insurance line of the layout in an amount not more than $1 / 2$ of the player's initial Blackjack Wager. A player may wager an amount in excess of $1 / 2$ of the initial Blackjack Wager to the next unit that can be wagered in chips when, because of the limitation of the value of chip denominations, $1 / 2$ the initial Blackjack Wager cannot be bet. Insurance Wagers shall be placed prior to the dealer inserting his hole card into the card reader device.
(c) Winning Insurance Wagers shall be paid in accordance with the payout odds in § 672a.11(b) (relating to payout odds).
(d) Losing Insurance Wagers shall be collected by the dealer immediately after the dealer inserts his hole card into the card reader device and determines that he does not have a Blackjack and before he draws any additional cards.
(e) Notwithstanding the requirements of subsections (a)—(d), if selected in its Rules Submission under $\S 601 \mathrm{a} .2$ (relating to table games Rules Submissions), a certificate holder may offer a player who has Blackjack the option to be paid even money on the Blackjack Wager instead of making an Insurance Wager. If the player elects to be paid even money, the dealer shall pay out the Blackjack Wager at odds of 1 to 1 and remove the player's cards provided that if the player also placed a Push 22 Wager, the dealer shall tuck the player's cards under the
player's Push 22 Wager until it is resolved in accordance with § 672a.7(n) (relating to procedure for dealing the cards; completion of each round of play).

## § 672a.9. Double down.

(a) Except when a player has a Blackjack, a player may elect to double down on the first two cards dealt to him or on the first two cards of any split pair. If the total point count of the player's two cards:
(1) Is a hard 9,10 or 11 , the player may double down without placing an additional wager. If a player is doubling down without placing an additional wager, the dealer shall place a Free Bet lammer next to the player's original Blackjack Wager.
(2) Is not a hard 9,10 or 11 , the player may place an additional wager next to the player's original Blackjack Wager which may not exceed the amount of the player's original Blackjack Wager.
(b) If a player elects to double down after splitting pairs, as provided in § 672a. 10 (relating to splitting pairs), the player may double down on split pairs as provided in subsection (a).
(c) Upon a player's election to double down, the dealer shall deal one additional card face up and place it sideways on the layout.
(d) The dealer shall then complete the procedure in § 672a.7(i)-(s) (relating to procedure for dealing the cards; completion of each round of play).

## § 672a.10. Splitting pairs.

(a) If the initial two cards dealt to a player are identical in value, the player may elect to split the hand into two separate hands. For example, if a player has two 7 s or a king and a 10 , the player may elect to split the hand.
(b) If a player elects to split pairs and the player has:
(1) A pair of 10 value cards ( 10 , jack, queen or king), the player shall place an amount equal to the original Blackjack Wager for the split pair.
(2) Any pair other than 10 value cards, the player may split pairs without placing an additional wager. If a player is splitting pairs without placing an additional wager:
(i) The dealer shall place a Free Bet lammer next to the player's original Blackjack Wager.
(ii) The original Blackjack Wager shall move with the first split hand and the Free Bet lammer shall be the wager for the second split hand.
(c) When a player splits pairs, the dealer shall deal a card to and complete the player's decisions with respect to the first incomplete hand on the dealer's left before proceeding to deal any cards to the second hand. If the first split hand busts and if the player's hand:
(1) Does not contain any Free Bet lammers, the dealer shall collect the losing Blackjack Wager and place the player's cards in the discard rack.
(2) Contains a Free Bet lammer, the player's cards shall be tucked under the original Blackjack Wager until the hand is settled or until the split hand or hands bust as well.
(d) After a second card is dealt to each split pair, the player shall indicate his decision to stand, draw, double down or resplit with respect that hand. A player may
resplit any additional pairs, in accordance with subsection (b), for a total of up to four hands.

## § 672a.11. Payout odds.

(a) The certificate holder shall pay each winning Blackjack Wager and any Free Bet lammers at odds of 1 to 1 with the exception of player Blackjack which shall be paid at odds of 3 to 2 .
(b) The certificate holder shall pay out winning Insurance Wagers at odds of 2 to 1 .
(c) The certificate holder shall pay out winning Push 22 Wagers based on the dealer's hand at the odds in one of the following paytables selected by the certificate holder in its Rules Submission filed in accordance with § 601a. 2 (relating to table games Rules Submissions): Hand

Paytable A
Paytable B
Same suit $22 \quad 50$ to $1 \quad 50$ to 1
Same color $22 \quad 20$ to $1 \quad 20$ to 1
Other $22 \quad 8$ to $1 \quad 7$ to 1

## § 672a.12. Irregularities.

(a) A card found face up in the shoe may not be used in that round of play and shall be placed in the discard rack or in a segregated area of the double shoe.
(b) A card drawn in error without its face being exposed shall be used as though it were the next card from the shoe.
(c) After the initial two cards have been dealt to each player and a card is drawn in error and exposed to the players, the card shall be dealt to the players or dealer as though it were the next card from the shoe. Any player refusing to accept the card may not have any additional cards dealt to him during the round. If the card is refused by the players and the dealer cannot use the card, the card shall be placed in the discard rack.
(d) If the dealer has 17 and accidentally draws a card for himself, the card shall be placed in the discard rack.
(e) If the dealer misses dealing his first or second card to himself, the dealer shall continue dealing the first two cards to each player and then deal the appropriate number of cards to himself.
(f) If there are insufficient cards remaining in the shoe to complete a round of play, all of the cards in the discard rack shall be shuffled and cut according to the procedures in $\S 672$ a. 5 (relating to shuffle and cut of the cards). The first card shall be drawn face down and placed in the discard rack and the dealer shall complete the round of play.
(g) If no cards are dealt to a player's hand, the hand is dead and the player shall be included in the next deal. If only one card is dealt to a player's hand, at the player's option, the dealer shall deal the second card to the player after all other players have received a second card.
(h) If after receiving the first two cards the dealer fails to deal an additional card to a player who has requested a card, then, at the player's option, the dealer shall either deal the additional card after all other players have received their additional cards but prior to the dealer revealing his hole card or call the player's hand dead and return the player's original Blackjack Wager.
(i) If the dealer inserts his hole card into a card reader device when the value of his first card is not an ace, king, queen, jack or 10 , the dealer, after notification to a floorperson or above, shall continue play.
(j) If a card reader device malfunctions, the dealer may not continue dealing the game of Blackjack at that table until the card reader device is repaired or replaced.
(k) If an automated card shuffling device is being used and the device jams, stops shuffling during a shuffle or fails to complete a shuffle cycle, the cards shall be reshuffled.
(1) If an automated shuffling device malfunctions and cannot be used, the device must be covered or have a sign indicating that it is out of order placed on the device before any other method of shuffling may be utilized at that table.

## CHAPTER 673a. DOUBLE BACK JACK

Sec.
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## § 673a.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:
Blackjack-An ace and any card having a value of 10 dealt as the initial two cards to a player or the dealer.
Bust-The total point count of a hand that is greater than 21.
Card reader device-A device which permits the dealer to determine if the hole card will give the dealer a Blackjack.
Hard total-The total point count of a hand which contains no aces or which contains aces that are each counted as 1 in value.
Hole card-The second card dealt face down to the dealer.
Soft total-The total point count of a hand containing an ace when the ace is counted as 11 in value.
§ 673a.2. Double Back Jack table; card reader device; physical characteristics; inspections.
(a) Double Back Jack shall be played at a table having betting positions for no more than six players on one side of the table and a place for the dealer on the opposite side of the table.
(b) The layout for a Double Back Jack table shall be submitted to the Bureau of Gaming Operations and approved in accordance with § 601a.10(a) (relating to approval of table game layouts, signage and equipment) and contain, at a minimum:
(1) The name or logo of the certificate holder.
(2) A separate betting area designated for the placement of the Blackjack Wager for each player.
(3) A separate betting area designated for the placement of the Second Chance Wager for each player.
(4) The following inscriptions or other similar language approved by the Executive Director in accordance with § 601a.10(a):
(i) Blackjack and Insurance pays 2 to 1 .
(ii) Dealer shall draw to 16 and stand on all 17s.
(iii) Blackjack Wagers will push if the dealer's hand has a total point count of 22 , player 21 pays right away, Second Chance pays even money.
(5) Inscriptions that advise patrons of the payout odds or amounts for all permissible wagers offered by the certificate holder. If the payout odds or amounts are not inscribed on the layout, a sign identifying the payout odds or amounts for all permissible wagers shall be posted at each Double Back Jack table.
(c) Each Double Back Jack table must have a drop box and a tip box attached on the same side of the table as, but on opposite sides of, the dealer, as approved by the Bureau of Casino Compliance in accordance with § 601a.10(g). The Bureau of Casino Compliance may approve an alternative location for the tip box when a card shuffling device or other table game equipment prevents the placement of the drop box and tip box on the same side of the gaming table as, but on opposite sides of, the dealer.
(d) Each Double Back Jack table must have a card reader device attached to the top of the dealer's side of the table. The floorperson assigned to the Double Back Jack table shall inspect the card reader device at the beginning of each gaming day to ensure that there has been no tampering with the device and that it is in proper working order.
(e) Each Double Back Jack table must have a discard rack securely attached to the top of the dealer's side of the table. The height of each discard rack must either:
(1) Equal the height of the cards, stacked one on top of the other, in the total number of decks that are to be used in the dealing shoe at that table.
(2) Be taller than the height of the total number of decks being used if the discard rack has a distinct and clearly visible mark on its side to show the exact height for a stack of cards equal to the total number of cards in the number of decks to be used in the dealing shoe at that table.
§ 673a.3. Cards; number of decks; value of cards.
(a) Except as provided in subsections (b) and (c), Double Back Jack shall be played with at least one deck of cards that are identical in appearance and at least one cover card.
(b) If an automated card shuffling device is utilized, other than a continuous shuffler, Double Back Jack shall be played with at least two decks of cards in accordance with the following requirements:
(1) The cards shall be separated into two batches with an equal number of decks included in each batch.
(2) The cards in each batch must be of the same design but the backs of the cards in one batch must be of a different color than the cards in the other batch.
(3) One batch of cards shall be shuffled and stored in the automated card shuffling device while the other batch is being used to play the game.
(4) Both batches of cards shall be continuously alternated in and out of play, with each batch being used for every other dealing shoe.
(5) The cards from only one batch shall be placed in the discard rack at any given time.
(c) The decks of cards opened for use at a Double Back Jack table shall be changed at least once every 24 hours.
(d) The value of the cards shall be as follows:
(1) Any card from 2 to 10 shall have its face value.
(2) Any jack, queen or king shall have a value of 10 .
(3) An ace shall have a value of 11 unless that value would give a player or the dealer a score in excess of 21 , in which case the ace shall have a value of 1 .

## § 673a.4. Opening of the table for gaming.

(a) After receiving one or more decks of cards at the table, the dealer shall inspect the cards for any defects. The floorperson assigned to the table shall verify the inspection.
(b) After the cards are inspected, the cards shall be spread out face up on the table for visual inspection by the first player to arrive at the table. The cards shall be spread in horizontal fan shaped columns by deck according to suit and in sequence.
(c) After the first player arriving at the table has been afforded an opportunity to visually inspect the cards, the cards shall be turned face down on the table, mixed thoroughly by a washing of the cards and stacked. Once the cards have been stacked, the cards shall be shuffled in accordance with § 673a.5 (relating to shuffle and cut of the cards).
(d) If an automated shuffling device is utilized, other than a continuous shuffler, all the decks in one batch of cards shall be spread for inspection, mixed, stacked and shuffled in accordance with subsections (a)-(c) separate from the decks in the other batch of cards.
(e) If the decks of cards received at the table are preinspected and preshuffled in accordance with § 603a.16(u) or (v) (relating to cards; receipt, storage, inspection and removal from use), subsections (a)-(d) do not apply.

## § 673a.5. Shuffle and cut of the cards.

(a) Immediately prior to commencement of play, unless the cards were preshuffled in accordance with § 603a.16(u) or (v) (relating to cards; receipt, storage, inspection and removal from use), after each shoe of cards is dealt or when directed by a floorperson or above, the dealer shall shuffle the cards, either manually or by use of an automated card shuffling device, so that the cards are randomly intermixed. Upon completion of the shuffle, the dealer or device shall place the decks of cards in a single stack. The certificate holder may use an automated card shuffling device which, upon completion of the shuffling of the cards, inserts the stack of cards directly into a dealing shoe.
(b) After the cards have been shuffled and stacked, the dealer shall offer the stack of cards to be cut, with the backs facing away from the dealer, to the player determined under subsection (c). If no player accepts the cut, the dealer shall cut the cards.
(c) The cut of the cards shall be offered to players in the following order:
(1) The first player arriving at the table, if the game is just beginning.
(2) The player on whose betting area the cover card appeared during the last round of play.
(3) If the cover card appeared on the dealer's hand during the last round of play, the player at the farthest position to the right of the dealer. If this player refuses, the offer to cut the cards shall rotate to each player in a counterclockwise manner.
(4) If the reshuffle was initiated at the direction of the floorperson or above, the player at the farthest position to the right of the dealer. If this player refuses, the offer to cut the cards shall rotate to each player in a counterclockwise manner.
(d) The player or dealer making the cut shall place the cover card in the stack at least ten cards from the top or bottom of the stack. Once the cover card has been inserted, the dealer shall take all cards on top of the cover card and place them on the bottom of the stack. The dealer shall then insert the cover card in the stack at a position at least $1 / 4$ of the way in from the bottom of the stack. The stack of cards shall then be inserted into the dealing shoe for commencement of play.
(e) After the cards have been cut and before the cards have been placed in the dealing shoe, a floorperson or above may require the cards to be recut if the floorperson determines that the cut was performed improperly or in any way that might affect the integrity or fairness of the game. If a recut is required, the cards shall be recut either by the player who last cut the cards or by the next person entitled to cut the cards, as determined under subsection (c). The stack of cards shall then be inserted into the dealing shoe for commencement of play.
(f) A reshuffle of the cards in the shoe shall take place after the cover card is reached in the shoe, as provided in § 673a.7(d) (relating to procedure for dealing the cards; completion of each round of play), except that a floorperson may determine that the cards should be reshuffled after any round of play.
(g) If there is no gaming activity at a Double Back Jack table which is open for gaming, the cards shall be removed from the dealing shoe and the discard rack and spread out on the table face down unless a player requests that the cards be spread face up on the table. After the first player arriving at the table is afforded an opportunity to visually inspect the cards, the cards shall be:
(1) Mixed thoroughly by a washing of the cards, stacked, then shuffled and cut in accordance with this section, if there is no automated shuffling device in use.
(2) Stacked and placed into the automated shuffling device to be shuffled, if an automated shuffling device is in use. The batch of cards already in the shuffler shall then be removed. Unless a player requests otherwise, the batch of cards removed from the shuffler does not need to be spread for inspection and reshuffled prior to being dealt if the automated card shuffling device stores a single batch of shuffled cards inside the shuffler in a secure manner.
(h) A certificate holder may utilize a dealing shoe or other device that automatically reshuffles and counts the cards provided that the device is submitted to the Bureau of Gaming Laboratory Operations and approved in accordance with § 461a.4 (relating to submission for testing and approval) prior to its use in the licensed facility. If a certificate holder is utilizing the approved device, subsections (b)-(g) do not apply.

## § 673a.6. Wagers.

(a) Wagers at Double Back Jack shall be made by placing value chips, plaques or other Board-approved table game wagering instruments on the appropriate areas of the Double Back Jack layout.
(b) After the cards have been shuffled as required under § 673a. 5 (relating to shuffle and cut of the cards), a certificate holder may prohibit any patron, whether seated at the gaming table or not, who does not make a wager on a given round of play from placing a wager on the next round of play and any subsequent round of play at that gaming table until either:
(1) The certificate holder chooses to permit the player to begin wagering again.
(2) A reshuffle of the cards has occurred.
(c) All wagers, except a Second Chance Wager under § 673a.7(1) (relating to procedure for dealing the cards; completion of each round of play), an Insurance Wager under § 673a. 8 (relating to Insurance Wager), a wager to double down under § 673a. 10 (relating to double down) or a wager on split pairs under § 673a.11 (relating to splitting pairs), shall be placed prior to the first card being dealt for each round of play. A player may not handle, remove or alter any wagers that have been made until a decision has been rendered and implemented with respect to that wager.
(d) To participate in a round of play and compete against the dealer's hand, a player shall place a Blackjack Wager.
(e) The certificate holder shall specify in its Rules Submission under § 601a. 2 (relating to table games Rules Submissions) the number of adjacent boxes on which a player may place a Blackjack Wager in one round of play.

## § 673a.7. Procedure for dealing the cards; completion of each round of play.

(a) All cards shall be dealt from a dealing shoe which must be located on the table in a location approved by the Bureau of Casino Compliance in accordance with § 601a.10(g) (relating to approval of table game layouts, signage and equipment). Once the procedures under § 673a.5 (relating to shuffle and cut of the cards) have been completed, the stacked cards shall be placed in the dealing shoe by the dealer or by an automated card shuffling device.
(b) Each card shall be removed from the dealing shoe with the hand of the dealer that is closest to the dealing shoe and placed on the appropriate area of the layout with the opposite hand. The dealer may deal cards to the two betting positions closest to the dealing shoe with the same hand.
(c) After each full batch of cards is placed in the shoe, the dealer shall remove the first card and place it in the discard rack. Each new dealer who comes to the table shall also remove one card and place it in the discard rack before dealing any cards to the players.
(d) If the cover card appears as the first card in the dealing shoe at the beginning of a round of play or appears during play, the cover card shall be removed and placed to the side and the hand will be completed. The dealer shall then:
(1) Collect and reshuffle the cards by removing the cards remaining in the shoe and placing them in the discard rack to ensure that no cards are missing.
(2) Shuffle the cards so that they are randomly intermixed.
(e) After all Blackjack Wagers have been placed, the dealer shall, starting with the player farthest to the dealer's left and continuing around the table in a clockwise manner, deal the cards as follows:
(1) One card face up to each box on the layout in which a Blackjack Wager is contained.
(2) One card face up to the dealer.
(3) A second card face up to each box in which a wager is contained.
(4) A second card face down to the dealer.
(f) Immediately after the second card is dealt to each player and the dealer, but prior to any additional cards being dealt or before any card reader device is utilized, if any player has a Blackjack, the dealer shall settle the player's Blackjack Wager. Starting with the player farthest to the dealer's right and continuing around the table in a counterclockwise direction, the dealer shall pay the winning Blackjack Wager in accordance with § 673a.12(a) (relating to payout odds) and place the player's cards in the discard rack.
(g) After paying out any winning Blackjack Wagers in accordance with subsection (f), if the dealer's first card is an ace, the dealer shall offer the Insurance Wager in accordance with § 673a.8 (relating to Insurance Wager).
(h) If the dealer's first card is an ace, king, queen, jack or 10, after all Insurance Wagers have been placed, if applicable, the dealer shall determine whether the hole card will give the dealer a Blackjack. The dealer shall insert the hole card into the card reader device by moving the card face down on the layout without exposing it to anyone at the table, including the dealer. If the dealer has a Blackjack, additional cards may not be dealt and each player's Blackjack Wager will be collected.
(i) If the dealer's up card was not an ace or 10 value card or if the dealer's hole card did not give the dealer Blackjack, the dealer shall start with the player farthest to the dealer's left and continue around the table in a clockwise direction and each player shall indicate whether he wishes to surrender, as permitted under $\S 673 \mathrm{a} .9$ (relating to surrender), double down as permitted under § 673 a .10 (relating to double down), split pairs as permitted under § 673a. 11 (relating to splitting pairs), stand or draw additional cards.
(j) As each player indicates his decision, the dealer shall deal face upwards whatever additional cards are necessary to effectuate the player's decision.
(k) A player may elect to draw additional cards whenever his point count total is less than 21, except that:
(1) A player having a hard or soft total of 21 may not draw additional cards.
(2) A player electing to double down may draw only one additional card.
(l) After drawing additional cards in accordance with subsection (k), if the player's hand is greater than 21, the dealer shall ask if the player would like to place a Second Chance Wager to draw one additional card, the value of which will be subtracted from the player's hand. To draw an additional card, the player shall place a Second Chance Wager equal to the amount of the player's current Blackjack Wager. The dealer shall deal one additional card face up and place it sideways on the layout. The value of the second chance card shall be subtracted from
the total value of the player's hand. For example, if a player elects to place a Second Chance Wager when the player's hand has a total value of 25 after all additional cards are dealt in accordance with subsection (k), and the player receives a second chance card with a value of 5 , the 5 shall be subtracted from the player's hand making the total value of the player's hand a 20 . For purposes of the Second Chance Wager, an additional ace drawn is counted as a 1. After drawing the additional second chance card, if the player's hand has a total value:
(1) Greater than 21, the dealer shall collect the player's Blackjack and Second Chance Wagers and place the player's cards in the discard rack.
(2) Of 21, the dealer shall pay the player's winning Second Chance Wager in accordance with § 673a.12(b), return the player's Blackjack Wager and place the player's cards in the discard rack.
(3) Less than 21, the round of play shall continue in accordance with subsection (n).
(m) If a player did not place a Second Chance Wager, after all additional cards have been dealt, if any player's hand has a total value of 21, the dealer shall pay the player's winning Blackjack Wager in accordance with § 673a.12(a) and place the player's cards in the discard rack.
(n) After settling any player's hand who had a total value of 21 , the dealer shall turn the dealer's hole card face up.
(o) Except as provided in subsection (p), the dealer shall draw additional cards until he has a hard or soft total of $17,18,19,20$ or 21 . Any additional cards required to be dealt to the hand of the dealer shall be dealt face up. The dealer shall announce the dealer's total point count after each additional card is dealt.
(p) A dealer shall draw no additional cards to his hand, regardless of the point count, if decisions have been made on all players' hands and the point count of the dealer's hand will not have an effect on the outcome of the round of play.
(q) After all additional cards have been dealt to the dealer, if the total point count of the dealer's hand:
(1) Is 22, the dealer shall return all remaining player's Blackjack Wagers and Second Chance Wagers, if applicable.
(2) Is 21 or less, the dealer shall, starting with the player farthest to the dealer's right and continuing around the table in a counterclockwise direction, settle the remaining player's hands in accordance with subsections (r) and (s).
(r) In comparing the total point count of the dealer's hand versus the total point count of the player's hand, a player's hand shall:
(1) Win if:
(i) The total point count of the player's hand is less than 21 and the total point count of the dealer's hand is in excess of 21 .
(ii) The total point count of the player's hand exceeds the total point count of the dealer's hand without exceeding 21.
(2) Tie if the total point count of the player's hand is the same as the total point count of the dealer's hand.
(3) Lose if:
(i) The total point count of the dealer's hand is 21 or less and the total point count of the player's hand is in excess of 21 .
(ii) The total point count of the dealer's hand exceeds the total point count of the player's hand without exceeding 21.
(s) If a player's hand:
(1) Is a winning hand, in accordance with subsection (r), and the player:
(i) Placed a Second Chance Wager, the dealer shall return the player's Blackjack Wager and pay out the winning Second Chance Wager in accordance with § 673a.12(b).
(ii) Did not place a Second Chance Wager, the dealer shall pay out the winning Blackjack Wager in accordance with § 673a.12(a).
(2) Ties with the dealer's hand, the dealer shall return the player's Blackjack Wager and Second Chance Wager, if applicable.
(3) Loses against the dealer's hand, the dealer shall collect the player's Blackjack Wager and Second Chance Wager, if applicable.
(t) The dealer shall collect all losing wagers and pay off all winning wagers in accordance with one of the following procedures designated in the certificate holder's Rules Submission under § 601a. 2 (relating to table games Rules Submissions):
(1) Collect all losing wagers beginning with the player farthest to the dealer's right and continuing around the table in a counterclockwise direction and then pay off all winning wagers.
(2) Collect each player's losing wagers and pay off each player's winning wagers beginning with the player farthest to the dealer's right and continuing around the table in a counterclockwise direction. The dealer shall place any losing wagers directly into the table inventory and may not pay off any player's winning wagers by using value chips collected from a losing wager.
(u) After all wagers have been settled, the dealer shall remove any remaining cards from the table and place them in the discard rack in a manner that permits the reconstruction of each hand in the event of a question or dispute.
(v) Players and spectators may not handle, remove or alter any cards used to play Double Back Jack.

## § 673a.8. Insurance Wager.

(a) If the first card dealt to the dealer is an ace, each player may make an Insurance Wager which shall win if the dealer's hole card is a king, queen, jack or 10.
(b) An Insurance Wager may be made by placing a value chip on the insurance line of the layout in an amount not more than $1 / 2$ of the player's initial Blackjack Wager. A player may wager an amount in excess of $1 / 2$ of the initial Blackjack Wager to the next unit that can be wagered in chips, when, because of the limitation of the value of chip denominations, half the initial Blackjack Wager cannot be bet. Insurance Wagers shall be placed prior to the dealer inserting his hole card into the card reader device.
(c) Winning Insurance Wagers shall be paid in accordance with the payout odds in § 673a.12(c) (relating to payout odds).
(d) Losing Insurance Wagers shall be collected by the dealer immediately after the dealer inserts his hole card into the card reader device and determines that he does not have a Blackjack and before he draws any additional cards.

## § 673a.9. Surrender.

(a) After the first two cards are dealt to the player, the player may elect to discontinue play on his hand for that round by surrendering $1 / 2$ of his wager. All decisions to surrender shall be made prior to the player indicating whether he wishes to double down as permitted under $\S 673 a .10$ (relating to double down), split pairs as permitted under § 673a. 11 (relating to splitting pairs), stand or draw. If the first card dealt to the dealer:
(1) Is not an ace or 10 value card, the dealer shall immediately collect $1 / 2$ of the wager and return $1 / 2$ to the player.
(2) Is an ace or 10 value card, the dealer will place the player's wager on top of the player's cards. After the Insurance Wager is offered and the card reader device is utilized, the hand will be settled by immediately collecting the entire wager if the dealer has Blackjack or collecting $1 / 2$ of the wager and returning $1 / 2$ of the wager to the player if the dealer does not have Blackjack.
(b) If the player has made an Insurance Wager and then elects to surrender, each wager will be settled separately in accordance with subsection (a) and § 673a.8 (relating to Insurance Wager).

## § 673a.10. Double down.

(a) Except when a player has a Blackjack, a player may elect to double down on the first two cards dealt to him or the first two cards of any split pair. To double down, the player shall place an additional wager next to the player's original Blackjack Wager which may not exceed the amount of the player's original Blackjack Wager. Only one additional card shall be dealt to the hand on which the player has elected to double down.
(b) Upon a player's election to double down, the dealer shall deal the one additional card face up and place it sideways on the layout.
(c) A player may double down after splitting pairs as provided in § 673a. 11 (relating to splitting pairs).

## § 673a.11. Splitting pairs.

(a) If the initial two cards dealt to a player are identical in value, the player may elect to split the hand into a maximum of two separate hands provided that he makes a wager on the second hand formed in an amount equal to his original Blackjack Wager. For example, if a player has two 7 s or a king and a 10, the player may elect to split the hand.
(b) When a player splits pairs, the dealer shall deal a card to and complete the player's decisions with respect to the first incomplete hand on the dealer's left before proceeding to deal any cards to the second hand. If a player's hand contains an ace and a 10 value card after the player's hand is split and an additional card is dealt, the player shall be paid out for a 21 not a Blackjack.
(c) After a second card is dealt to each split pair hand, the player shall indicate his decision to stand, draw or double down with respect that hand.

## § 673a.12. Payout odds.

(a) The certificate holder shall pay each winning Blackjack Wager at odds of 1 to 1 with the exception of a player Blackjack which shall be paid at odds of 2 to 1 .
(b) The certificate holder shall pay out winning Second Chance Wagers at odds of 1 to 1.
(c) The certificate holder shall pay out winning Insurance Wagers at odds of 2 to 1.

## § 673a.13. Irregularities.

(a) A card found face up in the shoe may not be used in that round of play and shall be placed in the discard rack or in a segregated area of the double shoe.
(b) A card drawn in error without its face being exposed shall be used as though it were the next card from the shoe.
(c) After the initial two cards have been dealt to each player and a card is drawn in error and exposed to the players, the card shall be dealt to the players or dealer as though it were the next card from the shoe. Any player refusing to accept the card may not have any additional cards dealt to him during the round. If the card is refused by the players and the dealer cannot use the card, the card shall be placed in the discard rack.
(d) If the dealer has 17 and accidentally draws a card for himself, the card shall be placed in the discard rack.
(e) If the dealer misses dealing his first or second card to himself, the dealer shall continue dealing the first two cards to each player and then deal the appropriate number of cards to himself.
(f) If there are insufficient cards remaining in the shoe to complete a round of play, all of the cards in the discard rack shall be shuffled and cut according to the procedures in $\S 673 \mathrm{a} .5$ (relating to shuffle and cut of the cards). The first card shall be drawn face down and placed in the discard rack and the dealer shall complete the round of play.
(g) If no cards are dealt to a player's hand, the hand is dead and the player shall be included in the next deal. If only one card is dealt to a player's hand, at the player's option, the dealer shall deal the second card to the player after all other players have received a second card.
(h) If after receiving the first two cards, the dealer fails to deal an additional card to a player who has requested a card, then, at the player's option, the dealer shall either deal the additional card after all other players have received their additional cards but prior to the dealer revealing his hole card or call the player's hand dead and return the player's original Blackjack Wager.
(i) If the dealer inserts his hole card into a card reader device when the value of his first card is not an ace, king, queen, jack or 10 , the dealer, after notification to a floorperson or above, shall continue play.
(j) If a card reader device malfunctions, the dealer may not continue dealing the game of Blackjack at that table until the card reader device is repaired or replaced.
(k) If an automated card shuffling device is being used and the device jams, stops shuffling during a shuffle or fails to complete a shuffle cycle, the cards shall be reshuffled.
(l) If an automated shuffling device malfunctions and cannot be used, the device must be covered or have a sign indicating that it is out of order placed on the device before any other method of shuffling may be utilized at that table.

## CHAPTER 674a. CRISS-CROSS POKER

Sec.
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## § 674a.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:
Across Hand-A five-card Poker hand formed for each player by combining the two cards dealt to the player and the three community cards on the horizontal line of the cross.

Community cards-Cards which are used by all players to form a five-card Poker hand.
Down Hand-A five-card Poker hand formed for each player by combining the two cards dealt to the player and the three community cards on the vertical line of the cross.

## § 674a.2. Criss-Cross Poker table physical characteristics.

(a) Criss-Cross Poker shall be played at a table having betting positions for no more than six players on one side of the table and a place for the dealer on the opposite side of the table.
(b) The layout for a Criss-Cross Poker table shall be submitted to the Bureau of Gaming Operations in accordance with § 601a.10(a) (relating to approval of table game layouts, signage and equipment) and contain:
(1) The name or logo of the certificate holder.
(2) Five separate betting areas for each player designated for the placement of the Ante Across and Ante Down Wagers required under § 674a.7(d) (relating to wagers) and the Across, Down and Middle Bets as provided in § 674a.11(b), (d) and (f) (relating to procedures for completion of each round of play).
(3) Five separate areas designated for the placement of the five community cards. The area for the community cards must form a cross with one box furthest from the table inventory container, three boxes in the center row and one box directly in front of the table inventory container.
(4) If the certificate holder offers the optional Five Card Bonus Wager authorized under § 674a.7(e), a separate area designated for the placement of the Five Card Bonus Wager for each player.
(5) Inscriptions that advise patrons of the payout odds or amounts for all permissible wagers offered by the certificate holder. If payout odds or amounts are not inscribed on the layout, a sign identifying the payout odds
or amounts for all permissible wagers shall be posted at each Criss-Cross Poker table.
(6) If the certificate holder establishes a payout limit per player per round of play as authorized under § 674a.12(d) (relating to payout odds), inscriptions that advise patrons of the payout limit. If the limit is not inscribed on the layout, a sign identifying the payout limit shall be posted at each Criss-Cross Poker table.
(c) Each Criss-Cross Poker table must have a drop box and a tip box attached on the same side of the table as, but on opposite sides of, the dealer as approved by the Bureau of Casino Compliance in accordance with $\S 601 \mathrm{a} .10(\mathrm{~g})$. The Bureau of Casino Compliance may approve an alternative location for the tip box when a card shuffling device or other table game equipment prevents the placement of the drop box and tip box on the same side of the gaming table as, but on opposite sides of, the dealer.
(d) Each Criss-Cross Poker table must have a discard rack securely attached to the top of the dealer's side of the table.

## § 674a.3. Cards; number of decks.

(a) Except as provided in subsection (b), Criss-Cross Poker shall be played with one deck of cards that are identical in appearance and one cover card.
(b) If an automated card shuffling device is utilized, Criss-Cross Poker may be played with two decks of cards in accordance with the following requirements:
(1) The cards in each deck must be of the same design. The backs of the cards in one deck must be of a different color than the cards included in the other deck.
(2) One deck of cards shall be shuffled and stored in the automated card shuffling device while the other deck is being used to play the game.
(3) Both decks of cards shall be continuously alternated in and out of play, with each deck being used for every other round of play.
(4) The cards from only one deck shall be placed in the discard rack at any given time.
(c) The decks of cards used in Criss-Cross Poker shall be changed at least every:
(1) Four hours if the cards are dealt by hand.
(2) Eight hours if the cards are dealt from a manual or automated dealing shoe.

## § 674a.4. Opening of the table for gaming.

(a) After receiving one or more decks of cards at the table, the dealer shall inspect the cards for any defects. The floorperson assigned to the table shall verify the inspection.
(b) After the cards are inspected, the cards shall be spread out face up on the table for visual inspection by the first player to arrive at the table. The cards shall be spread in horizontal fan shaped columns by deck according to suit and in sequence.
(c) After the first player arriving at the table has been afforded an opportunity to visually inspect the cards, the cards shall be turned face down on the table, mixed thoroughly by a washing of the cards and stacked. Once the cards have been stacked, the cards shall be shuffled in accordance with $\S 674$ a. 5 (relating to shuffle and cut of the cards).
(d) If an automated card shuffling device is utilized and two decks of cards are received at the table, each deck of cards shall be spread for inspection, mixed, stacked and shuffled in accordance with subsections (a)-(c).
(e) If the decks of cards received at the table are preinspected and preshuffled in accordance with § 603a.16(u) or (v) (relating to cards; receipt, storage, inspection and removal from use), subsections (a)-(d) do not apply.

## § 674a.5. Shuffle and cut of the cards.

(a) Immediately prior to commencement of play, unless the cards were preshuffled in accordance with $\S 603 \mathrm{a} .16(\mathrm{u})$ or (v) (relating to cards; receipt, storage, inspection and removal from use), after each round of play has been completed or when directed by a floorperson or above, the dealer shall shuffle the cards, either manually or by use of an automated card shuffling device, so that the cards are randomly intermixed. Upon completion of the shuffle, the dealer or automated shuffling device shall place the deck of cards in a single stack. The certificate holder may use an automated card shuffling device which, upon completion of the shuffling of the cards, inserts the stack of cards directly into a dealing shoe.
(b) If an automated card shuffling device is being used, which counts the number of cards in the deck after the completion of each shuffle and indicates whether 52 cards are present, and the device reveals that an incorrect number of cards are present, the deck shall be removed from the table.
(c) After the cards have been shuffled and stacked, the dealer shall:
(1) If the cards were shuffled using an automated card shuffling device, deal the cards in accordance with $\S 674 \mathrm{a} .8, \S 674 \mathrm{a} .9$ or $\S 674 \mathrm{a} .10$ (relating to procedure for dealing the cards from a manual dealing shoe; procedure for dealing the cards from the hand; and procedure for dealing the cards from an automated dealing shoe).
(2) If the cards were shuffled manually or were preshuffled, cut the cards in accordance with the procedures in subsection (d).
(d) If a cut of the cards is required, the dealer shall place the cover card in the stack at least ten cards in from the top of the stack. Once the cover card has been inserted, the dealer shall take all cards above the cover card and the cover card and place them on the bottom of the stack. The stack of cards shall then be inserted into the dealing shoe for commencement of play.
(e) After the cards have been cut and before the cards have been dealt, a floorperson or above may require the cards to be recut if the floorperson determines that the cut was performed improperly or in any way that might affect the integrity or fairness of the game.
(f) If there is no gaming activity at a Criss-Cross Poker table which is open for gaming, the cards shall be removed from the dealing shoe and discard rack and spread out on the table face down unless a player requests that the cards be spread face up on the table. After the first player arriving at the table is afforded an opportunity to visually inspect the cards, the procedures in § 674a.4(c) (relating to opening of the table for gaming) and this section shall be completed.
(g) A certificate holder may utilize a dealing shoe or other device that automatically reshuffles and counts the
cards provided that the device is submitted to the Bureau of Gaming Laboratory Operations and approved in accordance with § 461a. 4 (relating to submission for testing and approval) prior to its use in the licensed facility. If a certificate holder is utilizing the approved device, subsections (d)-(f) do not apply.

## § 674a.6. Criss-Cross Poker rankings.

(a) The rank of the cards used in Criss-Cross Poker shall be: ace, king, queen, jack, 10, 9, 8, 7, 6, 5, 4, 3 and 2. Notwithstanding the foregoing, an ace may be used to complete a straight flush or a straight formed with a 2,3 , 4 and 5 but may not be combined with any other sequence of cards (for example, queen, king, ace, 2 and 3). All suits shall be equal in rank.
(b) The permissible Poker hands in the game of CrissCross Poker, in order of highest to lowest rank, shall be:
(1) A royal flush, which is a hand consisting of an ace, king, queen, jack and 10 of the same suit.
(2) A straight flush, which is a hand consisting of five cards of the same suit in consecutive ranking, other than a royal flush.
(3) A four-of-a-kind, which is a hand consisting of four cards of the same rank.
(4) A full house, which is a hand consisting of a three-of-a-kind and a pair.
(5) A flush, which is a hand consisting of five cards of the same suit, not in consecutive order.
(6) A straight, which is a hand consisting of five cards of consecutive rank of different suits.
(7) A three-of-a-kind, which is a hand consisting of three cards of the same rank.
(8) Two pairs, which is a hand consisting of two pairs.
(9) A pair, which is a hand consisting of two cards of the same rank.

## § 674a.7. Wagers.

(a) Wagers at Criss-Cross Poker shall be made by placing value chips, plaques or other Board-approved table game wagering instruments on the appropriate areas of the table layout. Verbal wagers accompanied by cash may not be accepted.
(b) Only players who are seated at a Criss-Cross Poker table may wager at the game. Once a player has placed a wager and received cards, that player shall remain seated until the completion of the round of play. If a player leaves the table during a round of play, any wagers made by the player may be considered abandoned and may be treated as losing wagers.
(c) All Ante Across and Ante Down Wagers shall be placed prior to the dealer announcing "no more bets" in accordance with the dealing procedures in § 674a.8, $\S 674 \mathrm{a} .9$ or $\S 674 \mathrm{a} .10$ (relating to procedure for dealing the cards from a manual dealing shoe; procedure for dealing the cards from the hand; and procedure for dealing the cards from an automated dealing shoe). Except as provided in § 674a.11(b), (d) and (f) (relating to procedures for completion of each round of play), a wager may not be made after the dealer has announced "no more bets."
(d) To participate in a round of play, a player shall place two equal but separate Ante Wagers designated as Ante Across and Ante Down.
(e) If specified in its Rules Submission under § 601a. 2 (relating to table games Rules Submissions), a certificate holder may offer to each player at a Criss-Cross Poker table the option to make an additional Five Card Bonus Wager that the five community cards will form a hand with a rank of a pair of 6 s or better. After placing the Ante Wagers required under subsection (d), a player may make an additional Five Card Bonus Wager by placing a value chip onto the designated betting area for that player. A Five Card Bonus Wager will not have a bearing on any other wagers made by the player.
(f) Across, Down and Middle Bets shall be made in accordance with § 674a.11(b), (d) and (f).
(g) A player may not wager on more than one player position at a Criss-Cross Poker table.

## § 674a.8. Procedure for dealing the cards from a manual dealing shoe.

(a) If a manual dealing shoe is used, the dealing shoe must be located on the table in a location approved by the Bureau of Casino Compliance in accordance with § 601a.10(g) (relating to approval of table game layouts, signage and equipment). Once the procedures required under § 674a. 5 (relating to shuffle and cut of the cards) have been completed, the stacked deck of cards shall be placed in the dealing shoe by the dealer or by an automated card shuffling device.
(b) Prior to dealing any cards, the dealer shall announce "no more bets."
(c) Each card shall be removed from the dealing shoe with the hand of the dealer that is closest to the dealing shoe and placed on the appropriate area of the layout with the opposite hand.
(d) The dealer shall deal five community cards face down to form a cross with one card in the box furthest from the dealer, three cards in the second row and one card in the box closest to the dealer. After dealing the five community cards, starting with the player farthest to the dealer's left and continuing around the table in a clockwise manner, the dealer shall deal one card at a time, face down to each player who has placed the two required Ante Wagers in accordance with § 674a.7(d) (relating to wagers) until each player has two cards.
(e) After five cards have been dealt to the area designated for the placement of the community cards and two cards have been dealt to each player, the dealer shall remove the stub from the manual dealing shoe and, except as provided in subsection (f), place the stub in the discard rack without exposing the cards.
(f) If an automated card shuffling device, which counts the number of cards in the deck after the completion of each shuffle and indicates whether 52 cards are present, is not being used, the dealer shall count the stub at least once every 5 rounds of play to determine if the correct number of cards are still present in the deck. The dealer shall determine the number of cards in the stub by counting the cards face down on the layout.
(g) If the count of the stub indicates that 52 cards are in the deck, the dealer shall place the stub in the discard rack without exposing the cards.
(h) If the count of the stub indicates that the number of cards in the deck is incorrect, the dealer shall determine if the cards were misdealt. If the cards were misdealt (a player has more or less than 2 cards or the
area designed for the placement of the community cards has more or less than 5 cards) but 52 cards remain in the deck, all hands shall be void and all wagers shall be returned to the players. If the cards were not misdealt, all hands shall be void, all wagers shall be returned to the players and the entire deck of cards shall be removed from the table.

## § 674a.9. Procedure for dealing the cards from the hand.

(a) If the cards are dealt from the dealer's hand, the following requirements shall be observed:
(1) An automated shuffling device shall be used to shuffle the cards.
(2) After the procedures required under § 674a.5 (relating to shuffle and cut of the cards) have been completed, the dealer shall place the stacked deck of cards in either hand. After the dealer has chosen the hand in which he will hold the cards, the dealer shall continue to use that hand whenever holding the cards during that round of play. The cards held by the dealer shall be kept over the table inventory container and in front of the dealer at all times.
(3) Prior to dealing any cards, the dealer shall announce "no more bets."
(b) The dealer shall deal each card by holding the deck of cards in the chosen hand and use the other hand to remove the top card of the deck. The dealer shall deal five community cards face down to form a cross with one card in the box furthest from the dealer, three cards in the second row and one card in the box closest to the dealer. After dealing the five community cards, starting with the player farthest to the dealer's left and continuing around the table in a clockwise manner, the dealer shall deal one card at a time, face down to each player who has placed the two required Ante Wagers in accordance with § 674a.7(d) (relating to wagers) until each player has two cards.
(c) After five cards have been dealt to the area designated for the placement of the community cards and two cards have been dealt to each player, the dealer shall, except as provided in subsection (d), place the stub in the discard rack without exposing the cards.
(d) If an automated card shuffling device, which counts the number of cards in the deck after the completion of each shuffle and indicates whether 52 cards are present, is not being used, the dealer shall count the stub at least once every 5 rounds of play to determine if the correct number of cards are still present in the deck. The dealer shall determine the number of cards in the stub by counting the cards face down on the layout.
(e) If the count of the stub indicates that 52 cards are in the deck, the dealer shall place the stub in the discard rack without exposing the cards.
(f) If the count of the stub indicates that the number of cards in the deck is incorrect, the dealer shall determine if the cards were misdealt. If the cards were misdealt (a player has more or less than 2 cards or the area designed for the placement of the community cards has more or less than 5 cards) but 52 cards remain in the deck, all hands shall be void and all wagers shall be returned to the players. If the cards were not misdealt, all hands shall be void, all wagers shall be returned to the players and the entire deck of cards shall be removed from the table.
$\S$ 674a.10. Procedure for dealing the cards from an automated dealing shoe.
(a) If the cards are dealt from an automated dealing shoe, the following requirements shall be observed:
(1) After the procedures required under § 674a.5 (relating to shuffle and cut of the cards) have been completed, the cards shall be placed in the automated dealing shoe.
(2) Prior to the shoe dispensing any stacks of cards, the dealer shall announce "no more bets."
(b) The dealer shall deliver the first stack of five cards dispensed by the automated dealing shoe face down to the area designated for the placement of the community cards. The dealer shall spread the stack within the designated area to form a cross with one card placed in the box furthest from the dealer, three cards in the second row and one card in the box closest to the dealer. After dealing the five community cards, starting with the player farthest to the dealer's left and continuing around the table in a clockwise manner, the dealer shall deliver a stack of two cards face down to each of the players who has placed the two required Ante Wagers in accordance with § 674a.7(d) (relating to wagers).
(c) After each stack of cards has been dispensed and delivered in accordance with subsection (b), the dealer shall remove the stub from the automated dealing shoe and, except as provided in subsection (d), place the cards in the discard rack without exposing the cards.
(d) If an automated card shuffling device, which counts the number of cards in the deck after the completion of each shuffle and indicates whether 52 cards are present, is not being used, the dealer shall count the stub at least once every 5 rounds of play to determine if the correct number of cards are still present in the deck. The dealer shall determine the number of cards in the stub by counting the cards face down on the layout.
(e) If the count of the stub indicates that 52 cards are in the deck, the dealer shall place the stub in the discard rack without exposing the cards.
(f) If the count of the stub indicates that the number of cards in the deck is incorrect, the dealer shall determine if the cards were misdealt. If the cards were misdealt (a player has more or less than 2 cards or the area designed for the placement of the community cards has more or less than 5 cards) but 52 cards remain in the deck, all hands shall be void and all wagers shall be returned to the players. If the cards were not misdealt, all hands shall be void, all wagers shall be returned to the players and the entire deck of cards shall be removed from the table.
§ 674a.11. Procedures for completion of each round of play.
(a) After the dealing procedures required under $\S 674 \mathrm{a} .8$, § 674a. 9 or § 674a. 10 (relating to procedure for dealing the cards from a manual dealing shoe; procedure for dealing the cards from the hand; and procedure for dealing the cards from an automated dealing shoe) have been completed, each player shall examine his cards subject to the following limitations:
(1) Each player who wagers at Criss-Cross Poker shall be responsible for his own hand and no person other than the dealer and the player to whom the cards were dealt may touch the cards of that player.
(2) Each player shall keep his two cards in full view of the dealer at all times.
(b) After each player has examined his cards, the dealer shall, beginning with the player farthest to the dealer's left and moving clockwise around the table, ask each player if he wishes to place an Across Bet in an amount equal to one to three times the total amount of the player's Ante Across Wager. If a player does not place an Across Bet, the player's Ante Across and Ante Down Wagers shall be collected and the player's cards placed in the discard rack provided that if a player also placed a Five Card Bonus Wager, the player's Five Card Bonus Wager shall remain on the table until resolved in accordance with subsection (h)(5).
(c) After each player has made a decision regarding the Across Bet and any forfeited hands have been collected, the dealer shall then turn the two outside community cards in the horizontal row face up on the layout.
(d) After the first two community cards are exposed, the dealer shall, beginning with the player farthest to the dealer's left and moving clockwise around the table, ask each player if he wishes to place a Down Bet in an amount equal to one to three times the total amount of the player's Ante Down Wager. If a player does not place a Down Bet, the player's Ante Across Wager, Ante Down Wager and Across Bet shall be collected and the player's cards placed in the discard rack provided that if a player also placed a Five Card Bonus Wager, the player's Five Card Bonus Wager shall remain on the table until resolved in accordance with subsection (h)(5).
(e) The dealer shall then turn the two outside community cards in the vertical row face up leaving only the middle community card face down on the layout.
(f) After the third and fourth community cards are exposed, the dealer shall, beginning with the player farthest to the dealer's left and moving clockwise around the table, ask each player if he wishes to place a Middle Bet in an amount equal to one to three times the amount of the player's Ante Across or Ante Down Wager. If a player does not place a Middle Bet, the player's Ante Across Wager, Ante Down Wager, Across Bet and Down Bet shall be collected and the player's cards placed in the discard rack provided that if a player also placed a Five Card Bonus Wager, the player's Five Card Bonus Wager shall remain on the table until resolved in accordance with subsection (h)(5). After all remaining players have placed a Middle Bet, each player shall place his cards face down on the appropriate area of the layout.
(g) The dealer shall then turn the middle community card face up on the layout. After all five community cards are turned face up, the dealer shall, beginning with the player farthest to the dealer's right and continuing around the table in a counterclockwise direction, turn the two cards of the player face up on the layout. The player's two cards and the three community cards in the horizontal line shall form the player's five-card Across Hand while the player's two cards and the three community cards in the vertical line shall form the player's five-card Down Hand.
(h) The dealer shall settle all wagers of that player by collecting losing wagers and paying winning wagers as follows:
(1) If a player's Across Hand:
(i) Is less than a pair of 6 s , the dealer shall collect the losing Ante Across and Across Bet Wagers.
(ii) Is a pair of 6 s or better, as described in § 674a.6(b) (relating to Criss-Cross Poker rankings), the dealer shall return or pay out the winning Ante Across wager in
accordance with § 674a.12(a) (relating to payout odds) and the Across Bet in accordance with § 674a.12(b).
(2) If a player's Down Hand:
(i) Is less than a pair of 6 s , the dealer shall collect the losing Ante Down and Down Bet wagers.
(ii) Is a pair of 6 s or better, as described in $\S 674 \mathrm{a} .6(\mathrm{~b})$, the dealer shall return or pay out the winning Ante Down Wager in accordance with § 674a.12(a) and the Down Bet in accordance with § 674a.12(b).
(3) If neither of a player's Down or Across Hands contains a pair of 6 s or better, the dealer shall collect the losing Middle Bet Wager.
(4) If either of a player's Down or Across Hands contains a pair of 6 s or better, as described in § 674a.6(b), the dealer shall pay out the Middle Bet Wager in accordance with § 674a.12(b). The payout shall be based on the higher ranking Across Hand or Down Hand.
(5) After settling the player's other wagers, the dealer shall settle the player's Five Card Bonus Wager, if applicable. If the five community cards form a five-card Poker hand of a pair of 6 s or better, as described in § 674a.6(b), the dealer shall pay the winning Five Card Bonus Wager in accordance with § 674a.12(c).
(i) After all wagers of the player have been settled, the dealer shall remove the player's cards from the table and place them in the discard rack in a manner that permits the reconstruction of each hand in the event of a question or dispute.

## § 674a.12. Payout odds.

(a) Winning Ante Across and Ante Down Wagers shall be paid at the following odds:

| Hand | Payout |
| :--- | ---: |
| Pair of jacks or better | 1 to 1 |
| Pair of 6 s through 10 s | Push |

(b) Winning Across, Down and Middle Bet Wagers shall be paid at the following odds:

| Hand | Payout |
| :--- | ---: |
| Royal flush | 500 to 1 |
| Straight flush | 100 to 1 |
| Four-of-a-kind | 40 to 1 |
| Full house | 12 to 1 |
| Flush | 8 to 1 |
| Straight | 5 to 1 |
| Three-of-a-kind | 3 to 1 |
| Two pair | 2 to 1 |
| Pair of jacks, queens, kings or aces | 1 to 1 |
| Pair of 6s through 10s | Push |

(c) If a certificate holder offers the Five Card Bonus Wager, winning Five Card Bonus Wagers shall be paid out at the following odds:

| Hand | Payout |
| :--- | ---: |
| Royal flush | 250 to 1 |
| Straight flush | 100 to 1 |
| Four-of-a-kind | 40 to 1 |
| Full house | 15 to 1 |
| Flush | 10 to 1 |
| Straight | 6 to 1 |
| Three-of-a-kind | 4 to 1 |
| Two pair | 3 to 1 |
| Pair of 6 s or better | 1 to 1 |

(d) Notwithstanding the payout odds in subsections (a)-(c), if specified in its Rules Submission form filed in accordance with § 601a. 2 (relating to table game Rules Submissions), the certificate holder may establish an aggregate payout limit per player per round of play which may not be less than $\$ 50,000$ or the maximum amount that one patron could win per round when betting the minimum wager, whichever is greater.

## § 674a.13. Irregularities.

(a) A card that is found face up in the shoe or the deck while the cards are being dealt may not be used in that round of play and shall be placed in the discard rack. If more than one card is found face up in the shoe or the deck during the dealing of the cards, all hands shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(b) A card drawn in error without its face being exposed shall be used as though it were the next card from the shoe or the deck.
(c) If any player or the area designated for the placement of the community cards is dealt an incorrect number of cards, all hands shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(d) If any of the community cards are inadvertently exposed prior to the dealer revealing the community cards in accordance with § 674a.11(c), (e) and (g) (relating to procedures for completion of each round of play), all hands shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(e) If an automated card shuffling device is being used and the device jams, stops shuffling during a shuffle or fails to complete a shuffle cycle, the cards shall be reshuffled.
(f) If an automated dealing shoe is being used and the device jams, stops dealing cards or fails to deal all cards during a round of play, the round of play shall be void, all wagers shall be returned to the players and the cards shall be removed from the device and reshuffled with any cards already dealt.
(g) If an automated card shuffling device or automated dealing shoe malfunctions and cannot be used, the automated card shuffling device or automated dealing shoe shall be covered or have a sign indicating that the automated card shuffling device or automated dealing shoe is out of order placed on the device before any other method of shuffling or dealing may be utilized at that table.

## CHAPTER 675a. HIGH ROLL DICE

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675a.2. Wagers; die ranking.
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675a.4. Procedure for completion of each round of play.
675a.5. Payout odds.
675a.6. High Roll Dice variation.
§ 675a.1. High Roll Dice table; physical characteristics.
(a) High Roll Dice shall be played at a table having betting positions for up to six players on one side of the table and a place for the dealer on the opposite side of the table.
(b) The layout for a High Roll Dice table shall be submitted to the Bureau of Gaming Operations and
approved in accordance with § 601a.10(a) (relating to approval of table game layouts, signage and equipment) and contain, at a minimum:
(1) The name or logo of the certificate holder.
(2) At each betting position:
(i) For the Like Kind Boulevard Wagers, seven circles containing the numbers two of a kind through eight of a kind.
(ii) For the Millionaire Row Wagers, two circles containing the numbers nine of a kind and ten of a kind and the inscription "First Roll Side Bet."
(iii) For the Pip Street Wagers, a depiction of six dice displaying a value of one through six with the two-spot die farthest to the player's left and the one-spot die farthest to the player's right.
(iv) An inscription advising players that all Pip Street and Like Kind Boulevard Wagers and the purchase of an Extra Roll must be of equal value.
(v) An extra-roll sensor for the placement of an Extra Roll purchased by the player.
(3) The payout odds, in accordance with § 675a.5 (relating to payout odds), for all permissible wagers offered by the certificate holder. If the payout odds are not on the layout, a sign identifying the payout odds shall be posted at each High Roll Dice table.
(4) If the certificate holder establishes a payout limit per player per round of play, as authorized under § 675a.5(1) (relating to payout odds), inscriptions that advise patrons of the payout limit. If the limit is not inscribed on the layout, a sign identifying the payout limit shall be posted at each high roll dice table.
(5) A throw box set into the surface of the High Roll Dice table. The throw box layout must contain an area for the placement of dice labeled "Ace" through "Six" with the "Ace" box farthest to the left of the dealer and the "Two" box farthest to the right of the dealer.
(c) The High Roll Dice table must have an electronic system for the placement of an Extra Roll purchased by the player. The electronic system must include:
(1) A wagering device at each betting position that acknowledges or accepts the placement of the Extra Roll purchased by the player.
(2) A device that controls or monitors the placement of an Extra Roll purchased at the gaming table, including a mechanism, such as a lock-out button, that prevents the recognition of an Extra Roll that a player attempts to purchase after the dealer has announced "no more bets."
(d) Each High Roll Dice table must have a drop box with a tip box attached on the same side of the gaming table as, but on opposite sides of, the dealer, as approved by the Bureau of Casino Compliance in accordance with § 601a.10(g).

## § 675a.2. Wagers; die ranking.

(a) All wagers and the purchase of an extra roll shall be made before the dice are shaken by the dealer.
(b) Wagers and the purchase of an extra roll shall be made by placing value chips or plaques on the appropriate areas of the layout. Verbal wagers and the purchase of an extra roll accompanied by cash may not be accepted.
(c) Only players who are seated at a High Roll Dice table may place a wager at the game. Once a player has
placed a wager, that player shall remain seated until the completion of the round of play.
(d) For High Roll Dice, a die with a value of 1, or ace, is the highest in rank followed by a $6,5,4$ and 3 , with a 2 being the lowest value die.
(e) The following wagers are authorized in High Roll Dice:
(1) To participate in a round of play, each player shall place a Pip Street Wager on any or all of the depictions of six dice contained at the top of the player's wagering area. For purposes of the Pip Street Wager, the player is wagering on which die face will occur the greatest number of times in the first roll. For example, if a dealer throws:
(i) Three 6 s and four 4 s , the 4 s occurred the most during the first roll.
(ii) Three 6 s and three 1 s , the 1 s occurred the most as an ace has a higher value than a 6 for purposes of High Roll Dice.
(2) After placing a Pip Street Wager, a player may place a Like Kind Boulevard Wager equal to the player's Pip Street Wager on any or all of the numbered circles two through eight. For purposes of the Like Kind Wager, the player is wagering on how many of the most matching dice will be rolled on the first roll. For example, if a dealer throws:
(i) Three 6 s and four 1 s , the result would be four matching dice, or a four-of-a-kind.
(ii) Five 2 s and three 1 s , the result would be five matching dice, or a five-of-a-kind.
(3) If a player placed a Like Kind Boulevard Wager, the player may also purchase an extra roll by placing an amount equal to the player's Like Kind Boulevard Wager on the extra-roll sensor. The purchase of an Extra Roll will entitle the player to an additional throw of nonmatching dice. For example, if a dealer threw two 6 s and four 1 s on the first throw and two additional 1 s on the second roll, there would be a total of six matching dice, or a six-of-a-kind.
(4) A player may place a Millionaire Row Wager on either or both of the numbered nine or ten circles. For purposes of the Millionaire Row Wager, the player is wagering that all nine or ten dice will match on the first roll. The Millionaire Row Wager may not be more than \$1.

## § 675a.3. Dice; shaker.

(a) High Roll Dice shall be played with ten 19 mm dice. Dice used in the play of the game shall comply with § 603a.12(a)(2)-(10) and (d) (relating to dice; physical characteristics) and the receipt and inspection requirements in § 603a. 13 (relating to dice; receipt, storage, inspection and removal from use).
(b) High Roll Dice shall be played with a dice shaker, approved in accordance with § 601a.10(a) (relating to approval of table game layouts, signage and equipment), which shall be used to shake the ten dice to arrive at the winning combinations. The dice shaker shall be designed and constructed to maintain the integrity of the game and must:
(1) Be capable of effectively shaking ten dice. Dice that have been placed in a dice shaker for use in gaming may not remain on a table for more than 24 hours.
(2) Have the name or logo of the certificate holder imprinted or impressed thereon.
(c) The dice shaker is the responsibility of the dealer and may not be left unattended while at the table.
(d) A shaker and ten dice shall be present at the High Roll Dice table for gaming.
§ 675a.4. Procedure for completion of each round
of play.
(a) After all players have placed their wagers, the dealer shall announce "no more bets" and if any player placed an Extra Roll Wager use the electronic device to prevent the placement of additional Extra Roll Wagers. If any Extra Roll Wagers have been made, the dealer shall collect the wagers and place them in the table inventory container.
(b) The dealer shall cover and shake the shaker containing the dice at least three times to cause a random mixture of the dice. The dealer shall then simultaneously throw the dice into the throw box. A roll of the dice shall be invalid if any of the dice go off the table or if one die comes to rest on top of the other.
(c) In the event any of the dice do not land flat on the table (for example, one edge of the die is resting cocked on a stack of chips), the side directly opposite the side that is resting on the chips or other object shall be considered uppermost or skyward. If more than one side of a die is resting on a stack of chips or other object, the roll shall be void and the dice shall be placed back in the throw cup, shaken and rethrown.
(d) When the dice come to rest from a valid throw, the dealer shall call out which die of the highest value occurs the most.
(e) After the first roll, the dealer shall announce to the players the matching dice of the highest value. After announcing the winning combination, the dealer shall move all matching dice of the highest value into the corresponding box on the throw box layout. For example, if there were four 5 s , three 6 s and two 1 s and one 4 , the dealer shall move the four 5 s into the box on the throw layout labeled "Five." To move the dice to the designated area on the throw box layout, the dealer shall leave the dice exposed and may not cover the dice or impede surveillance's ability to view the dice at any time the dice are on the throw box layout.
(f) The dealer shall then settle each player's first roll wagers as follows:
(1) The dealer shall collect the player's losing Pip Street Wagers and pay out all winning Pip Street Wagers in accordance with § 675a.5(a) (relating to payout odds). For example, if a player placed a Pip Street Wager on the 5 die and the 2 die and the dealer threw four 5 s , three 6 s and two 1s and one 4, the dealer shall collect the losing Pip Street Wager placed on the 2 die and pay out the winning Pip Street Wager placed on the 5 die.
(2) For the Like Kind Wager, if a player:
(i) Did not purchase an Extra Roll, the dealer shall collect the player's losing Like Kind Boulevard Wagers and pay out any Like Kind Boulevard Wagers in accordance with $\S 675$ a.5(b). For example, if the dealer threw four 5 s , three 6 s and two 1 s and one 4 , the dealer shall collect all Like Kind Wagers that were not placed on the four-of-a-kind circle and pay out any winning wagers that were placed on the four-of-a-kind circle.
(ii) Also purchased an Extra Roll, the dealer shall pay out any winning Like Kind Boulevard Wagers in accordance with § 675a.5(b) and collect a player's losing Like

Kind Boulevard Wagers that have no possibility of winning with an extra roll. For example, if a player wagered on the three-of-a-kind, a four-of-a-kind and a five-of-akind and a four-of-a-kind was thrown on the first throw, the dealer shall pay the winning four-of-a-kind, collect the Like Kind Wager placed on the three-of-a-kind and leave the player's wager on the five-of-a-kind on the table layout until it is resolved in accordance with subsection (g).
(3) The dealer shall then settle the player's Millionaire Row Wagers by collecting any losing wagers and paying out any winning wagers in accordance with § 675a.5(c). For example, if nine matching dice were thrown on the first throw, the dealer shall collect all Millionaire Row Wagers that were not placed on the nine-of-a-kind and pay out any winning Millionaire Row Wagers that were placed on the nine-of-a-kind circle.
(g) If any player purchased an Extra Roll, the dealer shall then collect all dice except those of the highest value that were placed on a designated number on the throw box layout and place them in the shaker. For example, if the dealer threw three 6 s , three 4 s , two 2 s and two 1 s in the first throw, the three 6s would be placed on the "Six" in the throw box layout. The dealer would collect the three 4 s , two 2 s and the two 1 s , place them in the shaker, shake and throw the remaining dice in accordance with subsections (b) and (c).
(h) When the dice come to rest from a valid throw, the dealer shall call out the number of additional dice that match the highest number of matched dice thrown in the first throw. For example, if after the first throw three 6s were placed on the "Six" in the throw box layout and on the second throw an additional two 6 s were thrown, the extra roll would result in a total of a five-of-a-kind. The dealer shall collect any losing Like Kind Boulevard Wager and pay out any winning Like Kind Boulevard Wagers on the Extra Roll in accordance with § 675a.5(d), provided that if a player was paid out on a winning Like Kind Wager after the first roll, the player may not be paid out on the second roll for the same number. For example, if a player placed a winning Like Kind Wager on the four-of-a-kind and if no additional matching dice were thrown on the second roll, the player may not be paid out for the four-of-a-kind for the Extra Roll.

## § 675a.5. Payout odds.

(a) The certificate holder shall pay out winning Pip Street Wagers at the following odds:
Die Value with Most Matches Payout Odds
Two 6 to 1
Three 6 to 1
Four 5 to 1
Five 4 to 1
Six 4 to 1
One/ace 3 to 1
(b) The certificate holder shall pay out winning Like Kind Wager at the following odds:

Payout Odds
Eight-of-a-kind
5,000 to 1
Seven-of-a-kind 400 to 1
Six-of-a-kind 30 to 1
Five-of-a-kind 4 to 1
Four-of-a-kind 1 to 1
Three-of-a-kind 3 to 5
Two-of-a-kind 12 to 1
(c) The certificate holder shall pay out winning Millionaire Row Wagers at the following odds:

|  | Payout |
| :--- | ---: |
| Ten-of-a-kind | $\$ 1,000,000$ |
| Nine-of-a-kind | $\$ 50,000$ |

(d) The certificate holder shall pay out winning Like Kind Boulevard Wagers on the Extra Roll at the following odds:
Payout Odds
50 to 1
10 to 1
4 to 1
2 to 1
1 to 1
6 to 1

Eight-of-a-kind 50 to 1
Seven-of-a-kind 10 to 1
Six-of-a-kind
2 to 1
Five-of-a-kind
6 to 1
ments in § 603a. 13 (relating to dice; receipt, storage, inspection and removal from use).
(f) High Roll Dice shall be played with a dice shaker that complies with the requirements in § 675a.3(c) and (d) (relating to dice; shaker).
(g) After all players have placed their wagers, the dealer shall announce "no more bets" and complete the dealing procedures in § 675a.4(b) and (c) (relating to procedure for completion of each round of play).
(h) After the roll, the dealer shall call out which die of the highest value occurs the most then the matching dice of the highest value. After announcing the winning combination, the dealer shall move all matching dice of the highest value into the corresponding box on the throw box layout. For example, if there were three 5 s , two 6 s and one 4 , the dealer shall move the three 5 s into the box on the throw layout labeled "five." To move the dice to the designated area on the throw box layout, the dealer shall leave the dice exposed and may not cover the dice or impede surveillance's ability to view the dice at any time the dice are on the throw box layout.
(i) The dealer shall collect any losing Pip Street and Like Kind Boulevard Wagers and pay out any winning wagers in accordance with subsections ( j ) and ( k ).
(j) The certificate holder shall pay out winning Pip Street Wagers at the following odds:

| Die Value with Most Matches | Payout Odds |
| :--- | ---: |
| Two | 8 to 1 |
| Three | 6 to 1 |
| Four | 5 to 1 |
| Five | 4 to 1 |
| Six | 3 to 1 |
| One/ace | 2 to 1 |

(k) The certificate holder shall pay out winning Like Kind Wagers at the following odds:

## Payout Odds

Six-of-a-kind
6,000 to 1
Five-of-a-kind
200 to 1
Four-of-a-kind
15 to 1
Three-of-a-kind
2 to 1
Two-of-a-kind
1 to 2
No matches
60 to 1
(l) Notwithstanding the payout odds in subsections (j) and (k), if specified in its Rules Submission form filed in accordance with § 601a. 2 (relating to table games Rules Submissions), the certificate holder may establish an aggregate payout limit per player per round of play which may not be less than $\$ 50,000$ or the maximum amount that one patron could win per round when betting the minimum wager, whichever is greater.

## CHAPTER 676a. GO FORE IT

Sec.
676a.1. Definitions
676a.2. Go Fore It table physical characteristics.
676a.3. Cards; number of decks.
676a.4. Opening of the table for gaming.
676a.5. Shuffle and cut of the cards.
676a.6. Go Fore It rankings.
676a.7. Wagers.
676a.8. Procedure for dealing the cards from a manual dealing shoe.
676a.9. Procedure for dealing the cards from the hand.
676a.10. Procedures for dealing the cards from an automated dealing shoe.
676a.11. Procedures for completion of each round of play.
676a.12. Payout odds.
676a.13. Irregularities.

## § 676a.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:
Albatross-All four of the player's cards with a total point value of 8 or less.
Back 9 Wager-An additional wager that a player shall make to remain in play after the player reviews the first two cards of his hand.
Birdie-All four of the player's cards with a total point value of between 14 and 18 .
Eagle-All four of the player's cards with a total point value of between 9 and 13 .
Fold-The withdrawal of a player from a round of play by not making a Back 9 Wager.
Front 9 Wager-A wager that a player shall make to participate in a round of play.
Gopher Wager-An optional wager that at least one of the player's four cards will contain an ace.
Hand-The four-card hand that is held by each player and the dealer after the cards are dealt.
Hole cards-Two of the player's four cards dealt face down that are not viewed until after the dealer exposes his hand.
Par-All four of the player's cards with a total point value of between 19 and 24 .

Skins Wager-An optional wager a player may make to compete against the dealer's four cards.

## § 676a.2. Go Fore It table physical characteristics.

(a) Go Fore It shall be played at a table having betting positions for no more than six players on one side of the table and a place for the dealer on the opposite side of the table.
(b) The layout for Go Fore It shall be submitted to the Bureau of Gaming Operations and approved in accordance with § 601a.10(a) (relating to approval of table game layouts, signage and equipment) and contain, at a minimum:
(1) The name or logo of the certificate holder.
(2) Separate betting areas designated for the placement of the Skins, Gopher, Front 9 and Back 9 Wagers for each player.
(3) Inscriptions that advise patrons of the payout odds for all permissible wagers offered by the certificate holder. If the payout odds are not inscribed on the layout, a sign identifying the payout odds for all permissible wagers shall be posted at each Go Fore It table.
(4) An inscription indicating that the Skins Wager will be lost if the dealer's hand and the player's hand ties. If the information is not inscribed on the layout, a sign which sets forth the required information shall be posted at each Go Fore It table.
(c) Each Go Fore It table must have a drop box and a tip box attached on the same side of the table as, but on opposite sides of, the dealer, as approved by the Bureau of Casino Compliance in accordance with § 601a.10(g). The Bureau of Casino Compliance may approve an alternative location for the tip box when a card shuffling device or other table game equipment prevents the placement of the drop box and tip box on the same side of the gaming table as, but on opposite sides of, the dealer.
(d) Each Go Fore It table must have a discard rack securely attached to the top of the dealer's side of the table.

## § 676a.3. Cards; number of decks.

(a) Except as provided in subsection (b), Go Fore It shall be played with one deck of cards that are identical in appearance and one cover card.
(b) If an automated card shuffling device is utilized, Go Fore It may be played with two decks of cards in accordance with the following requirements:
(1) The cards in each deck must be of the same design. The backs of the cards in one deck must be of a different color than the cards included in the other deck.
(2) One deck of cards shall be shuffled and stored in the automated card shuffling device while the other deck is being used to play the game.
(3) Both decks of cards shall be continuously alternated in and out of play, with each deck being used for every other round of play.
(4) The cards from only one deck shall be placed in the discard rack at any given time.
(c) The decks of cards used in Go Fore It shall be changed at least every:
(1) Four hours if the cards are dealt by hand.
(2) Eight hours if the cards are dealt from a manual or automated dealing shoe.

## § 676a.4. Opening of the table for gaming.

(a) After receiving one deck or two decks of cards at the table, the dealer shall inspect the cards for defects. The floorperson assigned to the table shall verify the inspection.
(b) After the cards are inspected, the cards shall be spread out face up on the table for visual inspection by the first player to arrive at the table. The cards shall be spread in horizontal fan shaped columns by deck according to suit and in sequence.
(c) After the first player arriving at the table has been afforded an opportunity to visually inspect the cards, the cards shall be turned face down on the table, mixed thoroughly by a washing of the cards and stacked. Once the cards have been stacked, the cards shall be shuffled in accordance with $\S 676$ a. 5 (relating to shuffle and cut of the cards).
(d) If an automated card shuffling device is utilized and two decks of cards are received at the table, each deck of cards shall be spread for inspection, mixed, stacked and shuffled in accordance with subsections (a)-(c).
(e) If the decks of cards received at the table are preinspected and preshuffled in accordance with § 603a.16(u) or (v) (relating to cards; receipt, storage, inspection and removal from use), subsections (a)-(d) do not apply.

## § 676a.5. Shuffle and cut of the cards.

(a) Immediately prior to commencement of play, unless the cards were preshuffled in accordance with $\S 603 \mathrm{a} .16(\mathrm{u})$ or (v) (relating to cards; receipt, storage, inspection and removal from use), after each round of play has been completed or when directed by a floorperson or above, the dealer shall shuffle the cards, either manually or by use of an automated card shuffling device, so that the cards are randomly intermixed. Upon
completion of the shuffle, the dealer or automated shuffling device shall place the deck of cards in a single stack. The certificate holder may use an automated card shuffling device which, upon completion of the shuffling of the cards, inserts the stack of cards directly into a dealing shoe.
(b) If an automated card shuffling device is being used, which counts the number of cards in the deck after the completion of each shuffle and indicates whether 52 cards are present, and the device reveals that an incorrect number of cards are present, the deck shall be removed from the table.
(c) After the cards have been shuffled and stacked, the dealer shall:
(1) If the cards were shuffled using an automated card shuffling device, deal or deliver the cards in accordance with § 676a.8, § 676a.9 or § 676a. 10 (relating to procedure for dealing the cards from a manual dealing shoe; procedure for dealing the cards from the hand; and procedures for dealing the cards from an automated dealing shoe).
(2) If the cards were shuffled manually, cut the cards in accordance with subsection (d).
(d) If a cut of the cards is required, the dealer shall place the cover card in the stack at least ten cards in from the top of the stack. Once the cover card has been inserted, the dealer shall take all cards above the cover card and the cover card and place them on the bottom of the stack. The stack of cards shall then be inserted into the dealing shoe for commencement of play.
(e) After the cards have been cut and before any cards have been dealt, a floorperson or above may require the cards to be recut if the floorperson determines that the cut was performed improperly or in any way that might affect the integrity or fairness of the game.
(f) If there is no gaming activity at a Go Fore It table which is open for gaming, the cards shall be spread out on the table face down unless a player requests that the cards be spread face up on the table. After the first player arriving at the table is afforded an opportunity to visually inspect the cards, the procedures in § 676a.4(c) (relating to opening of the table for gaming) and this section shall be completed.
(g) A certificate holder may utilize a dealing shoe or other device that automatically reshuffles and counts the cards provided that the device is submitted to the Bureau of Gaming Laboratory Operations and approved in accordance with § 461a.4 (relating to submission for testing and approval) prior to its use in the licensed facility. If a certificate holder is utilizing the approved device, subsections (d)-(f) do not apply.

## § 676a.6. Go Fore It rankings.

The point value assigned to the cards used in Go Fore It shall be:

| Card | Point Value |
| :--- | ---: |
| Ace | 1 |
| Jack, queen, king | 10 |
| 2 through 10 | Face value |

2 through 10
Face value

## § 676a.7. Wagers.

(a) Wagers at Go Fore It shall be made by placing value chips or plaques on the appropriate areas of the table layout. Verbal wagers accompanied by cash may not be accepted.
(b) Only players who are seated at a Go Fore It table may wager at the game. Once a player has placed a wager and received cards, that player shall remain seated until the completion of the round of play. If a player leaves the table during a round of play, any wagers made by the player may be considered abandoned and may be treated as losing wagers.
(c) All wagers, except the Back 9 Wager, shall be placed prior to the dealer announcing "no more bets" in accordance with the dealing procedure in § 676a.8, § 676a.9 or § 676a.10 (relating to procedure for dealing the cards from a manual dealing shoe; procedure for dealing the cards from the hand; and procedures for dealing the cards from an automated dealing shoe). Except as provided in $\S 676 \mathrm{a} .11(\mathrm{~b})$ (relating to procedures for completion of each round of play), a wager may not be made, increased or withdrawn after the dealer has announced "no more bets."
(d) The following wagers may be placed in the game of Go Fore It:
(1) A Front 9 Wager, which is required to participate in a round of play.
(2) A Back 9 Wager equal to the player's Front 9 Wager which is required to continue in the round of play after the player views his first to cards.
(3) An optional Skins Wager to compete against the total point count of the dealer's hand.
(4) A Gopher Wager that at least one of the player's four cards will contain an ace.
(e) A player may not wager on more than one player position at a Go Fore It table.
§ 676a.8. Procedure for dealing the cards from a
manual dealing shoe. manual dealing shoe.
(a) If a manual dealing shoe is used, the dealing shoe must be located on the table in a location approved by the Bureau of Casino Compliance in accordance with $\S 601 \mathrm{a} .10(\mathrm{~g})$ (relating to approval of table game layouts, signage and equipment). Once the procedures required under § 676a.5 (relating to shuffle and cut of the cards) have been completed, the stacked deck of cards shall be placed in the dealing shoe by the dealer or by the automated card shuffling device.
(b) Prior to dealing the cards, the dealer shall announce "no more bets" and starting with the player farthest to the dealer's left and continuing around the table in a clockwise manner, deal one card at a time to each player who placed the required Front 9 Wager in accordance with § 676a.7(d)(1) (relating to wagers) until each player who placed the required Front 9 Wager and the dealer has four cards. The first two cards dealt to the player shall be placed in front of the player. The second two cards dealt to the player shall be dealt behind the front two cards and shall be the player's hole cards. Each card shall be removed from the dealing shoe with the hand of the dealer that is the closest to the dealing shoe and placed on the appropriate area of the layout with the opposite hand.
(c) After two stacks of two cards have been dealt to each player and four cards to the dealer, the dealer shall remove the stub from the manual dealing shoe and, except as provided in subsection (d), place the stub in the discard rack without exposing the cards.
(d) If an automated card shuffling device, which counts the number of cards in the deck after the completion of each shuffle and indicates whether 52 cards are present,
is not being used, the dealer shall count the stub at least once every 5 rounds of play to determine if the correct number of cards are still present in the deck. The dealer shall determine the number of cards in the stub by counting the cards face down on the layout.
(e) If the count of the stub indicates that 52 cards are in the deck, the dealer shall place the stub in the discard rack without exposing the cards.
(f) If the count of the stub indicates that the number of cards in the deck is incorrect, the dealer shall determine if the cards were misdealt. If the cards were misdealt but 52 cards remain in the deck, all hands shall be void and all wagers shall be returned to the players. If the cards were not misdealt, all hands shall be void, all wagers shall be returned to the players and the entire deck of cards shall be removed from the table.
§ 676a.9. Procedure for dealing the cards from the hand.
(a) If the cards are dealt from the dealer's hand, the following requirements shall be observed:
(1) An automated shuffling device shall be used to shuffle the cards.
(2) After the procedures required under § 676a.5 (relating to shuffle and cut of the cards) have been completed, the dealer shall place the stacked deck of cards in either hand. After the dealer has chosen the hand in which he will hold the cards, the dealer shall continue to use that hand whenever holding the cards during that round of play. The cards held by the dealer shall be kept over the table inventory container and in front of the dealer at all times.
(b) Prior to dealing the cards, the dealer shall announce "no more bets" and starting with the player farthest to the dealer's left and continuing around the table in a clockwise manner, deal one card at a time to each player who placed the required Front 9 Wager in accordance with § 676a.7(d)(1) (relating to wagers) until each player who placed the required Front 9 Wager and the dealer has four cards. The first two cards dealt to the player shall be placed in front of the player. The second two cards dealt to the player shall be dealt behind the front two cards and shall be the player's hole cards.
(c) After two stacks of two cards have been dealt to each player and four cards to the dealer, except as provided in subsection (d), the dealer shall remove the stub from the manual dealing shoe and place the stub in the discard rack without exposing the cards.
(d) If the automated card shuffling device does not count the number of cards in the deck after the completion of each shuffle and indicate whether 52 cards are present, the dealer shall count the stub at least once every 5 rounds of play to determine if the correct number of cards are still present in the deck. The dealer shall determine the number of cards in the stub by counting the cards face down on the layout.
(e) If the count of the stub indicates that 52 cards are in the deck, the dealer shall place the stub in the discard rack without exposing the cards.
(f) If the count of the stub indicates that the number of cards in the deck is incorrect, the dealer shall determine if the cards were misdealt. If the cards were misdealt but 52 cards remain in the deck, all hands shall be void and all wagers shall be returned to the players. If the cards were not misdealt, all hands shall be void, all wagers
shall be returned to the players and the entire deck of cards shall be removed from the table.

## § 676a.10. Procedures for dealing the cards from an automated dealing shoe.

(a) If the cards are dealt from an automated dealing shoe, the following requirements shall be observed:
(1) After the procedures required under § 676a.5 (relating to shuffle and cut of the cards) have been completed, the cards shall be placed in the automated dealing shoe.
(2) Prior to the dealer delivering any stacks of cards dispensed by the automated dealing shoe, the dealer shall announce "no more bets."
(b) The dealer shall deliver the first stack of four cards dispensed by the automated dealing shoe face down to the player farthest to the dealer's left who has placed the required Front 9 Wager in accordance with § 676a.7(d)(1) (relating to wagers). The dealer shall then move the top two cards and place them face down behind the player's front two cards. The top two cards shall be the player's hole cards. Moving clockwise around the table, as the remaining stacks are dispensed to the dealer by the automated dealing shoe, the dealer shall repeat the dealing procedure outlined above to each of the other players who has placed a Front 9 Wager in accordance with § 676a.7(d)(1). The dealer shall then deliver a stack of four cards face down as the dealer's hand.
(c) After each stack of four cards has been dispensed and delivered in accordance with subsection (b), the dealer shall remove the remaining cards from the automated dealing shoe and, except as provided in subsection (d), place the stub in the discard rack without exposing the cards.
(d) If the automated card shuffling device does not count the number of cards in the deck after the completion of each shuffle and indicate whether 52 cards are present, the dealer shall count the stub at least once every 5 rounds of play to determine if the correct number of cards are still present in the deck. The dealer shall determine the number of cards in the stub by counting the cards face down on the layout.
(e) If the count of the stub indicates that 52 cards are in the deck, the dealer shall place the stub in the discard rack without exposing the cards.
(f) If the count of the stub indicates that the number of cards in the deck is incorrect, the dealer shall determine if the cards were misdealt. If the cards were misdealt but 52 cards remain in the deck, all hands shall be void and all wagers shall be returned to the players. If the cards were not misdealt, all hands shall be void, all wagers shall be returned to the players and the entire deck of cards shall be removed from the table.

## § 676a.11. Procedures for completion of each round of play.

(a) After the dealing procedures required under $\S 676 \mathrm{a} .8$, § 676a. 9 or § 676a. 10 (relating to procedure for dealing the cards from a manual dealing shoe; procedure for dealing the cards from the hand; and procedures for dealing the cards from an automated dealing shoe) have been completed, each player shall examine the player's closest two cards subject to the following limitations:
(1) Each player who wagers at a Go Fore It table shall be responsible for his own hand and no person other than the dealer and the player to whom the cards were dealt may touch the cards of that player.
(2) Each player shall keep his cards in full view of the dealer at all times.
(b) After each player has examined his first two cards, the dealer shall, beginning with the player farthest to the dealer's left and moving clockwise around the table ask each player if he wishes to make a Back 9 Wager in an amount equal to the player's Front 9 Wager or fold and forfeit the player's Front 9 Wager.
(c) After each player who placed a Front 9 Wager has either placed a Back 9 Wager on the designated area of the layout or forfeited his Front 9 Wager, the dealer shall collect all forfeited Front 9 Wagers and if the player:
(1) Did not place a Skins or Gopher Wager, collect the player's cards and place them face down in the discard rack.
(2) Placed a Gopher or Skins Wager, the dealer shall collect the player's four cards and place them face down under the player's Skins or Gopher Wagers are until settled in accordance with subsection (d).
(d) The dealer shall then reveal the dealer's four cards and place them face up on the layout. After the dealer's cards are turned face up, the dealer shall, beginning with the player farthest to the dealer's right and continuing around the table in a counterclockwise direction, complete the following applicable procedures in succession for each player:
(1) The dealer shall turn the four cards of each player who placed a Back 9, Skins or Gopher Wager face up on the layout.
(2) The dealer shall add together the point value of all four of the player's cards.
(3) For all players who placed Front 9 and Back 9 Wagers, if the total point value of all four cards:
(i) Is equal to or less than par, the player shall be paid out on a winning Front 9 Wager in accordance with $\S 676 a .12(\mathrm{a})$ (relating to payout odds) and a winning Back 9 Wager in accordance with § 676a.12(b).
(ii) Is greater than par, the dealer shall collect the player's losing Front 9 and Back 9 Wagers.
(4) For all players who placed a Skins Wager, if the total point value of the player's hand:
(i) Is equal to or greater than the total point value of the dealer's hand, the dealer shall collect the player's losing Skins Wager.
(ii) Is less than the total point value of the dealer's hand, the dealer shall pay the winning Skins Wager in accordance with § 676a.12(c).
(5) For all players who placed a Gopher wager, if the player's four cards:
(i) Does not contain at least one ace, the dealer shall collect the player's losing Gopher Wager.
(ii) Contains at least one ace, the dealer shall pay the player's winning Gopher Wager in accordance with § 676a.12(d).
(e) After all wagers of the player have been settled, the dealer shall remove all remaining cards from the table and place them in the discard rack in a manner that permits the reconstruction of each hand in the event of a question or dispute.

## § 676a.12. Payout odds.

(a) A certificate holder shall pay winning Front 9 Wagers at odds of 1 to 1 .
(b) A certificate holder shall pay winning Back 9 Wagers in accordance with the following odds:

| Hand-Total Point Value | Payout |
| :--- | ---: |
| Albatross (8 or less) | 25 to 1 |
| Eagle $(9-13)$ | 5 to 1 |
| Birdie $(14-18)$ | 2 to 1 |
| Par $(19-24)$ | 1 to 1 |

(c) A certificate holder shall pay winning Skins Wagers at odds of 1 to 1 .
(d) A certificate holder shall pay winning Gopher Wagers at the odds in one of the following paytables selected by the certificate holder in its Rules Submission filed in accordance with § 601a. 2 (relating to table games Rules Submissions):

| Number of Aces | Paytable $A$ | Paytable $B$ |
| :--- | ---: | ---: |
| 4 | 1,000 to 1 | 1,000 to 1 |
| 3 | 50 to 1 | 50 to 1 |
| 2 | 5 to 1 | 6 to 1 |
| 1 | 2 to 1 | 2 to 1 |

## § 676a.13. Irregularities.

(a) A card that is found face up in the shoe or the deck while the cards are being dealt may not be used in that round of play and shall be placed in the discard rack. If more than one card is found face up in the shoe or the deck during the dealing of the cards, all hands shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(b) A card drawn in error without its face being exposed shall be used as though it were the next card from the shoe or the deck.
(c) If any player or the dealer is dealt an incorrect number of cards, all hands shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(d) If any of the dealer's cards or the player's hole cards are inadvertently exposed prior to each player having either folded or placed a Back 9 Wager as provided under § 676a.11 (relating to procedures for completion of each round of play), all hands shall be void, all wagers shall be returned to the players and the cards shall be reshuffled.
(e) If an automated card shuffling device is being used and the device jams, stops shuffling during a shuffle or fails to complete a shuffle cycle, the cards shall be reshuffled.
(f) If an automated dealing shoe is being used and the device jams, stops dealing cards or fails to deal cards during a round of play, the round of play shall be void, all wagers shall be returned to the players and the cards shall be removed from the device and reshuffled with any cards already dealt.
(g) If an automated card shuffling device or automated dealing shoe malfunctions and cannot be used, the automated card shuffling device or automated dealing shoe shall be covered or have a sign indicating that the automated card shuffling device or automated dealing shoe is out of order placed on the device before any other method of shuffling or dealing may be utilized at that table.
[Pa.B. Doc. No. 16-1487. Filed for public inspection August 26, 2016, 9:00 a.m.]

# STATEMENTS OF POLICY <br> Title 4-ADMINISTRATION 

PART II. EXECUTIVE BOARD<br>[ 4 PA. CODE CH. 9]<br>Reorganization of the Department of Banking and Securities

The Executive Board approved a reorganization of the Department of Banking and Securities effective August 12, 2016.

The organization chart at 46 Pa.B. 5589 (August 27, 2016) is published at the request of the Joint Committee on Documents under 1 Pa . Code § 3.1(a)(9) (relating to contents of Code).
(Editor's Note: The Joint Committee on Documents has found organization charts to be general and permanent in nature. This document meets the criteria of $45 \mathrm{~Pa} . \mathrm{C} . \mathrm{S}$. § 702(7) (relating to contents of Pennsylvania Code) as a document general and permanent in nature which shall be codified in the Pennsylvania Code.)
[Pa.B. Doc. No. 16-1488. Filed for public inspection August 26, 2016, 9:00 a.m.]


PENNSYLVANIA BULLETIN, VOL. 46, NO. 35, AUGUST 27, 2016

# NOTICES <br> DEPARTMENT OF BANKING AND SECURITIES 

## Actions on Applications


#### Abstract

The Department of Banking and Securities (Department), under the authority contained in the act of November 30, 1965 (P.L. 847, No. 356), known as the Banking Code of 1965; the act of May 15, 1933 (P.L. 565, No. 111), known as the Department of Banking Code; and the act of December 19, 1990 (P.L. 834, No. 198), known as the Credit Union Code, has taken the following action on applications received for the week ending August 16, 2016.

Under section 503.E of the Department of Banking and Securities Code ( 71 P.S. § 733-503.E), any person wishing to comment on the following applications, with the exception of branch applications, may file their comments in writing with the Department of Banking and Securities, Corporate Applications Division, 17 North Second Street, Suite 1300, Harrisburg, PA 17101-2290. Comments must be received no later than 30 days from the date notice regarding receipt of the application is published in the Pennsylvania Bulletin. The nonconfidential portions of the applications are on file at the Department and are available for public inspection, by appointment only, during regular business hours. To schedule an appointment, contact the Corporate Applications Division at (717) 783-2253. Photocopies of the nonconfidential portions of the applications may be requested consistent with the Department's Right-to-Know Law Records Request policy.


## BANKING INSTITUTIONS

## Branch Applications

De Novo Branches

| Date | Name and Location of Applicant | Location of Branch | Action |
| :---: | :---: | :---: | :---: |
| 8-12-2016 | Huntingdon Valley Bank Huntingdon Valley Montgomery County | 1388 West Street Road <br> Warminster <br> Bucks County <br> (Limited Service Facility) | Approved |
| 8-12-2016 | Peoples Security Bank and Trust Company Scranton <br> Lackawanna County | 2151 Emrick Boulevard Bethlehem Northampton County | Approved |
| 8-12-2016 | Peoples Security Bank \& Trust Company Scranton Lackawanna County | 610 Freedom Business Center Drive <br> King of Prussia <br> Montgomery County | Approved |
| 8-15-2016 | Citizens Bank of Pennsylvania Philadelphia <br> Philadelphia County | 116 West Township Line Road Havertown Delaware County | Filed |
| Branch Relocations |  |  |  |
| Date | Name and Location of Applicant | Location of Branch | Action |
| 8-15-2016 | Univest Bank and Trust Co. <br> Souderton <br> Montgomery County | To: 200 North High Street West Chester Chester County | Filed |
|  |  | From: 137 North High Street West Chester Chester County |  |
| Branch Discontinuances |  |  |  |
| Date | Name and Location of Applicant | Location of Branch | Action |
| 8-8-2016 | S\&T Bank Indiana | 3100 Oakland Avenue Indiana Indiana County | Closed |

## Articles of Amendment

| Date | Name and Location of Institution | Action |
| :--- | :--- | :---: |
| 8-16-2016 | Covenant Bank <br> Doylestown <br> Bucks County | Filed |
|  | Amendment to Article II of the institution's Articles of Incorporation provides for a change in <br> principal place of business to 182 North Main Street, Doylestown, Bucks County, PA 18901. |  |

## CREDIT UNIONS

No activity.
The Department's web site at www.dobs.pa.gov includes public notices for more recently filed applications.
ROBIN L. WIESSMANN,
Secretary
[Pa.B. Doc. No. 16-1489. Filed for public inspection August 26, 2016, 9:00 a.m.]

# DEPARTMENT OF ENVIRONMENTAL PROTECTION 

## Applications, Actions and Special Notices

## APPLICATIONS

## THE CLEAN STREAMS LAW AND THE FEDERAL CLEAN WATER ACT APPLICATIONS FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMITS AND WATER QUALITY MANAGEMENT (WQM) PERMITS

This notice provides information about persons who have applied for a new, amended or renewed NPDES or permit, a permit waiver for certain stormwater discharges or submitted a Notice of Intent (NOI) for coverage under a General Permit. The applications concern, but are not limited to, discharges regarding industrial, animal or sewage waste, discharges to groundwater, discharges associated with municipal separate storm sewer systems (MS4), stormwater associated with construction activities or concentrated animal feeding operations (CAFO). This notice is provided in accordance with 25 Pa . Code Chapters 91 and 92a and 40 CFR Part 122, implementing The Clean Streams Law (35 P.S. §§ 691.1-691.1001) and the Federal Clean Water Act (33 U.S.C.A. §§ 1251-1376).<br>Location Permit Authority<br>Application Type or Category<br>Section I<br>NPDES Renewals<br>Section II NPDES New or Amendment<br>Section III WQM Industrial, Sewage or Animal Waste; Discharge into Groundwater<br>Section IV NPDES MS4 Individual Permit<br>Section V<br>NPDES<br>MS4 Permit Waiver<br>Individual Permit Stormwater Construction<br>NOI for Coverage under NPDES General Permits

For NPDES renewal applications in Section I, the Department of Environmental Protection (Department) has made a tentative determination to reissue these permits for 5 years subject to effluent limitations and monitoring and reporting requirements in their current permits, with appropriate and necessary updated requirements to reflect new and changed regulations and other requirements.

For applications for new NPDES permits and renewal applications with major changes in Section II, as well as applications for MS4 Individual Permits and Individual Stormwater Construction Permits in Sections IV and VI, the Department, based upon preliminary reviews, has made tentative determinations of proposed effluent limitations and other terms and conditions for the permit applications. In accordance with 25 Pa . Code § 92a.32(d), the proposed discharge of stormwater associated with construction activities will be managed in accordance with the requirements of 25 Pa . Code Chapter 102. These determinations are published as proposed actions for comments prior to taking final actions.

Unless indicated otherwise, the United States Environmental Protection Agency (EPA) Region III Administrator has waived the right to review or object to proposed NPDES permit actions under the waiver provision in 40 CFR 123.24(d).
Persons wishing to comment on NPDES applications are invited to submit statements to the contact office noted before the application within 30 days from the date of this public notice. Persons wishing to comment on WQM permit applications are invited to submit statements to the office noted before the application within 15 days from the date of this public notice. Comments received within the respective comment periods will be considered in the final
determinations regarding the applications. A comment submittal should include the name, address and telephone number of the writer and a concise statement to inform the Department of the exact basis of a comment and the relevant facts upon which it is based.

The Department will also accept requests for public hearings on applications. A public hearing may be held if the responsible office considers the public response significant. If a hearing is scheduled, a notice of the hearing will be published in the Pennsylvania Bulletin and a newspaper of general circulation within the relevant geographical area. The Department will postpone its final determination until after a public hearing is held.

Persons with a disability who require an auxiliary aid, service, including TDD users, or other accommodations to seek additional information should contact the Department through the Pennsylvania AT\&T Relay Service at (800) 654-5984.

## I. NPDES Renewal Applications

Southwest Regional Office: Regional Clean Water Program Manager, 400 Waterfront Drive, Pittsburgh, PA 15222-4745. Phone: 412.442.4000.

| NPDES No. | Facility Name \& | County \& | Stream Name <br> (Type) | Address |
| :--- | :--- | :--- | :--- | :---: | Municipality $\quad$ (Watershed No.) $\quad$ EPA Waived

Northeast Region: Clean Water Program Manager, 2 Public Square, Wilkes-Barre, PA 18701-1915. Phone: 570-826-2511.
NPDES No Facility Name \& County \& Stream Name EPA Waived
(Type)
PA0035335
(Sewage)

Facility Name \&
Address
Barton Court MHP
654 Morwood Road
Telford, PA 18969

County \& Stream Name EPA Waived
Municipality (Watershed No.) $Y / N$ ?
Unnamed Tributary to Yes
Pocono Creek
(1-E)

Northcentral Regional Office: Clean Water Program Manager, 208 W Third Street, Suite 101, Williamsport, PA 17701-6448. Phone: 570.327.3636.

| NPDES No. (Type) | Facility Name \& Address | County \& Municipality | Stream Name <br> (Watershed No.) | EPA Waived $Y / N$ ? |
| :---: | :---: | :---: | :---: | :---: |
| PA0228206 <br> (Industrial) | Montgomery Run Water Treatment Facility 107 E Market Street Clearfield, PA 16830-2405 | Clearfield County Pike Township | Montgomery Creek (8-B) | Yes |
| PA0033910 (Sewage) | Northeast Bradford School <br> District WWTP <br> 526 Panther Lane <br> Rome, PA 18837-7892 | Bradford County Orwell Township | Johnson Creek (4-D) | Yes |
| PA0009725 <br> (Industrial) | Jersey Shore Steel Plant <br> 70 Maryland Avenue <br> PO Box 5055 <br> Jersey Shore, PA 17740-7113 | Clinton County <br> Pine Creek Township | Unnamed Tributary to West Branch Susquehanna River (9-B) | Yes |

Northwest Region: Clean Water Program Manager, 230 Chestnut Street, Meadville, PA 16335-3481.

| NPDES No. (Type) | Facility Name \& Address | County \& Municipality | Stream Name (Watershed \#) | EPA Waived $Y / N$ ? |
| :---: | :---: | :---: | :---: | :---: |
| PA0263770 (Sewage) | Dena M. \& Trent H. A. Nagy SRSTP 17973 Townville Road Centerville, PA 16404 | Crawford County Athens Township | Unnamed Tributary to the Muddy Creek (16-A) | Yes |
| PA0004995 <br> (Industrial) | Armstrong Cement \& Supply 100 Clearfield Road Cabot, PA 16023-9531 | Butler County Winfield Township | Unnamed Tributary to Rough Run and Rough Run (18-F) | Yes |

II. Applications for New or Expanded Facility Permits, Renewal of Major Permits and EPA Non-Waived Permit Applications

Southeast Region: Clean Water Program Manager, 2 East Main Street, Norristown, PA 19401. Telephone 484-250-5970.
PA0053449, Sewage, SIC Code 4952, Birmingham Township, 1040 West Street Road, West Chester, PA 19382-8012. Facility Name: Birmingham Township STP. This existing facility is located in Birmingham Township, Chester County.

Description of Existing Activity: The application is for a renewal of an NPDES permit for an existing discharge of treated Sewage.
The receiving stream(s), Radley Run, is located in State Water Plan watershed 3-H and is classified for Migratory Fishes and Warm Water Fishes, aquatic life, water supply and recreation. The discharge is not expected to affect public water supplies.
The proposed effluent limits for Outfall 001 are based on a design flow of 0.15 MGD.


* Shall not exceed in more than $10 \%$ of samples.

In addition, the permit contains the following major special conditions:
A. No Stormwater
B. Acquire Necessary Property Rights
C. Proper Sludge Disposal
D. Chlorine Optimization
E. Small Stream Discharge
F. Operator Notification
G. Fecal Coliform Reporting

You may make an appointment to review the DEP files on this case by calling the File Review Coordinator at 484-250-5910.
The EPA Waiver is not in effect.

PA0026018, Sewage, SIC Code 4952, Borough of West Chester, Goose Creek Wastewater Treatment Plant, 351 Snyder Avenue, West Chester, PA 19382. Facility Name: West Chester Taylor Run STP. This existing facility is located in East Bradford Township, Chester County.

Description of Existing Activity: The application is for a renewal of an NPDES permit for an existing discharge of treated Sewage.

The receiving stream, Taylor Run, is located in State Water Plan watershed 3-H and is classified for Migratory Fishes and Trout Stocking, aquatic life, water supply and recreation. The discharge is not expected to affect public water supplies.
The proposed effluent limits for Outfall 001 are based on a design flow of 1.5 MGD.

|  | Mass Units (lbs / day) |  | Concentrations (mg/L) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Parameters | Average <br> Monthly | Weekly Average | Instantaneous Minimum | Average Monthly | Daily Maximum | Instant. <br> Maximum |
| Flow (MGD) | Report | Report Daily Max | XXX | XXX | XXX | XXX |
| pH (S.U.) | XXX | XXX | 6.0 | XXX | XXX | 9.0 |
| Dissolved Oxygen | XXX | XXX | 5.0 | XXX | XXX | XXX |
| Total Residual Chlorine (TRC) | XXX | XXX | XXX | 0.05 | XXX | 0.15 |
| Carbonaceous Biochemical Oxygen Demand $\left(\mathrm{CBOD}_{5}\right)$ | 311.4 | 475 | XXX | 25.0 | $\begin{gathered} 40.0 \\ \text { Wkly Avg } \end{gathered}$ | 50 |
| Biochemical Oxygen Demand $\left(\mathrm{BOD}_{5}\right)$ <br> Raw Sewage Influent | Report | XXX | XXX | Report | XXX | XXX |
| Total Suspended Solids Raw Sewage Influent | Report | XXX | XXX | Report | XXX | XXX |
| Total Suspended Solids | 188 | 282 | XXX | 15.0 | 23.0 Wkly Avg | 30 |
| Total Dissolved Solids | Report | XXX | XXX | Report | XXX | XXX |
| Fecal Coliform (No. $/ 100 \mathrm{ml}$ ) Oct 1 - Apr 30 | XXX | XXX | XXX | $\begin{aligned} & 200 \\ & \text { Geo Mean } \end{aligned}$ | XXX | 1,000* |
| May 1 - Sep 30 | XXX | XXX | XXX | $\begin{aligned} & 200 \\ & \text { Geo Mean } \end{aligned}$ | XXX | 1,000 |
| Total Nitrogen | 375 | XXX | XXX | 30.0 | XXX | 60 |
| Ammonia-Nitrogen |  |  |  |  |  |  |
| Nov 1 - Apr 30 | 94 | XXX | XXX | 7.5 | XXX | 15 |
| May 1 - Oct 31 | 31 | XXX | XXX | 2.5 | XXX | 5 |
| Aluminum, Total | Report | XXX | XXX | Report | XXX | XXX |
| Copper, Total | Report | XXX | XXX | Report | XXX | XXX |
| Total Phosphorus <br> Nov 1 - Mar 31 (effective date to completion of second year) | 25.0 | XXX | XXX | 2.0 | XXX | 4 |
| Apr 1-Oct 31 (effective date to completion of second year) | 20.0 | XXX | XXX | 1.6 | XXX | 3.2 |
| (beginning of third year to expiration date) | XXX | $\begin{gathered} 16.3 \\ \text { Annual Avg } \end{gathered}$ | XXX | Report | $\begin{gathered} 1.3 \\ \text { Annual Avg } \end{gathered}$ | 3.2 |
| Toxicity, Chronic-Ceriodaphnia Survival (TUc) | XXX | XXX | XXX | XXX | Report | XXX |
| Reproduction (TUc) | XXX | XXX | XXX | XXX | Report | XXX |
| Toxicity, Chronic-Pimephales Survival (TUc) | XXX | XXX | XXX | XXX | Report | XXX |
| Growth (TUc) | XXX | XXX | XXX | XXX | Report | XXX |

The proposed effluent limits for Outfall 003 are based on an average flow of stormwater.

|  | Mass Units (lbs/day) |  |  | Concentrations (mg/L) <br> Average |  | Daily |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | Instant.

## NOTICES

In addition, the permit contains the following major special conditions:
A. No Stormwater
B. Acquire Necessary Property Rights
C. Proper Sludge Disposal
D. Chlorine Optimization
E. Discharge to Small Stream
F. Operator Notification
G. TMDL/WLA Data
H. Fecal Coliform Reporting
I. Exemption from Pretreatment Program
J. Operations and Maintenance Plan
K. WET Testing
L. Requirements for Stormwater Outfalls

You may make an appointment to review the DEP files on this case by calling the File Review Coordinator at 484-250-5910.
The EPA Waiver is not in effect.

## III. WQM Industrial Waste and Sewerage Applications under The Clean Streams Law

Southwest Regional Office: Regional Clean Water Program Manager, 400 Waterfront Drive, Pittsburgh, PA 15222-4745. Phone: 412.442.4000.
WQM Permit No. 0216402, Sewage, West Mifflin Sanitary Sewer Municipal Authority, 1302 Lower Bull Run Road, West Mifflin, PA 15122-2902.
This proposed facility is located in West Mifflin Borough, Allegheny County.
Description of Proposed Action/Activity: Installation of a new Ultraviolet disinfection system and flow monitoring equipment at the Thompson Run Sewage Treatment Plant.
Northwest Region: Clean Water Program Manager, 230 Chestnut Street, Meadville, PA 16335-3481.
WQM Permit No. 4316404, Sewage, Susan First, 1090 Linn-Tyro Road, Hadley, PA 16130-2832.
This proposed facility is located in Perry Township, Mercer County.
Description of Proposed Action/Activity: Small Flow Treatment Facility.
VI. NPDES Individual Permit Applications for Discharges of Stormwater Associated with Construction Activities

Northeast Region: Waterways and Wetlands Program Manager, 2 Public Square, Wilkes-Barre, PA 18701-1915.
Luzerne Conservation District, 325 Smiths Pond Road, Shavertown, PA 18708.

| NPDES | Applicant Name \& |  | Receiving |  |
| :--- | :--- | :--- | :--- | :--- |
| Permit No. | Address | County | Municipality | Water/Use |
| PAI024016002 | Hunlock Township | Luzerne | Hunlock Township | UNT to Hunlock Creek |
|  | 33 Village Drive |  |  | (CWF, MF) |

Northampton County Conservation District, 14 Gracedale Avenue Greystone Bldg., Nazareth, PA 18064-9211.

NPDES
Permit No.
PAI024816013
Applicant Name \&
Address County Municipality
Anthony Rymar Northampton Forks Township
UGI Utilities, Inc.
2525 N 12th Street
Reading, PA 19612

| PAI024804022R | GeorgeAnn Custom Homes, Inc. <br> 230 East Dell Rd. | Northampton | Moore and Bushkill <br> Townships | Bushkill Creek <br> (HQ-CWF, MF) |
| :--- | :--- | :--- | :--- | :--- |
| Path, PA 18014 |  |  |  |  |

Horsham, PA 19044

Southcentral Region: Waterways \& Wetlands Program, 909 Elmerton Avenue, Harrisburg, PA 17110-8200, Nathan Crawford, Section Chief, 717.705.4802.

| Permit \# | Applicant Name \& Address | County | Municipality | Receiving Water/Use |
| :---: | :---: | :---: | :---: | :---: |
| PAI033616008 | First Pennsylvania Resources 33 Terminal Way, Suite 431A Pittsburgh, PA 15219 | Lancaster | West Cocalico Township | Trib 07739 Cocalico Creek (HQ-CWF) |
| PAI030716001 | PennDOT District 9-0 1620 North Juniata Street Hollidaysburg, PA 16648 | Blair | Frankstown Township | UNT Canoe Creek <br> (HQ-CWF, MF) <br> Canoe Creek <br> (HQ-CWF, MF) <br> UNT Frankstown <br> Branch Juniata River <br> (WWF, MF) <br> Frankstown Branch <br> Juniata River <br> (WWF, MF) <br> EV Wetlands |

## STATE CONSERVATION COMIMISSION <br> PROPOSED NUTRIENT MANAGEMENT PLANS RELATED TO APPLICATIONS FOR NPDES PERMITS FOR CAFOs

This notice provides information about agricultural operations that have submitted nutrient management plans (NMPs) for approval under 3 Pa.C.S. Chapter 5 and that have or anticipate submitting applications for new, amended or renewed NPDES permits, or Notices of Intent (NOIs) for coverage under a general permit, for CAFOs, under 25 Pa. Code Chapter 92a. This notice is provided in accordance with 25 Pa . Code Chapter 92a and 40 CFR Part 122, implementing The Clean Streams Law and the Federal Clean Water Act.
Based upon preliminary reviews, the State Conservation Commission (SCC) or County Conservation Districts (CCD) working under a delegation agreement with the SCC have completed an administrative review of NMPs described. These NMPs are published as proposed plans for comment prior to taking final actions. The NMPs are available for review at the CCD office for the county where the agricultural operation is located. A list of CCD office locations is available at http://www.nacdnet.org/about/districts/directory/pa.phtml or can be obtained from the SCC at the office address listed or by calling (717) 787-8821.

Persons wishing to comment on an NMP are invited to submit a statement outlining their comments on the plan to the CCD, with a copy to the SCC for each NMP, within 30 days from the date of this public notice. Comments received within the respective comment periods will be considered in the final determinations regarding the NMPs. Comments should include the name, address and telephone number of the writer and a concise statement to inform the SCC of the exact basis of the comments and the relevant facts upon which they are based. Comments should be sent to the SCC, Agriculture Building, Room 310, 2301 North Cameron Street, Harrisburg, PA 17110.
Persons with a disability who require an auxiliary aid, service, including TDD users or other accommodations to seek additional information should contact the SCC through the Pennsylvania AT\&T Relay Service at (800) 654-5984.

APPLICATIONS
NUTRIENT MANAGEMENT PLAN-PUBLIC NOTICE SPREADSHEET

| Agricultural Operation <br> Name and Address | County | Total <br> Acres | Animal Equivalent Units | Animal Type | Special Protection Waters (HQ or $E V$ or $N A$ ) | Renewal/ <br> New |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Acorn Farms Inc./Franklin Family Farms Inc. 14627 Lurgan Road Orrstown, PA 17224 | Franklin | 2; 0 acre available for manure | 1,336.45 | Swine | NA | Renewal |
| Clifford Zimmerman 2993 Mill Road Elizabethtown, PA 17022 | Dauphin | 119.2 | 335.98 | Poultry | N/A | Renewal |
| Drew Remley <br> 1170 Salt Spring Road Roaring Branch, PA 17765 | Tioga | 1,379.99 | 713.42 | Hog | Unamed Trib to Brion Creek-HQ-CWF <br> Brion Creek-HQ-CWF <br> Unnamed Trib to Salt Spring <br> Run-HQ-CWF Salt Spring <br> Run-HQ-CWF French Lick <br> Creek-HQ-CWF | Renewal |

## PUBLIC WATER SUPPLY (PWS) PERMITS

Under the Pennsylvania Safe Drinking Water Act (35 P.S. §§ 721.1-721.17), the following parties have applied for PWS permits to construct or substantially modify public water systems.

Persons wishing to comment on permit applications are invited to submit statements to the office listed before the application within 30 days of this public notice. Comments received within this 30-day comment period will be considered in the formulation of the final determinations regarding an application. A comment should include the name, address and telephone number of the writer and a concise statement to inform the Department of the exact basis of a comment and the relevant facts upon which it is based. A public hearing may be held after consideration of comments received during the 30 -day public comment period.

Following the comment period, the Department will make a final determination regarding the proposed permit. Notice of this final determination will be published in the Pennsylvania Bulletin at which time this determination may be appealed to the Environmental Hearing Board.
The permit application and related documents are on file at the office listed before the application and available for public review. Arrangements for inspection and copying information should be made with the office listed before the application.
Persons with a disability that require an auxiliary aid, service or other accommodations to participate during the 30-day public comment period should contact the office listed before the application. TDD users may contact the Department through the Pennsylvania AT\&T Relay Service at (800) 654-5984.

## SAFE DRINKING WATER

## Applications Received Under the Pennsylvania Safe Drinking Water Act

Southeast Region: Safe Drinking Water Supply Management Program Manager, 2 East Main Street, Norristown, PA 19401
Permit No. 4616520, Public Water Supply.

| Applicant | Schwenksville Borough <br> Authority |
| :--- | :--- |
| Borough | Schwenksville <br> Montgomery |
| County | Mesponsible Official <br> Michael Sullivan <br> Manager <br> 298 Main Street <br> P.O. Box 458 |
|  | Schwenksville, PA 19473-0458 |
| Type of Facility | PWS |
| Consulting Engineer | Frederick E. Ebert, P.E. <br> Ebert Engineering, Inc. <br> P.O. Box 540 |
|  | 492 Skippack Pike, Suite 202 <br> Skippack, PA 19474 |
| Application Received | August 4, 2016 |
| Date | Installation of arsenic treatment |
| Description of Action | It Well Nos. 4 and 5. |

Permit No. 4616516, Public Water Supply.

| Applicant | Pennsylvania American <br> Water Company |
| :--- | :--- |
| Township | Upper Providence <br> Montgomery |
| County | Responsible Official |
|  | David R. Kaufman <br> 800 West Hershey Park Blvd. <br> Hershey, PA 17033 |
| Type of Facility | PWS |
| Consulting Engineer | Ebert Engineering, Inc. <br> Fred Ebert, P.E. <br> P.O. Box 540 |
|  | 4092 Skippack Pike, Suite 202 <br> Skippack, PA 19474 |
| Application Received | July 18, 2016 |
| Date | Replacement of pumps and <br> Description of Action <br> motor controls in the existing |
|  | Black Rock Road Booster Station <br> to increase the capacity of the <br> station. |

Permit No. WA-09-1009, Public Water Supply.

| Applicant | Warminster Municipal Authority |
| :---: | :---: |
| Township | Warminster |
| County | Bucks |
| Responsible Official | Timothy D. Hagey 415 Gibson Avenue Warminster, PA 18974 |
| Type of Facility | PWS |
| Consulting Engineer | Charles E. Corey, P.E. CKS Engineers, Inc. 88 South Main Street Doylestown, PA 18901 |
| Application Received Date | October 13, 2015 |
| Description of Action | Modification to the reference subsidiary water allocation permit application was received by DEP on July 22, 2016. The applicant is now requesting the right to purchase $3,000,000$ gallons per day through their interconnection with the North Water Authority. |

Southcentral Region: Safe Drinking Water Program
Manager, 909 Elmerton Avenue, Harrisburg, PA 17110.
Permit No. 3616513, Public Water Supply.

| Applicant | Spring Glen Fresh Foods, Inc. |
| :--- | :--- |
| Municipality | Ephrata Township |
| County | Lancaster |
| Responsible Official | Tom Butler, Plant Manager |
|  | 1410 East Market Street |
| Type of Facility | York, PA 17403 |
|  | Public Water Supply |


| Consulting Engineer | Joshua D. Mareny, P.E. <br> Zephyr Environmental <br> Corporation |
| :--- | :--- |
|  | 1410 East Market Street |
| York, PA 17403 |  |
| Application Received: | $7 / 28 / 2016$ |
| Description of Action | Installation of sand pressure <br> filter for water polishing and <br> replacement of booster pumps. |

Permit No. 2116508 MA, Minor Amendment, Public Water Supply.

| Applicant | South Middleton Township <br> Municipal Authority <br> South Middleton Township |
| :--- | :--- |
| Municipality | Cumberland |
| County | Robert L. Kissinger, Manager <br> Responsible Official <br> 345 Criswell Drive <br> Boiling Springs, PA 17007-0008 <br> Type of Facility <br> Consulting Engineer |
|  | Public Water Supply <br> Howard Butler, P.E. <br> GHD |
|  | 1240 N Mountain Road |
| Application Received: | Harrisburg, PA 17112 <br> $7 / 29 / 2016$ |
| Description of Action | Interconnection and installation <br> of a pressure reducing valve |
|  | between the "Main System" and <br> the "Well No. 3 System." |
|  | the |

Permit No. 2816501 MA, Minor Amendment, Public Water Supply.

| Applicant | Quincy Township |
| :--- | :--- |
| Municipality | Quincy Township <br> County |
| Responklin |  |

Permit No. 5016505, Minor Amendment, Public Water Supply.

| Applicant | Pfautz Rentals, LP |
| :--- | :--- |
| Municipality | Penn Township |
| County | Perry |


| Responsible Official | Suzanne H. Hammaker, Partner <br> 10 Dicken Drive <br> Marysville, PA 17053 |
| :--- | :--- |
| Type of Facility | Public Water Supply <br> Consulting Engineer |
| Charles A. Kehew II, P.E. <br> James R. Holley \& Associates, <br>  <br>  <br>  <br> Inc. <br> 18 South George Street <br> York, PA 17401 |  |
| Application Received: | 8/5/2016 |
| Description of Action | Istallation of treatment facilities <br> to enhance arsenic removal. |

Southwest Region: Safe Drinking Water Program Manager, 400 Waterfront Drive, Pittsburgh, PA 15222-4745.

Permit No. 6316512, Public Water Supply.

| Applicant | Authority of the Borough of <br> Charleroi <br> 3 McKean Avenue <br> Charleroi, PA 15022 |
| :--- | :--- |
| [Township or Borough] | Charleroi Borough |
| Responsible Official | Edward J. Golanka <br> General Manager <br> Authority of the Borough of <br> Charleroi |
|  | 3 McKean Avenue <br> Charleroi, PA 15022 |
|  | Water system |
| Type of Facility | Chester Engineers |
| Consulting Engineer | 1555 Coraopolis Heights Road <br> Moon Township, PA 15108 |
|  | August 12, 2016 |
| Application Received |  |
| Date | Installation of a HDPE plate <br> Description of Action |
|  | liner for four membrane filter <br> tanks at the water treatment |
| plant. |  |

## WATER ALLOCATIONS

## Applications received under the act of June 24, 1939 (P.L. 842, No. 365) (35 P.S. §§ 631-641) relating to the Acquisition of Rights to Divert Waters of the Commonwealth

Southwest Region: Water Supply Management Program Manager, 400 Waterfront Drive, Pittsburgh, PA 152224745.

WA2-1012, Water Allocations. Hampton Shaler Water Authority, PO Box 66, 3101 McCully Road, Allison Park, PA 15101, Allegheny County. The applicant is requesting the right to withdraw $11,475,000$ gallons of water per day, peak day, from 12 wells located in Shaler Township and Etna Borough along the Allegheny River.

WA4-24C, Water Allocations. Beaver Falls Municipal Authority, 1425 Eighth Avenue, PO Box 400, Beaver Falls, PA 15010, Beaver County. The applicant is requesting the right to withdraw $11,250,000$ gallons of water per day, peak day, from the Beaver River.
WA4-724C, Water Allocations. North Sewickley Township Municipal Authority, 590 Mercer Road, Beaver Falls, PA 15010, Beaver County. The applicant is requesting the right to purchase 300,000 gallons of water per day, average day, from the Pennsylvania American Water Company-Ellwood District.
Northwest Region: Safe Drinking Water Program Man-
ager, 230 Chestnut Street, Meadville, PA 16335-3481
WA 24-909B, Water Allocations. Ridgway Township Municipal Authority, 1537B Montmorenci Road, Ridgway, PA 15853, Ridgway Township, Elk County. Water Allocation Permit application requesting the right to purchase 0.365 MGD from Ridgway Borough.

## LAND RECYCLING AND ENVIRONMENTAL REMEDIATION

UNDER ACT 2, 1995<br>PREAMBLE 1

Acknowledgment of Notices of Intent to Remediate Submitted under the Land Recycling and Environmental Remediation Standards Act (35 P.S. §§ 6026.101—6026.907)

Sections 302-305 of the Land Recycling and Environmental Remediation Standards Act (act) (35 P.S. §§ 6026.302-6026.305) require the Department to publish in the Pennsylvania Bulletin an acknowledgment noting receipt of Notices of Intent to Remediate. An acknowledgment of the receipt of a Notice of Intent to Remediate is used to identify a site where a person proposes to, or has been required to, respond to a release of a regulated substance at a site. A person intending to use the background standard, Statewide health standard, the site-specific standard or intend to remediate a site as a special industrial area shall file a Notice of Intent to Remediate with the Department. A Notice of Intent to Remediate filed with the Department provides a brief description of the location of the site, a list of known or suspected contaminants at the site, the proposed remediation measures for the site and a description of the intended future use of the site. A person who demonstrates attainment of one or a combination of cleanup standards or receives approval of a special industrial area remediation identified under the act will be relieved of further liability for the remediation of the site for contamination identified in reports submitted to and ap-
proved by the Department. Furthermore, the person shall not be subject to citizen suits or other contribution actions brought by responsible persons not participating in the remediation.

Under sections 304(n)(1)(ii) and 305(c)(2) of the act, there is a 30 -day public and municipal comment period for sites proposed for remediation using a site-specific standard, in whole or in part, and for sites remediated as a special industrial area. This period begins when a summary of the Notice of Intent to Remediate is published in a newspaper of general circulation in the area of the site. For the following site, proposed for remediation to a site-specific standard or as a special industrial area, the municipality, within which the site is located, may request to be involved in the development of the remediation and reuse plans for the site if the request is made within 30 days of the date specified as follows. During this comment period, the municipality may request that the person identified as the remediator of the site develop and implement a public involvement plan. Requests to be involved and comments should be directed to the remediator of the site.

For further information concerning the content of a Notice of Intent to Remediate, contact the environmental cleanup program manager in the Department regional office listed before the notice. If information concerning this acknowledgment is required in an alternative form, contact the community relations coordinator at the appropriate regional office. TDD users may telephone the Department through the Pennsylvania AT\&T Relay Service at (800) 654-5984.

The Department has received the following Notices of Intent to Remediate:
Northeast Region: Eric Supey, Environmental Cleanup \& Brownfields Program Manager, 2 Public Square, Wilkes-Barre, PA 18701-1915.

PA American Water-Stafford Avenue, 2699 Stafford Avenue, City of Scranton, Lackawanna County. Resource Environmental Management, Inc., 50 Maple Street, Montrose, PA 18801, on behalf of PA American Water, 800 West Hersheypark Drive, Hershey, PA 17033, submitted a Notice of Intent to Remediate. Contamination is due to historical operations at the site. The proposed future use of the property will be nonresidential. The Notice of Intent to Remediate was published in The Scranton Times on May 25, 2016.

Southcentral Region: Environmental Cleanup and Brownfields Program Manager, 909 Elmerton Avenue, Harrisburg, PA 17110. Phone 717.705.4705.

Volume Transportation/RML Warehouse, 350 Wiconisco Street, Millersburg, PA 17061, Millersburg Borough and Upper Paxton Township, Dauphin County. EP\&S of Vermont, Inc., 1539 Bobali Drive, Harrisburg, PA 17104, on behalf of Volume Transportation, 2261 Plunket Road, Conyers, GA 30012, and RML Warehouse, 350 Wiconisco Street, Millersburg, PA 17061 submitted a Notice of Intent to Remediate site soil contaminated with diesel fuel. The site will be remediated to the Residential Statewide Health Standard. Future use of the site will continue to be commercial. The Notice of Intent to Remediate was published in the Patriot News on July 7, 2016.

Northcentral Region: Environmental Cleanup Program Manager, 208 West Third Street, Williamsport, PA 17701.

Family Practice Medical Center, Lower Mahanoy Township, Northumberland County. Molesevich Envi-
ronmental, LLC, P.O. Box 654, Lewisburg, PA 17837 on behalf of Family Practice Center PC, 3040 North Susquehanna Trail, PO Box 129, Shamokin Dam, PA 17876 has submitted a Notice of Intent to Remediate soil and groundwater contaminated with heating oil. The applicant proposes to remediate the site to meet the Site Specific Standard. A summary of the Notice of Intent to Remediate was published in The Daily Item on June 8, 2016.

GKN Sinter Metals, LLC, Shippen Township, Cameron County. Independence Environmental Consulting, LLC, 1750 Kaylor Road, Hummelstown, PA 17036, on behalf of Gleason Corporation, 1000 University Avenue, Rochester, NY 14692-2970, has submitted a Notice of Intent to Remediate soil and groundwater contaminated with Trichloroethene. The applicant proposes to remediate the site to meet the Site Specific Standard. A summary of the Notice of Intent to Remediate was published in The Cameron County Echo on September 23, 2015.

Wharton Compressor Station, Wharton Township, Potter County. Environmental Remediation \& Recovery, Inc., 4250 Rt. 6N, Edinboro, PA 16412, on behalf of National Fuel Gas Supply Corporation, P.O. Box 2081, 1100 State Street, Erie, PA 16512, has submitted a Notice of Intent to Remediate soil and groundwater contaminated with methanol. The applicant proposes to remediate the site to meet the Statewide Health and Site Specific Standards. A summary of the Notice of Intent to Remediate was published in the Potter Leader-Enterprise on June 29, 2016.
Southwest Region: Environmental Cleanup \& Brownfield Development Program Manager, 400 Waterfront Drive, Pittsburgh, PA 15222-4745.

Former Shop'N Save, 937 Ohio Avenue, Glassport Borough, Allegheny County. RT Environmental Services, Inc., 591 East Maiden Street, Washington, PA 15301 on behalf of First Link, LLC, P.O. Box 1567 Beaver Falls, PA 15010 has submitted a Notice of Intent to Remediate to meet the non-residential Statewide Health standards concerning site soil and groundwater contaminated with benzene, ethybenzene, methyl tertiary butyl ether (MTBE), 1,2,4-trimethylbenzene and 1,3,5trimethylbenzene. Notice of the NIR was published in the Pittsburgh Post-Gazette on July 26, 2016.

Southeast Regional Office: Regional Manager, Environmental Cleanup and Brownfields, 2 East Main Street, Norristown, PA 19401, Telephone 484.250.5960. Charline Bass.
910 Township Line Road, 910 Township Line Road, Hilltown Township, Bucks County. Mark Fortna, DelVal Soil Environmental Consultants, Sky Run II, Suite A1, 4050 Skyron Drive, Doylestown, PA 18902 on behalf of Carol Ross, 255 Station Road, Quakertown, PA 18951 has submitted a Notice of Intent to Remediate. Soil at the site has been impacted with the release of unleaded gasoline. The proposed future sue of the property is to remain in residential use. The Notice of Intent to Remediate as published in the Intelligence on June 30, 2016. PF811543.
(REVISED) Hale Produce Industrial Facility, 720 Spring Mill Avenue \& 701 Jones Street, Borough of Conshohocken, Montgomery County. Jon Rutledge, ARCADIS U.S. Inc., 10 Friends Lane, Suite 200, Newtown, PA 18940 on behalf of Mark Frick, Hurst Jaws of Life, Inc. (f/k/a Hale Products, Inc.) 1925 West Field Court, Suite 100, Lake Forest, IL 60045-4824 has submitted a Notice of Intent to Remediate. Soil and groundwater
at the site has been impacted with the release of vocs, svocs and metals. The proposed future use of the property will be residential. The Notice of Intent to Remediate was published in the Times Herald on July 11, 2016. PF772990.

Redd Residence, 3214 Meetinghouse Road, Upper Chichester Township, Delaware County. Viola Redd, 3214 Meetinghouse Road, Boothwyn, PA 19060 on behalf of Thomas Hippensteal, PG, Envirosearch Consultants, Inc., P.O. Box 940, Springhouse, PA 19477 has submitted a Notice of Intent to Remediate. Soil at the site has been impacted with the release of no. 2 fuel oil. The future use of the property will be residential. The Notice of Intent to Remediate was published in the Marcus Hook Press on 11, 2015. PF811622.

Harvard Seven LLC Lot 1, Harvard and Columbia Roads, Haverford Township, Delaware County. Thomas A. Petrecz Jr. Penn E\&R, Inc., 2755 Bergey Road, Hatfield, PA 19440 on behalf of Kevin Hillsinger, Harvard Seven, LLC, 1305 Catfish Lane, Audubon, PA 19403 has submitted a Notice of Intent to Remediate. Soil at the site has been impacted with the release of no. 1, 2, 4, 5 and 6 fuel oil short-list compounds. A single family residence will be built on Lot \# 1. The Notice of Intent was published in the Pennsylvania Bulletin on July 23, 2016. PF811563.

Harvard Seven LLC Lot \# 2, Harvard and Columbia Roads, Haverford Township, Delaware County. Thomas A. Petrecz Jr. Penn E\&R, Inc., 2755 Bergey Road, Hatfield, PA 19440 on behalf of Kevin Hillsinger, Harvard Seven, LLC, 1305 Catfish Lane, Audubon, PA 19403 has submitted a Notice of Intent to Remediate. Soil at the site has been impacted with the release of no. $1,2,4,5$ and 6 fuel oil short-list compounds. A single family residence will be built on Lots \# 2 and \# 3. The Notice of Intent was published in the Pennsylvania Bulletin on July 23, 2016. PF811568.

Harvard Seven LLC Lot \# 3, Harvard and Columbia Roads, Haverford Township, Delaware County. Thomas A. Petrecz Jr. Penn E\&R, Inc., 2755 Bergey Road, Hatfield, PA 19440 on behalf of Kevin Hillsinger, Harvard Seven, LLC, 1305 Catfish Lane, Audubon, PA 19403 has submitted a Notice of Intent to Remediate. Soil at the site has been impacted with the release of no. $1,2,4,5$ and 6 fuel oil short-list compounds. A single family residence will be built on Lots \# 2 and \#3. The Notice of Intent was published in the Pennsylvania Bulletin on July 23, 2016. PF811569.

Harvard Seven LLC Lot \# 4, Harvard and Columbia Roads, Haverford Township, Delaware County. Thomas A. Petrecz Jr. Penn E\&R, Inc., 2755 Bergey Road, Hatfield, PA 19440 on behalf of Kevin Hillsinger, Harvard Seven, LLC, 1305 Catfish Lane, Audubon, PA 19403 has submitted a Notice of Intent to Remediate. Soil at the site has been impacted with the release of no. 1, 2, 4, 5 and 6 fuel oil short-list compounds. A single family residence will be built on Lots \# 4. The Notice of Intent to Remediate was published in the Pennsylvania Bulletin on July 23, 2016. PF811570.

5 Ways Lane, 5 Way Lane, Kennett Township, Chester County. Richard S. Werner, Environmental Consulting, Inc., 2002 Renaissance Boulevard, Suite 110, King of Prussia, PA 19406 on behalf of Joe Pepe, Kennett Square Specialties, LLC, Kennett Square, PA 19348 has submitted a Notice of Intent to Remediate. Soil at the site has been impacted with the release of arsenic and lead. The proposed future use of the property will be a mixed
non-residential and residential use. The Notice of Intent to Remediate was published in the Kennett Paper on June 9, 2016. PF811547.

Schaffer Residence, 3795 Church School Road, Buckingham Township, Bucks County. Richard D. Trimpi, Trimpi Associates, Inc., 1635 Old Plains Road, Pennsburg, PA 18073, Stephanie McLaughlin, Selective Insurance Company of America, P.O. Box 7264, London, KY 40742 on behalf of Amy and Mark Shaffer, 3795 Church School Road, Doylestown, PA 18902 has submitted a Notice of Intent to Remediate. Soil at the site has been impacted with the release of no. 2 fuel oil. The current use and proposed future use of the property is residential. A Notice of Intent to Remediate was published in the Intelligence on June 24, 2016. PF810209.

Rose Residence, 1069 Meetinghouse Road, Abington Township, Montgomery County. Jeremy Bolyn, Environmental Maintenance Company, Inc., 1420 Mermaid Lane, Glenside, PA 19038 on behalf of c/o Ms. Susan Rose, 1069 Meetinghouse Road, Rydal, PA 19038 has submitted a Notice of Intent to Remediate. Soil at the site has been impacted with the release of no. 2 fuel oil. The future use of the property is residential. A Notice of Intent to Remediate was published in the Times Herald on June 17, 2016. PF811623.

Addisville Commons, 922 Second Street Pike, Northampton Township, Bucks County. Jason Pereo, RCC Environmental Professionals, 10 Lippincott Lane, Unit 1, Mount Holly, NJ 08060 on behalf of has submitted a Notice of Intent to Remediate. Soil at the site has been impacted with the release of pesticides. The subject facility has been sold and will be redeveloped; proposed future use will include commercial and retail operation including a Rite Aid Pharmacy, bank, hospital and commercial offices. The Notice of Intent to Remediate was published in the Bucks County Courier Times on July 18, 2016. PF811548.

915 Bethlehem Pike, 915 Bethlehem Pike, Lower Gwynedd Township, Montgomery County. Richard S. Werner, Environmental Consulting, Inc., 2002 Renaissance Boulevard, Suite 110, King of Prussia, PA 19406, Andrew Hubley, Environmental Consulting, Inc., 2002 Renaissance Boulevard, Suite 110, King of Prussia, PA 19406 on behalf of Paul Bucco, 915 1/2 North Bethlehem Pike Partners LP, 10 Est 6th Avenue, Suite 100, Conshohocken, PA 19428 has submitted a Notice of Intent to Remediate. Soil at the site has been impacted with the release of unleaded/leaded gasoline. The future use of the site is intended to be redeveloped for future commercial use. A Notice of Intent to Remediate was published in the Ambler Gazette on July 10, 2016. PF811562.
(REVISED) Dreshertown Plaza, 1424 Dreshertown Road, Upper Dublin Township, Montgomery County. Craig Herr, RT Environmental Services, Inc., 215 West Church Road, King of Prussia, PA 19408 on behalf of Jim Bladel, Dreshertown Plaza, LP, 1301 Lancaster Avenue, Berwyn, PA 19312 has submitted a Notice of Intent to Remediate. Soil and groundwater at the site has been impacted with the release of tetrachloroethylene. The future use of the property will remain a commercial shopping center. A Notice of Intent to Remediate was published in the Ambler Gazette on April 11, 2016.

Fort Washington MGP Site, 432 Pennsylvania Avenue, Whitemarsh Township, Montgomery County. Gloria Hunsberger, Kleinfelder, Inc., 180 Sheree Boulevard, Suite 3800, Exton, PA 19341 on behalf of Peter Farrand,

PECO Energy Company, 2301 Market Street, S7-2, Philadelphia, PA 19103 has submitted a Notice of Intent to Remediate. Soil has been impacted with the release of pah. The intended future use of the property includes a mixture of commercial and residential properties. A Notice of Intent to Remediate was published in the Ambler Gazette on August 5, 2016. PF618877.

Festival Pier, 501 North Columbus Boulevard, City of Philadelphia, Philadelphia County. Paul Martino, PG, Pennoni Associates, Inc., 3001 Market Street, Philadelphia, PA 19104, Bill Schmidt, PE, Pennoni Associates, Inc., 3001 Market Street, Philadelphia, PA 19104 on behalf of Joseph Forkin, Delaware River Waterfront Corporation, 12 North Columbus Boulevard, Philadelphia, PA 19106 has submitted a Notice of Intent to Remediate. Soil and groundwater at the site has been impacted with the release of pah and metals. The site is currently developed as an entertainment center for musical concerts. Future development includes development of commercial structure on the ground floor, and residential bulling above grade levels. A Notice of Intent to Remediate was published in The Metro Philadelphia on July 26, 2016. PF811767.

Earls Dry Cleaners, 816 2nd Street Pike, Northampton Township Bucks County. Stephen Huxta, Brickhouse Environmental, 515 South Franklin Street, West Chester, PA 19392, David Farrington, Brickhouse Environmental, 515 South Franklin Street, West Chester, PA 19392 on behalf of Earl Mangin, Earls Cleaners, 816 2nd Street Pike, Richboro, PA 18954 has submitted a Notice of Intent to Remediate. Soil and groundwater at the site has been impacted with the release of chlorinated solvents. The property is proposed to remain as nonresidential. A Notice of Intent to Remediate was published in the Bucks County Courier Times on July 21, 2016. PF811736.

## DETERMINATION OF APPLICABILITY FOR RESIDUAL WASTE GENERAL PERMITS

Application(s) for Renewal of a Determination of Applicability Withdrawn Under the Solid Waste Management Act (35 P.S. §§ 6018.101-6018.1003); the Municipal Waste Planning, Recycling and Waste Reduction Act (53 P.S. §§ 4000.1014000.1904); and Residual Waste Regulations for a General Permit to Operate Residual Waste Processing Facilities and/or the Beneficial Use of Residual Waste Other Than Coal Ash

Southcentral Region: Regional Solid Waste Manager, 909 Elmerton Avenue, Harrisburg, PA 17110.

General Permit Application No. WMGR038SC006. Blair County Resource Recovery Facility, Inc., 1356 Old 6th Avenue Road, Altoona, PA 16601. The Southcentral Regional Office, Waste Management Program received an application on May 31, 2016 for a renewal of Blair County Resource Recovery Facility, Inc.'s determination of applicability (DOA) under Residual Waste General Permit No. WMGR038 for the Blair County Resource Recovery Facility, Inc. facility located at 1356 Old 6th Avenue Road, Altoona, PA in Logan Township, Blair County. This general permit is for processing waste tires and tire-derived material for fuel and consumer products. The DOA application was withdrawn by the applicant on August 16, 2016.

Persons interested in obtaining more information about this determination of applicability may contact John Oren, P.E., Permits Chief, Southcentral Regional Office,

Waste Management Program at 717-705-4706. TDD users may contact the Department through the Pennsylvania AT\&T Relay Service, (800) 654-5984.

## OPERATE WASTE PROCESSING OR DISPOSAL AREA OR SITE

Application(s) Received Under the Solid Waste Management Act, the Municipal Waste Planning, Recycling and Waste Reduction Act and Regulations to Operate Solid Waste Processing or Disposal Area or Site.

Northeast Region: Regional Solid Waste Manager, 2 Public Square, Wilkes-Barre, PA 18701-1915.
Permit Application No. 101628. Tully Environmental Inc. d/b/a Natural Soil Products, 2286 East Center Street, P.O. Box 283, Tremont, PA 17981. A permit renewal application for the continued operation of this municipal biosolids composting facility located in Frailey Township, Schuylkill County. The application was received by the Regional Office on August 2, 2016 and accepted as complete on August 5, 2016.
Persons interested in reviewing the permit may contact Roger Bellas, Regional Waste Management Program Manager, Department of Environmental Protection, Northeast Regional Office, 2 Public Square, Wilkes-Barre, PA 187011915 at 570-826-2511. TDD users may contact the Department through the Pennsylvania AT\&T Relay Service, (800) 654-5984.

## AIR QUALITY

## PLAN APPROVAL AND OPERATING PERMIT APPLICATIONS

The Department has developed an "integrated" plan approval, State Operating Permit and Title V Operating Permit program. This integrated approach is designed to make the permitting process more efficient for the Department, the regulated community and the general public. This approach allows the owner or operator of a facility to submit permitting documents relevant to its application for all sources related to a facility or a proposed project, affords an opportunity for public input, and provides for a decision on the issuance of the necessary permits.
The Department received applications for Plan Approvals or Operating Permits from the following facilities.
Copies of the application, the Department's analysis, all pertinent documents used in the evaluation of the application and subsequently prepared proposed plan approvals/operating permits are available for public review during normal business hours at the appropriate Department Regional Office. Appointments for scheduling a review must be made by calling the appropriate Department Regional Office. The address and phone number of the Regional Office is listed before the application notices.

Persons wishing to file a written protest or provide comments or additional information, which they believe should be considered prior to the issuance of a permit, may submit the information to the Department's Regional Office. A 30-day comment period from the date of this publication will exist for the submission of comments, protests and information. Each submission must contain the name, address and telephone number of the person submitting the comments, identification of the proposed Plan Approval/Operating Permit including the permit number and a concise statement regarding the relevancy
of the information or objections to issuance of the permit.
A person wishing to request a hearing may do so during the 30-day comment period. A public hearing may be held, if the Department, in its discretion, decides that a hearing is warranted based on the information received. Persons submitting comments or requesting a hearing will be notified of the decision to hold a hearing by publication in the newspaper, the Pennsylvania Bulletin or by telephone, when the Department determines this type of notification is sufficient. Requests for a public hearing and any relevant information should be directed to the appropriate Department Regional Office.

Permits issued to the owners or operators of sources subject to 25 Pa . Code Chapter 127, Subchapter D or E, or located within a Title V facility or subject to 25 Pa. Code § 129.51(a) or permits issued for sources with limitations on their potential to emit used to avoid otherwise applicable Federal requirements may be submitted to the United States Environmental Protection Agency for review and approval as a revision to the State Implementation Plan. Final Plan Approvals and Operating Permits will contain terms and conditions to ensure that the sources are constructed and operating in compliance with applicable requirements in the Air Pollution Control Act (35 P.S. §§ 4001-4015), 25 Pa. Code Chapters 121-145, the Federal Clean Air Act ( 42 U.S.C.A. §§ 7401-7671q) and regulations adopted under the Federal Clean Air Act.

Persons with a disability who wish to comment and require an auxiliary aid, service or other accommodation to participate should contact the regional office listed before the application. TDD users may contact the Department through the Pennsylvania AT\&T Relay Service at (800) 654-5984.

## Intent to Issue Plan Approvals and Intent to Issue or Amend Operating Permits under the Air Pollution Control Act (35 P.S. §§ 4001-4015) and 25 Pa. Code Chapter 127, Subchapter B. These actions may include the administrative amendments of an associated operating permit.

Southeast Region: Air Quality Program, 2 East Main Street, Norristown, PA 19401.

Contact: James A. Beach, New Source Review ChiefTelephone: 484-250-5920.

09-0090C: Praxair Distribution, Inc. (One Steel Road East, Morrisville, PA 19067) for operation of one (1) existing Guardian Gas Cylinder Manifold, in Falls Township, Bucks County. The plan approval is for a non-Title V, State-Only facility. This plan approval is for the reactivation of their previously permitted Guardian System which was installed in 1992, deactivated on January 14, 2011, and no maintenance plan was submitted to DEP. This source processes residual gases from returned cylinders. The plan approval will include monitoring, recordkeeping and reporting requirements designed to keep the source and the facility operating within all applicable air quality requirements.

09-0152D: Gelest Inc. (11 Steel Road E, Morrisville, PA 19067) to authorize the installation and operation of 4 new reactors and change the status of 3 existing reactors previously installed under an RFD from insignificant to significant sources at Morrisville facility located in Falls Township, Bucks County. Gelest is a specialty chemicals manufacturer and operates under Natural Minor Operating Permit No. 09-00152. With this plan approval, Gelest
has a potential to emit more than 25 tons of VOCs per year; however, Gelest is taking a site-wide emission limitation of 24.990 TPY of VOCs and stay as a Synthetic Minor. In addition, Gelest is also taking a HAP emissions limit of 24.990 for total HAPs and 9.990 for any single HAP. Gelest will estimate potential emissions for each order then update the emission records after the order is processed to maintain compliance with the applicable limits in the permit. A major part of the VOC and HAP emissions is fugitive and the rest is controlled by condenser and two acid scrubbers and a base scrubber. The scrubbers controls VOCs and HAPs by greater than 99 percent, and the condenser reclaims the condensable VOC and HAP compounds by greater than 90 percent. The plan approval contains monitoring, recordkeeping, reporting, and work practice standards designed to keep the facility operating within all applicable air quality requirements.

## OPERATING PERMITS

Intent to Issue Title V Operating Permits under the Air Pollution Control Act and 25 Pa. Code Chapter 127, Subchapter G.
Northcentral Region: Air Quality Program, 208 West Third Street, Williamsport, PA 17701.

Contact: Muhammad Q. Zaman, Environmental Program Manager-Telephone: 570-327-3648.

18-00005: Dominion Transmission, Inc. (925 White Oakes Blvd, Bridgeport, WV 26330) has submitted an application to the Pennsylvania Department of Environmental Protection for the significant modification to the Title V operating permit TVOP 18-00005 for a Notice of Violation (NOV) dated December 17, 2015, that was sent to DTI for not equipping the compressor turbine engine (Source P110) of Title V operating permit (TVOP) 1800005 with the Cold Ambient Fuel Control Logic. The significant modification is for the increase in nitrogen oxide ( $\mathrm{NO}_{\mathrm{x}}$, expressed as $\mathrm{NO}_{2}$ ) and volatile organic compounds VOC because Dominion Transmission, Inc. did not install the Cold Ambient Fuel Control Logic on Source P110 at the Finnefrock Compressor Station located in Leidy Township, Clinton County.

Dominion Transmission, Inc. has demonstrated compliance with all applicable air quality regulatory requirements pertaining to the operation of all air contamination sources and the emission of air contaminants authorized by the Title V operating permit. Based on these findings, the Department intends to modify the TVOP 18-00005 for the increase in the CO, $\mathrm{NO}_{\mathrm{x}}$ and VOC emissions for Source P110 and remove the condition requiring Source P110 to be equipped with the Cold Ambient Fuel Control Logic. The following is a summary of the conditions to be modified in the TVOP $18-00005$ to be issued to ensure compliance with all applicable air quality regulatory requirements: The total carbon monoxide emissions from Source P110 shall not exceed 16.28 tons in any 12 consecutive month period; the total combined nitrogen oxide emissions from Source P110 shall not exceed 32.88 tons in any 12 consecutive month period and the total combined volatile organic compound emissions from Source P110 shall not exceed 3.00 tons in any 12 consecutive month period.

All pertinent documents used in the evaluation of the application are available for public review during normal business hours at the Department's Northcentral Regional Office, 208 West Third Street, Suite 101, Williamsport, PA 17701. Appointments for scheduling a review must be made by calling 570-327-0550.

59-00005: Dominion Transmission Inc. (925 White Oaks Blvd., Bridgeport, WV 26330) for renewal of the Title V operating permit for their Sabinsville Compressor station located in Clymer Township, Tioga County. The facility is currently operating under Title V Operating Permit 59-00005. The facility's sources include one 25.2 million Btu per hour heater; 18 natural-gas fired combustion units with a combined maximum heat input rating of 3.773 million Btu per hour; five 1,300 brake-horsepower natural-gas fired engines; two 2,000 brake-horsepower natural-gas fired engines; one 2,370 brake-horsepower natural gas-fired engine controlled by an oxidation catalyst; one 5,810 brake-horsepower natural gas-fired turbine controlled by an oxidation catalyst; eight 65 kilowatt micro-turbines; one 12.07 million Btu per hour natural gas-fired salt bath heater; one 3.0 million Btu per hour natural gas-fired boiler; one 576 brake-horsepower dieselfired emergency engine; one 150 brake-horsepower natural gas-fired emergency engine, 19 storage tanks; emergency gas blowdown; engine transition vents; and miscellaneous sources determined to be of minor significance.
The facility has actual annual emissions of 45.57 tons of carbon monoxide, 36.11 tons of nitrogen oxides, 0.07 ton of sulfur oxides, 3.32 tons of particulate matter including particulate matter less than 10 microns in size, 3.32 tons of particulate matter less than 2.5 microns in size, 15.55 tons of volatile organic compounds, 7.75 tons of hazardous air pollutants, and 13,376.20 tons of greenhouse gases. The emission limits, throughput limitations and work practice standards along with testing, monitoring, record keeping and reporting requirements have been included in the operating permit to ensure the facility complies with all applicable Federal and State air quality regulations. These operating permit conditions have been derived from the applicable requirements of 40 CFR Part 60 Subpart Dc, 40 CFR Part 60 Subpart JJJJ, 40 CFR Part 60 Subpart KKKK, 40 CFR Part 63 Subpart ZZZZ, 40 CFR Part 63 Subpart DDDDD, 40 CFR Part63 Subpart YYYY, and 25 Pa. Code Chapters 121-145.
All pertinent documents used in the evaluation of the application are available for public review during normal business hours at the Department's Northcentral Regional Office, 208 West Third Street, Suite 101, Williamsport, PA 17701. Appointments for scheduling a review must be made by calling 570-327-0550.

Northwest Region: Air Quality Program, 230 Chestnut Street, Meadville, PA 16335-3481.

Contact: Dave Balog, New Source Review ChiefTelephone: 814-332-6940.

42-00011: International Waxes Plant (45 Route 446, Smethport, PA 16749-5413) for intent to re-issue the Title V Permit for the Farmers Valley Plant in Keating Township, McKean County. The facility's representative to contact concerning this application is Mr. Daniel Goldsmith, Environmental Manager. His phone number is (814) 887-4056.

The facility's major emission sources include the boilers 1, 2, and 3 (controlled by an ESP), natural gas boiler 5, rerun unit charge heater 2, crude unit vacuum heater, resin heater, No. 2 Earth Burner (controlled by a scrubber), emergency fire pumps and compressors, storage tanks (controlled by a flare), plant wide-fugitive emissions, wastewater treatment, propane deresiner unit (controlled by a flare), degreasers, flue gas holder, coal unloading, and flyash loading. The facility is a major facility due to its potential to emit Nitrogen Oxides $\left(\mathrm{NO}_{\mathrm{x}}\right)$,

Sulfur Oxides ( $\mathrm{So}_{\mathrm{x}}$ ), and Volatile Organic Compounds (VOCs). The facility is subject to the Title V Operating Permit requirements adopted in 25 Pa . Code Chapter 127, Subchapter G. The facility is subject to the New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII) and the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Organic Hazardous Air Pollutant for Equipment Leaks ( 40 CFR 63, Subpart H), Recovery Device and Routing to the Fuel Gas System or a Process (40 CFR 63, Subpart SS), Organic Liquids Distribution (40 CFR 63, Subpart EEEE), Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ), and, Industrial, Commercial and Institutional Boilers and Process Heaters (40 CFR 63, Subpart DDDDD).

Intent to Issue Operating Permits under the Air Pollution Control Act and 25 Pa. Code Chapter 127, Subchapter F.

Southwest Region: Air Quality Program, 400 Waterfront Drive, Pittsburgh, PA 15222-4745.

Contact: Tom Joseph, P.E., Engineering ManagerTelephone: 412-442-4336.

11-00527: Phoenix Services, LLC/Johnstown Slag Preparation Facility (1317 Main Street, Johnstown, PA 15909) for operation of a slag processing and handling facility located in Franklin Borough, Cambria County. The operation of the facility's air contamination source consisting front end loaders, vibrating feeder, jaw crusher, screens, conveyors, stackers, stockpiles, and roadways. Emissions are controlled through moisture content, the use of wet dust suppression and a water truck. Emissions from this site will not exceed 10 tons of particulate matter per year. This facility is subject to the applicable requirements of 25 Pa . Code Chapters 121-145. Proposed SOOP includes conditions relating to applicable emission restrictions, testing, monitoring, recordkeeping, reporting and work practice standards requirements.

OP-56-00159: Somerset County Technology Center/ Somerset (281 Technology Drive, Somerset, PA 15501) in accordance with 25 Pa . Code §§ $127.424,127.425$ and 127.521, the Department of Environmental Protection (DEP) is providing notice that it intends to issue a renewal State Only Operating Permit (SOOP-56-00159) to Somerset County Technology Center to authorize the continued operation of a Tri-Fuel Boiler located in Somerset Township, Somerset County.
The facility's air contamination sources consist of one boiler and two emergency generators. Emissions from "Tri-Fuel Boiler" are controlled via a Breslove Separator. Potential emissions from the facility are based on a limit of burning 2,000 tons of coal per consecutive 12 -month period and are estimated to be 71.3 tons $\mathrm{SO}_{\mathrm{x}}, 11.0$ tons $\mathrm{CO}, 9.1$ tons $\mathrm{NO}_{\mathrm{x}}, 1.3$ ton VOCs, and 15.0 tons particulate matter (PM). Actual emissions from the facility are much lower.

This facility is subject to the applicable requirements of 25 Pa. Code Chapters 121-145. Proposed SOOP renewal includes conditions relating to applicable emission restrictions, testing, monitoring, recordkeeping, reporting and work practice standards requirements. The emergency generators are subject to the applicable requirement of 40 CFR Part 63 Subpart ZZZZ.
Somerset County Technology Center State Only Operating Permit renewal application, the Department's Air Quality Review Memorandum, and the proposed Air

Quality State Only Operating Permit for this project are available for review by any interested party at the Pennsylvania Department of Environmental Protection, Southwest Regional Office, 400 Waterfront Drive, Pittsburgh, PA 15222. To request a review of the State Only Operating Permit renewal application, to receive an electronic copy of the Department's Air Quality Review Memorandum, or to receive an electronic copy of the Department's proposed Air Quality State Only Operating Permit for this project, a person may contact Phil Bouse at pbouse@pa.gov or 412.442.4000.

Any person may submit comments, requests for the Department to hold a public hearing, or protests to the operating permit or a proposed condition thereof, by filing such submissions in writing to the Department at the Southwest Regional Office. A 30-day comment period from the date of this publication will exist for the submission of comments.

All comments, requests for a public hearing, and protests to a proposed action, shall be filed with the Department within 30 days of the date that notice of the proposed action was published under 25 Pa . Code $\S 127.424$ (relating to public notice). Comments, requests for a public hearing, and protests must include the name, address and telephone number of the person filing the protest, identification of the proposed permit issuance being opposed (State Only Operating Permit 56-00159) and a concise statement of the objections to the permit issuance and the relevant facts upon which the objections are based.

A public hearing may be held in accordance with 25 Pa. Code § 127.429, if the Department, in its discretion, decides that such a hearing is warranted based on the information received. If a public hearing is held, all persons who have properly filed a protest under 25 Pa. Code § 127.426 may appear and give testimony. The applicant, the protestant and other participants will be notified of the decision to hold a hearing (and the time, place and purpose of such hearing) by publication in the newspaper or by the Pennsylvania Bulletin, or by telephone, where the Department determines such notification by telephone is sufficient.

Comments, protests and requests for a public hearing should be directed to Jesse S. Parihar, Air Quality Engineering Specialist, Department of Environmental Protection, Southwest Regional Office, 400 Waterfront Drive, Pittsburgh, PA 15222. (jparihar@pa.gov, Fax 412.442.4194).

Northwest Region: Air Quality Program, 230 Chestnut Street, Meadville, PA 16335-3481.

Contact: Dave Balog, New Source Review ChiefTelephone: 814-332-6940.

24-00083: Mersen USA, St. Marys-PA Corporation (215 Stackpole Street, Saint Marys, PA 15857-1401) for renewal of the Title V Operating Permit. The facility is located in the City of Saint Marys, Elk County. The facility manufactures Carbon and Graphite Products. The facility's emitting sources include: Billet Unloading Station; Pulverizers; Mills; Crushers Furnaces; Blenders; Sizing Operations; Mixers; Ovens; Graphitizers; Dryers; Machining Operations; Press Jolters; Miscellaneous Sources controlled by baghouses which exhaust outside; Parts Cleaners; Vacuum Hoses; and, Weigh Stations. The facility is a major facility due to potential $\mathrm{PM}_{10}$ (Particulate matter particle size is less than or equal to ten micron) emissions, Carbon Monoxide (CO) emissions, and Sulfur Dioxide ( $\mathrm{SO}_{\mathrm{x}}$ ) emissions more than 100 tons per
year. Therefore, the facility is subject to the Title V Operating Permit requirements adopted in 25 Pa . Code Chapter 127, Subchapter G. The facility is also subject to the Compliance Assurance Monitoring Rule (CAM) found in 40 C.F.R. Part 64. Appropriate permit conditions to address the applicable CAM requirements were included in the previous permit. The facility provided the following potential emissions in the permit application: Particulate Matter ( $\mathrm{PM}_{-25}$ )-10.98 Tons per year (TPY); PM less than ten microns $\left(\mathrm{PM}_{-10}\right)-18.40 \mathrm{TPY} ;$ Oxides of Sulfur $\left(\mathrm{SO}_{\mathrm{x}}\right)-$ 83.11 TPY; Carbon Monoxide (CO)-205.91 TPY; Oxides of Nitrogen $\left(\mathrm{NO}_{\mathrm{x}}\right)-11.65$ TPY; Volatile Organic Compound (VOC)-7.59 TPY; and Hazardous Air Pollutants (HAP) Less than one ton per year.

10-00237: Fox Funeral Home (410 West Main Street, PO Box 305, Saxonburg, PA 16056) to issue a renewal State Only Operating Permit for the facility located in Saxonburg Borough, Butler County. The facility is a Natural Minor. The primary sources at the facility include a natural gas fueled crematory and miscellaneous natural gas combustion units. The crematory is equipped with a $716,000 \mathrm{Btu} / \mathrm{hr}$ burner in the primary chamber and a 1.4 million Btu/hr burner in the secondary chamber. Emissions from the facility are: 0.04 tpy PM $_{-10} ; 0.05$ tpy CO; and 0.10 tpy VOC. The renewal permit contains emission restrictions, recordkeeping, and work practice requirements to ensure compliance with the Clean Air Act and the Air Pollution Control Act.
20-00135: Clear Lake Lumber (409 Main Street, Spartansburg, PA 16434) to issue a renewal of the State Only Operating Permit for the sawmill and hardwood flooring facility located in Spartansburg Borough, Crawford County. The sources at the facility include a wood fired boiler controlled by a cyclone, chipper room, sawmill operations, a reman shed for sorting and cutting lumber, the planer shed, planer silo, boiler silo, and cyclones/baghouses for control of the particulate emission. The facility is a natural minor. The facility is an Area Source for MACT. The wood fired boiler is subject to the requirements of 40 CFR 63, Subpart JJJJJJ-NESHAP for Industrial, Commercial, and Institutional Boilers at Area Sources. The renewal permit contains emission restrictions, recordkeeping, work practice, and additional requirements to ensure compliance with the Clean Air Act and the Air Pollution Control Act. The emissions from the boiler are: 13.1 TPY of particulate, 44.7 TPY of CO, 0.3 TPY of VOC, 16.4 TPY of $\mathrm{NO}_{\mathbf{x}}$, and 1.8 TPY $\mathrm{SO}_{2}$. The particulate emissions from each of the other sources is limited to $0.04 \mathrm{gr} / \mathrm{dscf}$ by 25 Pa . Code § 123.13.

## 25-00940: Animal Friends Cremation Services

 (11711 Sharp Rd, PO Box 735, Waterford, PA 16441-3935) to issue a renewal State Only Operating Permit for the facility located in Waterford Borough, Erie County. The facility is a Natural Minor. Annual emissions of criteria pollutants are as follows: 0.24 tpy $\mathrm{PM}_{-10} ; 0.04$ tpy CO. The primary source at the facility is a natural gas fueled crematory equipped with a primary chamber burner rated at $800,000 \mathrm{Btus} / \mathrm{hr}$ and a secondary chamber burner rated at 1.3 million Btus $/ \mathrm{hr}$. The renewal permit contains emission restrictions, recordkeeping, and work practice requirements to ensure compliance with the Clean Air Act and the Air Pollution Control Act.42-00187: Resting Acres Pet Cemetery (1353 South Avenue, Bradford, PA 16701-0736) to issue a renewal State Only Operating Permit for the facility located in Bradford Township, McKean County. The facility is a Natural Minor. The primary sources at the facility are 2 natural gas fueled crematories: Crematory A, rated at 1.5
million $\mathrm{Btu} / \mathrm{hr}$; and Crematory B , rated at 1.3 million Btus/hr. Annual emissions from the facility are as follows: $\mathrm{PM}_{-10}<1$ tpy; CO $<1$ tpy; VOC $<1$ tpy. The renewal permit contains emission restrictions, recordkeeping, and work practice requirements to ensure compliance with the Clean Air Act and the Air Pollution Control Act.

Department of Public Health, Air Management Services: 321 University Avenue, Philadelphia, PA 19104.

Contact: Edward Wiener, Chief—Telephone: 215-6859426.

N16-000: Equinix LLC (401 N. Broad Street, Philadelphia, PA 19108) for the operation of a data center in the City of Philadelphia, Philadelphia County. The facility's air emission sources include one (1) 800 kW diesel fuel fired emergency generator (EG1), and two (2) 1,500 kW diesel fuel fired emergency generators EGA \& EGB.

The operating permit will be issued under 25 Pa . Code, Philadelphia Code Title 3 and Air Management Regulation XIII. Permit copies and other supporting information are available for public inspection at AMS, 321 University Avenue, Philadelphia, PA 19104. For further information, contact Edward Wiener at (215) 685-9426.

Persons wishing to file protest or comments on the above operating permit must submit the protest or comments within 30 days from the date of this notice. Any protests or comments filed with AMS must include a concise statement of the objections to the permit issuance and the relevant facts upon which the objections are based. Based upon the information received during the public comment period, AMS may modify the operating permit or schedule a public hearing. The hearing notice will be published in the Pennsylvania Bulletin and a local newspaper at least thirty days before the hearing.

## COAL AND NONCOAL MINING ACTIVITY APPLICATIONS

Applications under the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.1-1396.19a); the Noncoal Surface Mining Conservation and Reclamation Act (52 P.S. §§ 3301-3326); The Clean Streams Law (35 P.S. §§ 691.1-691.1001); the Coal Refuse Disposal Control Act (52 P.S. §§ 30.51-30.66); and The Bituminous Mine Subsidence and Land Conservation Act (52 P.S. $\S \S 1406.1-1406.20 \mathrm{a}$ ). Mining activity permits issued in response to such applications will also address the applicable permitting requirements of the following statutes: the Air Pollution Control Act (35 P.S. §§ 4001-4015); the Dam Safety and Encroachments Act (32 P.S. §§ 693.1693.27); and the Solid Waste Management Act (35 P.S. §§ 6018.101-6018.1003).

The following permit applications to conduct mining activities have been received by the Department. A copy of the application is available for inspection at the district mining office indicated before each application. Notices of requests for 401 Water Quality Certifications are included in individual application notices, as noted.

Written comments or objections, or requests for an informal conference, or a public hearing, as applicable, on a mining permit application and request for Section 401 water quality certification application may be submitted by any person or any officer or head of any Federal, state or local government agency or authority to the Department at the address of the district mining office indicated before each application within 30 days of this publication, or within 30 days after the last publication of the applicant's newspaper advertisement as provided by 25 Pa. Code §§ 77.121-77.123 and 86.31-86.34.

Written comments or objections regarding a mining permit application should contain the name, address and telephone number of persons submitting comments or objections, application number and a statement of sufficient detail to inform the Department on the basis of comment or objection and relevant facts upon which it is based.

A request for an informal conference or a public hearing, as applicable, on a mining permit application, as provided by 25 Pa . Code § 77.123 or § 86.34, must contain the name, address and telephone number of the requestor; the application number; a brief summary of the issues to be raised by the requestor at the conference; and a statement whether the requestor desires to have the conference conducted in the locality of the proposed mining activities.
When an NPDES number is listed, the mining activity permit application was accompanied by an application for an individual NPDES permit. A separate notice will be provided after the draft NPDES permit is prepared.

## Coal Applications Received

California District Office: 25 Technology Drive, Coal Center, PA 15423, 724-769-1100.
30081601 and NPDES No. PA0235792. Coresco, LLC, (103 Corporate Drive, Suite 102, Morgantown, WV 26501). To renew the permit for the Overland Conveyor in Dunkard Township, Greene County and related NPDES permit. No additional discharges. The application was considered administratively complete on August 9, 2016. Application received February 1, 2016.

30841317 and NPDES No. PA0213527. Consol Pennsylvania Coal Company LLC, ( 1000 Consol Energy Drive, Canonsburg, PA 15317). To revise the permit for the Enlow Fork Mine in Richhill Township, Greene County and related NPDES permit to revise 246 currently permitted underground acreage and subsidence control plan area for longwall mining. No additional discharges. The application was considered administratively complete on August 12, 2016. Application received March 1, 2016.

Pottsuille District Mining Office: 5 West Laurel Boulevard, Pottsuille, PA 17901, 570-621-3118.

Permit No. 49871603T. Dale Lenig Coal, LLC, (1006 Lower Road, Shamokin, PA 17872), transfer of an existing anthracite coal preparation plant operation from D. Dale Lenig in Little Mahanoy Township, Northumberland County affecting 2.1 acres, receiving stream: Mahanoy Creek, classified for the following use: cold water fishes. Application received: August 2, 2016.

Permit No. 49871603R5 and PAM112055R. Dale Lenig Coal, LLC, (1006 Lower Road, Shamokin, PA 17872), renewal of an existing anthracite coal preparation plant operation in Little Mahanoy Township, Northumberland County affecting 2.1 acres, receiving stream: Mahanoy Creek, classified for the following use: cold water fishes. Application received: August 2, 2016.

## Noncoal Applications Received

Effluent Limits-The following effluent limits will apply to NPDES permits issued in conjunction with a noncoal mining permit:

Table 2

## Parameter

Suspended solids
Alkalinity exceeding acidity*
$\mathrm{pH}^{*}$
Daily
Maximum

20 to $70 \mathrm{mg} / \mathrm{l}$

## Instantaneous Maximum <br> 25 to $90 \mathrm{mg} / \mathrm{l}$

## 30-day <br> Average

10 to $35 \mathrm{mg} / \mathrm{l}$
greater than 6.0; less than 9.0

* The parameter is applicable at all times.

A settleable solids instantaneous maximum limit of $0.5 \mathrm{ml} / /$ applied to surface runoff resulting from a precipitation event of less than or equal to a 10 -year 24 -hour event. If coal will be extracted incidental to the extraction of noncoal minerals, at a minimum, the technology-based effluent limitations identified under coal applications will apply to discharges of wastewater to streams.

## Pottsville District Mining Office: 5 West Laurel Boulevard, Pottsville, PA 17901, 570-621-3118.

Permit No. 58042806. Douglas G. Kilmer, (4847 State Route 106, Clifford Twp., PA 18470), Stage I \& II bond release of a quarry operation in Harford Township, Susquehanna County affecting 3.0 acres on property owned by Larry Mock. Application received: August 3, 2016.

## MINING ACTIVITY NPDES DRAFT PERMITS

This notice provides information about applications for a new, amended or renewed NPDES permits associated with mining activity (coal or noncoal) permits. The applications concern industrial waste (mining) discharges to surface water and discharges of stormwater associated with mining activities. This notice is provided in accordance with 25 Pa . Code Chapters 91 and 92a and 40 CFR Part 122, implementing provisions of The Clean Streams Law (35 P.S. §§ 691.1-691.1001) and the Federal Clean Water Act (33 U.S.C.A. §§ 1251-1376).

The Department of Environmental Protection (Department) has prepared a draft NPDES permit and made a tentative determination to issue the NPDES permit in conjunction with the associated mining activity permit.

## Effluent Limits for Coal Mining Activities

For coal mining activities, NPDES permits, when issued, will contain effluent limits that are the more stringent of technology-based (BAT) effluent limitations or Water Quality Based Effluent Limits (WQBEL).

The BAT limits for coal mining activities, as provided in 40 CFR Part 434 and 25 Pa. Code Chapters $87-90$ are as follows:

| Parameter | $30-$ Day <br> Average |
| :--- | :--- |
| Iron (Total) (Total) | $3.0 \mathrm{mg} / \mathrm{l}$ |
| Manganese (Tot |  |
| Suspended solids | $2.0 \mathrm{mg} / \mathrm{l}$ |
| $\mathrm{pH}^{*}$ | $35 \mathrm{mg} / \mathrm{l}$ |


| Daily | Instantaneous |
| :---: | :---: |
| Maximum | Maximum |
| $6.0 \mathrm{mg} / \mathrm{l}$ | $7.0 \mathrm{mg} / \mathrm{l}$ |
| $4.0 \mathrm{mg} / \mathrm{l}$ | $5.0 \mathrm{mg} / \mathrm{l}$ |
| $70 \mathrm{mg} / \mathrm{l}$ | $90 \mathrm{mg} / \mathrm{l}$ |
| greater than 6.0; less than 9.0 |  |

Alkalinity greater than acidity*

* The parameter is applicable at all times.

A settleable solids instantaneous maximum limit of $0.5 \mathrm{ml} / \mathrm{l}$ applies to: surface runoff (resulting from a precipitation event of less than or equal to a 10 -year 24 -hour event) from active mining areas; active areas disturbed by coal refuse disposal activities; mined areas backfilled and revegetated; and all other discharges and drainage (resulting from a precipitation event of greater than 1 -year 24 -hour to less than or equal to a 10 -year 24 -hour event) from coal refuse disposal piles. Similarly, modified BAT limits apply to iron, manganese and suspended solids in surface runoff, discharges and drainage resulting from these precipitation events and those of greater magnitude in accordance with 25 Pa . Code §§ 87.102, 88.92, 88.187, 88.292, 89.52 and 90.102.

Exceptions to BAT effluent limits may be applicable in accordance with 25 Pa . Code $\S \S 87.102,88.92,88.187,88.292$, 89.52 and 90.102.

## Effluent Limits for Noncoal Mining Activities

The limits for noncoal mining activities as provided in 25 Pa . Code Chapter 77 are pH 6 to 9 and other parameters the Department may require.
Discharges from noncoal mines located in some geologic settings (for example, in the coal fields) may require additional water quality based effluent limits. If additional effluent limits are needed for an NPDES permit associated with a noncoal mining permit, then the permit description specifies the parameters.

In addition to BAT or WQBEL limits, coal and noncoal NPDES permits establish effluent limitations in the form of implemented Best Management Practices (BMPs) identified in the associated Erosion and Sedimentation Plan, the Reclamation Plan and the NPDES permit application. These BMPs restrict the rates and quantities of associated pollutants from being discharged into surface waters in this Commonwealth.

More restrictive effluent limitations, restrictions on discharge volume or restrictions on the extent of mining that may occur are incorporated into an NPDES permit when necessary for compliance with water quality standards and antidegradation requirements (in accordance with 25 Pa . Code Chapters 91-96).

The procedures for determining the final effluent limits, using a mass-balance equation or model, are found in Technical Guidance Document 563-2112-115, Developing National Pollutant Discharge Elimination System (NPDES) Permits for Mining Activities. Other specific factors to be considered include public comments and Total Maximum Daily Load(s). Additional discharge limitations may apply in the event that unexpected discharges occur.

Discharge rates for surface mining activities are precipitation driven. Discharge rates for proposed discharges associated with underground mining are noted in the permit description.
Persons wishing to comment on an NPDES draft permit should submit a written statement to the Department at the address of the district mining office indicated before each draft permit within 30 days of this public notice. Comments received within the comment period will be considered in the final determinations regarding the NPDES permit applications. Comments must include the name, address and telephone number of the writer and a concise statement to inform the Department of the exact basis of a comment and the relevant facts upon which it is based.

The Department will also accept requests or petitions for a public hearing on NPDES permit applications, as provided in 25 Pa . Code § $92 \mathrm{a} .82(\mathrm{~d})$. The request or petition for a public hearing shall be filed within 30 days of this public notice and contain the name, address, telephone number and the interest of the party filing the request, and state the reasons why a hearing is warranted. A public hearing may be held if the Department considers the public interest significant. If a hearing is scheduled, a notice of the hearing on the NPDES permit application will be published in the Pennsylvania Bulletin and a newspaper of general circulation within the relevant geographical area. When a public hearing is held, the Department will consider comments from the public hearing in the final determination on the NPDES permit application.

## Coal NPDES Draft Permits

Knox District Mining Office: P.O. Box 669, 310 Best Avenue, Knox, PA 16232-0669, 814-797-1191.
NPDES No. PA0604852 (Permit No. 10820122). Allegheny Mineral Corporation (P.O. Box 1022, Kittanning, PA 16201) Revision to an existing NPDES permit for a bituminous surface mine in Marion \& Mercer Townships, Butler County, affecting 598.6 acres. Receiving streams: Unnamed tributaries to North Branch Slippery Rock Creek and North Branch Slippery Rock Creek, classified for the following uses: CWF. TMDL: None. Application received: July 20, 2016.
Unless otherwise noted for a specific outfall, the proposed effluent limits for all outfalls in this permit are the BAT limits described above for coal mining activities.

The outfall(s) listed below discharge to unnamed tributaries to North Branch Slippery Rock Creek and North Branch Slippery Rock Creek:

| Outfall No. | New Outfall $(Y / N)$ |
| :---: | :---: |
| J | N |
| P | N |
| T | N |
| V | N |
| X | N |
| GB | N |
| FB | N |
|  | N |

The proposed effluent limits for the above listed outfall(s) are as follows:

| Parameter | Minimum | 30-Day <br> Average | Daily <br> Maximum | Instant. <br> Maximum |
| :--- | :---: | :---: | :---: | :---: |
| $\mathrm{pH}^{1}$ (S.U.) | 6.0 |  |  | 9.0 |
| Iron (mg/l) |  | 3.0 | 4.0 | 7.0 |
| Manganese (mg/l) | 2.0 | 4.0 | 5.0 |  |
| Aluminum (mg/l) | 2.0 | 5.0 |  |  |
| Alkalinity greater than acidity |  |  |  |  |
| Total Suspended Solids (mg/l) |  | 35 | 70 | 90 |

${ }^{1}$ The parameter is applicable at all times.
The outfall(s) listed below discharge to unnamed tributaries to North Branch Slippery Rock Creek and North Branch Slippery Rock Creek:


The proposed effluent limits for the above listed outfall(s) are as follows:

| Parameter | Minimum | 30-Day Average | Daily Maximum | Instant. Maximum |
| :---: | :---: | :---: | :---: | :---: |
| $\mathrm{pH}^{1}$ (S.U.) | 6.0 |  |  | 9.0 |
| Iron ( $\mathrm{mg} / \mathrm{l}$ ) |  |  |  | 7.0 |
| Alkalinity greater than acidity ${ }^{1}$ |  |  |  |  |
| Total Settleable Solids (ml/l) |  |  |  | 0.5 |

Moshannon District Mining Office: 186 Enterprise Drive, Philipsburg, PA 16866, 814-342-8200.
NPDES No. PA0269697 (Mining permit no. 17150103), RES Coal, LLC, 224 Grange Hall Road, P.O. Box 228, Armagh, PA 15920, new NPDES permit for bituminous surface coal mine in Sandy Township, Clearfield County affecting 88.9 acres. Receiving stream(s): Sandy Lick Creek and Unnamed Tributaries to Sandy Lick Creek classified for the following use(s): CWF. Application received: January 8, 2016.

This proposed mine site also contains or is hydrologically connected to substandard discharges for which there is no responsible party. Pursuant to 25 Pa . Code § 87.201 , effluent limits for those discharges will be based upon existing baseline pollution load or the standards found at 25 Pa . Code § 87.102(a) Group A, whichever is least stringent.

Unless otherwise noted for a specific outfall, the proposed effluent limits for all outfalls in this permit are the BAT limits described above for coal mining activities.

The outfall(s) listed below discharge to UNT \# 14 to Sandy Lick Creek:

| Outfall No. | New Outfall $(Y / N)$ |
| :---: | :---: |
| TF-1 | Y |
| SP-A* | Y |
| SP-B* | Y |

The proposed effluent limits for the above listed outfall(s) are as follows:

| Parameter | Minimum | 30-Day <br> Average | Daily <br> Maximum | Instant. <br> Maximum |
| :---: | :---: | :---: | :---: | :---: |
| $\mathrm{pH}{ }^{1}$ (S.U.) | 6.0 |  |  | 9.0 |
| Iron (mg/l) |  | 3.0 | 6.0 | 7.0* |
| Manganese ( $\mathrm{mg} / \mathrm{l}$ ) |  | 2.0 | 4.0 | 5.0 |
| Aluminum (mg/l) |  | 2.0 | 2.0 | 2.0 |
| Alkalinity greater than acidity ${ }^{1}$ |  |  |  |  |
| Total Suspended Solids ( $\mathrm{mg} / \mathrm{l}$ ) |  | 35.0 | 70.0 | 90.0 |
| Total Settleable Solids ( $\mathrm{ml} / \mathrm{l}$ ) |  |  |  | 0.5* |

The outfall(s) listed below discharge to UNT \# 1 to Sandy Lick Creek:

| Outfall No. | New Outfall $(Y / N)$ |
| :---: | :---: |
| TF-2 | Y |
| TF-3 | Y |
| TF-4 | Y |
| SP-C* | Y |
| SP-D* | Y |

The proposed effluent limits for the above listed outfall(s) are as follows:

| Parameter | Minimum | 30-Day Average | Daily <br> Maximum | Instant. Maximum |
| :---: | :---: | :---: | :---: | :---: |
| pH ${ }^{1}$ (S.U.) | 6.0 |  |  | 9.0 |
| Iron (mg/l) |  | 3.0 | 6.0 | 7.0* |
| Manganese ( $\mathrm{mg} / \mathrm{l}$ ) |  | 2.0 | 4.0 | 5.0 |
| Aluminum (mg/l) |  | 8.0 | 8.0 | 8.0 |
| Alkalinity greater than acidity ${ }^{1}$ |  |  |  |  |
| Total Suspended Solids (mg/l) |  | 35.0 | 70.0 | 90.0 |
| Total Settleable Solids ( $\mathrm{ml} /$ ) |  |  |  | 0.5* |

${ }^{1}$ The parameter is applicable at all times.

## Noncoal NPDES Draft Permits

Cambria District Mining Office: 286 Industrial Park Road, Ebensburg, PA 15931, 814-472-1900.
NPDES No. PA0224456 (Mining permit No. 21050301), JR Zimmerman Enterprises, LLC, 35 Ridge Road, Newville, PA 17241, renewal of an NPDES permit for a shale quarry in North Newton Township, Cumberland County, affecting 33.31 acres. Receiving stream: unnamed tributary to Green Spring Creek, classified for the following use: cold water fishes. Application received: April 25, 2016.
Unless otherwise noted for a specific outfall, the proposed effluent limits for all outfalls in this permit are the BAT limits described above for coal mining activities.

The treatment outfall listed below discharges to unnamed tributary to Green Spring Creek.

Outfall Nos.
001
002

New Outfall (Y/N)
N
N

The proposed effluent limits for the above listed outfalls are as follows:

| Outfalls: | 30-Day | Daily |
| :--- | :---: | :---: |
| Parameter | Average | Maximum |
| Total Suspended Solids $(\mathrm{mg} / \mathrm{l})$ | 35.0 | 70.0 |

pH (S.U.): Must be between 6.0 and 9.0 standard units at all times
Alkalinity must exceed acidity at all times
NPDES No. PA0223735. (Mining permit No. 28960301), New Enterprise Stone and Lime Company, Inc., 3912
Brumbaugh Road, P.O. Box 77, New Enterprise, PA 16664-0077, renewal of an NPDES permit in Fannett Township,
Franklin County, affecting 40.8 acres. Receiving stream: Unnamed tributary to Dry Run, classified for the following use: cold water fishes. Application received: June 22, 2016.

Unless otherwise noted for a specific outfall, the proposed effluent limits for all outfalls in this permit are the BAT limits described above for coal mining activities.

The treatment outfall listed below discharges to an unnamed tributary to Dry Run.

Outfall Nos.
004

New Outfall (Y/N)
N

The proposed effluent limits for the above listed outfall are as follows:

| Outfall: 004 | 30-Day | Daily |
| :--- | :---: | :---: |
| Parameter | Average | Maximum |
| Total Suspended Solids (mg/l) | 35.0 | 70.0 |

pH (S.U.): Must be between 6.0 and 9.0 standard units at all times
Alkalinity must exceed acidity at all times

## FEDERAL WATER POLLUTION CONTROL ACT, SECTION 401

The following permit applications, requests for Environmental Assessment approval and requests for 401 Water Quality Certification have been received by the Department. Section 401 of the Federal Water Pollution Control Act (FWPCA) (33 U.S.C.A. § 1341) requires the Commonwealth to certify that the involved projects will not violate the sections $301-303,306$ and 307 of the FWPCA (33 U.S.C.A. §§ $1311-1313,1316$ and 1317) as well as relevant State requirements. Persons objecting to approval of a request for certification under section 401 of the FWPCA, the issuance of a Dam Permit or Water Obstruction and Encroachment Permit or the approval of an Environmental Assessment shall submit comments, suggestions or objections within 30 days of the date of this notice as well as any questions to the office noted before an application. Comments should contain the name, address and telephone number of the person commenting, identification of the certification request to which the comments or objections are addressed and a concise statement of comments, objections or suggestions including the relevant facts upon which they are based.
The Department may conduct a fact-finding hearing or an informal conference in response to comments if deemed necessary. Each individual will be notified, in writing, of the time and place of a scheduled hearing or conference concerning the certification request to which the comment, objection or suggestion relates. Maps, drawings and other data pertinent to the certification request are available for inspection between 8 a.m. and $4 \mathrm{p} . \mathrm{m}$. on working days at the office noted before the application.
Persons with a disability who wish to attend the hearing and require an auxiliary aid, service or other accommodation to participate in the proceedings should contact the specified program. TDD users may contact the Department through the Pennsylvania AT\&T Relay Service at (800) 654-5984.

Applications Received under the Dam Safety and Encroachments Act (32 P.S. §§ 693.1-693.27) and section 302 of the Flood Plain Management Act (32 P.S. § 679.302) and Requests for Certification under section 401(a) of the FWPCA.

## WATER OBSTRUCTIONS AND ENCROACHMENTS

Southcentral Region: Waterways \& Wetlands Program, 909 Elmerton Avenue, Harrisburg, PA 17110, Ed Muzic, Section Chief, 717.705.4802.
E07-463: PennDOT Engineering District 9-0, Engineering District 9-0, 1620 North Juniata Street, Hollidaysburg, PA 16648-108 in Frankstown Township, Blair County, U.S. Army Corps of Engineers Baltimore District.

To
(1) widen and construct roadway improvements alone 1-mile of SR 2022 and SR 1011 between ( $40^{\circ} 28^{\prime} 17.45^{\prime \prime}$,
$-78^{\circ} 17^{\prime} 3.93^{\prime \prime}$ ) and ( $40^{\circ} 28^{\prime} 30.09^{\prime \prime}$, $-78^{\circ} 16^{\prime} 23.83^{\prime \prime}$ ) in and along the floodway and floodplain of Canoe Creek (HQCWF, MF),
(2) relocate 621-linear feet of UNT Canoe Creek (HQCWF, MF),
(3) remove existing culvert and install and maintain a 113 -linear foot 8 -foot $\times 6$-foot box culvert with baffles, 1 foot uniform depression and R-7 scour protection in UNT Canoe Creek (HQ-CWF, MF),
(4) remove existing culvert and install and maintain a 66 -linear foot 8 -foot $\times 6$-foot box culvert with baffles, 1 foot uniform depression and R-7 scour protection in UNT Canoe Creek (HQ-CWF, MF),
(5) remove existing bridge and install and maintain a 76 -foot $\times 56$-foot 9.75 -inch bridge over Canoe Creek (HQ-CWF, MF),
(6) remove existing culvert and install and maintain a 93 linear foot 42 -inch diameter culvert with 6 -inch uniform depression in UNT Frankstown Brach Juniata River (WWF, MF),
(7) install six (6) 15 or 18 inch diameter outfalls to UNT Canoe Creek (HQ-CWF, MF),
(8) install one (1) temporary 18 -inch diameter outfall to UNT Canoe Creek (HQ-CWF, MF),
(9) remove two (2) outfall to UNT Canoe Creek (HQCWF, MF),
(10) install one (1) 18-inch diameter outfall to Canoe Creek (HQ-CWF, MF),
(11) install six (6) 15 or 18 inch diameter outfalls to UNT Frankstown Brach Juniata River (WWF, MF),
(12) remove one (1) outfall to UNT Frankstown Brach Juniata River (WWF, MF),
(13) install four (4) 18 inch diameter outfalls to Frankstown Brach Juniata River (WWF, MF),
(14) install two (2) temporary causeway during construction in Canoe Creek (HQ-CWF, MF),
(15) install a 24 -inch diameter and 42 -inch diameter culvert for two temporary stream crossings in UNT Canoe Creek (HQ-CWF, MF),
(16) place 1,275 cubic yards of fill within the floodway of UNT Canoe Creek (HQ-CWF, MF),
(17) place 280 cubic yards if dukk within the floodway if UNT Frankstown Brach Juniata River (WWF, MF),
(18) one (1) 6 -inch utility crossing of UNT Canoe Creek (HQ-CWF, MF),
(19) one (1) 6 -inch utility crossing of Canoe Creek (HQ-CWF, MF) and,
(20) permanently impact 0.02 acre of Exceptional Value (EV) PEM and PSS wetlands and temporarily impact 0.02 acre of EV PEM wetlands, 0.01 acre of EV PSS wetlands, and 0.05 acre of EV PEM/PSS/PFO wetlands, for the purpose of improving transportation safety and roadway
standards. A total of 315 linear feet of compensatory stream mitigation in Mary Anns Creek (HQ-CWF, MF) located in Canoe Creek State Park.

Southwest Region: Waterways \& Wetlands Program Manager, 400 Waterfront Drive, Pittsburgh, PA 152224745.

E02-1738, Glasso Development Company, LP, 4201 Cohasset Lane, Allison Park, PA 15101, West Deer Township, Allegheny County, Pittsburgh ACOE District.
The applicant is proposing to:

1. Construct and maintain a 167 LF, 48 in-HDPE culvert in an Unnamed Tributary (UNT) to Deer Creek.
2. Place and maintain fill within 0.11 acre of PEM wetlands (aka WL-1).
3. Place and maintain multiple utility line crossings across the aforementioned UNT and wetland under a GP05.

For the purpose of developing a residential community located near the intersection of McIntyre Road and Shadow Circle, (Quadrangle: Valencia, PA, Latitude: $40^{\circ}$ $37^{\prime} 40^{\prime \prime}$; Longitude: $-79^{\circ} 54^{\prime} 46^{\prime \prime}$ ) in West Deer Township, Allegheny County. The permanent impacts will be off-set with on-site stream and wetland mitigation.

E04-001-A2, FirstEnergy Generation, LLC, 341 White Pond Drive, State Route 3016, Akron, OH 44320, Shippingport Borough, Beaver County, Pittsburgh ACOE District.
The applicant is proposing to:
Amend Permit No. E04-001-A1 which authorized the applicant to:
1.) Construct and maintain a $29^{\prime}$ diameter, steel sheet coffer mooring cell.
2.) Construct and maintain a portion of a conveyor system, in the floodplain.
To: construct and maintain three (3) $10^{\prime} \times 10^{\prime}$ anchor structures consisting of four (4) pipe pilings at each corner of the structure impacting $60 \mathrm{ft}^{2}$ of riverbed, at Mile Marker 35 on the Ohio River.

For the purpose of adding additional mooring barges to the existing Bruce Mansfield Plant, which is located at (USGS Hookstown, PA Quadrangle; Latitude: $40^{\circ} 37^{\prime}$ 50.9"; Longitude: $-80^{\circ} 25^{\prime} 31.6^{\prime \prime}$ ) located at 128 Ferry Hill Road, Shippingport, PA 15077.

E63-689, A\&S Landscaping, 2150 Washington Rd, Canonsburg, PA 15317, Canonsburg Borough, Washington County, Pittsburgh ACOE District.

The applicant is proposing to:
Place and maintain approximately 0.3 acre of fill in the floodway with a $6^{\prime}$ embankment having a $2: 1$ slope, running parallel to the Army Corps of Engineers flood protection project along Chartiers Creek for approximately 315 linear feet. The project is located on the A\&S Strabane site in Canonsburg, Washington. (Canonsburg USGS Topographic Quadrangle, Latitude: $40^{\circ} 15^{\prime} 20.9^{\prime \prime}$; Longitude: -80 ${ }^{\circ} 11^{\prime}$ 48.9"; Sub-basin 20F; Pittsburgh Corps District), in Canonsburg Borough, Washington County. This project will impact only the floodway of Chartiers Creek (WWF), no direct stream impacts are proposed.

## SPECIAL NOTICES

## Proposed State Water Quality Certification Required by Section 401 of the Federal Clean Water Act for the PennEast Pipeline Company, LLC, PennEast Pipeline Project

Northeast Region: Waterways \& Wetlands Program, 2 Public Square, Wilkes-Barre, PA 18711, Joseph Buczynski, 570-826-2511.

WQ02-005, PennEast Pipeline Company, LLC (Applicant), 1 Meridian Boulevard, Suite 2C01, Wyomissing, PA 19610, PennEast Pipeline Project (Project), in Dallas, Kingston, Jenkins, Plains and Bear Creek Townships, West Wyoming, Wyoming and Laflin Boroughs, Luzerne County, Kidder, Penn Forest, Towamensing and Lower Towamensing Townships, Carbon County, Lehigh, Moore, East Allen, Upper Nazareth, Lower Nazareth, Bethlehem, Lower Saucon, and Williams Townships, and Easton City, Northampton County, and Durham and Rieglesville Townships, Bucks County, Philadelphia and Baltimore District Corps of Engineers. The proposed project starts at a point at the Wyoming Pipeline Interconnect of the Energy Transfer Partners, L.P. pipeline (Kingston, PA Quadrangle N: $41^{\circ} 20^{\prime} 48.16^{\prime \prime}$, W: $75^{\circ} 56^{\prime}$ $43.42^{\prime \prime}$ ) and ends at a point under the Delaware River as it enters New Jersey (Rieglesville, PA Quadrangle N: $40^{\circ} 35^{\prime} 2.28^{\prime \prime}$, W: $75^{\circ} 11^{\prime} 35.43^{\prime \prime}$ ).

On September 24, 2015, Applicant filed an application with the Federal Energy Regulatory Commission (FERC) under Section 7 of the Natural Gas Act (15 U.S.C. § 717f) seeking a Certificate of Public Convenience and Necessity to construct and operate its Project (FERC Docket No. CP 15-558-000). The FERC Environmental Assessment for the Project, when available, may be viewed on FERC's website at www.ferc.gov (search eLibrary; Docket Search; CP 15-558-000).

On February 9, 2016, Applicant requested a state water quality certification from the Department of Environmental Protection (Department), as required by Section 401 of the Clean Water Act (33 U.S.C. § 1341), to ensure that the construction, operation and maintenance of the Project will protect water quality in Pennsylvania through compliance with State water quality standards and associated State law requirements, which are consistent with the requirements of the Clean Water Act.
The Project, as proposed, includes an approximately 77.4 mile long, 36 -inch pipeline for the purpose of transporting natural gas from a point at the Wyoming Pipeline Interconnect of the Energy Transfer Partners, L.P. pipeline to a point under the Delaware River as it enters New Jersey. The project also includes an approximate 2.1 mile long lateral, known as the Hellertown lateral consisting of 24 inch pipeline The Project, as proposed, will require approximately 1,574 acres of earth disturbance, and impacts to 15,001 linear feet of Deep Creek (CWF, MF), Mill Creek (CWF, MF), Bear Creek (HQ-CWF, MF), Little Shades Creek (HQ-CWF, MF), Shades Creek (HQ-CWF, MF), Stoney Creek (EV, MF), Wild Creek (EV, MF), Aquashicola Creek (HQ-CWF, MF), Indian Creek (CWF, MF), Hokendaqua Creek (CWF, MF), Monocacy Creek (HQ-CWF, MF), Meadow Run (HQ-CWF, MF), Stoney Run (HQ-CWF, MF), Laurel Run (HQ-CWF, MF), Mud Run (HQ-CWF, MF), Bull Run (CWF, MF), Frya Run (HQCWF, MF), Delaware River (WWF) and unnamed tributaries; Trout Brook (CWF, MF), Gardner Creek (CWF, MF), Buckwha Creek (CWF, MF), Yellow Run (EV, MF), Delaware Canal; and UNT's to Abrahams Creek (CWF, MF), Toby Creek (CWF, MF), Little Bear Creek (HQ-CWF,

MF), Black Creek (HQ-CWF, MF), Pohopoco Creek (CWF, MF), Hunter Creek (HQ-CWF, MF), East Branch Monocacy Creek (HQ-CWF, MF) and Cooks Creek (EV, MF), Hawk Run (HQ-CWF, MF), and White Oak Run (EV, MF) and the Susquehanna River (CWF, MF); Wild Creek/ Beltzville Lake (EV, MF), and Pohopoco Creek/Beltzville Lake (CWF, MF), 35.19 acres of floodway, 43.48 acres of temporary PEM/PSS/PFO wetland impacts, and 7.90 acres of PSS/PFO conversion to PEM impacts.
The Department anticipates issuing a state water quality certification to Applicant for the Project that will require compliance with the following State water quality permitting programs, criteria and conditions established pursuant to State law to ensure the Project does not violate applicable State water quality standards set forth in 25 Pa . Code Chapter 93:

1. Discharge Permit-Applicant shall obtain and comply with a Department National Pollutant Discharge Elimination System (NPDES) permit for the discharge of water from the hydrostatic testing of the pipeline pursuant to Pennsylvania's Clean Streams Law (35 P.S. §§ 691.1—691.1001) and all applicable implementing regulations ( 25 Pa . Code Chapter 92a).
2. Erosion and Sediment Control Permit-Applicant shall obtain and comply with the Department's Chapter 102 Erosion and Sediment Control General Permit for Earth Disturbance Associated with Oil and Gas Exploration, Production, Processing or Treatment issued pursuant to Pennsylvania's Clean Streams Law and Storm Water Management Act (32 P.S. §§ 680.1-680.17) and all applicable implementing regulations ( 25 Pa . Code Chapter 102).
3. Water Obstruction and Encroachment PermitsApplicant shall obtain and comply with a Department Chapter 105 Water Obstruction and Encroachment Permits for the construction, operation and maintenance of all water obstructions and encroachments associated with the project pursuant to Pennsylvania's Clean Streams Law, Dam Safety and Encroachments Act (32 P.S. §§ 673.1-693.27), and Flood Plain Management Act (32 P.S. §§ 679.101-679.601.) and all applicable implementing regulations ( 25 Pa . Code Chapter 105).
4. Water Quality Monitoring-The Department retains the right to specify additional studies or monitoring to ensure that the receiving water quality is not adversely impacted by any operational and construction process that may be employed by Applicant.
5. Operation-Applicant shall at all times properly operate and maintain all Project facilities and systems of treatment and control (and related appurtenances) which are installed to achieve compliance with the terms and conditions of this Certification and all required permits. Proper operation and maintenance includes adequate laboratory controls, appropriate quality assurance procedures, and the operation of backup or auxiliary facilities or similar systems installed by Applicant.
6. Inspection-The Project, including all relevant records, are subject to inspection at reasonable hours and intervals by an authorized representative of the Department to determine compliance with this State Water Quality Certification, including all required State water quality permits and State water quality standards. A copy of this Certification shall be available for inspection by the Department during such inspections of the Projects.
7. Transfer of Projects-If Applicant intends to transfer any legal or equitable interest in the Project which is affected by this State Water Quality Certification, Appli-
cant shall serve a copy of this Certification upon the prospective transferee of the legal and equitable interest at least thirty (30) days prior to the contemplated transfer and shall simultaneously inform the Department Regional Office of such intent. Notice to the Department shall include a transfer agreement signed by the existing and new owner containing a specific date for transfer of Certification responsibility, coverage, and liability between them.
8. Correspondence-All correspondence with and submittals to the Department concerning this Certification shall be addressed to the Department of Environmental Protection, Northeast Regional Office, Joseph Buczynski, P.E., Waterways and Wetlands Program Manager, 2 Public Avenue, Wilkes-Barre, PA 18711.
9. Reservation of Rights-The Department may suspend or revoke this Certification if it determines that Tennessee Gas Pipeline Company, LLC has not complied with the terms and conditions of this Certification. The Department may require additional measures to achieve compliance with applicable law, subject to Applicant's applicable procedural and substantive rights.
10. Other Laws-Nothing in this Certification shall be construed to preclude the institution of any legal action or relieve Applicant from any responsibilities, liabilities, or penalties established pursuant to any applicable Federal or state law or regulation.
11. Severability-The provisions of this Certification are severable and should any provision of this Certification be declared invalid or unenforceable, the remainder of the Certification shall not be affected thereby.

Prior to final action on the proposed section 401 Water Quality Certification, consideration will be given to any comments, suggestions or objections which are submitted in writing within 30 days of this notice. Comments concerning the proposed 401 Water Quality Certification should be directed to Mr. Joseph Buczynski, P.E., Northeast Region Waterways and Wetlands Program Manager at the above address or through the Pennsylvania AT\&T Relay Service at (800) 654-5984 (TDD). Comments must be submitted in writing and contain the name, address and telephone number of the person commenting and a concise statement of comments, objections or suggestions on this proposal. No comments submitted by facsimile will be accepted. The Department will consider all relevant and timely comments received. Comments must be submitted within 30 days of this notice.

## DAM SAFETY

Central Office: Bureau of Waterways Engineering and Wetlands, Rachel Carson State Office Building, Floor 2, 400 Market Street, P.O. Box 8460, Harrisburg, PA 171058460.

D22-115. Widener University Dam, 3800 Vartan Way, Harrisburg, PA 17106. To modify, operate, and maintain Widener University Dam across a tributary to Black Run (WWF), for the purpose of modifying an existing outlet structure in order to increase impoundment volume and discharge time (Harrisburg East, PA Quadrangle Latitude: 40.3228; Longitude: -76.8542) in Susquehanna Township, Dauphin County.
D45-039. Stillwater Lakes Civic Association, 5144 Hummingbird Drive, Pocono Summit, PA 18346. Stillwater Lakes Civic Association is proposing to modify, operate, and maintain Summit Lake No. 1 Dam across Red Run (HQ-CWF) for the purpose of recreation. The existing spillway will be upgraded to address deficiencies.
(Pocono Pines, PA Quadrangle Latitude: 41.119, Longitude: -75.392) Coolbaugh Township, Monroe County.
D52-015. Pennsylvania Department of Conservation and Natural Resources, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8767, Harrisburg, PA 17105-8767. To modify, operate, and maintain Pecks Pond Dam across Bush Kill Creek (EV, MF),
impacting 0.10 acre of wetlands (scrub-shrub/forested) and 0 feet of stream and providing 0.10 acre of wetland mitigation, for the purpose of rehabilitating an existing, recreational, dam to comply with the Commonwealth's regulations (Milford, PA Quadrangle Latitude: $41.2808^{\circ} \mathrm{N}$; Longitude: $75.0869^{\circ} \mathrm{W}$ ) in Porter Township, Pike County.

## ACTIONS

## THE PENNSYLVANIA CLEAN STREAMS LAW AND THE FEDERAL CLEAN WATER ACT <br> FINAL ACTIONS TAKEN FOR NPDES PERMITS AND WQM PERMITS

The Department has taken the following actions on previously received applications for new, amended and renewed NPDES and WQM permits, applications for permit waivers and NOIs for coverage under General Permits. This notice of final action is provided in accordance with 25 Pa . Code Chapters 91 and 92 a and 40 CFR Part 122, implementing provisions of The Clean Streams Law (35 P.S. §§ 691.1-691.101) and the Federal Clean Water Act (33 U.S.C.A. §§ 1251—1376).

| Location | Permit Authority | Application Type or Category |
| :--- | :--- | :--- |
| Section I | NPDES | Renewals |
| Section II | NPDES | New or Amendment |
| Section III | WQM | Industrial, Sewage or Animal Wastes; Discharges to Groundwater |
| Section IV | NPDES | MS4 Individual Permit |
| Section V | NPDES | MS4 Permit Waiver |
| Section VI | NPDES | Individual Permit Stormwater Construction |
| Section VII | NPDES | NOI for Coverage under NPDES General Permits |

Sections I-VI contain actions regarding industrial, animal or sewage wastes discharges, discharges to groundwater, and discharges associated with MS4, stormwater associated with construction activities and CAFOs. Section VII contains notices for parties who have submitted NOIs for Coverage under General NPDES Permits. The approval for coverage under these General NPDES Permits is subject to applicable effluent limitations, monitoring, reporting requirements and other conditions in each General Permit. The approval of coverage for land application of sewage sludge or residential septage under applicable general permit is subject to pollutant limitations, pathogen and vector attraction reduction requirements, operational standards, general requirements, management practices and other conditions in the respective permit. The permits and related documents, effluent limitations, permitting requirements and other information are on file and may be inspected and arrangements made for copying at the contact office noted before the action.

Persons aggrieved by an action may appeal that action to the Environmental Hearing Board (Board) under section 4 of the Environmental Hearing Board Act (35 P.S. § 7514) and 2 Pa.C.S. §§ 501-508 and 701-704 (relating to Administrative Agency Law). The appeal should be sent to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, PO Box 8457, Harrisburg, PA 17105-8457, (717) 787-3483. TDD users may contact the Board through the Pennsylvania AT\&T Relay Service, (800) 654-5984. Appeals must be filed with the Board within 30 days of publication of this notice in the Pennsylvania Bulletin unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in Braille or on audiotape from the Secretary to the Board at (717) 787-3483. This paragraph does not, in and of itself, create a right of appeal beyond that permitted by applicable statutes and decisional law.

For individuals who wish to challenge an action, the appeal must reach the Board within 30 days. A lawyer is not needed to file an appeal with the Board.
Important legal rights are at stake, however, so individuals should contact a lawyer at once. Persons who cannot afford a lawyer may qualify for free pro bono representation. Call the Secretary to the Board at (717) 787-3483 for more information.

## I. NPDES Renewal Permit Actions

Southwest Regional Office: Regional Clean Water Program Manager, 400 Waterfront Drive, Pittsburgh, PA 15222-4745. Phone: 412.442.4000.

| NPDES No. | Facility Name \& | County \& | Stream Name <br> (Type) | Address |
| :--- | :--- | :--- | :--- | :---: | | Municipality |
| :---: |


| NPDES No. <br> (Type) | Facility Name \& Address | County \& Municipality | Stream Name <br> (Watershed No.) | $\begin{gathered} E P A \text { Waived } \\ Y / N ? \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| PA0097233 (Sewage) | S Versailles Township PO Box 66 <br> Coulter, PA 15028 | Allegheny County South Versailles Township | Youghiogheny River (19-D) | Yes |
| PA0219444 <br> (Sewage) | Markleysburg Area STP <br> 150 Main Street <br> PO Box 25 <br> Markleysburg, PA 15459-0025 | Fayette County Markleysburg Borough | Unnamed Tributary to Youghiogheny River (19-E) | Yes |
| Southcentral Region: Clean Water Program Manager, 909 Elmerton Avenue, Harrisburg, PA 17110. Phone: 717-705-4707. |  |  |  |  |
| NPDES No. <br> (Type) | Facility Name \& Address | County \& Municipality | Stream Name <br> (Watershed \#) | $\begin{gathered} \text { EPA Waived } \\ Y / N ? \end{gathered}$ |
| PA0051560—IW | Western Berks Water Authority 91 Water Road <br> Sinking Spring, PA 19608-9633 | Berks County/Lower Heidelberg Township | Tulpehocken Creek/3-C | Y |

## II. New or Expanded Facility Permits, Renewal of Major Permits and EPA Nonwaived Permit Actions

Northeast Region: Clean Water Program Manager, 2 Public Square, Wilkes-Barre, PA 18701-1915. Phone: 570-826-2511.
NPDES Permit No. PA0027090, Sewage, SIC Code 4952, Lackawanna River Basin Sewer Authority, PO Box 280, Olyphant, PA 18447-0280.
This existing facility is located in Throop Borough, Lackawanna County.
Description of Existing Action/Activity: Issuance of an NPDES Permit for an existing discharge of treated Sewage.
Northcentral Regional Office: Regional Clean Water Program Manager, 208 W Third Street, Suite 101, Williamsport, PA 17701-6448. Phone: 570.327.3636.
NPDES Permit No. PA0027057, Sewage, SIC Code 4952, Williamsport Sanitary Authority, 253 W 4th Street, Williamsport, PA 17701-6113.
This existing facility is located in City of Williamsport, Lycoming County.
Description of Existing Action/Activity: Issuance of an NPDES Permit for an existing discharge of treated Sewage.
Northwest Region: Water Management Program Manager, 230 Chestnut Street, Meadville, PA 16335-3481.
NPDES Permit No. PA0264474, Sewage, SIC Code 8800, David Selfridge, 204 Geibel Road, Butler, PA 16002.
This proposed facility is located in Summit Township, Butler County.
Description of Proposed Action/Activity: Issuance of an NPDES Permit for a new discharge of treated Sewage.

## III. WQM Industrial Waste and Sewerage Actions under The Clean Streams Law

Northeast Region: Clean Water Program Manager, 2 Public Square, Wilkes-Barre, PA 18701-1915. Phone: 570-826-2511.
WQM Permit No. 5416401, Sewage, SIC Code 4952, Saint Clair Sewer Authority (Schuylkill County), 16 S 3rd Street, Saint Clair, PA 17970-1207.
This proposed facility is located in St. Clair Borough, Schuylkill County.
Description of Proposed Action/Activity: Installation of a bar screen at the CSO Outfall \# 008 headwall.
WQM Permit No. 3516402, Sewage, SIC Code 4952, Lackawanna River Basin Sewer Authority, P.O. Box 280, Olyphant, PA 18447.

This facility is located in Archbald Borough, Lackawanna County.
Description of Proposed Action/Activity: The project is for the installation of a gravity belt thickener and centrifuge at the wastewater treatment plant to improve sludge processing. Also included in the project are new sludge transfer and feed pumps, new polymer systems, new dewatered sludge conveyors, replacement digester diffusers, a new building over the thickener equipment, a new roof over the dewatered sludge storage containers, and other associated appurtenances.

The existing dissolved air flotation and belt filter press sludge processing equipment will be removed as a result of this project.
Southcentral Region: Clean Water Program Manager, 909 Elmerton Avenue, Harrisburg, PA 17110. Phone: 717-705-4707.
WQM Permit No. 3616401, Sewerage, Ephrata Borough Authority, 124 South State Street, Ephrata, PA 17522-2411.
This proposed facility is located in Ephrata Borough, Lancaster County.
Description of Proposed Action/Activity: Permit approval for the construction/modification of sewage facilities consisting replacement of the Mission Pump Station with a new pump station and force main; replacement of $300^{\prime}$ of the Upper Interceptor with new $30^{\prime}$ pipe; and replacement of $1,649^{\prime}$ of gravity sewer within Penn Avenue with $18^{\prime \prime}$ pipe.

WQM Permit No. WQG01211601, Sewerage, Jennifer Garcia, 555 West Penn Street, Carlisle, PA 17013.
This proposed facility is located in Lower Frankford Township, Cumberland County.
Description of Proposed Action/Activity: Permit approval for the construction/operation of a small flow system to serve their single family residence.
Northcentral Regional Office: Regional Clean Water Program Manager, 208 W Third Street, Suite 101, Williamsport, PA 17701-6448. Phone: 570.327.3636.
WQM Permit No. 0891401 A-1, Sewage, SIC Code 4952, Sayre Borough Bradford County, 110 W Packer Avenue, Sayre, PA 18840-2053.
This existing facility is located in Sayre Borough, Bradford County.
Description of Proposed Action/Activity: Repair and replacement for the Milltown Pumping Station.
WQM Permit No. 4177409 A-1, Sewage, SIC Code 4952, Mifflin Manor Homeowners Association, PO Box 622, Jersey Shore, PA 17740-0622.
This existing facility is located in Mifflin Township, Lycoming County.
Description of Proposed Action/Activity: addition of dechlorination to an existing treatment process.
Northwest Region: Clean Water Program Manager, 230 Chestnut Street, Meadville, PA 16335-3481.
WQM Permit No. 1096407 A-2, Sewage, West Sunbury Borough Municipal Authority Butler County, PO Box 202, West Sunbury, PA 16061-0202.
This existing facility is located in West Sunbury Borough, Butler County.
Description of Proposed Action/Activity: Installation of tertiary treatment unit to reduce Ammonia in treated effluent.
WQM Permit No. WQG01251606, Sewage, Samuel K Ponsoll, 12680 Fry Road, Edinboro, PA 16412.
This proposed facility is located in Washington Township, Erie County.
Description of Proposed Action/Activity: Single Residence Sewage Treatment Plant.
WQM Permit No. 1016404, Sewage, David Selfridge, 204 Geibel Road, Butler, PA 16002.
This proposed facility is located in Summit Township, Butler County.
Description of Proposed Action/Activity: Single Residence Sewage Treatment Plant.

## VI. NPDES Discharges of Stormwater Associated with Construction Activities Individual Permit Actions

Southeast Region: Waterways \& Wetlands Program Manager, 2 East Main Street, Norristown, PA 19401. Telephone 484-250-5160.

| NPDES <br> Permit No. | Applicant Name \& Address | County | Municipality | Receiving <br> Water/Use |
| :---: | :---: | :---: | :---: | :---: |
| PAI011516010 | Willistown Conservation Trust 925 Providence Road Newtown Square, PA 19073 | Chester | Willistown Township | Okehoking Run HQ-TSF <br> Turtle Rock Run HQ-TSF |
| Northeast R | Waterways and Wetlands Program Manager, 2 Public Square, Wilkes-Barre, PA 18701-1915. |  |  |  |
| NPDES <br> Permit No. | Applicant Name \& Address | County | Municipality | Receiving <br> Water/Use |
| PAI024815017 | Shelley and Brian Spence 2533 West Stanley Street Allentown, PA 18104 | Northampton | Lower Macungie Township | UNT to Saucon Creek (CWF, MF) and EV Wetlands |

Southcentral Region: Waterways \& Wetlands Program, 909 Elmerton Avenue, Harrisburg, PA 17110, Nathan Crawford, Section Chief, Telephone 717.705.4802.

|  | Applicant Name \& |  | Receiving |  |
| :--- | :--- | :--- | :--- | :--- |
| Permit \# | Address | County | Municipality | Water/Use |
| PAI033615001 | Turkey Hill, LP | Lancaster | Drumore Township | UNT Fishing Creek |
|  | 257 Centerville Road |  |  | (HQ-CWF, MF) |

Northcentral Region: Waterways \& Wetlands Program Manager, 208 West Third Street, Williamsport, PA 17701, 570.327.3574.

Centre County Conservation District: 414 Holmes Avenue, Suite 4, Bellefonte, PA 16823, (814) 355-6817.

| NPDES | Applicant Name \& |  | Receiving |  |
| :--- | :--- | :--- | :--- | :--- |
| Permit No. | Address | County | Municipality | Water/Use |
| PAI041416001 | Penn State University | Centre | College Twp | Thompson Run |
|  | 139J Physical Plant Bldg |  |  | HQ-CWF, MF |
|  | University Park, PA 16802 |  |  |  |

## VII. Approvals to Use NPDES and/or Other General Permits

The EPA Region III Administrator has waived the right to review or object to this permit action under the waiver provision 40 CFR 123.23(d).

| List of NPDES and/or Other General Permit Types |  |
| :--- | :--- |
| PAG-1 | General Permit for Discharges from Stripper Oil Well Facilities |
| PAG-2 | General Permit for Discharges of Stormwater Associated With Construction Activities |
| PAG-3 | General Permit for Discharges of Stormwater From Industrial Activities |
| PAG-4 | General Permit for Discharges from Small Flow Treatment Facilities |
| PAG-5 | General Permit for Discharges from Petroleum Product Contaminated Groundwater Remediation |
|  | Systems |
| PAG-6 | General Permit for Wet Weather Overflow Discharges from Combined Sewer Systems (CSO) |
| PAG-7 | General Permit for Beneficial Use of Exceptional Quality Sewage Sludge by Land Application <br> PAG-8 |
|  | General Permit for Beneficial Use of Non-Exceptional Quality Sewage Sludge by Land Application to |
| PAG-8 (SSN) | Site Suitability Notice for Land Application Under Approved PAG-8 General Permit Coverage <br> PAG-9 |
|  | General Permit for Beneficial Use of Residential Septage by Land Application to Agricultural Land, <br> PAG-9 (SSN) |
| Forest, or a Land Reclamation Site |  |

General Permit Type-PAG-02
Waterways \& Wetlands Program Manager, 2 East Main Street, Norristown, PA 19401. Telephone 484-250-5160.

| Facility Location \& Municipality | Permit No. | Applicant Name \& Address | Receiving <br> Water/Use | Contact Office \& Phone No. |
| :---: | :---: | :---: | :---: | :---: |
| Buckingham Township Bucks County | PAG02000916033 | Elkay Property <br> Management LLC 1669 Edgewood Road Yardley, PA 19067 | Unnamed Tributary to Pine Run TSF-MF | Southeast Regional Office <br> 2 East Main Street <br> Norristown, PA 19401 <br> 484-250-5900 |
| Doylestown <br> Borough <br> Bucks County | PAG02000915009(1) | Chapman Lane Investors, LP 6263 Kellers Church Road Pipersville, PA 18947 | Cooks Run <br> WWF-MF | $\begin{aligned} & \text { Southeast Regional Office } \\ & \text { 2 East Main Street } \\ & \text { Norristown, PA } 19401 \\ & \text { 484-250-5900 } \end{aligned}$ |
| Tinicum Township Bucks County | PAG02000916020 | Select Properties, Inc. 2312 North Broad Street Colmar, PA 18915 | Tohickon Creek CWF | $\begin{aligned} & \text { Southeast Regional Office } \\ & 2 \text { East Main Street } \\ & \text { Norristown, PA } 19401 \\ & 484-250-5900 \end{aligned}$ |
| Tullytown Borough Bucks County | PAG02000916036 | Tullytown Borough 500 Main Street Tullytown, PA 19007 | Delaware River WWF | $\begin{aligned} & \text { Southeast Regional Office } \\ & 2 \text { East Main Street } \\ & \text { Norristown, PA } 19401 \\ & \text { 484-250-5900 } \end{aligned}$ |

Northeast Region: Waterways and Wetlands Program Manager, 2 Public Square, Wilkes-Barre, PA 18701-1915.
Facility Location:

Municipality \& County
Hazle Township
Luzerne County

Laurel Run PAG02004016007
Permit No.
PAG02004016005
Applicant Name \&
Address
Humboldt Realty, L.P.
c/o Marc Lebovitz
822 South Avenue West
Westfield, NJ 07090
Laurel Run Borough
100 Dupont Road
Laurel Run, PA 18706

Applicant Name \&

Borough
Luzerne County

| Receiving <br> Water/Use |  <br> Phone No. |
| :--- | :--- |
| Stoney Creek | Luzerne Conservation |
| (CWF, MF) | District <br>  <br>  <br> 570-674-7991 |
|  |  |
| Spring Run | Luzerne Conservation |
| (CWF, MF) | District <br>  <br> $570-674-7991$ |


| Facility Location: |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Municipality \& County | Permit No. | Applicant Name \& Address | Receiving <br> Water/Use | Contact Office \& Phone No. |
| Palmer Township Northampton County | PAG02004816010 | Charles Chrin Real <br> Estate Trust <br> 400 South Greenwood <br> Avenue <br> Easton, PA 18045 | Shoeneck Creek (WWF, MF) | Northampton County Conservation District 610-746-1971 |
| Allen Township Northampton County | PAG02004815002(1) | FedEx Ground Package System, Inc. c/o Andrew Loeb 1000 FedEx Drive Moon Township, PA 15108 | Catasauqua Creek (CWF, MF) | Northampton County Conservation District 610-746-1971 |
| Northcentral Region: Watershed Management Program Manager, 208 West Third Street, Williamsport, PA 17701. |  |  |  |  |
| Facility Location \& Municipality | Permit No. | Applicant Name \& Address | Receiving <br> Water/Use | Contact Office \& Phone No. |
| Muncy Creek Twp/Muncy Boro, Lycoming Cnty | PAG02004116007 | Chuck Leonard <br> Muncy Borough Municipal Authority 14 Washington Street Muncy, PA 17756 | $\begin{aligned} & \text { Glade Run- } \\ & \text { WWF.MF } \end{aligned}$ | Lycoming County Conservation District 542 County Farm Rd Ste 202 <br> Montoursville, PA 17754 (570) 433-3003 |
| Muncy Twp, Lycoming Cnty | PAG02004116008 | Thomas Neuhard Ashler Inc 276 Ashler Manor Dr Muncy, PA 17756 | Wolf Run-CWF | Lycoming County Conservation District 542 County Farm Rd Ste 202 <br> Montoursville PA 17754 (570) 433-3003 |
| Lewis Twp and Limestone Twp, Union Cnty | PAG02006016017 | Dennis Boop 1681 Swengle Rd Mifflinburg, PA 17844 | UNT to Buffalo Creek-CWF, MF | Union County <br> Conservation District <br> Union County <br> Government Center <br> 155 N 15th St <br> Lewisburg, PA 17837 <br> (570) 524-3860 |
| Mifflinburg Borough, Union Cnty | PAG02006016013 | Dave and Cindy Garelius 2095 Green Ridge Road | Buffalo Creek CWF | Union County Conservation District Union County Government Center 155 N 15th St Lewisburg, PA 17837 (570) 524-3860 |
| Southwest Region: Regional Waterways \& Wetlands Program Manager, 400 Waterfront Drive, Pittsburgh, PA 15222-4745. |  |  |  |  |
| Facility Location and Municipality | Permit No. | Applicant Name and Address | Receiving Water/Use | Contact Office and Phone No. |
| Center Township | PAG02000406014R | Zokaites Contracting, Inc. 375 Golfside Drive Wexford, PA 15090 | UNT to Moon Run (CWF) | Beaver County Conservation District 156 Cowpath Road Aliquippa, PA 15001 (724) 378-1701 |
| Hopewell Township | PAG02000416016 | Esmark Realty, LLC 100 Hazel Lane Suite 300 <br> Sewickley, PA 15143 | $\underset{\text { (WWF) }}{\text { Trampmill Run }}$ | Beaver County Conservation District 156 Cowpath Road Aliquippa, PA 15001 (724) 378-1701 |
| Economy Borough | PAG02000406016R | Zokaites Properties, LP 375 Golfside Drive, Wexford, PA 15090 | Ohio River (WWF) | Beaver County Conservation District 156 Cowpath Road Aliquippa, PA 15001 (724) 378-1701 |


| Facility Location and Municipality | Permit No. | Applicant Name and Address | Receiving <br> Water/Use | Contact Office and Phone No. |
| :---: | :---: | :---: | :---: | :---: |
| Cambria Township | PAG02001116015 | Peoples TWP, LLC <br> 201 Pitt Street <br> Pittsburgh, PA 15221 | UNTs to California Run (CWF) | Cambria County Conservation District 401 Candlelight Drive Suite 221 Ebensburg, PA 15931 (814) 472-2120 |
| Adams Township | PAG02001116016 | Forest Hills Municipal Authority 900 Locust Street Saint Michael, PA 15951 | UNT to Otto Run (CWF) and Otto Run (CWF) | Cambria County Conservation District 401 Candlelight Drive Suite 221 Ebensburg, PA 15931 (814) 472-2120 |
| Cambria Township | PAG02001116017 | Central Cambria School District 208 Schoolhouse Road Ebensburg, PA 15931 | South Branch Blacklick Creek (CWF) | Cambria County Conservation District 401 Candlelight Drive Suite 221 Ebensburg, PA 15931 (814) 472-2120 |
| Blacklick Township | PAG02003216005 | PennDOT District 10-0 2550 Oakland Avenue Indiana, PA 15701 | Stewart Run (CWF) | Indiana County Conservation District 625 Kolter Drive Suite 8 Indiana, PA 15701-3571 (724) 471-4751 |
| Burrell Township | PAG02003216010 | TRISTAR Auto Group 1591 Route 22 East Blairsville, PA 15717 | UNT to Conemaugh River (CWF) | Indiana County Conservation District 625 Kolter Drive Suite 8 Indiana, PA 15701-3571 (724) 471-4751 |

Northcentral Regional Office: Clean Water Program Manager, 208 W Third Street, Suite 101, Williamsport, PA 17701-6448. Phone: 570.327.3636.

| NPDES No. | Facility Name \& | County \& | Stream Name | EPA Waived |
| :--- | :--- | :--- | :--- | :---: |
| (Type) | Address | Municipality | (Watershed No.) | Y/N? |
| PAR214817 | Glen-Gery Corporation | Clearfield County | Roaring Run | Yes |
| (Industrial | Bigler Plant | Bradford Township | (8-C) |  |

Shoemakersville, PA 19555-9742

| General Permit Type_PAG-4 |  |  |  |
| :--- | :--- | :--- | :--- |
| Facility Location \& |  |  |  |
| Municipality | Permit No. | Applicant Name \& | Receiving |
| Cumberland | PAG043956 | Jennifer Garcia | Water/Use |

General Permit Type—PAG-10
Facility Location
Municipality \&
County Permit No.

Brewster Pipeline
PAG102340
Project Brooklyn
Township
Susquehanna
County

General Permit Type—PAG-12 CAFO
Facility Location
Municipality \&
County Permit No.

Brothersvalley PAG126101
Township
Somerset County

|  <br> Address | Receiving <br> Water/Use |  <br> Phone No. |
| :--- | :--- | :--- |
| Williams Field | Unnamed Tributary | DEP Northeast |
| Service Co. LLC | to Meshoppen | Regional Office |
| Park Place Corp Center 2 | Creek-4-G | Clean Water Program |
| 2000 Commerce Drive |  | 2 Public Square |
| Pittsburgh, PA |  | Wilkes-Barre, PA |
| 15275-1026 | $18701-1915$ |  |
|  | 570.826 .2511 |  |


| Applicant Name \& | Receiving <br> Address |  <br> Pater/Use |
| :--- | :--- | :--- |
| Keith \& Denise Leydig No. |  |  |
| 594 Cumberland Highway | Swamp Creek-19-F | DEP Southwest |
| Berlin, PA 15530 |  | Regional Office |
|  |  | Clean Water Program |
|  | 400 Waterfront Drive |  |
|  | Pittsburgh, PA 15222-4745 |  |
| 412.442.4000 |  |  |

General Permit Type—PAG-12

| Facility Location \& |  |
| :--- | :--- |
| Municipality | Permit No. |
| York County/ | PAG123813 |
| Chanceford |  |
| Township |  |

\(\left.$$
\begin{array}{ll}\text { Applicant Name \& } & \begin{array}{l}\text { Receiving } \\
\text { Address }\end{array}
$$ <br>

Water/Use\end{array}\right\}\)| Star Rock Farms, LLC |
| :--- | West Brach Tom's

Contact Office \&
Phone No.
DEP—SCRO—CW
909 Elmerton Ave
Harrisburg, PA 17110
717-705-4707
Lancaster County/ PAG123665
Rapho Township
Kerek Musser
2604 Hossler Road
Manheim, PA 17545

Lancaster County/ PAG123749
East Donegal
Kenton L. Sweigert 620 Greider Road

UNT Donegal
Creek/CWF
UNT Back Run/TSF DEP—SCRO—CW
909 Elmerton Ave
Harrisburg, PA 17110
717-705-4707

Township
Mount Joy, PA 17552-8911

DEP—SCRO—CW
909 Elmerton Avenue
Harrisburg, PA 17110
717-705-4707

## STATE CONSERVATION COMIMISSION

## NUTRIENT MANAGEMENT PLANS RELATED TO APPLICATIONS FOR NPDES PERMITS FOR CAFOs

The State Conservation Commission has taken the following actions on previously received applications for nutrient management plans under 3 Pa.C.S. Chapter 5, for agricultural operations that have or anticipate submitting applications for new, amended or renewed NPDES permits or NOIs for coverage under a general permit for CAFOs under 25 Pa. Code Chapter 92a. This notice is provided in accordance with 25 Pa . Code Chapter 92a and 40 CFR Part 122, implementing The Clean Streams Law and the Federal Clean Water Act.

Persons aggrieved by an action may appeal under 3 Pa.C.S. § 517, section 4 of the Environmental Hearing Board Act and 2 Pa.C.S. §§ 501-508 and 701-704 to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, (717) 787-3483. TDD users should contact the Environmental Hearing Board (Board) through the Pennsylvania AT\&T Relay Service at (800) 654-5984. Appeals must be filed with the Board within 30 days of publication of this notice in the Pennsylvania Bulletin. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in Braille or on audiotape from the Secretary of the Board at (717) 787-3483. This paragraph does not, in and of itself, create a right of appeal beyond that permitted by applicable statutes and decision law.

For individuals who wish to challenge actions, appeals must reach the Board within 30 days. A lawyer is not needed to file an appeal with the Board.

Important legal rights are at stake, however, so individuals should show this notice to a lawyer at once. Persons who cannot afford a lawyer may qualify for pro bono representation. Call the Secretary of the Board at (717) 787-3483 for more information.

## NUTRIENT MANAGEMENT PLAN PUBLIC NOTICE SPREADSHEET-ACTIONS

Agricultural Operation
Name and Address
Hemlock Lane Farm, LP
121 Hemlock Lane Farm Ln
Williamsburg, PA 16693

## PUBLIC WATER SUPPLY PERMITS

The Department has taken the following actions on applications received under the Pennsylvania Safe Drinking Water Act (35 P.S. §§ 721.1-721.17) for the construction, substantial modification or operation of a public water system.

Persons aggrieved by an action may appeal that action to the Environmental Hearing Board (Board) under section 4 of the Environmental Hearing Board Act and 2 Pa.C.S. §§ $501-508$ and 701-704. The appeal should be sent to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, PO Box 8457, Harrisburg, PA 17105-8457, (717) 787-3483. TDD users may contact the Board through the Pennsylvania AT\&T Relay Service, (800) 654-5984. Appeals must be filed with the Board within 30 days of publication of this notice in the Pennsylvania Bulletin unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in Braille or on audiotape from the Secretary to the Board at (717) 787-3483. This paragraph does not, in and of itself, create a right of appeal beyond that permitted by applicable statutes and decisional law.

For individuals who wish to challenge an action, the appeal must reach the Board within 30 days. A lawyer is not needed to file an appeal with the Board.

Important legal rights are at stake, however, so individuals should show this document to a lawyer at once. Persons who cannot afford a lawyer may qualify for free pro bono representation. Call the Secretary to the Board at (717) 787-3483 for more information.

## SAFE DRINKING WATER

Actions taken under the Pennsylvania Safe Drinking Water Act

Northeast Region: Safe Drinking Water Program Manager, 2 Public Square, Wilkes-Barre, PA 18701-1915.

Permit No. 2409002, Operation Permit, Public Water Supply.

| Applicant | Pennsylvania-American <br> Water Company <br> (Ceasetown Water System) |
| :--- | :--- |
|  | 800 West Hershey Park Drive |
| Hershey, PA 17033 |  |
| County | Jackson Township |
| Type of Facility | Luzerne |
|  | PWS |

$$
\begin{array}{cc}
\text { Special Protection } & \\
\text { Waters (HQ or } & \text { Approved or } \\
\text { EV or NA) } & \text { Disapproved } \\
\text { NA } & \text { Approved }
\end{array}
$$

Animal
Type
Swine

Scott M. Thomas, P.E. Pennsylvania-American Water Company
852 Wesley Drive
Mechanicsburg, PA 17055
Permit to Operate Issued

August 15, 2016

Permit No. 3540043, Operation Permit, Public Water Supply.

| Applicant | UMH Properties, Inc. <br> 150 Clay Street, Suite 450 <br> Morgantown, WV 26501 |
| :---: | :---: |
| Municipality | Wayne Township |
| County | Schuylkill |
| Type of Facility | PWS |
| Consulting Engineer | Alfred Ty Leinneweber, P.E <br> Lehigh Engineering, LLC <br> P.O. Box 1200 <br> 200 Mahantongo Street <br> Pottsville, PA 17901 |
| Permit to Operate | August 11, 2016 |

Issued
Permit No. 5816502MA, Public Water Supply.

| Applicant | Oneida Campground and <br> Lodge, LLC <br> P.O. Box 537 |
| :--- | :--- |
| New Milford, PA 18834 |  |
| [Borough or Township] | New Milford Township |
| County | Susquehanna |
| Type of Facility | PWS |
| Consulting Engineer | Mr. Dennis Kutch, PE <br> KBA Engineering PC |
|  | 25 S. Washington Ave. <br> Jermyn, PA 18433 |
| Permit to Construct | August 2, 2016 |

Issued
Southcentral Region: Safe Drinking Water Program Manager, 909 Elmerton Avenue, Harrisburg, PA 17110.

Permit No. 0616505 MA, Minor Amendment, Public Water Supply.

Applicant
Municipality
County
Responsible Official

## Borough of Bally

Washington Township
Berks
Leo Mutter, Borough Council
President
425 Chestnut St.
Bally, PA 19503
$\left.\begin{array}{ll}\text { Type of Facility } & \begin{array}{l}\text { This permit approves the } \\ \text { construction of a new } \\ \text { 500,000-gallon glass-fused to } \\ \text { steel finished water storage tank } \\ \text { to replace the Borough of Bally's } \\ \text { (Borough) existing } \\ \text { 270,000-gallon storage tank. }\end{array} \\ \text { Karen C. Pollock, P.E. } \\ \text { Sonsulting Engineer } \\ \text { Systems Design Engineering } \\ \text { 1032 James Drive } \\ \text { Lessport, PA 19533 }\end{array}\right\}$

Permit No. 0116502 MA, Minor Amendment, Public Water Supply.
Applicant
Municipality
County
Responsible Official

## New Oxford MHC LLC

Mt. Pleasant Township

## Adams

Matthew Raynor, Executive Director 10006 Hammock Bend Chapel Hill, NC 27517
Type of Facility Modification to the existing GWR 4-log inactivation of viruses treatment with the installation of additional chlorine contact piping.
Consulting Engineer N Peter Fleszar, P.E. Glace Associates, Inc. 3705 Trindle Road Camp Hill, PA 17011
Permit to Construct 8/3/2016
Issued

Permit No. 1914502-Operation-Public Water Supply.

Township/Borough

Applicant

County

Northcentral Region: Safe Drinking Water Program Manager, 208 West Third Street, Suite 101, Williamsport, PA 17701-6448.

Permit No. 5716501-MA—Construction—Public Water Supply.
Applicant
Laporte Borough Water System
Township/Borough

| County | Sullivan County |
| :--- | :--- |
| Responsible Official | Frank Kann, Borough Council <br> President |
|  | Laporte Borough Office |
|  | P.O. Box 125 |
| Laporte, PA 18626 |  |
| Type of Facility | Public Water Supply |
| Consulting Engineer | David L. Horst |
|  | Alfred Benesch \& Company |
|  | 400 One Norwegian Plaza |
|  | Pottsville, PA 17901 |
| Permit Issued | August 10, 2016 |
| Description of Action | Replacement of (1) existing |
|  | 150,000 -gallon water storage |
|  | tank (standpipe) with a new, |
|  | glass-fused-to-glass, |
|  | 150,000 -gallon standpipe and (2) |
|  | replacement of approximately |
|  | 3,800 linear feet of water |
| distribution system piping with |  |
|  | new piping in Laporte Borough. |

Permit No. 1914501—Operation—Public Water Supply.
Applicant
Township/Borough
County
Bloomsburg Filtration Plant
Town of Bloomsburg
Responsible Official
Columbia
Mr. Tate Hunsinger
SUEZ Water
Pennsylvania, Inc.-
Bloomsburg Filtration Plant
100 Irondale Road
Bloomsburg, PA 17815
Type of Facility Public Water Supply
Consulting Engineer
Mr. Michael Schober, P.E.
CDM Smith, Inc.
205 Granite Run Drive
Suite 350
Lancaster, PA 17601
and
Mr. Ken Smith, P.E.
CDM Smith, Inc.
60 Crossways Park Drive West
Woodbury, NY 11797
Permit Issued August 10, 2016
Description of Action Operation of duplicate
SuperPulsator pulsed bed solids contact sludge blanket clarifiers, manufactured by IDI, and related facilities, including rapid mix tanks, sludge equalization basins, membrane filtration feed equalization basins, and coagulant feed system.

Bloomsburg Filtration Plant
Town of Bloomsburg
Columbia

\(\left.$$
\begin{array}{ll}\text { Responsible Official } & \begin{array}{l}\text { Mr. Tate Hunsinger } \\
\text { SUEZ Water } \\
\text { Pennsylvania, Inc.-- } \\
\text { Bloomsburg Filtration Plant }\end{array}
$$ <br>
\& 100 Irondale Road <br>

Bloomsburg, PA 17815\end{array}\right\}\)| Type of Facility | Public Water Supply |
| :--- | :--- |
| Consulting Engineer | Mr. Michael Schober, P.E. |
|  | CDM Smith, Inc. |
|  | 205 Granite Run Drive |
|  | Suite 350 |
|  | Lancaster, PA 17601 |
| and |  |
|  | Mr. Ken Smith, P.E. |
|  | CDM Smith, Inc. |
|  | 60 Crossways Park Drive West |
|  | Woodbury, NY 11797 |
|  | August 10, 2016 |
| Permit Issued | Operation of all remaining |
| Description of Action | components of the membrane |
|  | filtration plant, including the |
|  | chemical feed systems and |
| ultraviolet disinfection. |  |

Permit No. 1915501-Operation—Public Water Supply.

| Applicant | Bloomsburg Filtration Plant |
| :--- | :--- |
| Township/Borough | Town of Bloomsburg <br> County |
| Responsible Official | Columbia |
|  | Mr. Tate Hunsinger <br> SUEZ Water |
|  | Pennsylvania, Inc.-- |
|  | Bloomsburg Filtration Plant |
|  | 100 Irondale Road |
|  | Bloomsburg, PA 17815 |
| Type of Facility | Public Water Supply |
| Consulting Engineer | Mr. Michael Schober, P.E. |
|  | CDM Smith, Inc. |
|  | 205 Granite Run Drive |
|  | Suite 350 |
|  | Lancaster, PA 17601 |
|  | and |
|  | Mr. Ken Smith, P.E. |
|  | CDM Smith, Inc. |
|  | 60 Crossways Park Drive West |
|  | Woodbury, NY 11797 |
|  | August 10, 2016 |
| Permit Issued | Operation of the new raw water |
| Description of Action | pump station and intake on |
|  | Fishing Creek. |

Southwest Region: Water Supply Management Program Manager, 400 Waterfront Drive, Pittsburgh, PA 152224745.

| $\quad$ Permit No. 6516502, Public Water Supply. |  |
| :--- | :--- |
| Excela Health Group |  |
| Applicant | 532 West Pittsburgh Street |
|  | Greensburg, PA 15601 |


| Type of Facility | Secondary disinfection |
| :--- | :--- |
| Consulting Engineer | E.L. Robinson Engineering, <br> Company |
|  | 5088 Washington Street, <br>  <br>  <br> West <br> Charleston, WV 25313 <br> Permit to Construct <br> Issued August 9, 2016 | Issued

Secondary disinfection
E.L. Robinson Engineering, Company West Charleston, WV 25313
August 9, 2016

Operations Permit issued to: GW Services, d/b/a Glacier Water, 1385 Park Center Drive, Vista, CA 92081, (PWSID \# 5026467) Beaver County on August 15,2016 for the operation of facilities approved under Construction Permit \# 5026467-110.

Operations Permit issued to: GW Services, d/b/a Glacier Water, 1385 Park Center Drive, Vista, CA 92081, (PWSID \# 5026467) Allegheny County on August 15, 2016 for the operation of facilities approved under Construction Permit \# 5026467-150.

Operations Permit issued to: GW Services, d/b/a Glacier Water, 1385 Park Center Drive, Vista, CA 92081, (PWSID \# 5026467) Allegheny County on August 15, 2016 for the operation of facilities approved under Construction Permit \# 5026467-184.

Operations Permit issued to: GW Services, d/b/a Glacier Water, 1385 Park Center Drive, Vista, CA 92081, (PWSID \# 5026467) Allegheny County on August 15, 2016 for the operation of facilities approved under Construction Permit \# 5026467-185.

Operations Permit issued to: Blacklick Valley Municipal Authority, PO Box 272, Twin Rocks, PA 15960, (PWSID \# 4110077) Jackson Township, Cambria County on August 10, 2016 for the operation of facilities approved under Construction Permit \# 1114519.

Operations Permit issued to: Blacklick Valley Municipal Authority, PO Box 272, Twin Rocks, PA 15960, (PWSID \# 4110077) Blacklick Township, Cambria County on August 10, 2016 for the operation of facilities approved under Construction Permit \# 1114515.

Operations Permit issued to: Blacklick Valley Municipal Authority, PO Box 272, Twin Rocks, PA 15960, (PWSID \# 4110077) Blacklick Township and Vintondale Borough, Cambria County on August 10, 2016 for the operation of facilities approved under Construction Permit \# 1114520.

Permit No. 3016505MA, Minor Amendment. Public Water Supply.

| Applicant | Southwest Pennsylvania <br> Water Authority |
| :--- | :--- |
|  | 1442 Jefferson Road <br> PO Box 187 <br> Jefferson, PA 15344 |
| [Borough or Township] | Washington Township |
| Greene |  |
| Gounty | Byard Road waterline <br> Type of Facility <br> Consulting Engineer <br> Bankson Engineers, Inc. <br> 267 Blue Run Road |
| Suite 200 |  |
| Permit to Construct | Cheswick, PA 15024 <br> August 10, 2016 |
| Issued |  |

Northwest Region: Safe Drinking Water Program Manager, 230 Chestnut Street, Meadville, PA 16335-3481.

Operation Permit issued to Brockway Borough Municipal Authority, PWSID No. 6330002, Brockway Borough, Jefferson County. Permit Number 3314501 issued August 15, 2016 for the operation of Siple Road Booster Pump Station and Rattlesnake Keystone Area Interconnection. This permit is issued in response to an operation inspection conducted by the Department of Environmental Protection personnel on July 6, 2016.

Operation Permit issued to Borough of Stoneboro, PWSID No. 6430059, Borough of Stoneboro, Mercer County. Permit Number 4379503-MA3 issued August 15, 2016 for the operation of 4 -Log treatment of viruses for Entry Point 100 for Springs 1-5. This action is taken under the requirements of the Groundwater Rule.

## WATER ALLOCATIONS

Actions taken on applications received under the act of June 24, 1939 (P.L. 842, No. 365) (35 P.S. §§ 631-641) relating to the acquisition of rights to divert waters of the Commonwealth.

Southcentral Region: Safe Drinking Water Program Manager, 909 Elmerton Avenue, Harrisburg, PA 17110.

WA 67-378 E, Water Allocations. Glen Rock Water Authority (PWS ID No. 7670050), York County. The Authority is requesting the right to purchase 500,000 gallons per day (gpd), based on a 30-day average, up to a maximum of $15,000,000$ gallons per month from the York Water Company through an existing interconnection. Permittee Contact: Dale E. Getz, Director of Aministration, Glen Rock Water Authority, PO Box 205, Glen Rock, PA 17327. Consulting Engineer: Bill Meinert, P.E. O’Brien \& Gere, 4201 Mitchellville Road, Suite 500, Bowie, MD 20716. Permit Issued: 8/4/2016.

## SEWAGE FACILITIES ACT PLAN APPROVAL

Plan Approvals Granted Under the Pennsylvania Sewage Facilities Act (35 P.S. § 750.5)

Southwest Regional Office, Regional Clean Water Program Manager, 400 Waterfront Drive, Pittsburgh, PA 15222-4745, Telephone 412-442-4000.
Plan Location: Single Residence Sewage Treatment Plant at 845 Barclay Hill Road, Brighton Township, Beaver County.

| Borough or <br> Township | Borough or Township <br> Address | County |
| :--- | :--- | :--- |
| Brighton | 1300 Brighton Road | Beaver |
| Township | Beaver, PA 15009 |  |

Plan Description: The approved plan provides for the installation of a Single Residence Sewage Treatment Plant at 845 Barclay Hill Road, Beaver, PA 15009 to remedy an existing malfunction. The proposed discharge is to an unnamed tributary of Fourmile Run designated under Chapter 93 as a Warm Water Fisheries. The approved sewage facility plan, evaluated all nondischarge alternatives and determined no environmentally sound and cost effective non-discharge alternative is available.

The Department's review of the sewage facility plan has not identified any significant environmental impacts resulting from this proposal. Any required NPDES Permits or WQM Permits must be obtained in the name of the homeowner.

Plan Location:

| Borough or <br> Township | Borough or Township <br> Address | County |
| :--- | :--- | :--- |
| Mount Pleasant | 31 McCarrell Road | Washington |
| Township | Hickory, PA 15340 | County |

Plan Description: The approved plan revised the existing 537 plan which proposed construction of a sewage treatment facility in the village of Southview. The approved plan proposes construction of a pump station and sanitary sewers to convey sewage flows from the village of Southview to a proposed sewage treatment plant in the village of Westland. Construction of the Westland treatment facility was addressed in a previously approved plan. This plan also approves an increase in the proposed capacity of the Westland facility. The Departments review of the sewage facilities update revision has not identified any significant environmental impacts resulting from this proposal. Any required NPDES Permits or WQM Permits must be obtained in the name of the municipality or authority as appropriate.

## SEWAGE FACILITIES ACT PLAN DISAPPROVAL

Plan Disapprovals Under the Pennsylvania Sewage Facilities Act

Southcentral Region: Clean Water Program Manager, 909 Elmerton Avenue, Harrisburg, PA 17110. 717-7054707.

Plan Location:

| Borough or <br> Township | Borough or Township <br> Address | County |
| :--- | :--- | :--- |
| Exeter Township | 4975 DeMoss Rd. | Berks |

Plan Description: The request for a planning exemption for the Daniel Boone Homestead, DEP Code No. A3-06932-291-3E, APS Id 920957, is disapproved. The purpose of this submission is to replace their existing wastewater treatment facility with a connection to Exeter Township's public sewerage system. The project is located west of Daniel Boone Road, north of the junction with US Route 422 . The application is denied because exemptions are only for new land development (see Chapter 71, Section 71.51(b)) and new development was not proposed as part of the present submission. The proposal may be resubmitted using the Component 3 module forms.

## LAND RECYCLING AND

 ENVIRONMENTAL REMEDIATIONUNDER ACT 2, 1995
PREAMBLE 2
The following plans and reports were submitted under the Land Recycling and Environmental Remediation Standards Act (35 P.S. §§ 6026.1016026.907).

Provisions of Sections 301-308 of the Land Recycling and Environmental Remediation Standards Act (act) (35 P.S. §§ 6026.301-6026.308) require the Department to publish in the Pennsylvania Bulletin a notice of submission of plans and reports. A final report is submitted to document cleanup of a release of a regulated substance at a site to one of the act's remediation standards. A final report provides a description of the site investigation to characterize the nature and extent of contaminants in environmental media, the basis for selecting the environmental media of concern, documentation supporting the
selection of residential or nonresidential exposure factors, a description of the remediation performed and summaries of sampling analytical results which demonstrate that remediation has attained the cleanup standard selected. Submission of plans and reports, other than the final report, will also be published in the Pennsylvania Bulletin. These include the remedial investigation report, risk assessment report and cleanup plan for a site-specific standard remediation. A remedial investigation report includes conclusions from the site investigation; concentration of regulated substances in environmental media; benefits of reuse of the property; and, in some circumstances, a fate and transport analysis. If required, a risk assessment report describes potential adverse effects caused by the presence of regulated substances. If required, a cleanup plan evaluates the abilities of potential remedies to achieve remedy requirements.
For further information concerning plans or reports, contact the environmental cleanup program manager in the Department regional office under which the notice of receipt of plans or reports appears. If information concerning plans or reports is required in an alternative form, contact the community relations coordinator at the appropriate regional office. TDD users may telephone the Department through the Pennsylvania AT\&T Relay Service at (800) 654-5984.
The Department has received the following plans and reports:
Northeast Region: Eric Supey, Environmental Cleanup \& Brownfields Program Manager, 2 Public Square, Wilkes-Barre, PA 18701-1915.
PA American Water-Stafford Avenue, 2699 Stafford Avenue, City of Scranton, Lackawanna County. Resource Environmental Management, Inc., 50 Maple Street, Montrose, PA 18801, on behalf of PA American Water, 800 West Hersheypark Drive, Hershey, PA 17033, submitted a Site Specific Remedial Investigation Report concerning remediation of site soils contaminated with benzene, naphthalene, toluene, ethylbenzene, cumene, MTBE, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, total xylenes, 1,2-dibromoethane, and 1,2-dichloroethane.. The report is intended to document remediation of the site to meet the Site-Specific Standard.
Southcentral Region: Environmental Cleanup and Brownfields Program Manager, 909 Elmerton Avenue, Harrisburg, PA 17110. Phone 717.705.4705.

Worley \& Obetz, Inc./Janet Trish Property, 5829 Waltersdorff Road, Spring Grove, PA 17362, North Codorus Township, York County. Letterle \& Associates, Inc., 2022 Axemann Road, Suite 201, Bellefonte, PA 16823 , on behalf of Worley \& Obetz, Inc., 85 White Oak Road, Manheim, PA 17545-0429, and Janet Trish, 5829 Waltersdorff Road, Spring Grove, PA 17362, submitted Final Report concerning remediation of site soil contaminated with heating oil. The report is intended to document remediation of the site to meet the Residential Statewide Health Standard.
Tate Access Floors, Inc., 52 Springvale Road, Red Lion, PA 17356-0398, Windsor Township, York County. Amec Foster Wheeler, 800 North Bell Avenue, Carnegie, PA 15106, on behalf of USG Corporation, P.O. Box 6721, Chicago, IL 60680-6721 and Tate Access Floors, 52 Springvale Road, Red Lion, PA 17356-0398, submitted a Remedial Investigation and Risk Assessment Report concerning remediation of site soil and groundwater contaminated with chlorinated solvents. The report is intended to document remediation of the site to meet the Site Specific Standard.

Greiner, Inc. Diesel \& Hydraulic Fuel Release, Southern Right-of-Way 3000 Block of Pricetown Road, Fleetwood, PA 19522, Alsace Township, Berks County. Liberty Environmental, 50 North Fifth Street, Fifth Floor, Reading, PA 19601, on behalf of Greiner, Inc., P.O. Box 204, Uwchland, PA 19480, and PennDOT-District 5, 1002 Hamilton Street, Allentown, PA 181401, submitted a Final Report concerning remediation of site soil contaminated with diesel fuel. The report is intended to document remediation of the site to meet the Residential Statewide Health Standard.

Northcentral Region: Environmental Cleanup Program Manager, 208 West Third Street, Williamsport, PA 17701.
U.S. Xpress, Inc., East Keating Township, Clinton County. Northridge Group, Inc., P.O. Box 231, Northumberland, PA 17857 on behalf of U.S. Xpress, Inc., 4080 Jenkins Road, Chattanooga, TN 37421 has submitted a Final Report concerning remediation of site soil contaminated with diesel fuel. The report is intended to document remediation of the site to meet the Statewide Health Standard.

Shipley Energy, Spring Township, Snyder County. Mountain Research, LLC, 825 25th Street, Altoona, PA 16601, on behalf of Shipley Energy, 415 Norway Street, York, PA 17403 has submitted a Final Report concerning remediation of site soil and groundwater contaminated with diesel fuel and gasoline. The report is intended to document remediation of the site to meet the Statewide Health Standard.

GS Trucking, Inc., Lewis Township, Union County. Northridge Group, Inc., P.O. Box 231, Northumberland, PA 17857 on behalf of GS Trucking, Inc., 1500 Ferry Road, Easton, PA 18042 has submitted a Final Report concerning remediation of site soil contaminated with diesel fuel. The report is intended to document remediation of the site to meet the Statewide Health Standard.
Southeast Regional Office: Regional Manager, Environmental Cleanup and Brownfields, 2 East Main Street, Norristown, PA 19401, Telephone 484.250.5960.

Rose Residence, 1069 Meetinghouse Road, Abington Township, Montgomery County. Jeremy W. Bolyn, Environmental Maintenance, 1420 East Mermaid Lane, Glenside, PA 19038 on behalf of Susan Rose, 1069 Meetinghouse Road, Rydal, PA 19038 has submitted a Final Report concerning remediation of site soil contaminated with heating oil. The report is intended to document remediation of the site to meet the Statewide Health Standard. PF811623.

Schaffer Residence, 3795 Church School Road, Buckingham Township, Bucks County. Richard D. Trimpi, Trimpi Associates, Inc., 1635 Old Plains Road, Pennsburg, PA 18073, Stephanie McLaughlin, Selective Insurance Company of America, P.O. Box 7264, London, KY 40742 on behalf of Mark and Ms. Amy Shaffer, 3795 Church School Road, Doylestown, PA 18902 has submitted a Final Report concerning remediation of site soil contaminated with no. 2 fuel oil. The report is intended to document remediation of the site to meet the Statewide Health Standard. PF810209.

Waterside Development Parcel B, 2215 State Road, Bensalem Township, Bucks County. Michael D. Lattanze, Penn Environmental \& Remediation, Inc., 2755 Bergey Road, Hatfield, PA 19440, Jeffrey K. Walsh, P.G., Penn Environmental \& Remediation, Inc., 2755 Bergey Road, Hatfield, PA 19440 on behalf of Arnold Boyer, Waterside Construction, LP, 2310 Terwood Drive, Huntington Valley, PA 19006 has submitted a Cleanup/

Remedial Investigation Report concerning remediation of site soil and groundwater contaminated with petroleum. The report is intended to document remediation of the site to meet the Site Specific Standard. PF620175.
915 North Bethlehem Pike, 915 North Bethlehem Pike, Lower Gwynedd Township, Montgomery County. Richard S. Werner, Environmental Consulting, Inc., 2002 Renaissance Boulevard, Suite 110, King of Prussia, PA 19406 on behalf of Paul Bucco, 915 1/2 North Bethlehem Pike, Partners LP, 10 East 6th Avenue, Suite 100, Conshohocken, PA 19428 has submitted a Final Report concerning remediation of site soil contaminated with gasoline. The report is intended to document remediation of the site to meet the Statewide Health Standard. PF811562.

3509 Spring Garden Street, 3509-3513 Spring Garden Street, City of Philadelphia, Philadelphia County. William F. Schmidt, PE, Pennoni Associates, Inc., 3001 Market Street, Philadelphia, PA 19104 on behalf of Jonathan Chase, 3509 Spring Garden, LP, 3201 Arch Street, \# 420, Philadelphia, PA 19104 has submitted a Remedial Investigation/Cleanup Plan/Final Report concerning remediation of site soil contaminated with voc's. The report is intended to document remediation of the site to meet the Site Specific Standard. PF785063.

# LAND RECYCLING AND ENVIRONMENTAL REMEDIATION 

UNDER ACT 2, 1995<br>PREAMBLE 3

The Department has taken action on the following plans and reports under the Land Recycling and Environmental Remediation Standards Act (35 P.S. §§ 6026.101-6026.907).

Section 250.8 of 25 Pa . Code and administration of the Land Recycling and Environmental Remediation Standards Act (act) require the Department to publish in the Pennsylvania Bulletin a notice of its final actions on plans and reports. A final report is submitted to document cleanup of a release of a regulated substance at a site to one of the remediation standards of the act. A final report provides a description of the site investigation to characterize the nature and extent of contaminants in environmental media, the basis of selecting the environmental media of concern, documentation supporting the selection of residential or nonresidential exposure factors, a description of the remediation performed and summaries of sampling methodology and analytical results which demonstrate that the remediation has attained the cleanup standard selected. Plans and reports required by the act for compliance with selection of remediation to a sitespecific standard, in addition to a final report, include a remedial investigation report, risk assessment report and cleanup plan. A remedial investigation report includes conclusions from the site investigation; concentration of regulated substances in environmental media; benefits of reuse of the property; and, in some circumstances, a fate and transport analysis. If required, a risk assessment report describes potential adverse effects caused by the presence of regulated substances. If required, a cleanup plan evaluates the abilities of potential remedies to achieve remedy requirements. A work plan for conducting a baseline remedial investigation is required by the act for compliance with selection of a special industrial area remediation. The baseline remedial investigation, based on the work plan, is compiled into the baseline environmental report to establish a reference point to show
existing contamination, describe proposed remediation to be done and include a description of existing or potential public benefits of the use or reuse of the property. The Department may approve or disapprove plans and reports submitted. This notice provides the Department's decision and, if relevant, the basis for disapproval.

For further information concerning the plans and reports, contact the environmental cleanup program manager in the Department regional office under which the notice of the plan or report appears. If information concerning a final report is required in an alternative form, contact the community relations coordinator at the appropriate regional office. TDD users may telephone the Department through the Pennsylvania AT\&T Relay Service at (800) 654-5984.

The Department has received the following plans and reports:
Northeast Region: Eric Supey, Environmental Cleanup \& Brownfields Program Manager, 2 Public Square, Wilkes-Barre, PA 18701-1915.

William Lutz Property, 514 South Sterling Road, Dreher Township and Greene Township, Wayne and Pike County. Brickhouse Environmental, 515 South Franklin Street, West Chester, PA 19382, on behalf of William Lutz, 514 South Sterling Road, South Sterling, PA 18460, submitted a Final Report concerning the remediation of site soils contaminated with Benzene, Ethylbenzene, MTBE, Isopropylbenzene, Napthanlene, 1,3,5-TMB, 1,2,4-TMB, Toluene. The Final Report demonstrated attainment of the Site-Specific Standard, and was approved by the Department on August 9, 2016.

Paul Cecil Residence, 30 Montgomery Avenue, West Pittston Borough, Luzerne County. Trimpi Associates, Inc., 1635 Old Plains Road, Pennsburg, PA 18073, on behalf of State Farm Insurance Company, PO Box 106169, Atlanta, GA 30348, submitted a Final Report concerning the remediation of site soils contaminated with Benzene, Toluene, Ethylbenzene, Isopropylbenzene, MTBE, Naphthalene, 1,2,4-trimethylbenzene, and 1,3,5trimethylbenzene. The Final Report demonstrated attainment of the Statewide Health Standard, and was approved by the Department on August 9, 2016.
Arbor Business Center, 2125 28th Street SW, Allentown City, Lehigh County. Leidos, Inc., 6310 Allentown Boulevard, Harrisburg, PA 17112, on behalf of Air Products and Chemicals, Inc., 7201 Hamilton Boulevard, Allentown, PA 18195, submitted a Final Report concerning the remediation of site groundwater contaminated with Tetrachloroethene, Trichloroethene, 1,1-Dichloroethene, cis/trans-1,2-Dichloroethene, 1,2-Dichloroethane, and 1,1,1-Trichloroethane. The Final Report demonstrated attainment of the Background Standard, and was approved by the Department on August 10, 2016.

## Southcentral Region: Environmental Cleanup and Brownfields Program Manager, 909 Elmerton Avenue, Harrisburg, PA 17110. Phone 717.705.4705.

Harvey Building Products/Snyder \& Bender Properties, 415 and 417 Lancaster Pike, New Providence, PA 17560, Providence Township, Lancaster County. EP\&S of Vermont, Inc., 1539 Bobali Drive, Harrisburg, PA 17104, on behalf of Ronald and Anne Lucinda Snyder, 415 Lancaster Pike, New Providence, PA 17560 and Daniel R. and Frannie L. Bender, 417 Lancaster Pike, New Providence, PA 17560, submitted a Final Report concerning remediation of site soils contaminated with diesel fuel. The Final Report demonstrated attainment of the Resi-
dential Statewide Health Standard, and was approved by the Department on August 11, 2016.

Llewellyn's Manufactured Home Community Lot 69, 4550 Bull Road, Dover, PA 17315, Dover Township, York County. Independence Environmental Consulting, LLC, 1750 Kaylor Road, Hummelstown, PA 17036, on behalf of Llewellyn's Manufactured Home Community, Inc., 4550 Bull Road, Dover, PA 17315, submitted a Final Report concerning remediation of site soil contaminated with \# 2 fuel oil. The Final Report demonstrated attainment of the Residential Statewide Health Standard, and was approved by the Department on August 9, 2016.
Northcentral Region: Environmental Cleanup Program
Manager, 208 West Third Street, Williamsport, PA 17701.
Vasile, Inc., dba Red, White \& Blue, Inc., Lawrence Township, Clearfield County. Northridge Group, Inc., P.O. Box 231, Northumberland, PA 17857, on behalf of Vasile LLC, 236 Andrew Lane, Schaumburg, IL 60193 has submitted a Final Report concerning remediation of site soil contaminated with diesel fuel. The final report demonstrated attainment of the Statewide Health Standard and was approved by the Department on August 3, 2016.
Valley Farms Dairy Distribution Center, 629 Puddintown Road, College Township, Centre County. LaBella Associates, D.P.C., 300 State Street, Suite 201, Rochester, NY 14614, on behalf of Valley Farms Dairy, LLC, 25 Anderson Road, Buffalo, New York 14225, submitted a Final Report concerning remediation of groundwater contaminated with Benzene. The final report failed to demonstrate attainment of the Statewide Health standard and was disapproved by the Department on July 22, 2016.

Northwest Region: Environmental Cleanup \& Brownfields Program Manager, 230 Chestnut Street, Meadville, PA 16335-3481.
Marathon New Castle Site (MPC No. 3670), 718 East Washington Street, City of New Castle, Lawrence County. ARCADIS U.S. Inc., 6041 Wallace Road Extension, Suite 300, Wexford, PA 15090 on behalf of Marathon Petroleum Company, LP, 539 South Main Street, Findlay, OH 45840, submitted a Remedial Investigation Report concerning the remediation of site soil and site groundwater contaminated with benzene, toluene, ethylbenzene, xylenes, cumene, naphthalene, 1-methylnaphthalene, 2 -methylnaphthalene, 1,2,4-trimethylbenzene (TMB), 1,3,5-TMB, 1,2-dibromoethane, 1,2-dichloroethane, anthracene, acenaphthene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, acenaphthylene, fluoranthene, fluorene, phenanthrene, pyrene, and lead. The Report was approved by the Department on August 12, 2016.

Bradford Mall, 1001 East Main Street, Foster Township, McKean County. Penn Environmental \& Remediation, Inc., 2755 Bergey Road, Hatfield, PA 19440, on behalf of KR Bradford Mall, L.P., 450 Lexington Avenue, 13th Floor, New York, NY 10017, submitted a Final Report concerning the remediation of site soil and groundwater contaminated with trans-1,2-dichloroethene, 1,1,-dichloroethene, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride. The Final Report demonstrated attainment of a combination of the Site-Specific and Statewide Health standards and was approved by the Department on August 12, 2016.

NFG Midstream Clermont East Compressor Station, 70 Billy Buck Tie Road, Sergeant Township, McKean County. Environmental Remediation \& Recov-
ery, Inc., 4250 Route 6 N , Edinboro, PA 16412, on behalf of National Fuel Gas, 1100 State Street, Erie, PA 16512, submitted a Final Report concerning the remediation of site soil contaminated with benzene, toluene, ethyl benzene, xylene, sec-butyl benzene, tert-butyl benzene, cyclohexane, 1,3,4-trimethylbenzene, 1,3,5-trimethylbenzene, cumene, naphthalene, acenaphthene, anthracene, benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[g,h,i]perylene, chrysene, fluoranthene, fluorene, indeno[1,2,3-c,d]pyrene, 2-methylnapthalene, phenanthrene, pyrene, 1,1,biphenyl, phenol, aluminum, barium, boron, iron, lithium, manganese, vanadium, zinc, selenium, and ethylene glycol. The Final Report demonstrated attainment of the Statewide Health Standard and was approved by the Department on August 12, 2016.

## Former Chicago Bridge \& Iron Constructors, Inc.,

 1420 Lexington Avenue, City of Warren, Warren County. Groundwater and Environmental Services, Inc., 301 Commerce Park Drive, Cranberry Township, PA 16066, on behalf of United Refining Company, 814 Lexington Avenue, Warren, PA 16365, submitted a Remedial Investigation/Risk Assessment Report concerning the remediation of site soil contaminated with arsenic, barium, lead, cadmium, benzene, toluene, ethylbenzene, total xylenes, 1,2,4-trimethylbenzene (1,2,4-TMB), 1,3,5trimethylbenzene (1,3,5-TMB), naphthalene, 2 -methylnaphthalene and site groundwater contaminated with arsenic, lead, benzene, 1,2,4-TMB, and methyl tert-butyl ether (MTBE). The Report was approved by the Department on August 12, 2016.Southeast Regional Office: Regional Manager, Environmental Cleanup and Brownfields, 2 East Main Street, Norristown, PA 19401, Telephone 484.250.5960.

61 West Eagle Road Property, 61 West Eagle Road Property, Haverford Township, Delaware County. Douglass B. Schott, P.G., Brickhouse Environmental, 515 South Franklin Street, West Chester, PA on behalf of Mr. \& Mrs. Frank Pulcini, SDG Enterprises Group, LLC, 419 Haverford Avenue, Narberth, PA 19072, Kurt Spiess, EMG Remediation Services, LLC, 5066R West Chester Pike, P.O. Box 129, Edgemont, PA 19028 has submitted a Final Report concerning the remediation of site soil contaminated with unleaded gasoline. The Final report demonstrated attainment of the Statewide Health Standard and was approved by the Department on August 3, 2016. PF809100.

Haverford Seven LLC Lot 5, Haverford and Columbia Roads, Haverford Township, Delaware County. Thomas Petrecz, Penn E\&R, Inc., 2755 Bergey Road, Hatfield, PA 19440 on behalf of Kevin Hillsinger, Harvard Seven LLC, 1305 Catfish Lane, Audubon, PA 19403 has submitted a Final Report concerning the remediation of site soil contaminated with $1,2,4,5$ and 6 fuel oil short-list compounds. The Final report demonstrated attainment of the Statewide Health Standard and was approved by the Department on August 4, 2016. PF811099.

Clermont Property, 329 East Township Road, 330 Leidy Road, 340 Leidy Road, 30 Cowpath Road, and 329 East Township Line Road, Franconia Township, Montgomery County. Lawrence W. Bily, RT Environmental Services, Inc., 215 West Church Road, King of Prussia, PA 19406, James Sieracki, Environmental Services, Inc., 215 West Church Road, King of Prussia, PA 19406 on behalf of Christopher Canavan, Blecker Acquisition, LP, 404 Sumneytown Pike, Suite 200, North Wales, PA 19454 has submitted a Final Report concerning the remediation of site soil contaminated with arsenic. The Final report did
not demonstrate attainment of the Site Specific Standard and was disapproved by the Department on August 1, 2016. PF810251.

## HAZARDOUS WASTE TRANSPORTER LICENSE

Actions on applications for Hazardous Waste Transporter License received under the Solid Waste Management Act (35 P.S. §§ 6018.101-6018.1003) and regulations to transport hazardous waste.

Central Office: Bureau of Land Recycling and Waste Management, Division of Hazardous Waste Management, PO Box 69170, Harrisburg, PA 17106-9170.
Hazardous Waste Transporter License Issued
South Penn Resources, LLC, 570 East Main Street, Uniontown, PA 15401. License No. PA-AH 0844. Effective Aug 11, 2016.

## Renewal Applications Received

Pioneer Tank Lines, Inc., 12501 Hudson Road South, Afton, MN 55001-9751. License No. PA-AH 0600. Effective Aug 11, 2016.

REGULATED MEDICAL AND CHEMOTHERAPEUTIC WASTE TRANSPORTER LICENSE

Actions on applications for Regulated Medical and Chemotherapeutic Waste Transporter License received under the Solid Waste Management Act and the act of June 28, 1988 (P.L. 525, No. 93) and regulations to transport regulated medical and chemotherapeutic waste.

Central Office: Bureau of Land Recycling and Waste Management, Division of Hazardous Waste Management, PO Box 69170, Harrisburg, PA 17106-9170.
Regulated Medical and Chemotherapeutic Waste Transporter License Issued

Approved Storage \& Waste Hauling MA, Inc., 110 Edison Avenue, Mount Vernon, NY 10550. License No. PA-HC 0273. Effective Aug 11, 2016.

## Renewal Applications Received

Cole Care, Inc., 1001 East Second Street, Coudersport, PA 16915. License No. PA-HC 0178. Effective Aug 12, 2016.

## RESIDUAL WASTE GENERAL PERMITS

Permit Issued Under the Solid Waste Management Act (35 P.S. §§ 6018.101-6018.1003); the Municipal Waste Planning, Recycling and Waste Reduction Act (53 P.S. §§ 4000.101-4000.1904); and Residual Waste Regulations for a General Permit to Operate Residual Waste Processing Facilities and the Beneficial Use of Residual Waste other than Coal Ash.
Central Office: Division of Municipal and Residual Waste, Rachel Carson State Office Building, 14th Floor, 400 Market Street, Harrisburg, PA 17105.

General Permit Application No. WMGR038Base. General Permit No. WMGR038 authorizes processing, reuse, and beneficial use of waste tires, which include whole tires, tire chips, baled tires, tire shreds, and crumb rubber. The permitted processing is limited to collection, sorting, storage, recapping, cleaning, shredding, chipping, grinding, crumbing, cutting and baling of waste tires. The
permitted beneficial use of whole waste tires, tire chips, baled tires, tire shreds, and crumb rubber is limited to use in recapping, as fuel in boilers or other combustion units, in civil engineering practices, and as an ingredient in or as a commercial product. The Department reorganized and re-formatted General Permit No. WMGR038 for overall clarity and ease of use. The general permit was renewed by the Department and became effective on August 10, 2016.

A person or municipality that proposes to process, reuse and beneficially use waste tires by operating under the terms and conditions of this general permit after the date of permit issuance must apply for and obtain a "Determination of Applicability" prior to commencing authorized activities under this general permit. A completed application on forms available from the Department must be submitted to the appropriate Department Regional Office (see p. 10 of the general permit for a list of regional offices).

Persons interested in obtaining a copy of the renewed general permit can download a copy at http://www. dep.pa.gov/Business/Land/Waste/SolidWaste/Residual/ Permitting/Pages/BeneficialUsePermits.aspx or may request a copy by contacting the Division of Municipal and Residual Waste, Bureau of Waste Management, P.O. Box 69170, Harrisburg, PA 17106-9170, 717-787-7381. TDD users may contact the Department through the Pennsylvania AT\&T Relay Service, (800) 654-5984.
Northwest Regional Office: 230 Chestnut Street, Meadville, PA 16335.

General Permit No. WMGR038NWD004. Cambridge Springs Tire Co., 23411 Thomas Road, Cambridge Springs, PA 16403; Site: Cambridge Township, Crawford County. Renewal of the Determination of Applicability under new WMGR038 authorizes the processing, storage and beneficial use of waste tires. The permit was issued by the Northwest Regional Office on August 10, 2016.

General Permit No. WMGR038NWD005. Crawford Renewable Energy, LLC, 360 Chestnut Street, Meadville, PA 16335; Site: Keystone Regional Industrial Park, Greenwood Township, Crawford County. Renewal of the Determination of Applicability under the new WMGR038 authorizes the processing, storage and beneficial use of waste tires. The permit was issued by the Northwest Regional Office on August 10, 2016.

## REGISTRATION FOR RESIDUAL WASTE GENERAL PERMITS

Registration for General Permit issued Under the Solid Waste Management Act; the Municipal Waste Planning, Recycling and Waste Reduction Act; and Residual Waste Regulations for a General Permit to Operate Residual Waste Processing Facilities and/or the Beneficial Use of Residual Waste Other Than Coal Ash.

[^7]located in Newtown Township, Delaware County. The registration for general permit was issued by the Southeast Regional Office on August 16, 2016.

## DETERMINATION OF APPLICABILITY FOR RESIDUAL WASTE GENERAL PERMITS

Determination of Applicability for General Permit Issued Under the Solid Waste Management Act; the Municipal Waste Planning, Recycling and Waste Reduction Act; and Residual Waste Regulations for a General Permit to Operate Residual Waste Processing Facilities and/or the Beneficial Use of Residual Waste Other Than Coal Ash.

Southeast Region: Regional Solid Waste Manager, 2 East Main Street, Norristown, PA 19401.
General Permit No. WMGR038SE008. Bergeys Retread Technologies, 1419 Old Route 309, Sellersville, PA 18960. This application is for the ten-year renewal of the determination of applicability (DOA) under General Permit No. (WMGR038) to continue operation at the Bergey's Retread Technologies facility for the beneficial use of waste tires by recapping. The Bergey's Retread Technologies facility is located at 1419 Old Route 39, Sellersville, PA 18960, in West Rockill Township, Bucks County. The application for the determination of applicability was issued by the Southeast Regional Office on August 10, 2016.

Renewal of a Determination of Applicability for General Permit issued Under the Solid Waste Management Act; the Municipal Waste Planning, Recycling and Waste Reduction Act; and Residual Waste Regulations for a General Permit to Operate Residual Waste Processing Facilities and/or the Beneficial Use of Residual Waste Other Than Coal Ash.

Southcentral Region: Regional Solid Waste Manager, 909 Elmerton Avenue, Harrisburg, PA 17110.
General Permit No. WMGR038SC004. Ecore International, Inc., 76 Acco Drive, York, PA, 17402. This general permit is for the processing, reuse and beneficial use of waste tires, which include whole tires, tire chips, baled tires, tire shreds, and crumb rubber. The Department issued the determination of applicability on August 10, 2016.

Persons interested in reviewing the general permit may contact John Oren, P.E., Permits Section Chief, Southcentral Regional Office, Waste Management Program, 909 Elmerton Avenue, Harrisburg, PA 17110, phone 717-705-4706. TDD users may contact the Department through the Pennsylvania AT\&T Relay Service, (800) 654-5984.

General Permit No. WMGR038SC007. Edge Pennsylvania, LLC, d/b/a/Edge Rubber, 1711 Opportunity Avenue, Chambersburg, PA 17202. This general permit is for the processing, reuse and beneficial use of waste tires, which include whole tires, tire chips, baled tires, tire shreds, and crumb rubber. The Department issued the determination of applicability on August 10, 2016.
Persons interested in reviewing the general permit may contact John Oren, P.E., Permits Section Chief, Waste Management Program, 909 Elmerton Avenue, Harrisburg, PA 17110, phone 717-705-4706. TDD users may contact the Department through the Pennsylvania AT\&T Relay Service, (800) 654-5984.

Renewal of a Determination of Applicability for General Permit issued under the Solid Waste Management Act; and Residual Waste Regulations for a General Permit To Operate Residual Waste Processing Facilities (25 Pa. Code § 287.611 relating to authorization for general permit).
South Central Regional Office: Waste Management Program, 909 Elmerton Avenue, Harrisburg, PA 17110-8200.

General Permit No. WMGR038SC005. Mahantango Enterprises, Inc., 2100 Old Trail Road, Liverpool, PA 17045 located in Susquehanna Township, Juniata County. This general permit is for the reuse and beneficial use of waste tires, which include whole tires, tire chips, baled tires, tire shreds, and crumb rubber. The Department issued the determination of applicability on August 10, 2016.

Persons interested in reviewing the general permit may contact John Oren, P.E., Permits Section Chief, Waste Management Program, 909 Elmerton Avenue, Harrisburg, PA 17110, (717) 705-4706. TDD users may contact the Department through the Pennsylvania AT\&T Relay Service, (800) 654-5984.

## OPERATE WASTE PROCESSING OR DISPOSAL AREA OR SITE

Permit(s) issued under the Solid Waste Management Act, the Municipal Waste Planning, Recycling and Waste Reduction Act and Regulations to Operate Solid Waste Processing or Disposal Area or Site.

Regional Solid Waste Manager, 400 Waterfront Drive, Southwest Region: Pittsburgh, PA 15222-4745. Telephone 412-442-4000.

Permit ID No. 301291. Ashland, Inc., 5200 Blazer Parkway, Dublin, Ohio 43017. Operation of a residual waste processing facility in Neville Township, Allegheny County. Permit renewed in the Regional Office on August 10, 2016.

## AIR QUALITY

General Plan Approval and Operating Permit Usage Authorized under the Air Pollution Control Act (35 P.S. §§ 4001-4015) and 25 Pa. Code Chapter 127 to construct, modify, reactivate or operate air contamination sources and associated air cleaning devices.

Southeast Region: Air Quality Program, 2 East Main Street, Norristown, PA 19401.

Contact: James Beach, New Source Review ChiefTelephone: 484-250-5920.

GP11-09-0059: Walter Earl Corporation (P.O. Box 757, Frmingdale, NJ 07727) on August 15, 2016, for the installation and operation of a diesel non-road engine in Falls Township, Bucks County.

GP14-09-0143: Life Celebration, Inc. (1010 Fox Chase Road, Rockledge, PA 19046) on August 15, 2016, for the installation and operation of a human crematory in Bristol Township, Bucks County.

Northeast Region: Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18711-0790.

Contact: Raymond Kempa, New Source Review ChiefTelephone: 570-826-2531.

GP3-40-018: Cedar Rock Materials Corp. (208 West 11th Street, Berwick, PA 18603) on August 2, 2016, for the construction and operation of a Portable Crushing Operation with watersprays at the Cedar Rock Quarry Site located in Salem Township, Luzerne County.

GP9-40-018: Cedar Rock Materials Corp. (208 West 11th Street, Berwick, PA 18603) on August 2, 2016, for the installation and operation of Diesel I/C engines at the Cedar Rock Quarry Site located in Salem Township, Luzerne County.

Southcentral Region: Air Quality Program, 909 Elmerton Avenue, Harrisburg, PA 17110.

Contact: Thomas Hanlon, Facilities Permitting Chief, 717-705-4862, Virendra Trivedi, New Source Review Chief, 717-705-4863, or William Weaver, Regional Air Quality Manager, 717-705-4702.

GP3-06-05073C: Dyer Quarry, Inc. (P.O. Box 188, Birdsboro, PA 19508) on August 9, 2016, for the installation and operation of a portable stone crushing plant at the quarry and stone crushing facility in Robeson Township, Berks County.

GP9-06-05073C: Dyer Quarry, Inc. (P.O. Box 188, Birdsboro, PA 19508) on August 9, 2016, for the installation and operation of two non-road diesel engines to power portable stone crushing equipment at the quarry and stone crushing facility in Robeson Township, Berks County.
Northcentral Region: Air Quality Program, 208 West Third Street, Williamsport, PA 17701.
Contact: Muhammad Q. Zaman, Program Manager, 570-327-3648.
GP3-49-00054A: Meckley's Limestone Products, Inc. (1543 State Route 225, Herndon, PA 17830) on August 1, 2016, to construct and operate one Terex Finlay jaw crusher, equipped with two hoppers/grizzly screens, one Extec double deck screen and seven conveyors pursuant to General Plan Approval and/or General Operating Permit For Portable Nonmetallic Mineral Processing Plants (BAQ-GPA/GP-3) at the East/Mandata Quarry located in Lower Mahanoy Township, Northumberland County.

GP9-49-00054A: Meckley's Limestone Products, Inc. (1543 State Route 225, Herndon, PA 17830) on August 1, 2016, to construct and operate one 350 bhp Scania DC09 diesel-fired engine and one 100 bhp Deutz BF4M2012 diesel-fired engine pursuant to the General Plan Approval and/or General Operating Permit for Diesel or No. 2 Fuel-fired Internal Combustion Engines (BAQ-GPA/GP-9) at the East/Mandata Quarry located in Lower Mahanoy Township, Northumberland County.

GP5-41-645: Regency Marcellus Gas Gathering LLC (101 West Third Street, Williamsport, PA 17701) on August 3, 2016, for authorization to continue operation of three (3) compressor engines, two (2) generator engines, two (2) dehydration processes including reboilers and enclosed flares, two (2) produced water storage tanks, as well as ancillary equipment such as valves pursuant to the General Plan Approval and/or General Operating Permit for Natural Gas Compressor and/or Processing Facilities (BAQ-GPA/GP-5) at their Ogontz West Compressor Site located in Cummings Township, Lycoming County.
GP5-41-646: Regency Marcellus Gas Gathering LLC (101 West Third Street, Williamsport, PA 17701) on August 3, 2016, for authorization to continue operation of
two (2) generator engines, two (2) dehydration processes including reboilers and enclosed flares, two (2) produced water storage tanks, as well as ancillary equipment such as valves pursuant to the General Plan Approval and/or General Operating Permit for Natural Gas Compressor and/or Processing Facilities (BAQ-GPA/GP-5) at their Ogontz East Compressor Site located in Cummings Township, Lycoming County.

GP5-17-475: Alliance Petroleum Corporation (4150 Belden Village Avenue, NW, Suite 410, Canton, OH 44718) on July 29, 2016, for new authorization due to change of ownership, which permits continued operation of $500-\mathrm{hp}$ compressor engine, the dehydration process, as well as ancillary equipment such as valves, flanges, connectors, etc. pursuant to the General Plan Approval and/or General Operating Permit for Natural Gas Compressor and/or Processing Facilities (BAQ-GPA/GP-5) at their Strong Compressor Station site located in Jordan Township, Clearfield County.

Plan Approvals Issued under the Air Pollution Control Act and regulations in 25 Pa. Code Chapter 127, Subchapter B relating to construction, modification and reactivation of air contamination sources and associated air cleaning devices.

Southeast Region: Air Quality Program, 2 East Main Street, Norristown, PA 19401.

Contact: Janine Tulloch-Reid, Facilities Permitting Chief-Telephone: 484-250-5920.

23-0119F: Sunoco Partners Market \& Terminial (100 Green Street, Marcus Hook, PA 19061-4800) on August 15, 2016, for increase the VOC limits for five (5) existing internal floating roof storage tanks for the processing of gaseous and light liquid organics at their Title V facility located in Marcus Hook Borough, Delaware County.
Northeast Region: Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18711-0790.

Contact: Raymond Kempa, New Source Review ChiefTelephone: 570-826-2507.

40-00131A: Downs Racing LP (1280 Highway 315, Wilkes-Barre, PA 18702) on August 3, 2016, for the installation and operation of boilers and generators at the site located in Plains Township., Luzerne County.

Southcentral Region: Air Quality Program, 909 Elmerton Avenue, Harrisburg, PA 17110.

Contact: Thomas Hanlon, Facilities Permitting Chief, 717-705-4862, Virendra Trivedi, New Source Review Chief, 717-705-4863, or William Weaver, Regional Air Quality Manager, 717-705-4702.

06-05112C: WBLF Acquisition Co., LLC/Western Berks Landfill (455 Poplar Neck Road, Birdsboro, PA 19508) on August 8, 2016, to increase the capacity of Enclosed Flare No. 1 (Control ID C03) from 800 scfm to $1,000 \mathrm{scfm}$ due to a blower change out at the landfill facility in Cumru Township, Berks County. Additionally, alternative operating parameters for the landfill gas collection system will be added, and conditions of the facility's Title V permit will be modified as follows: SG01 013 added verbiage to clarify that testing shall be conducted when the flare reaches $90 \%$ of its new capacity of $1,000 \mathrm{scfm}$; SG01 016 changed the frequency of leak checks from weekly to monthly; SG01 050 changed the stated design capacity of the flare to $1,000 \mathrm{scfm}$.

## Plan Approval Revisions Issued including Extensions, Minor Modifications and Transfers of Ownership under the Air Pollution Control Act and 25 Pa. Code §§ 127.13, 127.13a and 127.32.

Southeast Region: Air Quality Program, 2 East Main Street, Norristown, PA 19401.

Contact: James A. Beach, New Source Review ChiefTelephone: 484-250-5920.

15-0010D: ArcelorMittal Plate LLC (139 Modena Road, Coastesville, PA 19320-4036) on August 15, 2016, for the replacement of an $8 \mathrm{MMBTU} / \mathrm{hr}$ ladle pre-heat burner with a $12 \mathrm{MMBTU} / \mathrm{hr}$ ladle pre-heat burner in Coatesville City, Chester County.
Southcentral Region: Air Quality Program, 909 Elmerton Avenue, Harrisburg, PA 17110.

Contact: Thomas Hanlon, Facilities Permitting Chief, 717-705-4862, Virendra Trivedi, New Source Review Chief, 717-705-4863, or William Weaver, Regional Air Quality Manager, 717-705-4702.

06-05002L: Lehigh Cement Company, LLC (Evansville Cement Plant and Quarry), (537 Evansville Road, Fleetwood, Pennsylvania 19522-8541) on August 8, 2016, to install a mercury emission control systems at their facility in Maidencreek Township, Berks County. Plan Approval No. 06-05002L is for the installation of two (2) new mercury emission control systems on Kiln Nos. 1 \& 2 (Source Ids $121 \& 122$ ). The mercury emission control systems include dust shuttling and activated carbon injection (ACI) and are part of the facility's compliance strategy with regard to the February 12, 2013, amended 40 CFR Part 63, Subpart LLL-National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry mercury emission limit. The plan approval was extended.
Northcentral Region: Air Quality Program, 208 West Third Street, Williamsport, PA 17701.
Contact: Muhammad Q. Zaman, Environmental Program Manager—Telephone: 570-327-3648.

18-00011J: Croda, Inc. (8 Croda Way, Mill Hall, PA 17751) on August 11, 2016, to extend the authorization to operate the sources pursuant to the plan approval an additional 180 days from August 23, 2016, to February 19, 2017, at their facility located in Bald Eagle Township, Clinton County. The plan approval has been extended.
14-00002N: Graymont (PA), Inc. 965 East College Avenue, Pleasant Gap, PA 16823) on August 11, 2016, extended the authorization to February 10, 2017, to allow for temporary operation to facilitate the shake-down of all sources associated with the project in accordance with 25 Pa. Code § $127.12 \mathrm{~b}(\mathrm{~d})$. The construction (and operation) of the sources associated with the Kiln 8 project is located at their Pleasant Gap plant located in Spring Township, Centre County. The plan approval has been extended.

14-00002P: Graymont (PA), Inc. 965 East College Avenue, Pleasant Gap, PA 16823) on August 11, 2016, extended the authorization to February 10, 2017, to allow for temporary operation to facilitate the shake-down of all sources associated with the project in accordance with 25 Pa. Code § $127.12 \mathrm{~b}(\mathrm{~d})$. The construction (and operation) of the sources associated with the Kiln 8 project is located at their Pleasant Gap plant located in Spring Township, Centre County. The plan approval has been extended.

Southwest Region: Air Quality Program, 400 Waterfront Drive, Pittsburgh, PA 15222-4745.

Contact: Tom Joseph, P.E., Engineering ManagerTelephone: 412-442-4336.

11-00535A: Laurel Highlands Crematory at Harris Funeral Home, Inc. (500 Cherry Lane, Johnstown, PA 15904) Plan Approval extension effective on August 28, 2016, with expiration date of January 28, 2017, for continued temporary operation two (2) crematory incinerators at the above referenced facility located in Richland Township, Cambria County.

32-00059E: GenOn Northeast Management Company (121 Champion Way, Suite 200, Canonsburg, PA 15317) Extension effective August 28, 2016, to extend the period of temporary operation of the Unit 1 and 2 SCR systems and limestone/SO3 sorbent storage silos controlled by bin vent filters authorized under PA-32-00059E, until January 28, 2017, at the Conemaugh Power Plant located in West Wheatfield Township, Indiana County.

65-00596A: St. Clair Cemetery Association (944 St. Clair Way, Greensburg, PA 15601) on August 10, 2016, to begin the period of temporary operation of the for the additional human crematory authorized under this plan approval at the existing St. Clair Cemetery located in Hempfield Township, Westmoreland County. The new expiration date is January 28, 2017.

Title V Operating Permits Issued under the Air Pollution Control Act and 25 Pa. Code Chapter 127, Subchapter G.

Southcentral Region: Air Quality Program, 909 Elmerton Avenue, Harrisburg, PA 17110.

Contact: Thomas Hanlon, Facilities Permitting Chief, 717-705-4862, Virendra Trivedi, New Source Review Chief, 717-705-4863, or William Weaver, Regional Air Quality Manager, 717-705-4702.

22-05047: Dura Bond Pipe, LLC (2716 South Front Street, Steelton, PA 17113-3099) on August 8, 2016, for the pipe manufacturing facility located in Steelton Borough, Dauphin County. The Title V permit was renewed.

Northcentral Region: Air Quality Program, 208 West Third Street, Williamsport, PA 17701.

Contact: Muhammad Q. Zaman, Environmental Program Manager-Telephone: 570-327-3648.

19-00002: Foam Fabricators, LTD ( 7050 Columbia Boulevard, 17 Industrial Drive, Bloomsburg, PA 17815) on August 15, 2016, issued a Title V operating permit for their facility located in South Centre Township, Columbia County. The state only operating permit contains all applicable regulatory requirements including monitoring, recordkeeping and reporting conditions.

## Operating Permits for Non-Title V Facilities Issued under the Air Pollution Control Act and 25 Pa. Code Chapter 127, Subchapter F.

Southeast Region: Air Quality Program, 2 East Main Street, Norristown, PA 19401.

Contact: Janine Tulloch-Reid, Facilities Permitting Chief-Telephone: 484-250-5920.

09-00121: Philadelphia Macaroni Co. (40 Jacksonville Road, Warminster, PA 18974) on August 15, 2016, for
a non-Title V (State-Only), Natural Minor, Operating Permit Renewal. The facility is located in Warminster Township, Bucks County.

Southcentral Region: Air Quality Program, 909 Elmerton Avenue, Harrisburg, PA 17110.

Contact: Thomas Hanlon, Facilities Permitting Chief, 717-705-4862, Virendra Trivedi, New Source Review Chief, 717-705-4863, or William Weaver, Regional Air Quality Manager, 717-705-4702.

07-05034: PA Dept. of Military \& Veterans Affairs, Hollidaysburg Veterans Home (PO Box 319, Hollidaysburg, PA 16648-0319) on August 9, 2016, for the boiler and generators at the Hollidaysburg Veterans Home located in Allegheny Township, Blair County. The State-Only permit was renewed.

29-03007: Mellott Wood Preserving Co., Inc. (1398 Sawmill Road, PO Box 209, Needmore, PA 17238-0209) on August 11, 2016, for the wood preserving facility located in Belfast Township, Fulton County. The State-Only permit was renewed.
Northcentral Region: Air Quality Program, 208 West Third Street, Williamsport, PA 17701.
Contact: Muhammad Q. Zaman, Environmental Program Manager-Telephone: 570-327-3648.

17-00017: Rescar, Inc. (450 Osborn Avenue, DuBois, PA 15801-1854) issued on August 15, 2016, the renewal of a State Only (Synthetic Minor) Operating Permit SMOP 17-00017 for their DuBois Plant facility located in Sandy Township and the City of DuBois, Clearfield County. All applicable federal and state regulatory requirements including testing, monitoring, recordkeeping, reporting, and work practice conditions to assure compliance with the applicable requirements have been included in State Only (Synthetic Minor) Operating Permit SMOP 1700017.

59-00016: Pine Hills, Inc. (PO Box 62, Blossburg, PA 16912-0062) on August 4, 2016, issued a State Only Operating Permit for their facility located in Ward Township, Tioga County. The State Only Operating Permit contains all applicable regulatory requirements including monitoring, recordkeeping and reporting conditions.

Southwest Region: Air Quality Program, 400 Waterfront Drive, Pittsburgh, PA 15222-4745.

Contact: Tom Joseph, P.E., Engineering ManagerTelephone: 412-442-4336.
OP-11-00433: GapVax Inc. (575 Central Ave, Johnstown, PA 15902-2600) State-Only Operating Permit renewal issuance date effective August 9, 2016, for their GapVax painting facility located in City of Johnstown, Cambria County.

Operating Permit Revisions Issued including Administrative Amendments, Minor Modifications or Transfers of Ownership under the Air Pollution Control Act and 25 Pa. Code $\S$ 127.412, 127.450, 127.462 and 127.464.

Southeast Region: Air Quality Program, 2 East Main Street, Norristown, PA 19401.

Contact: Janine Tulloch-Reid, Facilities Permitting Chief-Telephone: 484-250-5920.

46-00044: Glasgow, Inc. (Church \& Flint Hill Roads, King of Prussia, PA 19406) on August 15, 2016, for an Administrative Amendment to State Only (Synthetic Minor) Operating Permit No. 46-00044 to modify the stack-
testing requirements for its McCoy facility, which is located in Upper Merion Township, Montgomery County.

## ACTIONS ON COAL AND NONCOAL MIINING ACTIVITY APPLICATIONS

Actions on applications under the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.1-1396.19a); the Noncoal Surface Mining Conservation and Reclamation Act (52 P.S. §§ 3301-3326); The Clean Streams Law; the Coal Refuse Disposal Control Act ( 52 P.S. §§ 30.5130.66); and The Bituminous Mine Subsidence and Land Conservation Act (52 P.S. §§ 1406.11406.20a). The final action on each application also constitutes action on the NPDES permit application and, if noted, the request for a Section 401 Water Quality Certification. Mining activity permits issued in response to applications will also address the application permitting requirements of the following statutes: the Air Quality Pollution Act (35 P.S. §§ 4001-4014); the Dam Safety and Encroachments Act (32 P.S. §§ 693.1693.27); and the Solid Waste Management Act (35 P.S. §§ 6018.101-6018.1002).

## Coal Permits Issued

California District Office: 25 Technology Drive, Coal Center, PA 15423, 724-769-1100.

30841317 and NPDES No. PA0213527. Consol Pennsylvania Coal Company LLC, ( 1000 Consol Energy Drive, Canonsburg, PA 15317). To revise the permit for the Enlow Fork Mine in East Finley and South Franklin Townships, Washington County, Richhill Township, Greene County and related NPDES permit to revise currently permitted underground and subsidence control acres to longwall mining. No additional discharges. The application was considered administratively complete on May 20, 2016. Application received February 23, 2016. Permit issued August 5, 2016.

63831302 and NPDES No. PA0213608. The Washington County Coal Company (formerly Eighty-Four Mining Company), (46226 National Road, St. Clairsville, OH 43950). To renew the permit for the Washington County Mine (formerly Mine No. 84) in Somerset, South Strabane, Amwell, North Bethlehem and West Bethlehem Townships, Washington County. No additional discharges. The application was considered administratively complete on January 15, 2013. Application received April 5, 2012. Permit issued August 10, 2016.

03981301 and NPDES No. PA0215198. Western Allegheny Energy, LLC, (301 Market Street, Kittanning, PA 16201). To renew the permit for the Parkwood Mine in Plumcreek and South Bend Townships, Armstrong County, Armstrong Township, Indiana County and related NPDES Permit. No additional discharges. The application was considered administratively complete on October 9, 2014. Application received January 24, 2014. Permit issued August 10, 2016.

Cambria District Mining Office: 286 Industrial Park Road, Ebensburg, PA 15931, 814-472-1900.

Permit No. 56120105 and NPDES No. PA0268968, Coal Loaders, Inc., 210 East Main Street, P.O. Box 556, Ligonier, PA 15658, transfer of an existing bituminous surface and auger mine from PBS Coals, Inc., 1576 Stoystown Road, Friedens, PA 15541, located in Somerset Township, Somerset County, affecting 44.3 acres. Re-
ceiving streams: East Branch Coxes Creek classified for the following use: trout stocked fishery. The first downstream potable water supply intake from the point of discharge is Site ID No. 623843 Milford Township Municipal Authority Primary Facility No. 683209, Rockwood Interconn Subfacility No. 926821. Application received: January 15, 2016. Permit issued: August 8, 2016.

Permit No. 32090104 and NPDES No. PA262897. Beth Contracting, Inc., 815 Rock Run Road, Glen Campbell, PA 15742, permit renewal for the continued operation and restoration of a bituminous surface mine in Banks Township, Indiana County affecting 23.2 acres. Receiving streams: unnamed tributaries to Cush Creek and Horton Run classified for the following use: cold water fishes. There are no potable water supply intakes within 10 miles downstream. Application received: September 22, 2015. Permit issued: August 11, 2016.

Permit No. 07100101 and NPDES No. PA0262943. Heritage Mining Co., Inc., P.O. Box 126, Cresson, PA 16630, permit renewal for the continued operation and restoration of a bituminous surface mine in Logan and Gallitzin Townships, Blair and Cambria Counties, affecting 116.0 acres. Receiving streams: Kittanning Run and Glenwhite Run to Burgoon Run to Beaverdam classified for the following use: cold water fishes. The first downstream potable water supply intake from the point of discharge is located approximately 2 miles downstream from the site where Glenwhite Run flows into the Altoona City Authority's Kittanning Reservoir. Application received: September 24, 2015. Permit issued: August 12, 2016.

Moshannon District Mining Office: 186 Enterprise Drive, Philipsburg, PA 16866, 814-342-8200.

17050109 and NPDES PA0256293. Forcey Coal, Inc. (475 Banion Road, Madera, PA 16661). Permit renewal for long term mine drainage treatment of a bituminous surface mine located in Bloom Township, Clearfield County affecting 119.9 acres. Receiving streams: Unnamed Tributary to Little Anderson Creek and Unnamed Tributary to Bell Run, classified for CWF. There are no potable water supply intakes within 10 miles downstream. Application received: April 7, 2016. Permit issued: August 4, 2016.

17070106 and NPDES PA0256528. Junior Coal Contracting, Inc. (2330 Six Mile Road, Philipsburg, PA 16866). Permit renewal for continued operation and restoration of a bituminous surface and auger mine located in Decatur Township, Clearfield County affecting 245.6 acres. Receiving stream(s): Unnamed Tributary to Big Run and Big Run classified for the following use(s): CWF. There are no potable water supply intakes within 10 miles downstream. Application received: November 30, 2015. Permit issued: August 4, 2016.

New Stanton District Office: 131 Broadview Road, New Stanton, PA 15672, 724-925-5500.
65100101 and NPDES Permit No. PA0251887. Britt Energies, Inc. (P.O. Box 515, Indiana, PA 15701). Permit revision for land use change from forestland to pastureland/land occasionally cut for hay to an existing bituminous surface mine, located in Derry Township, Westmoreland County, affecting 69.6 acres. Receiving streams: unnamed tributary to McGee Run and Conemaugh River. Application received June 27, 2012. Revision permit issued: August 9, 2016.

03060103 and NPDES Permit No. PA0250911. Bedrock Mines LP (111 Freeport Road, Pittsburgh, PA 15215). Permit revision for land use change to correct the
unmanaged natural habitat in trees to unmanaged natural habitat for an existing bituminous surface mine, located in Burrell Township, Armstrong County, affecting 75.3 acres. Receiving streams: unnamed tributaries to Crooked Creek. Application received: May 19, 2016. Revision permit issued: August 12, 2016.

Pottsville District Mining Office: 5 West Laurel Boulevard, Pottsville, PA 17901, 570-621-3118.

Permit No. 49860102R5. Farragut Anthracite Company, (122 Wilburton Road, Mt. Carmel, PA 17815), renewal of an existing anthracite surface mine, coal refuse reprocessing, refuse disposal and preparation plant operation in Coal and Zerbe Townships, Northumberland County affecting 814.6 acres, receiving stream: Shamokin Creek. Application received: March 8, 2016. Renewal issued: August 15, 2016.

Permit No. PAM113045R. Farragut Anthracite Company, (122 Wilburton Road, Mt. Carmel, PA 17815), renewal of General NPDES Stormwater Permit for stormwater discharges associated with mining activities on Surface Mining Permit No. 49860102 in Coal \& Zerbe Townships, Northumberland County, receiving stream: Shamokin Creek. Application received: March 8, 2016. Renewal issued: August 15, 2016.

## Noncoal Permits Issued

Pottsuille District Mining Office: 5 West Laurel Boulevard, Pottsuille, PA 17901, 570-621-3118.

Permit No. PAM116031. New Hope Crushed Stone \& Lime Co., (PO Box 248, New Hope, PA 18938), General NPDES Stormwater Permit for stormwater discharges associated with and to authorize the repair, reconstruction and restoration of Primrose Creek immediately upstream of the associated mining activities on Surface Mining Permit No. 7974SM3 in Solebury Township, Bucks County, receiving stream: Primrose Creek. Application received: April 20, 2016. Permit issued: August 10, 2016.

Permit No. 58160805 \& NPDES Permit No. PA0225631. Jason A. McCarey (UPS Store-BMP 161, 1143 Northern Blvd., Clarks Summit, PA 18411), Commencement, operation and restoration of a quarry operation and NPDES permit for discharge of treated mine drainage in Franklin Township, Susquehanna County affecting 5.0 acres, receiving stream: unnamed tributary to Beaver Creek to Salt Lick Creek Watershed. Application received: March 31, 2016. Permit issued: August 11, 2016.

## ACTIONS ON BLASTING ACTIVITY APPLICATIONS

Actions on applications under the Explosives Acts of 1937 and 1957 and 25 Pa. Code § 211.124. Blasting activity performed as part of a coal or noncoal mining activity will be regulated by the mining permit for that coal or noncoal mining activity.

Blasting Permits Issued
Pottsuille District Mining Office: 5 West Laurel Boulevard, Pottsuille, PA 17901, 570-621-3118.

Permit No. 36164151. Newville Construction Services, Inc., (408 Mohawk Road, Newville, PA 17241), construction blasting for commercial development at 160 Hershey Road in Mt. Joy Township, Lancaster County with an expiration date of August 3, 2017. Permit issued: August 11, 2016.

Permit No. 36164152. Keystone Blasting Service, (15 Hopeland Road, Lititz, PA 17543), construction blasting for Dan Burkholder Chicken House in Ephrata Township, Lancaster County with an expiration date of December 30, 2016. Permit issued: August 11, 2016.

Permit No. 36164153. Keystone Blasting Service, (15 Hopeland Road, Lititz, PA 17543), construction blasting for Aaron Beiler dwelling in Earl Township, Lancaster County with an expiration date of December 30, 2016. Permit issued: August 11, 2016.

Permit No. 36164154. Keystone Blasting Service, (15 Hopeland Road, Lititz, PA 17543), construction blasting for Ben King Dwelling in Manheim Township, Lancaster County with an expiration date of December 30, 2016. Permit issued: August 11, 2016.

Permit No. 36164155. Maine Drilling \& Blasting, Inc., (P.O. Box 1140, Gardiner, ME 04345), construction blasting for Traditions of America Lititz in Warwick Township, Lancaster County with an expiration date of August 4, 2017. Permit issued: August 11, 2016.

Permit No. 46164109. Rock Work, Inc., (1257 DeKalb Pike, Blue Bell, PA 19422), construction blasting for Fortuna Station in Hatfield Township, Montgomery County with an expiration date of December 31, 2016. Permit issued: August 11, 2016.

Permit No. 46164110. American Rock Mechanics, Inc., (7531 Chestnut Street, Zionsville, PA 18092), construction blasting for Berkley Court in Souderton Borough, Montgomery County with an expiration date of August 9, 2017. Permit issued: August 11, 2016.

Permit No. 58164108. Meshoppen Blasting, Inc., (P.O. Box 127, Meshoppen, PA 18630), construction blasting for Williams Potter Compressor Station \& Access Road in Brooklyn Township, Susquehanna County with an expiration date of August 1, 2017. Permit issued: August 11, 2016.

## FEDERAL WATER POLLUTION CONTROL ACT SECTION 401

The Department has taken the following actions on previously received permit applications, requests for Environmental Assessment approval and requests for Water Quality Certification under section 401 of the Federal Water Pollution Control Act (FWPCA) (33 U.S.C.A. § 1341).

Except as otherwise noted, the Department has granted 401 Water Quality Certification certifying that the construction and operation described will comply with sections 301-303, 306 and 307 of the FWPCA (33 U.S.C.A. §§ 1311-1313, 1316 and 1317) and that the construction will not violate applicable Federal and State water quality standards.

Persons aggrieved by an action may appeal that action to the Environmental Hearing Board (Board) under section 4 of the Environmental Hearing Board Act and 2 Pa.C.S. §§ $501-508$ and $701-704$. The appeal should be sent to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, PO Box 8457, Harrisburg, PA 17105-8457, (717) 787-3483. TDD users may contact the Board through the Pennsylvania AT\&T Relay Service, (800) 654-5984. Appeals must be filed with the Board within 30 days of publication of this notice in the Pennsylvania Bulletin unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and proce-
dure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in Braille or on audiotape from the Secretary to the Board at (717) 787-3483. This paragraph does not, in and of itself, create a right of appeal beyond that permitted by applicable statutes and decisional law.

For individuals who wish to challenge an action, the appeal must reach the Board within 30 days. A lawyer is not needed to file an appeal with the Board.

Important legal rights are at stake, however, so individuals should show this notice to a lawyer at once. Persons who cannot afford a lawyer may qualify for free pro bono representation. Call the Secretary to the Board at (717) 787-3483 for more information.

## Actions on applications for the following activities

 filed under the Dam Safety and Encroachments Act (32 P.S. §§ 693.1-693.27), section 302 of the Flood Plain Management Act (32 P.S. § 679.302) and The Clean Streams Law and Notice of Final Action for Certification under section 401 of the FWPCA.Permits, Environmental Assessments and 401 Water Quality Certifications Issued:

## WATER OBSTRUCTIONS AND ENCROACHMENTS

Southeast Region: Waterway and Wetlands Program Manager, 2 East Main Street, Norristown, PA 19401, Telephone 484-250-5900.

E23-529. Chester Township, 1150 Engle Street, Chester, PA 19013, Township of Chester, Delaware County, ACOE Philadelphia District.

To demolish 6 row homes, remove the debris and to restore the disturbed area along the floodplain of the Chester Creek (TSF) associated with the floodplain site restoration.

The site is located near the crossing of Powel Road and Gideon Road (Marcus Hook, PA USGS Quadrangle, Latitude: 39.8534; Longitude: -75.3966).

The issuance of this permit also constitutes approval of a Water Quality Certification under Section 401 of the Federal Water Pollution Control Act (33 U.S.C.A. § 1341(a)).

E09-993. Land Group Reality LLC, 347 New Street, Quakertown, PA 18851, Sellersville Borough, Bucks County, ACOE Philadelphia District.

To rehabilitate and maintain the existing remnant of an old mill race and the paved parking area associated with an old building of historic nature within the 100-year floodway of East Branch Perkiomen Creek (TSF, MF). The project will not impact the 100 year floodway elevation.

The site is located at about 100 feet northwest of Route 152 and West Park Ave. (Telford, PA USGS Quadrangle, Latitude 40.3562; Longitude -75.3063).

The issuance of this permit also constitutes approval of a Water Quality Certification under Section 401 of the Federal Water Pollution Control Act (33 U.S.C.A. § 1341(a)).

E15-824. Pennsylvania Turnpike Commission, Tredyffrin Township, Chester County; Upper Marion Township, Montgomery County, ACOE Philadelphia District.

To perform the following Water Obstruction and Encroachment activities associated with the reconstruction and widening of the Pennsylvania Turnpike (I-76) from Milepost 319.4, west of Howells Road Bridge in Tredyffrin Township, Chester County to Milepost 326.7, west of the Valley Forge Interchange in Upper Merion Township, Montgomery County. Upon completion of this project, the existing 4 -lane facility with a 10 -foot median and 12 -foot shoulders will be converted into a 6-lane facility with three 12 -foot travel lanes east and westbound, a 26 -foot median, and 12 -foot shoulders:

## Wetland Impacts

1. To permanently impact approximately 0.001 acre ( 30 SF) and to temporarily impact approximately 0.033 acre ( $1,466 \mathrm{SF}$ ) of wetland (PEM) to accommodate the construction of a stormwater pipe from station $1104+00$ to $1106+00$ (Wetland F).
2. To permanently impact approximately 0.002 acre ( 95 SF ) of wetland (PFO) to accommodate the placement of rip-rap at opening of culvert from station $1123+90$ to $1124+10$ (Wetland H).

## Stream Impacts

3. To permanently impact approximately 27 LF and 0.009 acre ( 396 SF ) in order to construct and maintain an outfall structure discharging into an unnamed tributary (UNT) to Valley Creek (EV) from station $1072+45$ to $1072+65$ to accommodate stormwater discharge from Vault 1A-2 (S-50).
4. To permanently impact approximately 10 LF and 0.001 acre ( 30 SF ) and to temporarily impact approximately 65 LF and 0.011 acre ( 498 SF ) of a UNT to Valley Creek (EV) in order to construct and maintain a new headwall from station $1146+64$ to $1147+21$ to avoid further permanent impact to the stream (S-48).
5. To permanently impact approximately 63 LF and 0.008 acre ( 360 SF ) and to temporarily impact approximately 13 LF and 0.001 acre ( 40 SF ) of a UNT to Valley Creek (EV) in order to construct and maintain retaining wall from station $1146+65$ to $1147+50$ to accommodate road widening (S-7).
6. To permanently impact approximately 157 LF and 0.041 acre $(1,774 \mathrm{SF})$ of a UNT to Valley Creek (EV) in order to extend and maintain a 72 -inch RCP culvert from station $1183+50$ to $1184+25(\mathrm{~S}-13)$.
7. To permanently impact approximately 101 LF and 0.017 acre ( 743 SF ) and to temporarily impact approximately 11 LF and 0.004 acre ( 194 SF ) of a UNT to Valley Creek (EV) in order to construct and maintain a sandbag cofferdam and new headwall construction with pipe replacement from station $1182+00$ to $1183+00$ to accommodate road widening (S-42).
8. To permanently impact approximately 89 LF and 0.023 acre ( 994 SF ) and to temporarily impact approximately 29 LF and 0.003 acre ( 139 SF ) of a UNT to Valley Creek (EV) in order to construct and maintain retaining headwall from station $1162+50$ to $1162+75$ to accommodate road widening (S-12).
9. To permanently impact approximately 40 LF and 0.017 acre ( 732 SF ) of a UNT to Valley Creek (EV) in order to provide for placement of fill from station $1196+$ 00 to $1198+00$ south of Basin 6B (S-15).
10. To permanently impact approximately 27 LF and 0.016 acre ( 717 SF ) and to temporarily impact approximately 9 LF and 0.007 acre ( 299 SF) of a UNT to Valley Creek (EV) in order to construct and maintain a sandbag
cofferdam and place rip-rap protection from station 1198 +75 to $1199+00$ to accommodate road widening (S-41).
11. To permanently impact approximately 57 LF and 0.020 acre ( 857 SF ) and to temporarily impact approximately 73 LF and 0.027 acre ( $1,192 \mathrm{SF}$ ) of a UNT to Valley Creek (EV) in order to construct and maintain a sandbag cofferdam and new headwall construction with pipe replacement from station $1224+00$ to $1224+50$ to accommodate road widening (S-36).
12. To permanently impact approximately 11 LF and 0.004 acre ( 163 SF ) and to temporarily impact approximately 218 LF and 0.061 acre ( $2,640 \mathrm{SF}$ ) of Valley Creek (EV) in order to rip-rap outlet protection at Basin 8 from station $1224+55$ to $1224+80(\mathrm{~S}-19)$.
13. To permanently impact approximately 9 LF and 0.002 acre ( 85 SF ) of a UNT to Valley Creek (EV) in order to construct and maintain a sandbag cofferdam and new headwall construction with pipe replacement at station $1251+00$ to accommodate road widening (S-22).
14. To permanently impact approximately 22 LF and 0.017 acre ( 734 SF ) and to temporarily impact approximately 6 LF and 0.004 acre ( 190 SF ) in the West Branch Trout Creek (WWF) in order to extend and maintain a 24 -foot by 10 -foot open bottom arch culvert at station $1355+85$ (S-27).
15. To permanently impact approximately 16 LF and 0.010 acre ( 431 SF ) and to temporarily impact approximately 14 LF and 0.007 acre ( 308 SF ) in the West Branch Trout Creek (WWF) in order to extend and maintain a 24 -foot by 10 -foot open bottom arch culvert at station $1355+85$ (S-30).
16. To permanently impact approximately 17 LF and 0.010 acre ( 452 SF ) and to temporarily impact approximately 5 LF and 0.004 acre ( 170 SF ) in the West Branch Trout Creek (WWF) in order to extend and maintain a 24 -foot by 10 -foot open bottom arch culvert at station $1366+01$ (S-28).
17. To permanently impact approximately 20 LF and 0.015 acre ( 650 SF ) and to temporarily impact approximately 16 LF and 0.012 acre ( 526 SF ) in the West Branch Trout Creek (WWF) in order to extend and maintain a 24 -foot by 10 -foot open bottom arch culvert at station $1366+01$ (S-29).

## Stormwater Channel Impacts

18. To permanently impact approximately 47 LF and 0.035 acre ( $1,511 \mathrm{SF}$ ) in order to construct and maintain a stormwater management pipe and replace the existing stormwater drainage ditch with the new pipe from station $1139+91$ to $1141+54$ (S-5).
19. To permanently impact approximately 35 LF and 0.003 acre ( 134 SF ) and to temporarily impact approximately 21 LF and 0.002 acre ( 81 SF ) in order to extend and maintain a 36 -inch RCP culvert at station $1146+65$ to accommodate an existing stormwater discharge due to road expansion (S-49).
20. To permanently impact approximately 23 LF and 0.008 acre ( 370 SF ) and to temporarily impact approximately 5 LF and 0.004 acre ( 168 SF ) in order to extend and maintain a 54 -inch RCP culvert from station $1151+$ 29 to $1152+29$ to accommodate an existing stormwater discharge due to road expansion (S-46).
21. To permanently impact approximately 14 LF and 0.010 acre ( 452 SF ) and to temporarily impact approximately 9 LF and 0.001 acre ( 50 SF ) in order to extend and maintain a 54 -inch RCP Culvert from station $1151+$

89 to $1152+59$ to accommodate an existing intermittent Natural Drainage Swale (UNT to Valley Creek) (S-47).
22. To permanently impact approximately 13 LF and 0.002 acre ( 101 SF ) and to temporarily impact approximately 25 LF and 0.007 acre ( 295 SF ) in order to extend and maintain a 54-inch RCP Culvert from station $1152+$ 59 to $1153+24$ to accommodate an existing intermittent Natural Drainage Swale (UNT to Valley Creek) (S-45).
23. To permanently impact approximately 48 LF and 0.017 acre ( 728 SF ) in order to regrade the stormwater swale from station $1153+10$ to $1157+00$ to accommodate the RCP 24 -inch culvert extension and mid slope retaining wall (S-10).
24. To permanently impact approximately 15 LF and 0.011 acre ( 480 SF ) in order to extend and maintain a 24 -inch RCP culvert at station $1153+34$ to accommodate an existing stormwater discharge due to road expansion (S-9).
25. To permanently impact approximately 310 LF and 0.084 acre (3,669 SF) of stormwater drainage swale (3,669 SF) to facilitate the road widening process from station $1159+00$ to $1162+10(\mathrm{~S}-44)$.
26. To permanently impact approximately 6 LF and 0.002 acre ( 100 SF ) of stormwater drainage swale to facilitate the expansion of 54 -inch RCP Culvert from station $1199+00$ to $1201+00(\mathrm{~S}-40)$.
27. To fill in approximately 200 LF of existing stormwater conveyance channel to accommodate BioRetention Basin 3 construction from station $1145+00$ to $1146+80$ (S-6).
28. To fill in approximately 225 LF of existing stormwater conveyance channel to accommodate BioRetention Basin 3A construction from station $1148+40$ to $1149+20$ (S-8).
29. To eliminate approximately 254 feet of stormwater drainage swale to accommodate the construction of a noise wall from $1159+50$ to $1161+96(\mathrm{~S}-11)$.
30. To fill in approximately 200 LF of existing stormwater conveyance channel to accommodate BioRetention Basin 6B construction from station $1194+50$ to $1196+00(\mathrm{~S}-14)$.
31. To fill in approximately $1,200 \mathrm{LF}$ of existing stormwater conveyance channel to accommodate earth berm construction from station $1202+00$ to $1216+00$ (S-39).
32. To fill in approximately 200 LF of existing stormwater conveyance channel to accommodate earth berm construction at station $1217+00$ (S-38).
33. To fill in approximately 375 LF of existing stormwater conveyance channel to accommodate Infiltration Basin 7 construction from station $1221+10$ to 1224 +70 (S-18).
34. To eliminate approximately 265 feet of stormwater drainage swale to accommodate the construction of the underground stormwater vault from station $1236+40$ to $1239+10$ (S-20).
35. To fill in approximately 100 LF of existing stormwater conveyance channel to accommodate Infiltration Basin 8 construction from station $1239+00$ to 1242 +65 (S-21).
36. To fill in approximately 530 LF of existing stormwater conveyance channel to accommodate Underground Vault 10C construction from station $1264+60$ to $1269+65$ (S-34).
37. To temporarily impact approximately 81 LF of existing stormwater gully to accommodate the temporary sediment trap from station $1287+00$ to $1287+50(\mathrm{~S}-25)$. Floodplain Impacts
38. To permanently impact approximately 0.5 acre ( $21,760 \mathrm{SF}$ ) and temporarily impact 0.175 acre ( $7,605 \mathrm{SF}$ ) within the floodplain of Valley Creek (EV) in order to construct and maintain a stormwater basin at station $1251+00$ (S-22).
39. To temporarily impact approximately 4.68 acres ( $203,800 \mathrm{SF}$ ) within the floodplain of a UNT to Valley Creek (EV) in order to construct and maintain a stormwater basin and stream mitigation from station $1224+55$ to $1224+80(\mathrm{~S}-19)$.
40. To permanently impact approximately 2.97 acres (129,500 SF) within the floodplain of a UNT to Valley Creek (EV) in order to extend a 12 foot by 7 foot arch culvert and place additional fill from station $1244+00$ to $1224+50$ (S-36)
41. To permanently impact approximately 0.084 acre (3,655 SF) within the floodplain of Valley Creek (EV) in order to enable fill for the roadway approaches for the bridge and construction of a stormwater basin construction at station $1251+00(\mathrm{~S}-33)$.
42. To permanently impact approximately 0.283 acre ( $12,335 \mathrm{SF}$ ) within the floodplain of a UNT to Valley Creek (EV) in order to extend a 24 -foot by 10 -foot arch culvert and place additional fill at station $1355+85$ (S-27).
43. To permanently impact approximately 0.387 acre ( $16,600 \mathrm{SF}$ ) within the floodplain of a UNT to Valley Creek (EV) in order to extend a 24 -foot by 10 -foot arch culvert and place additional fill at station $1355+85$ (S-30).
44. To permanently impact approximately 1.15 acre (49,860 SF) within the floodplain of a UNT to Valley Creek (EV) in order to extend a 24 -foot by 10 -foot arch culvert and place additional fill at station $1366+01$ (S-29).

## Floodway Impacts

45. To permanently impact approximately 15 LF and 0.002 acre ( 98 SF ) in order to construct and maintain an outfall structure discharging into the floodway of a UNT to Valley Creek (EV) from station $1113+65$ to $1113+90$ to accommodate stormwater discharge from Basin 2A (S-52).
46. To permanently impact approximately 20 LF and 0.012 acre ( 503 SF ) in order to construct and maintain an outfall structure discharging into the floodway of a UNT to Valley Creek (EV) from station $1072+45$ to $1072+65$ (S-50).
47. To permanently impact approximately 48 LF and 0.040 acre ( $1,760 \mathrm{SF}$ ) in order to regrade areas around the stream (UNT to Valley Creek) to accommodate the 36 -inch RCP culvert extension and the retaining walls proposed at the shoulder from station $1146+64$ to $1147+$ 21 (S-48).
48. To permanently impact approximately 155 LF and 0.421 acre $(18,351 \mathrm{SF})$ of floodway in order to reroute a part of a UNT to Valley Creek (EV) to enable the construction of Stormwater Basin No. 3 from station 1146 +65 to $1147+50$ (S-7).
49. To permanently impact approximately 72 LF and 0.119 acre ( $5,164 \mathrm{SF}$ ) and temporarily impact 15 LF and
0.015 acre ( 673 SF ) of the floodway of a UNT to Valley Creek (EV) in order to accommodate Stormwater Basin No. 4, an 18 -inch pipe discharge, and the 60 -inch RCP culvert extension from station $1162+50$ to $1162+75$ (S-12).
50. To permanently impact approximately 19 LF and 0.028 acre ( $1,234 \mathrm{SF}$ ) and temporarily impact 20 LF and 0.010 acre ( 441 SF ) of the floodway of a UNT to Valley Creek (EV) in order to install sand bag cofferdam to accommodate proposed retaining wall construction and 72 -inch RCP culvert extension from station $1182+00$ to $1183+00$ (S-42).
51. To permanently impact approximately 96 LF and 0.294 acre $(12,815 \mathrm{SF})$ of the floodway of a UNT to Valley Creek (EV) in order to install and maintain a 72-inch RCP culvert extension from station $1183+50$ to $1184+$ 25 (S-13).
52. To permanently impact approximately 14 LF and 0.029 acre ( $1,246 \mathrm{SF}$ ) and temporarily impact 25 LF and 0.084 acre ( $3,674 \mathrm{SF}$ ) of the floodway of a UNT to Valley Creek (EV) in order to install sand bag cofferdam to accommodate proposed retaining wall construction and 54 -inch RCP culvert extension from station $1198+75$ to $1199+00$ (S-41).
53. To permanently impact approximately 73 LF and 0.171 acre ( $7,446 \mathrm{SF}$ ) and temporarily impact 22 LF and 0.035 acre $(1,543 \mathrm{SF})$ of the floodway of a UNT to Valley Creek (EV) in order to extend and maintain a 12 -foot by 7 -foot open bottom arch culvert from station $1224+00$ to $1224+50$ (S-36).
54. To permanently impact approximately 579 LF and 0.202 acre ( $8,779 \mathrm{SF}$ ) and temporarily impact 11 LF and 0.034 acre $(1,468 \mathrm{SF})$ of the floodway of a UNT to Valley Creek (EV) in order to extend and maintain a 12 -foot by 7 -foot open bottom arch culvert from station $1224+55$ to $1224+80$ (S-19).
55. To permanently impact approximately 232 LF and 0.260 acre ( $11,308 \mathrm{SF}$ ) of the floodway of Valley Creek (EV) in order to replace bridge at station $1251+00$ (S-22).
56. To permanently impact approximately 138 LF and 0.176 acre ( $7,688 \mathrm{SF}$ ) and temporarily impact 92 LF and 0.010 acre ( 426 SF ) of the floodway of a UNT to Valley Creek (EV) in order to in order to place sandbag cofferdam and to regrade around retaining wall from station $1260+00$ to $1268+00(\mathrm{~S}-24)$.
57. To permanently impact approximately 129 LF and 0.082 acre ( $3,577 \mathrm{SF}$ ) and temporarily impact 12 LF and 0.005 acre ( 216 SF ) of the floodway of East Branch Trout Creek (WWF) in order to place sandbag cofferdam and to regrade around retaining wall at station $1355+85$ (S-30).
58. To permanently impact approximately 24 LF and 0.198 acre ( $8,643 \mathrm{SF}$ ) and temporarily impact 20 LF and 0.015 acre ( 658 SF ) of the floodway of East Branch Trout Creek (WWF) in order to place sandbag cofferdam and to regrade outside retaining wall RW-25 limits for the 24 -foot by 10 -foot arch culvert extension at station $1355+$ 85 (S-27).
59. To permanently impact approximately 40 LF and 0.258 acre ( $11,223 \mathrm{SF}$ ) and temporarily impact 20 LF and 0.030 acre ( $1,315 \mathrm{SF}$ ) of the floodway of East Branch Trout Creek (WWF) in order to place sand bag cofferdam and regrading for the retaining walls for the 24 -foot by 10 -foot arch culvert extension at station $1366+01$ (S-28).
60. To permanently impact approximately 45 LF and 0.119 acre ( $5,170 \mathrm{SF}$ ) and temporarily impact 50 LF and
0.178 acre ( $7,759 \mathrm{SF}$ ) of the floodway of East Branch Trout Creek (WWF) in order to install sand bag cofferdam to accommodate proposed retaining wall construction and 54 -inch RCP culvert extension at station $1366+01$ (S-29).
61. To permanently impact approximately 101 LF and 0.088 acre ( $3,840 \mathrm{SF}$ ) of the floodway of East Branch Trout Creek (WWF) in order to perform grading for Infiltration Basin 15-3 from station $1384+20$ to $1384+$ 65 (S-51).
The project will permanently impact approximately 0.003 acre of wetland, approximately 666 linear feet of stream, 4,060 linear feet of stormwater channels, 5.4 acres of floodplain and 2.5 acres of floodway. The project will temporarily impact approximately 0.033 acre of wetlands, approximately 459 linear feet of stream, 141 linear feet of stormwater channels, 4.9 acres of floodplain and 0.42 acre of floodway. The project widening commences west of Howells Road over the Turnpike in Tredyffrin Township, Chester County (Malvern, PA, USGS Quadrangle Latitude: $40^{\circ} 4^{\prime} 36^{\prime \prime}$, Longitude: $75^{\circ}-31^{\prime} 0^{\prime \prime}$ ) and runs east approximately six miles and ends at the Valley Forge Interchange in Upper Merion Township, Montgomery County (Valley Forge, PA, USGS Quadrangle Latitude: $40^{\circ} 5^{\prime} 24.6^{\prime \prime} \mathrm{N}$, Longitude: $75^{\circ} 24^{\prime} 5.2^{\prime \prime}$ ).

The issuance of this permit also constitutes approval of a Water Quality Certification under Section 401 of the Federal Water Pollution Control Act (33 U.S.C.A. § 1341(a)).

Northeast Regional Office, Waterways and Wetlands Program, 2 Public Square, Wilkes-Barre, PA 18701-1915, Telephone 570-826-2511.

E40-773. Pennsylvania Department of Transportation, Engineering District 4-0, 55 Keystone Industrial Park, Dunmore, PA 18512. Jackson Township, Luzerne County, Army Corps of Engineers Baltimore District.

To maintain the existing structure over East Fork Harveys Creek (HQ-CWF, MF) by replacing the superstructure resulting in an underclearance of 8.3'. To construct and maintain a stormwater outfall in the floodway of Harveys Creek (HQ-CWF,MF) consisting of a $18^{\prime \prime}$ reinforced concrete pipe, concrete flared end section and a riprap apron. Also to construct and maintain an 88 -foot long, various height concrete floodwall in the floodway of East Fork Harveys Creek (HQ-CWF, MF). The project is located at the intersection of SR 0029 and SR 1012 (Harveys Lake, PA Quadrangle Latitude: $41^{\circ} 15^{\prime} 10^{\prime \prime}$; Longitude:- $\left.75^{\circ} 59^{\prime} 56.4^{\prime \prime}\right)$.

E45-595 REOPEN. Pennsylvania Department of Transportation, Engineering District 5-0, 1002 Hamilton Boulevard, Allentown, PA 18101. Pocono Township, Monroe County, Army Corps of Engineers Philadelphia District.

To authorize the following water obstruction and encroachments associated with the Pennsylvania Department of Transportation SR 611, Section 04S reconstruction project:

1. To construct and maintain a channel change along 33 feet of a UNT to Scotrun (DC-16), (HW-CWF, MF), at STA $500+00$ right, with work consisting of widening, re-grading and reshaping the channel and floodway. The stream channel will be vegetated with a bottom width of 4 feet, and side slopes of $2: 1$.
2. To construct and maintain a stormwater outfall structure, at STA $499+50$ left, within the floodway of Scotrun (HW-CWF, MF), consisting of an 18-inch and 24 -inch reinforced concrete pipe, with an endwall and riprap apron.
3. To maintain an 8 -foot by 5 -foot box culvert at Sta. $508+35.47$ with work consisting of concrete repairs and scour protection in a tributary to Scott Run (HQ-CWF, MF).
4. To maintain an 18 -foot by 8 -foot box culvert at Sta. $515+15.82$ with work consisting of concrete repairs and scour protection in Scott Run (HQ-CWF, MF).
5. To construct and maintain a stormwater outfall structure, at STA $515+00$ left, within the floodway of Scotrun (HQ-CWF, MF), consisting of a 24 -inch reinforced concrete pipe, endwall and riprap apron.
6. To remove the existing structure and to construct and maintain a 107 -foot long stream enclosure of a UNT to Scotrun (HQ-CWF, MF), consisting of a 19 -inch by 30 -inch reinforced concrete culvert and a 24 -inch reinforced concrete culvert, endwall and riprap apron.
7. To construct and maintain a channel change along 133 feet of a UNT to Scotrun (DC-1) (HQ-CWF, MF), at STA521 + 50 right, with work consisting of widening, re-grading and reshaping the channel and floodway. The stream channel will be vegetated with a bottom width of 4 feet and side slopes of $2: 1$.
8. To maintain a bridge structure, at STA $530+50$, that includes the replacement of the bridge superstructure over Scotrun (HQ-CWF, MF) and temporarily impacting less than 0.01 acre of PEM wetlands. The bridge superstructure replacement will increase the underclearance to 8.05 -foot, a span of 14.1 -feet and a length of 95.7-feet.
9. To construct and maintain a stormwater outfall structure, at STA $533+50$ left, within the floodway of Scotrun (HQ-CWF, MF), consisting of a 14 -inch by 23 -inch reinforced concrete culvert, endwall and riprap apron.
10. To construct and maintain a stormwater outfall structure, at $535+25$ left, within the floodway of Scotrun (HQ-CWF, MF), consisting of an 18 -inch reinforced concrete culvert, endwall and riprap apron.
11. To construct and maintain a stormwater outfall structure, at $535+25$ left, within the floodway of Scotrun (HQ-CWF, MF), consisting of a 24 -inch reinforced concrete culvert, endwall and riprap apron.
12. To construct and maintain a stream relocation along 333 feet of a UNT to Scotrun (DC-10) (HQ-CWF, MF), at $576+50$ right, with work consisting of widening, re-grading and reshaping the channel and floodway. The stream channel will be vegetated with a bottom width of 4 feet and side slopes of 2:1.
13. To construct and maintain a stormwater outfall structure, at STA $537+00$ left, within the floodway of Scotrun (HQ-CWF, MF), consisting of a 24 -inch reinforced concrete culvert, endwall and riprap apron.
14. To construct and maintain a stormwater outfall structure, at STA $539+00$ left, within the floodway of Scotrun (HQ-CWF, MF), consisting of a 24 -inch reinforced concrete culvert, endwall and riprap apron.
15. To construct and maintain a stormwater outfall structure, at STA $582+50$ left, within the floodway of Scotrun (HQ-CWF, MF), consisting of a 14 -inch by 23 -inch reinforced concrete culvert, endwall and riprap apron.
16. To construct and maintain a stream relocation along 860 feet of a UNT to Scotrun (HQ-CWF, MF), from STA $596+50$ right to STA $588+50$ right, with work
consisting of widening, re-grading and reshaping the channel and floodway. The stream channel will be vegetated with a bottom width of 4 feet and side slopes 2:1. The stream relocation will result in a secondary impact of the UNT to Scotrun (DC-13) having a loss of 420 feet of stream channel. There will be a resulting GAIN of 440 feet of stream channel due to this stream relocation.
17. To construct and maintain a 205 -foot long stream enclosure of a UNT to Scotrun (DC-13) (HQ-CWF, MF), from STA $596+50$ right to STA $598+55$ right, consisting of a 205 foot long reinforced concrete culverts. The stream enclosure will consist of 3 separate culverts, a 53 -foot long, 24 -inch by 38 -inch culvert, a 85 -foot long, a 24 -inch diameter culvert, and a 67 -foot long, 19 -inch by 30 -inch culvert.
18. To construct and maintain a stormwater outfall structure, at approximate STA $582+50$ left, within the floodway of Scotrun (HQ-CWF, MF), consisting of a 19 -inch by 30 -inch reinforced concrete culvert, endwall and riprap apron.

The project begins at the intersection of SR 611 and Shine Hill Road and ends near the intersection of SR 611 and the Sanofi Pasture entrance (Mount Pocono, PA Quadrangle Latitude: $41^{\circ} 4^{\prime} 37^{\prime \prime}$; Longitude: $-75^{\circ} 19^{\prime} 31.7^{\prime \prime}$ ) in Pocono Township, Monroe County.

Southwest Region: Waterways and Wetlands Program Manager, 400 Waterfront Drive, Pittsburgh, PA 152224745.

E03-465, Cowanshannock Township, 4033 Second Street, P.O. Box 137, NuMine, PA 16244, Cowanshannock Township, Armstrong County, Pittsburgh ACOE District.

## Has been given consent to:

Remove the existing $21^{\prime}$ long, $20^{\prime}$ wide, 5.75' underclearance, single span, TR 720, Hoosicks single span bridge; construct and maintain a new $26.5^{\prime}$ long, $22^{\prime}$ wide, $6.5^{\prime}$ underclearance, $1^{\prime}$ depressed box culvert on the South Branch Cowanshannock Creek (WWF) with a drainage area of 3.2 square miles; fill and maintain 96 ft and 190 ft of two unnamed tributaries to South Branch Cowanshannock Creek (WWF) with drainage areas less than 100 acres and construct and maintain 99 ft and 190 ft long replacement channels; and temporarily impact 359 ft of stream for construction. The project is located south of the SR 85 and TR 720 intersection (Plumville, PA Quadrangle; $\mathrm{N}: 7.75$ inches; W: 4.5 inches; Latitude: $40^{\circ}$ $48^{\prime} 0^{\prime \prime}$; Longitude: $-79^{\circ} 13^{\prime} 56^{\prime \prime}$ ) in Cowanshannock Township, Armstrong County.

E32-513, PennDOT District 10-0, 2550 Oakland Avenue, Indiana, PA 15701, Pine Township, Indiana County, Pittsburgh ACOE District.

Has been given consent to:
Remove the existing $40^{\prime} 8^{\prime \prime}$ wide concrete slab bridge having a minimum underclearance of $4^{\prime}$ carrying SR 422 over Carney Run (CWF) with a drainage area of 0.94 square mile; construct and maintain a replacement $44^{\prime} 6^{\prime \prime}$ long, $14^{\prime}$ wide reinforced concrete box culvert with a minimum underclearance of $6^{\prime}$ in the same location. In addition, place and maintain fill in a de minimis 0.014 acre of EV PEM/PSS wetland, construct and maintain associated stormwater outfalls, and temporarily impact 0.12 acre of EV PEM wetland, 0.21 acre of EV-PSS and 0.04 acre of EV-PFO wetlands, and 120' of stream for the construction of temporary encroachments. EV-PSS and EV-PFO wetlands will be mitigated for on-site by restor-
ing and replanting impacted acreage ( 0.21 acre and 0.04 acre respectively) as a result of the temporary encroachments. This project is located approximately one mile east of the intersection of SR 422 and SR 403 in Pine Township, Indiana County (Strongstown, PA quadrangle; North 7.75 inches, West 5 inches; Latitude $40^{\circ} 32^{\prime} 34.98^{\prime \prime}$, Longitude $-78^{\circ} 54^{\prime} 37.29^{\prime \prime}$ ).
District Oil and Gas Operations: Eastern Oil \& Gas District, 208 West Third Street, Suite 101, Williamsport, $P A$.

E5929-052: HEP Tioga Gathering, LLC; 512 Towne Plaza, Suite 120 Route 6, Tunkhannock, PA 18657, Morris Township, Tioga County, ACOE Baltimore District.
To construct, operate, and maintain:

1) A 20 inch diameter steel gas pipeline, a 16 inch diameter HDPE water pipeline, and a temporary road crossing using timber mats impacting 98 linear feet of an unnamed tributary to Dixie Run (EV) (Morris, PA Quadrangle $41^{\circ} 33^{\prime} 39^{\prime \prime} \mathrm{N}, 77^{\circ} 18^{\prime} 57^{\prime \prime} \mathrm{W}$ );
2) A 20 inch diameter steel gas pipeline, a 16 inch diameter HDPE water pipeline, and a temporary road crossing using timber mats impacting 126 linear feet of an unnamed tributary to Dixie Run (EV) (Morris, PA Quadrangle $41^{\circ} 33^{\prime} 51^{\prime \prime} \mathrm{N}, 77^{\circ} 17^{\prime} 42^{\prime \prime} \mathrm{W}$ );
3) A 20 inch diameter steel gas pipeline, a 16 inch diameter HDPE water pipeline, and a temporary road crossing using timber mats impacting 92 linear feet of an unnamed tributary to Harrison Run (EV) (Morris, PA Quadrangle $41^{\circ} 34^{\prime} 01^{\prime \prime} \mathrm{N}, 77^{\circ} 17^{\prime} 41^{\prime \prime} \mathrm{W}$ );
4) A 20 inch diameter steel gas pipeline, a 16 inch diameter HDPE water pipeline, and a temporary road crossing using a multi-span bridge impacting 79 linear feet of Harrison Run (EV) (Morris, PA Quadrangle $41^{\circ} 34^{\prime} 01^{\prime \prime} \mathrm{N}, 77^{\circ} 16^{\prime} 52^{\prime \prime} \mathrm{W}$ );
5) A 20 inch diameter steel gas pipeline, a 16 inch diameter HDPE water pipeline, and a temporary road crossing using a timbermat bridge impacting 90 linear feet of an unnamed tributary to Custard Run (EV) (Morris, PA Quadrangle $41^{\circ} 34^{\prime} 44^{\prime \prime} \mathrm{N}, 77^{\circ} 15^{\prime} 47^{\prime \prime} \mathrm{W}$ );
6) A 20 inch diameter steel gas pipeline, a 16 inch diameter HDPE water pipeline, and a temporary road crossing using a timbermat bridge impacting 1,731 square feet of an exception value palustrine forested (EV-PFO) wetland (Morris, PA Quadrangle $41^{\circ} 35^{\prime} 12^{\prime \prime} \mathrm{N}, 77^{\circ} 15^{\prime} 14^{\prime \prime} \mathrm{W}$ );
7) A 20 inch diameter steel gas pipeline and a 16 inch diameter HDPE water pipeline impacting 42 linear feet of an unnamed tributary to Custard Run (EV) (Morris, PA Quadrangle $41^{\circ} 35^{\prime} 14^{\prime \prime} \mathrm{N}, 77^{\circ} 15^{\prime} 12^{\prime \prime} \mathrm{W}$ );
8) A 20 inch diameter steel gas pipeline, a 16 inch diameter HDPE water pipeline, and a temporary road
crossing using a multi-span bridge impacting 80 linear feet of Custard Run (EV) (Morris, PA Quadrangle $41^{\circ} 35^{\prime} 14^{\prime \prime} \mathrm{N}, 77^{\circ} 15^{\prime} 12^{\prime \prime} \mathrm{W}$ );
9) A 20 inch diameter steel gas pipeline, a 16 inch diameter HDPE water pipeline, and a temporary road crossing using a timbermat bridge impacting 1,619 square feet of an exception value palustrine emergent (EV-PFO) wetland (Morris, PA Quadrangle $41^{\circ} 35^{\prime} 20^{\prime \prime} \mathrm{N}, 77^{\circ} 15^{\prime} 17^{\prime \prime} \mathrm{W}$ );
10) A 20 inch diameter steel gas pipeline, a 16 inch diameter HDPE water pipeline, and a temporary road crossing using a timber mat bridge impacting 51 linear feet of an unnamed tributary to Custard Run (EV) (Morris, PA Quadrangle $41^{\circ} 35^{\prime} 17^{\prime \prime} \mathrm{N}, 77^{\circ} 15^{\prime} 10^{\prime \prime} \mathrm{W}$ ).

The project will result in 658 linear feet of temporary stream impacts, 1,619 square feet ( 0.04 acre) of temporary wetland impacts, and 1,731 square feet ( 0.04 acre) of permanent wetland impacts all for the purpose of installing a natural gas gathering line and associated access roads in Morris Township, Tioga County.

## EROSION AND SEDIMENT CONTROL

The following Erosion and Sediment Control permits have been issued.

Persons aggrieved by an action may appeal that action to the Environmental Hearing Board (Board) under section 4 of the Environmental Hearing Board Act and 2 Pa.C.S. §§ 501-508 and 701-704. The appeal should be sent to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, PO Box 8457, Harrisburg, PA 17105-8457, (717) 787-3483. TDD users may contact the Board through the Pennsylvania AT\&T Relay Service, (800) 654-5984. Appeals must be filed with the Board within 30 days of publication of this notice in the Pennsylvania Bulletin unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in Braille or on audiotape from the Secretary to the Board at (717) 787-3483. This paragraph does not, in and of itself, create a right of appeal beyond that permitted by applicable statutes and decisional law.

For individuals who wish to challenge an action, the appeal must reach the Board within 30 days. A lawyer is not needed to file an appeal with the Board.

Important legal rights are at stake, however, so individuals should show this notice to a lawyer at once. Persons who cannot afford a lawyer may qualify for free pro bono representation. Call the Secretary to the Board at (717) 787-3483 for more information.

Southwest Region: Waterways \& Wetlands Program Manager, 400 Waterfront Drive, Pittsburgh, PA 152224745.

|  |  |  | Receiving |  |
| :--- | :--- | :--- | :--- | :--- |
| ESCGP-2 No. | Address |  | Rame \& | County |

Northwest Region: Oil and Gas Program Manager, 230 Chestnut St., Meadville, PA 16335.
ESCGP-2 \# ESX16-019-0014—Kern Well Pad
Applicant RE Gas Development
Contact Mr. Michael Endler
Address 600 Cranberry Woods Drive, Suite 250
City Cranberry Township State PA Zip Code 16066
County Butler Township(s) Center
Receiving Stream(s) and Classification(s) Tributary 35010 to Little Connoquenessing Creek
ESCGP-2 \# ESX16-019-0006-Breakneck Creek Heater Station
Applicant ETC Northeast Pipeline, LLC
Contact Mr. Kevin Roberts
Address 7000 Stonewood Drive, Suite 351
City Wexford State PA Zip Code 15090
County Butler Township(s) Jackson
Receiving Stream(s) and Classification(s) Breakneck Creek: WWF; Unnamed Tributary to Breakneck Creek: WWF

Eastern Region: Oil \& Gas Management Program Manager, 208 West Third Street, Williamsport, PA 17701.
ESCGP-2 \# ESX10-113-0001(01)
Applicant Name Chesapeake Appalachia LLC
Contact Person Eric Haskins
Address 14 Chesapeake Lane
City, State, Zip Sayre, PA 18840
County Sullivan
Township(s) Cherry
Receiving Stream(s) and Classification(s) UNT to Little Loyalsock Ck (EV)
ESCGP-2 \# ESX29-015-16-0018
Applicant Name EOG Resources Inc
Contact Person Greg Shaffer
Address 2039 S Sixth St
City, State, Zip Indiana, PA 15701
County Bradford
Township(s) Springfield
Receiving Stream(s) and Classification(s) UNT to Mill Ck
(TSF, MF); Mill Ck (TSF, MF); UNT to Miller Run
(TSF); UNT to Buck Ck (TSF)
Seconfary-Sugar Creek

## STORAGE TANKS <br> SITE-SPECIFIC INSTALLATION PERMITS

The following Storage Tank Site-Specific Installation Permits, under the authority of the Storage Tank Spill Prevention Act ( 35 P.S. §§ 6021.304, 6021.504, 6021.1101-6021.1102) and under 25 Pa. Code Chapter 245, Subchapter C, have been issued by the Bureau of Environmental Cleanup and Brownfields, Director, PO Box 8763, Harrisburg, PA 17105-8763.

| SSIP | Applicant Name \& |  |  | Tank | Tank |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Permit No. | Address | County | Municipality | Type | Capacity |
| 16-25-006 | Alpont, LLC | Erie | City of Erie | 13 ASTs storing | 3,951,000 |
|  | 2797 Freedland Road |  | hazardous | gallons total |  |
|  | Hermitage, PA 16148 |  | substances |  |  |
|  | Attn: Lou Razzano |  |  |  |  |

## Availability of Technical Guidance

Technical guidance documents are available on the Department of Environmental Protection's (Department) web site at http://www.elibrary.dep.state.pa.us/dsweb/ HomePage. The "Technical Guidance Final Documents" heading is the link to a menu of the various Department bureaus where each bureau's final technical guidance documents are posted. The "Technical Guidance Draft Documents" heading is the link to the Department's draft technical guidance documents.

## Ordering Paper Copies of Department Technical Guidance

The Department encourages the use of the Internet to view and download technical guidance documents. When this option is not available, persons can order a paper copy of any of the Department's draft or final technical guidance documents by contacting the Department at (717) 787-8727.

In addition, bound copies of some of the Department's documents are available as Department publications. Check with the appropriate bureau for more information about the availability of a particular document as a publication.

## Changes to Technical Guidance Documents

Following is the current list of recent changes. Persons who have questions or comments about a particular document should call the contact person whose name, phone number and e-mail address is listed with each document.

## Final Technical Guidance Document: Minor Revision

DEP ID: 263-4500-601. Title: Closure Requirements for Underground Storage Tank Systems. Description: The purpose of this guidance is to establish minimum standards that must be met to comply with the closure requirements for regulated underground storage tanks. These procedures include closure notification, tank handling, waste management and disposal, site assessment, sampling requirements, analytical requirements, release reporting and recordkeeping.
This technical document is being revised to update Appendix E, Standards/Action Levels for Confirmatory Samples Collected at Closure Site Assessments, found on pages 54 and 55 . The numeric standards contained in the tables reflect current standards that were updated and published at 46 Pa .B. 5655 (August 27, 2016) as amendments to 25 Pa . Code Chapter 250 (relating to Land Recycling Program).

Contact: Questions regarding this technical guidance document should be directed to Randy Martin at (717) 772-5828 or ramartin@pa.gov.

Effective Date: August 27, 2016.

## Final Technical Guidance Document: Minor Revision

DEP ID: 263-4200-001. Title: Closure Requirements for Aboveground Storage Tank Systems. Description: The purpose of this guidance is to establish minimum standards that must be met to comply with the closure requirements for regulated large aboveground storage tanks. These procedures include closure notification, tank handling, waste management and disposal, site assessment, sampling requirements, analytical requirements, release reporting and recordkeeping.

This technical document is being revised to update Appendix E, Standards/Action Levels for Confirmatory Samples Collected at Closure Site Assessments, found on pages 47 and 48 . The numeric standards contained in the tables reflect current standards that were updated and published at 46 Pa. B. 5655 (August 27, 2016) as amendments to 25 Pa . Code Chapter 250.

Contact: Questions regarding this technical guidance document should be directed to Chad Clancy at (717) 772-5830 or cclancy@pa.gov.

Effective Date: August 27, 2016.

> PATRICK McDONNELL, Acting Secretary
[Pa.B. Doc. No. 16-1491. Filed for public inspection August 26, 2016, 9:00 a.m.]

## Bid Opportunity

OSM 11(4092)101.1, Abandoned Mine Reclamation Project, Blue Goose South, Barr Township, Cambria County. The principal items of work and approximate quantities include backfilling mine shaft 4,780 tons.

This bid issues on September 16, 2016, and bids will be opened on October 20, 2016, at 2 p.m. Bid documents, including drawings in PDF format and Auto-Cad Map 3D format, may be downloaded for free beginning on the issue date from the Department of Environmental Protection's web site at www.dep.pa.gov/ConstructionContracts. Bid documents and drawings can also be obtained upon payment of $\$ 22$, plus $\$ 13$ for postage, which includes sales tax, by calling (717) 787-7820. Auto-Cad Map 3D format drawings can also be purchased on a compact disc (CD) for an additional $\$ 5$ per CD. Money will not be refunded. This project is financed by the Federal government under the authority given it by the Surface Mining Control and Reclamation Act of 1977 (act) (30 U.S.C.A. §§ 1201-1328) and is subject to the act and to the Federal grant for this project. Contact the Construction Contracts Section at (717) 787-7820 for more information on this bid. Note this is a Small Construction Business Program bid opportunity.

## PATRICK McDONNELL, Acting Secretary

[Pa.B. Doc. No. 16-1492. Filed for public inspection August 26, 2016, 9:00 a.m.]

## Extension of NPDES General Permit for Point Source Discharges to Waters of the Commonwealth of Pennsylvania from the Application of Pesticides (PAG-15)

Under The Clean Streams Law (35 P.S. §§ 691.1691.1001), 25 Pa. Code §§ 92a.7(b) and (c) and 92a.54(b) (relating to duration of permits and continuation of expiring permits; and general permits) and section 1905-A of The Administrative Code of 1929 (71 P.S. § 510-5), the Department of Environmental Protection (Department) is, by this notice, extending for 12 months, the availability of the current General Permit for Point Source Discharges to Waters of the Commonwealth of Pennsylvania from the Application of Pesticides (PAG-15).

The existing PAG-15 in effect at this time will expire on October 28, 2016. By this notice, the Department is administratively extending the PAG-15 General Permit to October 28, 2017. Persons that are operating under the PAG-15 General Permit may continue to operate until October 28, 2017, or the expiration date of coverage identified on the permit coverage approval page, whichever is later. The Department is extending the availability of this permit to adequately complete preparation for the reissuance of the PAG-15 General Permit, and it is anticipated that the final PAG-15 General Permit update may be published prior to October 28, 2017. Any draft versions and public comment periods relating to the PAG-15 update will be published in the Pennsylvania Bulletin and the Department's web site at www.dep. pa.gov.

To access the current General Permit and related documents visit www.elibrary.dep.state.pa.us (select "Permit and Authorization Packages," then "Point and NonPoint Source Management," then "National Pollutant Discharge Elimination System-NPDES," then "General Permits," then "07 PAG-15-NPDES General Permit for Point Source Discharges to Waters of PA from Application of Pesticides").

Questions regarding PAG-15 General Permit should be directed to Dharmendra Kumar at dkumar@pa.gov or (717) 787-8184.

## PATRICK McDONNELL,

Acting Secretary
[Pa.B. Doc. No. 16-1493. Filed for public inspection August 26, 2016, 9:00 a.m.]

## Nutrient Credit Trading Program Certification Requests

The Department of Environmental Protection (Department) provides notice of the following certification requests that has been submitted under the Nutrient Credit Trading Program (Trading Program). See 25 Pa . Code § 96.8 (relating to use of offsets and tradable credits from pollution reduction activities in the Chesapeake Bay Watershed).

The following requests are being reviewed by the Department:

Applicant<br>Red Barn Consulting<br>(Chickies Creek Farm)

Lancaster County

Red Barn Consulting
(Lime Valley Farms)
Lancaster County

Red Barn Consulting
(Five Springs Farm LTD)
Lancaster County

## Pollutant Reduction Activity Description

This certification request is for nutrient reduction credits to be generated from the export of poultry litter out of the Chesapeake Bay Watershed.
This certification request is for nutrient reduction credits to be generated from the export of poultry litter out of the Chesapeake Bay Watershed.
This certification request is for nutrient reduction credits to be generated from the export of poultry litter out of the Chesapeake Bay Watershed.

The Department must receive comments on this application for credit certification no later than Thursday, September 15, 2016. Commentators are urged to submit electronic comments using the Department's eComment site at www.ahs.dep.pa.gov/eComment. Written comments can be submitted by e-mail to ecomment@pa.gov or by mail to the Policy Office, Department of Environmental Protection, Rachel Carson State Office Building, P.O. Box 2063, Harrisburg, PA 17105-2063. Use "Red Barn" as the subject line in written communication.

For further information about this certification request or the Nutrient Credit Trading Program contact Jay Braund, Bureau of Point and Non-Point Source Management, Department of Environmental Protection, P.O. Box 8774, Harrisburg, PA 17105-8774, (717) 772-5636, jbraund@pa.gov or visit the Department's web site at www.dep.pa.gov/Nutrient_Trading.

## PATRICK McDONNELL, <br> Acting Secretary

[Pa.B. Doc. No. 16-1494. Filed for public inspection August 26, 2016, 9:00 a.m.]

## Planning Grant Awards under Section 901 of the Municipal Waste Planning, Recycling and Waste Reduction Act, Act 101 of 1988

The Department of Environmental Protection (Department) announces the following grants to Luzerne County, Huntingdon County, Centre County and Clearfield County under section 901 of the Municipal Waste Planning, Recycling and Waste Reduction Act (act) (53 P.S. § 4000.901) and section 208 of the Small Business and Household Pollution Prevention Program Act (35 P.S. § 6029.208).

Planning grants are awarded to counties for $80 \%$ of approved costs for preparing municipal waste management plans as required by the act for carrying out related studies, surveys, investigations, inquiries, research and analysis, including those related to siting, environmental mediation, education programs on pollution prevention and household hazardous waste and providing technical assistance to small businesses for pollution prevention. Grants may be awarded for feasibility studies and project development for municipal waste processing or disposal facilities, except for facilities for the combustion of municipal waste that are not proposed to be operated for the recovery of energy. All grant awards are predicated on the receipt of recycling fees required by sections 701 and 702 of the act ( 53 P.S. §§ 4000.701 and 4000.702), and the availability of funds in the Recycling Fund.

Inquiries regarding the grant offerings should be directed to Mark Vottero, Department of Environmental Protection, Bureau of Waste Management, Division of Waste Minimization and Planning, P.O. Box 8472, Harrisburg, PA 17105-8472 at (717) 772-5719 or mvottero@pa.gov.

## Act 101, Section 901 Planning Grant

| Region | County |
| :--- | :--- |
| Northeast | Luzerne |
| Southcentral | Huntingdon |
| Northcentral | Centre |
| Northcentral | Clearfield |


| Applicant | Project | Grant |
| :--- | :--- | :--- |
| Luzerne County | HHW Education | $\$ 38,680$ |
| Huntingdon County | HHW Education | $\$ 30,506$ |
| Centre County | HHW Education | $\$ 75,000$ |
| Clearfield County | HHW Education | $\$ 18,660$ |

[Pa.B. Doc. No. 16-1495. Filed for public inspection August 26, 2016, 9:00 a.m.]

# DEPARTMENT OF HEALTH 

## Advisory Health Board Meeting

The Department of Health (Department) gives notice that the Advisory Health Board will meet on Tuesday, September 6, 2016, from 9 a.m. to 9:45 a.m. in Room 907, Health and Welfare Building, 625 Forster Street, Harrisburg, PA 17120 to review and approve final amendments to the school immunization regulations.

For additional information contact Erik Huet, Executive Policy Specialist, Office of Policy at (717) 547-3311.

Persons with a disability who wish to obtain a copy of the request or provide comments to the Department, or both, and require an auxiliary aid, service or other accommodation to do so should contact the Division at the address or phone number listed previously or for speech and/or hearing impaired persons V/TT (717) 783-6514 or the Pennsylvania AT\&T Relay Service (800) 654-5984 (TT).
This meeting is subject to cancellation without notice. KAREN M. MURPHY, PhD, RN, Secretary
[Pa.B. Doc. No. 16-1496. Filed for public inspection August 26, 2016, 9:00 a.m.]

## Ambulatory Surgical Facilities; Requests for Exceptions

The following ambulatory surgical facility (ASF) has filed a request for exception under 28 Pa . Code § 51.33 (relating to requests for exceptions) with the Department of Health (Department), which has authority to license ASFs under the Health Care Facilities Act (35 P.S. §§ 448.101-448.904b). The following request for exception relates to regulations governing ASF licensure in 28 Pa . Code Chapters 51 and $551-571$ (relating to general information; and ambulatory surgical facilities).

## Facility Name

Heritage Valley Surgery Center

## Regulation

28 Pa . Code § 555.2 (relating to medical staff membership)

The request previously listed is on file with the Department. Persons may receive a copy of a request for exception by requesting a copy from the Department of Health, Division of Acute and Ambulatory Care, Room 532, Health and Welfare Building, Harrisburg, PA 17120, (717) 783-8980, fax (717) 772-2163, ra-paexcept@pa.gov. Persons who wish to comment on an exception request may do so by sending a letter by mail, e-mail or facsimile to the Division at the address listed previously. Comments received by the Department within 10 days after the date of publication of this notice will be reviewed by the Department before it decides whether to approve or disapprove the request for exception.
Persons with a disability who wish to obtain a copy of a request and/or provide comments to the Department and require an auxiliary aid, service or other accommodation to do so should contact the Director, Division of Acute and Ambulatory Care at (717) 783-8980, for speech and/or hearing impaired persons V/TT (717) 783-6154, or the Pennsylvania AT\&T Relay Service (800) 654-5984 (TT).

KAREN M. MURPHY, PhD, RN, Secretary

> [Pa.B. Doc. No. 16-1497. Filed for public inspection August 26, 2016, 9:00 a.m.]

## Decisions on Requests for Exception to Health Care Facility Regulations

Under 28 Pa Code § 51.33 (relating to requests for exceptions), effective June 6, 1998, the Department of Health (Department) has published in the Pennsylvania Bulletin all requests by entities licensed under the Health Care Facilities Act (35 P.S. §§ 448.101-448.904b) for exceptions to regulations in 28 Pa. Code Part IV, Subparts B-G.
Section $51.33(\mathrm{~d})$ of 28 Pa . Code provides that the Department will publish notice of all approved exceptions on a periodic basis. The Department has determined that it will publish notice of all exceptions, both approved and denied. The following list contains the decisions made on exception requests published in the Pennsylvania Bulletin from April 1, 2016, through June 30, 2016. Publications of decisions on exception requests will appear on a quarterly basis.
Requests for additional information on the exception request and the Department's decision should be made to the relevant division of the Department. Inquiries regarding hospitals, abortion facilities and ambulatory surgical facilities shall be addressed to Garrison E. Gladfelter, Jr., Director, Division of Acute and Ambulatory Care, Room 532, Health and Welfare Building, Harrisburg, PA 17120, (717) 783-8980. Inquiries regarding long-term care facilities shall be addressed to Susan Williamson, Director, Division of Nursing Care Facilities, Room 528, Health and Welfare Building, Harrisburg, PA 17120, (717) 787-1816.

## Facility Name

Surgical Institute of Reading
Surgical Institute of Reading
Surgical Institute of Reading
Surgical Institute of Reading

## Hospitals

| 28 Pa. Code |  | Request <br> Regulation | Relating to |
| :--- | :--- | :--- | :--- | | Published |
| :--- | :--- | :--- |$\quad$ Decision



| 28 Pa. Code |  | Request |  |
| :---: | :---: | :---: | :---: |
| Regulation | Relating to | Published | Decision |
| § 103.43 | Insurance (fiscal control) | 06/04/2016 | not nec. |
| § 103.44 | Purchasing and inventory (fiscal control) | 06/04/2016 | not nec. |
| § 103.45 | Audit of financial operations (fiscal control) | 06/04/2016 | not nec. |
| § 103.46 | Equipment and supplies (fiscal control) | 06/04/2016 | not nec. |
| § 105.1 | Principal | 04/09/2016 | withdrawn |
| § 107.11 | Medical staff bylaws, rules and regulations (principle) | 06/04/2016 | not nec. |
| § 107.12 | Content of bylaws, rules and regulations | 06/04/2016 | not nec. |
| § 107.2 | Medical staff membership | 06/11/2016 | granted |
| § 107.2 | Medical staff membership | 06/11/2016 | granted |
| § 107.26(b)(2) | Organization of the medical staff (additional committees) | 06/11/2016 | granted |
| § 107.61 | Written orders (medical staff) | 05/21/2016 | granted |
| § 107.61 | Written orders (medical staff) | 04/23/2016 | granted |
| § 107.61 | Written orders (medical staff) | 05/21/2016 | granted |
| § 107.61 | Written orders (medical staff) | 05/21/2016 | granted |
| § 107.61 | Written orders (medical staff) | 05/21/2016 | granted |
| § 107.61 | Written orders (medical staff) | 05/28/2016 | granted |
| § 107.61 | Written orders (medical staff) | 06/11/2016 | granted |
| § 107.61 | Written orders (medical staff) | 05/21/2016 | granted |
| § 107.62(a) | Oral orders | 04/23/2016 | granted |
| § 107.62(a) | Oral orders | 04/09/2016 | granted |
| § 107.62(b) | Medical staff by-laws | 04/23/2016 | granted |
| § 107.62(b) | Medical staff by-laws | 04/09/2016 | granted |
| § 107.64 | Administration of drugs | 04/09/2016 | granted |
| § 123.25(2) | Control of anesthetic explosion hazards | 04/09/2016 | granted |
| § 127.32 | Written orders (radiology orders) | 04/09/2016 | not nec. |
| § 127.32 | Written orders (radiology orders) | 04/09/2016 | not nec. |
| § 127.32 | Written orders (radiology orders) | 04/09/2016 | not nec. |
| § 138.15 | High-risk cardiac catheterizations | 06/11/2016 | granted |
| § 138.15 | High-risk cardiac catheterizations | 04/16/2016 | granted |
| § 138.15 | High-risk cardiac catheterizations | 05/21/2016 | withdrawn |
| § 138.18(b) | EPS studies | 03/05/2016 | granted |
| § 143.5 | Medical supervision of podiatric patients | 04/30/2016 | granted |
| § 153.1 | 2.1-2.2.5.1 Hand-washing stations in the patient rooms (location) | 05/21/2016 | granted |
| § 153.1 | 2.1-2.4.3.1(2)(a) General (location) | 06/11/2016 | granted |
| § 153.1 | 2.1-2.4.3.9(1)(b) Special design elements (architectural details) | 06/11/2016 | granted |


| Facility Name | 28 Pa. Code Regulation |
| :---: | :---: |
| Penn Highlands DuBois, 100 Hospital Avenue | § 153.1 |
| Children's Hospital of Philadelphia and Children's Seashore House of CHOP | § 153.1 |
| Geisinger Community Medical Center | § 153.1 |
| UPMC Hamot | § 153.1 |
| Holy Spirit Hospital | § 153.1 |
| Temple University Hospital | § 153.1 |
| Main Line Hospital Lankenau Medical Center | § 153.1 |
| Jameson Memorial Hospital | § 153.1 |
| UPMC East | § 153.1 |
| UPMC East | § 153.1 |
| Hanover Hospital | § 153.1 |
| Saint Vincent Hospital | § 153.1 |
| Heritage Valley Sewickley | § 153.1 |
| Magee-Womens Hospital of UPMC Health System | § 153.1 |
| Jameson Memorial Hospital | § 153.1 |
| Lancaster Regional Medical Center | § 153.1 |
| UPMC Altoona | § 153.1 |
| Williamsport Regional Medical Center | § 153.1 |
| Children's Hospital of Philadelphia and Children's Seashore House of CHOP | § 153.1 |
| Children's Hospital of Philadelphia and Children's Seashore House of CHOP | § 153.1 |
| Penn Highlands DuBois, 177 Washington Street, St. Marys | § 153.1 |
| Thomas Jefferson University Hospital, GI | § 153.1 |
| Thomas Jefferson University Hospital, Jefferson Endocrinology | § 153.1 |
| Thomas Jefferson University Hospital, Jefferson Internal Medicine | § 153.1 |
| Penn Highlands DuBois, 177 Washington Street, St. Marys | § 153.1 |
| Milton S. Hershey Medical Center | § 153.1 |
| Thomas Jefferson University Hospital, Jefferson Endocrinology | § 153.1 |
| Thomas Jefferson University Hospital, Jefferson Endocrinology | § 153.1 |


| Relating to | Request <br> Published | Decision |
| :---: | :---: | :---: |
| 2.1-7.2.2.5(1) Windows in patient rooms | 05/21/2016 | granted |
| 2.1-8.5.3.2 Size (TDRs) | 04/09/2016 | not nec. |
| 2.2-2.11.9.2(1) Space requirements (area (cesarean delivery rooms)) | 04/02/2016 | granted |
| 2.2-2.5.2.2(1) Space requirements (area) | 05/21/2016 | granted |
| 2.2-2.6.7.1(2) Staff lounge facilities | 06/11/2016 | granted |
| 2.2-3.1.3.3(3)(h) Reception and triage areas | 05/21/2016 | granted |
| 2.2-3.1.3.6(10) Treatment rooms or areas (fast track) | 04/16/2016 | granted |
| 2.2-3.1.3.6(5)(a) Treatment rooms for bariatric patients | 04/16/2016 | granted |
| 2.2-3.12.2.6 Patient toilet rooms | 05/21/2016 | granted |
| 2.2-3.12.6.7 Nourishment area or rooms | 05/21/2016 | granted |
| 2.2-3.4.2.1(1)(b) CT scanner rooms | 03/12/2016 | granted |
| 2.2-3.4.3.3(3) Radiography (fluoroscopy rooms) | 06/18/2016 | granted |
| 2.2-3.4.5.4 Patient toilet rooms | 04/09/2016 | granted |
| 2.2-3.4.5.4 Patient toilet rooms | 05/21/2016 | granted |
| 2.2-3.4.5.4(1) Patient toilet room | 04/16/2016 | granted |
| 2.2-3.5.3.1(2) General (location) | 04/23/2016 | granted |
| 2.2-3.5.3.1(2-4) Pre-procedure and recovery patient care areas (general) | 03/12/2016 | granted |
| 2.2-3.6.3.6(1) Support areas for PET facilities | 02/13/2016 | granted |
| 2.7-2.2.2.2(2) Space requirements (clearances) | 04/09/2016 | granted |
| 2.7-2.2.2.6 Patient toilet rooms | 04/09/2016 | granted |
| 3.1-3.2.2.2(1) Space requirements (area) | 03/12/2016 | granted |
| 3.1-3.2.2.2(1) Space requirements (area) | 05/21/2016 | granted |
| 3.1-3.2.2.2(1) Space requirements (area) | 05/21/2016 | granted |
| 3.1-3.2.2.2(1) Space requirements (area) | 05/21/2016 | granted |
| 3.1-3.2.2.2(2) Space requirements (clearances) | 03/12/2016 | granted |
| 3.1-3.6.5.1 Hand-washing stations (location) | 05/21/2016 | granted |
| 3.1-6.2.4.1 Public toilets | 05/28/2016 | granted |
| 3.1-6.2.4.1 Public toilets | 05/28/2016 | granted |


| Facility Name |  | Pa. Code egulation | Relating to | Request Published | Decision |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Milton S. Hershey Medical Center | § | 153.1 | 3.6-3.2.5.1 Hand-washing stations | 05/21/2016 | granted |
| Thomas Jefferson University Hospital, Family Medicine, 833 Chestnut Street | § | 153.1 | 3.8-3.1.2.1 Space requirements (area) | 06/04/2016 | granted |
| Thomas Jefferson University Hospital, Medical Oncology, 925 Chestnut Street, 3rd and 4th Floors | § | 153.1 | 3.8-3.1.2.1 Space requirements (area) | 06/11/2016 | granted |
| Thomas Jefferson University Hospital, Neurology/Neuroscience | § | 153.1 | 3.8-3.1.2.1 Space requirements (area) | 06/04/2016 | granted |
| Thomas Jefferson University Hospital, Rheumatology, 211 South 9th Street | § | 153.1 | 3.8-3.1.2.1 Space requirements (area) | 06/11/2016 | granted |
| Thomas Jefferson University Hospital, Internal Medicine, 833 Chestnut Street | § | 153.1 | 3.8-3.1.2.1 Space requirements (area) | 06/18/2016 | granted |
| UPMC Altoona | § | 153.1 | 4-6.7.1 Air distribution systemsgeneral | 03/12/2016 | granted |
| Jameson Memorial Hospital | § | 153.1 | Table 7.1 Design parameters | 04/16/2016 | granted |
| Albert Einstein Medical Center | § | 153.1 | Table 7.1 Design parameterscritical and intensive care | 04/09/2016 | granted |
| Ambulatory Surgical Facilities |  |  |  |  |  |
| Western Pa. Surgery Center | § | 51.3 | Notification (general provisions) | 06/18/2016 | not nec. |
| Allegheny Health Network Surgery Center-Bethel Park, LLC | § | 551.21 | Criteria for ambulatory surgery (re: general surgeon) | 05/21/2016 | granted |
| Langhorne Access Center | § | 551.21 | Criteria for ambulatory surgery | 04/09/2016 | granted/ denied in part |
| Monroeville ASC, LLC | § | 551.21 | Criteria for ambulatory surgery | 02/13/2016 | granted |
| Peter's Township Surgery Center, LLC | § | 551.21 | Criteria for ambulatory surgery | 02/13/2016 | granted |
| Excela Health Norwin Medical Commons | § | 551.21(d) | Criteria for ambulatory surgery | 03/12/2016 | granted/ <br> denied in part |
| The Surgery Center at Benbrook | § | 551.21(d) | Criteria for ambulatory surgery | 03/26/2016 | granted |
| Chambersburg Endoscopy Center, LLC | § | 551.3(ii) | Class B definitions (PS III patients) | 04/23/2016 | granted |
| Pinnacle Health Pain Management Center West | § | 551.3(ii) | Class B definitions (PS III patients) | 05/21/2016 | granted |
| Saint Vincent Endoscopy Center | § | 551.3(ii) | Class B definitions (PS III patients) | 05/28/2016 | denied |
| Einstein Montgomery Surgery Center | § | 553.1 | Principle (governing body) | 05/28/2016 | denied |
| Reading Ambulatory Surgery Center, LP | § | 553.3 | Governing body responsibilities | 05/21/2016 | granted |
| McCandless Endoscopy Center, LLC | § | 553.31 | Administrative responsibilities | 03/12/2016 | granted |
| Progressive Surgical Institute Abe, Inc. | § | 553.31 | Administrative responsibilities | 03/12/2016 | granted |
| Reading Ambulatory Surgery Center, LP | § | 553.31 | Administrative responsibilities | 05/21/2016 | granted |
| Penn Medicine at Radnor Endoscopy Facility | § | 553.31(a) | Administrative responsibilities | 06/04/2016 | denied |
| Einstein Montgomery Surgery Center | § | 555.1 | Principle (medical staff) | 05/28/2016 | granted |


| Facility Name | 28 Pa. Code Regulation |
| :---: | :---: |
| Reading Ambulatory Surgery Center, LP | § 555.3 |
| Chambersburg Endoscopy Center, LLC | § 555.31(a) |
| Einstein Montgomery Surgery Center | § 557.1 |
| Einstein Montgomery Surgery Center | §557.2 |
| Reading Ambulatory Surgery Center, LP | § 557.2 |
| Einstein Montgomery Surgery Center | § 557.4 |
| Einstein Montgomery Surgery Center | § 559.1 |
| Einstein Montgomery Surgery Center | § 559.2 |
| Einstein Montgomery Surgery Center | § 561.2 |
| Einstein Montgomery Surgery Center | § 563.2 |
| Einstein Montgomery Surgery Center | § 565.1 |
| Einstein Montgomery Surgery Center | § 565.12 |
| Einstein Montgomery Surgery Center | § 567.2 |
| Reading Ambulatory Surgery Center, LP | § 567.2 |
| Einstein Montgomery Surgery Center | § 567.22 |
| Eyes of York Surgical Center, LLC | § 567.43 |
| Children's Hospital of Philadelphia, Brandywine Valley Specialty Care \& Surgery Center | § 567.53 |
| Einstein Montgomery Surgery Center | § 569.1 |
| Einstein Montgomery Surgery Center | § 569.11 |
| Einstein Montgomery Surgery Center | § 569.13 |
| Einstein Montgomery Surgery Center | § 569.14 |
| Einstein Montgomery Surgery Center | § 569.32 |
| Allegheny Health Network Surgery Center-Bethel Park, LLC | § 569.35(7) |
| Einstein Montgomery Surgery Center | § 569.35(7) |
| Einstein Montgomery Surgery Center | § 569.37 |
| Einstein Montgomery Surgery Center | § 571.1 |
| Einstein Montgomery Surgery Center | § 571.1 |


| Relating to | Request Published | Decision |
| :---: | :---: | :---: |
| Requirements for membership and privileges | 05/21/2016 | granted |
| Anesthesia services (propofol) | 04/23/2016 | granted |
| Policy (quality assurance and improvement) | 05/28/2016 | denied |
| Plan (quality assurance and improvement) | 05/28/2016 | granted |
| Plan (quality assurance and improvement) | 06/04/2016 | granted |
| Quality assurance and improvement committee | 05/28/2016 | granted |
| Nursing department | 05/28/2016 | denied |
| Director of nursing | 05/28/2016 | not nec. |
| Pharmaceutical service | 05/28/2016 | denied |
| Organization and staffing (medical records) | 05/28/2016 | granted |
| Principle (laboratory services) | 05/28/2016 | withdrawn |
| Radiology service policy | 05/28/2016 | denied |
| Committee responsibilities | 05/28/2016 | granted |
| Committee responsibilities | 05/21/2016 | granted |
| Linen service policy | 05/28/2016 | denied |
| Ventilation system | 04/23/2016 | not nec. |
| Sterilization controls | 04/09/2016 | granted |
| Principle (general provisions-fire and safety services) | 05/28/2016 | denied |
| Firefighting service (internal disaster plan) | 05/28/2016 | denied |
| Testing fire warning systems | 05/28/2016 | denied |
| Internal disaster and fire plans | 05/28/2016 | denied |
| Fire inspection | 05/28/2016 | granted |
| General safety precautions | 05/21/2016 | granted |
| General safety precautions | 05/28/2016 | granted |
| Report of emergencies causing interruption of service | 05/28/2016 | denied |
| 3.7-3.8.1.1 Patient changing and preparation area (space) | 05/28/2016 | granted |
| 3.7-3.4.2.1 Pre- and postoperative patient care areas (general) | 05/28/2016 | granted |


|  | 28 Pa. Code |  | Request <br> Facility Name | Published |
| :--- | :--- | :--- | :--- | :--- | Decision

NOTICES

| Facility Name | 28 Pa. Code <br> Regulation | Relating to | Request <br> Published | Decision |
| :--- | :--- | :--- | :--- | :--- |
| Scottdale Healthcare and <br> Rehabilitation Center | $\S 211.9(\mathrm{~g})$ | Pharmacy services | $04 / 23 / 2016$ | granted |
| St. Martha Center for |  |  |  |  |
| Rehabilitation \& Healthcare | $\S 211.9(\mathrm{~g})$ | Pharmacy services | $06 / 11 / 2016$ | granted |
| The Wesley Village | $\S 211.9(\mathrm{~g})$ | Pharmacy services | $05 / 07 / 2016$ | granted |
| Woodland Rehabilitation and | $\S 211.9(\mathrm{~g})$ | Pharmacy services | $04 / 23 / 2016$ | granted |

Persons with a disability who require an alternative format of this notice (for example, large print, audiotape, Braille) should contact the Division of Acute and Ambulatory Care or the Division of Nursing Care Facilities at the previously referenced addresses or telephone numbers, or for speech and/or hearing impaired persons V/TT (717) 783-6514, or the Pennsylvania AT\&T Relay Service at (800) 654-5984.

> KAREN M. MURPHY, PhD, RN,
> Secretary
[Pa.B. Doc. No. 16-1498. Filed for public inspection August 26, 2016, 9:00 a.m.]

## Hospitals; Requests for Exceptions

The following hospitals have filed requests for exceptions under 28 Pa . Code $\S 51.33$ (relating to requests for exceptions) with the Department of Health (Department), which has authority to license hospitals under the Health Care Facilities Act (35 P.S. §§ 448.101-448.904b). The following requests for exceptions relate to regulations governing hospital licensure in 28 Pa . Code Chapters 51 and 101-158 (relating to general information; and general and special hospitals).

## Facility Name

Divine Providence Hospital
Muncy Valley Hospital
Williamsport Regional Medical Center

## Regulation

28 Pa . Code § 107.61 (relating to written orders)
28 Pa . Code § 107.61
28 Pa . Code § 107.61

All requests previously listed are on file with the Department. Persons may receive a copy of a request for exception by requesting a copy from the Department of Health, Division of Acute and Ambulatory Care, Room 532, Health and Welfare Building, Harrisburg, PA 17120, (717) 783-8980, fax (717) 772-2163, ra-paexcept@pa.gov. Persons who wish to comment on an exception request may do so by sending a letter by mail, e-mail or facsimile to the Division at the address listed previously. Comments received by the Department within 10 days after the date of publication of this notice will be reviewed by the Department before it decides whether to approve or disapprove the request for exception.
Persons with a disability who wish to obtain a copy of a request and/or provide comments to the Department and require an auxiliary aid, service or other accommodation to do so should contact the Director, Division of Acute and Ambulatory Care at (717) 783-8980, for speech and/or hearing impaired persons V/TT (717) 783-6154, or the Pennsylvania AT\&T Relay Service (800) 654-5984 (TT).

KAREN M. MURPHY, PhD, RN, $\underset{\text { Secretary }}{\text { M }}$
[Pa.B. Doc. No. 16-1499. Filed for public inspection August 26, 2016, 9:00 a.m.]

## Human Immunodeficiency Virus (HIV) Community Prevention Planning Committee Public Meetings

The Statewide HIV Planning Group, established by the Department of Health (Department) under sections 301(a) and 317 of the Public Health Service Act ( 42 U.S.C.A. $\S \S 241$ (a) and 247b), will hold a public meeting on Wednesday, September 14, 2016, and Thursday, September 15, 2016, from 9 a.m. to 4 p.m. at the Park Inn Harrisburg West, 5401 Carlisle Pike, Mechanicsburg, PA 17050.

Jurisdictional HIV prevention planning is a required activity of the Department's Centers for Disease Control and Prevention grant for Comprehensive HIV Prevention Programs for Health Departments. Additionally, the Ryan White HIV/AIDS Treatment Extension Act of 2009
(Pub.L. No. 111-87), previously known as the Ryan White Comprehensive AIDS Resources Emergency Act of 1990 (42 U.S.C.A. §§ 300ff-21-300ff-38), requires that the Department engage in a public advisory planning process in developing a comprehensive plan. The purpose of these meetings is to conduct an integrated prevention and care HIV planning process by which the Department works in partnership with the community and stakeholders to enhance access to HIV prevention, care and treatment services.

For additional information or persons with a disability who wish to attend the meeting who require an auxiliary aid, service or other accommodation to do so should contact Robin Rothermel, Bureau Director, Department of Health, Division of HIV Disease, Bureau of Communicable Diseases, 625 Forster Street, Room 1010, Health
and Welfare Building, Harrisburg, PA 17120, (717) 7830572 or for speech and/or hearing impaired persons V/TT (717) 783-6514 or the Pennsylvania AT\&T Relay Service at (800) 654-5984.
The Department reserves the right to cancel this meeting without prior notice.

KAREN M. MURPHY, PhD, RN, Secretary
[Pa.B. Doc. No. 16-1500. Filed for public inspection August 26, 2016, 9:00 a.m.]

## DEPARTMENT OF HUMAN SERVICES

## Changes to the Medical Assistance Fee Schedule for the Aging, COMMCARE, Independence and OBRA Waivers

This notice announces the Department of Human Services (Department) proposed changes to the Medical Assistance (MA) fee schedule for the Aging, COMMCARE, Independence and OBRA waivers effective October 1, 2016.

## Removal of Waiver Services

The Department proposes to remove the following waiver services from the MA fee schedule for the Aging, COMMCARE, Independence and OBRA waivers:

1. Aging waiver-Enrollment
2. COMMCARE waiver-Prevocational Services and Supported Employment
3. Independence waiver-Supported Employment
4. OBRA waiver-Prevocational Services and Supported Employment

## Addition of Waiver Services

Under 55 Pa . Code § 52.45 (a) and (b) (relating to fee schedule rates), the Department proposes to add the following services to the MA fee schedule for the COMMCARE, Independence and OBRA waivers:

1. COMMCARE waiver-Benefits Counseling, Career Assessment, Employment Skills Development, Job Coaching Intensive and Follow-along and Job Finding.
2. Independence waiver-Benefits Counseling, Career Assessment, Employment Skills Development, Job Coaching Intensive and Follow-along and Job Finding.
3. OBRA waiver-Benefits Counseling, Career Assessment, Employment Skills Development, Job Coaching Intensive and Follow-along and Job Finding.

## Rate-Setting Methodology

The Department developed MA fee schedule rates for the additional services added to the COMMCARE, Independence and OBRA waivers using a standardized market-based rate setting methodology. Relevant marketbased information used to determine the fee schedule rates included Commonwealth-specific wage information from the Center for Workforce Information and Analysis, Occupational Wages by County, Bureau of Labor Statistics Employer Costs, cost surveys from providers, Medicare rate information and MA State Plan Fee Schedules.

The proposed MA fee schedule rates are available on the Department's web site at http://www.dhs.pa.gov/ provider/longtermcareprov/ or by contacting April Leonhard, Department of Human Services, Office of LongTerm Living at (717) 783-8412.

## Fiscal Impact

The estimated fiscal impact of this change is $\$ 2.691$ million ( $\$ 1.288$ million in State funds) for Fiscal Year 2016-2017.

## Public Comment

Interested persons are invited to submit written comments regarding this notice and the proposed MA fee schedule rates to the Department of Human Services, Office of Long-Term Living, Bureau of Policy and Regulatory Management, Attention: HCBS Rates, P.O. Box 8025, Harrisburg, PA 17105-8025. Comments can also be sent to RA-oltlstreamlining@pa.gov. This notice is available in alternate format and paper copy upon request by calling (717) 783-8412. Comments received within 30 days will be reviewed and considered for any subsequent revision of the notice.

Persons with a disability who require an auxiliary aid or service may submit comments using the Pennsylvania AT\&T Relay Service at (800) 654-5984 (TDD users) or (800) 654-5988 (voice users).

## THEODORE DALLAS,

Secretary
Fiscal Note: 14-NOT-1053. (1) General Fund;
(7) Services to Persons with Disabilities; (2) Implementing Year 2016-17 is $\$ 1,554,000$; (3) 1st Succeeding Year 2017-18 through 5th Succeeding Year 2021-22 are \$2,372,000; (4) 2015-16 Program—\$339,077,000; 2014-15 Program—\$273,538,000; 2013-14 Program—\$233,104,000;
(7) Home and Community-Based Services; (2) Implementing Year 2016-17 is -\$266,000; (3) 1st Succeeding Year 2017-18 through 5th Succeeding Year 2021-22 are -\$399,000; (4) 2015-16 Program-\$261,945,000; 2014-15 Program-\$132,951,000; 2013-14 Program\$225,008,000;
(8) recommends adoption. Funds have been included in the budget to cover this increase.
[Pa.B. Doc. No. 16-1501. Filed for public inspection August 26, 2016, 9:00 a.m.]

## HOUSING FINANCE AGENCY

## Proposed PHARE (Act 105 of 2010) Plan Amendment Implementing Act 58 of 2015 (Realty Transfer Tax) Funding; Public Comment

The Housing Affordability and Rehabilitation Enhancement Fund (PHARE Fund) was established by the act of November 23, 2010 (P.L. 1035, No. 105) (PHARE Act) to provide a structure by which certain State and Federal funds may be used to support housing throughout this Commonwealth. The Housing Finance Agency (Agency) administers the PHARE Fund. Under the recent enactment of the Realty Transfer Tax by the act of November 4, 2015 (P.L. 222, No. 58) (Act 58), additional funds are expected to be available to the PHARE Fund.

The PHARE Act establishes a public comment period and in order to administer the PHARE Fund with the added moneys, the Agency must amend the 2016 plan and take public comment. The Proposed Plan Amendment implementing Act 58 is available at www.phfa.org and the Agency is specifically inviting public comment of the Proposed Plan Amendment.
Written comments are being accepted on the Proposed Plan Amendment addressed to Bryce Maretzki, Housing Finance Agency, 211 North Front Street, Harrisburg, PA 17101, bmaretzki@phfa.org. Comments are due no later than October 11, 2016. The Agency will make all comments available for public inspection.

BRIAN A. HUDSON, Sr.,
Executive Director
[Pa.B. Doc. No. 16-1502. Filed for public inspection August 26, 2016, 9:00 a.m.]

## INSURANCE DEPARTMENT

## Senior Health Insurance Company of Pennsylvania (SHPT-130672701); Rate Increase Filing for Various LTC Forms

Senior Health Insurance Company of Pennsylvania is requesting approval to increase the premium $40 \%$ on 1,378 Pennsylvania policies originally issued by American Travelers Life Insurance Company, Conseco Senior Health Insurance Company and Transport Life Insurance Company.

The following forms, which are affected by this increase, were originally issued by American Travelers Life Insurance Company: ATL-FQ-LTC, ATL-FQ-NH, ATL-FQHHC, ATL-NFQ-LTC, ATL-NFQ-NH, ATL-NFQ-HHC, ATL-HHC-2, ATL-HHC-3, ATL-HHC-4, ATL-LTC-1, ATL-LTC-5 and ATL-LTC-6. The following affected forms were originally issued by Conseco Senior Health Insurance Company: CSHIC-5003, CSHIC-5004 and CSHIC-5005. The following affected forms were originally issued by Transport Life Insurance Company: 10955 and 11001.

Unless formal administrative action is taken prior to November 10, 2016, the subject filing may be deemed approved by operation of law.

A copy of the filing is available on the Insurance Department's (Department) web site at www.insurance. pa.gov. To view these filing notices, hover the cursor over "Consumers" in the blue bar at the top of the webpage then select "Long Term Care Rate Filings" from the drop down menu.

Copies of the filing are also available for public inspection, by appointment, during normal working hours at the Department's Harrisburg office.

Interested parties are invited to submit written comments, suggestions or objections to James Laverty, Actuary, Insurance Department, Insurance Product Regulation, Room 1311, Strawberry Square, Harrisburg, PA 17120, jlaverty@pa.gov within 30 days after publication of this notice in the Pennsylvania Bulletin.

> TERESA D. MILLER, Insurance Commissioner
[Pa.B. Doc. No. 16-1503. Filed for public inspection August 26, 2016, 9:00 a.m.]

# MILK MARKETING BOARD 

Special Sunshine Meeting

The Milk Marketing Board will meet to approve an over-order premium on Wednesday, September 14, 2016, at 9 a.m. in Room 309, Agriculture Building, 2301 North Cameron Street, Harrisburg, PA 17110.

TIM MOYER,
Secretary
[Pa.B. Doc. No. 16-1504. Filed for public inspection August 26, 2016, 9:00 a.m.]

## PENNSYLVANIA PUBLIC UTILITY COMMISSION

## Electric Generation Supplier License Cancellations of Companies with an Expired Financial Security

Public Meeting held
August 11, 2016
Commissioners Present: Gladys M. Brown, Chairperson; Andrew G. Place, Vice Chairperson; John F. Coleman, Jr.; Robert F. Powelson; David W. Sweet

> Electric Generation Supplier License Cancellations of Companies with an Expired Financial Security; M-2015-2490383
> Tentative Order

## By the Commission:

The Commission's regulations at 52 Pa . Code § 54.40(a) state that an Electric Generation Supplier (EGS) license will not be issued or remain in force until the licensee furnishes a bond or other security approved by the Commission. In addition, 52 Pa . Code § 54.40(d) states that the maintenance of an EGS license is contingent on the licensee providing proof to the Commission that a bond or other approved security in the amount directed by the Commission has been obtained.

Each EGS must file an original bond, letter of credit, continuation certificate, amendment, or other approved financial instrument with Rosemary Chiavetta, Secretary, Pennsylvania Public Utility Commission, 400 North Street, Harrisburg, PA 17120 prior to the EGS's current security expiration date. Each financial instrument must be an original document that displays a "wet" signature or digital signature, preferable in blue ink, and displays a "raised seal" or original notary stamp. The name of the principal on the original financial instrument must match exactly with the name that appears on the EGS's license issued by the Commission.

Failure to file before the financial security's expiration date may cause Commission staff to initiate a formal proceeding that may lead to the following: cancellation of each company's electric supplier license, removal of each company's information from the Commission's website and notification to all electric distribution companies, in which each company is licensed to do business, of the cancellation of the license.

As of August 2, 2016, each EGS listed in the Supplier Table below has not provided proof to the Commission that it has a bond or other approved security in the amount directed by the Commission, to replace its expired bond as noted in the table below.

| Supplier Table-List of Electric Generation Suppliers |  |  |
| :---: | :---: | :---: |
|  |  | Exp. |
| Docket Number | Company Name | Date |
| A-2010-2191919 | OPTIONS CONSULTING | $7 / 13 / 16$ |
| A-2010-2194044 | SERVICES, LLC |  |
| MONDRE ENERGY, INC. | $8 / 1 / 16$ |  |
| A-2014-2416214* | SMARTENERGY | $1 / 7 / 17$ |
| * Taking title to electricity |  |  |

As part of its EGS license validation procedures, the Commission's Bureau of Technical Utility Services sent a 60 -day Security Renewal Notice Letter to each entity in the Supplier Table above stating that original documentation of a bond, or other approved security, must be filed within 30 days prior to each entity's security expiration date. None of the companies listed in the Supplier Table provided the required documentation.

Based on the above facts, we tentatively conclude that the EGSs listed in the Supplier Table are not in compliance with 52 Pa . Code § 54.40(a) and (d) and therefore it is appropriate to initiate the cancellation process for each EGS license of each company listed in the Supplier Table, without the necessity of a formal complaint, as being in the public interest; Therefore,

## It Is Ordered That:

1. Cancellation of the Electric Generation Supplier Licenses of each company listed in the Supplier Table is hereby tentatively approved as being in the public interest.
2. The Secretary serve a copy of this Tentative Order upon the Office of Consumer Advocate, the Office of Small Business Advocate, the Bureau of Investigation \& Enforcement, Department of Revenue-Bureau of Corporation Taxes, all electric distribution companies, all of the Electric Generation Suppliers in the Supplier Table and also cause a copy of this Tentative Order to be published in the Pennsylvania Bulletin with a 30 -day comment period.
3. Absent the filing of adverse public comment or the filing of approved security within 30 days after publication in the Pennsylvania Bulletin, the Bureau of Technical Utility Services shall prepare a Final Order for entry by the Secretary.
4. Upon entry of the Final Order described in Ordering Paragraph No. 3 above, each company listed in the Supplier Table will be stricken from all active utility lists maintained by the Commission's Bureau of Technical Utility Services and the Assessment Section of the Bureau of Administration, removed from the Commission's website, and notifications be sent to all electric distribution companies in which the Electric Generation Suppliers are licensed to do business.

[^8]5. Upon entry of the Final Order described in Ordering Paragraph No. 3, each electric distribution company in which the Electric Generation Suppliers are licensed to do business, shall return the customers of the Electric Generation Suppliers to default service.

ROSEMARY CHIAVETTA,
Secretary
[Pa.B. Doc. No. 16-1505. Filed for public inspection August 26, 2016, 9:00 a.m.]

## Service of Notice of Motor Carrier Applications

The following temporary authority and/or permanent authority applications for the right to render service as a common carrier or contract carrier in this Commonwealth have been filed with the Pennsylvania Public Utility Commission. Formal protests and petitions to intervene must be filed in accordance with 52 Pa . Code (relating to public utilities). A protest shall indicate whether it applies to the temporary authority application, the permanent authority application, or both. Filings must be made with the Secretary, Pennsylvania Public Utility Commission, P.O. Box 3265, Harrisburg, PA 17105-3265, with a copy served on the applicant by September 12, 2016. Documents filed in support of the applications are available for inspection and copying at the Office of the Secretary between 8 a.m. and 4:30 p.m., Monday through Friday, and at the business address of the respective applicant.

## Applications of the following for approval to begin operating as common carriers for transportation of persons as described under each application.

A-2016-2544831 (Amended). D \& R Amish Transportation, LLC (78 Slaymaker Hill Road, Kinzers, Lancaster County, PA 17535) in paratransit service, persons whose personal convictions prevent them from owning or operating motor vehicles, or both, between points in the following portions of Lancaster County: east of State Route 501 and north of U.S. Route 30; east of State Route 272 and south of U.S. Route 30; and south of State Route 372, bounded by U.S. Route 222 South, the Pennsylvania/Maryland Border, State Route 272 North and the Lancaster County/Chester County border. Attorney: Charles H. Rieck, IV, Blakinger Thomas, PC, 28 Penn Square, Lancaster, PA 17603.

A-2016-2559007 (Amended). Donald Henry Bigger, Jr. (855 Hockley Hill Road, Turbotville, Northumberland County, PA 17772) for the right to transport as a common carrier, by motor vehicle, persons in group and party service, in vehicles seating 11 to 15 passengers, including the driver, from the Counties of Columbia, Lycoming, Montour, Northumberland, Snyder and Union, to points in Pennsylvania, and return; excluding service that is under the jurisdiction of the Philadelphia Parking Authority.

A-2016-2560571. Pamela L. Thomas (383 East District Road, Watsontown, Northumberland County, PA 17777) for the right to transport as a common carrier, by motor vehicle, persons in group and party service, in vehicles seating 11 to 15 passengers, including the driver, from Northumberland County, to points in Pennsylvania, and return; excluding service that is under the jurisdiction of the Philadelphia Parking Authority.

A-2016-2560622. Visit Vans, LLC, t/a Ideal Transportation (1101 Hamilton Street, Suite 160, Allentown, Lehigh County, PA 18101) for the right to begin to transport, as a common carrier, by motor vehicle, persons in airport transfer service, from points in Pennsylvania to Pennsylvania airports.
A-2016-2560627. Visit Vans, LLC, t/a Ideal Transportation (1101 Hamilton Street, Suite 160, Allentown, Lehigh County, PA 18101) for the right to begin to transport, as a common carrier, by motor vehicle, persons in call or demand service, between points in the Counties of Berks, Bucks, Carbon, Lehigh, Monroe, Montgomery, Northampton and Schuylkill.
Application of the following for the approval of the right and privilege to discontinue/abandon operating as common carriers by motor vehicle and for cancellation of the certificate of public convenience as described under the application.
A-2016-2560521. Traveler's Limo, LLC (43 Diverty Road, Pennington, NJ 08534-5011) for the discontinuance of service and cancellation of its certificate, as a common carrier, by motor vehicle, authorizing the transportation of persons, in limousine service, between points in the Counties of Bucks, Delaware, Montgomery and Philadelphia, and from points in said counties, to points in Pennsylvania, and return.

ROSEMARY CHIAVETTA,
Secretary
[Pa.B. Doc. No. 16-1506. Filed for public inspection August 26, 2016, 9:00 a.m.]

## PHILADELPHIA PARKING AUTHORITY

## Service of Notice of Motor Carrier Applications in the City of Philadelphia

The following permanent authority applications to render service as common carriers in the City of Philadelphia have been filed with the Philadelphia Parking Authority (PPA) Taxicab and Limousine Division (TLD). Formal protests must be filed in accordance with 52 Pa . Code Part II (relating to Philadelphia Parking Authority) with
the TLD's Office of the Clerk, 2415 South Swanson Street, Philadelphia, PA 19148 no later than September 12,2016 . The nonrefundable protest filing fee is $\$ 5,000$ payable to the PPA by certified check or money order. The applications are available for inspection at the TLD with Administrative Counsel between 9 a.m. and 4 p.m., Monday through Friday (contact Christine Kirlin, Esq. at (215) 683-9653 to make an appointment) or may be inspected at the business address of the respective applicants.

Doc. No. A-16-05-03. ECS Carriers, LLC (2423 Hill Camp Road, Pottstown, PA 19465): An application for a limousine certificate of public convenience (CPC) to transport persons on an exclusive basis arranged for in advance in luxury limousine service between points within the City of Philadelphia and from points in the City of Philadelphia to points in Pennsylvania, and return. Attorney for Applicant: David P. Temple, Esq., 1760 Market Street, Suite 1100, Philadelphia, PA 19103.

Doc. No. A-16-08-01. Kazi Trans, Inc. (1914 Chandler Street, Philadelphia, PA 19124): An application for a medallion taxicab CPC to transport persons in taxicab service between points within the City of Philadelphia and from points in the City of Philadelphia to points in Pennsylvania, and return. Attorney: Danielle Friedman, Esq., 2301 Church Street, Philadelphia, PA 19124.

Doc. No. A-16-08-03. Rohan Trans, Inc. (63 North 46th Street, Philadelphia, PA 19139): An application for a medallion taxicab CPC to transport persons in taxicab service between points within the City of Philadelphia and from points in the City of Philadelphia to points in Pennsylvania, and return. Attorney: Danielle Friedman, Esq., 2301 Church Street, Philadelphia, PA 19124.

Doc. No. A-16-08-04. Indu \& Alisha, Inc. (12 Kenmore Road, Upper Darby, PA 19082): An application for a medallion taxicab CPC to transport persons in taxicab service between points within the City of Philadelphia and from points in the City of Philadelphia to points in Pennsylvania, and return. Attorney: Danielle Friedman, Esq., 2301 Church Street, Philadelphia, PA 19124.

VINCENT J. FENERTY, Jr., Executive Director [Pa.B. Doc. No. 16-1507. Filed for public inspection August 26, 2016, 9:00 a.m.]

## RULES AND REGULATIONS

# 25-ENVIRONMENTAL PROTECTION 

ENVIRONMENTAL QUALITY BOARD<br>[ 25 PA. CODE CH. 250 ]

## Administration of the Land Recycling Program

The Environmental Quality Board (Board) amends Chapter 250 (relating to administration of Land Recycling Program) to read as set forth in Annex A. These amendments satisfy the obligation of the Department of Environmental Protection (Department), as specified in § 250.11 (relating to periodic review of MSCs), to review new scientific information that relates to the basis of medium-specific concentrations (MSC) as it becomes available and to propose appropriate changes for consideration by the Board no more than 36 months after the effective date of the most recently promulgated MSCs.

This final-form rulemaking was adopted by the Board at its meeting on April 19, 2016.

## A. Effective Date

This final-form rulemaking will go into effect upon publication in the Pennsylvania Bulletin.

## B. Contact Persons

For further information, contact Troy Conrad, Program Manager, Land Recycling Program, P.O. Box 8471, Rachel Carson State Office Building, Harrisburg, PA 17105-8471, (717) 783-7816; or Keith Salador, Assistant Counsel, Bureau of Regulatory Counsel, P.O. Box 8464, Rachel Carson State Office Building, Harrisburg, PA 17105-8464, (717) 783-8075. Persons with a disability may use the Pennsylvania AT\&T Relay Service at (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This finalform rulemaking is available electronically through the Department's web site at http://www.dep.state.pa.us.

## C. Statutory Authority

This final-form rulemaking is being made under the authority of sections 104(a) and 303(a) of the Land Recycling and Environmental Remediation Standards Act (act) (35 P.S. §§ 6026.104(a) and 6026.303(a)) and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20). Section 104(a) of the act authorizes the Board to adopt Statewide health standards as well as appropriate mathematically valid statistical tests to define compliance with the act and other regulations that may be needed to implement the act. Section 303(a) of the act authorizes the Board to promulgate Statewide health standards for regulated substances for each environmental medium and to promulgate methods used to calculate the standards. Section 1920-A of The Administrative Code of 1929 authorizes the Board to formulate, adopt and promulgate rules and regulations that are necessary for the proper work of the Department.

## D. Background and Purpose

Section 250.11 requires the Department to review new scientific information that is used to calculate MSCs under the Statewide health standard and to propose appropriate changes to the Board at least every 36 months. The changes serve the public as they are based on the most up-to-date health and other scientific information to protect human health and welfare. In addition,
the changes serve the public and regulated community as they provide clear information on what is required to clean up contaminated sites. This final-form rulemaking was reviewed by the Cleanup Standards Scientific Advisory Board (CSSAB). This final-form rulemaking was discussed and approved at the CSSAB meeting held on December 17, 2014. The CSSAB supported all aspects of the rulemaking except that they raised questions regarding the retention of the groundwater MSC for Methyl Tertiary Butyl Ether (MTBE). As discussed further in Section G of this preamble, the CSSAB asserted that the MTBE groundwater MSC was based on aesthetic considerations under a United States Environmental Protection Agency (EPA) published drinking water advisory rather than specific health-based criteria as required under the act and the regulations thereunder. This final-form rulemaking was reviewed by the Storage Tank Advisory Committee (STAC) on March 3, 2015. The STAC supported all aspects of this final-form rulemaking except for the groundwater MSC for MTBE, reiterating the same questions as the CSSAB.

## E. Summary of Regulatory Requirements

## § 250.5. Public notice by applicant

Amendments to this section add the requirement that documented proof of the mailing of municipal notices and the arranging for publication of newspaper notices that are required under the act shall be submitted at the same time the Notice of Intent to Remediate (NIR), plan or report is submitted to the Department. This will allow the Department to assure that the municipality and the public are notified of the NIR, plan or report in a timely fashion.

## § 250.7. Fees

Amendments to this section clarify that the Department may waive the fee for resubmission of a plan or report if the resubmission is related to correcting minor administrative or technical deficiencies.

## § 250.301. Scope

Amendments to this section add certain regulated substances to the list of substances classified as mutagens based on recently published scientific information.

## §250.304. MSCs for groundwater

Prior to the January 2011 edition of the Drinking Water Standards and Health Advisories, EPA Office of Water Publication No. EPA 820-R-11-002 (January, 2011), when the EPA published a lifetime Health Advisory Level (HAL) and a $10^{-4}$ Cancer Risk concentration for a chemical, the lifetime HAL concentration would include an adjustment for cancer risk. Starting with the January 2011 edition of the Drinking Water Standards and Health Advisories, the EPA changed its Cancer Classification system and started publishing lifetime HALs that did not include adjustments for cancer risk even when a $10^{-4}$ Cancer Risk concentration was also published.
Amendments to subsection (c) clarifies that a published lifetime HAL concentration would not be used as the MSC for substances that are designated as likely to be carcinogenic if the lifetime HAL does not include an adjustment for cancer risk. For these cases the MSC will be calculated based on the equations in $\S \S 250.306$ and 250.307 (relating to ingestion numeric values; and inhalation numeric values).

Amendments to subsection (g) include additional references related to the determination of solubility values.

## § 250.306. Ingestion numeric values

Due to new information about the toxicology of trichloroethylene (TCE), values for oral cancer slope factors for TCE were added and the formula for calculating the MSC for TCE was amended.

Due to new information published by the EPA in Exposure Factors Handbook 2011 Edition, EPA/600/R-090/ 052F, the average body weight and the associated ingestion factors were amended.

## § 250.307. Inhalation numeric values

Due to new information relating to the toxicology of TCE, values for inhalation unit risk for TCE and the formula for calculating the MSC for TCE were amended.

## Appendix A, Tables 1-6

Amendments to the Medium-Specific Concentrations tables in Appendix A were made for certain regulated substances. Information was updated on the Physical and Toxicological Properties tables and the Threshold of Regulation Compounds table.

## F. Summary of Changes to the Proposed Rulemaking

## § 250.5. Public notice by applicant

The proposed amendments to this section stated that specific documented proof of the mailing of municipal notices and arranging for the publication of newspaper notices is required at the same time the NIR is submitted to the Department. This would have required remediators to wait for public notice documents in advance of submitting reports and NIRs to the Department. The act requires these notices to be made at the same time the NIR or report is submitted to the Department. See section $303(\mathrm{~h})$ of the act and sections 302(e), 304(n) and 305(c) of the act (35 P.S. §§ 6026.302(e), 6026.304(n) and 6026.305(c)). In this final-form rulemaking, this section was revised to allow remediators to provide reasonable proof of publication by submitting the proposed text of the newspaper notice and the anticipated publication date at the same time that the NIR is submitted. This will allow the Department to assure that the municipality and the public are notified of the NIR, plan or report in a timely fashion, in accordance with the act.

## § 250.304. MSCs for groundwater

Section 250.304(g) provides references for sources of solubility limits used in calculating the groundwater MSCs. Paragraph (18) with the reference to Riddick, J.A., et al. was added in this final-form rulemaking to the list of sources.

## § 250.307. Inhalation numeric values

An amendment to an equation in this section corrects a typographical error that occurred between approval and publication of the final-form rulemaking published at 41 Pa.B. 230 (January 8, 2011).

## Appendix A, Tables 1-6

Updates to toxicity values published after the proposed rulemaking caused existing MSCs for certain regulated substances to change. In addition, triethylene glycol was added based on new data the EPA published in the Provisional Peer-Reviewed Toxicity Values (PPRTV).

## G. Summary of Comments and Responses on the Proposed Rulemaking

Notice of proposed rulemaking was published at 44 Pa.B. 2980 (May 17, 2014). The comment period opened
on May 17, 2014, and closed on June 17, 2014. The Board received comments from two commentators in addition to comments from the Independent Regulatory Review Commission (IRRC).

A commentator noted that the residential soil MSC for vanadium is proposed to be decreased by 100 times from $1,500 \mathrm{mg} / \mathrm{kg}$ to $15 \mathrm{mg} / \mathrm{kg}$. Furthermore, the commentator asserted that vanadium background concentrations in this Commonwealth range from a minimum of $15 \mathrm{mg} / \mathrm{kg}$ to a maximum of $150 \mathrm{mg} / \mathrm{kg}$ with an average of $80 \mathrm{mg} / \mathrm{kg}$ (Dragun, J. and Chekiri, K. (2005). Element in North America Soils. Amherst, MA: Amherst Scientific Publishers; and Boerngen, J.G and Shacklette, H.T. (1981). "Chemical Analysis of Soils and Other Surficial Materials of the Conterminous United States." Open File Report 81-197. United States Geological Survey). Therefore, the commentator felt it would be more practical to set the MSC at the maximum background concentration of 150 $\mathrm{mg} / \mathrm{kg}$. A similar argument was made by the commentator regarding arsenic, which has background concentrations ranges from $3.8 \mathrm{mg} / \mathrm{kg}$ to $31 \mathrm{mg} / \mathrm{kg}$. IRRC requested an explanation of the scientific data relied upon for lowering the MSCs for vanadium and arsenic and to explain how the new standards are necessary to protect the public health.

The Department did not propose alteration of the current MSCs for arsenic. The PPRTV oral reference dose $\left(\mathrm{RfD}_{\mathrm{o}}\right)$ of $0.00007 \mathrm{mg} / \mathrm{kg}$-day published by the EPA (Provisional Peer-Reviewed Toxicity Values for Vanadium and Its Soluble Inorganic Compounds Other than Vanadium Pentoxide, EPA, 2009) is the basis for the change in the vanadium MSCs. The prior MSCs for vanadium were based on a $\mathrm{RfD}_{\mathrm{o}}$ published by the EPA in the Health Effects Assessment Summary Tables (HEAST). This PPRTV RfD ${ }_{o}$ is based on a peer-reviewed toxicity analysis that undergoes greater rigor than the $\mathrm{RfD}_{\mathrm{o}}$ published in HEAST. The Board and the CSSAB assign greater weight to a PPRTV RfD o than a HEAST RfD ${ }_{\mathrm{o}}$ consistent with § 250.605(a) (relating to sources of toxicity information). Therefore, this new value is the appropriate human health level for vanadium under the act.

The act and the regulations promulgated thereunder require the calculation of Statewide health standard MSCs based on human health toxicity values only and not on background soil levels. However, the act does recognize that human health toxicity values for any naturally occurring regulated substance may result in standards that are numerically less than the background levels at specific sites in this Commonwealth. In this case, section 303(d) of the act states that persons are not required to remediate below the background standard. Therefore, persons may use the background standard under the act and the regulations promulgated thereunder.

A commentator also noted that neither the CSSAB nor the STAC support the existing groundwater and soil-togroundwater MSCs for MTBE which the Department did not propose to amend in this rulemaking. The commentator concurred with the CSSAB and the STAC assessment that the MTBE standard does not use specific healthbased standards. The commentator also supported the recommendations submitted by the two Department advisory committees and recommended that the proposed rulemaking be revised to reflect an altered MTBE standard. IRRC requested that the advisory committees' concerns regarding the MSCs for MTBE be addressed in the preamble and the Regulatory Analysis Form of the final-form rulemaking. IRRC also requested an explana-
tion of how the MTBE MSCs meet the criteria established in the act and how the MTBE MSCs adequately protect public health, safety and welfare.
The Department did not propose alteration of the current MTBE groundwater MSC in this final-form rulemaking. Therefore, comments regarding the groundwater MSC are outside the scope of this final-form rulemaking. The MTBE groundwater MSC appears in this final-form rulemaking only because the entire table of standards has been reproduced and set forth in its entirety for clarity. Section 301(c) of the act (35 P.S. § 6026.301(c)) requires Federally or State promulgated groundwater maximum contaminant level (MCL) and HALs to be the groundwater MSC. Currently six regulated substances have groundwater MSCs that are Federally promulgated MCLs which are solely based on secondary effects (aesthetic thresholds, for example, taste and odor). Since the act requires the use of MCLs and HALs when available, the act therefore allows for groundwater MSCs to be based on drinking water standards that are not health-based, but are aesthetic-based to protect public health and welfare. The EPA may include taste and odor considerations as well as health-based calculations in its promulgation of MCLs. See section 1401(2) of the Federal Safe Drinking Water Act (42 U.S.C.A. § $300 f(2)$ ).

In Chapter 250 as initially adopted at 27 Pa .B. 4181 (August 16, 1997), the Board promulgated a groundwater MSC for MTBE of $20 \mu \mathrm{~g} / \mathrm{L}$ based on a draft lifetime HAL published by the EPA at the time. In subsequent publications of the Federal drinking water standards, the EPA listed MTBE under a separate table, titled Drinking Water Advisories, with an advisory level of $20 \mu \mathrm{~g} / \mathrm{L}$. The EPA concluded that despite limited health-based information, the drinking water advisory is consistent with human health protection goals. The Department suggests that decision was a sound decision to prevent water from having an odor after a cleanup is completed and to protect the public health and welfare. The Board decided not to propose a change in the MSC for MTBE because the drinking water advisory level does not reflect a change in the degree of protectiveness from the original draft HAL. The EPA continues to indicate that it is further evaluating MTBE for an MCL determination. The Department will continue to monitor EPA's progress and communications related to this MCL determination.

## H. Benefits, Costs and Compliance

## Benefits

The Department updates the Statewide health standard MSC values on a regular basis to assure that environmental response actions at contaminated sites are remediated using current EPA guidance and toxicological information. This will ensure the protection of public health and the environment from exposure to regulated substances when it has been determined that lower concentrations of regulated substances are required to meet the standards established by the act. This will also avoid unnecessary expense for remediators when remediating contaminated property for redevelopment when it has been determined that higher concentrations of regulated substances are protective and meet the standards established by the act.

## Compliance costs

These technical amendments to Chapter 250 will affect owners, operators and purchasers of properties and facilities who volunteer or are required to perform remediation of releases and of contaminated sites. These technical amendments are not expected to add any significant costs
to the cleanup of releases or contaminated sites under the Land Recycling Program. Some cleanup standard concentration values will be lower and some will be higher. The net overall cost should be negligible.

## Compliance assistance plan

The Land Recycling Program will disseminate information concerning these updates using the Department's web site and e-mail to environmental consultants involved in the Land Recycling Program.

## Paperwork requirements

No forms or reports are required beyond those established by the act.

## I. Pollution Prevention

The Pollution Prevention Act of 1990 ( 42 U.S.C.A. §§ 13101-13109) established a National policy that promotes pollution prevention as the preferred means for achieving state environmental protection goals. The Department encourages pollution prevention, which is the reduction or elimination of pollution at its source, through the substitution of environmentally friendly materials, more efficient use of raw materials and the incorporation of energy efficiency strategies. Pollution prevention practices can provide greater environmental protection with greater efficiency because they can result in significant cost savings to facilities that permanently achieve or move beyond compliance requirements.

During remediation of a contaminated site, potential sources of pollution are often removed to attain the standards in the act, thus eliminating or minimizing the potential for continued migration.

## J. Sunset Review

Chapter 250 will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulations effectively fulfills the goals for which they were intended.

## K. Regulatory Review

Under section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on April 28, 2014, the Department submitted a copy of the notice of proposed rulemaking, published at 44 Pa .B. 2980, to IRRC and the Chairpersons of the House and Senate Environmental Resources and Energy Committees for review and comment.

Under section 5(c) of the Regulatory Review Act, the Department shall submit to IRRC and the House and Senate Committees copies of comments received during the public comment period, as well as other documents when requested. In preparing the final-form rulemaking, the Department has considered all comments from IRRC and the public.

Under section 5.1(j.2) of the Regulatory Review Act (71 P.S. § 745.5a(j.2)), on June 29, 2016, the final-form rulemaking was deemed approved by the House and Senate Committees. Under section 5.1(e) of the Regulatory Review Act, IRRC met on June 30, 2016, and approved the final-form rulemaking.

## L. Findings

The Board finds that:
(1) Public notice of the proposed rulemaking was given under sections 201 and 202 of the act of July 31, 1968 (P.L. 769, No. 240) (45 P.S. §§ 1201 and 1202) and regulations promulgated thereunder, 1 Pa . Code §§ 7.1 and 7.2.
(2) A public comment period was provided as required by law, and all comments were considered.
(3) These regulations do not enlarge the purpose of the proposed rulemaking published at 44 Pa .B. 2980.
(4) These regulations are necessary and appropriate for the administration and enforcement of the acts identified in Section C of this preamble.

## M. Order

The Board, acting under the authorizing statutes, orders that:
(a) The regulations of the Department, 25 Pa . Code Chapter 250, are amended by amending §§ 250.5, 250.7, 250.301, 250.304, 250.306 and 250.307 and Appendix A, Tables $1-6$, with ellipses referring to the existing text of the regulations.
(b) The Chairperson of the Board shall submit this order and Annex A to the Office of General Counsel and the Office of Attorney General for review and approval as to legality and form, as required by law.
(c) The Chairperson of the Board shall submit this order and Annex A to IRRC and the Senate and House Environmental Resources and Energy Committees as required under the Regulatory Review Act (71 P.S. §§ 745.1—745.14).
(d) The Chairperson of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau, as required by law.
(e) This order shall take effect immediately.

> PATRICK McDONNELL,
> Acting Chairperson
(Editor's Note: See 46 Pa.B. 3894 (July 16, 2016) for IRRC's approval order.)

Fiscal Note: Fiscal Note 7-486 remains valid for the final adoption of the subject regulations.

## Annex A

## TITLE 25. ENVIRONMENTAL PROTECTION PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION <br> Subpart D. ENVIRONMENTAL HEALTH AND SAFETY <br> ARTICLE VI. GENERAL HEALTH AND SAFETY CHAPTER 250. ADMINISTRATION OF LAND RECYCLING PROGRAM

## Subchapter A. GENERAL PROVISIONS

§ 250.5. Public notice by applicant.
(a) Public notice under the background, Statewide health or site-specific standard and under a special industrial area cleanup shall be initiated by the applicant through an NIR. For remediations proposing the use of a site-specific standard or, for remediations under an SIA agreement, the public and the municipality where the site is located shall be provided a 30-day period, in the NIR, in which the municipality may request to be involved in the development of the remediation and reuse plans for the site.
(b) The remedial investigation report, the risk assessment report and the cleanup plan, prepared under a site-specific remediation, may not be submitted to the Department until after the initial 30-day public and municipal comment period following the submission of the NIR has expired.
(c) The baseline environmental report, prepared under an SIA remediation, shall be submitted after the initial 30-day public and municipal comment period has expired.
(d) For areas not covered entirely by a nonuse aquifer areawide certification granted under § 250.303(f) (relating to aquifer determination; current use and currently planned use of aquifer groundwater), at the same time a request for a nonuse aquifer designation under the Statewide health standard is made to the Department, the remediator shall send notice to every municipality and community water supplier servicing the area requested for designation as nonuse under § $250.303(\mathrm{~b})$. The notice must include a copy of the request for determination of nonuse aquifer submitted to the Department.
(e) Upon receipt of notice of a request for a nonuse aquifer designation, the municipality and community water supplier shall have 45 days to indicate to the Department and the remediator any information relevant to the requirements of § 250.303 .
(f) Reasonable proof of the mailing of the municipal notices and arranging for the publication of newspaper notices, required under sections 302(e), 303(h), 304(n) and 305(c) of the act (35 P.S. §§ 6026.302(e), 6026.303(h), 6026.304(n) and 6026.305(c)), shall be submitted at the same time the NIR, plan or report is submitted to the Department. Examples of reasonable proof include:
(1) A copy of the letter to the municipality with a United States Postal Service Certified Mail Receipt, PS Form No. 3800.
(2) A copy of the proposed text of the newspaper notice and the anticipated publication date.

## § 250.7. Fees.

(a) Resubmission of a cleanup plan, remedial investigation, risk assessment or final report will require payment of the appropriate fee identified in the act for each resubmission.
(b) The Department will disapprove a plan or report that is submitted without the appropriate fee.
(c) The Department may waive the fee for resubmission of a plan or report if the resubmission is related to correcting minor administrative or technical deficiencies. The fee waiver is limited to the following:
(1) One time for each plan or report to correct administrative deficiencies if the corrections are made within 15 days of notice of the deficiencies by the Department.
(2) One time for each plan or report to correct technical deficiencies if the corrections are made within 60 days of notice of the deficiencies by the Department.

## Subchapter C. STATEWIDE HEALTH STANDARDS

## § 250.301. Scope.

(a) This subchapter sets forth generic Statewide health standards as one of three remediation standards that a person may select. The Statewide health standards are concentrations of regulated substances associated with a specific environmental medium, and are designated as the MSCs. The values used to determine the MSCs are contained in Appendix A, Tables 1-4 and 6 and are the concentrations of regulated substances that shall be met to demonstrate attainment of a Statewide health standard. Appendix A, Table 5 presents the toxicological and physical parameters used to calculate the MSCs in Appendix A, Tables 1-4.
(b) This subchapter sets forth generic Statewide health standards for regulated substances determined by the

EPA to be mutagens. Appendix A, Tables 1-4 contain Statewide health standards based upon the methodology for mutagens in §§ 250.306 and 250.307 (relating to ingestion numeric values; and inhalation numeric values) for the following substances classified as mutagens:

|  | CAS |
| :--- | :--- |
| Regulated Substance | Number |
| Acrylamide | $79-06-1$ |
| Benzo[a]anthracene | $56-55-3$ |
| Benzidine | $92-87-5$ |
| Benzo[a]pyrene | $50-32-8$ |
| Benzo[b]fluoranthene | $205-99-2$ |
| Benzo[k]fluoranthene | $207-08-9$ |
| Chromium (VI) | $18540-29-9$ |
| Chrysene | $218-01-9$ |
| Dibenzo[a,h]anthracene | $53-70-3$ |
| Dibromo-3-chloropropane, 1,2- | $96-12-8$ |
| Dichloromethane | $75-09-2$ |
| Indeno[1,2,3-cd]pyrene | $193-39-5$ |
| Methylene bis(2-chloroaniline), 4,4'- | $101-14-4$ |
| Nitrosodiethylamine, N- | $55-18-5$ |
| Nitrosodimethylamine, N- | $62-75-9$ |
| Nitroso-N-ethylurea, N- | $759-73-9$ |
| Trichloroethylene (TCE) | $79-01-6$ |
| Trichloropropane, 1,2,3- | $96-18-4$ |
| Vinyl chloride | $75-01-4$ |

(c) This subchapter sets forth minimum threshold MSCs for soil and groundwater that shall be met to demonstrate attainment of the Statewide health standards for regulated substances in Appendix A, Table 6. Minimum threshold MSCs are standards developed for regulated substances for which no chemical-specific toxicological data exist.
(d) For regulated substances which do not have an MSC for the relevant medium on Appendix A, Tables 1-4 or 6, the background standard or site-specific standard shall be met to qualify for a release of liability under the act.

## § 250.304. MSCs for groundwater.

(a) A person shall implement a remedy under the Statewide health standard that is protective of human health and the environment.
(b) The MSCs for regulated substances in groundwater are presented in Appendix A, Tables 1 and 2. The methodology used by the Department for calculating MSCs in groundwater is detailed in subsections (c)-(f).
(c) The MSCs for regulated substances contained in groundwater in aquifers used or currently planned to be used for drinking water or for agricultural purposes are the MCLs as established by the Department or the EPA in § 109.202 (relating to State MCLs, MRDLs and treatment technique requirements). For regulated substances where no MCL has been established, the MSCs are the Lifetime Health Advisory Levels (HAL) set forth in Drinking Water Standards and Health Advisories (DWSHA), EPA Office of Water Publication No. EPA 822-S-12-001 (April 2012 or as revised), except for substances designated in the DWSHA with cancer descriptor (L) "Likely to be carcinogenic to humans" or (L/N) "Likely to be carcinogenic above a specific dose but not likely to be carcinogenic below that dose because a key event in tumor formation does not occur below that dose." New or revised MCLs or HALs promulgated by the Department or the EPA shall become effective immediately for any demonstration of attainment completed after the date the new or revised MCLs or HALs become effective.
(1) For regulated substances where neither an MCL nor a lifetime HAL has been established and for substances designated in the DWSHA with cancer descriptor (L) or ( $\mathrm{L} / \mathrm{N}$ ), the MSCs are the lowest concentration calculated using the appropriate residential and nonresidential exposure assumptions and the equations in §§ 250.306 and 250.307 (relating to ingestion numeric values; and inhalation numeric values).
(2) If the Lifetime HAL for a substance designated in the DWSHA with cancer descriptor ( L ) or ( $\mathrm{L} / \mathrm{N}$ ) is less than the MSC calculated under paragraph (1), then the Lifetime HAL shall be the MSC.
(d) For regulated substances contained in aquifers not used or currently planned to be used, the MSCs in Appendix A, Tables 1 and 2 are calculated by the following:
(1) For volatile organic regulated substances with an attenuation factor of less than 20, as calculated by the methodology in paragraph (7), ten times the appropriate residential or nonresidential MSC for groundwater in aquifers used or currently planned to be used containing less than $2,500 \mathrm{mg} / \mathrm{l}$ total dissolved solids.
(2) For volatile organic regulated substances with an attenuation factor of greater than or equal to 20 , as calculated by the methodology in paragraph (7), 100 times the appropriate residential or nonresidential MSC for groundwater in aquifers used or currently planned to be used containing less than $2,500 \mathrm{mg} / \mathrm{l}$ total dissolved solids.
(3) For semivolatile organic and inorganic regulated substances, regardless of the attenuation factor, 1,000 times the appropriate residential or nonresidential MSC for groundwater in aquifers used or currently planned to be used containing less than $2,500 \mathrm{mg} / \mathrm{l}$ total dissolved solids.
(4) For benzene, 100 times the appropriate residential or nonresidential MSC for groundwater in aquifers used or currently planned to be used containing less than $2,500 \mathrm{mg} / \mathrm{l}$ total dissolved solids.
(5) For regulated substances with no calculated attenuation factor because of a lack of data in Howard, P. H., R. S. Boethling, W. F. Jarais, W. M. Meylan and E. M. Michalenko. 1991. Handbook of Environmental Degradation Rates. Lewis Publishers, Inc., Chelsea, MI, the appropriate residential or nonresidential MSC for groundwater in aquifers used or currently planned to be used containing less than $2,500 \mathrm{mg} / \mathrm{l}$ total dissolved solids.
(6) For minimum threshold MSCs, 5 micrograms per liter in groundwater shall be used.
(7) The attenuation factor (AF) for an organic regulated substance shall be calculated according to the following formula:
$\mathrm{AF}=\mathrm{K} \times \mathrm{KOC}$
Where:
$\mathrm{K}=$ degradation coefficient $=\frac{0.693}{\mathrm{~T}_{1 / 2}}$
$\mathrm{T}_{1 / 2}$-half-life of organic regulated substance in groundwater as reported in Howard, P. H., R. S. Boethling, W. F. Jarais, W. M. Meylan and E. M. Michalenko, 1991. Handbook of Environmental Degradation Rates. Lewis Publishers, Inc., Chelsea, MI.

KOC—organic carbon partitioning coefficient (see Appendix A, Table 5).
(e) If the groundwater in aquifers used or currently planned for use at the site has naturally occurring background total dissolved solids concentrations greater than 2,500 milligrams per liter, the Statewide health standard for a regulated substance dissolved in the groundwater may be adjusted by multiplying the MSC for groundwater in aquifers by 100. The adjusted Statewide health standard shall then be used in calculating the soil to groundwater pathway numeric value as specified in § 250.308 (relating to soil to groundwater pathway numeric values).
(f) In addition to the requirements in this section, the MSCs are further limited by solubility as identified in Appendix A, Table 5. The solubility limits are derived from the references in subsection (g), which are keyed to the numbers in Appendix A, Table 5. The following procedure was used to determine the appropriate solubility value for each regulated substance: where multiple sources are cited in Appendix A, Table 5, the value for the solubility limit is the median of the values in the indicated references.
(1) Using the hierarchy established in subsection (g), the first two references were consulted. If the solubility values agreed within 5\%, the selected value is the lower of the two values.
(2) If the values in step (1) did not agree within $5 \%$, the next references in order were consulted until two values that did agree within $5 \%$ were found. The selected value is then the median of all the values consulted.
(3) If none of the values in all of the references in subsection (g) agreed within $5 \%$, the selected value is the median of all values in all references.
(g) The references referred to in subsection (f) are:
(1) Lide, D. R., ed. 1996. CRC Handbook of Chemistry and Physics, 77th Edition. CRC Press.
(2) Budavari, S., ed. 1996. The Merck Index, 12th Ed. Merck and Co.
(3) Perry, R. H., et al. 1997. Perry's Chemical Engineer's Handbook, 7th ed. McGraw-Hill, New York.
(4) Howard, P. H. 1991. Handbook of Environmental Fate and Exposure Data for Organic Chemicals. Vol. III Pesticides, Lewis Publishers.
(5) Verschueren, K. 1977, Handbook of Environmental Data on Organic Chemicals, Van Nostrand Reinhold.
(6) MacKay, D., et al. 1997, Illustrated Handbook of Physical-Chemical Properties and Environmental Fate for Organic Chemicals, 5 Volumes. Lewis Publishers, New York.
(7) Montgomery, J. H. 1991, Groundwater Chemicals Desk Reference, Vol. II. Lewis Publishers and Montgomery, J. H., and L. M. Welkom. 1990, Groundwater Chemicals Desk Reference Vol I, Louis Publishers.
(8) Milne, G.W.A., ed. 1995, CRC Handbook of Pesticides, CRC Press, Inc.
(9) National Library of Medicine (Grateful Med), Hazardous Substances Databank.
(10) EPA.1994, Superfund Chemical Data Matrix. Office of Solid Waste and Emergency Response, EPA 540-R-94-009.
(11) Mabey, et al. 1982, Aquatic Fate Process Data for Organic Priority Pollutants, SRI. EPA Contract Nos. 68-01-3867, 68-03-2981.
(12) Yalkowsky, S.H. and R.M. Dannenfelser. 1992. Aquasol Database of Aqueous Solubility. Version 5. College of Pharmacy, University of Arizona-Tucson, AZ. PC Version.
(13) Estimate from Log Kow.
(14) Bennett, S.R., J.M. Bane, P.J. Benford, and R.L. Pyatt. 1984. Environmental Hazards of Chemical Agent Simulants. CRDC-TR-84055, Aberdeen Proving Ground, Md.
(15) Munro, N.B. et al. 1999. The Sources, Fate, and Toxicity of Chemical Warfare Agent Degradation Products. Environ. Health Perspect. 107(12): 933-4.
(16) Monteil-Rivera, F., C. Groom, and J. Hawari. 2003. Sorption and Degradation of Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine in Soil. Environ. Sci. Technol. 37:3878-3884.
(17) Seidell, A.1941. Solubilities of Organic Compounds. New York, NY. D. Van Nostrand Co. Inc.
(18) Riddick, J. A., et al. 1986. Organic Solvents; Physical Properties \& Methods of Purification. Techniques of Chemistry. 11th Edition. New York, NY: WileyInterscience.

## § 250.306. Ingestion numeric values.

(a) For a regulated substance which is a systemic toxicant, the ingestion numeric value for that substance was calculated using the appropriate residential or nonresidential exposure assumptions from subsection (d) according to the following equation:

$$
\mathrm{MSC}=\frac{\mathrm{THQ} \times \mathrm{RfD}_{\mathrm{o}} \times \mathrm{BW} \times \mathrm{AT}_{\mathrm{nc}} \times 365 \text { days } / y e a r}{\mathrm{Abs} \times \mathrm{EF} \times \mathrm{ED} \times \mathrm{IngR} \times \mathrm{CF}}
$$

(b) For a regulated substance which is a carcinogen, the ingestion numeric value for that substance was calculated using the appropriate residential or nonresidential exposure assumptions from subsection (d) according to the following equations:
(1) For regulated substances not identified as a mutagen in § 250.301(b) (relating to scope):
$\mathrm{MSC}=\frac{\mathrm{TR} \times \mathrm{AT}_{\mathrm{c}} \times 365 \text { days } / \text { year }}{\mathrm{CSF}_{\mathrm{o}} \times \mathrm{Abs} \times \mathrm{EF} \times \mathrm{IFadj} \times \mathrm{CF}}$
(2) For regulated substances identified as a mutagen, except for vinyl chloride and trichloroethylene, in § 250.301(b):
$\mathrm{MSC}=\frac{\mathrm{TR} \times \mathrm{AT}_{\mathrm{c}} \times 365 \text { days } / \text { year }}{\mathrm{CSF}_{\mathrm{o}} \times \mathrm{Abs} \times \mathrm{EF} \times \mathrm{AIFadj} \times \mathrm{CF}}$
(3) For vinyl chloride:

MSC = $\qquad$
(4) For trichloroethylene:

MSC = $\qquad$
$\left(\mathrm{CSFo}_{\mathrm{k}} \times \mathrm{AIFadj}+\mathrm{CSFo}_{1} \times \mathrm{IFadj}\right) \times \mathrm{Abs} \times \mathrm{EF} \times \mathrm{CF}$
(c) For a regulated substance that has both an oral reference dose and an oral cancer slope factor, the ingestion numeric value is the lower of the two numbers as calculated by the equations in subsections (a) and (b).
(d) The default exposure assumptions used to calculate the ingestion numeric values are as follows:

| Term |  | Residential |  | Nonresidential (Onsite Worker) |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Systemic ${ }^{1}$ | Carcinogens ${ }^{2,6}$ |  |
| THQ | Target Hazard Quotient | 1 | N/A | 1 |
| $\mathrm{RfD}_{\text {o }}$ | Oral Reference Dose (mg/kg-day) | Chemical-specific | N/A | Chemical-specific |
| BW | Body Weight (kg) <br> Soil <br> Groundwater | $\begin{aligned} & 15 \\ & 80 \end{aligned}$ | N/A | $\begin{aligned} & 80 \\ & 80 \end{aligned}$ |
| $\mathrm{AT}_{\mathrm{nc}}$ | Averaging Time for systemic toxicants (yr) <br> Soil <br> Groundwater | $\begin{aligned} & 6 \\ & 30 \end{aligned}$ | $\begin{aligned} & \text { N/A } \\ & \text { N/A } \end{aligned}$ | $\begin{aligned} & 25 \\ & 25 \end{aligned}$ |
| Abs | Absorption (unitless) ${ }^{3}$ | 1 | 1 | 1 |
| EF | Exposure Frequency (d/yr) <br> Soil <br> Groundwater | $\begin{aligned} & 250 \\ & 350 \end{aligned}$ | $\begin{aligned} & 250 \\ & 350 \end{aligned}$ | $\begin{aligned} & 180 \\ & 250 \end{aligned}$ |
| ED | Exposure Duration (yr) Soil Groundwater | $\begin{aligned} & 6 \\ & 30 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { N/A } \\ & \text { N/A } \end{aligned}$ | $\begin{array}{r} 25 \\ 25 \\ \hline \end{array}$ |
| IngR | Ingestion Rate <br> Soil (mg/day) GW (L/day) | $\begin{aligned} & 100 \\ & 2 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { N/A } \\ & \text { N/A } \end{aligned}$ | $\begin{aligned} & 50 \\ & 1 \\ & \hline \end{aligned}$ |
| CF | Conversion Factor <br> Soil (kg/mg) <br> GW (unitless) | $\begin{aligned} & 1 \times 10^{-6} \\ & 1 \end{aligned}$ | $\begin{aligned} & 1 \times 10^{-6} \\ & 1 \end{aligned}$ | $\begin{aligned} & 1 \times 10^{-6} \\ & 1 \end{aligned}$ |
| TR | Target Risk | N/A | $1 \times 10^{-5}$ | $1 \times 10^{-5}$ |
| $\mathrm{CSF}_{\text {o }}$ | Oral Cancer Slope Factor (mg/kg-day) ${ }^{-1}$ | N/A | Chemical-specific | Chemical-specific |
| $\mathrm{AT}_{\mathrm{c}}$ | Averaging Time for carcinogens (yr) | N/A | 70 | 70 |
| IFadj ${ }^{4}$ | Ingestion Factor Soil (mg-yr/kg-day) GW (L-yr/kg day) | N/A | $\begin{aligned} & 55 \\ & 1 \\ & \hline \end{aligned}$ | $\begin{aligned} & 15.6 \\ & 0.3 \\ & \hline \end{aligned}$ |
| AIFadj ${ }^{5}$ | Combined Age-Dependent Adjustment Factor and Ingestion Factor <br> Soil (mg-yr/kg-day) <br> GW (L-yr/kg-day) | N/A | $\begin{aligned} & 241 \\ & 3.23 \end{aligned}$ | N/A |
| $\begin{aligned} & \mathrm{CSFo}_{\mathrm{k}} \\ & \mathrm{CSFo}_{1} \end{aligned}$ | TCE oral cancer slope factor for kidney cancer ( $\mathrm{mg} / \mathrm{kg} /$ day $)^{-1}$ <br> TCE oral cancer slope factor for non-Hodgkin lymphoma and liver cancer $(\mathrm{mg} / \mathrm{kg} / \mathrm{day})^{-1}$ |  | $\begin{aligned} & 9.3 \times 10^{-3} \\ & 3.7 \times 10^{-2} \end{aligned}$ |  |

## Notes:

${ }^{1}$ Residential exposure to noncarcinogens is based on childhood (ages 1-6) exposure for soil, and adult exposure for groundwater, consistent with USEPA (1991).
${ }^{2}$ Residential exposure to carcinogens is based on combined childhood and adult exposure.
${ }^{3}$ The oral absorption factor takes into account absorption and bioavailability. In cases where the oral RfD or CSF is based on administered oral dose, the absorption factor would be limited to bioavailability. The default value is 1 .
${ }^{4}$ The Ingestion Factor for the residential scenario is calculated using the equation $\mathrm{If}_{\text {adj }}=\mathrm{ED}_{\mathrm{c}} \times \mathrm{IR}_{\mathrm{c}} / \mathrm{BW}_{\mathrm{c}}+\mathrm{ED}_{\mathrm{a}} \times$ $\mathrm{IR}_{\mathrm{a}} / \mathrm{Bw}_{\mathrm{a}}$, where $\mathrm{ED}_{\mathrm{c}}=6 \mathrm{yr}, \mathrm{IR}_{\mathrm{c}}=100 \mathrm{mg} /$ day for soils and $1 \mathrm{~L} /$ day for groundwater, $\mathrm{BW}_{\mathrm{c}}=15 \mathrm{~kg}, E D_{\mathrm{a}}=24 \mathrm{yr}, \mathrm{IR}_{\mathrm{a}}=50$ $\mathrm{mg} /$ day for soils and $2 \mathrm{~L} /$ day for groundwater, and $\mathrm{BW}_{\mathrm{a}}=80 \mathrm{~kg}$. The ingestion factor for the nonresidential scenario is calculated using the equation $\mathrm{If}_{\text {adj }}=\mathrm{ED} \times \mathrm{IR} / \mathrm{BW}$, where $\mathrm{ED}=25 \mathrm{yr}, \mathrm{IR}=50 \mathrm{mg} /$ day for soils and $1 \mathrm{~L} /$ day for groundwater, and $B W=80 \mathrm{~kg}$.
${ }^{5}$ The Combined Age-Dependent Adjustment Factor and Ingestion Factor (AIFadj) for the residential scenario is calculated using the equation AIFadj $=\left[\left(\mathrm{ADAF}_{2} \times \mathrm{ED}_{22}\right)+\left(\mathrm{ADAF}_{2-6} \times \mathrm{ED}_{2-6}\right)\right] \times \mathrm{IRc} / \mathrm{BWc}+\left[\left(\mathrm{ADAF}_{96-16} \times \mathrm{ED}_{6-16}\right)+\left(\mathrm{ADAF}_{16} \times\right.\right.$ $\left.\left.\mathrm{ED}_{6-16}\right)\right] \times \mathrm{IRa} / \mathrm{BWa}$, where $\mathrm{ADAF}_{2}=10$, $\mathrm{ED}_{2}=2 \mathrm{yr}, \mathrm{ADAF}_{2-6}=3, \mathrm{ED}_{2-6}=4 \mathrm{yr}$, $\mathrm{IRc}=100 \mathrm{mg} /$ day for soils and $1 \mathrm{~L} /$ day for groundwater, $\mathrm{BWc}=15 \mathrm{~kg}, \mathrm{ADAF}_{, 6-16}=3, \mathrm{ED}_{2-16}=10 \mathrm{yr}, \mathrm{ADAF}_{16}=1, \mathrm{ED}_{16}=14 \mathrm{yr}, \mathrm{IRa}=50 \mathrm{mg} /$ day for soils and 2 $\mathrm{L} /$ day for groundwater, and $\mathrm{BWa}=80 \mathrm{~kg}$.
${ }^{6}$ For the equation to calculate the vinyl chloride residential MSC based on the carcinogenic effect, IRc $=100 \mathrm{mg} / \mathrm{day}$ for soils and $1 \mathrm{~L} /$ day for groundwater, $\mathrm{BWc}=15 \mathrm{~kg}$.
(e) The residential ingestion numeric value for lead in soil was developed using the Uptake Biokinetic (UBK) Model for Lead (version 0.4) developed by the EPA (U.S. Environmental Protection Agency. (1990). Uptake Biokinetic (UBK) Model for Lead (version 0.4). U.S. EPA/ECAO. August 1990, in lieu of the algorithms presented in subsections (a) and (b). Default input values are identified in Appendix A, Table 7. Because the UBK model is applicable only to children, the nonresidential ingestion numeric value was calculated according to the method developed by the Society for Environmental Geochemistry and Health (Wixson, B. G. (1991)). The Society for Environmental Geochemistry and Health (SEGH) Task Force Approach to the Assessment of Lead in Soil. Trace Substances in Environmental Health. (11-20), using the following equations:

$$
S=\frac{1000\left[\left(\frac{T}{G^{n}}\right)-B\right]}{\delta}
$$

Table 7 identifies each of the variables in this equation.

## § 250.307. Inhalation numeric values.

(a) For a regulated substance which is a systemic toxicant, the following applies:
(1) For a volatile compound, the numeric value for inhalation from soil shall be calculated using the appropriate residential or nonresidential exposure assumptions from subsection (d) according to the following equation using TF for volatiles:

$$
\mathrm{MSC}=\frac{\mathrm{THQ} \times \mathrm{RfCi} \times \mathrm{AT}_{\mathrm{nc}} \times 365 \text { days } / \mathrm{yr} \times 24 \mathrm{hr} / \text { day } \times \mathrm{TF}}{\mathrm{ET} \times \mathrm{EF} \times \mathrm{ED}}
$$

(2) For a regulated substance attached to particulates, the numeric value for inhalation from soil was calculated using the appropriate residential or nonresidential exposure assumptions from subsection (d) according to the equation in paragraph (1) using TF for particulates.
(b) For a regulated substance which is a carcinogen, the following apply:
(1) For a volatile compound, the numeric value for inhalation from soil was calculated using the appropriate residential or nonresidential exposure assumptions from subsection (d) according to the following equation using TF for volatiles:
$\mathrm{MSC}=\frac{\mathrm{TR} \times \mathrm{AT}_{\mathrm{c}} \times 365 \text { days/year } \times 24 \mathrm{hr} / \text { day } \times \mathrm{TF}}{\mathrm{IUR} \times \mathrm{ET} \times \mathrm{EF} \times \mathrm{ED} \times \mathrm{CF}}$
(2) For a regulated substance attached to particulates, the numeric value for inhalation from soil was calculated using the appropriate residential or nonresidential exposure assumptions from subsection (d) according to the equation in paragraph (1) using TF for particulates.
(3) For a regulated substance identified in § 250.301 (b) (relating to scope) as a mutagen, except for vinyl chloride and trichloroethylene, the numeric value for inhalation from soil was calculated using the appropriate residential or nonresidential exposure assumptions from subsection (d) according to the following equation using the TF for volatiles or particulates:

$$
\mathrm{MSC}=\frac{\mathrm{TR} \times \mathrm{AT}_{\mathrm{c}} \times 365 \text { days } / \text { year } \times 24 \mathrm{hr} / \text { day } \times \mathrm{TF}}{\mathrm{IUR} \times \mathrm{ET} \times \mathrm{EF} \times \mathrm{AED} \times \mathrm{CF}}
$$

(4) For vinyl chloride, the numeric value for inhalation from soil was calculated using the appropriate residential or nonresidential exposure assumptions from subsection (d) according to the following equation using the TF for volatiles or particulates:

MSC =
TR
$\left[\mathrm{IUR} \times \mathrm{ET} \times \mathrm{EF} \times \mathrm{ED} \times \mathrm{CF} /\left(\mathrm{AT}_{\mathrm{c}} \times 365\right.\right.$ days $\left.\left./ \mathrm{yr} \times 24 \mathrm{hr} / \mathrm{d} \times \mathrm{TF}\right)\right]+(\mathrm{IUR} \times \mathrm{CF} \times \mathrm{TF})$
(5) For trichloroethylene, the numeric value for inhalation from soil was calculated using the appropriate residential or nonresidential exposure assumptions from subsection (d) according to the following equation using the TF for volatiles:
$\mathrm{MSC}=\frac{\mathrm{TR} \times \mathrm{AT}_{\mathrm{c}} \times 365 \text { days } / \mathrm{yr} \times 24 \mathrm{hr} / \text { day } \times \mathrm{TF}}{\left(\mathrm{IUR}_{\mathrm{k}} \times \mathrm{AED}+\mathrm{IUR}_{1} \times \mathrm{ED}\right) \times \mathrm{ET} \times \mathrm{EF} \times \mathrm{CF}}$
(c) For a regulated substance which is both a systemic toxicant and a carcinogen, the inhalation numeric value is the lower of the two numbers as calculated by the equations in subsections (a) and (b).
(d) The default exposure assumptions used to calculate the inhalation numeric values for soil are as follows:

| Term |  | Residential |  | Nonresidential (Onsite Worker) |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Systemic ${ }^{1}$ | Carcinogens ${ }^{2}$ |  |
| THQ | Target Hazard Quotient | 1 | N/A | 1 |
| RfCi | Inhal. Reference Concentration ( $\mathrm{mg} / \mathrm{m}^{3}$ ) | Chemical-specific | N/A | Chemical-specific |
| $\mathrm{AT}_{\text {nc }}$ | Averaging Time for systemic toxicants (yr) | 30 | N/A | 25 |
| TF | ```Transport Factor \((\mathrm{mg} / \mathrm{kg}) /\left(\mathrm{mg} / \mathrm{m}^{3}\right)\) Volatilization \({ }^{3}\) Particulate \({ }^{4}\)``` | Chemical-specific $1 \times 10^{10}$ | Chemical-specific $1 \times 10^{10}$ | Chemical-specific $1 \times 10^{10}$ |
| ET | Exposure Time (hr/day) | 24 | 24 | 8 |
| EF | Exposure Frequency ${ }^{5}$ (d/yr) | 250 | 250 | 180 |
| ED | Exposure Duration (yr) | 30 | 30 | 25 |
| CF | Conversion Factor | N/A | $1000 \mu \mathrm{~g} / \mathrm{mg}$ | $1000 \mu \mathrm{~g} / \mathrm{mg}$ |
| TR | Target Risk | N/A | $1 \times 10^{-5}$ | $1 \times 10^{-5}$ |
| IUR | Inhalation Unit Risk ( $\left.\mu \mathrm{g} / \mathrm{m}^{3}\right)^{-1}$ | N/A | Chemical-specific | Chemical-specific |
| $\mathrm{AT}_{\mathrm{c}}$ | Averaging Time for carcinogens (yr) | N/A | 70 | 70 |
| AED | Combined Age-Dependent Adjustment Factor and Exposure Duration (yr) ${ }^{6}$ | N/A | 76 | N/A |
| $\mathrm{IUR}_{\mathrm{k}}$ | TCE inhalation unit risk for kidney cancer $\left(\mathrm{ug} / \mathrm{m}^{3}\right)^{-1}$ |  | $1 \times 10^{-6}$ |  |
| $\mathrm{IUR}_{1}$ | TCE inhalation unit risk for both non-Hodgkin lymphoma and liver cancer $\left(\mathrm{ug} / \mathrm{m}^{3}\right)^{-1}$ |  | $3 \times 10^{-6}$ |  |

Notes: Modified from USEPA Region III Risk-based Concentration Table, dated October 20, 1995.
N/A = Not Applicable
${ }^{1}$ Residential exposure to systemic toxicants is based on adult exposure, consistent with USEPA (1991).
${ }^{2}$ Residential exposure to carcinogens is based on combined child and adult exposure.
${ }^{3}$ Volatilization transport factor is calculated using $\mathrm{TF}=(\mathrm{ER} \times \mathrm{DF})^{-1}$, where $\mathrm{DF}=12\left(\mathrm{mg} / \mathrm{m}^{3}\right) /\left(\mathrm{m}^{2}\right.$-sec $)$. See soil depth-specific algorithm for the calculation of ER.
${ }^{4}$ Particulate transfer factor was calculated using $T F=(E R \times D F)^{-1}$, where $E R=8.25 \times 10^{-12}\left(\mathrm{mg} / \mathrm{m}^{2}-\mathrm{sec}\right) /(\mathrm{mg} / \mathrm{kg})$ and $\mathrm{DF}=12\left(\mathrm{mg} / \mathrm{m}^{3}\right) /\left(\mathrm{mg} / \mathrm{m}^{2}-\mathrm{sec}\right)$.
${ }^{5}$ Assumes approximately 100 days/yr with the ground being frozen. Exposure to surficial soils when the ground is frozen is considered de minimis. The nonresidential exposure frequency is defined as $5 / 7 \times 250$ days $/ \mathrm{yr}$.
${ }^{6}$ The Combined Age-Dependent Adjustment Factor and Exposure Duration (AED) is calculated using the equation AED = $\mathrm{ADAF}_{c 2} \times \mathrm{ED}_{c 2}+\mathrm{ADAF}_{2-16} \times \mathrm{ED}_{2-16}+\mathrm{ADAF}_{16} \times \mathrm{ED}_{16}$, where $\mathrm{ADAF}_{c 2}=10, \mathrm{ED}_{c 2}=2 \mathrm{yr}, \mathrm{ADAF}_{2-16}=3, \mathrm{ED}_{2-16}=14 \mathrm{yr}$, $\mathrm{ADAF}_{, 16}=1, \mathrm{ED}_{, 16}=14 \mathrm{yr}$.
(g) For a regulated substance which is a carcinogen and is a volatile compound, the numeric value for the inhalation of volatiles from groundwater shall be calculated by using the appropriate residential or nonresidential exposure assumptions from subsection (h) according to the following equations:
(1) For regulated substances not identified as a mutagen in § 250.301(b):

MSC = $\qquad$
$\mathrm{IUR} \times \mathrm{ET} \times \mathrm{EF} \times \mathrm{ED} \times \mathrm{TF} \times \mathrm{CF}$
(2) For regulated substances identified as a mutagen, except for vinyl chloride and trichloroethylene, in § 250.301(b): $\mathrm{MSC}=\quad \mathrm{TR} \times \mathrm{AT}_{\mathrm{c}} \times 365$ days $/$ year $\times 24 \mathrm{hr} /$ day
(3) For vinyl chloride:

MSC =
TR
$\left[(\mathrm{IUR} \times \mathrm{ET} \times \mathrm{EF} \times \mathrm{ED} \times \mathrm{TF} \times \mathrm{CF}) /\left(\mathrm{AT}_{\mathrm{c}} \times 365\right.\right.$ days/year $\times 24 \mathrm{hr} /$ day $\left.)\right]+(\mathrm{IUR} \times \mathrm{TF} \times \mathrm{CF})$
(4) For trichloroethylene:

$$
\mathrm{MSC}=\frac{\mathrm{TR} \times \mathrm{AT}_{\mathrm{c}} \times 365 \mathrm{days} / \mathrm{yr} \times 24 \mathrm{hr} / \text { day }}{\left(\mathrm{IUR}_{\mathrm{k}} \times \mathrm{AED}+\mathrm{IUR}_{1} \times \mathrm{ED}\right) \times \mathrm{ET} \times \mathrm{EF} \times \mathrm{TF} \times \mathrm{CF}}
$$

(h) The default exposure assumptions used to calculate the inhalation numeric values for the inhalation of volatiles from groundwater are as follows:

| Term |  | Residential |  | Nonresidential (Onsite Worker) |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Systemic ${ }^{1}$ | Carcinogens ${ }^{2}$ |  |
| THQ | Target Hazard Quotient | 1 | N/A | 1 |
| RfCi | Inhal. Reference Concentration ( $\mathrm{mg} / \mathrm{m}^{3}$ ) | Chemical-specific | N/A | Chemical-specific |
| $\mathrm{AT}_{\mathrm{nc}}$ | Averaging Time for systemic toxicants (yr) | 30 | N/A | 25 |
| ET | Exposure Time (hr/day) | 24 | 24 | 8 |
| EF | Exposure Frequency (d/yr) | 350 | 350 | 250 |
| ED | Exposure Duration (yr) | 30 | 30 | 25 |
| TF | Transfer Factor $\left(\mathrm{L} / \mathrm{m}^{3}\right)^{3}$ | 0.5 | 0.5 | 0.5 |
| CF | Conversion Factor | N/A | 1,000 $\mu \mathrm{g} / \mathrm{mg}$ | 1,000 $\mu \mathrm{g} / \mathrm{mg}$ |
| TR | Target Risk | N/A | $1 \times 10^{-5}$ | $1 \times 10^{-5}$ |
| IUR | Inhalation Unit Risk ( $\left.\mathrm{ug} / \mathrm{m}^{3}\right)^{-1}$ | N/A | Chemical-specific | Chemical-specific |
| $\mathrm{AT}_{\mathrm{c}}$ | Averaging Time for carcinogens (yr) | N/A | 70 | 70 |
| AED | Combined Age-Dependent adjustment Factor and Exposure Duration (yr) ${ }^{4}$ | N/A | 76 | N/A |
| $\mathrm{IUR}_{\mathrm{k}}$ | TCE inhalation unit risk for kidney cancer $\left(\mathrm{ug} / \mathrm{m}^{3}\right)^{-1}$ |  | $1 \times 10^{-6}$ |  |
| $\mathrm{IUR}_{1}$ | TCE inhalation unit risk for both non-Hodgkin lymphoma and liver cancer $\left(\mathrm{ug} / \mathrm{m}^{3}\right)^{1}$ |  | $3 \times 10^{-6}$ |  |

Notes: Modified from USEPA Region III Risk-based Concentration Table, dated October 20, 1995.
N/A = Not Applicable
${ }^{1}$ Residential exposure to systemic toxicants is based on adult exposure, consistent with USEPA (1991).
${ }^{2}$ Residential exposure to carcinogens is based on combined child and adult exposure.
${ }^{3}$ Default Transfer Factor is as presented in USEPA's RAGS, Part B.
${ }^{4}$ The Combined Age-Dependent Adjustment Factor and Exposure Duration (AED) is calculated using the equation AED = $\mathrm{ADAF}_{\iota 2} \times \mathrm{ED}_{\iota 2}+\mathrm{ADAF}_{2-16} \times \mathrm{ED}_{2-16}+\mathrm{ADAF}_{, 16} \times \mathrm{ED}_{, 16}$ where $\mathrm{ADAF}_{\iota 2}=10, \mathrm{ED}_{\curvearrowright 2}=2 \mathrm{yr}, \mathrm{ADAF}_{2-16}=3, \mathrm{ED}_{2-16}=14 \mathrm{yr}$, $\mathrm{ADAF}_{, 16}=1, \mathrm{ED}_{, 16}=14 \mathrm{yr}$.
Appendix A


| Regulated Substance | CASRN | Used Aquifers |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  | $T D S>2500$ |  |  |  |  |  |  |  |
|  |  | $R$ |  | NR |  | $R$ |  | NR |  | $R$ |  | $N R$ |  |
| ACENAPHTHENE | 83-32-9 | 2,500 | G | 3,800 | S | 3,800 | S | 3,800 | S | 3,800 | S | 3,800 | S |
| ACENAPHTHYLENE | 208-96-8 | 2,500 | G | 7,000 | G | 16,000 | S | 16,000 | S | 16,000 | S | 16,000 | S |
| ACEPHATE | 30560-19-1 | 84 | G | 390 | G | 8,400 | G | 39,000 | G |  | G | 390 | G |
| ACETALDEHYDE | 75-07-0 |  |  | 79 | N | 1,900 | N | 7,900 | N |  |  | 79 | N |
| ACETONE | 67-64-1 | 38,000 | G | 110,000 | G | 3,800,000 | G | 11,000,000 | G | 380,000 |  | 1,100,000 | G |
| ACETONITRILE | 75-05-8 | 130 | N | 530 | N | 13,000 | N | 53,000 | N | 1,300 |  | 5,300 | N |
| ACETOPHENONE | 98-86-2 | 4,200 | G | 12,000 | G | 420,000 | G | 1,200,000 | G | 4,200 |  | 12,000 | G |
| ACETYLAMINOFLUORENE, 2- (2AAF) | 53-96-3 | 0.19 | G | 0.89 | G | 19 | G | 89 | G | 190 | G | 890 | G |
| ACROLEIN | 107-02-8 | 0.042 | N | 0.18 | N | 4.2 | N | 18 | N | 0.42 |  | 1.8 | N |
| ACRYLAMIDE | 79-06-1 | 0.19 N | N | 2.5 | N | 19 | N | 250 | N | 0.19 |  | 2.5 | N |
| ACRYLIC ACID | 79-10-7 |  |  | 8.8 |  | 210 | N | 880 | N |  |  | 880 | N |
| ACRYLONITRILE | 107-13-1 | 0.72 N | N | 3.7 | N | 72 | N | 370 | N |  |  | 370 | N |
| ALACHLOR | 15972-60-8 | 2 | M | 2 | M | 200 | M | 200 |  | 2 | M | 2 | M |
| ALDICARB | 116-06-3 | 3 | M | 3 | M | 300 | M | 300 | M | 3,000 |  | 3,000 | M |
| ALDICARB SULFONE | 1646-88-4 | 2 | M | 2 | M | 200 | M | 200 |  |  | M | 2 | M |
| ALDICARB SULFOXIDE | 1646-87-3 | 4 | M | 4 | M | 400 | M | 400 |  | 4 | M | 4 | M |
| ALDRIN | 309-00-2 | 0.43 | G | 0.2 |  | 4.3 | G | 20 | G |  | S | 20 | S |
| ALLYL ALCOHOL | 107-18-6 | 0.21 | N | 0.88 |  | 21 | N | 88 | N | 21 |  | 88 | N |
| AMETRYN | 834-12-8 |  | H | 60 |  | 6,000 | H | 6,000 |  |  |  | 60 | H |
| AMINOBIPHENYL, 4- | 92-67-1 | 0.035 | G | 0.16 | G | 3.5 | G | 16 | G |  | G | 160 | G |
| AMITROLE | 61-82-5 | 0.78 |  | 3.6 | G | 78 | G | 360 | G | 780 |  | 3,600 | G |
| AMMONIA | 7664-41-7 | 30,000 | H | 30,000 |  | 3,000,000 | H | 3,000,000 | H | 30,000 |  | 30,000 | H |
| AMMONIUM SULFAMATE | 7773-06-0 | 2,000 | H | 2,000 | H | 200,000 | H | 200,000 | H | 2,000 |  | 2,000 | H |
| ANILINE | 62-53-3 | 2.1 |  | 8.8 | N | 210 | N | 880 | N | 2.1 |  | 8.8 | N |
| ANTHRACENE | 120-12-7 | 66 | S | 66 | S | 66 | S | 66 | S |  | S | 66 | S |
| ATRAZINE | 1912-24-9 | 3 | M | 3 | M | 300 | M | 300 |  |  | M | 3 | M |
| AZINPHOS-METHYL (GUTHION) | 86-50-0 | 130 | G | 350 | G | 13,000 | G | 32,000 | S | 130 |  | 350 | G |
| BAYGON (PROPOXUR) | 114-26-1 | 3 | H | 3 | H | 300 | H | 300 | H | 3,000 |  | 3,000 | H |
| BENOMYL | 17804-35-2 | 2,000 |  | 2,000 |  | 2,000 |  | 2,000 |  | 2,000 |  | 2,000 | S |
| BENTAZON | 25057-89-0 | 200 H |  | 200 | H | 20,000 | H | 20,000 |  | 200 |  | 200 | H |
| BENZENE | 71-43-2 | 5 | M | 5 | M | 500 | M | 500 | M | 500 |  | 500 | M |
| BENZIDINE | 92-87-5 | 0.00098 |  | 0.015 |  | 0.098 | G | 1.5 | G | 0.98 |  | 15 | G |
| BENZO[A]ANTHRACENE | 56-55-3 | 0.32 |  | 4.9 |  | 11 | S | 11 | S |  | S | 11 | S |
| BENZO[A]PYRENE | 50-32-8 | 0.2 |  | 0.2 | M | 3.8 | S | 3.8 | S | 3.8 | S | 3.8 | S |

[^9]Table 1—Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Groundwater

| Regulated Substance | CASRN | Used Aquifers |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  | $T D S>2500$ |  |  |  |  |  |  |  |
|  |  | $R$ |  | $N R$ |  | $R$ |  | NR |  | $R$ |  | $N R$ |  |
| BENZO[B]FLUORANTHENE | 205-99-2 | 0.19 | G | 1.2 | S | 1.2 | S | 1.2 | S | 1.2 | S | 1.2 | S |
| BENZO[GHI]PERYLENE | 191-24-2 | 0.26 | S | 0.26 | S | 0.26 | S | 0.26 | S | 0.26 | S | 0.26 | S |
| BENZO[K]FLUORANTHENE | 207-08-9 | 0.19 | G | 0.55 | S | 0.55 | S | 0.55 | S | 0.55 | S | 0.55 | S |
| BENZOIC ACID | 65-85-0 | 170,000 | G | 470,000 | G | 2,700,000 | S | 2,700,000 | S | 170,000 | G | 470,000 | G |
| BENZOTRICHLORIDE | 98-07-7 | 0.056 | G | 0.26 | G | 5.6 | G | 26 | G | 56 | G | 260 | G |
| BENZYL ALCOHOL | 100-51-6 | 4,200 |  | 12,000 | G | 420,000 | G | 1,200,000 | G | 4,200 | G | 12,000 | G |
| BENZYL CHLORIDE | 100-44-7 | 1 | N |  | N | 100 | N | 510 | N | 100 | N | 510 | N |
| BETA PROPIOLACTONE | 57-57-8 | 0.012 | N | 0.063 | N | 1.2 | N | 6.3 | N | 0.12 | N | 0.63 | N |
| BHC, ALPHA- | 319-84-6 | 0.12 | G | 0.54 | G | 12 | G | 54 | G | 120 | G | 540 | G |
| BHC, BETA- | 319-85-7 | 0.41 | G | 1.9 | G | 41 | G | 100 | S | 100 | S | 100 | S |
| BHC, GAMMA (LINDANE) | 58-89-9 | 0.2 |  |  | M | 20 | M | 20 | M | 200 | M | 200 | M |
| BIPHENYL, 1,1- | 92-52-4 | 91 | G | 430 | G | 7,200 | S | 7,200 | S | 7,200 | S | 7,200 | S |
| BIS(2-CHLOROETHOXY)METHANE | 111-91-1 | 130 | G | 350 | G | 13,000 | G | 35,000 | G | 130 | G | 350 | G |
| BIS(2-CHLOROETHYL)ETHER | 111-44-4 | 0.15 | N | 0.76 | N | 15 | N | 76 | N | 15 | N | 76 | N |
| BIS(2-CHLORO-ISOPROPYL)ETHER | 108-60-1 | 300 | H | 300 | H | 30,000 | H | 30,000 | H | 30,000 | H | 30,000 | H |
| BIS(CHLOROMETHYL)ETHER | 542-88-1 | 0.00079 | N | 0.004 | N | 0.079 | N | 0.4 | N | 0.079 | N | 0.4 | N |
| BIS[2-ETHYLHEXYL] PHTHALATE | 117-81-7 | 6 | M | 6 | M | 290 | S | 290 | S | 290 | S | 290 | S |
| BISPHENOL A | 80-05-7 | 2,100 | G | 5,800 | G | 120,000 | S | 120,000 | S | 120,000 | S | 120,000 | S |
| BROMACIL | 314-40-9 |  | H |  | H | 7,000 | H | 7,000 | H | 70 | H | 70 | H |
| BROMOCHLOROMETHANE | 74-97-5 | 90 |  |  | H | 9,000 | H | 9,000 | H | 90 | H | 90 | H |
| BROMODICHLOROMETHANE (THM) | 75-27-4 |  |  |  | M | 8,000 | M | 8,000 |  | 80 | M | 80 | M |
| BROMOMETHANE | 74-83-9 |  | H | 10 | H | 1,000 | H | 1,000 | H | 1,000 | H | 1,000 | H |
| BROMOXYNIL | 1689-84-5 | 830 |  | 2,300 | G | 83,000 | G | 130,000 | S | 830 | G | 2,300 | G |
| BROMOXYNIL OCTANOATE | 1689-99-2 | 80 | S | 80 | S | 80 | S | 80 | S | 80 | S | 80 | S |
| BUTADIENE, 1,3- | 106-99-0 | 0.21 |  | 1 | G | 21 | G | 100 | G | 21 | G | 100 | G |
| BUTYL ALCOHOL, N- | 71-36-3 | 4,200 | G | 12,000 | G | 420,000 | G | 1,200,000 | G | 42,000 | G | 120,000 | G |
| BUTYLATE | 2008-41-5 | 400 | H | 400 | H | 40,000 | H | 40,000 | H | 400 | H | 400 | H |
| BUTYLBENZENE, N - | 104-51-8 | 2,100 |  | 5,800 | G | 15,000 | S | 15,000 | S | 2,100 | G | 5,800 | G |
| BUTYLBENZENE, SEC- | 135-98-8 | 4,200 | G | 12,000 | G | 17,000 | S | 17,000 | S | 4,200 | G | 12,000 | G |
| BUTYLBENZENE, TERT- | 98-06-6 | 4,200 | G | 12,000 | G | 30,000 | S | 30,000 | S | 4,200 | G | 12,000 | G |
| BUTYLBENZYL PHTHALATE | 85-68-7 | 380 | G | 1,800 | G | 2,700 | S | 2,700 | S | 2,700 | S | 2,700 | S |
| CAPTAN | 133-06-2 | 320 |  | 500 | S | 500 | S | 500 | S | 500 | S | 500 | S |
| CARBARYL | 63-25-2 | 4,200 |  | 12,000 | G | 120,000 | S | 120,000 | S | 120,000 | S | 120,000 | S |
| CARBAZOLE | 86-74-8 | 37 |  | 170 | G | 1,200 | S | 1,200 | S | 37 | S | 170 | S |

[^10]Table 1—Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Groundwater

| Regulated Substance | CASRN | Used Aquifers |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  | $T D S>2500$ |  |  |  |  |  |  |  |
|  |  | $R$ | $N R$ |  | $R$ |  | $N R$ |  | $R$ |  | $N R$ |  |
| CARBOFURAN | 1563-66-2 | 40 M |  | M | 4,000 | M | 4,000 | M | 40 |  | 40 | M |
| CARBON DISULFIDE | 75-15-0 | 1,500 N | 6,200 | N | 150,000 | N | 620,000 | N | 1,500 |  | 6,200 | N |
| CARBON TETRACHLORIDE | 56-23-5 | 5 M | 5 | M | 500 | M | 500 | M | 50 |  | 50 | M |
| CARBOXIN | 5234-68-4 | 700 H | 700 | H | 70,000 |  | 70,000 | H | 700 |  | 700 | H |
| CHLORAMBEN | 133-90-4 | 100 H | 100 | H | 10,000 | H | 10,000 | H | 100 |  | 100 | H |
| CHLORDANE | 57-74-9 | 2 M | 2 | M | 56 | S | 56 | S | 56 |  | 56 | S |
| CHLORO-1,1-DIFLUOROETHANE, 1- | 75-68-3 | 110,000 N | 440,000 | N | 1,400,000 | S | 1,400,000 | S | 110,000 |  | 440,000 | N |
| CHLORO-1-PROPENE, 3- (ALLYL CHLORIDE) | 107-05-1 | 2.1 N | 8.8 | N | 210 |  | 880 | N | 210 |  | 880 | N |
| CHLOROACETALDEHYDE | 107-20-0 | 2.4 C |  | G | 240 | G | 1,100 | G | 2.4 |  | 11 | G |
| CHLOROACETOPHENONE, 2 - | 532-27-4 | 1.3 C | 3.5 | G | 130 | G | 350 | G | 1,300 |  | 3,500 | G |
| CHLOROANILINE, P- | 106-47-8 | 3.7 C |  | G | 370 | G | 1,700 | G | 3.7 |  | 17 | G |
| CHLOROBENZENE | 108-90-7 | 100 M | 100 | M | 10,000 |  | 10,000 | M | 10,000 |  | 10,000 | M |
| CHLOROBENZILATE | 510-15-6 | 6.6 C |  | G | 660 | G | 3,100 | G | 6,600 |  | 13,000 | S |
| CHLOROBUTANE, 1 - | 109-69-3 | 1,700 C | 4,700 | G | 170,000 |  | 470,000 | G | 1,700 |  | 4,700 | G |
| CHLORODIBROMOMETHANE (THM) | 124-48-1 | 80 M |  | M | 8,000 | M | 8,000 | M | 8,000 |  | 8,000 | M |
| CHLORODIFLUOROMETHANE | 75-45-6 | 110,000 N | 440,000 | N | 2,900,000 | S | 2,900,000 | S | 110,000 |  | 440,000 | N |
| CHLOROETHANE | 75-00-3 | 250 G | 1,200 | G | 25,000 | G | 120,000 | G | 25,000 |  | 120,000 | G |
| CHLOROFORM (THM) | 67-66-3 | 80 M |  | M | 8,000 |  | 8,000 | M | 800 |  | 800 | M |
| CHLORONAPHTHALENE, 2- | 91-58-7 | 3,300 G | 9,300 | G | 12,000 | S | 12,000 | S | 3,300 | G | 9,300 | G |
| CHLORONITROBENZENE, P- | 100-00-5 | 42 G | 120 | G | 4,200 |  | 12,000 | G | 42 |  | 120 | G |
| CHLOROPHENOL, 2 - | 95-57-8 | 40 H |  | H | 4,000 |  | 4,000 | H | 40 |  | 40 | H |
| CHLOROPRENE | 126-99-8 | 0.16 N | 0.83 | N | 16 | N | 83 | N | 16 |  | 83 | N |
| CHLOROPROPANE, 2- | 75-29-6 | 210 N | 880 | N | 21,000 |  | 88,000 | N | 210 |  | 880 | N |
| CHLOROTHALONIL | 1897-45-6 | 240 G | 600 | S | 600 | S | 600 | S | 240 |  | 600 | S |
| CHLOROTOLUENE, O- | 95-49-8 | 100 H | 100 | H | 10,000 |  | 10,000 | H | 100 | H | 100 | H |
| CHLOROTOLUENE, P- | 106-43-4 | 100 H | 100 | H | 10,000 | H | 10,000 | H | 100 |  | 100 | H |
| CHLORPYRIFOS | 2921-88-2 | 2 H | 2 | H | 200 | H | 200 | H | 2 | H | 2 | H |
| CHLORSULFURON | 64902-72-3 | 2,100 | 5,800 | G | 190,000 | S | 190,000 | S | 2,100 |  | 5,800 | G |
| CHLORTHAL-DIMETHYL (DACTHAL) (DCPA) | 1861-32-1 | 70 H |  | H | 500 | S | 500 | S | 500 | S | 500 | S |
| CHRYSENE | 218-01-9 | 1.9 | 1.9 | S | 1.9 | S | 1.9 | S | 1.9 |  | 1.9 | S |
| CRESOL(S) | 1319-77-3 | 1,300 N | 5,300 | N | 130,000 | N | 530,000 | N | 130,000 | N | 530,000 | N |
| CRESOL, DINITRO-O-,4,6- | 534-52-1 | 3.3 C | 9.3 | G | 330 | G | 930 | G | 3,300 |  | 9,300 | G |
| CRESOL, O- (METHYLPHENOL, 2-) | 95-48-7 | 2,100 | 5,800 | G | 210,000 | G | 580,000 | G | 210,000 |  | 580,000 | G |
| CRESOL, M (METHYLPHENOL, 3-) | 108-39-4 | 2,100 C | 5,800 | G | 210,000 | G | 580,000 | G | 2,100,000 | G | 2,500,000 | S |

[^11]Table 1—Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Groundwater

| Regulated Substance | CASRN | Used Aquifers |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  | $T D S>2500$ |  |  |  |  |  |  |  |
|  |  | $R$ | $N R$ |  | $R$ |  | $N R$ |  | $R$ |  | $N R$ |  |
| CRESOL, P (METHYLPHENOL, 4-) | 106-44-5 | 210 G | 580 | G | 21,000 | G | 58,000 | G | 210,000 | G | 580,000 | G |
| CRESOL, P-CHLORO-M- | 59-50-7 | $4,200 \mathrm{G}$ | 12,000 | G | 420,000 | G | 1,200,000 | G | 4,200 | G | 12,000 | G |
| CROTONALDEHYDE | 4170-30-3 | 0.38 G | 1.8 | G | 38 | G | 180 | G | 38 | G | 180 | G |
| CROTONALDEHYDE, TRANS- | 123-73-9 | 0.38 G | 1.8 | G | 38 | G | 180 | G | 38 | G | 180 | G |
| CUMENE (ISOPROPYL BENZENE) | 98-82-8 | 840 N | 3,500 | N | 50,000 | S | 50,000 | S | 50,000 |  | 50,000 | S |
| CYANAZINE | 21725-46-2 | 1 H |  | H | 100 | H | 100 | H | 1 | H | 1 | H |
| CYCLOHEXANE | 110-82-7 | 13,000 N | 53,000 | N | 55,000 | S | 55,000 | S | 13,000 |  | 53,000 | N |
| CYCLOHEXANONE | 108-94-1 | 1,500 N | 6,200 | N | 150,000 | N | 620,000 | N | 1,500 |  | 6,200 | N |
| CYFLUTHRIN | 68359-37-5 | 1 S |  | S | 1 | S | 1 | S |  | S | 1 | S |
| CYROMAZINE | 66215-27-8 | 310 G | 880 | G | 31,000 | G | 88,000 | G | 310 | G | 880 | G |
| DDD, 4,4'- | 72-54-8 | 3 G |  | G | 160 | S | 160 | S | 160 | S | 160 | S |
| DDE, 4,4'- | 72-55-9 | 2.1 G |  | G | 40 | S | 40 | S | 40 | S | 40 | S |
| DDT, 4,4'- | 50-29-3 | 2.1 G | 5.5 | S | 5.5 | S | 5.5 | S | 5.5 | S | 5.5 | S |
| DI(2-ETHYLHEXYL)ADIPATE | 103-23-1 | 400 M | 400 | M | 40,000 | M | 40,000 | M | 200,000 |  | 200,000 | S |
| DIALLATE | 2303-16-4 | 12 G |  | G | 1,200 | G | 5,600 | G | 12,000 | G | 40,000 | S |
| DIAMINOTOLUENE, 2,4- | 95-80-7 | 0.18 G | 0.85 | G | 18 | G | 85 | G | 180 | G | 850 | G |
| DIAZINON | 333-41-5 | 1 H |  | H | 100 | H | 100 | H | 1 | H | 1 | H |
| DIBENZO[A,H]ANTHRACENE | 53-70-3 | 0.055 G | 0.6 | S | 0.6 | S | 0.6 | S | 0.6 |  | 0.6 | S |
| DIBENZOFURAN | 132-64-9 | 42 G | 120 | G | 4,200 | G | 4,500 | S | 4,500 |  | 4,500 | S |
| DIBROMO-3-CHLOROPROPANE, 1,2- | 96-12-8 | 0.2 M | 0.2 | M | 20 | M | 20 | M | 20 |  | 20 | M |
| DIBROMOBENZENE, 1,4- | 106-37-6 | 420 G | 1,200 | G | 20,000 | S | 20,000 | S | 420 |  | 1,200 | G |
| DIBROMOETHANE, 1,2-(ETHYLENE DIBROMIDE) | 106-93-4 | 0.05 M | 0.05 | M | 5 | M | 5 | M |  | M | 5 | M |
| DIBROMOMETHANE | 74-95-3 | 8.4 N |  | N | 840 | N | 3,500 | N | 840 |  | 3,500 | N |
| DIBUTYL PHTHALATE, N- | 84-74-2 | $4,200 \mathrm{G}$ | 12,000 | G | 400,000 | S | 400,000 | S | 400,000 |  | 400,000 | S |
| DICAMBA | 1918-00-9 | $4,000 \mathrm{H}$ | 4,000 | H | 400,000 | H | 400,000 | H | 4,000 |  | 4,000 | H |
| DICHLOROACETIC ACID (HAA) | 76-43-6 | 60 M | 60 | M | 6,000 | M | 6,000 | M | 60 | M | 60 | M |
| DICHLORO-2-BUTENE, 1,4- | 764-41-0 | 0.012 N | 0.06 | N | 1.2 | N | 6 | N | 0.012 | N | 0.06 | N |
| DICHLORO-2-BUTENE, TRANS-1,4- | 110-57-6 | 0.012 N | 0.06 | N | 1.2 | N | 6 | N | 0.012 | N | 0.06 | N |
| DICHLOROBENZENE, 1,2- | 95-50-1 | 600 M | 600 | M | 60,000 | M | 60,000 | M | 60,000 |  | 60,000 | M |
| DICHLOROBENZENE, 1,3- | 541-73-1 | 600 H | 600 | H | 60,000 | H | 60,000 | H | 60,000 |  | 60,000 | H |
| DICHLOROBENZENE, P- | 106-46-7 | 75 M | 75 | M | 7,500 | M | 7,500 | M | 7,500 | M | 7,500 | M |
| DICHLOROBENZIDINE, 3,3'- | 91-94-1 | 1.6 G | 7.6 | G | 160 | G | 760 | G | 1,600 |  | 3,100 | S |
| DICHLORODIFLUOROMETHANE (FREON 12) | 75-71-8 | 1,000 H | 1,000 | H | 100,000 | H | 100,000 | H | 100,000 | H | 100,000 | H |
| DICHLOROETHANE, 1,1- | 75-34-3 | 31 N | 160 | N | 3,100 | N | 16,000 | N | 310 | N | 1,600 | N |

[^12]Table 1-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Groundwater

| Regulated Substance | CASRN | Used Aquifers |  |  |  | Nonuse Aquifers |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  | $T D S>2500$ |  |  |  |  |
|  |  | $R$ | $N R$ | $R$ | NR | $R$ | NR |  |
| DICHLOROETHANE, 1,2- | 107-06-2 | 5 M | 5 M | 500 M | 500 M | 50 M | 50 | M |
| DICHLOROETHYLENE, 1,1- | 75-35-4 | 7 M | 7 M | 700 M | 700 M | 70 M | 70 | M |
| DICHLOROETHYLENE, CIS-1,2- | 156-59-2 | 70 M | 70 M | 7,000 M | 7,000 M | 700 M | 700 | M |
| DICHLOROETHYLENE, TRANS-1,2- | 156-60-5 | 100 M | 100 M | 10,000 M | 10,000 M | 1,000 M | 1,000 | M |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | 75-09-2 | 5 M | 5 M | 500 M | 500 M | 500 M | 500 | M |
| DICHLOROPHENOL, 2,4- | 120-83-2 | 20 H | 20 H | $2,000 \mathrm{H}$ | $2,000 \mathrm{H}$ | $20,000 \mathrm{H}$ | 20,000 | H |
| DICHLOROPHENOXYACETIC ACID, 2,4- (2,4-D) | 94-75-7 | 70 M | 70 M | 7,000 M | 7,000 M | $70,000 \mathrm{M}$ | 70,000 | M |
| DICHLOROPROPANE, 1,2 - | 78-87-5 | 5 M | 5 M | 500 M | 500 M | 50 M | 50 | M |
| DICHLOROPROPENE, $1,3-$ | 542-75-6 | 7.3 G | 34 G | 730 G | $3,400 \quad \mathrm{G}$ | 730 G | 3,400 | G |
| DICHLOROPROPIONIC ACID, 2,2- (DALAPON) | 75-99-0 | 200 M | 200 M | 20,000 M | 20,000 M | $20,000 \mathrm{M}$ | 20,000 | M |
| DICHLORVOS | 62-73-7 | 2.5 G | 12 G | 250 G | 1,200 G | 2.5 G | 12 | G |
| DICYCLOPENTADIENE | 77-73-6 | 0.63 N | 2.6 N | 63 N | 260 N | 0.63 N | 2.6 | N |
| DIELDRIN | 60-57-1 | 0.046 G | 0.21 G | 4.6 G | 21 G | 46 G | 170 | S |
| DIETHYL PHTHALATE | 84-66-2 | $33,000 \mathrm{G}$ | $93,000 \quad \mathrm{G}$ | 1,100,000 S | 1,100,000 S | 1,100,000 S | 1,100,000 | S |
| DIFLUBENZURON | 35367-38-5 | 200 S | 200 S | 200 S | 200 S | 200 S | 200 | S |
| DIISOPROPYL METHYLPHOSPHONATE | 1445-75-6 | 600 H | 600 H | $60,000 \mathrm{H}$ | 60,000 H | 600 H | 600 | H |
| DIMETHOATE | 60-51-5 | 8.3 G | 23 G | 830 G | 2,300 G | $8,300 \mathrm{G}$ | 23,000 | G |
| DIMETHOXYBENZIDINE, 3,3- | 119-90-4 | 0.46 G | 2 G | 46 G | 210 G | 460 G | 2,100 | G |
| DIMETHRIN | 70-38-2 | 36 S | 36 S | 36 S | 36 S | 36 S | 36 | S |
| DIMETHYLAMINOAZOBENZENE, P- | 60-11-7 | 0.16 G | 0.74 G | 16 G | 74 G | 160 G | 740 | G |
| DIMETHYLANILINE, $\mathrm{N}, \mathrm{N}$ - | 121-69-7 | 83 G | 230 G | 8,300 G | $23,000 \mathrm{G}$ | 8,300 G | 23,000 | G |
| DIMETHYLBENZIDINE, 3,3- | 119-93-7 | 0.066 G | 0.31 G | 6.6 G | 31 G | 66 G | 310 | G |
| DIMETHYL METHYLPHOSPHONATE | 756-79-6 | 100 H | 100 H | 10,000 H | $10,000 \mathrm{H}$ | 100 H | 100 | H |
| DIMETHYLPHENOL, 2,4- | 105-67-9 | 830 G | $2,300 \quad \mathrm{G}$ | 83,000 G | $230,000 \mathrm{G}$ | $830,000 \mathrm{G}$ | 2,300,000 | G |
| DINITROBENZENE, 1,3- | 99-65-0 | 1 H | 1 H | 100 H | 100 H | $1,000 \mathrm{H}$ | 1,000 | H |
| DINITROPHENOL, 2,4- | 51-28-5 | 83 G | 230 G | 8,300 G | $23,000 \mathrm{G}$ | 83,000 G | 230,000 | G |
| DINITROTOLUENE, 2,4- | 121-14-2 | 2.4 G | 11 G | 240 G | $1,100 \mathrm{G}$ | $2,400 \mathrm{G}$ | 11,000 | G |
| DINITROTOLUENE, 2,6- (2,6-DNT) | 606-20-2 | 0.49 G | 2 G | 49 G | 230 G | 490 G | 2,300 | G |
| DINOSEB | 88-85-7 | 7 M | 7 M | 700 M | 700 M | 7,000 M | 7,000 | M |
| DIOXANE, 1,4- | 123-91-1 | 6.4 N | 32 N | 640 N | $3,200 \mathrm{~N}$ | 64 N | 320 | N |
| DIPHENAMID | 957-51-7 | 200 H | 200 H | 20,000 H | 20,000 H | 200 H | 200 | H |
| DIPHENYLAMINE | 122-39-4 | 1,000 G | 2,900 G | 100,000 G | 290,000 G | 300,000 S | 300,000 | S |
| DIPHENYLHYDRAZINE, 1,2- | 122-66-7 | 0.91 G | 4.3 G | 91 G | 250 S | 250 S | 250 | S |
| DIQUAT | 85-00-7 | 20 M | 20 M | 2,000 M | 2,000 M | 20 M |  | M |

[^13]Table 1-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Groundwater

| Regulated Substance | CASRN | Used Aquifers |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  | TDS > 2500 |  |  |  |  |  |  |  |
|  |  | $R$ |  | NR |  | $R$ |  | NR |  | $R$ |  | NR |  |
| DISULFOTON | 298-04-4 | 0.7 | H | 0.7 | H | 70 | H | 70 | H | 700 | H | 700 | H |
| DITHIANE, 1,4- | 505-29-3 | 80 | H | 80 | H | 8,000 | H | 8,000 | H | 80 | H | 80 | H |
| DIURON | 330-54-1 | 83 | G | 230 | G | 8,300 | G | 23,000 | G | 83 | G | 230 | G |
| ENDOSULFAN | 115-29-7 | 250 | G | 480 | S | 480 | S | 480 | S | 480 | S | 480 | S |
| ENDOSULFAN I (APLHA) | 959-98-8 | 250 | G | 500 | S | 500 | S | 500 | S | 250 | G | 500 | S |
| ENDOSULFAN II (BETA) | 33213-65-9 | 250 | G | 450 | S | 450 | S | 450 | S | 250 | G | 450 | S |
| ENDOSULFAN SULFATE | 1031-07-8 | 120 | S | 120 | S | 120 | S | 120 | S | 120 | S | 120 | S |
| ENDOTHALL | 145-73-3 | 100 | M | 100 | M | 10,000 | M | 10,000 | M | 100 | M | 100 | M |
| ENDRIN | 72-20-8 |  | M | 2 | M | 200 | M | 200 | M | 2 | M | 2 | M |
| EPICHLOROHYDRIN | 106-89-8 | 2.1 | N | 8.8 | N | 210 | N | 880 | N | 210 | N | 880 | N |
| ETHEPHON | 16672-87-0 | 210 | G | 580 | G | 21,000 | G | 58,000 | G | 210 | G | 580 | G |
| ETHION | 563-12-2 | 21 | G | 58 | G | 850 | S | 850 | S | 21 | G | 58 | G |
| ETHOXYETHANOL, 2- (EGEE) | 110-80-5 | 420 | N | 1,800 | N | 42,000 | N | 180,000 | N | 42,000 | N | 180,000 | N |
| ETHYL ACETATE | 141-78-6 | 150 | G | 620 | G | 150,000 | G | 62,000 | G | 150,000 | G | 62,000 | G |
| ETHYL ACRYLATE | 140-88-5 | 15 | G | 70 | N | 1,500 | G | 7,000 | N | 1,500 | G | 7,000 | N |
| ETHYL BENZENE | 100-41-4 | 700 | M | 700 | M | 70,000 | M | 70,000 | M | 70,000 | M | 70,000 | M |
| ETHYL DIPROPYLTHIOCARBAMATE, S- (EPTC) | 759-94-4 | 1,000 | G | 2,900 | G | 100,000 | G | 290,000 | G | 1,000 | G | 2,900 | G |
| ETHYL ETHER | 60-29-7 | 8,300 | G | 23,000 | G | 830,000 | G | 2,300,000 | G | 8,300 | G | 23,000 | G |
| ETHYL METHACRYLATE | 97-63-2 | 630 | N | 2,600 | N | 63,000 | N | 260,000 | N | 630 | N | 2,600 | N |
| ETHYLENE CHLORHYDRIN | 107-07-3 | 830 | G | 2,300 | G | 83,000 | G | 230,000 | G | 830 | G | 2,300 | G |
| ETHYLENE GLYCOL | 107-21-1 | 14,000 | H | 14,000 | H | 1,400,000 | H | 1,400,000 | H | 1,400,000 | H | 1,400,000 | H |
| ETHYLENE THIOUREA (ETU) | 96-45-7 | 3.3 | G | 9.3 | G | 330 | G | 930 | G | 3,300 | G | 9,300 | G |
| ETHYLP-NITROPHENYL PHENYLPHOSPHOROTHIOATE | 2104-64-5 | 0.42 | G | 1 | G | 42 | G | 120 | G | 0.42 | G | 1.2 | G |
| FENAMIPHOS | 22224-92-6 | 0.7 | H | 0.7 | H | 70 | H | 70 | H | 0.7 | H | 0.7 | H |
| FENVALERATE (PYDRIN) | 51630-58-1 | 85 | S | 85 | S | 85 | S | 85 | S | 85 | S | 85 | S |
| FLUOMETURON | 2164-17-2 | 90 | H | 90 | H | 9,000 | H | 9,000 | H | 90 | H | 90 | H |
| FLUORANTHENE | 206-44-0 | 260 | S | 260 | S | 260 | S | 260 | S | 260 | S | 260 | S |
| FLUORENE | 86-73-7 | 1,700 | G | 1,900 | S | 1,900 | S | 1,900 | S | 1,900 | S | 1,900 | S |
| FLUOROTRICHLOROMETHANE (FREON 11) | 75-69-4 | 2,000 | H | 2,000 | H | 200,000 | H | 200,000 | H | 200,000 | H | 200,000 | H |
| FONOFOS | 944-22-9 | 10 | H | 10 | H | 1,000 | H | 1,000 | H | 10 | H | 10 | H |
| FORMALDEHYDE | 50-00-0 | 1,000 | H | 1,000 | H | 100,000 | H | 100,000 | H | 100,000 | H | 100,000 | H |
| FORMIC ACID | 64-18-6 | 0.63 | N | 2.6 | N | 63 | N | 260 | N | 6.3 | N | 26 | N |
| FOSETYL-AL | 39148-24-8 | 130,000 | G | 350,000 | G | 13,000,000 | G | 35,000,000 | G | 130,000 | G | 350,000 | G |
| FURAN | 110-00-9 | 42 | G | 120 | G | 4,200 | G | 12,000 | G | 4,200 | G | 12,000 | G |

[^14]Table 1-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Groundwater

| Regulated Substance | CASRN | Used Aquifers |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  | $T D S>2500$ |  |  |  |  |  |  |  |
|  |  | $R$ |  | NR |  | $R$ |  | NR |  | $R$ |  | $N R$ |  |
| FURFURAL | 98-01-1 | 110 N |  | 350 | G | 11,000 | N | 35,000 | G | 110 | N | 350 | G |
| GLYPHOSATE | 1071-83-6 | 700 M |  | 700 | M | 70,000 |  | 70,000 | M | 700 | M | 700 | M |
| HEPTACHLOR | 76-44-8 | 0.4 M |  | 0.4 |  | 40 | M | 40 | M | 180 | S | 180 | S |
| HEPTACHLOR EPOXIDE | 1024-57-3 | 0.2 M |  | 0.2 | M | 20 |  | 20 | M | 200 | M | 200 | M |
| HEXACHLOROBENZENE | 118-74-1 | 1 M | M | 1 | M | 6 | S | 6 | S | 6 | S | 6 | S |
| HEXACHLOROBUTADIENE | 87-68-3 | 9.4 |  | 44 | G | 940 |  | 2,900 | S | 2,900 | S | 2,900 | S |
| HEXACHLOROCYCLOPENTADIENE | 77-47-4 | 50 M |  | 50 |  | 1,800 | S | 1,800 | S | 1,800 | S | 1,800 | S |
| HEXACHLOROETHANE | 67-72-1 | 1 | H | 1 | H | 100 | H | 100 | H |  | H | 100 | H |
| HEXANE | 110-54-3 | 1,500 N |  | 6,200 | N | 9,500 | S | 9,500 | S | 1,500 | N | 6,200 | N |
| HEXAZINONE | 51235-04-2 | 400 |  | 400 | H | 40,000 |  | 40,000 | H | 400 | H | 400 | H |
| HEXYTHIAZOX (SAVEY) | 78587-05-0 | 500 |  | 500 | S | 500 | S | 500 | S | 500 | S | 500 | S |
| HMX | 2691-41-0 | 400 H |  | 400 | H | 5,000 | S | 5,000 | S | 400 | H | 400 | H |
| HYDRAZINE/HYDRAZINE SULFATE | 302-01-2 | 0.01 |  | 0.051 | N | 1 | N | 5.1 | N | 0.1 | N | 0.51 | N |
| HYDROQUINONE | 123-31-9 | 12 |  | 57 | G | 1,200 | G | 5,700 | G | 12,000 | G | 57,000 | G |
| INDENO[1,2,3-CD]PYRENE | 193-39-5 | 0.19 |  | 2.8 | G | 19 | G | 62 | S |  | S | 62 | S |
| IPRODIONE | 36734-19-7 | 1,700 |  | 4,700 | G | 13,000 | S | 13,000 | S | 1,700 | G | 4,700 | G |
| ISOBUTYL ALCOHOL | 78-83-1 | 13,000 |  | 35,000 | G | 1,300,000 | G | 3,500,000 | G | 1,300,000 | G | 3,500,000 | G |
| ISOPHORONE | 78-59-1 | 100 H |  | 100 | H | 10,000 | H | 10,000 | H | 100,000 | H | 100,000 | H |
| ISOPROPYL METHYLPHOSPHONATE | 1832-54-8 | 700 |  | 700 | H | 70,000 | H | 70,000 | H | 700 | H | 700 | H |
| KEPONE | 143-50-0 | 0.073 |  | 0.34 | G | 7.3 | G | 34 | G |  | G | 340 | G |
| MALATHION | 121-75-5 | 500 |  | 500 | H | 50,000 | H | 50,000 | H | 140,000 | S | 140,000 | S |
| MALEIC HYDRAZIDE | 123-33-1 | 4,000 |  | 4,000 | H | 400,000 | H | 400,000 | H | 4,000 | H | 4,000 | H |
| MANEB | 12427-38-2 | 210 |  | 580 | G | 21,000 | G | 23,000 | S | 210 | G | 580 | G |
| MERPHOS OXIDE | 78-48-8 | 1.3 |  | 3.5 | G | 130 | G | 350 | G |  | G | 3.5 | G |
| METHACRYLONITRILE | 126-98-7 | 4.2 G |  | 12 | G | 420 | G | 1,200 | G | 4.2 | G | 12 | G |
| METHAMIDOPHOS | 10265-92-6 | 2.1 |  | 5.8 | G | 210 | G | 580 | G | 2.1 | G | 5.8 | G |
| METHANOL | 67-56-1 | 8,400 |  | 35,000 | N | 840,000 | N | 3,500,000 | N | 840,000 | N | 3,500,000 | N |
| METHOMYL | 16752-77-5 | 200 |  | 200 | H | 20,000 | H | 20,000 | H | 200 | H | 200 | H |
| METHOXYCHLOR | 72-43-5 | 40 M |  | 40 | M | 45 | S | 45 | S | 45 | S | 45 | S |
| METHOXYETHANOL, 2- | 109-86-4 | 42 |  | 180 | N | 4,200 | N | 18,000 | N |  | N | 180 | N |
| METHYL ACETATE | 79-20-9 | 42,000 |  | 120,000 | G | 4,200,000 | G | 12,000,000 | G | 42,000 | G | 120,000 | G |
| METHYL ACRYLATE | 96-33-3 | 42 N |  | 180 | N | 4,200 | N | 18,000 | N | 4,200 | N | 18,000 | N |
| METHYL CHLORIDE | 74-87-3 | 30 |  | 30 | H | 3,000 | H | 3,000 | H | 3,000 |  | 3,000 | H |
| METHYL ETHYL KETONE | 78-93-3 | 4,000 |  | 4,000 | H | 400,000 | H | 400,000 | H | 400,000 | H | 400,000 | H |

[^15]Table 1-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Groundwater

| Regulated Substance | CASRN | Used Aquifers |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  | $T D S>2500$ |  |  |  |  |  |  |  |
|  |  | $R$ |  | $N R$ |  | $R$ |  | $N R$ |  | $R$ |  | NR |  |
| METHYL HYDRAZINE | 60-34-4 | 0.042 | N | 0.18 | N | 4.2 | N | 18 | N | 0.42 | N | 1.8 | N |
| METHYL ISOBUTYL KETONE | 108-10-1 | 3,300 | G | 9,300 | G | 330,000 | G | 930,000 | G | 330,000 | G | 930,000 | G |
| METHYL ISOCYANATE | 624-83-9 | 2.1 |  | 8.8 | N | 210 | N | 880 | N |  | N | 8.8 | N |
| METHYL N-BUTYL KETONE | 591-78-6 |  | N | 260 | N | 6,300 | N | 26,000 | N |  | N | 260 | N |
| METHYL METHACRYLATE | 80-62-6 | 1,500 | N | 6,200 | N | 150,000 | N | 620,000 | N | 150,000 | N | 620,000 | N |
| METHYL METHANESULFONATE | 66-27-3 | 7.4 | G |  | G | 740 | G | 3,400 | G | 7.4 | G | 34 | G |
| METHYL PARATHION | 298-00-0 | 1 | H | 1 | H | 100 | H | 100 | H | 1,000 | H | 1,000 | H |
| METHYL STYRENE (MIXED ISOMERS) | 25013-15-4 | 84 | N | 350 | N | 8,400 | N | 35,000 | N | 84 | N | 350 | N |
| METHYL TERT-BUTYL ETHER (MTBE) | 1634-04-4 | 20 |  | 20 |  | 2,000 |  | 2,000 |  | 200 |  | 200 |  |
| METHYLCHLOROPHENOXYACETIC ACID (MCPA) | 94-74-6 | 30 | H |  | H | 3,000 | H | 3,000 | H | 30,000 | H | 30,000 | H |
| METHYLENE BIS(2-CHLOROANILINE), 4,4'- | 101-14-4 | 2.3 | G |  | G | 230 | G | 3,400 | G | 2.3 | G | 34 | G |
| METHYLNAPHTHALENE, 2- | 91-57-6 | 170 | G | 470 | G | 17,000 | G | 25,000 | S | 170 | G | 470 | G |
| METHYLSTYRENE, ALPHA | 98-83-9 | 2,900 | G | 8,200 | G | 290,000 | G | 560,000 | S | 2,900 | G | 8,200 | G |
| METOLACHLOR | 51218-45-2 | 700 | H | 700 | H | 70,000 | H | 70,000 | H | 700 | H | 700 | H |
| METRIBUZIN | 21087-64-9 |  | H |  | H | 7,000 | H | 7,000 | H | 70 | H | 70 | H |
| MONOCHLOROACETIC ACID (HAA) | 79-11-8 |  | H |  | H | 6,000 | H | 6,000 | H | 60 | H | 60 | H |
| NAPHTHALENE | 91-20-3 | 100 | H | 100 | H | 10,000 | H | 10,000 | H | 30,000 | S | 30,000 | S |
| NAPHTHYLAMINE, 1 - | 134-32-7 | 0.41 | G | 1.9 | G | 41 | G | 190 | G | 410 | G | 1,900 | G |
| NAPHTHYLAMINE, 2- | 91-59-8 | 0.41 | G | 1.9 | G | 41 | G | 190 | G | 410 | G | 1,900 | G |
| NAPROPAMIDE | 15299-99-7 | 4,200 | G | 12,000 | G | 70,000 | S | 70,000 | S | 4,200 | G | 12,000 | G |
| NITROANILINE, O- | 88-74-4 | 420 | G | 1,200 | G | 42,000 | G | 120,000 | G | 420 | G | 1,200 | G |
| NITROANILINE, P- | 100-01-6 | 37 | G | 170 | G | 3,700 | G | 17,000 | G | 37 | G | 170 | G |
| NITROBENZENE | 98-95-3 | 83 | G | 230 | G | 8,300 | G | 23,000 | G | 83,000 | G | 230,000 | G |
| NITROGUANIDINE | 556-88-7 | 700 | H | 700 | H | 70,000 | H | 70,000 | H | 700 | H | 700 | H |
| NITROPHENOL, 2 - | 88-75-5 | 330 | G | 930 | G | 33,000 | G | 93,000 | G | 330,000 | G | 930,000 | G |
| NITROPHENOL, 4- | 100-02-7 | 60 | H |  | H | 6,000 | H | 6,000 | H | 60,000 | H | 60,000 | H |
| NITROPROPANE, 2- | 79-46-9 | 0.018 | N | 0.093 | N | 1.8 | N | 9.3 | N | 0.18 | N | 0.93 | N |
| NITROSODIETHYLAMINE, N- | 55-18-5 | 0.00045 | N | 0.0058 | N | 0.045 | N | 0.58 | N | 0.0045 | N | 0.058 | N |
| NITROSODIMETHYLAMINE, N- | 62-75-9 | 0.0014 | N | 0.018 | N | 0.14 | N | 1.8 | N | 0.014 | N | 0.18 | N |
| NITROSO-DI-N-BUTYLAMINE, N- | 924-16-3 | 0.14 | G | 0.63 | G | 14 | G | 63 | G | 140 | G | 630 | G |
| NITROSODI-N-PROPYLAMINE, N- | 621-64-7 | 0.1 | G | 0.49 | G | 10 | G | 49 | G | 100 | G | 490 | G |
| NITROSODIPHENYLAMINE, N- | 86-30-6 | 150 | G | 690 | G | 15,000 | G | 35,000 | S | 35,000 | S | 35,000 | S |
| NITROSO-N-ETHYLUREA, N- | 759-73-9 | 0.0084 | G | 0.13 | G | 0.84 | G | 13 | G | 8.4 | G | 130 | G |
| OCTYL PHTHALATE, DI-N- | 117-84-0 | 420 | G | 1,200 |  | 3,000 | S | 3,000 | S | 3,000 | S | 3,000 | S |

[^16]PENNSYLVANIA BULLETIN, VOL. 46, NO. 35, AUGUST 27, 2016
Table 1-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Groundwater

| Regulated Substance | CASRN | Used Aquifers |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  | $T D S>2500$ |  |  |  |  |  |  |  |
|  |  | $R$ |  | $N R$ |  | $R$ |  | $N R$ |  | $R$ |  | $N R$ |  |
| OXAMYL (VYDATE) | 23135-22-0 | 200 M |  | 200 | M | 20,000 | M | 20,000 |  | 200 | M | 200 | M |
| PARAQUAT | 1910-42-5 | 30 H |  | 30 | H | 3,000 | H | 3,000 | H |  | H | 30 | H |
| PARATHION | 56-38-2 | 250 |  | 700 | G | 20,000 | S | 20,000 | S | 250 | G | 700 | G |
| PCB-1016 (AROCLOR) | 12674-11-2 | 0.37 G |  | 1.7 | G | 37 | G | 170 | G | 0.37 | G | 1.7 | G |
| PCB-1221 (AROCLOR) | 11104-28-2 | 0.37 |  | 1.7 | G | 37 | G | 170 | G | 0.37 | G | 1.7 | G |
| PCB-1232 (AROCLOR) | 11141-16-5 | 0.37 G |  | 1.7 | G | 37 | G | 170 | G | 0.37 | G | 1.7 | G |
| PCB-1242 (AROCLOR) | 53469-21-9 | 0.37 |  | 1.7 | G | 37 | G | 100 | S | 0.37 | G | 1.7 | G |
| PCB-1248 (AROCLOR) | 12672-29-6 | 0.37 |  | 1.7 | G | 37 | G | 54 | S | 0.37 | G | 1.7 | G |
| PCB-1254 (AROCLOR) | 11097-69-1 | 0.37 G |  | 1.7 | G | 37 | G | 57 | S | 0.37 | G | 1.7 | G |
| PCB-1260 (AROCLOR) | 11096-82-5 | 0.37 |  | 1.7 | G | 37 | G | 80 | S | 0.37 | G | 1.7 | G |
| PEBULATE | 1114-71-2 | 2,100 |  | 5,800 | G | 92,000 | S | 92,000 | S | 2,100 | G | 5,800 | G |
| PENTACHLOROBENZENE | 608-93-5 | 33 |  | 93 | G | 740 | S | 740 | S | 740 | S | 740 | S |
| PENTACHLOROETHANE | 76-01-7 | 8.1 |  | 38 | G | 810 | G | 3,800 | G |  | G | 38 | G |
| PENTACHLORONITROBENZENE | 82-68-8 | 2.8 |  | 13 | G | 280 | G | 440 | S | 440 | S | 440 | S |
| PENTACHLOROPHENOL | 87-86-5 | 1 M | M | 1 | M | 100 | M | 100 | M | 1,000 | M | 1,000 | M |
| PHENACETIN | 62-44-2 | 330 |  | 1,500 | G | 33,000 | G | 150,000 | G | 330,000 | G | 760,000 | S |
| PHENANTHRENE | 85-01-8 | 1,100 S |  | 1,100 | S | 1,100 | S | 1,100 | S | 1,100 | S | 1,100 | S |
| PHENOL | 108-95-2 | 2,000 H |  | 2,000 | H | 200,000 | H | 200,000 | H | 200,000 | H | 200,000 | H |
| PHENYL MERCAPTAN | 108-98-5 | 42 |  | 120 | G | 4,200 | G | 12,000 | G | 42 | G | 120 | G |
| PHENYLENEDIAMINE, M- | 108-45-2 | 250 |  | 700 | G | 25,000 | G | 70,000 | G | 250,000 | G | 700,000 | G |
| PHENYLPHENOL, 2- | 90-43-7 | 380 G |  | 1,800 | G | 38,000 | G | 180,000 | G | 380,000 | G | 700,000 | S |
| PHORATE | 298-02-2 | 8.3 |  | 23 | G | 830 | G | 2,300 | G | 8.3 | G | 23 | G |
| PHTHALIC ANHYDRIDE | 85-44-9 | 83,000 G |  | 230,000 | G | 6,200,000 | S | 6,200,000 | S | 6,200,000 | S | 6,200,000 | S |
| PICLORAM | 1918-02-1 | 500 M |  | 500 | M | 50,000 | M | 50,000 | M | 500 | M | 500 | M |
| POLYCHLORINATED BIPHENYLS (PCBS) | 1336-36-3 | 0.5 M |  | 0.5 | M | 50 | M | 50 | M |  | M | 0.5 | M |
| PROMETON | 1610-18-0 | 400 H |  | 400 | H | 40,000 | H | 40,000 | H | 400 | H | 400 | H |
| PRONAMIDE | 23950-58-5 | 3,100 G |  | 8,800 | G | 15,000 | S | 15,000 | S | 3,100 | G | 8,800 | G |
| PROPANIL | 709-98-8 | 210 |  | 580 | G | 21,000 | G | 58,000 | G | 210 | G | 580 | G |
| PROPANOL, 2- (ISOPROPYL ALCOHOL) | 67-63-0 | 420 N |  | 1,800 | N | 42,000 | N | 180,000 | N | 420 | N | 1,800 | N |
| PROPAZINE | 139-40-2 | 10 H |  | 10 |  | 1,000 |  | 1,000 | H | 10 | H | 10 | H |
| PROPHAM | 122-42-9 | 100 H |  | 100 |  | 10,000 | H | 10,000 | H | 100 | H | 100 | H |
| PROPYLBENZENE, N- | 103-65-1 | 2,100 |  | 8,800 |  | 52,000 | S | 52,000 | S | 2,100 |  | 8,800 | N |
| PROPYLENE OXIDE | 75-56-9 | 3 G | G | 14 | G | 300 | G | 1,400 | G | 3 | G | 14 | G |
| PYRENE | 129-00-0 | 130 |  | 130 | S | 130 | S | 130 | S | 130 | S | 130 | S |

[^17]Table 1—Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Groundwater

| Regulated Substance | CASRN | Used Aquifers |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  | $T D S>2500$ |  |  |  |  |  |  |  |
|  |  | $R$ | NR |  | $R$ |  | NR |  | $R$ |  | NR |  |
| PYRIDINE | 110-86-1 | 42 G | 120 | G | 4,200 | G | 12,000 | G | 420 | G | 1,200 | G |
| QUINOLINE | 91-22-5 | 0.24 G |  | G | 24 | G | 110 | G | 240 | G | 1,100 | G |
| QUIZALOFOP (ASSURE) | 76578-14-8 | 300 S | 300 | S | 300 | S | 300 | S | 300 | S | 300 | S |
| RDX | 121-82-4 | 2 H | 2 | H | 200 | H | 200 | H | 2 | H | 2 | H |
| RESORCINOL | 108-46-3 | 83,000 G | 230,000 | G | 8,300,000 | G | 23,000,000 | G | 83,000 | G | 230,000 | G |
| RONNEL | 299-84-3 | 2,100 G | 5,800 | G | 40,000 | S | 40,000 | S | 2,100 | G | 5,800 | G |
| SIMAZINE | 122-34-9 | 4 M | 4 | M | 400 | M | 400 | M | 4 | M | 4 | M |
| STRYCHNINE | 57-24-9 | 13 G |  | G | 1,300 | G | 3,500 | G | 13,000 | G | 35,000 | G |
| STYRENE | 100-42-5 | 100 M | 100 | M | 10,000 |  | 10,000 | M | 10,000 | M | 10,000 | M |
| TEBUTHIURON | 34014-18-1 | 500 H | 500 | H | 50,000 | H | 50,000 | H | 500 | H | 500 | H |
| TERBACIL | 5902-51-2 | 90 H |  | H | 9,000 |  | 9,000 | H | 90 | H | 90 | H |
| TERBUFOS | 13071-79-9 | 0.4 H | 0.4 | H | 40 | H | 40 | H | 0.4 | H | 0.4 | H |
| TETRACHLOROBENZENE, 1,2,4,5- | 95-94-3 | 13 G |  | G | 580 | S | 580 | S | 580 | S | 580 | S |
| TETRACHLORODIBENZO-P-DIOXIN, 2,3,7,8- (TCDD) | 1746-01-6 | 0.00003 M | 0.00003 | M | 0.003 | M | 0.003 | M | 0.019 | S | 0.019 | S |
| TETRACHLOROETHANE, 1,1,1,2- | 630-20-6 | 70 H |  | H | 7,000 |  | 7,000 | H | 7,000 | H | 7,000 | H |
| TETRACHLOROETHANE, 1,1,2,2- | 79-34-5 | 0.84 N | 4.3 | N | 84 | N | 430 | N | 84 | N | 430 | N |
| TETRACHLOROETHYLENE (PCE) | 127-18-4 | 5 M | 5 | M | 500 |  | 500 | M |  | M | 50 | M |
| TETRACHLOROPHENOL, $2,3,4,6$ - | 58-90-2 | 1,300 G | 3,500 | G | 130,000 | G | 180,000 | S | 180,000 | S | 180,000 | S |
| TETRAETHYL LEAD | 78-00-2 | 0.0042 G | 0.012 | G | 0.42 | G | 1 | G | 4.2 | G | 12 | G |
| TETRAETHYLDITHIOPYROPHOSPHATE | 3689-24-5 | 21 G |  | G | 2,100 | G | 5,800 | G | 21 | G | 58 | G |
| TETRAHYDROFURAN | 109-99-9 | 26 N | 130 | N | 2,600 | N | 13,000 | N |  | N | 130 | N |
| THIOFANOX | 39196-18-4 | 13 G |  | G | 1,300 | G | 3,500 | G | 13 | G | 35 | G |
| THIRAM | 137-26-8 | 210 G | 580 | G | 21,000 |  | 30,000 | S | 210 | G | 580 | G |
| TOLUENE | 108-88-3 | 1,000 M | 1,000 | M | 100,000 | M | 100,000 | M | 100,000 | M | 100,000 | M |
| TOLUIDINE, M- | 108-44-1 | 46 G | 210 | G | 4,600 | G | 21,000 | G | 46 | G | 210 | G |
| TOLUIDINE, O | 95-53-4 | 46 G | 210 | G | 4,600 | G | 21,000 | G | 46,000 | G | 210,000 | G |
| TOLUIDINE, P- | 106-49-0 | 24 G | 110 | G | 2,400 | G | 11,000 | G | 24 | G | 110 | G |
| TOXAPHENE | 8001-35-2 | 3 M | 3 | M | 300 | M | 300 | M | 3 | M | 3 | M |
| TRIALLATE | 2303-17-5 | 540 G | 1,500 | G | 4,000 | S | 4,000 | S | 540 | G | 1,500 | G |
| TRIBROMOMETHANE (BROMOFORM) (THM) | 75-25-2 | 80 M |  | M | 8,000 |  | 8,000 | M | 8,000 |  | 8,000 | M |
| TRICHLORO-1,2,2-TRIFLUOROETHANE, 1,1,2- | 76-13-1 | $63,000 \mathrm{~N}$ | 170,000 | S | 170,000 | S | 170,000 | S | 170,000 | S | 170,000 | S |
| TRICHLOROACETIC ACID (HAA) | 76-03-9 | 60 H |  | H | 6,000 |  | 6,000 | H | 60 | H | 60 | H |
| TRICHLOROBENZENE, 1,2,4- | 120-82-1 | 70 M |  | M | 7,000 |  | 7,000 | M | 44,000 | S | 44,000 | S |
| TRICHLOROBENZENE, 1,3,5- | 108-70-3 | 40 H | 40 | H | 4,000 | H | 4,000 | H | 40 | H | 40 | H |

[^18]Table 1-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Groundwater

|  |  |  |  |  | sed | fers |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Regulated Substance | CASRN |  | DS |  |  |  | $\overline{D S}$ | 500 |  |  | us | uifers |  |
|  |  | $R$ |  | NR |  | $R$ |  | NR |  | $R$ |  | NR |  |
| TRICHLOROETHANE, 1,1,1- | 71-55-6 | 200 | M | 200 | M | 20,000 | M | 20,000 | M | 2,000 | M | 2,000 | M |
| TRICHLOROETHANE, $1,1,2$ - | 79-00-5 |  | M | 5 | M | 500 | M | 500 | M | 50 | M | 50 | M |
| TRICHLOROETHYLENE (TCE) | 79-01-6 | 5 | M | 5 | M | 500 | M | 500 | M | 50 | M | 50 | M |
| TRICHLOROPHENOL, $2,4,5$ - | 95-95-4 | 4,200 | G | 12,000 | G | 420,000 | G | 1,000,000 | S | 1,000,000 | S | 1,000,000 | S |
| TRICHLOROPHENOL, 2,4,6- | 88-06-2 | 42 | G | 120 | G | 4,200 | G | 12,000 | G | 42,000 | G | 120,000 | G |
| TRICHLOROPHENOXYACETIC ACID, 2,4,5-( $2,4,5-\mathrm{T}$ ) | 93-76-5 | 70 | H | 70 | H | 7,000 | H | 7,000 | H | 70,000 | H | 70,000 | H |
| TRICHLOROPHENOXYPROPIONIC ACID, $2,4,5 \cdot(2,4,5-\mathrm{TP})$ | 93-72-1 | 50 | M | 50 | M | 5,000 | M | 5,000 | M | 50 | M | 50 | M |
| TRICHLOROPROPANE, 1,1,2- | 598-77-6 | 210 | G | 580 | G | 21,000 | G | 58,000 | G | 210 | G | 580 | G |
| TRICHLOROPROPANE, 1,2,3- | 96-18-4 |  | H | 40 | H | 4,000 | H | 4,000 | H | 4,000 | H | 4,000 | H |
| TRICHLOROPROPENE, 1,2,3- | 96-19-5 | 0.63 | N | 2.6 | N | 63 | N | 260 | N | 0.63 | N | 2.6 | N |
| TRIETHYLAMINE | 121-44-8 | 15 | N | 62 | N | 1,500 | N | 6,200 | N | 15 | N | 62 | N |
| TRIETHYLENE GLYCOL | 112-27-6 | 83,000 | G | 230,000 | G | 8,300,000 | G | 23,000,000 | G | 83,000 | G | 230,000 | G |
| TRIFLURALIN | 1582-09-8 | 10 | H | 10 | H | 1,000 | H | 1,000 | H | 10 | H | 10 | H |
| TRIMETHYLBENZENE, $1,3,4-$ (TRIMETHYLBENZENE, $1,2,4-$ ) | 95-63-6 |  | N | 62 | N | 1,500 | N | 6,200 | N | 1,500 | N | 6,200 | N |
| TRIMETHYLBENZENE, $1,3,5$ - | 108-67-8 | 420 | G | 1,200 | G | 42,000 | G | 49,000 | S | 420 | G | 1,200 | G |
| TRINITROGLYCEROL (NITROGLYCERIN) | 55-63-0 |  | H | 5 | H | 500 | H | 500 | H | 5 | H | 5 | H |
| TRINITROTOLUENE, 2,4,6- | 118-96-7 |  | H | 2 | H | 200 | H | 200 | H | 2 | H | 2 | H |
| VINYL ACETATE | 108-05-4 | 420 |  | 1,800 | N | 42,000 | N | 180,000 | N | 420 | N | 1,800 | N |
| VINYL BROMIDE (BROMOETHENE) | 593-60-2 | 1.5 | N |  | N | 150 | N | 780 | N | 15 | N | 78 | N |
| VINYL CHLORIDE | 75-01-4 |  | M | 2 | M | 200 | M | 200 | M | 20 | M | 20 | M |
| WARFARIN | 81-81-2 |  | G | 35 | G | 1,300 | G | 3,500 | G | 13,000 | G | 17,000 | S |
| XYLENES (TOTAL) | 1330-20-7 | 10,000 |  | 10,000 |  | 180,000 | S | 180,000 | S | 180,000 | S | 180,000 | S |
| ZINEB | 12122-67-7 | 2,100 | G | 5,800 | G | 10,000 | S | 10,000 | S | 2,100 | G | 5,800 | G |

[^19]| Regulated Substance | CASRN | Used Aquifers |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  | $T D S>2500$ |  |  |  |  |  |  |  |
|  |  | $R$ |  | NR |  | $R$ |  | NR |  | $R$ |  | $N R$ |  |
| ANTIMONY | 7440-36-0 | 6 | M | 6 | M | 600 | M | 600 | M | 6,000 | M | 6,000 | M |
| ARSENIC | 7440-38-2 | 10 | M | 10 | M | 1,000 | M | 1,000 | M | 10,000 | M | 10,000 | M |
| ASBESTOS (fibers/L) | 12001-29-5 | 7,000,000 | M | 7,000,000 | M | 7,000,000 | M | 7,000,000 | M | 7,000,000 | M | 7,000,000 | M |
| BARIUM AND COMPOUNDS | 7440-39-3 | 2,000 |  | 2,000 | M | 200,000 | M | 200,000 | M | 2,000,000 | M | 2,000,000 | M |
| BERYLLIUM | 7440-41-7 | 4 | M | 4 | M | 400 | M | 400 | M | 4,000 | M | 4,000 | M |
| BORON AND COMPOUNDS | 7440-42-8 | 6,000 | H | 6,000 | H | 600,000 | H | 600,000 | H | 6,000,000 | H | 6,000,000 | H |
| CADMIUM | 7440-43-9 | 5 | M | 5 | M | 500 | M | 500 | M | 5,000 | M | 5,000 | M |
| CHROMIUM (TOTAL) | 7440-47-3 | 100 | M | 100 | M | 10,000 | M | 10,000 | M | 100,000 | M | 100,000 | M |
| COBALT | 7440-48-4 | 13 | G | 35 | G | 1,300 | G | 3,500 | G | 13,000 | G | 35,000 | G |
| CYANIDE, FREE | 57-12-5 | 200 | M | 200 | M | 20,000 | M | 20,000 | M | 200,000 | M | 200,000 | M |
| FLUORIDE | 16984-48-8 | 4,000 | M | 4,000 | M | 400,000 | M | 400,000 | M | 4,000,000 | M | 4,000,000 | M |
| LEAD | 7439-92-1 | 5 | M | 5 | M | 500 | M | 500 | M | 5,000 | M | 5,000 | M |
| LITHIUM | 7439-93-2 | 83 | G | 230 | G | 8,300 | G | 23,000 | G | 83,000 | G | 230,000 | G |
| MANGANESE | 7439-96-5 | 300 | H | 300 | H | 30,000 | H | 30,000 | H | 300,000 | H | 300,000 | H |
| MERCURY | 7439-97-6 |  | M | 2 | M | 200 | M | 200 | M | 2,000 | M | 2,000 | M |
| MOLYBDENUM | 7439-98-7 | 40 | H | 40 | H | 4,000 | H | 4,000 | H | 40,000 | H | 40,000 | H |
| NICKEL | 7440-02-0 | 100 | H | 100 | H | 10,000 | H | 10,000 | H | 100,000 | H | 100,000 | H |
| NITRATE NITROGEN | 14797-55-8 | 10,000 | M | 10,000 | M | 1,000,000 | M | 1,000,000 | M | 10,000,000 | M | 10,000,000 | M |
| NITRITE NITROGEN | 14797-65-0 | 1,000 | M | 1,000 | M | 100,000 | M | 100,000 | M | 1,000,000 | M | 1,000,000 | M |
| PERCHLORATE | 7790-98-9 | 15 | H | 15 | H | 1,500 | H | 1,500 | H | 15,000 | H | 15,000 | H |
| SELENIUM | 7782-49-2 | 50 | M | 50 | M | 5,000 | M | 5,000 | M | 50,000 | M | 50,000 | M |
| SILVER | 7440-22-4 | 100 | H | 100 | H | 10,000 | H | 10,000 | H | 100,000 | H | 100,000 | H |
| STRONTIUM | 7440-24-6 | 4,000 | H | 4,000 | H | 400,000 | H | 400,000 | H | 4,000,000 | H | 4,000,000 | H |
| THALLIUM | 7440-28-0 | 2 | M | 2 | M | 200 | M | 200 | M | 2,000 | M | 2,000 | M |
| TIN | 7440-31-5 | 25,000 | G | 70,000 | G | 2,500,000 | G | 7,000,000 | G | 25,000,000 | G | 70,000,000 | G |
| VANADIUM | 7440-62-2 | 2.9 | G | 8.2 | G | 290 | G | 820 | G | 2,900 | G | 8,200 | G |
| ZINC AND COMPOUNDS | 7440-66-6 | 2,000 |  | 2,000 | H | 200,000 | H | 200,000 | H | 2,000,000 | H | 2,000,000 | H |

[^20]Table 2-Medium-Specific Concentrations (MSCs) for Inorganic Regulated Substances in Groundwater
Table 2-Medium-Specific Concentrations (MSCs) for Inorganic Regulated Substances in Groundwater

| SECONDARY CONTAMINANTS |  |  |  |
| :--- | :---: | ---: | :---: |
| REGULATED SUBSTANCE | CASRN | SMCL | UNITS |
| ALUMINUM | $7429-90-5$ | 200 | $\mu \mathrm{~g} / \mathrm{L}$ |
| CHLORIDE | $7647-14-5$ | 250,000 | $\mu \mathrm{~g} / \mathrm{L}$ |
| COPPER | $7440-50-8$ | 1000 | $\mu \mathrm{~g} / \mathrm{L}$ |
| FLUORIDE | $7681-49-4$ | 2,000 | $\mu \mathrm{~g} / \mathrm{L}$ |
| IRON | $7439-89-6$ | 300 | $\mu \mathrm{~g} / \mathrm{L}$ |
| MANGANESE | $7439-96-5$ | 50 | $\mu \mathrm{~g} / \mathrm{L}$ |
| SULFATE | $7757-82-6$ | 250,000 | $\mu \mathrm{~g} / \mathrm{L}$ |

[^21]$\mathrm{N}=$ Inhalation

Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil A. Direct Contact Numeric Values

| REGULATED SUBSTANCE | CASRN | Residential 0-15 feet |  | Nonresidential |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Surface Soil 0-2 feet |  | Subsurface Soil 2-15 feet |  |
| ACENAPHTHENE | 83-32-9 | 13,000 | G | 190,000 | C | 190,000 | C |
| ACENAPHTHYLENE | 208-96-8 | 13,000 | G | 190,000 | C | 190,000 | C |
| ACEPHATE | 30560-19-1 | 880 | G | 10,000 | G | 190,000 | C |
| ACETALDEHYDE | 75-07-0 | 170 | N | 720 | N | 830 | N |
| ACETONE | 67-64-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| ACETONITRILE | 75-05-8 | 1,100 | N | 4,800 | N | 5,500 | N |
| ACETOPHENONE | 98-86-2 | 10,000 | C | 10,000 | C | 10,000 | C |
| ACETYLAMINOFLUORENE, 2- (2AAF) | 53-96-3 | 4.9 | G | 24 | G | 190,000 | C |
| ACROLEIN | 107-02-8 | 0.38 | N | 1.6 | N | 1.8 | N |
| ACRYLAMIDE | 79-06-1 | 1.7 | N | 22 | N | 26 | N |
| ACRYLIC ACID | 79-10-7 | 19 | N | 79 | N | 91 | N |
| ACRYLONITRILE | 107-13-1 | 6.6 | N | 33 | N | 38 | N |
| ALACHLOR | 15972-60-8 | 330 | G | 1,600 | G | 190,000 | C |
| ALDICARB | 116-06-3 | 220 | G | 3,200 | G | 190,000 | C |
| ALDICARB SULFONE | 1646-88-4 | 220 | G | 3,200 | G | 190,000 | C |
| ALDICARB SULFOXIDE | 1646-87-3 | 220 | G | 3,200 | G | 190,000 | C |
| ALDRIN | 309-00-2 | 1.1 | G | 5.4 | G | 190,000 | C |
| ALLYL ALCOHOL | 107-18-6 | 1.9 | N | 8 | N | 9.1 | N |
| AMETRYN | 834-12-8 | 2,000 | G | 29,000 | G | 190,000 | C |
| AMINOBIPHENYL, 4- | 92-67-1 | 0.89 | G | 4.3 | G | 190,000 | C |
| AMITROLE | 61-82-5 | 20 | G | 97 | G | 190,000 | C |
| AMMONIA | 7664-41-7 | 1,900 | N | 8,000 | N | 9,100 | N |
| AMMONIUM SULFAMATE | 7773-06-0 | 44,000 | G | 190,000 | C | 190,000 | C |
| ANILINE | 62-53-3 | 19 | N | 79 | N | 91 | N |
| ANTHRACENE | 120-12-7 | 66,000 | G | 190,000 | C | 190,000 | C |
| ATRAZINE | 1912-24-9 | 81 | G | 400 | G | 190,000 | C |
| AZINPHOS-METHYL (GUTHION) | 86-50-0 | 660 | G | 9,600 | G | 190,000 | C |
| BAYGON (PROPOXUR) | 114-26-1 | 880 | G | 13,000 | G | 190,000 | C |
| BENOMYL | 17804-35-2 | 11,000 | G | 160,000 | G | 190,000 | C |
| BENTAZON | 25057-89-0 | 6,600 | G | 96,000 | G | 190,000 | C |
| BENZENE | 71-43-2 | 57 | N | 290 | N | 330 | N |
| BENZIDINE | 92-87-5 | 0.018 | G | 0.4 | G | 190,000 | C |
| BENZO[A]ANTHRACENE | 56-55-3 | 6 | G | 130 | G | 190,000 | C |
| BENZO[A]PYRENE | 50-32-8 | 0.58 | G | 12 | G | 190,000 | C |
| BENZO[B]FLUORANTHENE | 205-99-2 | 3.5 | G | 76 | G | 190,000 | C |
| BENZO[GHI]PERYLENE | 191-24-2 | 13,000 | G | 190,000 | C | 190,000 | C |
| BENZO[K]FLUORANTHENE | 207-08-9 | 4 | G | 76 | G | 190,000 | C |
| BENZOIC ACID | 65-85-0 | 190,000 | C | 190,000 | C | 190,000 | C |
| BENZOTRICHLORIDE | 98-07-7 | 1.4 | G | 7 | G | 10,000 | C |
| BENZYL ALCOHOL | 100-51-6 | 10,000 | C | 10,000 | C | 10,000 | C |
| BENZYL CHLORIDE | 100-44-7 | 9 | N | 45 | N | 52 | N |
| BETA PROPIOLACTONE | 57-57-8 | 0.11 | N | 0.56 | N | 0.64 | N |
| BHC, ALPHA | 319-84-6 | 3 | G | 14 | G | 190,000 | C |
| BHC, BETA- | 319-85-7 | 10 | G | 51 | G | 190,000 | C |
| BHC, GAMMA (LINDANE) | 58-89-9 | 17 | G | 83 | G | 190,000 | C |
| BIPHENYL, 1,1- | 92-52-4 | 2,300 | G | 11,000 | G | 190,000 | C |
| BIS(2-CHLOROETHOXY)METHANE | 111-91-1 | 660 | G | 9,600 | G | 10,000 | C |
| BIS(2-CHLOROETHYL)ETHER | 111-44-4 | 1.3 | N | 6.7 | N | 7.7 | N |
| BIS(2-CHLORO-ISOPROPYL)ETHER | 108-60-1 | 44 | N | 220 | N | 250 | N |
| BIS(CHLOROMETHYL)ETHER | 542-88-1 | 0.0072 | N | 0.036 | N | 0.041 | N |
| BIS[2-ETHYLHEXYL] PHTHALATE | 117-81-7 | 1,300 | G | 6,500 | G | 10,000 | C |
| BISPHENOL A | 80-05-7 | 11,000 | G | 160,000 | G | 190,000 | C |
| BROMACIL | 314-40-9 | 22,000 | G | 190,000 | C | 190,000 | C |
| BROMOCHLOROMETHANE | 74-97-5 | 770 | N | 3,200 | N | 3,600 | N |
| BROMODICHLOROMETHANE | 75-27-4 | 12 | N | 60 | N | 69 | N |
| BROMOMETHANE | 74-83-9 | 96 | N | 400 | N | 460 | N |
| BROMOXYNIL | 1689-84-5 | 4,400 | G | 64,000 | G | 190,000 | C |
| BROMOXYNIL OCTANOATE | 1689-99-2 | 4,400 | G | 64,000 | G | 190,000 | C |
| BUTADIENE, 1,3- | 106-99-0 | 5.5 | G | 27 | G | 85 | N |

All concentration ns in $\mathrm{mg} / \mathrm{kg}$
G-Ingestion
N -Inhalation
C-Cap

Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil A. Direct Contact Numeric Values

| REGULATED SUBSTANCE | CASRN | Residential 0-15 feet |  | Nonresidential |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{gathered} \hline \text { Surface Soil } \\ 0-2 \text { feet } \\ \hline \end{gathered}$ |  | Subsurface Soil 2-15 feet |  |
| BUTYL ALCOHOL, N- | 71-36-3 | 10,000 | C | 10,000 | C | 10,000 | C |
| BUTYLATE | 2008-41-5 | 10,000 | C | 10,000 | C | 10,000 | C |
| BUTYLBENZENE, N - | 104-51-8 | 10,000 | C | 10,000 | C | 10,000 | C |
| BUTYLBENZENE, SEC- | 135-98-8 | 10,000 | C | 10,000 | C | 10,000 | C |
| BUTYLBENZENE, TERT- | 98-06-6 | 10,000 | C | 10,000 | C | 10,000 | C |
| BUTYLBENZYL PHTHALATE | 85-68-7 | 9,800 | G | 10,000 | C | 10,000 | C |
| CAPTAN | 133-06-2 | 8,100 | G | 40,000 | G | 190,000 | C |
| CARBARYL | 63-25-2 | 22,000 | G | 190,000 | C | 190,000 | C |
| CARBAZOLE | 86-74-8 | 930 | G | 4,600 | G | 190,000 | C |
| CARBOFURAN | 1563-66-2 | 1,100 | G | 16,000 | G | 190,000 | C |
| CARBON DISULFIDE | 75-15-0 | 10,000 | C | 10,000 | C | 10,000 | C |
| CARBON TETRACHLORIDE | 56-23-5 | 74 | N | 370 | N | 430 | N |
| CARBOXIN | 5234-68-4 | 22,000 | G | 190,000 | C | 190,000 | C |
| CHLORAMBEN | 133-90-4 | 3,300 | G | 48,000 | G | 190,000 | C |
| CHLORDANE | 57-74-9 | 53 | G | 260 | G | 190,000 | C |
| CHLORO-1,1-DIFLUOROETHANE, 1 - | 75-68-3 | 10,000 | C | 10,000 | C | 10,000 | C |
| CHLORO-1-PROPENE, 3- (ALLYL CHLORIDE) | 107-05-1 | 19 | N | 80 | N | 91 | N |
| CHLOROACETALDEHYDE | 107-20-0 | 62 | G | 300 | G | 10,000 | C |
| CHLOROACETOPHENONE, 2 - | 532-27-4 | 190,000 | C | 190,000 | C | 190,000 | C |
| CHLOROANILINE, P- | 106-47-8 | 93 | G | 460 | G | 190,000 | C |
| CHLOROBENZENE | 108-90-7 | 960 | N | 4,000 | N | 4,600 | N |
| CHLOROBENZILATE | 510-15-6 | 170 | G | 830 | G | 190,000 | C |
| CHLOROBUTANE, 1 - | 109-69-3 | 8,800 | G | 10,000 | C | 10,000 | C |
| CHLORODIBROMOMETHANE | 124-48-1 | 17 | N | 82 | N | 95 | N |
| CHLORODIFLUOROMETHANE | 75-45-6 | 10,000 | C | 10,000 | C | 10,000 | C |
| CHLOROETHANE | 75-00-3 | 6,400 | G | 10,000 | C | 10,000 | C |
| CHLOROFORM | 67-66-3 | 19 | N | 97 | N | 110 | N |
| CHLORONAPHTHALENE, 2- | 91-58-7 | 18,000 | G | 190,000 | C | 190,000 | C |
| CHLORONITROBENZENE, P- | 100-00-5 | 220 | G | 3,200 | G | 190,000 | C |
| CHLOROPHENOL, 2- | 95-57-8 | 1,100 | G | 10,000 | C | 10,000 | C |
| CHLOROPRENE | 126-99-8 | 1.5 | N | 7.4 | N | 8.5 | N |
| CHLOROPROPANE, 2- | 75-29-6 | 1,900 | N | 8,000 | N | 9,100 | N |
| CHLOROTHALONIL | 1897-45-6 | 3,300 | G | 29,000 | G | 190,000 | C |
| CHLOROTOLUENE, O- | 95-49-8 | 4,400 | G | 10,000 | C | 10,000 | C |
| CHLOROTOLUENE, P- | 106-43-4 | 4,400 | C | 10,000 | C | 10,000 | C |
| CHLORPYRIFOS | 2921-88-2 | 220 | G | 3,200 | G | 190,000 | C |
| CHLORSULFURON | 64902-72-3 | 11,000 | G | 160,000 | G | 190,000 | C |
| CHLORTHAL-DIMETHYL (DACTHAL) (DCPA) | 1861-32-1 | 2,200 | G | 32,000 | G | 190,000 | C |
| CHRYSENE | 218-01-9 | 35 | G | 760 | G | 190,000 | C |
| CRESOL(S) | 1319-77-3 | 10,000 | C | 10,000 | C | 10,000 | C |
| CRESOL, 4,6-DINITRO-O- | 534-52-1 | 18 | G | 260 | G | 190,000 | C |
| CRESOL, O- (2-METHYLPHENOL) | 95-48-7 | 11,000 | G | 160,000 | G | 190,000 | C |
| CRESOL, M- (3-METHYLPHENOL) | 108-39-4 | 10,000 | C | 10,000 | C | 10,000 | C |
| CRESOL, P- (4-METHYLPHENOL) | 106-44-5 | 1,100 | G | 16,000 | G | 190,000 | C |
| CRESOL, P-CHLORO-M- | 59-50-7 | 22,000 | G | 190,000 | G | 190,000 | C |
| CROTONALDEHYDE | 4170-30-3 | 9.8 | G | 48 | G | 10,000 | C |
| CROTONALDEHYDE, TRANS- | 123-73-9 | 9.8 | G | 48 | G | 10,000 | C |
| CUMENE (ISOPROPYL BENZENE) | 98-82-8 | 7,700 | N | 10,000 | C | 10,000 | C |
| CYANAZINE | 21725-46-2 | 22 | G | 110 | G | 190,000 | C |
| CYCLOHEXANE | 110-82-7 | 10,000 | C | 10,000 | C | 10,000 | C |
| CYCLOHEXANONE | 108-94-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| CYFLUTHRIN | 68359-37-5 | 5,500 | G | 80,000 | G | 190,000 | C |
| CYROMAZINE | 66215-27-8 | 1,700 | G | 24,000 | G | 190,000 | C |
| DDD, 4,4'- | 72-54-8 | 78 | G | 380 | G | 190,000 | C |
| DDE, 4, $\mathbf{4}^{\prime}$ - | 72-55-9 | 55 | G | 270 | G | 190,000 | C |
| DDT, 4,4' | 50-29-3 | 55 | G | 270 | G | 190,000 | C |
| DI(2-ETHYLHEXYL)ADIPATE | 103-23-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| DIALLATE | 2303-16-4 | 300 | G | 1,500 | G | 10,000 | C |
| DIAMINOTOLUENE, 2,4- | 95-80-7 | 4.7 | G | 23 | G | 190,000 | C |

All concentration ns in $\mathrm{mg} / \mathrm{kg}$
G-Ingestion
N -Inhalation
C-Cap

Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil A. Direct Contact Numeric Values

| REGULATED SUBSTANCE | CASRN | Residential $0-15$ feet |  | Nonresidential |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Surface Soil 0-2 feet |  | Subsurface Soil 2-15 feet |  |
| DIAZINON | 333-41-5 | 150 | G | 2,200 | G | 10,000 | C |
| DIBENZO[A,H]ANTHRACENE | 53-70-3 | 1 | G | 22 | G | 190,000 | C |
| DIBENZOFURAN | 132-64-9 | 220 | G | 3,200 | G | 190,000 | C |
| DIBROMO-3-CHLOROPROPANE, 1,2- | 96-12-8 | 0.029 | N | 0.37 | N | 0.43 | N |
| DIBROMOBENZENE, 1,4- | 106-37-6 | 2,200 | G | 32,000 | G | 190,000 | C |
| DIBROMOETHANE, 1,2- (ETHYLENE DIBROMIDE) | 106-93-4 | 0.74 | N | 3.7 | N | 4.3 | N |
| DIBROMOMETHANE | 74-95-3 | 77 | N | 320 | N | 370 | N |
| DIBUTYL PHTHALATE, N- | 84-74-2 | 10,000 | C | 10,000 | C | 10,000 | C |
| DICAMBA | 1918-00-9 | 6,600 | G | 96,000 | G | 190,000 | C |
| DICHLOROACETIC ACID | 76-43-6 | 370 | G | 1,800 | G | 10,000 | C |
| DICHLORO-2-BUTENE, 1,4- | 764-41-0 | 0.11 | N | 0.53 | N | 0.61 | N |
| DICHLORO-2-BUTENE, TRANS-1,4- | 110-57-6 | 0.1 | N | 0.52 | N | 0.6 | N |
| DICHLOROBENZENE, 1,2 - | 95-50-1 | 3,800 | N | 10,000 | C | 10,000 | C |
| DICHLOROBENZENE, 1,3 - | 541-73-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| DICHLOROBENZENE, P- | 106-46-7 | 40 | N | 200 | N | 230 | N |
| DICHLOROBENZIDINE, 3,3'- | 91-94-1 | 41 | G | 200 | G | 190,000 | C |
| DICHLORODIFLUOROMETHANE (FREON 12) | 75-71-8 | 1,900 | N | 8,000 | N | 9,100 | N |
| DICHLOROETHANE, 1,1- | 75-34-3 | 280 | N | 1,400 | N | 1,600 | N |
| DICHLOROETHANE, 1,2- | 107-06-2 | 17 | N | 86 | N | 98 | N |
| DICHLOROETHYLENE, 1,1- | 75-35-4 | 3,800 | N | 10,000 | C | 10,000 | C |
| DICHLOROETHYLENE, CIS-1,2- | 156-59-2 | 440 | G | 6,400 | G | 10,000 | C |
| DICHLOROETHYLENE, TRANS-1,2- | 156-60-5 | 1,100 | N | 4,800 | N | 5,500 | N |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | 75-09-2 | 1,300 | G | 10,000 | C | 10,000 | C |
| DICHLOROPHENOL, 2,4- | 120-83-2 | 660 | G | 9,600 | G | 190,000 | C |
| DICHLOROPHENOXYACETIC ACID, 2,4- (2,4-D) | 94-75-7 | 2,200 | G | 32,000 | G | 190,000 | C |
| DICHLOROPROPANE, 1,2- | 78-87-5 | 45 | N | 220 | N | 260 | N |
| DICHLOROPROPENE, 1,3- | 542-75-6 | 110 | N | 560 | N | 640 | N |
| DICHLOROPROPIONIC ACID, 2,2- (DALAPON) | 75-99-0 | 6,600 | G | 10,000 | C | 10,000 | C |
| DICHLORVOS | 62-73-7 | 64 | G | 310 | G | 10,000 | C |
| DICYCLOPENTADIENE | 77-73-6 | 6 | N | 24 | N | 27 | N |
| DIELDRIN | 60-57-1 | 1.2 | G | 6 | G | 190,000 | C |
| DIETHANOLAMINE | 111-42-2 | 440 | G | 6,400 | G | 10,000 | C |
| DIETHYL PHTHALATE | 84-66-2 | 10,000 | C | 10,000 | C | 10,000 | C |
| DIFLUBENZURON | 35367-38-5 | 4,400 | G | 64,000 | G | 190,000 | C |
| DIISOPROPYL METHYLPHOSPHONATE | 1445-75-6 | 10,000 | C | 10,000 | C | 10,000 | C |
| DIMETHOATE | 60-51-5 | 44 | G | 640 | G | 190,000 | C |
| DIMETHOXYBENZIDINE, 3,3- | 119-90-4 | 1,300 | G | 6,500 | G | 190,000 | C |
| DIMETHRIN | 70-38-2 | 66,000 | G | 190,000 | C | 190,000 | C |
| DIMETHYLAMINOAZOBENZENE, P- | 60-11-7 | 4 | G | 20 | G | 190,000 | C |
| DIMETHYLANILINE, $\mathrm{N}, \mathrm{N}$ - | 121-69-7 | 440 | G | 6,400 | G | 10,000 | C |
| DIMETHYLBENZIDINE, 3,3- | 119-93-7 | 1.7 | G | 8.3 | G | 190,000 | C |
| DIMETHYL METHYLPHOSPHONATE | 756-79-6 | 10,000 | C | 10,000 | C | 10,000 | C |
| DIMETHYLPHENOL, 2,4- | 105-67-9 | 4,400 | G | 10,000 | C | 10,000 | C |
| DINITROBENZENE, 1,3- | 99-65-0 | 22 | G | 320 | G | 190,000 | C |
| DINITROPHENOL, 2,4- | 51-28-5 | 440 | G | 6,400 | G | 190,000 | C |
| DINITROTOLUENE, 2,4- | 121-14-2 | 60 | G | 290 | G | 190,000 | C |
| DINITROTOLUENE, 2,6- (2,6-DNT) | 606-20-2 | 12 | G | 61 | G | 190,000 | C |
| DINOSEB | 88-85-7 | 220 | G | 3,200 | G | 190,000 | C |
| DIOXANE, 1,4- | 123-91-1 | 58 | N | 290 | N | 330 | N |
| DIPHENAMID | 957-51-7 | 6,600 | G | 96,000 | G | 190,000 | C |
| DIPHENYLAMINE | 122-39-4 | 5,500 | G | 80,000 | G | 190,000 | C |
| DIPHENYLHYDRAZINE, 1,2- | 122-66-7 | 23 | G | 110 | G | 190,000 | C |
| DIQUAT | 85-00-7 | 480 | G | 7,000 | G | 190,000 | C |
| DISULFOTON | 298-04-4 | 8.8 | G | 130 | G | 10,000 | C |
| DITHIANE, 1,4- | 505-29-3 | 2,200 | G | 32,000 | G | 190,000 | C |
| DIURON | 330-54-1 | 440 | G | 6,400 | G | 190,000 | C |
| ENDOSULFAN | 115-29-7 | 1,300 | G | 19,000 | G | 190,000 | C |
| ENDOSULFAN I (ALPHA) | 959-98-8 | 1,300 | G | 19,000 | G | 190,000 | C |
| ENDOSULFAN II (BETA) | 33213-65-9 | 1,300 | G | 19,000 | G | 190,000 | C |

All conce
G-Ingestion
N -Inhalation
C-Cap

Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil A. Direct Contact Numeric Values

| REGULATED SUBSTANCE | CASRN | Residential 0-15 feet |  | Nonresidential |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Surface Soil 0-2 feet |  | Subsurface Soil 2-15 feet |  |
| ENDOSULFAN SULFATE | 1031-07-8 | 1,300 | G | 19,000 | G | 190,000 | C |
| ENDOTHALL | 145-73-3 | 4,400 | G | 64,000 | G | 190,000 | C |
| ENDRIN | 72-20-8 | 66 | G | 960 | G | 190,000 | C |
| EPICHLOROHYDRIN | 106-89-8 | 19 | N | 79 | N | 91 | N |
| ETHEPHON | 16672-87-0 | 1,100 | G | 16,000 | G | 190,000 | C |
| ETHION | 563-12-2 | 110 | G | 1,600 | G | 10,000 | C |
| ETHOXYETHANOL, 2- (EGEE) | 110-80-5 | 3,900 | N | 10,000 | C | 10,000 | C |
| ETHYL ACETATE | 141-78-6 | 1,300 | N | 5,600 | N | 6,400 | N |
| ETHYL ACRYLATE | 140-88-5 | 150 | N | 640 | N | 730 | N |
| ETHYL BENZENE | 100-41-4 | 180 | N | 890 | N | 1,000 | N |
| ETHYL DIPROPYLTHIOCARBAMATE, S- (EPTC) | 759-94-4 | 5,500 | G | 10,000 | C | 10,000 | C |
| ETHYL ETHER | 60-29-7 | 10,000 | C | 10,000 | C | 10,000 | C |
| ETHYL METHACRYLATE | 97-63-2 | 5,700 | N | 10,000 | C | 10,000 | C |
| ETHYLENE CHLORHYDRIN | 107-07-3 | 4,400 | G | 10,000 | C | 10,000 | C |
| ETHYLENE GLYCOL | 107-21-1 | 7,700 | N | 10,000 | C | 10,000 | C |
| ETHYLENE THIOUREA (ETU) | 96-45-7 | 18 | G | 260 | G | 190,000 | C |
| ETHYLP-NITROPHENYL <br> PHENYLPHOSPHOROTHIOATE | 2104-64-5 | 2.2 | G | 32 | G | 190,000 | C |
| FENAMIPHOS | 22224-92-6 | 55 | G | 800 | G | 190,000 | C |
| FENVALERATE (PYDRIN) | 51630-58-1 | 5,500 | G | 10,000 | C | 10,000 | C |
| FLUOMETURON | 2164-17-2 | 2,900 | G | 42,000 | G | 190,000 | C |
| FLUORANTHENE | 206-44-0 | 8,800 | G | 130,000 | G | 190,000 | C |
| FLUORENE | 86-73-7 | 8,800 | G | 130,000 | G | 190,000 | C |
| FLUOROTRICHLOROMETHANE (FREON 11) | 75-69-4 | 10,000 | C | 10,000 | C | 10,000 | C |
| FONOFOS | 944-22-9 | 440 | G | 6,400 | G | 10,000 | C |
| FORMALDEHYDE | 50-00-0 | 34 | N | 170 | N | 200 | N |
| FORMIC ACID | 64-18-6 | 6 | N | 24 | N | 27 | N |
| FOSETYL-AL | 39148-24-8 | 190,000 | C | 190,000 | C | 190,000 | C |
| FURAN | 110-00-9 | 220 | G | 3,200 | G | 10,000 | C |
| FURFURAL | 98-01-1 | 660 | G | 4,000 | N | 4,500 | N |
| GLYPHOSATE | 1071-83-6 | 22,000 | G | 190,000 | C | 190,000 | C |
| HEPTACHLOR | 76-44-8 | 4 | G | 20 | G | 190,000 | C |
| HEPTACHLOR EPOXIDE | 1024-57-3 | 2 | G | 10 | G | 190,000 | C |
| HEXACHLOROBENZENE | 118-74-1 | 12 | G | 57 | G | 190,000 | C |
| HEXACHLOROBUTADIENE | 87-68-3 | 220 | G | 1,200 | G | 10,000 | C |
| HEXACHLOROCYCLOPENTADIENE | 77-47-4 | 1,300 | G | 10,000 | C | 10,000 | C |
| HEXACHLOROETHANE | 67-72-1 | 44 | N | 220 | N | 260 | N |
| HEXANE | 110-54-3 | 10,000 | C | 10,000 | C | 10,000 | C |
| HEXAZINONE | 51235-04-2 | 7,300 | G | 110,000 | G | 190,000 | C |
| HEXYTHIAZOX (SAVEY) | 78587-05-0 | 5,500 | G | 80,000 | G | 190,000 | C |
| HMX | 2691-41-0 | 11,000 | G | 160,000 | G | 190,000 | C |
| HYDRAZINE/HYDRAZINE SULFATE | 302-01-2 | 0.09 | N | 0.45 | N | 0.52 | N |
| HYDROQUINONE | 123-31-9 | 310 | G | 1,500 | G | 190,000 | C |
| INDENO[1,2,3-CD]PYRENE | 193-39-5 | 3.5 | G | 76 | G | 190,000 | C |
| IPRODIONE | 36734-19-7 | 8,800 | G | 130,000 | G | 190,000 | C |
| ISOBUTYL ALCOHOL | 78-83-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| ISOPHORONE | 78-59-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| ISOPROPYL METHYLPHOSPHONATE | 1832-54-8 | 10,000 | C | 10,000 | C | 10,000 | C |
| KEPONE | 143-50-0 | 1.9 | G | 9.1 | G | 190,000 | C |
| MALATHION | 121-75-5 | 4,400 | G | 10,000 | C | 10,000 | C |
| MALEIC HYDRAZIDE | 123-33-1 | 110,000 | G | 190,000 | C | 190,000 | C |
| MANEB | 12427-38-2 | 1,100 | G | 16,000 | G | 190,000 | C |
| MERPHOS OXIDE | 78-48-8 | 6.6 | G | 96 | G | 10,000 | C |
| METHACRYLONITRILE | 126-98-7 | 22 | G | 320 | G | 2,800 | N |
| METHAMIDOPHOS | 10265-92-6 | 11 | G | 160 | G | 190,000 | C |
| METHANOL | 67-56-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| METHOMYL | 16752-77-5 | 5,500 | G | 80,000 | G | 190,000 | C |
| METHOXYCHLOR | 72-43-5 | 1,100 | G | 16,000 | G | 190,000 | C |
| METHOXYETHANOL, 2- | 109-86-4 | 380 | N | 1,600 | N | 1,800 | N |

All concentration ns in $\mathrm{mg} / \mathrm{kg}$
G-Ingestion
N -Inhalation
C—Cap

Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil A. Direct Contact Numeric Values

| REGULATED SUBSTANCE | CASRN | Residential 0-15 feet |  | Nonresidential |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Surface Soil 0-2 feet |  | Subsurface Soil 2-15 feet |  |
| METHYL ACETATE | 79-20-9 | 10,000 | C | 10,000 | C | 10,000 | C |
| METHYL ACRYLATE | 96-33-3 | 380 | N | 1,600 | N | 1,800 | N |
| METHYL CHLORIDE | 74-87-3 | 250 | N | 1,200 | N | 1,400 | N |
| METHYL ETHYL KETONE | 78-93-3 | 10,000 | C | 10,000 | C | 10,000 | C |
| METHYL HYDRAZINE | 60-34-4 | 0.38 | N | 1.6 | N | 1.8 | N |
| METHYL ISOBUTYL KETONE | 108-10-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| METHYL ISOCYANATE | 624-83-9 | 19 | N | 79 | N | 91 | N |
| METHYL N-BUTYL KETONE (2-HEXANONE) | 591-78-6 | 570 | N | 2,400 | N | 2,800 | N |
| METHYL METHACRYLATE | 80-62-6 | 10,000 | C | 10,000 | C | 10,000 | C |
| METHYL METHANESULFONATE | 66-27-3 | 190 | G | 920 | G | 10,000 | C |
| METHYL PARATHION | 298-00-0 | 55 | G | 800 | G | 190,000 | C |
| METHYL STYRENE (MIXED ISOMERS) | 25013-15-4 | 770 | N | 3,200 | N | 3,600 | N |
| METHYL TERT-BUTYL ETHER (MTBE) | 1634-04-4 | 1,700 | N | 8,600 | N | 9,900 | N |
| METHYLCHLOROPHENOXYACETIC ACD (MCPA) | 94-74-6 | 110 | G | 1,600 | C | 190,000 | C |
| METHYLENE BIS(2-CHLOROANILINE), 4,4'- | 101-14-4 | 42 | G | 910 | G | 190,000 | C |
| METHYLNAPHTHALENE, 2- | 91-57-6 | 880 | G | 13,000 | G | 190,000 | C |
| METHYLSTYRENE, ALPHA | 98-83-9 | 10,000 | C | 10,000 | C | 10,000 | C |
| METOLACHLOR | 51218-45-2 | 10,000 | C | 10,000 | C | 10,000 | C |
| METRIBUZIN | 21087-64-9 | 5,500 | G | 80,000 | G | 190,000 | C |
| MONOCHLOROACETIC ACID | 79-11-8 | 440 | G | 6,400 | G | 190,000 | C |
| NAPHTHALENE | 91-20-3 | 160 | G | 760 | G | 190,000 | C |
| NAPHTHYLAMINE, 1- | 134-32-7 | 10 | G | 51 | G | 190,000 | C |
| NAPHTHYLAMINE, 2- | 91-59-8 | 10 | G | 51 | G | 190,000 | C |
| NAPROPAMIDE | 15299-99-7 | 22,000 | G | 190,000 | C | 190,000 | C |
| NITROANILINE, O- | 88-74-4 | 2,200 | G | 32,000 | G | 190,000 | C |
| NITROANILINE, P- | 100-01-6 | 880 | G | 4,600 | G | 190,000 | C |
| NITROBENZENE | 98-95-3 | 440 | G | 6,400 | G | 10,000 | C |
| NITROGUANIDINE | 556-88-7 | 22,000 | G | 190,000 | C | 190,000 | C |
| NITROPHENOL, 2 - | 88-75-5 | 1,800 | G | 26,000 | G | 190,000 | C |
| NITROPHENOL, 4- | 100-02-7 | 1,800 | G | 26,000 | G | 190,000 | C |
| NITROPROPANE, 2- | 79-46-9 | 0.16 | N | 0.82 | N | 0.94 | N |
| NITROSODIETHYLAMINE, N- | 55-18-5 | 0.0041 | N | 0.051 | N | 0.059 | N |
| NITROSODIMETHYLAMINE, N- | 62-75-9 | 0.012 | N | 0.16 | N | 0.18 | N |
| NITROSO-DI-N-BUTYLAMINE, N- | 924-16-3 | 3.4 | G | 17 | G | 10,000 | C |
| NITROSODI-N-PROPYLAMINE, N- | 621-64-7 | 2.7 | G | 13 | G | 10,000 | C |
| NITROSODIPHENYLAMINE, N- | 86-30-6 | 3,800 | G | 19,000 | G | 190,000 | C |
| NITROSO-N-ETHYLUREA, N- | 759-73-9 | 0.16 | G | 3.4 | G | 190,000 | C |
| OCTYL PHTHALATE, DI-N- | 117-84-0 | 2,200 | G | 10,000 | C | 10,000 | C |
| OXAMYL (VYDATE) | 23135-22-0 | 5,500 | G | 80,000 | G | 190,000 | C |
| PARAQUAT | 1910-42-5 | 990 | G | 14,000 | G | 190,000 | C |
| PARATHION | 56-38-2 | 1,300 | G | 10,000 | C | 10,000 | C |
| PCB-1016 (AROCLOR) | 12674-11-2 | 9 | G | 46 | G | 10,000 | C |
| PCB-1221 (AROCLOR) | 11104-28-2 | 9 | G | 46 | G | 10,000 | C |
| PCB-1232 (AROCLOR) | 11141-16-5 | 9 | G | 46 | G | 10,000 | C |
| PCB-1242 (AROCLOR) | 53469-21-9 | 9 | G | 46 | G | 10,000 | C |
| PCB-1248 (AROCLOR) | 12672-29-6 | 9.3 | G | 46 | G | 10,000 | C |
| PCB-1254 (AROCLOR) | 11097-69-1 | 4.4 | G | 46 | G | 10,000 | C |
| PCB-1260 (AROCLOR) | 11096-82-5 | 9 | G | 46 | G | 190,000 | C |
| PEBULATE | 1114-71-2 | 10,000 | C | 10,000 | C | 10,000 | C |
| PENTACHLOROBENZENE | 608-93-5 | 180 | G | 2,600 | G | 190,000 | C |
| PENTACHLOROETHANE | 76-01-7 | 210 | G | 1,000 | G | 10,000 | C |
| PENTACHLORONITROBENZENE | 82-68-8 | 72 | G | 350 | G | 190,000 | C |
| PENTACHLOROPHENOL | 87-86-5 | 47 | G | 230 | G | 190,000 | C |
| PHENACETIN | 62-44-2 | 8,500 | G | 41,000 | G | 190,000 | C |
| PHENANTHRENE | 85-01-8 | 66,000 | G | 190,000 | C | 190,000 | C |
| PHENOL | 108-95-2 | 3,800 | N | 16,000 | N | 18,000 | N |
| PHENYL MERCAPTAN | 108-98-5 | 220 | G | 3,200 | G | 10,000 | C |
| PHENYLENEDIAMINE, M- | 108-45-2 | 1,300 | G | 19,000 | G | 190,000 | C |
| PHENYLPHENOL, 2- | 90-43-7 | 9,800 | G | 48,000 | G | 190,000 | C |

All concentration ns in $\mathrm{mg} / \mathrm{kg}$
G-Ingestion
N -Inhalation
C-Cap

Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil A. Direct Contact Numeric Values

| REGULATED SUBSTANCE | CASRN | Residential 0-15 feet |  | Nonresidential |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{gathered} \hline \text { Surface Soil } \\ 0-2 \text { feet } \\ \hline \end{gathered}$ |  | Subsurface Soil 2-15 feet |  |
| PHORATE | 298-02-2 | 44 | G | 640 | G | 10,000 | C |
| PHTHALIC ANHYDRIDE | 85-44-9 | 190,000 | C | 190,000 | C | 190,000 | C |
| PICLORAM | 1918-02-1 | 15,000 | G | 190,000 | C | 190,000 | C |
| PROMETON | 1610-18-0 | 3,300 | G | 48,000 | G | 190,000 | C |
| PRONAMIDE | 23950-58-5 | 17,000 | G | 190,000 | C | 190,000 | C |
| PROPANIL | 709-98-8 | 1,100 | G | 16,000 | G | 190,000 | C |
| PROPANOL, 2- (ISOPROPYL ALCOHOL) | 67-63-0 | 3,800 | N | 10,000 | C | 10,000 | C |
| PROPAZINE | 139-40-2 | 4,400 | G | 10,000 | C | 10,000 | C |
| PROPHAM | 122-42-9 | 4,400 | G | 64,000 | G | 190,000 | C |
| PROPYLBENZENE, N- | 103-65-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| PROPYLENE OXIDE | 75-56-9 | 78 | G | 380 | G | 690 | N |
| PYRENE | 129-00-0 | 6,600 | G | 96,000 | G | 190,000 | C |
| PYRIDINE | 110-86-1 | 220 | G | 3,200 | G | 10,000 | C |
| QUINOLINE | 91-22-5 | 6 | G | 30 | G | 10,000 | C |
| QUIZALOFOP (ASSURE) | 76578-14-8 | 2,000 | G | 29,000 | G | 190,000 | C |
| RDX | 121-82-4 | 170 | G | 830 | G | 190,000 | C |
| RESORCINOL | 108-46-3 | 190,000 | C | 190,000 | C | 190,000 | C |
| RONNEL | 299-84-3 | 11,000 | G | 160,000 | G | 190,000 | C |
| SIMAZINE | 122-34-9 | 160 | G | 760 | G | 190,000 | C |
| STRYCHNINE | 57-24-9 | 66 | G | 960 | G | 190,000 | C |
| STYRENE | 100-42-5 | 10,000 | C | 10,000 | C | 10,000 | C |
| TEBUTHIURON | 34014-18-1 | 15,000 | G | 190,000 | C | 190,000 | C |
| TERBACIL | 5902-51-2 | 2,900 | G | 42,000 | G | 190,000 | C |
| TERBUFOS | 13071-79-9 | 5.5 | G | 80 | G | 10,000 | C |
| TETRACHLOROBENZENE, 1,2,4,5- | 95-94-3 | 66 | G | 960 | G | 190,000 | C |
| TETRACHLORODIBENZO-P-DIOXIN, 2,3,7,8- (TCDD) | 1746-01-6 | 0.00014 | G | 0.0007 | G | 190,000 | C |
| TETRACHLOROETHANE, $1,1,1,2$ - | 630-20-6 | 60 | N | 300 | N | 340 | N |
| TETRACHLOROETHANE, $1,1,2,2$ - | 79-34-5 | 7.7 | N | 38 | N | 44 | N |
| TETRACHLOROETHYLENE (PCE) | 127-18-4 | 770 | N | 3,200 | N | 3,600 | N |
| TETRACHLOROPHENOL, $2,3,4,6$ - | 58-90-2 | 6,600 | G | 96,000 | G | 190,000 | C |
| TETRAETHYL LEAD | 78-00-2 | 0.022 | G | 0.32 | G | 10,000 | C |
| TETRAETHYLDITHIOPYROPHOSPHATE | 3689-24-5 | 110 | G | 1,600 | G | 10,000 | C |
| TETRAHYDROFURAN | 109-99-9 | 240 | N | 1,200 | N | 1,400 | N |
| THIOFANOX | 39196-18-4 | 66 | G | 960 | G | 190,000 | C |
| THIRAM | 137-26-8 | 1,100 | G | 16,000 | G | 190,000 | C |
| TOLUENE | 108-88-3 | 10,000 | C | 10,000 | C | 10,000 | C |
| TOLUIDINE, M- | 108-44-1 | 1,200 | G | 5,700 | G | 10,000 | C |
| TOLUIDINE, O- | 95-53-4 | 1,200 | G | 5,700 | G | 10,000 | C |
| TOLUIDINE, P- | 106-49-0 | 620 | G | 3,000 | G | 190,000 | C |
| TOXAPHENE | 8001-35-2 | 17 | G | 83 | G | 190,000 | C |
| TRIALLATE | 2303-17-5 | 2,900 | G | 10,000 | C | 10,000 | C |
| TRIBROMOMETHANE (BROMOFORM) | 75-25-2 | 410 | N | 2,000 | N | 2,300 | N |
| TRICHLORO-1,2,2-TRIFLUOROETHANE, 1,1,2- | 76-13-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| TRICHLOROACETIC ACID | 76-03-9 | 270 | G | 1,300 | G | 190,000 | C |
| TRICHLOROBENZENE, 1,2,4- | 120-82-1 | 640 | G | 3,100 | G | 10,000 | C |
| TRICHLOROBENZENE, 1,3,5- | 108-70-3 | 1,300 | G | 19,000 | G | 190,000 | C |
| TRICHLOROETHANE, 1,1,1- | 71-55-6 | 10,000 | C | 10,000 | C | 10,000 | C |
| TRICHLOROETHANE, 1,1,2- | 79-00-5 | 4 | N | 16 | N | 18 | N |
| TRICHLOROETHYLENE (TCE) | 79-01-6 | 38 | N | 160 | N | 180 | N |
| TRICHLOROPHENOL, 2,4,5- | 95-95-4 | 22,000 | G | 190,000 | C | 190,000 | C |
| TRICHLOROPHENOL, 2,4,6- | 88-06-2 | 220 | G | 3,200 | G | 190,000 | C |
| TRICHLOROPHENOXYACETIC ACID, 2,4,5- (2,4,5-T) | 93-76-5 | 2,200 | G | 32,000 | G | 190,000 | C |
| TRICHLOROPHENOXYPROPIONIC ACID, 2,4,5- (2,4,5TP) (SILVEX) | 93-72-1 | 1,800 | G | 26,000 | G | 190,000 | C |
| TRICHLOROPROPANE, 1,1,2- | 598-77-6 | 1,100 | G | 10,000 | C | 10,000 | C |
| TRICHLOROPROPANE, 1,2,3- | 96-18-4 | 0.14 | G | 3.0 | G | 28 | N |
| TRICHLOROPROPENE, 1,2,3- | 96-19-5 | 5.7 | N | 24 | N | 27 | N |
| TRIETHYLAMINE | 121-44-8 | 130 | N | 560 | N | 640 | N |
| TRIETHYLENE GLYCOL | 112-27-6 | 10,000 | C | 10,000 | C | 10,000 | C |

All concentration ns in $\mathrm{mg} / \mathrm{kg}$
G-Ingestion
N -Inhalation
C-Cap

Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil A. Direct Contact Numeric Values

| REGULATED SUBSTANCE | CASRN | Residential 0-15 feet |  | Nonresidential |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Surface Soil 0-2 feet |  | Subsurface Soil 2-15 feet |  |
| TRIFLURALIN | 1582-09-8 | 1,700 | G | 12,000 | G | 190,000 | C |
| TRIMETHYLBENZENE, 1,3,4- <br> (TRIMETHYLBENZENE, $1,2,4$-) | 95-63-6 | 130 | N | 560 | N | 640 | N |
| TRIMETHYLBENZENE, 1,3,5- | 108-67-8 | 2,200 | G | 10,000 | C | 10,000 | C |
| TRINITROGLYCEROL (NITROGLYCERIN) | 55-63-0 | 22 | G | 320 | G | 10,000 | C |
| TRINITROTOLUENE, 2,4,6- | 118-96-7 | 110 | G | 1,600 | G | 190,000 | C |
| VINYL ACETATE | 108-05-4 | 3,900 | N | 10,000 | C | 10,000 | C |
| VINYL BROMIDE (BROMOETHENE) | 593-60-2 | 14 | N | 70 | N | 80 | N |
| VINYL CHLORIDE | 75-01-4 | 0.9 | G | 61 | G | 280 | N |
| WARFARIN | 81-81-2 | 66 | G | 960 | G | 190,000 | C |
| XYLENES (TOTAL) | 1330-20-7 | 1,900 | N | 8,000 | N | 9,100 | N |
| ZINEB | 12122-67-7 | 11,000 | G | 160,000 | G | 190,000 | C |

All concentration ns in $\mathrm{mg} / \mathrm{kg}$
G-Ingestion
N -Inhalation
C-Cap
Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil

| REGULATED SUBSTANCE | CASRN | Used Aquifers |  |  |  |  |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |  |  | Soil Buffer Distance (feet) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  |  |  | TDS > 2500 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  |  |
|  |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic <br> Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  |  |
| ACENAPHTHENE | 83-32-9 | 250 | 3,100 | E | 380 | 4,700 | E | 380 | 4,700 | E | 380 | 4,700 | E | 380 | 4,700 | E | 380 | 4,700 | E | 15 |
| ACENAPHTHYLENE | 208-96-8 | 250 | 2,800 | E | 700 | 8,000 | E | 1,600 | 18,000 | E | 1,600 | 18,000 | E | 1,600 | 18,000 | E | 1,600 | 18,000 | E | 15 |
| ACEPHATE | 30560-19-1 | 8.4 | 1.0 | E | 39 | 4.6 | E | 840 | 100 | E | 3,900 | 460 | E | 8.4 | 1.0 | E | 39 | 4.6 | E | NA |
| ACETALDEHYDE | 75-07-0 | 1.9 | 0.23 | E | 7.9 | 0.96 | E | 190 | 23 | E | 790 | 96 | E | 1.9 | 0.23 | E | 7.9 | 0.96 | E | NA |
| ACETONE | 67-64-1 | 3,800 | 430 | E | 10,000 | 1,200 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 4,300 | E | 10,000 | 10,000 | C | NA |
| ACETONITRILE | 75-05-8 | 13 | 1.5 | E | 53 | 6 | E | 1,300 | 150 | E | 5,300 | 600 | E | 130 | 15 | E | 530 | 60 | E | NA |
| ACETOPHENONE | 98-86-2 | 420 | 230 | E | 1,200 | 640 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 420 | 230 | E | 1,200 | 640 | E | NA |
| $\begin{array}{\|l} \hline \text { ACETYLAMINOFLUORENE, } \\ 2 \text {-(2AAF) } \\ \hline \end{array}$ | 53-96-3 | 0.019 | 0.08 | E | 0.089 | 0.37 | E | 1.9 | 8 | E | 8.9 | 37 | E | 19 | 78 | E | 89 | 370 | E | 20 |
| ACROLEIN | 107-02-8 | 0.0042 | 0.00047 | E | 0.018 | 0.002 | E | 0.42 | 0.047 | E | 1.8 | 0.2 | E | 0.042 | 0.0047 | E | 0.18 | 0.02 | E | NA |
| ACRYLAMIDE | 79-06-1 | 0.019 | 0.0033 | E | 0.25 | 0.043 | E | 1.9 | 0.33 | E | 25 | 4.3 | E | 0.019 | 0.0033 | E | 0.25 | 0.043 | E | NA |
| ACRYLIC ACID | 79-10-7 | 0.21 | 0.039 | E | 0.88 | 0.16 | E | 21 | 3.9 | E | 88 | 16 | E | 21 | 3.9 | E | 88 | 16 | E | NA |
| ACRYLONITRILE | 107-13-1 | 0.072 | 0.01 | E | 0.37 | 0.051 | E | 7.2 | 1 | E | 37 | 5.1 | E | 7.2 | 1 | E | 37 | 5.1 | E | NA |
| ALACHLOR | 15972-60-8 | 0.2 | 0.077 | E | 0.2 | 0.077 | E | 20 | 7.7 | E | 20 | 7.7 | E | 0.2 | 0.077 | E | 0.2 | 0.077 | E | NA |
| ALDICARB | 116-06-3 | 0.3 | 0.05 | E | 0.3 | 0.05 | E | 30 | 5 | E | 30 | 5 | E | 300 | 50 | E | 300 | 50 | E | NA |
| ALDICARB SULFONE | 1646-88-4 | 0.2 | 0.027 | E | 0.2 | 0.027 | E | 20 | 2.7 | E | 20 | 2.7 | E | 0.2 | 0.027 | E | 0.2 | 0.027 | E | NA |
| ALDICARB SULFOXIDE | 1646-87-3 | 0.4 | 0.045 | E | 0.4 | 0.045 | E | 40 | 4.5 | E | 40 | 4.5 | E | 0.4 | 0.045 | E | 0.4 | 0.045 | E | NA |
| ALDRIN | 309-00-2 | 0.0043 | 0.52 | E | 0.02 | 2.4 | E | 0.43 | 52 | E | 2.0 | 240 | E | 2 | 240 | E | 2 | 240 | E | 10 |
| ALLYL ALCOHOL | 107-18-6 | 0.021 | 0.0025 | E | 0.088 | 0.01 | E | 2.1 | 0.25 | E | 9 | 1 | E | 2.1 | 0.25 | E | 9 | 1 | E | NA |
| AMETRYN | 834-12-8 | 6 | 6.5 | E | 6 | 6.5 | E | 600 | 650 | E | 600 | 650 | E | 6 | 6.5 | E | 6 | 6.5 | E | NA |
| AMINOBIPHENYL, 4- | 92-67-1 | 0.0035 | 0.0014 | E | 0.016 | 0.0062 | E | 0.35 | 0.14 | E | 1.6 | 0.62 | E | 3.5 | 1.4 | E | 16 | 6.2 | E | NA |
| AMITROLE | 61-82-5 | 0.078 | 0.032 | E | 0.36 | 0.15 | E | 8 | 3.2 | E | 36 | 15 | E | 78 | 32 | E | 360 | 150 | E | NA |
| AMMONIA | 7664-41-7 | 3,000 | 360 | E | 3,000 | 360 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 3,000 | 360 | E | 3,000 | 360 | E | NA |
| AMMONIUM SULFAMATE | 7773-06-0 | 200 | 24 | E | 200 | 24 | E | 20,000 | 2,400 | E | 20,000 | 2,400 | E | 200 | 24 | E | 200 | 24 | E | NA |
| ANILINE | 62-53-3 | 0.21 | 0.12 | E | 0.88 | 0.52 | E | 21 | 12 | E | 88 | 52 | E | 0.21 | 0.12 | E | 0.88 | 0.52 | E | NA |
| ANTHRACENE | 120-12-7 | 6.6 | 350 | E | 6.6 | 350 | E | 6.6 | 350 | E | 6.6 | 350 | E | 6.6 | 350 | E | 6.6 | 350 | E | 10 |
| ATRAZINE | 1912-24-9 | 0.3 | 0.13 | E | 0.3 | 0.13 | E | 30 | 13 | E | 30 | 13 | E | 0.3 | 0.13 | E | 0.3 | 0.13 | E | NA |
| $\begin{aligned} & \text { AZINPHOS-METHYL } \\ & \text { (GUTHION) } \end{aligned}$ | 86-50-0 | 13 | 15 | E | 35 | 40 | E | 1,300 | 1,500 | E | 3,200 | 3,600 | E | 13 | 15 | E | 35 | 40 | E | NA |
| BAYGON (PROPOXUR) | 114-26-1 | 0.3 | 0.057 | E | 0.3 | 0.057 | E | 30 | 5.7 | E | 30 | 5.7 | E | 300 | 57 | E | 300 | 57 | E | NA |
| BENOMYL | 17804-35-2 | 200 | 970 | E | 200 | 970 | E | 200 | 970 | E | 200 | 970 | E | 200 | 970 | E | 200 | 970 | E | 20 |
| BENTAZON | 25057-89-0 | 20 | 2.9 | E | 20 | 2.9 | E | 2,000 | 290 | E | 2,000 | 290 | E | 20 | 2.9 | E | 20 | 2.9 | E | NA |
| BENZENE | 71-43-2 | 0.5 | 0.13 | E | 0.5 | 0.13 | E | 50 | 13 | E | 50 | 13 | E | 50 | 13 | E | 50 | 13 | E | NA |
| BENZIDINE | 92-87-5 | 0.000098 | 0.13 | E | 0.0015 | 2 | E | 0.0098 | 13 | E | 0.15 | 200 | E | 0.098 | 130 | E | 1.5 | 2,000 | E | 5 |
| BENZO[A]ANTHRACENE | 56-55-3 | 0.032 | 28 | E | 0.49 | 430 | E | 1.1 | 960 | E | 1.1 | 960 | E | 1.1 | 960 | E | 1.1 | 960 | E | 5 |
| BENZO[A]PYRENE | 50-32-8 | 0.02 | 46 | E | 0.02 | 46 | E | 0.38 | 860 | E | 0.38 | 860 | E | 0.38 | 860 | E | 0.38 | 860 | E | 5 |
| BENZO[B]FLUORANTHENE | 205-99-2 | 0.019 | 26 | E | 0.12 | 170 | E | 0.12 | 170 | E | 0.12 | 170 | E | 0.12 | 170 | E | 0.12 | 170 | E | 5 |

${ }^{1}$ For other options see Section 250.308
All concentrations in mg/kg
E-Number calculated by the soil to groundwater equation is section 250.308
NA-The soil buffer distance option is not available for this substance
C-Cap
NA-The
THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.
HAAs-The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.
Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil

| REGULATED SUBSTANCE | CASRN | Used Aquifers |  |  |  |  |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |  |  | Soil Buffer Distance (feet) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  |  |  | TDS > 2500 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  |  |
|  |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic <br> Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  |  |
| BENZO[GHI]PERYLENE | 191-24-2 | 0.026 | 180 | E | 0.026 | 180 | E | 0.026 | 180 | E | 0.026 | 180 | E | 0.026 | 180 | E | 0.026 | 180 | E | 5 |
| BENZO[K]FLUORANTHENE | 207-08-9 | 0.019 | 210 | E | 0.055 | 610 | E | 0.055 | 610 | E | 0.055 | 610 | E | 0.055 | 610 | E | 0.055 | 610 | E | 5 |
| BENZOIC ACID | 65-85-0 | 17,000 | 3,200 | E | 47,000 | 9,000 | E | 190,000 | 52,000 | E | 190,000 | 52,000 | E | 17,000 | 3,200 | E | 47,000 | 9,000 | E | NA |
| BENZOTRICHLORIDE | 98-07-7 | 0.0056 | 0.014 | E | 0.026 | 0.063 | E | 0.56 | 1.4 | E | 3 | 6.3 | E | 5.6 | 14 | E | 26 | 63 | E | 30 |
| BENZYL ALCOHOL | 100-51-6 | 420 | 150 | E | 1,200 | 430 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 420 | 150 | E | 1,200 | 430 | E | NA |
| BENZYL CHLORIDE | 100-44-7 | 0.1 | 0.059 | E | 0.51 | 0.3 | E | 10 | 5.9 | E | 51 | 30 | E | 10 | 5.9 | E | 51 | 30 | E | NA |
| BETA PROPIOLACTONE | 57-57-8 | 0.0012 | 0.00015 | E | 0.0063 | 0.00076 | E | 0.1 | 0.015 | E | 0.63 | 0.076 | E | 0.012 | 0.0015 | E | 0.063 | 0.0076 | E | NA |
| BHC, ALPHA | 319-84-6 | 0.012 | 0.055 | E | 0.054 | 0.25 | E | 1 | 5.5 | E | 5.4 | 25 | E | 12 | 55 | E | 54 | 250 | E | 20 |
| BHC, BETA- | 319-85-7 | 0.041 | 0.24 | E | 0.19 | 1.1 | E | 4.1 | 24 | E | 10 | 59 | E | 10 | 59 | E | 10 | 59 | E | 15 |
| BHC, GAMMA (LINDANE) | 58-89-9 | 0.02 | 0.072 | E | 0.02 | 0.072 | E | 2 | 7.2 | E | 2 | 7.2 | E | 20 | 72 | E | 20 | 72 | E | 20 |
| BIPHENYL, 1,1- | 92-52-4 | 9.1 | 40 | E | 43 | 190 | E | 720 | 3,100 | E | 720 | 3,100 | E | 720 | 3,100 | E | 720 | 3,100 | E | 20 |
| $\begin{aligned} & \text { BIS(2-CHLOROETHOXY) } \\ & \text { METHANE } \\ & \hline \end{aligned}$ | 111-91-1 | 13 | 3.4 | E | 35 | 9.2 | E | 1,300 | 340 | E | 3,500 | 920 | E | 13 | 3.4 | E | 35 | 9.2 | E | NA |
| BIS(2- <br> CHLOROETHYL)ETHER | 111-44-4 | 0.015 | 0.0045 | E | 0.076 | 0.023 | E | 1.5 | 0.45 | E | 7.6 | 2.3 | E | 1.5 | 0.45 | E | 7.6 | 2.3 | E | NA |
| $\begin{aligned} & \hline \text { BIS(2-CHLORO- } \\ & \text { ISOPROPYL)ETHER } \end{aligned}$ | 108-60-1 | 30 | 8 | E | 30 | 8 | E | 3,000 | 800 | E | 3,000 | 800 | E | 3,000 | 800 | E | 3,000 | 800 | E | NA |
| BIS(CHLOROMETHYL) ETHER | 542-88-1 | 0.000079 | 0.000012 | E | 0.0004 | 0.00006 | E | 0.0079 | 0.001 | E | 0.04 | 0.006 | E | 0.0079 | 0.001 | E | 0.04 | 0.006 | E | NA |
| BIS[2-ETHYLHEXYL] PHTHALATE | 117-81-7 | 0.6 | 130 | E | 0.6 | 130 | E | 29 | 6,300 | E | 29 | 6,300 | E | 29 | 6,300 | E | 29 | 6,300 | E | 10 |
| BISPHENOL A | 80-05-7 | 210 | 810 | E | 580 | 2,200 | E | 12,000 | 46,000 | E | 12,000 | 46,000 | E | 12,000 | 46,000 | E | 12,000 | 46,000 | E | 20 |
| BROMACIL | 314-40-9 | 7 | 1.8 | E | 7 | 1.8 | E | 700 | 180 | E | 700 | 180 | E | 7 | 1.8 | E | 7 | 1.8 | E | NA |
| BROMOCHLOROMETHANE | 74-97-5 | 9 | 1.6 | E | 9 | 1.6 | E | 900 | 160 | E | 900 | 160 | E | 9 | 1.6 | E | 9 | 1.6 | E | NA |
| BROMODICHLORO <br> METHANE (THM) | 75-27-4 | 8 | 2.7 | E | 8 | 2.7 | E | 800 | 270 | E | 800 | 270 | E | 8 | 2.7 | E | 8 | 2.7 | E | NA |
| BROMOMETHANE | 74-83-9 | 1 | 0.54 | E | 1 | 0.54 | E | 100 | 54 | E | 100 | 54 | E | 100 | 54 | E | 100 | 54 | E | NA |
| BROMOXYNIL | 1689-84-5 | 83 | 71 | E | 230 | 200 | E | 8,300 | 7,100 | E | 13,000 | 11,000 | E | 83 | 71 | E | 230 | 200 | E | NA |
| BROMOXYNIL OCTANOATE | 1689-99-2 | 8 | 360 | E | 8 | 360 | E | 8 | 360 | E | 8 | 360 | E | 8 | 360 | E | 8 | 360 | E | 15 |
| BUTADIENE, 1,3- | 106-99-0 | 0.021 | 0.0086 | E | 0.1 | 0.041 | E | 2.1 | 0.86 | E | 10 | 4.1 | E | 2.1 | 0.86 | E | 10 | 4.1 | E | NA |
| BUTYL ALCOHOL, N - | 71-36-3 | 420 | 50 | E | 1,200 | 140 | E | 10,000 | 5,000 | E | 10,000 | 10,000 | C | 4,200 | 500 | E | 10,000 | 1,400 | E | NA |
| BUTYLATE | 2008-41-5 | 40 | 58 | E | 40 | 58 | E | 4,000 | 5,800 | E | 4,000 | 5,800 | E | 40 | 58 | E | 40 | 58 | E | 30 |
| BUTYLBENZENE, N - | 104-51-8 | 210 | 1,300 | E | 580 | 3,700 | E | 1,500 | 9,500 | E | 1,500 | 9,500 | E | 210 | 1,300 | E | 580 | 3,700 | E | 15 |
| BUTYLBENZENE, SEC- | 135-98-8 | 420 | 980 | E | 1,200 | 2,800 | E | 1,700 | 4,000 | E | 1,700 | 4,000 | E | 420 | 980 | E | 1,200 | 2,800 | E | 30 |
| BUTYLBENZENE, TERT- | 98-06-6 | 420 | 760 | E | 1,200 | 2,200 | E | 3,000 | 5,400 | E | 3,000 | 5,400 | E | 420 | 760 | E | 1,200 | 2,200 | E | 30 |
| BUTYLBENZYL PHTHALATE | 85-68-7 | 38 | 3,200 | E | 180 | 10,000 | C | 270 | 10,000 | C | 270 | 10,000 | C | 270 | 10,000 | C | 270 | 10,000 | C | 10 |
| CAPTAN | 133-06-2 | 32 | 20 | E | 50 | 31 | E | 50 | 31 | E | 50 | 31 | E | 50 | 31 | E | 50 | 31 | E | NA |

${ }^{1}$ For other options see Section 250.308
All concentrations in $\mathrm{mg} / \mathrm{kg}$
E-Number calculated by the soil to groundwater equation is section 250.308
C-Cap
NA-The soil buffer distance option is not available for this substance
THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.
HAAs-The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.
Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil

| REGULATED SUBSTANCE | CASRN | Used Aquifers |  |  |  |  |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |  |  | Soil Buffer Distance (feet) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  |  |  | TDS > 2500 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  |  |
|  |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi <br> Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  |  |
| CARBARYL | 63-25-2 | 420 | 250 | E | 1,200 | 700 | E | 12,000 | 7,000 | E | 12,000 | 7,000 | E | 12,000 | 7,000 | E | 12,000 | 7,000 | E | NA |
| CARBAZOLE | 86-74-8 | 3.7 | 24 | E | 17 | 110 | E | 120 | 760 | E | 120 | 760 | E | 4 | 24 | E | 17 | 110 | E | 15 |
| CARBOFURAN | 1563-66-2 | 4 | 0.87 | E | 4 | 0.87 | E | 400 | 87 | E | 400 | 87 | E | 4 | 0.87 | E | 4 | 0.87 | E | NA |
| CARBON DISULFIDE | 75-15-0 | 150 | 130 | E | 620 | 530 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 150 | 130 | E | 620 | 530 | E | NA |
| CARBON TETRACHLORIDE | 56-23-5 | 0.5 | 0.26 | E | 0.5 | 0.26 | E | 50 | 26 | E | 50 | 26 | E | 5 | 2.6 | E | 5 | 2.6 | E | NA |
| CARBOXIN | 5234-68-4 | 70 | 53 | E | 70 | 53 | E | 7,000 | 5,300 | E | 7,000 | 5,300 | E | 70 | 53 | E | 70 | 53 | E | NA |
| CHLORAMBEN | 133-90-4 | 10 | 1.6 | E | 10 | 1.6 | E | 1,000 | 160 | E | 1,000 | 160 | E | 10 | 1.6 | E | 10 | 1.6 | E | NA |
| CHLORDANE | 57-74-9 | 0.2 | 49 | E | 0.2 | 49 | E | 5.6 | 1,400 | E | 5.6 | 1,400 | E | 5.6 | 1,400 | E | 5.6 | 1,400 | E | 10 |
| CHLORO-1,1- <br> DIFLUOROETHANE, 1 - | 75-68-3 | 10,000 | 1,800 | E | 10,000 | 7,300 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 1,800 | E | 10,000 | 7,300 | E | NA |
| CHLORO-1-PROPENE, 3- <br> (ALLYL CHLORIDE) | 107-05-1 | 0.21 | 0.049 | E | 0.88 | 0.2 | E | 21 | 4.9 | E | 88 | 20 | E | 21 | 4.9 | E | 88 | 20 | E | NA |
| CHLOROACETALDEHYDE | 107-20-0 | 0.24 | 0.029 | E | 1.1 | 0.13 | E | 24 | 2.9 | E | 110 | 13 | E | 0.24 | 0.029 | E | 1.1 | 0.1 | E | NA |
| CHLOROACETOPHENONE, 2 - | 532-27-4 | 0.13 | 0.039 | E | 0.35 | 0.11 | E | 13 | 3.9 | E | 35 | 11.0 | E | 130 | 39 | E | 350 | 110 | E | NA |
| CHLOROANILINE, P- | 106-47-8 | 0.37 | 0.47 | E | 1.7 | 2.1 | E | 37 | 47 | E | 170 | 210 | E | 0.37 | 0.47 | E | 1.7 | 2.1 | E | NA |
| CHLOROBENZENE | 108-90-7 | 10 | 6.1 | E | 10 | 6.1 | E | 1,000 | 610 | E | 1,000 | 610 | E | 1,000 | 610 | E | 1,000 | 610 | E | NA |
| CHLOROBENZILATE | 510-15-6 | 0.66 | 4.4 | E | 3.1 | 20 | E | 66 | 440 | E | 310 | 2,000 | E | 660 | 4,400 | E | 1,300 | 8,600 | E | 15 |
| CHLOROBUTANE, 1 - | 109-69-3 | 170 | 270 | E | 470 | 730 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 170 | 270 | E | 470 | 730 | E | 30 |
| CHLORODIBROMO <br> METHANE (THM) | 124-48-1 | 8 | 2.5 | E | 8 | 2.5 | E | 800 | 250 | E | 800 | 250 | E | 800 | 250 | E | 800 | 250 | E | NA |
| CHLORODIFLUORO | 75-45-6 | 10,000 | 2,800 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 2,800 | E | 10,000 | 10,000 | C | NA |
| CHLOROETHANE | 75-00-3 | 25 | 5.4 | E | 120 | 26 | E | 2,500 | 540 | E | 10,000 | 2,600 | E | 2,500 | 540 | E | 10,000 | 2,600 | E | NA |
| CHLOROFORM (THM) | 67-66-3 | 8 | 2 | E | 8 | 2 | E | 800 | 200 | E | 800 | 200 | E | 80 | 20 | E | 80 | 20 | E | NA |
| CHLORONAPHTHALENE, 2- | 91-58-7 | 330 | 7,000 | E | 930 | 20,000 | E | 1,200 | 26,000 | E | 1,200 | 26,000 | E | 330 | 7,000 | E | 930 | 20,000 | E | 15 |
| CHLORONITROBENZENE, P- | 100-00-5 | 4.2 | 5.5 | E | 12 | 16 | E | 420 | 550 | E | 1,200 | 1,600 | E | 4.2 | 5.5 | E | 12 | 16 | E | NA |
| CHLOROPHENOL, 2 - | 95-57-8 | 4 | 4.4 | E | 4 | 4.4 | E | 400 | 440 | E | 400 | 440 | E | 4 | 4.4 | E | 4 | 4.4 | E | NA |
| CHLOROPRENE | 126-99-8 | 0.016 | 0.0038 | E | 0.083 | 0.02 | E | 1.6 | 0.38 | E | 8.3 | 2 | E | 1.6 | 0.38 | E | 8.3 | 2 | E | NA |
| CHLOROPROPANE, 2- | 75-29-6 | 21 | 16 | E | 88 | 67 | E | 2,100 | 1,600 | E | 8,800 | 6,700 | E | 21 | 16 | E | 88 | 67 | E | NA |
| CHLOROTHALONIL | 1897-45-6 | 24 | 61 | E | 60 | 150 | E | 60 | 150 | E | 60 | 150 | E | 24 | 61 | E | 60 | 150 | E | 30 |
| CHLOROTOLUENE, O- | 95-49-8 | 10 | 20 | E | 10 | 20 | E | 1,000 | 2,000 | E | 1,000 | 2,000 | E | 10 | 20 | E | 10 | 20 | E | 30 |
| CHLOROTOLUENE, P- | 106-43-4 | 10 | 10 | E | 10 | 10 | E | 1,000 | 1,000 | E | 1,000 | 1,000 | E | 10 | 10 | E | 10 | 10 | E | NA |
| CHLORPYRIFOS | 2921-88-2 | 0.2 | 2.3 | E | 0.2 | 2.3 | E | 20 | 230 | E | 20 | 230 | E | 0.2 | 2.3 | E | 0.2 | 2.3 | E | 15 |
| CHLORSULFURON | 64902-72-3 | 210 | 29 | E | 580 | 80 | E | 19,000 | 2,600 | E | 19,000 | 2,600 | E | 210 | 29 | E | 580 | 80 | E | NA |
| $\begin{aligned} & \text { CHLORTHAL-DIMETHYL } \\ & \text { (DACTHAL) (DCPA) } \end{aligned}$ | 1861-32-1 | 7 | 110 | E | 7 | 110 | E | 50 | 820 | E | 50 | 820 | E | 50 | 820 | E | 50 | 820 | E | 15 |
| CHRYSENE | 218-01-9 | 0.19 | 230 | E | 0.19 | 230 | E | 0.19 | 230 | E | 0.19 | 230 | E | 0.19 | 230 | E | 0.19 | 230 | E | 5 |

For other options see Section 250.308
All concentrations in $\mathrm{mg} / \mathrm{kg}$
E-Number calculated by the soil to groundwater equation is section 250.308
C-Cap
NA-The soil buffer distance option is not available for this substance
THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.
HAAs-The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.
Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil

| REGULATED SUBSTANCE | CASRN | Used Aquifers |  |  |  |  |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |  |  | Soil Buffer Distance (feet) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  |  |  | TDS > 2500 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  |  |
|  |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{aligned} & \hline 100 X \\ & G W \\ & M S C \end{aligned}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \\ \hline \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  |  |
| CRESOL(S) | 1319-77-3 | 130 | 23 | E | 530 | 92 | E | 10,000 | 2,300 | E | 10,000 | 9,200 | E | 10,000 | 2,300 | E | 10,000 | 9,200 | E | NA |
| CRESOL, 4,6-DINITRO-O- | 534-52-1 | 0.33 | 0.25 | E | 0.93 | 0.7 | E | 33 | 25 | E | 93 | 70 | E | 330 | 250 | E | 930 | 700 | E | NA |
| $\begin{aligned} & \hline \text { CRESOL, O- (2- } \\ & \text { METHYLPHENOL) } \end{aligned}$ | 95-48-7 | 210 | 35 | E | 580 | 96 | E | 21,000 | 3,500 | E | 58,000 | 9,600 | E | 21,000 | 3,500 | E | 58,000 | 9,600 | E | NA |
| $\begin{aligned} & \hline \text { CRESOL, M- (3- } \\ & \text { METHYLPHENOL) } \end{aligned}$ | 108-39-4 | 210 | 41 | E | 580 | 110 | E | 10,000 | 4,100 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | NA |
| $\begin{aligned} & \hline \text { CRESOL, P- (4- } \\ & \text { METHYLPHENOL) } \end{aligned}$ | 106-44-5 | 21 | 4.9 | E | 58 | 14 | E | 2,100 | 490 | E | 5,800 | 1,400 | E | 21,000 | 4,900 | E | 58,000 | 14,000 | E | NA |
| CRESOL, P-CHLORO-M- | 59-50-7 | 420 | 870 | E | 1,200 | 2,500 | E | 42,000 | 87,000 | E | 120,000 | 190,000 | C | 420 | 870 | E | 1,200 | 2,500 | E | 30 |
| CROTONALDEHYDE | 4170-30-3 | 0.038 | 0.0048 | E | 0.18 | 0.023 | E | 3.8 | 0.48 | E | 18 | 2.3 | E | 3.8 | 0.48 | E | 18 | 2.3 | E | NA |
| CROTONALDEHYDE, TRANS- | 123-73-9 | 0.038 | 0.0048 | E | 0.18 | 0.023 | E | 3.8 | 0.48 | E | 18 | 2.3 | E | 3.8 | 0.48 | E | 18 | 2.3 | E | NA |
| CUMENE (ISOPROPYL <br> BENZENE) | 98-82-8 | 84 | 600 | E | 350 | 2,500 | E | 5,000 | 10,000 | C | 5,000 | 10,000 | C | 5,000 | 10,000 | C | 5,000 | 10,000 | C | 15 |
| CYANAZINE | 21725-46-2 | 0.1 | 0.061 | E | 0.1 | 0.061 | E | 10 | 6.1 | E | 10 | 6.1 | E | 0.1 | 0.061 | E | 0.1 | 0.061 | E | NA |
| CYCLOHEXANE | 110-82-7 | 1,300 | 1,700 | E | 5,300 | 6,900 | E | 5,500 | 7,200 | E | 5,500 | 7,200 | E | 1,300 | 1,700 | E | 5,300 | 6,900 | E | NA |
| CYCLOHEXANONE | 108-94-1 | 150 | 41 | E | 620 | 170 | E | 10,000 | 4,100 | E | 10,000 | 10,000 | C | 150 | 41 | E | 620 | 170 | E | NA |
| CYFLUTHRIN | 68359-37-5 | 0.1 | 33 | E | 0.1 | 33 | E | 0.1 | 33 | E | 0.1 | 33 | E | 0.1 | 33 | E | 0.1 | 33 | E | 10 |
| CYROMAZINE | 66215-27-8 | 31 | 96 | E | 88 | 270 | E | 3,100 | 9,600 | E | 8,800 | 27,000 | E | 31 | 96 | E | 88 | 270 | E | 20 |
| DDD, 4,4'- | 72-54-8 | 0.3 | 33 | E | 1.4 | 150 | E | 16 | 1,800 | E | 16 | 1,800 | E | 16 | 1,800 | E | 16 | 1,800 | E | 10 |
| DDE, 4,4'- | 72-55-9 | 0.21 | 46 | E | 1 | 220 | E | 4 | 870 | E | 4 | 870 | E | 4 | 870 | E | 4 | 870 | E | 10 |
| DDT, 4,4'- | 50-29-3 | 0.21 | 130 | E | 0.55 | 330 | E | 0.55 | 330 | E | 0.55 | 330 | E | 0.55 | 330 | E | 0.55 | 330 | E | 5 |
| DI(2-ETHYLHEXYL) ADIPATE | 103-23-1 | 40 | 10,000 | C | 40 | 10,000 | C | 4,000 | 10,000 | C | 4,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 5 |
| DIALLATE | 2303-16-4 | 1.2 | 0.7 | E | 5.6 | 3.3 | E | 120 | 70 | E | 560 | 330 | E | 1,200 | 700 | E | 4,000 | 2,300 | E | NA |
| DIAMINOTOLUENE, 2,4- | 95-80-7 | 0.018 | 0.0036 | E | 0.085 | 0.017 | E | 1.8 | 0.36 | E | 8.5 | 1.7 | E | 18 | 3.6 | E | 85 | 17 | E | NA |
| DIAZINON | 333-41-5 | 0.1 | 0.14 | E | 0.1 | 0.14 | E | 10 | 14 | E | 10 | 14 | E | 0.1 | 0.14 | E | 0.1 | 0.14 | E | 30 |
| DIBENZO[A,H] ANTHRACENE | 53-70-3 | 0.0055 | 25 | E | 0.06 | 270 | E | 0.06 | 270 | E | 0.06 | 270 | E | 0.06 | 270 | E | 0.06 | 270 | E | 5 |
| DIBENZOFURAN | 132-64-9 | 4.2 | 110 | E | 12 | 310 | E | 420 | 11,000 | E | 450 | 12,000 | E | 450 | 12,000 | E | 450 | 12,000 | E | 15 |
| $\begin{aligned} & \hline \text { DIBROMO-3- } \\ & \text { CHLOROPROPANE, } 1,2 \text { - } \end{aligned}$ | 96-12-8 | 0.02 | 0.0092 | E | 0.02 | 0.0092 | E | 2 | 0.92 | E | 2 | 0.92 | E | 2 | 0.92 | E | 2 | 0.92 | E | NA |
| DIBROMOBENZENE, 1,4- | 106-37-6 | 42 | 170 | E | 120 | 490 | E | 2,000 | 8,200 | E | 2,000 | 8,200 | E | 42 | 170 | E | 120 | 490 | E | 20 |
| DIBROMOETHANE, 1,2 - <br> (ETHYLENE DIBROMIDE) | 106-93-4 | 0.005 | 0.0012 | E | 0.005 | 0.0012 | E | 0.5 | 0.12 | E | 0.5 | 0.12 | E | 0.5 | 0.12 | E | 0.5 | 0.12 | E | NA |
| DIBROMOMETHANE | 74-95-3 | 0.84 | 0.32 | E | 3.5 | 1.4 | E | 84 | 32 | E | 350 | 140 | E | 84 | 32 | E | 350 | 140 | E | NA |
| DIBUTYL PHTHALATE, N - | 84-74-2 | 420 | 1,700 | E | 1,200 | 4,900 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 20 |
| DICAMBA | 1918-00-9 | 400 | 45 | E | 400 | 45 | E | 40,000 | 4,500 | E | 40,000 | 4,500 | E | 400 | 45 | E | 400 | 45 | E | NA |
| DICHLOROACETIC ACID (HAA) | 76-43-6 | 6 | 0.79 | E | 6 | 0.79 | E | 600 | 79 | E | 600 | 79 | E | 6 | 0.79 | E | 6 | 0.79 | E | NA |
| DICHLORO-2-BUTENE, 1,4- | 764-41-0 | 0.0012 | 0.00067 | E | 0.006 | 0.0034 | E | 0.12 | 0.07 | E | 0.6 | 0.34 | E | 0.0012 | 0.0007 | E | 0.006 | 0.0034 | E | NA |

${ }^{1}$ For other options see Section 250.308
E-Number calculated by the soil to groundwater equation is section 250.308
--The soil buffer distance option is not available for this substance
THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.
HAAs-The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.
Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil

| REGULATED SUBSTANCE | CASRN | Used Aquifers |  |  |  |  |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |  |  | Soil Buffer Distance (feet) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  |  |  | TDS > 2500 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  |  |
|  |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{aligned} & \hline 100 X \\ & G W \\ & M S C \end{aligned}$ | Gener Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  |  |
| DICHLORO-2-BUTENE, TRANS-1,4- | 110-57-6 | 0.0012 | 0.00078 | E | 0.006 | 0.0039 | E | 0.12 | 0.078 | E | 0.6 | 0.39 | E | 0.0012 | 0.00078 | E | 0.006 | 0.0039 | E | NA |
| DICHLOROBENZENE, 1,2- | 95-50-1 | 60 | 59 | E | 60 | 59 | E | 6,000 | 5,900 | E | 6,000 | 5,900 | E | 6,000 | 5,900 | E | 6,000 | 5,900 | E | NA |
| DICHLOROBENZENE, 1,3 - | 541-73-1 | 60 | 61 | E | 60 | 61 | E | 6,000 | 6,100 | E | 6,000 | 6,100 | E | 6,000 | 6,100 | E | 6,000 | 6,100 | E | NA |
| DICHLOROBENZENE, P- | 106-46-7 | 7.5 | 10 | E | 7.5 | 10 | E | 750 | 1,000 | E | 750 | 1,000 | E | 750 | 1,000 | E | 750 | 1,000 | E | 30 |
| DICHLOROBENZIDINE, $3,3^{\prime}$ - | 91-94-1 | 0.16 | 8.8 | E | 0.76 | 42 | E | 16 | 880 | E | 76 | 4,200 | E | 160 | 8,800 | E | 310 | 17,000 | E | 10 |
| DICHLORODIFLUORO- METHANE (FREON 12) | 75-71-8 | 100 | 100 | E | 100 | 100 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | NA |
| DICHLOROETHANE, 1,1- | 75-34-3 | 3.1 | 0.75 | E | 16 | 3.9 | E | 310 | 75 | E | 1,600 | 390 | E | 31 | 7.5 | E | 160 | 39 | E | NA |
| DICHLOROETHANE, 1,2 - | 107-06-2 | 0.5 | 0.1 | E | 0.5 | 0.1 | E | 50 | 10 | E | 50 | 10 | E | 5 | 1 | E | 5 | 1 | E | NA |
| DICHLOROETHYLENE, 1,1- | 75-35-4 | 0.7 | 0.19 | E | 0.7 | 0.19 | E | 70 | 19 | E | 70 | 19 | E | 7 | 1.9 | E | 7 | 1.9 | E | NA |
| DICHLOROETHYLENE, CIS-1,2- | 156-59-2 | 7 | 1.6 | E | 7 | 1.6 | E | 700 | 160 | E | 700 | 160 | E | 70 | 16 | E | 70 | 16 | E | NA |
| DICHLOROETHYLENE, TRANS-1,2- | 156-60-5 | 10 | 2.3 | E | 10 | 2.3 | E | 1,000 | 230 | E | 1,000 | 230 | E | 100 | 23 | E | 100 | 23 | E | NA |
| DICHLOROMETHANE <br> (METHYLENE CHLORIDE) | 75-09-2 | 0.5 | 0.076 | E | 0.5 | 0.076 | E | 50 | 7.6 | E | 50 | 7.6 | E | 50 | 7.6 | E | 50 | 7.6 | E | NA |
| DICHLOROPHENOL, 2,4- | 120-83-2 | 2 | 1 | E | 2 | 1 | E | 200 | 100 | E | 200 | 100 | E | 2,000 | 1,000 | E | 2,000 | 1,000 | E | NA |
| DICHLOROPHENOXY ACETIC ACID, 2,4- (2,4-D) | 94-75-7 | 7 | 1.8 | E | 7 | 1.8 | E | 700 | 180 | E | 700 | 180 | E | 7,000 | 1,800 | E | 7,000 | 1,800 | E | NA |
| DICHLOROPROPANE, 1,2 - | 78-87-5 | 0.5 | 0.11 | E | 0.5 | 0.11 | E | 50 | 11 | E | 50 | 11 | E | 5 | 1.1 | E | 5 | 1.1 | E | NA |
| DICHLOROPROPENE, 1,3- | 542-75-6 | 0.73 | 0.13 | E | 3.4 | 0.61 | E | 73 | 13 | E | 340 | 61 | E | 73 | 13 | E | 340 | 61 | E | NA |
| DICHLOROPROPIONIC <br> ACID, 2,2-(DALAPON) | 75-99-0 | 20 | 5.3 | E | 20 | 5.3 | E | 2,000 | 530 | E | 2,000 | 530 | E | 2,000 | 530 | E | 2,000 | 530 | E | NA |
| DICHLORVOS | 62-73-7 | 0.25 | 0.059 | E | 1.2 | 0.28 | E | 25 | 5.9 | E | 120 | 28 | E | 0.25 | 0.059 | E | 1.2 | 0.28 | E | NA |
| DICYCLOPENTADIENE | 77-73-6 | 0.063 | 0.13 | E | 0.26 | 0.56 | E | 6 | 13 | E | 26 | 56 | E | 0.1 | 0.1 | E | 0.3 | 1 | E | 30 |
| DIELDRIN | 60-57-1 | 0.0046 | 0.13 | E | 0.021 | 0.58 | E | 0.46 | 13 | E | 2.1 | 58 | E | 4.6 | 130 | E | 17 | 470 | E | 15 |
| DIETHANOLAMINE | 111-42-2 | NA | NA |  | NA | NA |  | NA | NA |  | NA | NA |  | NA | NA |  | NA | NA |  | NA |
| DIETHYL PHTHALATE | 84-66-2 | 3,300 | 1,000 | E | 9,300 | 2,900 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | NA |
| DIFLUBENZURON | 35367-38-5 | 20 | 52 | E | 20 | 52 | E | 20 | 52 | E | 20 | 52 | E | 20 | 52 | E | 20 | 52 | E | 20 |
| DIISOPROPYL <br> METHYLPHOSPHONATE | 1445-75-6 | 60 | 8.2 | E | 60 | 8.2 | E | 6,000 | 820 | E | 6,000 | 820 | E | 60 | 8.2 | E | 60 | 8.2 | E | NA |
| DIMETHOATE | 60-51-5 | 0.83 | 0.32 | E | 2.3 | 0.89 | E | 83 | 32 | E | 230 | 89 | E | 830 | 320 | E | 2,300 | 890 | E | NA |
| DIMETHOXYBENZIDINE, 3,3- | 119-90-4 | 0.046 | 0.15 | E | 0.21 | 0.71 | E | 5 | 15 | E | 21 | 71 | E | 46 | 150 | E | 210 | 710 | E | 20 |
| DIMETHRIN | 70-38-2 | 3.6 | 240 | E | 3.6 | 240 | E | 3.6 | 240 | E | 3.6 | 240 | E | 3.6 | 240 | E | 3.6 | 240 | E | 10 |
| DIMETHYLAMINOAZO <br> BENZENE, P- | 60-11-7 | 0.016 | 0.042 | E | 0.074 | 0.19 | E | 1.6 | 4.2 | E | 7.4 | 19 | E | 16 | 42 | E | 74 | 190 | E | 20 |
| DIMETHYLANILINE, $\mathrm{N}, \mathrm{N}$ - | 121-69-7 | 8.3 | 4.7 | E | 23 | 13 | E | 830 | 470 | E | 2,300 | 1,300 | E | 830 | 470 | E | 2,300 | 1,300 | E | NA |

${ }^{1}$ For other options see Section 250.308
All concentrations in $\mathrm{mg} / \mathrm{kg}$
E-Number calculated by the soil to groundwater equation is section 250.308
C-Cap
NA-The soil buffer distance option is not available for this substance
THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.
HAAs-The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.
Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil

| REGULATED SUBSTANCE | CASRN | Used Aquifers |  |  |  |  |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |  |  | Soil Buffer Distance (feet) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  |  |  | TDS > 2500 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  |  |
|  |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{aligned} & \hline 100 X \\ & G W \\ & M S C \end{aligned}$ | Gener Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  |  |
| DIMETHYLBENZIDINE, 3,3- | 119-93-7 | 0.0066 | 0.36 | E | 0.031 | 1.7 | E | 0.7 | 36 | E | 3.1 | 170 | E | 7 | 360 | E | 31 | 1,700 | E | 10 |
| $\begin{aligned} & \text { DIMETHYL } \\ & \text { METHYLPHOSPHONATE } \end{aligned}$ | 756-79-6 | 10 | 1.2 | E | 10 | 1.2 | E | 1,000 | 120 | E | 1,000 | 120 | E | 10 | 1.2 | E | 10 | 1.2 | E | NA |
| DIMETHYLPHENOL, 2,4 - | 105-67-9 | 83 | 36 | E | 230 | 100 | E | 8,300 | 3,600 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | NA |
| DINITROBENZENE, 1,3- | 99-65-0 | 0.1 | 0.049 | E | 0.1 | 0.049 | E | 10 | 4.9 | E | 10 | 4.9 | E | 100 | 49 | E | 100 | 49 | E | NA |
| DINITROPHENOL, 2,4- | 51-28-5 | 8.3 | 0.94 | E | 23 | 2.6 | E | 830 | 94 | E | 2,300 | 260 | E | 8,300 | 940 | E | 23,000 | 2,600 | E | NA |
| DINITROTOLUENE, 2,4- | 121-14-2 | 0.24 | 0.057 | E | 1.1 | 0.26 | E | 24 | 6 | E | 110 | 26 | E | 240 | 57 | E | 1,100 | 260 | E | NA |
| DINITROTOLUENE, 2,6-(2,6- DNT) | 606-20-2 | 0.049 | 0.015 | E | 0.23 | 0.068 | E | 5 | 2 | E | 23 | 7 | E | 49 | 15 | E | 230 | 68 | E | NA |
| DINOSEB | 88-85-7 | 0.7 | 0.29 | E | 0.7 | 0.29 | E | 70 | 29 | E | 70 | 29 | E | 700 | 290 | E | 700 | 290 | E | NA |
| DIOXANE, 1,4- | 123-91-1 | 0.64 | 0.084 | E | 3.2 | 0.42 | E | 64 | 8.4 | E | 320 | 42 | E | 6.4 | 0.84 | E | 32 | 4.2 | E | NA |
| DIPHENAMID | 957-51-7 | 20 | 12 | E | 20 | 12 | E | 2,000 | 1,200 | E | 2,000 | 1,200 | E | 20 | 12 | E | 20 | 12 | E | NA |
| DIPHENYLAMINE | 122-39-4 | 100 | 59 | E | 290 | 170 | E | 10,000 | 5,900 | E | 29,000 | 17,000 | E | 30,000 | 18,000 | E | 30,000 | 18,000 | E | NA |
| DIPHENYLHYDRAZINE, 1,2- | 122-66-7 | 0.091 | 0.16 | E | 0.43 | 0.76 | E | 9.1 | 16 | E | 25 | 44 | E | 25 | 44 | E | 25 | 44 | E | 30 |
| DIQUAT | 85-00-7 | 2 | 0.24 | E | 2 | 0.24 | E | 200 | 24 | E | 200 | 24 | E | 2 | 0.24 | E | 2 | 0.24 | E | NA |
| DISULFOTON | 298-04-4 | 0.07 | 0.18 | E | 0.07 | 0.18 | E | 7 | 18 | E | 7 | 18 | E | 70 | 180 | E | 70 | 180 | E | 20 |
| DITHIANE, 1,4- | 505-29-3 | 8 | 1.3 | E | 8 | 1.3 | E | 800 | 130 | E | 800 | 130 | E | 8 | 1.3 | E | 8 | 1.3 | E | NA |
| DIURON | 330-54-1 | 8.3 | 7.1 | E | 23 | 20 | E | 830 | 710 | E | 2,300 | 2,000 | E | 8.3 | 7.1 | E | 23 | 20 | E | NA |
| ENDOSULFAN | 115-29-7 | 25 | 130 | E | 48 | 250 | E | 48 | 250 | E | 48 | 250 | E | 48 | 250 | E | 48 | 250 | E | 15 |
| ENDOSULFAN I (ALPHA) | 959-98-8 | 25 | 130 | E | 50 | 260 | E | 50 | 260 | E | 50 | 260 | E | 25 | 130 | E | 50 | 260 | E | 15 |
| ENDOSULFAN II (BETA) | 33213-65-9 | 25 | 150 | E | 45 | 260 | E | 45 | 260 | E | 45 | 260 | E | 25 | 150 | E | 45 | 260 | E | 15 |
| ENDOSULFAN SULFATE | 1031-07-8 | 12 | 70 | E | 12 | 70 | E | 12 | 70 | E | 12 | 70 | E | 12 | 70 | E | 12 | 70 | E | 15 |
| ENDOTHALL | 145-73-3 | 10 | 4.1 | E | 10 | 4.1 | E | 1,000 | 410 | E | 1,000 | 410 | E | 10 | 4.1 | E | 10 | 4.1 | E | NA |
| ENDRIN | 72-20-8 | 0.2 | 5.5 | E | 0.2 | 5.5 | E | 20 | 550 | E | 20 | 550 | E | 0.2 | 5.5 | E | 0.2 | 5.5 | E | 15 |
| EPICHLOROHYDRIN | 106-89-8 | 0.21 | 0.042 | E | 0.88 | 0.17 | E | 21 | 4.2 | E | 88 | 17 | E | 21 | 4.2 | E | 88 | 17 | E | NA |
| ETHEPHON | 16672-87-0 | 21 | 2.4 | E | 58 | 6.7 | E | 2,100 | 240 | E | 5,800 | 670 | E | 21 | 2.4 | E | 58 | 6.7 | E | NA |
| ETHION | 563-12-2 | 2.1 | 46 | E | 5.8 | 130 | E | 85 | 1,900 | E | 85 | 1,900 | E | 2.1 | 46 | E | 5.8 | 130 | E | 15 |
| ETHOXYETHANOL, 2- (EGEE) | 110-80-5 | 42 | 5.9 | E | 180 | 25 | E | 4,200 | 590 | E | 10,000 | 2,500 | E | 4,200 | 590 | E | 10,000 | 2,500 | E | NA |
| ETHYL ACETATE | 141-78-6 | 15 | 3.9 | E | 62 | 16 | E | 1,500 | 390 | E | 6,200 | 1,600 | E | 1,500 | 390 | E | 6,200 | 1,600 | E | NA |
| ETHYL ACRYLATE | 140-88-5 | 1.5 | 0.58 | E | 7.0 | 2.7 | E | 150 | 58 | E | 700 | 270 | E | 150 | 58 | E | 700 | 270 | E | NA |
| ETHYL BENZENE | 100-41-4 | 70 | 46 | E | 70 | 46 | E | 7,000 | 4,600 | E | 7,000 | 4,600 | E | 7,000 | 4,600 | E | 7,000 | 4,600 | E | NA |
| $\begin{aligned} & \text { ETHYL DIPROPYL } \\ & \text { THIOCARBAMATE, S- (EPTC) } \end{aligned}$ | 759-94-4 | 100 | 71 | E | 290 | 210 | E | 10,000 | 7,100 | E | 10,000 | 10,000 | C | 100 | 71 | E | 290 | 210 | E | NA |
| ETHYL ETHER | 60-29-7 | 830 | 230 | E | 2,300 | 650 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 830 | 230 | E | 2,300 | 650 | E | NA |
| ETHYL METHACRYLATE | 97-63-2 | 63 | 10 | E | 260 | 43 | E | 6,300 | 1,000 | E | 10,000 | 4,300 | E | 63 | 10 | E | 260 | 43 | E | NA |
| ETHYLENE CHLORHYDRIN | 107-07-3 | 83 | 10 | E | 230 | 26 | E | 8,300 | 950 | E | 10,000 | 2,600 | E | 83 | 10 | E | 230 | 26 | E | NA |
| ETHYLENE GLYCOL | 107-21-1 | 1,400 | 170 | E | 1,400 | 170 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | NA |

${ }^{1}$ For other options see Section 250.308
E-Number calculated by the soil to groundwater equation is section 250.308
NA-The soil buffer distance option is not available for this substance
THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.
HAAs-The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.
Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil

| REGULATED SUBSTANCE | CASRN | Used Aquifers |  |  |  |  |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |  |  | Soil Buffer Distance (feet) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  |  |  | TDS > 2500 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  |  |
|  |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{aligned} & \hline 100 X \\ & G W \\ & M S C \end{aligned}$ | Generic Value |  | $\begin{gathered} \hline 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  |  |
| ETHYLENE THIOUREA (ETU) | 96-45-7 | 0.33 | 0.037 | E | 0.93 | 0.1 | E | 33 | 3.7 | E | 93 | 10 | E | 330 | 37 | E | 930 | 100 | E | NA |
| ETHYLP-NITROPHENYL PHENYLPHOSPHORO THIOATE | 2104-64-5 | 0.042 | 0.13 | E | 0.12 | 0.37 | E | 4.2 | 13 | E | 12 | 37 | E | 0.042 | 0.13 | E | 0.1 | 0.37 | E | 20 |
| FENAMIPHOS | 22224-92-6 | 0.07 | 0.06 | E | 0.07 | 0.06 | E | 7 | 6 | E | 7 | 6 | E | 0.07 | 0.06 | E | 0.07 | 0.06 | E | NA |
| FENVALERATE (PYDRIN) | 51630-58-1 | 8.5 | 94 | E | 8.5 | 94 | E | 8.5 | 94 | E | 8.5 | 94 | E | 8.5 | 94 | E | 8.5 | 94 | E | 15 |
| FLUOMETURON | 2164-17-2 | 9 | 2.5 | E | 9 | 2.5 | E | 900 | 250 | E | 900 | 250 | E | 9 | 2.5 | E | 9 | 2.5 | E | NA |
| FLUORANTHENE | 206-44-0 | 26 | 3,200 | E | 26 | 3,200 | E | 26 | 3,200 | E | 26 | 3,200 | E | 26 | 3,200 | E | 26 | 3,200 | E | 10 |
| FLUORENE | 86-73-7 | 170 | 3,400 | E | 190 | 3,800 | E | 190 | 3,800 | E | 190 | 3,800 | E | 190 | 3,800 | E | 190 | 3,800 | E | 15 |
| FLUOROTRICHLORO <br> METHANE (FREON 11) | 75-69-4 | 200 | 87 | E | 200 | 87 | E | 10,000 | 8,700 | E | 10,000 | 8,700 | E | 10,000 | 8,700 | E | 10,000 | 8,700 | E | NA |
| FONOFOS | 944-22-9 | 1 | 2.9 | E | 1 | 2.9 | E | 100 | 290 | E | 100 | 290 | E | 1 | 2.9 | E | 1 | 2.9 | E | 20 |
| FORMALDEHYDE | 50-00-0 | 100 | 12 | E | 100 | 12 | E | 10,000 | 1,200 | E | 10,000 | 1,200 | E | 10,000 | 1,200 | E | 10,000 | 1,200 | E | NA |
| FORMIC ACID | 64-18-6 | 0.063 | 0.0071 | E | 0.26 | 0.029 | E | 6.3 | 0.71 | E | 26 | 2.9 | E | 0.63 | 0.071 | E | 2.6 | 0.29 | E | NA |
| FOSETYL-AL | 39148-24-8 | 13,000 | 12,000 | E | 35,000 | 31,000 | E | 190,000 | 190,000 | C | 190,000 | 190,000 | C | 13,000 | 12,000 | E | 35,000 | 31,000 | E | NA |
| FURAN | 110-00-9 | 4.2 | 1.8 | E | 12 | 5.2 | E | 420 | 180 | E | 1,200 | 520 | E | 420 | 180 | E | 1,200 | 520 | E | NA |
| FURFURAL | 98-01-1 | 11 | 1.4 | E | 35 | 4.4 | E | 1,100 | 140 | E | 3,500 | 440 | E | 11 | 1.4 | E | 35 | 4.4 | E | NA |
| GLYPHOSATE | 1071-83-6 | 70 | 620 | E | 70 | 620 | E | 7,000 | 62,000 | E | 7,000 | 62,000 | E | 70 | 620 | E | 70 | 620 | E | 15 |
| HEPTACHLOR | 76-44-8 | 0.04 | 0.68 | E | 0.04 | 0.68 | E | 4 | 68 | E | 4 | 68 | E | 18 | 310 | E | 18 | 310 | E | 15 |
| HEPTACHLOR EPOXIDE | 1024-57-3 | 0.02 | 1.1 | E | 0.02 | 1.1 | E | 2 | 110 | E | 2 | 110 | E | 20 | 1,100 | E | 20 | 1,100 | E | 10 |
| HEXACHLOROBENZENE | 118-74-1 | 0.1 | 0.96 | E | 0.1 | 0.96 | E | 0.6 | 5.8 | E | 0.6 | 5.8 | E | 0.6 | 5.8 | E | 0.6 | 5.8 | E | 15 |
| HEXACHLOROBUTADIENE | 87-68-3 | 0.94 | 11 | E | 4.4 | 52 | E | 94 | 1,100 | E | 290 | 3,400 | E | 290 | 3,400 | E | 290 | 3,400 | E | 15 |
| HEXACHLOROCYCLO PENTADIENE | 77-47-4 | 5 | 91 | E | 5 | 91 | E | 180 | 3,300 | E | 180 | 3,300 | E | 180 | 3,300 | E | 180 | 3,300 | E | 15 |
| HEXACHLOROETHANE | 67-72-1 | 0.1 | 0.56 | E | 0.1 | 0.56 | E | 10 | 56 | E | 10 | 56 | E | 10 | 56 | E | 10 | 56 | E | 15 |
| HEXANE | 110-54-3 | 150 | 1,400 | E | 620 | 5,600 | E | 950 | 8,700 | E | 950 | 8,700 | E | 150 | 1,400 | E | 620 | 5,600 | E | 15 |
| HEXAZINONE | 51235-04-2 | 40 | 8.5 | E | 40 | 8.5 | E | 4,000 | 850 | E | 4,000 | 850 | E | 40 | 8.5 | E | 40 | 8.5 | E | NA |
| HEXYTHIAZOX (SAVEY) | 78587-05-0 | 50 | 820 | E | 50 | 820 | E | 50 | 820 | E | 50 | 820 | E | 50 | 820 | E | 50 | 820 | E | 15 |
| HMX | 2691-41-0 | 40 | 4.8 | E | 40 | 4.8 | E | 500 | 60 | E | 500 | 60 | E | 40 | 4.8 | E | 40 | 4.8 | E | NA |
| HYDRAZINE/HYDRAZINE SULFATE | 302-01-2 | 0.001 | 0.00011 | E | 0.0051 | 0.00057 | E | 0.1 | 0.011 | E | 0.51 | 0.057 | E | 0.01 | 0.0011 | E | 0.051 | 0.0057 | E | NA |
| HYDROQUINONE | 123-31-9 | 1.2 | 0.16 | E | 5.7 | 0.77 | E | 120 | 16 | E | 570 | 77 | E | 1,200 | 160 | E | 5,700 | 770 | E | NA |
| INDENO[1,2,3-CD]PYRENE | 193-39-5 | 0.019 | 1,500 | E | 0.28 | 22,000 | E | 1.9 | 150,000 | E | 6.2 | 190,000 | C | 6.2 | 190,000 | C | 6.2 | 190,000 | C | 5 |
| IPRODIONE | 36734-19-7 | 170 | 490 | E | 470 | 1,300 | E | 1,300 | 3,700 | E | 1,300 | 3,700 | E | 170 | 490 | E | 470 | 1,300 | E | 20 |
| ISOBUTYL ALCOHOL | 78-83-1 | 1,300 | 340 | E | 3,500 | 910 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | NA |
| ISOPHORONE | 78-59-1 | 10 | 1.9 | E | 10 | 1.9 | E | 1,000 | 190 | E | 1,000 | 190 | E | 10,000 | 1,900 | E | 10,000 | 1,900 | E | NA |

${ }^{1}$ For other options see Section 250.308 All concentrations in $\mathrm{mg} / \mathrm{kg}$
E-Number calculated by the soil to groundwater equation is section 250.308
C-Cap
NA-The soil buffer distance option is not available for this substance
THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined
HAAs-The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.
Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil

| REGULATED SUBSTANCE | CASRN | Used Aquifers |  |  |  |  |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |  |  | Soil Buffer Distance (feet) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  |  |  | TDS > 2500 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  |  |
|  |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{aligned} & \hline 100 X \\ & G W \\ & M S C \end{aligned}$ | Generi Value |  | $\begin{gathered} \hline 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  |  |
| ISOPROPYL <br> METHYLPHOSPHONATE | 1832-54-8 | 70 | 8.1 | E | 70 | 8.1 | E | 7,000 | 810 | E | 7,000 | 810 | E | 70 | 8.1 | E | 70 | 8.1 | E | NA |
| KEPONE | 143-50-0 | 0.0073 | 1 | E | 0.034 | 4.7 | E | 0.73 | 100 | E | 3.4 | 470 | E | 7.3 | 1,000 | E | 34 | 4,700 | E | 10 |
| MALATHION | 121-75-5 | 50 | 170 | E | 50 | 170 | E | 5,000 | 10,000 | C | 5,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 20 |
| MALEIC HYDRAZIDE | 123-33-1 | 400 | 47 | E | 400 | 47 | E | 40,000 | 4,700 | E | 40,000 | 4,700 | E | 400 | 47 | E | 400 | 47 | E | NA |
| MANEB | 12427-38-2 | 21 | 2 | E | 58 | 6.6 | E | 2,100 | 240 | E | 2,300 | 260 | E | 21 | 2 | E | 58 | 6.6 | E | NA |
| MERPHOS OXIDE | 78-48-8 | 0.13 | 17 | E | 0.35 | 46 | E | 13 | 1,700 | E | 35 | 4,600 | E | 0.13 | 17 | E | 0.35 | 46 | E | 10 |
| METHACRYLONITRILE | 126-98-7 | 0.42 | 0.069 | E | 1.2 | 0.2 | E | 42 | 6.9 | E | 120 | 20 | E | 0.42 | 0.069 | E | 1.2 | 0.2 | E | NA |
| METHAMIDOPHOS | 10265-92-6 | 0.21 | 0.026 | E | 0.58 | 0.072 | E | 21 | 2.6 | E | 58 | 7.2 | E | 0.21 | 0.026 | E | 0.58 | 0.072 | E | NA |
| METHANOL | 67-56-1 | 840 | 99 | E | 3,500 | 410 | E | 10,000 | 9,900 | E | 10,000 | 10,000 | C | 10,000 | 9,900 | E | 10,000 | 10,000 | C | NA |
| METHOMYL | 16752-77-5 | 20 | 3.2 | E | 20 | 3.2 | E | 2,000 | 320 | E | 2,000 | 320 | E | 20 | 3.2 | E | 20 | 3.2 | E | NA |
| METHOXYCHLOR | 72-43-5 | 4 | 630 | E | 4 | 630 | E | 4.5 | 710 | E | 4.5 | 710 | E | 4.5 | 710 | E | 4.5 | 710 | E | 10 |
| METHOXYETHANOL, 2 - | 109-86-4 | 4.2 | 0.48 | E | 18 | 2 | E | 420 | 48 | E | 1,800 | 200 | E | 42 | 4.8 | E | 180 | 20 | E | NA |
| METHYL ACETATE | 79-20-9 | 4,200 | 780 | E | 10,000 | 2,200 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 4,200 | 780 | E | 10,000 | 2,200 | E | NA |
| METHYL ACRYLATE | 96-33-3 | 4 | 1 | E | 18 | 5 | E | 420 | 100 | E | 1,800 | 450 | E | 420 | 100 | E | 1,800 | 450 | E | NA |
| METHYL CHLORIDE | 74-87-3 | 3 | 0.38 | E | 3 | 0.38 | E | 300 | 38 | E | 300 | 38 | E | 300 | 38 | E | 300 | 38 | E | NA |
| METHYL ETHYL KETONE | 78-93-3 | 400 | 76 | E | 400 | 76 | E | 10,000 | 7,600 | E | 10,000 | 7,600 | E | 10,000 | 7,600 | E | 10,000 | 7,600 | E | NA |
| METHYL HYDRAZINE | 60-34-4 | 0.0042 | 0.00048 | E | 0.018 | 0.002 | E | 0.42 | 0.048 | E | 1.8 | 0.2 | E | 0.042 | 0.0048 | E | 0.18 | 0.02 | E | NA |
| METHYL ISOBUTYL KETONE | 108-10-1 | 330 | 51 | E | 930 | 140 | E | 10,000 | 5,100 | E | 10,000 | 10,000 | C | 10,000 | 5,100 | E | 10,000 | 10,000 | C | NA |
| METHYL ISOCYANATE | 624-83-9 | 0.21 | 0.029 | E | 0.88 | 0.12 | E | 21 | 2.9 | E | 88 | 12 | E | 0.21 | 0.029 | E | 0.88 | 0.12 | E | NA |
| METHYL N-BUTYL KETONE (2-HEXANONE) | 591-78-6 | 6.3 | 1.6 | E | 26 | 6.4 | E | 630 | 160 | E | 2,600 | 640 | E | 6.3 | 1.6 | E | 26 | 6.4 | E | NA |
| METHYL METHACRYLATE | 80-62-6 | 150 | 20 | E | 620 | 84 | E | 10,000 | 2,000 | E | 10,000 | 8,400 | E | 10,000 | 2,000 | E | 10,000 | 8,400 | E | NA |
| METHYL METHANESULFONATE | 66-27-3 | 0.74 | 0.092 | E | 3.4 | 0.42 | E | 74 | 9.2 | E | 340 | 42 | E | 0.74 | 0.092 | E | 3.4 | 0.42 | E | NA |
| METHYL PARATHION | 298-00-0 | 0.1 | 0.21 | E | 0.1 | 0.21 | E | 10 | 21 | E | 10 | 21 | E | 100 | 210 | E | 100 | 210 | E | 30 |
| METHYL STYRENE (MIXED ISOMERS) | 25013-15-4 | 8.4 | 47 | E | 35 | 200 | E | 840 | 4,700 | E | 3,500 | 10,000 | C | 8.4 | 47 | E | 35 | 200 | E | 15 |
| $\begin{aligned} & \text { METHYL TERT-BUTYL } \\ & \text { ETHER (MTBE) } \end{aligned}$ | 1634-04-4 | 2 | 0.28 | E | 2 | 0.28 | E | 200 | 28 | E | 200 | 28 | E | 20 | 2.8 | E | 20 | 2.8 | E | NA |
| METHYLCHLOROPHENOXY ACETIC ACID (MCPA) | 94-74-6 | 3 | 1.2 | E | 3 | 1.2 | E | 300 | 120 | E | 300 | 120 | E | 3,000 | 1,200 | E | 3,000 | 1,200 | E | NA |
| $\begin{aligned} & \text { METHYLENE BIS(2- } \\ & \text { CHLOROANILINE), 4,4'. } \end{aligned}$ | 101-14-4 | 0.23 | 1.8 | E | 3.4 | 26 | E | 23 | 180 | E | 340 | 2,600 | E | 0.23 | 1.8 | E | 3.4 | 26 | E | 15 |
| METHYLNAPHTHALENE, 2 - | 91-57-6 | 17 | 680 | E | 47 | 1,900 | E | 1,700 | 68,000 | E | 2,500 | 100,000 | E | 17 | 680 | E | 47 | 1,900 | E | 15 |
| METHYLSTYRENE, ALPHA | 98-83-9 | 290 | 510 | E | 820 | 1,400 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 290 | 510 | E | 820 | 1,400 | E | 30 |
| METOLACHLOR | 51218-45-2 | 70 | 40 | E | 70 | 40 | E | 7,000 | 4,000 | E | 7,000 | 4,000 | E | 70 | 40 | E | 70 | 40 | E | NA |

${ }^{1}$ For other options see Section 250.308
E-Number calculated by the soil to groundwater equation is section 250.308
--The soil buffer distance option is not available for this substance
THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.
Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil

| REGULATED SUBSTANCE | CASRN | Used Aquifers |  |  |  |  |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |  |  | Soil Buffer Distance (feet) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  |  |  | TDS > 2500 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  |  |
|  |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \\ \hline \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  |  |
| METRIBUZIN | 21087-64-9 | 7 | 2.4 | E | 7 | 2.4 | E | 700 | 240 | E | 700 | 240 | E | 7 | 2.4 | E | 7 | 2.4 | E | NA |
| $\begin{aligned} & \text { MONOCHLOROACETIC ACID } \\ & \text { (HAA) } \end{aligned}$ | 79-11-8 | 6 | 0.67 | E | 6 | 0.67 | E | 600 | 67 | E | 600 | 67 | E | 6 | 0.67 | E | 6 | 0.67 | E | NA |
| NAPHTHALENE | 91-20-3 | 10 | 25 | E | 10 | 25 | E | 1,000 | 2,500 | E | 1,000 | 2,500 | E | 3,000 | 7,500 | E | 3,000 | 7,500 | E | 30 |
| NAPHTHYLAMINE, 1- | 134-32-7 | 0.041 | 0.33 | E | 0.19 | 1.5 | E | 4.1 | 33 | E | 19 | 150 | E | 41 | 330 | E | 190 | 1,500 | E | 15 |
| NAPHTHYLAMINE, 2 - | 91-59-8 | 0.041 | 0.013 | E | 0.19 | 0.062 | E | 4.1 | 1.3 | E | 19 | 6.2 | E | 41 | 13 | E | 190 | 62 | E | NA |
| NAPROPAMIDE | 15299-99-7 | 420 | 970 | E | 1,200 | 2,800 | E | 7,000 | 16,000 | E | 7,000 | 16,000 | E | 420 | 970 | E | 1,200 | 2,800 | E | 30 |
| NITROANILINE, O- | 88-74-4 | 42 | 8 | E | 120 | 21 | E | 4,200 | 750 | E | 12,000 | 2,100 | E | 42 | 8 | E | 120 | 21 | E | NA |
| NITROANILINE, P - | 100-01-6 | 3.7 | 0.55 | E | 17 | 2.5 | E | 370 | 55 | E | 1,700 | 250 | E | 3.7 | 0.55 | E | 17 | 2.5 | E | NA |
| NITROBENZENE | 98-95-3 | 8.3 | 3.6 | E | 23 | 10 | E | 830 | 360 | E | 2,300 | 1,000 | E | 8,300 | 3,600 | E | 10,000 | 10,000 | C | NA |
| NITROGUANIDINE | 556-88-7 | 70 | 7.8 | E | 70 | 7.8 | E | 7,000 | 780 | E | 7,000 | 780 | E | 70 | 7.8 | E | 70 | 7.8 | E | NA |
| NITROPHENOL, 2 - | 88-75-5 | 33 | 6.7 | E | 93 | 19 | E | 3,300 | 670 | E | 9,300 | 1,900 | E | 33,000 | 6,700 | E | 93,000 | 19,000 | E | NA |
| NITROPHENOL, 4- | 100-02-7 | 6 | 4.1 | E | 6 | 4.1 | E | 600 | 410 | E | 600 | 410 | E | 6,000 | 4,100 | E | 6,000 | 4,100 | E | NA |
| NITROPROPANE, 2- | 79-46-9 | 0.0018 | 0.00029 | E | 0.0093 | 0.0015 | E | 0.18 | 0.029 | E | 0.93 | 0.15 | E | 0.018 | 0.0029 | E | 0.093 | 0.015 | E | NA |
| NITROSODIETHYLAMINE, N - | 55-18-5 | 0.000045 | 0.0000079 | E | 0.00058 | 0.0001 | E | 0.0045 | 0.0008 | E | 0.058 | 0.01 | E | 0.00045 | 0.00008 | E | 0.0058 | 0.001 | E | NA |
| NITROSODIMETHYLAMINE, N- | 62-75-9 | 0.00014 | 0.000019 | E | 0.0018 | 0.00024 | E | 0.014 | 0.0019 | E | 0.18 | 0.024 | E | 0.0014 | 0.00019 | E | 0.018 | 0.0024 | E | NA |
| $\begin{aligned} & \hline \text { NITROSO-DI-N- } \\ & \text { BUTYLAMINE, N- } \end{aligned}$ | 924-16-3 | 0.014 | 0.017 | E | 0.063 | 0.078 | E | 1.4 | 1.7 | E | 6.3 | 7.8 | E | 14 | 17 | E | 63 | 78 | E | NA |
| NITROSODI-NPROPYLAMINE, N - | 621-64-7 | 0.01 | 0.0014 | E | 0.049 | 0.0068 | E | 1 | 0.14 | E | 4.9 | 0.68 | E | 10 | 1.4 | E | 49 | 6.8 | E | NA |
| NITROSODIPHENYLAMINE, N- | 86-30-6 | 15 | 23 | E | 69 | 110 | E | 1,500 | 2,300 | E | 3,500 | 5,500 | E | 3,500 | 5,500 | E | 3,500 | 5,500 | E | 30 |
| NITROSO-N-ETHYLUREA, N - | 759-73-9 | 0.00084 | 0.000097 | E | 0.013 | 0.0015 | E | 0.08 | 0.0097 | E | 1.3 | 0.15 | E | 0.8 | 0.097 | E | 13 | 1.5 | E | NA |
| OCTYL PHTHALATE, DI-N- | 117-84-0 | 42 | 10,000 | C | 120 | 10,000 | C | 300 | 10,000 | C | 300 | 10,000 | C | 300 | 10,000 | C | 300 | 10,000 | C | 5 |
| OXAMYL (VYDATE) | 23135-22-0 | 20 | 2.6 | E | 20 | 2.6 | E | 2,000 | 260 | E | 2,000 | 260 | E | 20 | 2.6 | E | 20 | 2.6 | E | NA |
| PARAQUAT | 1910-42-5 | 3 | 120 | E | 3 | 120 | E | 300 | 12,000 | E | 300 | 12,000 | E | 3 | 120 | E | 3 | 120 | E | 15 |
| PARATHION | 56-38-2 | 25 | 150 | E | 70 | 410 | E | 2,000 | 10,000 | C | 2,000 | 10,000 | C | 25 | 150 | E | 70 | 410 | E | 15 |
| PCB-1016 (AROCLOR) | 12674-11-2 | 0.037 | 10 | E | 0.17 | 47 | E | 4 | 1,000 | E | 17 | 4,700 | E | 0.04 | 10 | E | 0.17 | 47 | E | 10 |
| PCB-1221 (AROCLOR) | 11104-28-2 | 0.037 | 0.18 | E | 0.17 | 0.83 | E | 3.7 | 18 | E | 17 | 83 | E | 0.037 | 0.18 | E | 0.17 | 0.83 | E | 20 |
| PCB-1232 (AROCLOR) | 11141-16-5 | 0.037 | 0.14 | E | 0.17 | 0.7 | E | 3.7 | 14 | E | 17 | 66 | E | 0.037 | 0.14 | E | 0.17 | 0.7 | E | 20 |
| PCB-1242 (AROCLOR) | 53469-21-9 | 0.037 | 4 | E | 0.17 | 20 | E | 3.7 | 440 | E | 10 | 1,200 | E | 0.037 | 4 | E | 0.17 | 20 | E | 10 |
| PCB-1248 (AROCLOR) | 12672-29-6 | 0.037 | 18 | E | 0.17 | 81 | E | 3.7 | 1,800 | E | 5.4 | 2,600 | E | 0.037 | 18 | E | 0.17 | 81 | E | 10 |
| PCB-1254 (AROCLOR) | 11097-69-1 | 0.037 | 75 | E | 0.17 | 340 | E | 3.7 | 7,500 | E | 5.7 | 10,000 | C | 0.037 | 75 | E | 0.17 | 340 | E | 5 |
| PCB-1260 (AROCLOR) | 11096-82-5 | 0.037 | 170 | E | 0.17 | 770 | E | 3.7 | 17,000 | E | 8 | 36,000 | E | 0.037 | 170 | E | 0.17 | 770 | E | 5 |
| PEBULATE | 1114-71-2 | 210 | 350 | E | 580 | 980 | E | 9,200 | 10,000 | C | 9,200 | 10,000 | C | 210 | 350 | E | 580 | 980 | E | 30 |
| PENTACHLOROBENZENE | 608-93-5 | 3.3 | 260 | E | 9.3 | 750 | E | 74 | 5,900 | E | 74 | 5,900 | E | 74 | 5,900 | E | 74 | 5,900 | E | 10 |
| PENTACHLOROETHANE | 76-01-7 | 0.81 | 3.9 | E | 3.8 | 19 | E | 81 | 390 | E | 380 | 1,900 | E | 0.81 | 3.9 | E | 3.8 | 19 | E | 20 |

${ }^{1}$ For other options see Section 250.308 All concentrations in $\mathrm{mg} / \mathrm{kg}$
E-Number calculated by the soil to groundwater equation is section 250.308
C-Cap
NA-The soil buffer distance option is not available for this substance
NA-The
THMs-Th
HAAs-Th
Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil
B. Soil to Groundwater Numeric Values ${ }^{1}$

| REGULATED SUBSTANCE | CASRN | Used Aquifers |  |  |  |  |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |  |  | Soil <br> Buffer Distance (feet) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  |  |  | $T D S>2500$ |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  |  |
|  |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  |  |
| PENTACHLORO NITROBENZENE | 82-68-8 | 0.28 | 6 | E | 1 | 26 | E | 28 | 560 | E | 44 | 870 | E | 44 | 870 | E | 44 | 870 | E | 15 |
| PENTACHLOROPHENOL | 87-86-5 | 0.1 | 5 | E | 0.1 | 5 | E | 10 | 500 | E | 10 | 500 | E | 100 | 5,000 | E | 100 | 5,000 | E | 10 |
| PHENACETIN | 62-44-2 | 33 | 13 | E | 150 | 58 | E | 3,300 | 1,300 | E | 15,000 | 5,800 | E | 33,000 | 13,000 | E | 76,000 | 29,000 | E | NA |
| PHENANTHRENE | 85-01-8 | 110 | 10,000 | E | 110 | 10,000 | E | 110 | 10,000 | E | 110 | 10,000 | E | 110 | 10,000 | E | 110 | 10,000 | E | 10 |
| PHENOL | 108-95-2 | 200 | 33 | E | 200 | 33 | E | 20,000 | 3,300 | E | 20,000 | 3,300 | E | 20,000 | 3,300 | E | 20,000 | 3,300 | E | NA |
| PHENYL MERCAPTAN | 108-98-5 | 4,200 | 6,400 | E | 12 | 18 | E | 420 | 640 | E | 1,200 | 1,800 | E | 4.2 | 6.4 | E | 12 | 18 | E | 30 |
| PHENYLENEDIAMINE, M- | 108-45-2 | 25 | 3.5 | E | 70 | 9.9 | E | 2,500 | 350 | E | 7,000 | 990 | E | 25,000 | 3,500 | E | 70,000 | 9,900 | E | NA |
| PHENYLPHENOL, 2 - | 90-43-7 | 38 | 550 | E | 180 | 2,600 | E | 3,800 | 55,000 | E | 18,000 | 190,000 | C | 38,000 | 190,000 | C | 70,000 | 190,000 | C | 15 |
| PHORATE | 298-02-2 | 0.83 | 1.8 | E | 2 | 4.9 | E | 83 | 180 | E | 230 | 490 | E | 0.83 | 1.8 | E | 2 | 4.9 | E | 30 |
| PHTHALIC ANHYDRIDE | 85-44-9 | 8,300 | 2,600 | E | 23,000 | 7,100 | E | 190,000 | 190,000 | C | 190,000 | 190,000 | C | 190,000 | 190,000 | C | 190,000 | 190,000 | C | NA |
| PICLORAM | 1918-02-1 | 50 | 7.4 | E | 50 | 7.4 | E | 5,000 | 740 | E | 5,000 | 740 | E | 50 | 7.4 | E | 50 | 7.4 | E | NA |
| PROMETON | 1610-18-0 | 40 | 39 | E | 40 | 39 | E | 4,000 | 3,900 | E | 4,000 | 3,900 | E | 40 | 39 | E | 40 | 39 | E | NA |
| PRONAMIDE | 23950-58-5 | 310 | 190 | E | 880 | 540 | E | 1,500 | 920 | E | 1,500 | 920 | E | 310 | 190 | E | 880 | 540 | E | NA |
| PROPANIL | 709-98-8 | 21 | 11 | E | 58 | 30 | E | 2,100 | 1,100 | E | 5,800 | 3,000 | E | 21 | 11 | E | 58 | 30 | E | NA |
| $\begin{aligned} & \text { PROPANOL, 2- (ISOPROPYL } \\ & \text { ALCOHOL) } \end{aligned}$ | 67-63-0 | 42 | 7.3 | E | 180 | 31 | E | 4,200 | 730 | E | 10,000 | 3,100 | E | 42 | 7 | E | 180 | 31 | E | NA |
| PROPAZINE | 139-40-2 | 1 | 0.5 | E | 1 | 0.5 | E | 100 | 50 | E | 100 | 50 | E | 1 | 0.5 | E | 1 | 0.5 | E | NA |
| PROPHAM | 122-42-9 | 10 | 2.4 | E | 10 | 2.4 | E | 1,000 | 240 | E | 1,000 | 240 | E | 10 | 2.4 | E | 10 | 2.4 | E | NA |
| PROPYLBENZENE, N - | 103-65-1 | 210 | 400 | E | 880 | 1,700 | E | 5,200 | 9,900 | E | 5,200 | 9,900 | E | 210 | 400 | E | 880 | 1,700 | E | 30 |
| PROPYLENE OXIDE | 75-56-9 | 0.3 | 0.052 | E | 1.4 | 0.24 | E | 30 | 5.2 | E | 140 | 24 | E | 0.30 | 0.052 | E | 1.4 | 0.24 | E | NA |
| PYRENE | 129-00-0 | 13 | 2,200 | E | 13 | 2,200 | E | 13 | 2,200 | E | 13 | 2,200 | E | 13 | 2,200 | E | 13 | 2,200 | E | 10 |
| PYRIDINE | 110-86-1 | 4.2 | 0.47 | E | 12 | 1.3 | E | 420 | 47 | E | 1,200 | 130 | E | 42 | 4.7 | E | 120 | 13 | E | NA |
| QUINOLINE | 91-22-5 | 0.024 | 0.081 | E | 0.11 | 0.37 | E | 2.4 | 8.1 | E | 11 | 37 | E | 24 | 81 | E | 110 | 370 | E | 20 |
| QUIZALOFOP (ASSURE) | 76578-14-8 | 30 | 47 | E | 30 | 47 | E | 30 | 47 | E | 30 | 47 | E | 30 | 47 | E | 30 | 47 | E | 30 |
| RDX | 121-82-4 | 0.2 | 0.057 | E | 0.2 | 0.057 | E | 20 | 5.7 | E | 20 | 5.7 | E | 0.2 | 0.057 | E | 0.2 | 0.057 | E | NA |
| RESORCINOL | 108-46-3 | 8,300 | 970 | E | 23,000 | 2,700 | E | 190,000 | 97,000 | E | 190,000 | 190,000 | C | 8,300 | 970 | E | 23,000 | 2,700 | E | NA |
| RONNEL | 299-84-3 | 210 | 330 | E | 580 | 910 | E | 4,000 | 6,200 | E | 4,000 | 6,200 | E | 210 | 330 | E | 580 | 910 | E | 30 |
| SIMAZINE | 122-34-9 | 0.4 | 0.15 | E | 0.4 | 0.15 | E | 40 | 15 | E | 40 | 15 | E | 0.4 | 0.15 | E | 0.4 | 0.15 | E | NA |
| STRYCHNINE | 57-24-9 | 1.3 | 1.1 | E | 3.5 | 2.8 | E | 130 | 110 | E | 350 | 280 | E | 1,300 | 1,100 | E | 3,500 | 2,800 | E | NA |
| STYRENE | 100-42-5 | 10 | 24 | E | 10 | 24 | E | 1,000 | 2,400 | E | 1,000 | 2,400 | E | 1,000 | 2,400 | E | 1,000 | 2,400 | E | 30 |
| TEBUTHIURON | 34014-18-1 | 50 | 83 | E | 50 | 83 | E | 5,000 | 8,300 | E | 5,000 | 8,300 | E | 50 | 83 | E | 50 | 83 | E | 30 |
| TERBACIL | 5902-51-2 | 9 | 2.2 | E | 9 | 2.2 | E | 900 | 220 | E | 900 | 220 | E | 9 | 2.2 | E | 9 | 2.2 | E | NA |
| TERBUFOS | 13071-79-9 | 0.04 | 0.055 | E | 0.04 | 0.055 | E | 4 | 5.5 | E | 4 | 5.5 | E | 0.04 | 0.055 | E | 0.04 | 0.055 | E | 30 |
| $\begin{aligned} & \text { TETRACHLOROBENZENE, } \\ & 1,2,4,5 \text { - } \\ & \hline \end{aligned}$ | 95-94-3 | 1.3 | 6 | E | 3.5 | 16 | E | 58 | 270 | E | 58 | 270 | E | 58 | 270 | E | 58 | 270 | E | 20 |

[^22]E-Number calculated by the soil to groundwater equation is section 250.308
NA-The soil buffer distance option is not available for this substance
THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined
Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil

| REGULATED SUBSTANCE | CASRN | Used Aquifers |  |  |  |  |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |  |  | Soil Buffer Distance (feet) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $T D S \leq 2500$ |  |  |  |  |  | TDS > 2500 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  |  |
|  |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  |  |
| TETRACHLORODIBENZO-PDIOXIN, 2,3,7,8- (TCDD) | 1746-01-6 | 0.000003 | 0.032 | E | 0.000003 | 0.032 | E | 0.0003 | 3.2 | E | 0.0003 | 3.2 | E | 0.0019 | 20 | E | 0.0019 | 20 | E | 5 |
| TETRACHLOROETHANE, $1,1,1,2$ - | 630-20-6 | 7 | 18 | E | 7 | 18 | E | 700 | 1,800 | E | 700 | 1,800 | E | 700 | 1,800 | E | 700 | 1,800 | E | 30 |
| TETRACHLOROETHANE, $1,1,2,2$ - | 79-34-5 | 0.08 | 0.026 | E | 0.43 | 0.13 | E | 8 | 2.6 | E | 43 | 13 | E | 8 | 2.6 | E | 43 | 13 | E | NA |
| $\begin{aligned} & \text { TETRACHLOROETHYLENE } \\ & \text { (PCE) } \end{aligned}$ | 127-18-4 | 0.5 | 0.43 | E | 0.5 | 0.43 | E | 50 | 43 | E | 50 | 43 | E | 5 | 4.3 | E | 5 | 4.3 | E | NA |
| TETRACHLOROPHENOL, 2,3,4,6- | 58-90-2 | 130 | 2,000 | E | 350 | 5,500 | E | 13,000 | 190,000 | C | 18,000 | 190,000 | C | 18,000 | 190,000 | C | 18,000 | 190,000 | C | 15 |
| TETRAETHYL LEAD | 78-00-2 | 0.00042 | 0.0052 | E | 0.0012 | 0.015 | E | 0.042 | 0.52 | E | 0.1 | 1.5 | E | 0.42 | 0.52 | E | 1 | 15 | E | 15 |
| TETRAETHYLDITHIO PYROPHOSPHATE | 3689-24-5 | 2.1 | 3.1 | E | 5.8 | 8.6 | E | 210 | 310 | E | 580 | 860 | E | 2.1 | 3.1 | E | 5.8 | 8.6 | E | 30 |
| TETRAHYDROFURAN | 109-99-9 | 2.6 | 0.57 | E | 13 | 2.8 | E | 260 | 57 | E | 1,300 | 280 | E | 2.6 | 0.57 | E | 13 | 2.8 | E | NA |
| THIOFANOX | 39196-18-4 | 1.3 | 0.14 | E | 3.5 | 0.39 | E | 130 | 14 | E | 350 | 39 | E | 1.3 | 0.14 | E | 3.5 | 0.39 | E | NA |
| THIRAM | 137-26-8 | 21 | 55 | E | 58 | 150 | E | 2,100 | 5,500 | E | 3,000 | 7,800 | E | 21 | 55 | E | 58 | 150 | E | 20 |
| TOLUENE | 108-88-3 | 100 | 44 | E | 100 | 44 | E | 10,000 | 4,400 | E | 10,000 | 4,400 | E | 10,000 | 4,400 | E | 10,000 | 4,400 | E | NA |
| TOLUIDINE, M- | 108-44-1 | 4.6 | 2.1 | E | 21 | 9.7 | E | 460 | 210 | E | 2,100 | 970 | E | 4.6 | 2.1 | E | 21 | 9.7 | E | NA |
| TOLUIDINE, O- | 95-53-4 | 4.6 | 5.2 | E | 21 | 24 | E | 460 | 520 | E | 2,100 | 2,400 | E | 4,600 | 5,200 | E | 10,000 | 10,000 | C | NA |
| TOLUIDINE, P - | 106-49-0 | 2.4 | 2.2 | E | 11 | 10 | E | 240 | 220 | E | 1,100 | 1,000 | E | 2.4 | 2.2 | E | 11 | 10 | E | NA |
| TOXAPHENE | 8001-35-2 | 0.3 | 1.2 | E | 0.3 | 1.2 | E | 30 | 120 | E | 30 | 120 | E | 0.3 | 1.2 | E | 0.3 | 1.2 | E | 20 |
| TRIALLATE | 2303-17-5 | 54 | 280 | E | 150 | 770 | E | 400 | 2,000 | E | 400 | 2,000 | E | 54 | 280 | E | 150 | 770 | E | 15 |
| TRIBROMOMETHANE (BROMOFORM) (THM) | 75-25-2 | 8 | 3.5 | E | 8 | 3.5 | E | 800 | 350 | E | 800 | 350 | E | 800 | 350 | E | 800 | 350 | E | NA |
| $\begin{aligned} & \text { TRICHLORO-1,2,2- } \\ & \text { TRIFLUOROETHANE, } 1,1,2 \text { - } \end{aligned}$ | 76-13-1 | 6,300 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 20 |
| TRICHLOROACETIC ACID (HAA) | 76-03-9 | 2 | 0.32 | E | 2 | 0.32 | E | 200 | 32 | E | 200 | 32 | E | 2 | 0.32 | E | 2 | 0.332 | E | NA |
| TRICHLOROBENZENE, 1,2,4- | 120-82-1 | 7 | 27 | E | 7 | 27 | E | 700 | 2,700 | E | 700 | 2,700 | E | 4,400 | 10,000 | C | 4,400 | 10,000 | C | 20 |
| TRICHLOROBENZENE, 1,3,5- | 108-70-3 | 4 | 31 | E | 4 | 31 | E | 400 | 3,100 | E | 400 | 3,100 | E | 4 | 31 | E | 4 | 31 | E | 15 |
| TRICHLOROETHANE, $1,1,1$ - | 71-55-6 | 20 | 7.2 | E | 20 | 7.2 | E | 2,000 | 720 | E | 2,000 | 720 | E | 200 | 72 | E | 200 | 72 | E | NA |
| TRICHLOROETHANE, $1,1,2$ - | 79-00-5 | 0.5 | 0.15 | E | 0.5 | 0.15 | E | 50 | 15 | E | 50 | 15 | E | 5 | 1.5 | E | 5 | 1.5 | E | NA |
| TRICHLOROETHYLENE (TCE) | 79-01-6 | 0.5 | 0.17 | E | 0.5 | 0.17 | E | 50 | 17 | E | 50 | 17 | E | 5 | 1.7 | E | 5 | 1.7 | E | NA |
| TRICHLOROPHENOL, $2,4,5$ - | 95-95-4 | 420 | 2,600 | E | 1,200 | 7,300 | E | 42,000 | 190,000 | C | 100,000 | 190,000 | C | 100,000 | 190,000 | C | 100,000 | 190,000 | C | 15 |
| TRICHLOROPHENOL, 2,4,6- | 88-06-2 | 4.2 | 12 | E | 12 | 34 | E | 420 | 1,200 | E | 1,200 | 3,400 | E | 4,200 | 12,000 | E | 12,000 | 34,000 | E | 20 |
| TRICHLOROPHENOXY <br> ACETIC ACID, 2,4,5- (2,4,5-T) | 93-76-5 | 7 | 1.5 | E | 7 | 1.5 | E | 700 | 150 | E | 700 | 150 | E | 7,000 | 1,500 | E | 7,000 | 1,500 | E | NA |
| TRICHLOROPHENOXY PROPIONIC ACID, 2,4,5-(2,4,5-TP)(SILVEX) | 93-72-1 | 5 | 22 | E | 5 | 22 | E | 500 | 2,200 | E | 500 | 2,200 | E | 5 | 22 | E | 5 | 22 | E | 20 |
| TRICHLOROPROPANE, 1,1,2- | 598-77-6 | 21 | 3.6 | E | 58 | 9.9 | E | 2,100 | 360 | E | 5,800 | 990 | E | 21 | 3.6 | E | 58 | 9.9 | E | NA |

${ }^{1}$ For other options see Section 250.308
All concentrations in $\mathrm{mg} / \mathrm{kg}$
E -Number calculated by the soil to groundwater equation is section 250.308

- The soil buffer distance option is not available for this substance
THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.
HAAs-The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.
Table 3-Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil

| REGULATED SUBSTANCE | CASRN | Used Aquifers |  |  |  |  |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  |  |  | Soil Buffer Distance (feet) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | TDS $\leq 2500$ |  |  |  |  |  | TDS > 2500 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  | Residential |  |  | Nonresidential |  |  |  |
|  |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \\ \hline \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \\ \hline \end{gathered}$ | Generic Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \\ \hline \end{gathered}$ | Generi Value |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  |  |
| TRICHLOROPROPANE, 1,2,3- | 96-18-4 | 4 | 3.2 | E | 4 | 3.2 | E | 400 | 320 | E | 400 | 320 | E | 400 | 320 | E | 400 | 320 | E | NA |
| TRICHLOROPROPENE, $1,2,3$ - | 96-19-5 | 0.063 | 0.037 | E | 0.26 | 0.15 | E | 6.3 | 3.7 | E | 26 | 15 | E | 0.063 | 0.037 | E | 0.26 | 0.15 | E | NA |
| TRIETHYLAMINE | 121-44-8 | 1.5 | 0.36 | E | 6.2 | 1.5 | E | 150 | 36 | E | 620 | 150 | E | 1.5 | 0.36 | E | 6.2 | 1.5 | E | NA |
| TRIETHYLENE GLYCOL | 112-27-6 | 8,300 | 1,000 | E | 10,000 | 2,900 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 8,300 | 1,000 | E | 10,000 | 2,900 | E | NA |
| TRIFLURALIN | 1582-09-8 | 1 | 1.9 | E | 1 | 1.9 | E | 100 | 190 | E | 100 | 190 | E | 1 | 1.9 | E | 1 | 1.9 | E | 30 |
| TRIMETHYLBENZENE, 1,3,4(TRIMETHYLBENZENE, 1,2,4-) | 95-63-6 | 1.5 | 8.4 | E | 6.2 | 35 | E | 150 | 840 | E | 620 | 3,500 | E | 150 | 840 | E | 620 | 3,500 | E | 15 |
| TRIMETHYLBENZENE, 1,3,5- | 108-67-8 | 42 | 74 | E | 120 | 210 | E | 4,200 | 7,400 | E | 4,900 | 8,600 | E | 42 | 74 | E | 120 | 210 | E | 30 |
| TRINITROGLYCEROL (NITROGLYCERIN) | 55-63-0 | 0.5 | 0.2 | E | 0.5 | 0.2 | E | 50 | 20 | E | 50 | 20 | E | 50 | 20 | E | 50 | 20 | E | NA |
| TRINITROTOLUENE, 2,4,6- | 118-96-7 | 0.2 | 0.023 | E | 0.2 | 0.023 | E | 20 | 2.3 | E | 20 | 2.3 | E | 0.2 | 0.023 | E | 0.2 | 0.023 | E | NA |
| VINYL ACETATE | 108-05-4 | 42 | 5 | E | 180 | 21 | E | 4,200 | 500 | E | 10,000 | 2,100 | E | 42 | 5 | E | 180 | 21 | E | NA |
| VINYL BROMIDE (BROMOETHENE) | 593-60-2 | 0.15 | 0.073 | E | 0.78 | 0.38 | E | 15 | 7.3 | E | 78 | 38 | E | 1.5 | 0.73 | E | 7.8 | 3.8 | E | NA |
| VINYL CHLORIDE | 75-01-4 | 0.2 | 0.027 | E | 0.2 | 0.027 | E | 20 | 2.7 | E | 20 | 2.7 | E | 2 | 0.27 | E | 2 | 0.27 | E | NA |
| WARFARIN | 81-81-2 | 1.3 | 3.1 | E | 3.5 | 8.4 | E | 130 | 310 | E | 350 | 840 | E | 1,300 | 3,100 | E | 1,700 | 4,100 | E | 30 |
| XYLENES (TOTAL) | 1330-20-7 | 1,000 | 990 | E | 1,000 | 990 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | NA |
| ZINEB | 12122-67-7 | 210 | 33 | E | 580 | 92 | E | 1,000 | 160 | E | 1,000 | 160 | E | 210 | 33 | E | 580 | 92 | E | NA |

${ }^{1}$ For other options see Section 250.308
All concentrations in $\mathrm{mg} / \mathrm{kg}$
E -Number calculated by the soil to groundwater equation is section 250.308
C-Cap
THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.
HAAs-The values listed for haloacetic acids (HAAs) are the total for all HAAs combined

Table 4-Medium-Specific Concentrations (MSCs) for Inorganic Regulated Substances in Soil

## A. Direct Contact Numeric Values

| REGULATED SUBSTANCE | CASRN | Residential MSC 0-15 feet |  | Nonresidential MSCs |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Surface Soil 0-2 feet |  | Subsurface Soil 2-15 feet |  |
| ALUMINUM | 7429-90-5 | 190,000 | C | 190,000 | C | 190,000 | C |
| ANTIMONY | 7440-36-0 | 88 | G | 1,300 | G | 190,000 | C |
| ARSENIC | 7440-38-2 | 12 | G | 61 | G | 190,000 | C |
| BARIUM AND COMPOUNDS | 7440-39-3 | 44,000 | G | 190,000 | C | 190,000 | C |
| BERYLLIUM | 7440-41-7 | 2 | G | 11 | G | 190,000 | C |
| BORON AND COMPOUNDS | 7440-42-8 | 44,000 | G | 190,000 | C | 190,000 | C |
| CADMIUM | 7440-43-9 | 1.2 | G | 6 | G | 190,000 | C |
| CHROMIUM III | 16065-83-1 | 190,000 | C | 190,000 | C | 190,000 | C |
| CHROMIUM VI | 18540-29-9 | 4 | G | 220 | G | 20,000 | N |
| COBALT | 7440-48-4 | 66 | G | 960 | G | 190,000 | N |
| COPPER | 7440-50-8 | 8,100 | G | 120,000 | G | 190,000 | C |
| CYANIDE, FREE | 57-12-5 | 130 | G | 1,900 | G | 190,000 | C |
| FLUORIDE | 16984-48-8 | 8,800 | G | 130,000 | G | 190,000 | C |
| IRON | 7439-89-6 | 150,000 | G | 190,000 | C | 190,000 | C |
| LEAD | 7439-92-1 | 500 | U | 1,000 | S | 190,000 | C |
| LITHIUM | 7439-93-2 | 440 | G | 6,400 | G | 190,000 | C |
| MANGANESE | 7439-96-5 | 10,000 | G | 150,000 | G | 190,000 | C |
| MERCURY | 7439-97-6 | 35 | G | 510 | G | 190,000 | C |
| MOLYBDENUM | 7439-98-7 | 1,100 | G | 16,000 | G | 190,000 | C |
| NICKEL | 7440-02-0 | 4,400 | G | 64,000 | G | 190,000 | C |
| PERCHLORATE | 7790-98-9 | 150 | G | 2,200 | G | 190,000 | C |
| SELENIUM | 7782-49-2 | 1,100 | G | 16,000 | G | 190,000 | C |
| SILVER | 7440-22-4 | 1,100 | G | 16,000 | G | 190,000 | C |
| STRONTIUM | 7440-24-6 | 130,000 | G | 190,000 | C | 190,000 | C |
| THALLIUM | 7440-28-0 | 2 | G | 32 | G | 190,000 | C |
| TIN | 7440-31-5 | 130,000 | G | 190,000 | C | 190,000 | C |
| VANADIUM | 7440-62-2 | 15 | G | 220 | G | 190,000 | C |
| ZINC | 7440-66-6 | 66,000 | G | 190,000 | C | 190,000 | C |

[^23]Table 4-Medium-Specific Concentrations (MSCs) for Inorganic Regulated Substances in Soil

| REGULATED SUBSTANCE | CASRN | Used Aquifers |  |  |  |  |  |  |  | Nonuse Aquifers |  |  |  | Soil Buffer Distance (feet) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | TDS < = 2500 |  |  |  | TDS > 2500 |  |  |  |  |  |  |  |  |
|  |  | $R$ |  | NR |  | $R$ |  | $N R$ |  | $R$ |  | $N R$ |  |  |
|  |  | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value | $\begin{gathered} 100 X \\ G W \\ M S C \end{gathered}$ | Generic Value |  |
| ALUMINUM | 7429-90-5 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| ANTIMONY | 7440-36-0 | 0.6 | 27 | 0.6 | 27 | 60 | 2,700 | 60 | 2,700 | 600 | 27,000 | 600 | 27,000 | 15 |
| ARSENIC | 7440-38-2 | 1 | 29 | 1 | 29 | 100 | 2,900 | 100 | 2,900 | 1,000 | 29,000 | 1,000 | 29,000 | 15 |
| BARIUM AND COMPOUNDS | 7440-39-3 | 200 | 8,200 | 200 | 8,200 | 20,000 | 190,000 | 20,000 | 190,000 | 190,000 | 190,000 | 190,000 | 190,000 | 15 |
| BERYLLIUM | 7440-41-7 | 0.4 | 320 | 0.4 | 320 | 40 | 32,000 | 40 | 32,000 | 400 | 190,000 | 400 | 190,000 | 10 |
| BORON AND COMPOUNDS | 7440-42-8 | 600 | 1,900 | 600 | 1,900 | 60,000 | 190,000 | 60,000 | 190,000 | 190,000 | 190,000 | 190,000 | 190,000 | 30 |
| CADMIUM | 7440-43-9 | 0.5 | 38 | 0.5 | 38 | 50 | 3,800 | 50 | 3,800 | 500 | 38,000 | 500 | 38,000 | 15 |
| CHROMIUM (III) | 16065-83-1 | 10 | 190,000 | 10 | 190,000 | 1,000 | 190,000 | 1,000 | 190,000 | 10,000 | 190,000 | 10,000 | 190,000 | 5 |
| CHROMIUM (VI) | 18540-29-9 | 10 | 190 | 10 | 190 | 1,000 | 19,000 | 1,000 | 19,000 | 10,000 | 190,000 | 10,000 | 190,000 | 15 |
| COBALT | 7440-48-4 | 1 | 59 | 4 | 160 | 130 | 5,900 | 350 | 16,000 | 1,300 | 59,000 | 3,500 | 160,000 | 15 |
| COPPER | 7440-50-8 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| CYANIDE, FREE | 57-12-5 | 20 | 200 | 20 | 200 | 2,000 | 20,000 | 2,000 | 20,000 | 20,000 | 190,000 | 20,000 | 190,000 | 20 |
| FLUORIDE | 16984-48-8 | 400 | 44 | 400 | 44 | 40,000 | 4,400 | 40,000 | 4,400 | 190,000 | 44,000 | 190,000 | 44,000 | NA |
| IRON | 7439-89-6 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| LEAD | 7439-92-1 | 0.5 | 450 | 0.5 | 450 | 50 | 45,000 | 50 | 45,000 | 500 | 190,000 | 500 | 190,000 | 10 |
| LITHIUM | 7439-93-2 | 8 | 2,500 | 23 | 6,900 | 830 | 190,000 | 2,300 | 190,000 | 8,300 | 190,000 | 23,000 | 190,000 | 10 |
| MANGANESE | 7439-96-5 | 30 | 2,000 | 30 | 2,000 | 3,000 | 190,000 | 3,000 | 190,000 | 30,000 | 190,000 | 30,000 | 190,000 | 15 |
| MERCURY | 7439-97-6 | 0.2 | 10 | 0.2 | 10 | 20 | 1,000 | 20 | 1,000 | 200 | 10,000 | 200 | 10,000 | 15 |
| MOLYBDENUM | 7439-98-7 | 4 | 650 | 4 | 650 | 400 | 65,000 | 400 | 65,000 | 4,000 | 190,000 | 4,000 | 190,000 | 15 |
| NICKEL | 7440-02-0 | 10 | 650 | 10 | 650 | 1,000 | 65,000 | 1,000 | 65,000 | 10,000 | 190,000 | 10,000 | 190,000 | 15 |
| PERCHLORATE | 7790-98-9 | 1.5 | 0.17 | 1.5 | 0.17 | 150 | 17 | 150 | 17 | 1,500 | 170 | 1,500 | 170 | NA |
| SELENIUM | 7782-49-2 | 5 | 26 | 5 | 26 | 500 | 2,600 | 500 | 2,600 | 5,000 | 26,000 | 5,000 | 26,000 | 20 |
| SILVER | 7440-22-4 | 10 | 84 | 10 | 84 | 1,000 | 8,400 | 1,000 | 8,400 | 10,000 | 84,000 | 10,000 | 84,000 | 20 |
| STRONTIUM | 7440-24-6 | 400 | 44 | 400 | 44 | 40,000 | 4,400 | 40,000 | 4,400 | 190,000 | 44,000 | 190,000 | 44,000 | NA |
| THALLIUM | 7440-28-0 | 0.2 | 14 | 0.2 | 14 | 20 | 1,400 | 20 | 1,400 | 200 | 14,000 | 200 | 14,000 | 15 |
| TIN | 7440-31-5 | 2,500 | 190,000 | 7,000 | 190,000 | 190,000 | 190,000 | 190,000 | 190,000 | 190,000 | 190,000 | 190,000 | 190,000 | 10 |
| VANADIUM | 7440-62-2 | 0.29 | 290 | 0.82 | 820 | 29 | 29,000 | 82 | 82,000 | 290 | 190,000 | 820 | 190,000 | 5 |
| ZINC | 440-66-6 | 200 | 12,000 | 200 | 12,000 | 20,000 | 190,000 | 20,000 | 190,000 | 190,000 | 190,000 | 190,000 | 190,000 | 15 |

${ }^{1}$ For other options see Section 250.308 All concentrations in $\mathrm{mg} / \mathrm{kg}$
NR-Non-Residential
NA-Not Applicable
Table 5-Physical and Toxicological Properties

| Regulated Substance | CAS | $\begin{array}{r} R f D o \\ (m g / k g \end{array}$ |  | $\begin{gathered} C S F O \\ (\mathrm{mg} / \mathrm{kg}-\mathrm{c} \end{gathered}$ |  | $\begin{gathered} R f C i \\ \left(m g / m^{3}\right. \end{gathered}$ |  | $\begin{gathered} I U R \\ \left(\mu \mathrm{~g} / \mathrm{m}^{3}\right)^{-1} \end{gathered}$ |  | Koc | VOC? | Aqueous <br> Sol <br> ( $\mathrm{mg} / \mathrm{L}$ ) | Aqueous Sol Reference ${ }^{1}$ | TF <br> Vol <br> from <br> Surface <br> Soil | TF <br> Vol from SubSurface Soil | Organic Liquid | Boiling Point (degrees C) | Degradation Coefficient (K) $\left(y r^{-1}\right)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ACENAPHTHENE | 83-32-9 | 0.06 | I |  |  |  |  |  |  | 4900 |  | 3.8 | 1,5,6 |  |  |  | 279 | 1.24 |
| ACENAPHTHYLENE | 208-96-8 | 0.06 | S |  |  |  |  |  |  | 4500 |  | 16.1 | 5,6,7 |  |  |  | 280 | 2.11 |
| ACEPHATE | 30560-19-1 | 0.004 | I | 0.0087 | I |  |  |  |  | 3 |  | 818000 | 6 |  |  |  | 340 |  |
| ACETALDEHYDE | 75-07-0 |  |  |  |  | 0.009 | I | 0.0000022 | I | 4.1 | X | 1000000 | 1 | 13100 | 15100 | X | 20 |  |
| ACETONE | 67-64-1 | 0.9 | I |  |  | 31 | D |  |  | 0.31 | X | 1000000 | 1 | 13100 | 15000 | X | 56 | 18.07 |
| ACETONITRILE | 75-05-8 |  |  |  |  | 0.06 | I |  |  | 0.5 | X | 1000000 | 1 | 13100 | 15000 | X | 82 | 4.50 |
| ACETOPHENONE | 98-86-2 | 0.1 | I |  |  |  |  |  |  | 170 |  | 5500 | 1 |  |  | X | 203 |  |
| ACETYLAMINOFLUORENE, 2- (2AAF) | 53-96-3 |  |  | 3.8 | C |  |  | 0.0013 | C | 1600 |  | 10.13 | 7 |  |  |  | 303 | 0.69 |
| ACROLEIN | 107-02-8 | 0.0005 | I |  |  | 0.00002 | I |  |  | 0.56 | X | 208000 | 1,2,4 | 13100 | 15100 | X | 53 | 4.50 |
| ACRYLAMIDE | 79-06-1 | 0.002 | I | 0.5 | I | 0.006 | I | 0.0001 | I | 25 | X | 2151000 | 4 | 13000 | 15000 |  | 193 |  |
| ACRYLIC ACID | 79-10-7 | 0.5 | I |  |  | 0.001 | I |  |  | 29 | X | 1000000 | 2 | 13000 | 14900 | X | 141 | 1.39 |
| ACRYLONITRILE | 107-13-1 | 0.04 | D | 0.54 | I | 0.002 | I | 0.000068 | I | 11 | X | 73500 | 1 | 13100 | 15100 | X | 77 | 5.50 |
| ALACHLOR | 15972-60-8 | 0.01 | I | 0.056 | C |  |  |  |  | 110 |  | 140 | 2 |  |  |  | 378 |  |
| ALDICARB | 116-06-3 | 0.001 | I |  |  |  |  |  |  | 22 |  | 6000 | 2 |  |  |  | 287 | 0.40 |
| ALDICARB SULFONE | 1646-88-4 | 0.001 | I |  |  |  |  |  |  | 10 |  | 8000 | 5 |  |  |  | 317 |  |
| ALDICARB SULFOXIDE | 1646-87-3 | 0.001 | M |  |  |  |  |  |  | 0.22 |  | 330000 | 5 |  |  |  | 307 |  |
| ALDRIN | 309-00-2 | 0.00003 | I | 17 | I |  |  | 0.0049 | I | 48000 |  | 0.02 | 4,5,6 |  |  |  | 330 | 0.22 |
| ALLYL ALCOHOL | 107-18-6 | 0.005 | I |  |  | 0.0001 | X |  |  | 3.2 | X | 1000000 | 2 | 13100 | 15000 | X | 97 | 18.07 |
| AMETRYN | 834-12-8 | 0.009 | I |  |  |  |  |  |  | 389 |  | 185 | 5 |  |  |  | 345 |  |
| AMINOBIPHENYL, 4- | 92-67-1 |  |  | 21 | C |  |  | 0.006 | C | 110 |  | 1200 | 5 |  |  |  | 302 | 18.07 |
| AMITROLE | 61-82-5 |  |  | 0.94 | C |  |  | 0.00027 | C | 120 |  | 280000 | 4 |  |  |  | 258 | 0.69 |
| AMMONIA | 7664-41-7 | 0.97 | H |  |  | 0.1 | I |  |  | 3 | X | 310000 | 2,5,7 | 13100 | 15000 | X | -33 |  |
| AMMONIUM SULFAMATE | 7773-06-0 | 0.2 | I |  |  |  |  |  |  | 3 |  | 2160000 | 10 |  |  |  | 603 |  |
| ANILINE | 62-53-3 | 0.007 | P | 0.0057 | I | 0.001 | I | 0.0000016 | C | 190 | X | 33800 | 1 | 13000 | 14900 | X | 184 |  |
| ANTHRACENE | 120-12-7 | 0.3 | I |  |  |  |  |  |  | 21000 |  | 0.066 | 1,5,6,7,8,9 |  |  |  | 340 | 0.28 |
| ATRAZINE | 1912-24-9 | 0.035 | I | 0.23 | C |  |  |  |  | 130 |  | 70 | 2,4,5 |  |  |  | 313 |  |
| $\begin{aligned} & \text { AZINPHOS-METHYL } \\ & \text { (GUTHION) } \\ & \hline \end{aligned}$ | 86-50-0 | 0.003 | D |  |  | 0.01 | D |  |  | 407.4 |  | 31.5 | 1,2 |  |  |  | 421 |  |
| BAYGON (PROPOXUR) | 114-26-1 | 0.004 | I |  |  |  |  |  |  | 31 |  | 2000 | 2,4,5 |  |  |  | decomp. | 4.50 |
| BENOMYL | 17804-35-2 | 0.05 | I |  |  |  |  |  |  | 1,900 |  | 2 | 5 |  |  |  | 520 |  |
| BENTAZON | 25057-89-0 | 0.03 | I |  |  |  |  |  |  | 13 |  | 500 | 2 |  |  |  | 415 |  |
| BENZENE | 71-43-2 | 0.004 | I | 0.055 | I | 0.03 | I | 0.0000078 | I | 58 | X | 1780.5 | 1,2,3,4 | 13100 | 15000 | X | 81 | 0.35 |
| BENZIDINE | 92-87-5 | 0.003 | I | 230 | I |  |  | 0.067 | I | 530,000 |  | 520 | 1,2,4 |  |  |  | 400 | 15.81 |

$\mathrm{N}=$ EPA NCEA Provisional Values
$\mathrm{P}=$ EPA Provisional Peer-Reviewed Toxicity Value
$\mathrm{P}=$ surrogate
$\mathrm{T}=\mathrm{TEF}$
$\mathrm{TE}=$ TERA ITER Peer-Reviewed Value

D = ATSDR Minimal Risk Level
I = Integrated Risk information System (IRIS)
$\mathrm{M}=$ EPA Drinking Water Regulations and Health Advisories
Table 5-Physical and Toxicological Properties

| Regulated Substance | $C A S$ | $\begin{gathered} R f D o \\ (m g / k g-d) \end{gathered}$ |  | $\begin{gathered} C S F O \\ (m g / k g-d)^{-1} \end{gathered}$ |  | $\begin{gathered} R f C i \\ \left(m g / m^{3}\right) \end{gathered}$ |  | $\begin{gathered} I U R \\ \left(\mu g / m^{3}\right)^{-1} \end{gathered}$ |  | Koc | VOC? | $\begin{gathered} \text { Aqueous } \\ \text { Sol } \\ (m g / L) \end{gathered}$ | Aqueous <br> Sol <br> Reference ${ }^{1}$ | TF <br> Vol <br> from Surface Soil | TF <br> Vol from SubSurface Soil | Organic Liquid | Boiling Point (degrees C) | Degradation Coefficient (K) $\left(y r^{-1}\right)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BENZO[A]ANTHRACENE | 56-55-3 |  |  | 0.7 | X |  |  | 0.00011 | C | 350000 |  | 0.011 | 1,5,6 |  |  |  | 438 | 0.19 |
| BENZO[A]PYRENE | 50-32-8 |  |  | 7.3 | I |  |  | 0.0011 | C | 910000 |  | 0.0038 | 1,5,6 |  |  |  | 495 | 0.24 |
| BENZO[B]FLUORAN- <br> THENE | 205-99-2 |  |  | 1.2 | C |  |  | 0.00011 | C | 550000 |  | 0.0012 | 5,6,7 |  |  |  | 357 | 0.21 |
| BENZO[GHIPPERYLENE | 191-24-2 | 0.06 | S |  |  |  |  |  |  | 2800000 |  | 0.00026 | 1,5,6 |  |  |  | 500 | 0.19 |
| BENZO[K]FLUORAN- <br> THENE | 207-08-9 |  |  | 1.2 | C |  |  | 0.00011 | C | 4400000 |  | 0.00055 | 5,6,7 |  |  |  | 480 | 0.06 |
| BENZOIC ACID | 65-85-0 | 4 | I |  |  |  |  |  |  | 32 |  | 2700 | 2,3,4,5 |  |  |  | 249 |  |
| BENZOTRICHLORIDE | 98-07-7 |  |  | 13 | I |  |  |  |  | 920 |  | 53 | 1,5,13 |  |  | X | 221 | 121413.60 |
| BENZYL ALCOHOL | 100-51-6 | 0.1 | P |  |  |  |  |  |  | 100 |  | 40000 | 1,2,3 |  |  | X | 205 |  |
| BENZYL CHLORIDE | 100-44-7 | 0.002 | P | 0.17 | I | 0.001 | P | 0.000049 | C | 190 | X | 493 | 1 | 13000 | 15000 | X | 179 | 20.90 |
| BETA PROPIOLACTONE | 57-57-8 |  |  | 14 | C |  |  | 0.004 | C | 4 | X | 370000 | 2 | 13100 | 15000 | X | 162 | 0.01 |
| BHC, ALPHA | 319-84-6 | 0.008 | D | 6.3 | I |  |  | 0.0018 | I | 1800 |  | 1.7 | 4,5,6,7 |  |  |  | 288 | 0.94 |
| BHC, BETA- | 319-85-7 |  |  | 1.8 | I |  |  | 0.00053 | I | 2300 |  | 0.1 | 6 |  |  |  | 304 | 1.02 |
| BHC, GAMMA (LINDANE) | 58-89-9 | 0.0003 | I | 1.1 | C |  |  | 0.00031 | C | 1400 |  | 7.3 | 4,5,6 |  |  |  | 323 | 1.05 |
| BIPHENYL, 1,1- | 92-52-4 | 0.05 | I | 0.008 | X | 0.0004 | X |  |  | 1,700 |  | 7.2 | 1 |  |  |  | 255 | 18.07 |
| BIS(2-CHLORO <br> ETHOXY)METHANE | 111-91-1 | 0.003 | P |  |  |  |  |  |  | 61 |  | 100500 | 4,6,7,9,10,11 |  |  | X | 218 |  |
| $\qquad$ | 111-44-4 |  |  | 1.1 | I |  |  | 0.00033 | I | 76 | X | 10200 | 1,4,5 | 13000 | 14900 | X | 179 | 0.69 |
| $\begin{array}{\|l} \hline \text { BIS(2-CHLORO- } \\ \text { ISOPROPYL)ETHER } \\ \hline \end{array}$ | 108-60-1 | 0.04 | I | 0.07 | H |  |  | 0.00001 | H | 62 | X | 1700 | 5 | 13000 | 14900 | X | 189 | 0.69 |
| $\begin{aligned} & \text { BIS(CHLOROMETHYL) } \\ & \text { ETHER } \end{aligned}$ | 542-88-1 |  |  | 220 | I |  |  | 0.062 | I | 16 | X | 22000 | 6 | 13100 | 15100 | X | 105 | 57270.57 |
| $\begin{aligned} & \text { BIS[2-ETHYLHEXYL] } \\ & \text { PHTHALATE } \\ & \hline \end{aligned}$ | 117-81-7 | 0.02 | I | 0.014 | I |  |  | 0.0000024 | C | 87000 |  | 0.285 | 4,5,6 |  |  | X | 384 | 0.65 |
| BISPHENOL A | 80-05-7 | 0.05 | I |  |  |  |  |  |  | 1,500 |  | 120 | 4 |  |  |  | 220 | 0.69 |
| BROMACIL | 314-40-9 | 0.1 | M |  |  |  |  |  |  | 58 |  | 815 | 2 |  |  |  | 421 |  |
| $\begin{aligned} & \text { BROMOCHLORO- } \\ & \text { METHANE } \\ & \hline \end{aligned}$ | 74-97-5 | 0.01 | M |  |  | 0.04 | X |  |  | 27 | X | 16700 | 4 | 13100 | 15000 | X | 68 |  |
| $\begin{aligned} & \hline \text { BROMODICHLORO- } \\ & \text { METHANE } \\ & \hline \end{aligned}$ | 75-27-4 | 0.02 | I | 0.062 | I |  |  | 0.000037 | C | 93 | X | 4500 | 6 | 13100 | 15000 | X | 87 |  |
| BROMOMETHANE | 74-83-9 | 0.0014 | I |  |  | 0.005 | I |  |  | 170 | X | 17500 | 2 | 13100 | 15000 | X | 4 | 6.66 |
| BROMOXYNIL | 1689-84-5 | 0.02 | 1 |  |  |  |  |  |  | 300 |  | 130 | 2 |  |  |  | 329 |  |

${ }^{1}$ Aqueous solubility references are keyed to the numbered list found at $\S 250.304(\mathrm{f})$. Where there are multiple sources cited. The table value is the median of the values in the
individual references.
Toxicity Value Sources
C = California EPA Cancer Potency Factor
$\mathrm{N}=$ EPA NCEA Provisional Values
$\mathrm{P}=$ EPA Provisional Peer-Reviewed Toxicity Value
$\mathrm{S}=$ surrogate
$\mathrm{T}=\mathrm{TEF}$
X = EPA Provisional Peer-Reviewed Toxicity Value Appendix
Table 5-Physical and Toxicological Properties
Toxicity Value Sources: $\quad$ Poten Factor
$\mathrm{N}=$ EPA NCEA Provisional Values
$\mathrm{P}=$ EPA Provisional Peer-Reviewed Toxicity Value
$\mathrm{P}=$ surrogate
T = TEF
X = EPA Provisional Peer-Reviewed Toxicity Value Appendix
individual references
C = California EPA Cancer Potency Factor
$\mathrm{H}=$ Health Effects Assessment Summary Table (HEAST)
M = EPA Drinking Water Regulations and Health Advisories
Table 5-Physical and Toxicological Properties

| Regulated Substance | CAS | $\begin{gathered} R f D o \\ (m g / k g-d) \end{gathered}$ |  | $\begin{gathered} \text { CSFo } \\ (m g / k g-d)^{-1} \end{gathered}$ |  | $\begin{gathered} R f C i \\ \left(m g / m^{3}\right) \end{gathered}$ |  | $\begin{gathered} I U R \\ \left(\mu g / m^{3}\right)^{-1} \end{gathered}$ |  | Koc | VOC? | $\begin{gathered} \text { Aqueous } \\ \text { Sol } \\ (m g / L) \end{gathered}$ | Aqueous <br> Sol <br> Reference ${ }^{1}$ | TF <br> Vol <br> from <br> Surface <br> Soil | TF <br> Vol from SubSurface Soil | Organic <br> Liquid | Boiling Point (degrees C) | Degradation Coefficient (K) (yr ${ }^{-1)}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CHLOROETHANE | 75-00-3 | 0.4 | N | 0.0029 | N | 10 | I |  |  | 42 | X | 5700 | 1 | 13100 | 15000 | X | 12 | 4.50 |
| CHLOROFORM | 67-66-3 | 0.01 | I | 0.019 | C | 0.098 | D | 0.000023 | I | 56 | X | 8000 | 1,2,3 | 13100 | 15000 | X | 61 | 0.01 |
| CHLORONAPHTHALENE, <br> 2 . | 91-58-7 | 0.08 | I |  |  |  |  |  |  | 8500 |  | 11.7 | 1 |  |  |  | 256 |  |
| $\begin{aligned} & \hline \text { CHLORONITRO- } \\ & \text { BENZENE, P- } \\ & \hline \end{aligned}$ | 100-00-5 | 0.001 | P | 0.0063 | P | 0.0006 | P |  |  | 480 |  | 220 | 1 |  |  |  | 242 |  |
| CHLOROPHENOL, 2- | 95-57-8 | 0.005 | I |  |  |  |  |  |  | 400 | X | 24000 | 1,3,4 | 12900 | 14900 | X | 175 |  |
| CHLOROPRENE | 126-99-8 | 0.02 | H |  |  | 0.02 | I | 0.0003 | I | 50 | X | 1736 | 9 | 13100 | 15000 | X | 59 | 0.69 |
| CHLOROPROPANE, 2 - | 75-29-6 |  |  |  |  | 0.1 | H |  |  | 260 | X | 3100 | 1,3,5 | 13200 | 15000 | X | 47 |  |
| CHLOROTHALONIL | 1897-45-6 | 0.015 | I | 0.0031 | C |  |  | 0.00000089 | C | 980 |  | 0.6 | 2 |  |  |  | 350 |  |
| CHLOROTOLUENE, O- | 95-49-8 | 0.02 | I |  |  |  |  |  |  | 760 | X | 422 | 1,4,5 | 13100 | 15000 | X | 159 |  |
| CHLOROTOLUENE, P- | 106-43-4 | 0.02 | X |  |  |  |  |  |  | 375 | X | 106 | 12 | 13000 | 14900 | X | 162 |  |
| CHLORPYRIFOS | 2921-88-2 | 0.001 | D |  |  |  |  |  |  | 4600 |  | 1.12 | 2,4,6,7 |  |  |  | 377 |  |
| CHLORSULFURON | 64902-72-3 | 0.05 | I |  |  |  |  |  |  | 11 |  | 192 | 2,5,6,8,9 |  |  |  | 531 |  |
| CHLORTHAL- DIMETHYL (DACTHAL) (DCPA) | 1861-32-1 | 0.01 | I |  |  |  |  |  |  | 6,500 |  | 0.5 | 2,5,7 |  |  |  | 360 | 1.37 |
| CHRYSENE | 218-01-9 |  |  | 0.12 | C |  |  | 0.000011 | C | 490000 |  | 0.0019 | 1 |  |  |  | 448 | 0.13 |
| CRESOL(S) | 1319-77-3 | 0.1 | D |  |  | 0.06 | C |  |  | 25 | X | 20000 | 2 | 13000 | 14900 | X | 139 | 5.16 |
| CRESOL, DINITRO-O-, 4,6- | 534-52-1 | 0.0001 | P |  |  |  |  |  |  | 257 |  | 150 | 4 |  |  |  | 312 | 6.02 |
| $\begin{aligned} & \text { CRESOL, O- } \\ & \text { (METHYLPHENOL, 2-) } \end{aligned}$ | 95-48-7 | 0.05 | I |  |  |  |  |  |  | 22 | X | 2500 | 3,5,6 | 13000 | 14900 |  | 191 | 18.07 |
| CRESOL, M (METHYLPHENOL, 3-) | 108-39-4 | 0.05 | I |  |  |  |  |  |  | 35 |  | 2500 | 2 |  |  | X | 202 | 5.16 |
| CRESOL, P (METHYLPHENOL, 4-) | 106-44-5 | 0.005 | H |  |  |  |  |  |  | 49 |  | 22000 | 6 |  |  |  | 202 | 9.03 |
| CRESOL, P-CHLORO-M- | 59-50-7 | 0.1 | X |  |  |  |  |  |  | 780 |  | 3846 | 2 |  |  |  | 235 |  |
| CROTONALDEHYDE | 4170-30-3 |  |  | 1.9 | S |  |  |  |  | 5.6 | X | 180000 | 3 | 13000 | 14900 | X | 104 | 18.07 |
| CROTONALDEHYDE, TRANS. | 123-73-9 | 0.001 | P | 1.9 | H |  |  |  |  | 6.1 | X | 156000 | 1 | 13100 | 15100 | X | 104 | 18.07 |
| CUMENE (ISOPROPYL BENZENE) | 98-82-8 | 0.1 | I |  |  | 0.4 | I |  |  | 2800 | X | 50 | 1,5,6 | 13100 | 15100 | X | 152 | 15.81 |
| CYANAZINE | 21725-46-2 | 0.002 | M | 0.84 | H |  |  |  |  | 199 |  | 171 | 2,5 |  |  |  | 369 |  |
| CYCLOHEXANE | 110-82-7 |  |  |  |  | 6 | I |  |  | 479 | X | 55 | 1,2,4,5,6 | 13100 | 15100 | X | 81 |  |
| CYCLOHEXANONE | 108-94-1 | 5 | I |  |  | 0.7 | P |  |  | 66 | X | 36500 | 1,2,4,5 | 13000 | 14900 | X | 157 |  |

${ }^{1}$ Aqueous solubility references are keyed to the numbered list found at $\S 250.304(\mathrm{f})$. Where there are multiple sources cited. The table value is the median of the values in the
Toxicity Value Source
C = California EPA Cancer Potency Factor
$\mathrm{N}=$ EPA NCEA Provisional Values
$\mathrm{P}=$ EPA Provisional Peer-Reviewed Toxicity Value
$\mathrm{S}=$ surrogate
T = TEF
X = EPA Provisional Peer-Reviewed Toxicity Value Appendix
D = ATSDR Minimal Risk Level
H = Health Effects Assessment Summary Table (HEAST)
M = EPA Drinking Water Regulations and Health Advisories

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Table 5-Physical and Toxicological Properties

| Regulated Substance | $C A S$ | $\begin{gathered} R f D o \\ (m g / k g-d) \end{gathered}$ |  | $\begin{gathered} C S F O \\ (m g / k g-d)^{-1} \end{gathered}$ |  | $\begin{gathered} R f C i \\ \left(m g / m^{3}\right) \end{gathered}$ |  | $\begin{gathered} I U R \\ \left(\mu g / m^{3}\right)^{-1} \end{gathered}$ |  | Koc | VOC? | Aqueous <br> Sol $(m g / L)$ | Aqueous Sol Reference ${ }^{1}$ | TF <br> Vol <br> from <br> Surface <br> Soil | TF <br> Vol from SubSurface Soil | Organic Liquid | Boiling Point (degrees C) | Degradation Coefficient (K) $\left(y r^{-1}\right)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CYFLUTHRIN | 68359-37-5 | 0.025 | I |  |  |  |  |  |  | 130,000 |  | 0.001 | 2 |  |  |  | 448 |  |
| CYROMAZINE | 66215-27-8 | 0.0075 | I |  |  |  |  |  |  | 1,200 |  | 11000 | 12 |  |  |  | 222 |  |
| DDD, 4, $4^{\prime}$ - | 72-54-8 |  |  | 0.24 | I |  |  | 0.000069 | C | 44000 |  | 0.16 | 5,6,7 |  |  |  | 350 | 0.02 |
| DDE, 4,4'- | 72-55-9 |  |  | 0.34 | I |  |  | 0.000097 | C | 87000 |  | 0.04 | 5 |  |  |  | 348 | 0.02 |
| DDT, 4,4' | 50-29-3 | 0.0005 | I | 0.34 | I |  |  | 0.000097 | I | 240000 |  | 0.0055 | 5,6,7 |  |  |  | 260 | 0.02 |
| DI(2- <br> ETHYLHEXYL)ADIPATE | 103-23-1 | 0.6 | I | 0.0012 | I |  |  |  |  | 47,000,000 |  | 200 | 5 |  |  | X | 214 | 4.50 |
| DIALLATE | 2303-16-4 |  |  | 0.061 | H |  |  |  |  | 190 |  | 40 | 2,4,6,8 |  |  | X | 328 | 1.39 |
| DIAMINOTOLUENE, 2,4- | 95-80-7 |  |  | 4 | C |  |  | 0.0011 | C | 36 |  | 7470 | 4 |  |  |  | 292 | 0.69 |
| DIAZINON | 333-41-5 | 0.0007 | D |  |  |  |  |  |  | 500 |  | 50 | 2,4,6,8 |  |  | X | 306 |  |
| DIBENZO[A,H]ANTHRACENE | 53-70-3 |  |  | 4.1 | C |  |  | 0.0012 | C | 1800000 |  | 0.0006 | 1,5,6 |  |  |  | 524 | 0.13 |
| DIBENZOFURAN | 132-64-9 | 0.001 | X |  |  |  |  |  |  | 10233 |  | 4.48 | 1,6,7,9 |  |  |  | 287 | 7.23 |
| $\begin{aligned} & \text { DIBROMO-3- } \\ & \text { CHLOROPROPANE, } 1,2 \text { - } \end{aligned}$ | 96-12-8 | 0.0002 | P | 0.8 | P | 0.0002 | I | 0.006 | P | 140 | X | 1000 | 4 | 13000 | 15000 | X | 196 | 0.69 |
| DIBROMOBENZENE, 1,4- | 106-37-6 | 0.01 | I |  |  |  |  |  |  | 1,600 |  | 20 | 1 |  |  |  | 220 |  |
| DIBROMOETHANE, 1,2 - (ETHYLENE DIBROMIDE) | 106-93-4 | 0.009 | I | 2 | I | 0.009 | I | 0.0006 | I | 54 | X | 4150 | 1,2,3,5 | 13100 | 15100 | X | 131 | 2.11 |
| DIBROMOMETHANE | 74-95-3 | 0.01 | H |  |  | 0.004 | X |  |  | 110 | X | 11400 | 1 | 13100 | 15100 | X | 96 | 4.50 |
| DIBUTYL PHTHALATE, N - | 84-74-2 | 0.1 | I |  |  |  |  |  |  | 1600 |  | 400 | 1,2,3 |  |  | X | 340 | 11.00 |
| DICAMBA | 1918-00-9 | 0.03 | I |  |  |  |  |  |  | 0.27 |  | 5600 | 4,5,6,8,10 |  |  |  | 329 |  |
| DICHLOROACETIC ACID | 76-43-6 | 0.004 | I | 0.05 | I |  |  |  |  | 8.1 | X | 1000000 | 1 | 12900 | 14900 | X | 194 |  |
| DICHLORO-2-BUTENE, 1,4- | 764-41-0 |  |  |  |  |  |  | 0.0042 | P | 180 | X | 850 | 9 | 13100 | 15000 | X | 156 |  |
| DICHLORO-2-BUTENE, TRANS-1,4- | 110-57-6 |  |  |  |  |  |  | 0.0042 | S | 215 | X | 850 | 9 | 12900 | 14800 | X | 155 |  |
| DICHLOROBENZENE, 1,2 - | 95-50-1 | 0.09 | I |  |  | 0.2 | H |  |  | 350 | X | 147 | 1,4,5,6,7 | 13100 | 15100 | X | 180 | 0.69 |
| DICHLOROBENZENE, 1,3 - | 541-73-1 | 0.09 | M |  |  |  |  |  |  | 360 | X | 106 | 1 | 13100 | 15100 | X | 173 | 0.69 |
| DICHLOROBENZENE, P- | 106-46-7 | 0.07 | D | 0.0054 | C | 0.8 | I | 0.000011 | C | 510 | X | 82.9 | 1 | 12900 | 14900 |  | 174 | 0.69 |
| $\begin{aligned} & \text { DICHLOROBENZIDINE, } \\ & 3,3^{\prime} \text { - } \end{aligned}$ | 91-94-1 |  |  | 0.45 | I |  |  | 0.00034 | C | 22000 |  | 3.11 | 4,5,6 |  |  |  | 368 | 0.69 |
| DICHLORODIFLUORO- <br> METHANE (FREON 12) | 75-71-8 | 0.2 | I |  |  | 0.1 | X |  |  | 360 | X | 280 | 1 | 13200 | 15000 | X | -30 | 0.69 |
| DICHLOROETHANE, 1,1- | 75-34-3 | 0.2 | P | 0.0057 | C | 0.5 | H | 0.0000016 | C | 52 | X | 5000 | 2 | 13100 | 15000 | X | 57 | 0.16 |
| DICHLOROETHANE, 1,2- | 107-06-2 | 0.006 | X | 0.091 | I | 0.007 | P | 0.000026 | I | 38 | X | 8412 | 1,2,3,4 | 13100 | 15000 | X | 83 | 0.07 |

Toxicity Value Sources
$\mathrm{N}=$ EPA NCEA Provisional Values
$\mathrm{P}=$ EPA Provisional Peer-Reviewed Toxicity Value
$\mathrm{S}=$ surrogate
$\mathrm{T}=\mathrm{TEF}$
$\mathrm{TE}=$ TERA ITER Peer-Reviewed Value
$\mathrm{C}=$ California EPA Cancer Potency Factor
H = Health Effects Assessment Summary Table (HEAST)
$\mathrm{I}=$ Integrated Risk information System (IRIS)
$\mathrm{M}=$ EPA Drinking Water Regulations and Health Advisories
Table 5-Physical and Toxicological Properties

| Regulated Substance | $C A S$ | $\begin{gathered} R f D o \\ (m g / k g-d) \end{gathered}$ |  | $\begin{gathered} \text { CSFo } \\ (m g / k g-d)^{-1} \end{gathered}$ |  | $\begin{gathered} R f C i \\ \left(m g / m^{3}\right) \end{gathered}$ |  | $\begin{gathered} I U R \\ \left(\mu g / m^{3}\right)^{-1} \end{gathered}$ |  | Koc | VOC? | $\begin{gathered} \text { Aqueous } \\ \text { Sol } \\ (m g / L) \end{gathered}$ | Aqueous <br> Sol <br> Reference ${ }^{1}$ | TF <br> Vol <br> from Surface Soil | TF <br> Vol from SubSurface Soil | Organic Liquid | Boiling Point (degrees C) | Degradation Coefficient (K) $\left(y r^{-1}\right)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DICHLOROETHYLENE, 1,1- | 75-35-4 | 0.05 | I |  |  | 0.2 | I |  |  | 65 | X | 2500 | 1,4,5 | 13100 | 15000 | X | 32 | 0.19 |
| DICHLOROETHYLENE, CIS-1,2- | 156-59-2 | 0.002 | I |  |  |  |  |  |  | 49 | X | 3500 | 1 | 13100 | 15000 | X | 60 | 0.01 |
| DICHLOROETHYLENE, TRANS-1,2- | 156-60-5 | 0.02 | I |  |  | 0.06 | P |  |  | 47 | X | 6300 | 1 | 13100 | 15000 | X | 48 | 0.01 |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | 75-09-2 | 0.006 | I | 0.002 | I | 0.6 | I | 0.00000001 | I | 16 | X | 20000 | 1,2,3 | 13100 | 15000 | X | 40 | 4.50 |
| DICHLOROPHENOL, 2,4- | 120-83-2 | 0.003 | I |  |  |  |  |  |  | 160 |  | 4500 | 1 |  |  |  | 210 | 5.88 |
| DICHLOROPHENOXY. ACETIC ACID, 2,4- (2,4-D) | 94-75-7 | 0.01 | I |  |  |  |  |  |  | 59 |  | 677 | 4,5,6,7,10 |  |  |  | 215 | 1.39 |
| DICHLOROPROPANE, 1,2 - | 78-87-5 | 0.09 | D | 0.036 | C | 0.004 | I | 0.00001 | C | 47 | X | 2700 | 1,3,4 | 13100 | 15000 | X | 96 | 0.10 |
| DICHLOROPROPENE, 1,3- | 542-75-6 | 0.03 | I | 0.1 | I | 0.02 | I | 0.000004 | I | 27 | X | 2700 | 6 | 13100 | 15000 | X | 108 | 22.38 |
| DICHLOROPROPIONIC <br> ACID, 2,2- (DALAPON) | 75-99-0 | 0.03 | I |  |  |  |  |  |  | 62 | X | 500000 | 5 | 13000 | 14900 | X | 190 | 2.11 |
| DICHLORVOS | 62-73-7 | 0.0005 | I | 0.29 | I | 0.0005 | I | 0.000083 | C | 50 |  | 10000 | 2,4,5 |  |  | X | 234 |  |
| DICYCLOPENTADIENE | 77-73-6 | 0.008 | P |  |  | 0.0003 | X |  |  | 810 | X | 40 | 5 | 13000 | 14900 |  | 167 |  |
| DIELDRIN | 60-57-1 | 0.00005 | I | 16 | I |  |  | 0.0046 | I | 11000 |  | 0.17 | 4,5,6 |  |  |  | 385 | 0.12 |
| DIETHANOLAMINE | 111-42-2 | 0.002 | P |  |  | 0.0002 | P |  |  | 4 |  | 1000000 | 2,3,9 |  |  | X | 269 |  |
| DIETHYL PHTHALATE | 84-66-2 | 0.8 | I |  |  |  |  |  |  | 81 |  | 1080 | 4,5,6 |  |  | X | 298 | 2.25 |
| DIFLUBENZURON | 35367-38-5 | 0.02 | I |  |  |  |  |  |  | 1,000 |  | 0.2 | 2 |  |  |  | 201 |  |
| DIISOPROPYL METHYLPHOSPHONATE | 1445-75-6 | 0.08 | I |  |  |  |  |  |  | 10 | X | 160000 | 9 | 13000 | 14900 | X | 190 |  |
| DIMETHOATE | 60-51-5 | 0.0002 | I |  |  |  |  |  |  | 110 |  | 25000 | 4 |  |  |  | 361 | 2.26 |
| DIMETHOXYBENZIDINE, 3,3- | 119-90-4 |  |  | 1.6 | P |  |  |  |  | 1,300 |  | 60 | 9 |  |  |  | 331 | 0.69 |
| DIMETHRIN | 70-38-2 | 0.3 | M |  |  |  |  |  |  | 27,000 |  | 0.036 | 13 |  |  |  | 353 |  |
| $\begin{aligned} & \text { DIMETHYLAMINOAZO- } \\ & \text { BENZENE, P- } \end{aligned}$ | 60-11-7 |  |  | 4.6 | C |  |  | 0.0013 | C | 1000 |  | 13.6 | 7 |  |  |  | 335 | 4.50 |
| DIMETHYLANILINE, $\mathrm{N}, \mathrm{N}$ - | 121-69-7 | 0.002 | I |  |  |  |  |  |  | 180 | X | 1200 | 5,6,7,9 | 13000 | 14900 | X | 192 | 0.69 |
| DIMETHYLBENZIDINE, 3,3- | 119-93-7 |  |  | 11 | P |  |  |  |  | 22,000 |  | 1300 | 10 |  |  |  | 300 | 18.07 |
| DIMETHYL METHYLPHOSPHONATE | 756-79-6 | 0.06 | P | 0.0017 | P |  |  |  |  | 5 | X | 1000000 | 14 | 13000 | 14900 | X | 181 |  |
| DIMETHYLPHENOL, 2,4- | 105-67-9 | 0.02 | I |  |  |  |  |  |  | 130 |  | 7869 | 1,4,6,7 |  |  | X | 211 | 18.07 |
| DINITROBENZENE, 1,3- | 99-65-0 | 0.0001 | I |  |  |  |  |  |  | 150 |  | 523 | 3,5,6,7 |  |  |  | 291 | 0.69 |
| DINITROPHENOL, 2,4- | 51-28-5 | 0.002 | I |  |  |  |  |  |  | 0.79 |  | 5600 | 2,4,5,6,7 |  |  |  | 332 | 0.48 |
| DINITROTOLUENE, 2,4- | 121-14-2 | 0.002 | I | 0.31 | C |  |  | 0.000089 | C | 51 |  | 270 | 4,5,6 |  |  |  | 300 | 0.69 |

${ }^{1}$ Aqueous solubility references are keyed to the numbered list found at $\S 250.304(\mathrm{f})$. Where there are multiple sources cited. The table value is the median of the values in the

[^24]Toxicity Value Sources.
C = California EPA Cancer Potency Factor
H = Health Effects Assessment Summary Table (HEAST)
M = EPA Drinking Water Regulations and Health Advisories
Table 5-Physical and Toxicological Properties

| Regulated Substance | CAS | $\begin{array}{r} R f D o \\ (\mathrm{mg} / \mathrm{kg}- \end{array}$ |  | $\begin{gathered} C S F O \\ (\mathrm{mg} / \mathrm{kg}-\mathrm{d} \end{gathered}$ |  | $\begin{gathered} R f C i \\ \left(m g / m^{3}\right) \end{gathered}$ |  | $\begin{gathered} I U R \\ \left(\mu \mathrm{~g} / \mathrm{m}^{3}\right)^{-1} \end{gathered}$ |  | Koc | VOC? | $\begin{gathered} \text { Aqueous } \\ \text { Sol } \\ (m g / L) \end{gathered}$ | Aqueous Sol Reference ${ }^{1}$ | TF <br> Vol <br> from <br> Surface <br> Soil | TF <br> Vol from SubSurface Soil | Organic Liquid | Boiling Point (degrees C) | Degradation Coefficient (K) $\left(y r^{-1}\right)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \hline \text { DINITROTOLUENE, 2,6- } \\ & (2,6 \text {-DNT }) \end{aligned}$ | 606-20-2 | 0.0003 | X | 1.5 | P |  |  |  |  | 74 |  | 200 | 6 |  |  |  | 300 | 0.69 |
| DINOSEB | 88-85-7 | 0.001 | I |  |  |  |  |  |  | 120 |  | 50 | 5 |  |  |  | 223 | 1.03 |
| DIOXANE, 1,4- | 123-91-1 | 0.03 | I | 0.1 | I | 0.11 | D | 0.0000077 | C | 7.8 | X | 1000000 | 5 | 13000 | 14900 | X | 101 | 0.69 |
| DIPHENAMID | 957-51-7 | 0.03 | I |  |  |  |  |  |  | 200 |  | 260 | 5 |  |  |  | 210 |  |
| DIPHENYLAMINE | 122-39-4 | 0.025 | I |  |  |  |  |  |  | 190 |  | 300 | 3 |  |  |  | 302 | 4.50 |
| DIPHENYLHYDRAZINE, <br> $1,2-$ | 122-66-7 |  |  | 0.8 | I |  |  | 0.00022 | I | 660 |  | 0.252 | 6 |  |  |  | 309 | 0.69 |
| DIQUAT | 85-00-7 | 0.0022 | I |  |  |  |  |  |  | 2.6 |  | 700000 | 5 |  |  |  | 355 |  |
| DISULFOTON | 298-04-4 | 0.00004 | I |  |  |  |  |  |  | 1000 |  | 25 | 4,5,6 |  |  | X | 332 | 6.02 |
| DITHIANE, 1,4- | 505-29-3 | 0.01 | I |  |  |  |  |  |  | 22.7 | X | 3000 | 15 | 13000 | 14900 |  | 199 |  |
| DIURON | 330-54-1 | 0.002 | I |  |  |  |  |  |  | 300 |  | 42 | 2,4,5 |  |  |  | 354 |  |
| ENDOSULFAN | 115-29-7 | 0.006 | I |  |  |  |  |  |  | 2,000 |  | 0.48 | 4 |  |  |  | 401 | 2.78 |
| $\begin{aligned} & \hline \text { ENDOSULFAN I } \\ & \text { (ALPHA) } \\ & \hline \end{aligned}$ | 959-98-8 | 0.006 | S |  |  |  |  |  |  | 2000 |  | 0.5 | 6 |  |  |  | 401 |  |
| ENDOSULFAN II (BETA) | 33213-65-9 | 0.006 | S |  |  |  |  |  |  | 2300 |  | 0.45 | 6 |  |  |  | 390 |  |
| ENDOSULFAN SULFATE | 1031-07-8 | 0.006 | S |  |  |  |  |  |  | 2300 |  | 0.117 | 7,9 |  |  |  | 409 |  |
| ENDOTHALL | 145-73-3 | 0.02 | I |  |  |  |  |  |  | 120 |  | 100000 | 2 |  |  |  | 350 |  |
| ENDRIN | 72-20-8 | 0.0003 | I |  |  |  |  |  |  | 11000 |  | 0.23 | 4,6,7,9 |  |  |  | 245 |  |
| EPICHLOROHYDRIN | 106-89-8 | 0.006 | P | 0.0099 | I | 0.001 | I | 0.0000012 | I | 35 | X | 65800 | 1,3,4 | 13000 | 14900 | X | 116 | 4.50 |
| ETHEPHON | 16672-87-0 | 0.005 | I |  |  |  |  |  |  | 2 |  | 1240000 | 12 |  |  |  | 201 |  |
| ETHION | 563-12-2 | 0.0005 | I |  |  |  |  |  |  | 8700 |  | 0.85 | 4,6,9,10 |  |  | X | 415 |  |
| $\begin{aligned} & \text { ETHOXYETHANOL, 2- } \\ & \text { (EGEE) } \end{aligned}$ | 110-80-5 | 0.09 | P |  |  | 0.2 | I |  |  | 12 | X | 1000000 | 2 | 13200 | 15000 | X | 136 | 4.50 |
| ETHYL ACETATE | 141-78-6 | 0.9 | I |  |  | 0.07 | P |  |  | 59 | X | 80800 | 1,2,3,4,5,6 | 13100 | 15000 | X | 77 | 18.07 |
| ETHYL ACRYLATE | 140-88-5 | 0.005 | P | 0.048 | H | 0.008 | P |  |  | 110 | X | 15000 | 1,2,6 | 13100 | 15100 | X | 100 | 18.07 |
| ETHYL BENZENE | 100-41-4 | 0.1 | I | 0.011 | C | 1 | I | 0.0000025 | C | 220 | X | 161 | 1,3,4 | 13100 | 15000 | X | 136 | 1.11 |
| ETHYL <br> DIPROPYLTHIOCAR- <br> BAMATE, S- (EPTC) | 759-94-4 | 0.025 | I |  |  |  |  |  |  | 240 | X | 365 | 2 | 12900 | 14900 | X | 127 |  |
| ETHYL ETHER | 60-29-7 | 0.2 | I |  |  |  |  |  |  | 68 | X | 60400 | 1 | 13100 | 15100 | X | 35 |  |
| ETHYL <br> METHACRYLATE | 97-63-2 | 0.09 | H |  |  | 0.3 | P |  |  | 22 | X | 4635.5 | 9,10 | 13100 | 15000 | X | 117 |  |
| ETHYLENE CHLORHYDRIN | 107-07-3 | 0.02 | P |  |  |  |  |  |  | 1 | X | 1000000 | 9 | 13000 | 14900 | X | 128 |  |

Toxicity Value Sources:
= California EPA Cancer Potency Factor
$\mathrm{N}=$ EPA NCEA Provisional Values
$\mathrm{P}=$ EPA Provisional Peer-Reviewed Toxicity Value
$\mathrm{S}=$ surrogate
$\mathrm{T}=\mathrm{TEF}$
$\mathrm{TE}=$ TERA ITER Peer-Reviewed Value
X = EPA Provisional Peer-Reviewed Toxicity Value Appendix
individual references.
C = California EPA Cancer Potency Factor
D $=$ ATSDR Minimal Risk Level
$\mathrm{H}=$ Health Effects Assessment Summary Table (HEAST)
M = EPA Drinking Water Regulations and Health Advisories
Table 5-Physical and Toxicological Properties

| Regulated Substance | $C A S$ | $\begin{array}{r} R f D o \\ (\mathrm{mg} / \mathrm{kg}- \end{array}$ |  | $\begin{gathered} \mathrm{CSFo} \\ (\mathrm{mg} / \mathrm{kg}-\mathrm{c} \end{gathered}$ |  | $\begin{gathered} R f C i \\ (m g / m \end{gathered}$ |  | $\begin{gathered} I U R \\ \left(\mu g / m^{3}\right)^{-1} \end{gathered}$ |  | Koc | VOC? | $\begin{gathered} \text { Aqueous } \\ \text { Sol } \\ (m g / L) \end{gathered}$ | Aqueous Sol Reference ${ }^{1}$ | TF Vol from Surface Soil | TF <br> Vol from SubSurface Soil | Organic <br> Liquid | Boiling Point (degrees C) | Degradation Coefficient (K) ( $\mathrm{rr}^{-1)}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ETHYLENE GLYCOL | 107-21-1 | 2 | I |  |  | 0.4 | C |  |  | 4.4 | X | 1000000 | 2 | 13100 | 15100 | X | 198 | 10.54 |
| ETHYLENE THIOUREA (ETU) | 96-45-7 | 0.00008 | I | 0.045 | C |  |  | 0.000013 | C | 0.23 |  | 20000 | 2 |  |  |  | 347 | 4.50 |
| ETHYL P-NITROPHENYL PHENYLPHOSPHORO THIOATE | 2104-64-5 | 0.00001 | I |  |  |  |  |  |  | 1,200 |  | 3.1 | 4 |  |  |  | 215 |  |
| FENAMIPHOS | 22224-92-6 | 0.00025 | I |  |  |  |  |  |  | 300 |  | 329 | 2 |  |  |  | 390 |  |
| FENVALERATE (PYDRIN) | 51630-58-1 | 0.025 | I |  |  |  |  |  |  | 4,400 |  | 0.085 | 5 |  |  | X | 300 |  |
| FLUOMETURON | 2164-17-2 | 0.013 | I |  |  |  |  |  |  | 68 |  | 97.5 | 2,5,6,8 |  |  |  | 318 |  |
| FLUORANTHENE | 206-44-0 | 0.04 | I |  |  |  |  |  |  | 49000 |  | 0.26 | 1,5,6 |  |  |  | 375 | 0.29 |
| FLUORENE | 86-73-7 | 0.04 | I |  |  |  |  |  |  | 7900 |  | 1.9 | 1 |  |  |  | 298 | 2.11 |
| FLUOROTRICHLOROMETHANE (FREON 11) | 75-69-4 | 0.3 | I |  |  | 0.7 | H |  |  | 130 | X | 1090 | 1,4,5,6 | 13100 | 15000 | X | 24 | 0.35 |
| FONOFOS | 944-22-9 | 0.002 | I |  |  |  |  |  |  | 1100 |  | 13 | 5,6,8 |  |  | X | 324 |  |
| FORMALDEHYDE | 50-00-0 | 0.2 | I |  |  | 0.0098 | D | 0.000013 | I | 3.6 | X | 55000 | 1 | 13100 | 15100 | X | -21 | 18.07 |
| FORMIC ACID | 64-18-6 | 0.9 | P |  |  | 0.0003 | X |  |  | 0.54 | X | 1000000 | 2 | 13000 | 14900 | X | 101 | 18.07 |
| FOSETYL-AL | 39148-24-8 | 3 | I |  |  |  |  |  |  | 310 |  | 120000 | 2 |  |  |  | 464 |  |
| FURAN | 110-00-9 | 0.001 | I |  |  |  |  |  |  | 130 | X | 10000 | 1 | 13100 | 15000 | X | 31 | 2.25 |
| FURFURAL | 98-01-1 | 0.003 | I |  |  | 0.05 | H |  |  | 6.3 | X | 91000 | 1,2,3 | 13000 | 14900 | X | 162 |  |
| GLYPHOSATE | 1071-83-6 | 0.1 | I |  |  |  |  |  |  | 3500 |  | 12000 | 1,5,6 |  |  |  | 417 |  |
| HEPTACHLOR | 76-44-8 | 0.0005 | I | 4.5 | I |  |  | 0.0013 | I | 6800 |  | 0.18 | 4,6,7 |  |  |  | 310 | 46.84 |
| $\begin{aligned} & \hline \text { HEPTACHLOR } \\ & \text { EPOXIDE } \\ & \hline \end{aligned}$ | 1024-57-3 | 0.000013 | I | 9.1 | I |  |  | 0.0026 | I | 21000 |  | 0.311 | 4,6,7,9 |  |  |  | 341 | 0.23 |
| HEXACHLOROBENZENE | 118-74-1 | 0.0008 | I | 1.6 | I |  |  | 0.00046 | I | 3800 |  | 0.006 | 1,4,5 |  |  |  | 319 | 0.06 |
| HEXACHLOROBUTADIENE | 87-68-3 | 0.001 | P | 0.078 | I |  |  | 0.000022 | I | 4700 |  | 2.89 | 4,5,6,7 |  |  | X | 215 | 0.69 |
| HEXACHLOROCYCLOPEN- TADIENE | 77-47-4 | 0.006 | I |  |  | 0.0002 | I |  |  | 7200 |  | 1.8 | 5,6,7 |  |  | X | 239 | 4.50 |
| HEXACHLOROETHANE | 67-72-1 | 0.0007 | I | 0.04 | I | 0.03 | I | 0.00001 | C | 2200 | X | 50 | 1 | 13000 | 15000 |  | 187 | 0.69 |
| HEXANE | 110-54-3 | 0.06 | H |  |  | 0.7 | I |  |  | 3600 | X | 9.5 | 1,5,6 | 13100 | 15000 | X | 69 |  |
| HEXAZINONE | 51235-04-2 | 0.033 | I |  |  |  |  |  |  | 41 |  | 330000 | 1,2 |  |  |  | 408 |  |
| HEXYTHIAZOX (SAVEY) | 78587-05-0 | 0.025 | I |  |  |  |  |  |  | 6,500 |  | 0.5 | 2 |  |  |  | 539 |  |
| HMX | 2691-41-0 | 0.05 | I |  |  |  |  |  |  | 4 |  | 5 | 16 |  |  |  | 436 |  |
| HYDRAZINE/HYDRAZINE SULFATE | 302-01-2 |  |  | 3 | 1 | 0.00003 | P | 0.0049 | I | 0.0053 | X | 1000000 | 2 | 13000 | 15000 | X | 114 | 18.07 |

Table 5-Physical and Toxicological Properties

| Regulated Substance | CAS | $\begin{gathered} R f D o \\ (\mathrm{mg} / \mathrm{kg} . \end{gathered}$ |  | $\begin{gathered} \mathrm{CSFo} \\ (\mathrm{mg} / \mathrm{kg}-\mathrm{c} \end{gathered}$ |  | $\begin{gathered} R f C i \\ \left(m g / m^{3}\right. \end{gathered}$ |  | $\begin{gathered} I U R \\ \left(\mu \mathrm{~g} / \mathrm{m}^{3}\right)^{-1} \end{gathered}$ |  | Koc | VOC? | $\begin{gathered} \text { Aqueous } \\ S o l \\ (m g / L) \end{gathered}$ | Aqueous Sol Reference ${ }^{1}$ | TF Vol from Surface Soil | TF <br> Vol from SubSurface Soil | Organic Liquid | Boiling Point (degrees C) | Degradation Coefficient (K) $\left(y r^{-1}\right)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| HYDROQUINONE | 123-31-9 | 0.04 | P | 0.06 | P |  |  |  |  | 10 |  | 70000 | 2,3,5 |  |  |  | 285 | 18.07 |
| $\begin{aligned} & \text { INDENO[1,2,3- } \\ & \text { CD]PYRENE } \end{aligned}$ | 193-39-5 |  |  | 1.2 | C |  |  | 0.00011 | C | 31000000 |  | 0.062 | 5 |  |  |  | 536 | 0.17 |
| IPRODIONE | 36734-19-7 | 0.04 | I |  |  |  |  |  |  | 1,100 |  | 13 | 2 |  |  |  | 545 |  |
| ISOBUTYL ALCOHOL | 78-83-1 | 0.3 | I |  |  |  |  |  |  | 60 | X | 81000 | 1,2,3,4,5 | 13000 | 14900 | X | 108 | 17.57 |
| ISOPHORONE | 78-59-1 | 0.2 | I | 0.00095 | I | 2 | C |  |  | 31 |  | 12000 | 2,4,5 |  |  | X | 215 | 4.5 |
| ISOPROPYL METHYLPHOSPHONATE | 1832-54-8 | 0.1 | I |  |  |  |  |  |  | 1.84 |  | 50000 | 13 |  |  | X | 230 |  |
| KEPONE | 143-50-0 | 0.0003 | I | 10 | I |  |  | 0.0046 | C | 55000 |  | 7.6 | 4 |  |  |  | 350 | 0.17 |
| MALATHION | 121-75-5 | 0.02 | I |  |  |  |  |  |  | 1300 |  | 143 | 4 |  |  | X | 351 | 2.46 |
| MALEIC HYDRAZIDE | 123-33-1 | 0.5 | I |  |  |  |  |  |  | 2.8 |  | 6000 | 4 |  |  |  | 260 |  |
| MANEB | 12427-38-2 | 0.005 | I |  |  |  |  |  |  | 1 |  | 23 | 9,13 |  |  |  | 351 |  |
| MERPHOS OXIDE | 78-48-8 | 0.00003 | I |  |  |  |  |  |  | 53,000 |  | 2.3 | 8,10,12 |  |  | X | 392 |  |
| METHACRYLONITRILE | 126-98-7 | 0.0001 | I |  |  | 0.03 | P |  |  | 21 | X | 25700 | 1 | 13100 | 15100 | X | 90 |  |
| METHAMIDOPHOS | 10265-92-6 | 0.00005 | I |  |  |  |  |  |  | 5 |  | 2000000 | 5 |  |  |  | 223 |  |
| METHANOL | 67-56-1 | 0.5 | I |  |  | 4 | C |  |  | 2.8 | X | 1000000 | 2 | 13100 | 15100 | X | 65 | 36.14 |
| METHOMYL | 16752-77-5 | 0.025 | I |  |  |  |  |  |  | 20 |  | 58000 | 2 |  |  |  | 228 |  |
| METHOXYCHLOR | 72-43-5 | 0.005 | I |  |  |  |  |  |  | 63000 |  | 0.045 | 4,5,6 |  |  |  | 346 | 0.69 |
| METHOXYETHANOL, 2- | 109-86-4 | 0.005 | P |  |  | 0.02 | I |  |  | 1 | X | 1000000 | 2 | 13100 | 15000 | X | 124 | 4.50 |
| METHYL ACETATE | 79-20-9 | 1 | H |  |  |  |  |  |  | 30 | X | 243500 | 4,5,6 | 13100 | 15100 | X | 57 |  |
| METHYL ACRYLATE | 96-33-3 | 0.03 | H |  |  | 0.02 | P |  |  | 55 | X | 52000 | 1,2,5 | 13100 | 15100 | X | 70 | 18.07 |
| METHYL CHLORIDE | 74-87-3 |  |  | 0.013 | H | 0.09 | I | 0.0000018 | H | 6 | X | 6180 | 1,2,3,4 | 13200 | 15000 | X | -24 | 4.50 |
| $\begin{aligned} & \text { METHYL ETHYL } \\ & \text { KETONE } \\ & \hline \end{aligned}$ | 78-93-3 | 0.6 | 1 |  |  | 5 | 1 |  |  | 32 | X | 275000 | 1,2,3,4,5 | 13100 | 15100 | X | 80 | 2.57 |
| METHYL HYDRAZINE | 60-34-4 | 0.001 | P |  |  | 0.00002 | X | 0.001 | X | 1 | X | 1000000 | 2 | 1300 | 14900 | X | 88 | 5.27 |
| $\begin{aligned} & \text { METHYL ISOBUTYL } \\ & \text { KETONE } \end{aligned}$ | 108-10-1 | 0.08 | H |  |  | 3 | I |  |  | 17 | X | 19550 | 1,2,4,5 | 13100 | 15100 | X | 117 | 18.07 |
| METHYL ISOCYANATE | 624-83-9 |  |  |  |  | 0.001 | C |  |  | 10 | X | 100000 | 7 | 13000 | 15000 | X | 40 |  |
| METHYL N-BUTYL KETONE (2-HEXANONE) | 591-78-6 | 0.005 | I |  |  | 0.03 | I |  |  | 54 | X | 17500 | 1 | 13100 | 15100 | X | 128 |  |
| METHYL <br> METHACRYLATE | 80-62-6 | 1.4 | I |  |  | 0.7 | I |  |  | 10 | X | 15600 | 1 | 13100 | 15100 | X | 100 | 4.50 |
| METHYL <br> METHANESULFONATE | 66-27-3 |  |  | 0.099 | C |  |  | 0.000028 | C | 5.2 |  | 200000 | 2 |  |  | X | 203 |  |
| METHYL PARATHION | 298-00-0 | 0.00025 | I |  |  |  |  |  |  | 790 |  | 25 | 4,5,6 |  |  |  | 348 | 3.61 | ${ }^{1}$ Aqueous solubility references are keyed to the numbered list found at $\S 250.304(\mathrm{f})$. Where there are multiple sources cited. The table value is the median of the values in the Toxicity Value Sources

C = California EPA Cancer Potency Factor
$\mathrm{N}=$ EPA NCEA Provisional Values
$\mathrm{P}=$ EPA Provisional Peer-Reviewed Toxicity Value
$\mathrm{S}=$ surrogate
T = TEF
$\mathrm{X}=$ EPA Provisional Peer-Reviewed Toxicity Value Appendix
$\mathrm{H}=$ Health Effects Assessment Summary Table (HEAST)
$\mathrm{M}=$ EPA Drinking Water Regulations and Health Advisories
Table 5-Physical and Toxicological Properties

| Regulated Substance | $C A S$ | $\begin{gathered} R f D o \\ (\mathrm{mg} / \mathrm{kg} \end{gathered}$ |  | $\begin{gathered} \mathrm{CSFo} \\ (\mathrm{mg} / \mathrm{kg}-\mathrm{e} \end{gathered}$ |  | $\begin{gathered} R f C i \\ \left(\mathrm{mg} / \mathrm{m}^{2}\right. \end{gathered}$ |  | $\begin{gathered} I U R \\ \left(\mu g / m^{3}\right)^{-1} \end{gathered}$ |  | Koc | VOC? | $\begin{gathered} \text { Aqueous } \\ \text { Sol } \\ (m g / L) \end{gathered}$ | Aqueous Sol Reference ${ }^{1}$ | TF <br> Vol <br> from <br> Surface <br> Soil | TF <br> Vol from SubSurface Soil | Organic Liquid | Boiling Point (degrees C) | Degradation Coefficient (K) $\left(y r^{-1}\right)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| METHYL STYRENE (MIXED ISOMERS) | 25013-15-4 | 0.006 | H |  |  | 0.04 | H |  |  | 2,200 | X | 89 | 9 | 13100 | 15000 | X | 163 |  |
| METHYL TERT-BUTYL ETHER (MTBE) | 1634-04-4 |  |  | 0.0018 | C | 3 | I | 0.00000026 | C | 12 | X | 45000 | 1,2,4,6 | 13100 | 15100 | X | 55 | 0.69 |
| METHYLCHLOROPHENOX YACETIC ACID (MCPA) | 94-74-6 | 0.0005 | I |  |  |  |  |  |  | 112 |  | 1000 | 5,6,8,9 |  |  |  | 287 | 1.39 |
| METHYLENE BIS(2CHLOROANILINE), 4, $4^{\prime}$ - | 101-14-4 | 0.002 | P | 0.1 | P |  |  | 0.00043 | C | 3,000 |  | 13.9 | 10 |  |  |  | 379 |  |
| METHYLNAPHTHALENE, 2 - | 91-57-6 | 0.004 | I |  |  | 0.003 | S |  |  | 16000 |  | 25 | 1 |  |  |  | 241 |  |
| METHYLSTYRENE, ALPHA | 98-83-9 | 0.07 | H |  |  |  |  |  |  | 660 | X | 560 | 9 | 13100 | 15100 | X | 165 |  |
| METOLACHLOR | 51218-45-2 | 0.15 | I |  |  |  |  |  |  | 182 | X | 530 | 1,5 | 13000 | 15000 | X | 100 |  |
| METRIBUZIN | 21087-64-9 | 0.025 | I |  |  |  |  |  |  | 95 |  | 1200 | 1,5 |  |  |  | 367 |  |
| $\begin{aligned} & \text { MONOCHLOROACETIC } \\ & \text { ACID } \end{aligned}$ | 79-11-8 | 0.002 | H |  |  |  |  |  |  | 0.24 | X | 858000 | 17 | 13000 | 14900 |  | 189 |  |
| NAPHTHALENE | 91-20-3 | 0.02 | I | 0.12 | C | 0.003 | I | 0.000034 | C | 950 |  | 30 | 3 |  |  |  | 218 | 0.98 |
| NAPHTHYLAMINE, 1 - | 134-32-7 |  |  | 1.8 | S |  |  | 0.00051 | S | 3200 |  | 1690 | 2 |  |  |  | 301 | 0.69 |
| NAPHTHYLAMINE, 2- | 91-59-8 |  |  | 1.8 | C |  |  | 0.00051 | C | 87 |  | 6.4 | 6 |  |  |  | 306 | 0.69 |
| NAPROPAMIDE | 15299-99-7 | 0.1 | I |  |  |  |  |  |  | 880 |  | 70 | 2 |  |  |  | 399 |  |
| NITROANILINE, O- | 88-74-4 | 0.01 | X |  |  | 0.00005 | X |  |  | 27 |  | 1200 | 6 |  |  |  | 284 |  |
| NITROANILINE, P- | 100-01-6 | 0.004 | P | 0.02 | P | 0.006 | P |  |  | 15 |  | 800 | 2 |  |  |  | 332 |  |
| NITROBENZENE | 98-95-3 | 0.002 | I |  |  | 0.009 | I | 0.00004 | I | 130 |  | 2000 | 2 |  |  | X | 211 | 0.64 |
| NITROGUANIDINE | 556-88-7 | 0.1 | I |  |  |  |  |  |  | 0.13 |  | 4400 | 9 |  |  |  | 231 |  |
| NITROPHENOL, 2- | 88-75-5 | 0.008 | S |  |  |  |  |  |  | 37 |  | 2100 | 1,2,3,4,5,6 |  |  |  | 215 | 9.01 |
| NITROPHENOL, 4- | 100-02-7 | 0.008 | N |  |  |  |  |  |  | 230 |  | 16000 | 2 |  |  |  | 279 | 25.81 |
| NITROPROPANE, 2 - | 79-46-9 |  |  |  |  | 0.02 | I | 0.0027 | H | 20 | X | 16700 | 1,3,4,5 | 13000 | 14900 | X | 120 | 0.69 |
| NITROSODIETHYLAMINE, N. | 55-18-5 |  |  | 150 | I |  |  | 0.043 | I | 26 | X | 93000 | 10 | 13000 | 14900 | X | 176 | 0.69 |
| NITROSODIMETHYLAMIN E, N. | 62-75-9 | 0.000008 | P | 51 | I | 0.00004 | X | 0.014 | I | 8.5 | X | 1000000 | 2 | 13000 | 14900 | X | 154 | 0.69 |
| NITROSO-DI-N- <br> BUTYLAMINE, N - | 924-16-3 |  |  | 5.4 | 1 |  |  | 0.0016 | I | 450 |  | 1200 | 9, 10, 11 |  |  | X | 235 | 0.69 |
| NITROSODI-N. PROPYLAMINE, N. | 621-64-7 |  |  | 7 | I |  |  | 0.002 | C | 11 |  | 9900 | 6 |  |  | X | 206 | 0.69 |

${ }^{1}$ Aqueous solubility references are keyed to the numbered list found at $\S 250.304(\mathrm{f})$. Where there are multiple sources cited. The table value is the median of the values in the
individual references.
Toxicity Value Sources:
C = California EPA Cancer Potency Factor
$\mathrm{N}=$ EPA NCEA Provisional Values
$\mathrm{P}=$ EPA Provisional Peer-Reviewed Toxicity Value
$\mathrm{S}=$ surrogate
T = TEF
X = EPA Provisional Peer-Reviewed Toxicity Value Appendix
D = ATSDR Minimal Risk Level
H = Health Effects Assessment Summary Table (HEAST)
M = EPA Drinking Water Regulations and Health Advisories
Table 5-Physical and Toxicological Properties

| Regulated Substance | CAS | $\begin{gathered} R f D o \\ (\mathrm{mg} / \mathrm{kg} . \end{gathered}$ |  | $\begin{gathered} \mathrm{CSFo} \\ (\mathrm{mg} / \mathrm{kg}-\mathrm{e} \end{gathered}$ |  | $\begin{gathered} R f C i \\ \left(\mathrm{mg} / \mathrm{m}^{3}\right) \end{gathered}$ |  | $\begin{gathered} I U R \\ \left(\mu g / m^{3}\right)^{-7} \end{gathered}$ |  | Koc | VOC? | $\begin{gathered} \text { Aqueous } \\ \text { Sol } \\ (m g / L) \end{gathered}$ | Aqueous <br> Sol <br> Reference ${ }^{1}$ | TF <br> Vol <br> from <br> Surface <br> Soil | TF <br> Vol from SubSurface Soil | Organic Liquid | Boiling Point (degrees C) | Degradation Coefficient (K) $\left(y r^{-1}\right)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NITROSODIPHENYLAMINE, N- | 86-30-6 |  |  | 0.0049 | I |  |  | 0.0000026 | C | 580 |  | 35 | 1 |  |  |  | 269 | 3.72 |
| NITROSO-NETHYLUREA, N- | 759-73-9 |  |  | 27 | C |  |  | 0.0077 | C | 2 |  | 13000 | 9 |  |  |  | 223 | 1734.48 |
| OCTYL PHTHALATE, DI-N- | 117-84-0 | 0.01 | P |  |  |  |  |  |  | 980000000 |  | 3 | 5 |  |  | X | 234 | 0.69 |
| OXAMYL (VYDATE) | 23135-22-0 | 0.025 | I |  |  |  |  |  |  | 7.1 |  | 280000 | 2 |  |  |  | 334 |  |
| PARAQUAT | 1910-42-5 | 0.0045 | I |  |  |  |  |  |  | 16200 |  | 660000 | 6,8 |  |  |  | 352 |  |
| PARATHION | 56-38-2 | 0.006 | H |  |  |  |  |  |  | 2300 |  | 20 | 2,4,5,6,7 |  |  | X | 375 |  |
| PCB-1016 (AROCLOR) | 12674-11-2 | 0.00007 | I | 2 | S |  |  | 0.00057 | S | 110000 |  | 0.25 | 5 |  |  | X | 325 |  |
| PCB-1221 (AROCLOR) | 11104-28-2 |  |  | 2 | S |  |  | 0.00057 | S | 1900 |  | 0.59 | 5 |  |  | X | 275 |  |
| PCB-1232 (AROCLOR) | 11141-16-5 |  |  | 2 | S |  |  | 0.00057 | S | 1500 |  | 1.45 | 7 |  |  | X | 290 |  |
| PCB-1242 (AROCLOR) | 53469-21-9 |  |  | 2 | S |  |  | 0.00057 | S | 48000 |  | 0.1 | 5 |  |  | X | 325 |  |
| PCB-1248 (AROCLOR) | 12672-29-6 |  |  | 2 | S |  |  | 0.00057 | S | 190000 |  | 0.054 | 7,9,11 |  |  | X | 340 |  |
| PCB-1254 (AROCLOR) | 11097-69-1 | 0.00002 | I | 2 | S |  |  | 0.00057 | S | 810000 |  | 0.057 | 5 |  |  | X | 365 |  |
| PCB-1260 (AROCLOR) | 11096-82-5 |  |  | 2 | S |  |  | 0.00057 | S | 1800000 |  | 0.08 | 5 |  |  |  | 385 |  |
| PEBULATE | 1114-71-2 | 0.05 | H |  |  |  |  |  |  | 630 |  | 92 | 5 |  |  | X | 303 |  |
| PENTACHLOROBENZENE | 608-93-5 | 0.0008 | I |  |  |  |  |  |  | 32000 |  | 0.74 | 1,5,6,7 |  |  |  | 277 | 0.37 |
| PENTACHLOROETHANE | 76-01-7 |  |  | 0.09 | P |  |  |  |  | 1905 | X | 480 | 1,3 | 13100 | 15100 | X | 160 |  |
| PENTACHLORONITRO- <br> BENZENE | 82-68-8 | 0.003 | I | 0.26 | H |  |  |  |  | 7900 |  | 0.44 | 4,6,8 |  |  |  | 328 | 0.36 |
| PENTACHLOROPHENOL | 87-86-5 | 0.005 | I | 0.4 | I |  |  | 0.0000046 | C | 20000 |  | 14 | 1,2,4,5 |  |  |  | 310 | 0.17 |
| PHENACETIN | 62-44-2 |  |  | 0.0022 | C |  |  | 0.00000063 | C | 110 |  | 763 | 2,3,9 |  |  |  | 341 | 4.50 |
| PHENANTHRENE | 85-01-8 | 0.3 | S |  |  |  |  |  |  | 38000 |  | 1.1 | 1,4,5 |  |  |  | 341 | 0.63 |
| PHENOL | 108-95-2 | 0.3 | I |  |  | 0.2 | C |  |  | 22 | X | 84300 | 1,2,3,4 | 13000 | 14900 |  | 182 | 36.14 |
| PHENYL MERCAPTAN | 108-98-5 | 0.001 | P |  |  |  |  |  |  | 562 | X | 653 | 5,9 | 13000 | 15000 | X | 170 |  |
| PHENYLENEDIAMINE, M- | 108-45-2 | 0.006 | I |  |  |  |  |  |  | 12 |  | 351000 | 3 |  |  |  | 286 | 4.50 |
| PHENYLPHENOL, 2 - | 90-43-7 |  |  | 0.0019 | H |  |  |  |  | 5,700 |  | 700 | 5 |  |  |  | 280 | 18.07 |
| PHORATE | 298-02-2 | 0.0002 | H |  |  |  |  |  |  | 810 |  | 50 | 2 |  |  | X | 319 |  |
| PHTHALIC ANHYDRIDE | 85-44-9 | 2 | I |  |  | 0.02 | C |  |  | 79 |  | 6170 | 2 |  |  |  | 285 | 13490.40 |
| PICLORAM | 1918-02-1 | 0.07 | I |  |  |  |  |  |  | 15 |  | 430 | 2 |  |  |  | 373 |  |
| POLYCHLORINATED <br> BIPHENYLS (AROCLORS) <br> (PCBS) <br> PROMET | 1336-36-3 |  |  | 2 | I |  |  | 0.00057 | I |  |  | 0.0505 | 10,13 |  |  |  | 360 |  |
| PROMETON | 1610-18-0 | 0.015 | I |  |  |  |  |  |  | 346 |  | 750 | 2,5 |  |  |  | 347 |  |
| PRONAMIDE | 23950-58-5 | 0.075 | I |  |  |  |  |  |  | 200 |  | 15 | 2 |  |  |  | 321 |  |


Toxicity Value Sources:
$\mathrm{C}=$ California EPA Cancer Potency Factor
$\mathrm{N}=$ EPA NCEA Provisional
$\mathrm{P}=$ EPA Provisional Peer-Reviewed Toxicity Value
$\mathrm{S}=$ surrogate
$\mathrm{T}=\mathrm{TEF}$
$\mathrm{TE}=$ TERA ITER Peer-Reviewed Value
$\mathrm{X}=$ EPA Provisional Peer-Reviewed Toxicity Value Appendix
$\mathrm{H}=$ Health Effects Assessment Su
H = Health Effects Assessment Summary Table (HEAST)
$\mathrm{M}=$ EPA Drinking Water Regulations and Health Advisories

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Table 5-Physical and Toxicological Properties
A. Organic Regulated Substances

| Regulated Substance | $C A S$ | $\begin{gathered} R f D o \\ (\mathrm{mg} / \mathrm{kg}-\mathrm{c} \end{gathered}$ |  | $\begin{gathered} C S F o \\ (m g / k g-d \end{gathered}$ |  | $\begin{gathered} R f C i \\ \left(\mathrm{mg} / \mathrm{m}^{3}\right) \end{gathered}$ |  | $\begin{gathered} I U R \\ \left(\mu \mathrm{~g} / \mathrm{m}^{3}\right)^{-1} \end{gathered}$ |  | Koc | VOC? | $\begin{gathered} \text { Aqueous } \\ S o l \\ (m g / L) \end{gathered}$ | Aqueous Sol Reference ${ }^{1}$ | TF <br> Vol <br> from <br> Surface <br> Soil | TF <br> Vol from SubSurface Soil | Organic <br> Liquid | Boiling Point (degrees C) | Degradation Coefficient (K) $\left(y r^{-1}\right)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PROPANIL | 709-98-8 | 0.005 | I |  |  |  |  |  |  | 160 |  | 225 | 2 |  |  |  | 355 |  |
| $\begin{aligned} & \begin{array}{l} \text { PROPANOL, } 2- \\ \text { (ISOPROPYL ALCOHOL) } \end{array} \\ & \hline \end{aligned}$ | 67-63-0 | 2 | P |  |  | 0.2 | P |  |  | 25 | X | 1000000 | 2 | 13000 | 14900 | X | 82 |  |
| PROPAZINE | 139-40-2 | 0.02 | I |  |  |  |  |  |  | 155 |  | 8.6 | 1,5 |  |  | X | 318 |  |
| PROPHAM | 122-42-9 | 0.02 | I |  |  |  |  |  |  | 51 |  | 250 | 5 |  |  |  | 257 |  |
| PROPYLBENZENE, N- | 103-65-1 | 0.1 | X |  |  | 1 | X |  |  | 720 | X | 52 | 6 | 13100 | 15100 | X | 159 |  |
| PROPYLENE OXIDE | 75-56-9 |  |  | 0.24 | I | 0.03 | I | 0.0000037 | I | 25 | X | 405000 | 1 | 13100 | 15000 | X | 34 |  |
| PYRENE | 129-00-0 | 0.03 | I |  |  |  |  |  |  | 68000 |  | 0.132 | 1 |  |  |  | 393 | 0.07 |
| PYRIDINE | 110-86-1 | 0.001 | I |  |  |  |  |  |  | 0.0066 | X | 1000000 | 2 | 13100 | 15000 | X | 115 | 18.07 |
| QUINOLINE | 91-22-5 |  |  | 3 | I |  |  |  |  | 1,300 |  | 60000 | 1,3,5 |  |  | X | 238 | 12.65 |
| QUIZALOFOP (ASSURE) | 76578-14-8 | 0.009 | I |  |  |  |  |  |  | 580 |  | 0.3 | 2 |  |  |  | 220 |  |
| RDX | 121-82-4 | 0.003 | I | 0.11 | I |  |  |  |  | 70 |  | 59.9 | 1,9 |  |  |  | 353 |  |
| RESORCINOL | 108-46-3 | 2 | TE |  |  |  |  |  |  | 2 |  | 717000 |  |  |  |  | 280 |  |
| RONNEL | 299-84-3 | 0.05 | H |  |  |  |  |  |  | 580 |  | 40 | 2 |  |  |  | 349 |  |
| SIMAZINE | 122-34-9 | 0.005 | I | 0.12 | H |  |  |  |  | 110 |  | 5 | 5 |  |  |  | 225 |  |
| STRYCHNINE | 57-24-9 | 0.0003 | I |  |  |  |  |  |  | 280 |  | 143 | 5 |  |  |  | 270 | 4.50 |
| STYRENE | 100-42-5 | 0.2 | I |  |  | 1 | I |  |  | 910 | X | 300 | 5 | 13100 | 15100 | X | 145 | 1.20 |
| TEBUTHIURON | 34014-18-1 | 0.07 | I |  |  |  |  |  |  | 620 |  | 2500 | 2 |  |  |  | 394 |  |
| TERBACIL | 5902-51-2 | 0.013 | I |  |  |  |  |  |  | 53 |  | 710 | 2 |  |  |  | 396 |  |
| TERBUFOS | 13071-79-9 | 0.000025 | H |  |  |  |  |  |  | 510 |  | 5 | 6 |  |  | X | 332 |  |
| TETRACHLOROBENZENE, $1,2,4,5-$ | 95-94-3 | 0.0003 | I |  |  |  |  |  |  | 1,800 |  | 0.583 | 1,5,6,7 |  |  |  | 245 | 0.69 |
| TETRACHLORODIBENZO- <br> P-DIOXIN, $2,3,7,8$ - (TCDD) | 1746-01-6 | $\begin{array}{\|r\|} \hline 0.00000 \\ 00007 \\ \hline \end{array}$ | D | 130000 | C | 0.00000004 | C | 38 | C | 4300000 |  | 0.0000193 | 6 |  |  |  | 412 | 0.21 |
| TETRACHLOROETHANE, $1,1,1,2$ - | 630-20-6 | 0.03 | I | 0.026 | I |  |  | 0.0000074 | I | 980 | X | 1100 | 1 | 13000 | 14600 | X | 131 | 3.79 |
| $\begin{aligned} & \text { TETRACHLOROETHANE, } \\ & 1,1,2,2 . \end{aligned}$ | 79-34-5 | 0.02 | I | 0.2 | I |  |  | 0.000058 | I | 79 | X | 2860 | 2 | 13100 | 15100 | X | 147 | 0.56 |
| $\begin{aligned} & \text { TETRACHLOROETHYLENE } \\ & \text { (PCE) } \\ & \hline \end{aligned}$ | 127-18-4 | 0.006 | I | 0.0021 | I | 0.04 | I | 0.00000026 | I | 300 | X | 162 | 1,2,3,4,5 | 13100 | 15000 | X | 121 | 0.03 |
| $\begin{aligned} & \text { TETRACHLOROPHENOL, } \\ & 2,3,4,6 \text { - } \end{aligned}$ | 58-90-2 | 0.03 | I |  |  |  |  |  |  | 6200 |  | 183 | 6 |  |  |  | 288 | 0.69 |
| TETRAETHYL LEAD | 78-00-2 | 0.0000001 | I |  |  |  |  |  |  | 4900 |  | 0.8 | 5 |  |  | X | 202 | 4.50 |
| $\begin{aligned} & \text { TETRAETHYLDITHIOP } \\ & \text { YROPHOSPHATE } \\ & \hline \end{aligned}$ | 3689-24-5 | 0.0005 | I |  |  |  |  |  |  | 550 |  | 25 | 2 |  |  | X | 349 |  |

${ }^{1}$ Aqueous solubility references are keyed to the numbered list found at $\S 250.304(\mathrm{f})$. Where there are multiple sources cited. The table value is the median of the values in the individual references.
Toxicity Value Sources:
C = California EPA Cancer Potency Factor
$\mathrm{N}=$ EPA NCEA Provisional Values
$\mathrm{P}=$ EPA Provisional Peer-Reviewed Toxicity Value
$\mathrm{S}=$ surrogate
$\mathrm{T}=\mathrm{TEF}$
TE = TERA ITER Peer-Reviewed Value
X = EPA Provisional Peer-Reviewed Toxicity Value Appendix
D = ATSDR Minimal Risk Level
H = Health Effects Assessment Summary Table (HEAST)
$\mathrm{I}=$ Integrated Risk information System (IRIS)
M = EPA Drinking Water Regulations and Health Advisories
Table 5-Physical and Toxicological Properties

| Regulated Substance | $C A S$ | $\begin{gathered} R f D o \\ (\mathrm{mg} / \mathrm{kg} . \end{gathered}$ |  | $\begin{array}{r} \mathrm{CSFo} \\ (\mathrm{mg} / \mathrm{kg}-\mathrm{c} \end{array}$ |  | $\begin{gathered} R f C i \\ (\mathrm{mg} / \mathrm{m} \end{gathered}$ |  | $\begin{gathered} I U R \\ \left(\mu g / m^{3}\right)^{-1} \end{gathered}$ |  | Koc | VOC? | $\begin{gathered} \text { Aqueous } \\ \text { Sol } \\ (m g / L) \end{gathered}$ | Aqueous Sol Reference ${ }^{1}$ | TF <br> Vol <br> from <br> Surface <br> Soil | TF <br> Vol from SubSurface Soil | Organic Liquid | Boiling Point (degrees C) | Degradation Coefficient (K) $\left(y r^{-1}\right)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TETRAHYDROFURAN | 109-99-9 | 0.9 | I | 0.0076 | N | 2 | I | 0.00000194 | N | 43 | X | 300000 | 1,6,7 | 13100 | 15100 | X | 66 |  |
| THIOFANOX | 39196-18-4 | 0.0003 | H |  |  |  |  |  |  | 0.022 |  | 5200 | 9 |  |  |  | 280 |  |
| THIRAM | 137-26-8 | 0.005 | I |  |  |  |  |  |  | 1000 |  | 30 | 4 |  |  |  | 339 |  |
| TOLUENE | 108-88-3 | 0.08 | I |  |  | 5 | I |  |  | 130 | X | 532.4 | 1,2,3,4 | 13100 | 15000 | X | 111 | 9.01 |
| TOLUIDINE, M- | 108-44-1 |  |  | 0.016 | S |  |  | 0.000051 | S | 140 |  | 15030 | 6 |  |  | X | 203 |  |
| TOLUIDINE, O- | 95-53-4 |  |  | 0.016 | P |  |  | 0.000051 | C | 410 |  | 15000 | 1,3,5 |  |  | X | 200 | 18.07 |
| TOLUIDINE, P - | 106-49-0 | 0.004 | X | 0.03 | P |  |  |  |  | 320 |  | 7410 | 1,2,3 |  |  |  | 200 |  |
| TOXAPHENE | 8001-35-2 | 0.0004 | M | 1.1 | I |  |  | 0.00032 | I | 1500 |  | 3 | 2,4,5 |  |  |  | 432 |  |
| TRIALLATE | 2303-17-5 | 0.013 | I |  |  |  |  |  |  | 2,000 |  | 4 | 5 |  |  | X | 343 |  |
| $\begin{aligned} & \text { TRIBROMOMETHANE } \\ & \text { (BROMOFORM) } \end{aligned}$ | 75-25-2 | 0.02 | I | 0.0079 | I |  |  | 0.0000011 | I | 130 | X | 3050 | 1,2,3,4 | 13100 | 15100 | X | 149 | 0.69 |
| TRICHLORO-1,2,2- <br> TRIFLUOROETHANE, $1,1,2$ - | 76-13-1 | 30 | I |  |  | 30 | H |  |  | 1,200 | X | 170 | 1 | 13100 | 15000 | X | 48 | 0.35 |
| TRICHLOROACETIC ACID | 76-03-9 | 0.02 | I | 0.07 | I |  |  |  |  | 20 | X | 1200000 | 2,3,5,9 |  |  |  | 196 |  |
| $\begin{aligned} & \text { TRICHLOROBENZENE, } \\ & 1,2,4 \text { - } \end{aligned}$ | 120-82-1 | 0.01 | I | 0.029 | P | 0.002 | P |  |  | 1500 |  | 44.4 | 1,4,6,7 |  |  | X | 213 | 0.69 |
| $\begin{aligned} & \text { TRICHLOROBENZENE, } \\ & 1,3,5 \text { - } \end{aligned}$ | 108-70-3 | 0.006 | M |  |  | 0.002 | S |  |  | 3100 |  | 5.8 | 5 |  |  |  | 208 |  |
| TRICHLOROETHANE, $1,1,1$ - | 71-55-6 | 2 | I |  |  | 5 | I |  |  | 100 | X | 1495 | 1,4,5,6 | 13100 | 15000 | X | 74 | 0.05 |
| TRICHLOROETHANE, $1,1,2$ - | 79-00-5 | 0.004 | I | 0.057 | I | 0.0002 | X | 0.000016 | I | 76 | X | 4420 | 1 | 13100 | 15100 | X | 114 | 0.03 |
| TRICHLOROETHYLENE (TCE) | 79-01-6 | 0.0005 | I | 0.05 | I | 0.002 | I | 0.000004 | I | 93 | X | 1100 | 1 | 13100 | 15000 | X | 87 | 0.02 |
| TRICHLOROPHENOL, $2,4,5$ - | 95-95-4 | 0.1 | I |  |  |  |  |  |  | 2400 |  | 1000 | 1,2,4 |  |  |  | 246 | 0.14 |
| TRICHLOROPHENOL, $2,4,6$ - | 88-06-2 | 0.001 | P | 0.011 | I |  |  | 0.0000031 | I | 1100 |  | 850 | 1,2,4,5 |  |  |  | 246 | 0.14 |
| TRICHLOROPHENOXY- ACETIC ACID, $2,4,5-(2,4,5-\mathrm{T})$ | 93-76-5 | 0.01 | I |  |  |  |  |  |  | 43 |  | 278 | 2,4,5 |  |  |  | 279 | 1.39 |
| TRICHLOROPHENOXY- PROPIONIC ACID, $2,4,5-$ $(2,4,5-\mathrm{TP})$ (SILVEX) | 93-72-1 | 0.008 | I |  |  |  |  |  |  | 1700 |  | 140 | 2 |  |  |  | 353 |  |
| TRICHLOROPROPANE, <br> 1,1,2- | 598-77-6 | 0.005 | I |  |  |  |  |  |  | 24 | X | 2700 | 14 | 13100 | 15000 | X | 117 |  |
| $\begin{array}{\|l\|} \hline \text { TRICHLOROPROPANE, } \\ 1,2,3- \\ \hline \end{array}$ | 96-18-4 | 0.004 | I | 30 | I | 0.0003 | I |  |  | 280 | X | 1896 | 1,4,6 | 13100 | 15100 | X | 157 | 0.35 |
| $\begin{aligned} & \text { TRICHLOROPROPENE, } \\ & 1,2,3- \\ & \hline \end{aligned}$ | 96-19-5 | 0.003 | X |  |  | 0.0003 | P |  |  | 190 | X | 2700 | 14 | 13100 | 15000 | X | 142 |  |
| TRIETHYLAMINE | 121-44-8 |  |  |  |  | 0.007 | I |  |  | 51 | X | 55000 | 1,4 | 13100 | 15100 | X | 90 |  |

Toxicity Value Source
C = California EPA Cancer Potency Factor
$\mathrm{N}=$ EPA NCEA Provisional Values
$\mathrm{P}=$ EPA Provisional Peer-Reviewed Toxicity Value
$\mathrm{S}=$ surrogate
T = TEF
X = EPA Provisional Peer-Reviewed Toxicity Value Appendix
$\mathrm{D}=$ ATSDR Mealth Effects Assessment Summary Table (HEAST)
$\mathrm{M}=$ EPA Drinking Water Regulations and Health Advisories
Table 5－Physical and Toxicological Properties A．Organic Regulated Substances

|  |  |  | \|o |  |  |  | $\underset{\sim}{\circ}$ |  |  |  | ${ }^{2}$ | ${ }^{\circ} \mathrm{O}$ | $\stackrel{\circ}{\circ}$ | $0^{\circ}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\left\lvert\, \begin{aligned} & \infty \\ & \underset{\sim}{\infty} \\ & \hline \end{aligned}\right.$ | $\left\|\begin{array}{l} \infty \\ \infty \\ \infty \end{array}\right\|$ | O |  | $\stackrel{\bullet}{\bullet}$ |  | $\underset{\sim}{2}$ | 안 |  | $\stackrel{\square}{2}$ | $\stackrel{\square}{\square}$ | $\stackrel{\square}{7}$ | 遍 | O | 戒 |
|  | $\times$ |  | $\bowtie$ |  | $x$ |  | $\rtimes$ |  |  | $x$ | $\bowtie$ | $x$ |  | $\star$ |  |
|  |  |  | $\begin{aligned} & 0 \\ & 8 \\ & 0 \\ & 0 \\ & \hline \end{aligned}$ |  | $\left\lvert\, \begin{aligned} & 8 \\ & 0 \\ & 20 \\ & \hline 1 \end{aligned}\right.$ |  | $\begin{array}{\|l\|l} \hline \stackrel{\circ}{\circ} \\ \hline 0 \\ \hline 1 \end{array}$ |  |  | $\left.\begin{array}{\|c\|} \hline 0 \\ 0 \\ 10 \\ 10 \end{array} \right\rvert\,$ | $0$ |  |  | $\begin{array}{\|l\|} \hline 8 \\ 0 \\ 10 \\ \hline \end{array}$ |  |
|  |  |  | $\begin{aligned} & \underset{\sim}{0} \\ & \underset{\sim}{0} \\ & \hline \end{aligned}$ |  | $\stackrel{\underset{\sim}{2}}{\stackrel{\rightharpoonup}{2}}$ |  | $\begin{aligned} & \text { O} \\ & \hline \stackrel{y}{2} \\ & \hline \end{aligned}$ |  |  | $\left\|\begin{array}{\|c} \mathbf{o} \\ \mathbf{0} \\ \mathbf{N} \end{array}\right\|$ | $8$ |  |  | $\left\|\begin{array}{\|c} \stackrel{9}{9} \\ \hline-9 \end{array}\right\|$ |  |
|  | ～ | $\begin{gathered} 1 \\ 1 \\ 10 \\ 10 \\ i \end{gathered}$ | － |  | $\checkmark$ |  | $\begin{gathered} 10 \\ 0 \\ 0 \\ 0 \end{gathered}$ | N |  | $-$ | N | $\checkmark$ | † | $\stackrel{ }{2}$ | － |
|  | $\left.\begin{array}{\|l\|} \hline 0 \\ 8 \\ 0 \\ 0 \\ \hline-1 \end{array} \right\rvert\,$ | ＋ | $\because$ |  | $\begin{array}{\|l\|} \hline \dot{\infty} \\ \dot{\alpha} \end{array}$ |  | $\underset{\sim}{\infty}$ | $\underset{-1}{0}$ |  |  | $7$ | $\begin{array}{\|c\|} \hline \stackrel{\rightharpoonup}{\mathrm{o}} \\ \stackrel{\rightharpoonup}{\mathrm{~N}} \end{array}$ | 득 | $=10$ | 0 |
| O |  |  | $\rtimes$ |  | $x$ |  | $\star$ |  |  | $x$ | $\bowtie$ | $x$ |  | $x$ |  |
| \％ | $\bigcirc$ | $0$ | $\begin{aligned} & \text { con } \\ & \text { N } \\ & \text { N } \end{aligned}$ |  | O |  | $\underset{\underset{7}{7}}{\square}$ | $\checkmark$ |  | $\begin{array}{\|l\|} \hline \infty \\ \dot{a} \end{array}$ | $\stackrel{10}{\square}$ | － | $\bigcirc$ | \％ | $\bigcirc$ |
|  |  |  |  |  |  |  |  |  |  |  | L | － |  |  |  |
| $\underset{\sim}{\stackrel{2}{2}}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | $\sim$ |  |  |  |  |  |  | － | － | $\square$ |  | － |  |
|  |  |  |  |  |  |  |  |  |  | $\|\stackrel{N}{0}\|$ | O\％ | $\stackrel{-}{\circ}$ |  | $\stackrel{\square}{0}$ | － |
|  |  | － |  |  |  |  | 0 | $\checkmark$ |  |  |  | － |  |  |  |
| $\begin{aligned} & \text { Bo } \\ & 0 \\ & 0 \\ & 0 \\ & \text { En } \end{aligned}$ |  | $\begin{array}{\|l\|} \hline \end{array}$ |  |  |  |  | $\stackrel{\rightharpoonup}{\stackrel{\rightharpoonup}{0}}$ | $\stackrel{O}{0}$ |  |  |  | $\stackrel{10}{\sim}$ | $\bigcirc$ |  |  |
|  | $\sim$ | $\checkmark$ |  |  | $x$ |  | A | $\checkmark$ |  | 工 |  | $\square$ | － | － | － |
|  | $\sim$ |  |  |  | O- |  | 敛 |  |  | $\checkmark$ |  | O\％ |  |  | $\bigcirc$ |
| S | $\left\|\begin{array}{c} 0 \\ \stackrel{1}{N} \\ \underset{\sim}{\sim} \\ \underset{\sim}{7} \end{array}\right\|$ |  |  |  |  |  |  | $\begin{aligned} & \text { rón } \\ & \dot{o} \\ & \dot{\infty} \\ & \underset{\sim}{c} \end{aligned}$ |  |  |  |  |  |  | ¢ |
|  | TRIETHYLENE GLYCOL |  |  |  |  | ம |  |  | $\stackrel{+}{6}$ |  | 疾 |  |  |  |  |

${ }^{1}$ Aqueous solubility references are keyed to the numbered list found at $\S 250.304(\mathrm{f})$ ．Where there are multiple sources cited．The table value is the median of the values in the individual references
$\mathrm{N}=$ EPA NCEA Provisional Values
$\mathrm{P}=$ EPA Provisional Peer－Reviewed Toxicity Value
$\mathrm{S}=$ surrogate
X＝EPA Provisional Peer－Reviewed Toxicity Value Appendix
C＝California EPA Cancer Potency Factor
D＝ATSDR Mffimal Risk Level Summary Table（HEAST）
I＝Integrated Risk information System Drinking Water Regulations and Health Advisories
T＝TEF
TE $=$ TERA ITER Peer－Reviewed Value
oxicity Value Sources：$\quad$ Ther
Mes

Table 5-Physical and Toxicological Properties
B. Inorganic Regulated Substances

| Regulated Substance | CAS | $\begin{gathered} R f D o \\ (m g / k g-d) \end{gathered}$ |  | $\begin{gathered} \text { CSFo } \\ (\mathrm{mg} / \mathrm{kg}-\mathrm{d})^{-1} \end{gathered}$ |  | $\begin{gathered} R f C i \\ \left(m g / m^{3}\right) \end{gathered}$ |  | $\begin{gathered} I U R \\ \left(u g / m^{3}\right)^{-1} \end{gathered}$ |  | Kd |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ALUMINUM | 7429-90-5 | 1 | P |  |  | 0.005 | P |  |  | 9.9 |
| ANTIMONY | 7440-36-0 | 0.0004 | I |  |  |  |  |  |  | 45 |
| ARSENIC | 7440-38-2 | 0.0003 | I | 1.5 | I | 0.000015 | C | 0.0043 | I | 29 |
| BARIUM AND COMPOUNDS | 7440-39-3 | 0.2 | I |  |  | 0.0005 | H |  |  | 41 |
| BERYLLIUM | 7440-41-7 | 0.002 | I | 8.4 | C | 0.00002 | I | 0.0024 | I | 790 |
| BORON AND COMPOUNDS | 7440-42-8 | 0.2 | I |  |  | 0.02 | H |  |  | 3 |
| CADMIUM | 7440-43-9 | 0.0005 | I | 15 | C | 0.00001 | D | 0.0018 | I | 75 |
| CHROMIUM III | 16065-83-1 | 1.5 | I |  |  |  |  |  |  | 1,800,000 |
| CHROMIUM VI | 18540-29-9 | 0.003 | I | 0.42 | C | 0.000008 | I | 0.084 | I | 19 |
| COBALT | 7440-48-4 | 0.0003 | P |  |  | 0.000006 | P | 0.009 | P | 45 |
| COPPER | 7440-50-8 | 0.037 | H |  |  |  |  |  |  | 430 |
| CYANIDE, FREE | 57-12-5 | 0.0006 | I |  |  | 0.0008 | I |  |  | 9.9 |
| FLUORIDE | 16984-48-8 | 0.04 | C |  |  | 0.013 | C |  |  |  |
| IRON | 7439-89-6 | 0.7 | P |  |  |  |  |  |  | 25 |
| LEAD | 7439-92-1 |  |  | 0.0085 | C |  |  | 0.000012 | C | 900 |
| LITHIUM | 7439-93-2 | 0.002 | P |  |  |  |  |  |  | 300 |
| MANGANESE | 7439-96-5 | 0.047 | I |  |  | 0.00005 | I |  |  | 65 |
| MERCURY | 7439-97-6 | 0.00016 | C |  |  | 0.0003 | I |  |  | 52 |
| MOLYBDENUM | 7439-98-7 | 0.005 | I |  |  |  |  |  |  | 20 |
| NICKEL | 7440-02-0 | 0.02 | I |  |  | 0.00009 | D | 0.00024 | Is | 65 |
| NITRATE NITROGEN | 14797-55-8 | 1.6 | I |  |  |  |  |  |  |  |
| NITRITE NITROGEN | 14797-65-0 | 0.1 | I |  |  |  |  |  |  |  |
| PERCHLORATE | 7790-98-9 | 0.0007 | I |  |  |  |  |  |  | 0 |
| SELENIUM | 7782-49-2 | 0.005 | I |  |  | 0.02 | C |  |  | 5 |
| SILVER | 7440-22-4 | 0.005 | I |  |  |  |  |  |  | 8.3 |
| STRONTIUM | 7440-24-6 | 0.06 | I |  |  |  |  |  |  |  |
| THALLIUM | 7440-28-0 | 0.00001 | X |  |  |  |  |  |  | 71 |
| TIN | 7440-31-5 | 0.6 | H |  |  |  |  |  |  | 250 |
| VANADIUM | 7440-62-2 | 0.00007 | P |  |  | 0.0001 | D |  |  | 1,000 |
| ZINC | 7440-66-6 | 0.3 | I |  |  |  |  |  |  | 62 |

[^25]Table 6-Threshold of Regulation Compounds

| $\begin{aligned} & \text { REGULATED } \\ & \text { SUBSTANCE } \end{aligned}$ | CASRN | ALL AQUIFERGROUNDWATERMSC$(\mu \mathrm{g} / L)$ | Residential Soil MSC ( $\mathrm{mg} / \mathrm{kg} \mathrm{)}$ 0-15 feet | Non-Residential Soil MSCs |  | Soil to Groundwater ${ }^{1}$$(m g / k g)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{gathered} \text { Surface Soil } \\ (\mathrm{mg} / \mathrm{kg}) \\ 0-2 \text { feet } \\ \hline \end{gathered}$ | Subsurface Soil ( $\mathrm{mg} / \mathrm{kg}$ ) $2-15 \text { feet }$ |  |
| ACETIC ACID | 64-19-7 | 5 | 100 | 100 | 100 | 0.5 |
| ACETIC ANHYDRIDE | 108-24-7 | 5 | 100 | 100 | 100 | 0.5 |
| AMYL ACETATE, N - | 628-63-7 | 5 | 100 | 100 | 100 | 0.5 |
| AMYL ACETATE, SEC- | 626-38-0 | 5 | 100 | 100 | 100 | 0.5 |
| ANTU (ALPHA-NAPHTHYLTHIOUREA) | 86-88-4 | 5 | 100 | 100 | 100 | 0.5 |
| BHC, DELTA | 319-86-8 | 5 | 100 | 100 | 100 | 0.5 |
| BROMOPHENYL PHENYL ETHER, 4- | 101-55-3 | 5 | 100 | 100 | 100 | 0.5 |
| BUTYL ACETATE, N - | 123-86-4 | 5 | 100 | 100 | 100 | 0.5 |
| BUTYL ACETATE, SEC- | 105-46-4 | 5 | 100 | 100 | 100 | 0.5 |
| BUTYL ACETATE, TERT- | 540-88-5 | 5 | 100 | 100 | 100 | 0.5 |
| BUTYLAMINE, N - | 109-73-9 | 5 | 100 | 100 | 100 | 0.5 |
| CALCIUM CHROMATE | 13765-19-0 | 5 | 100 | 100 | 100 | 0.5 |
| CALCIUM CYANAMIDE | 156-62-7 | 5 | 100 | 100 | 100 | 0.5 |
| CARBONYL FLUORIDE | 353-50-4 | 5 | 100 | 100 | 100 | 0.5 |
| CATECHOL | 120-80-9 | 5 | 100 | 100 | 100 | 0.5 |
| CHLOROETHYL VINYL ETHER, 2- | 110-75-8 | 5 | 100 | 100 | 100 | 0.5 |
| CHLOROPHENYL PHENYL ETHER, 4- | 7005-72-3 | 5 | 100 | 100 | 100 | 0.5 |
| DECABORANE | 17702-41-9 | 5 | 100 | 100 | 100 | 0.5 |
| DIETHYLAMINE | 109-89-7 | 5 | 100 | 100 | 100 | 0.5 |
| DIGLYCIDYL ETHER (DGE) | 2238-07-5 | 5 | 100 | 100 | 100 | 0.5 |
| DIMETHYL PHTHALATE | 131-11-3 | 5 | 100 | 100 | 100 | 0.5 |
| DIMETHYL SULFATE | 77-78-1 | 5 | 100 | 100 | 100 | 0.5 |
| DIMETHYLPHENETHYLAMINE, ALPHA, ALPHA- | 122-09-8 | 5 | 100 | 100 | 100 | 0.5 |
| DIOXATHION | 78-34-2 | 5 | 100 | 100 | 100 | 0.5 |
| ETHYL METHANESULFONATE | 62-50-0 | 5 | 100 | 100 | 100 | 0.5 |
| ETHYLAMINE | 75-04-7 | 5 | 100 | 100 | 100 | 0.5 |
| ETHYLENE CHLORHYDRIN | 107-07-3 | 5 | 100 | 100 | 100 | 0.5 |
| FAMPHUR | 52-85-7 | 5 | 100 | 100 | 100 | 0.5 |
| FENSULFOTHION | 115-90-2 | 5 | 100 | 100 | 100 | 0.5 |
| HEXACHLOROPROPENE | 1888-71-7 | 5 | 100 | 100 | 100 | 0.5 |
| IODOMETHANE | 74-88-4 | 5 | 100 | 100 | 100 | 0.5 |
| ISOAMYL ACETATE | 123-92-2 | 5 | 100 | 100 | 100 | 0.5 |
| ISOBUTYL ACETATE | 110-19-0 | 5 | 100 | 100 | 100 | 0.5 |
| ISODRIN | 465-73-6 | 5 | 100 | 100 | 100 | 0.5 |
| ISOPHORONE DIISOCYANATE | 4098-71-9 | 5 | 100 | 100 | 100 | 0.5 |
| ISOSAFROLE | 120-58-1 | 5 | 100 | 100 | 100 | 0.5 |
| LITHIUM HYDRIDE | 7580-67-8 | 5 | 100 | 100 | 100 | 0.5 |
| MANGANESE CYCLOPENTADIENYL TRICARBONYL | 12079-65-1 | 5 | 100 | 100 | 100 | 0.5 |
| METHYL ISOAMYL KETONE | 110-12-3 | 5 | 100 | 100 | 100 | 0.5 |
| METHYL MERCAPTAN | 74-93-1 | 5 | 100 | 100 | 100 | 0.5 |
| METHYLAMINE | 74-89-5 | 5 | 100 | 100 | 100 | 0.5 |

Table 6-Threshold of Regulation Compounds

| REGULATED <br> SUBSTANCE | CASRN | ALL AQUIFERGROUNDWATERMSC$(\mu \mathrm{g} / \mathrm{L})$ | Residential Soil MSC ( $\mathrm{mg} / \mathrm{kg}$ ) 0-15 feet | Non-Residential Soil MSCs |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{gathered} \hline \text { Surface Soil } \\ (\mathrm{mg} / \mathrm{kg}) \\ 0-2 \text { feet } \\ \hline \end{gathered}$ | Subsurface Soil (mg/kg) 2-15 feet |  |
| MEVINPHOS | 7786-34-7 | 5 | 100 | 100 | 100 | 0.5 |
| MONOCROTOPHOS | 6923-22-4 | 5 | 100 | 100 | 100 | 0.5 |
| NAPHTHOQUINONE, 1,4- | 130-15-4 | 5 | 100 | 100 | 100 | 0.5 |
| NITRIC ACID | 7697-37-2 | 5 | 100 | 100 | 100 | 0.5 |
| NITROQUINOLINE-1-OXIDE, 4- | 56-57-5 | 5 | 100 | 100 | 100 | 0.5 |
| OSMIUM TETROXIDE | 20816-12-0 | 5 | 100 | 100 | 100 | 0.5 |
| PENTABORANE | 19624-22-7 | 5 | 100 | 100 | 100 | 0.5 |
| PERCHLOROMETHYL MERCAPTAN | 594-42-3 | 5 | 100 | 100 | 100 | 0.5 |
| PICOLINE, 2- | 109-06-8 | 5 | 100 | 100 | 100 | 0.5 |
| PROPANOL, 1 - | 71-23-8 | 5 | 100 | 100 | 100 | 0.5 |
| PROPIONIC ACID | 79-09-4 | 5 | 100 | 100 | 100 | 0.5 |
| PROPIONITRILE (ETHYL CYANIDE) | 107-12-0 | 5 | 100 | 100 | 100 | 0.5 |
| PROPYLENE IMINE | 75-55-8 | 5 | 100 | 100 | 100 | 0.5 |
| PYRETHRUM | 8003-34-7 | 5 | 100 | 100 | 100 | 0.5 |
| QUINONE (p-BENZOQUINONE) | 106-51-4 | 5 | 100 | 100 | 100 | 0.5 |
| SELENIUM HEXAFLUORIDE | 7783-79-1 | 5 | 100 | 100 | 100 | 0.5 |
| SODIUM BISULFITE | 7631-90-5 | 5 | 100 | 100 | 100 | 0.5 |
| SULFIDE | 18496-25-8 | 5 | 100 | 100 | 100 | 0.5 |
| SULFUR MONOCHLORIDE | 10025-67-9 | 5 | 100 | 100 | 100 | 0.5 |
| SULFURIC ACID | 7664-93-9 | 5 | 100 | 100 | 100 | 0.5 |
| TELLURIUM | 13494-80-9 | 5 | 100 | 100 | 100 | 0.5 |
| TELLURIUM HEXAFLUORIDE | 7783-80-4 | 5 | 100 | 100 | 100 | 0.5 |
| TEPP (TETRAETHYL PYROPHOSPHATE) | 107-49-3 | 5 | 100 | 100 | 100 | 0.5 |
| TETRANITROMETHANE | 509-14-8 | 5 | 100 | 100 | 100 | 0.5 |
| THIONAZIN | 297-97-2 | 5 | 100 | 100 | 100 | 0.5 |
| TRIETHYLPHOSPHOROTHIOATE, O,O,O- | 126-68-1 | 5 | 100 | 100 | 100 | 0.5 |

${ }^{1}$ The value in the table is 100 time the groundwater MSC.
The option to use the SPLP is also available to calculate the soil to groundwater numeric value (See § 250.310)
[Pa.B. Doc. No. 16-1508. Filed for public inspection August 26, 2016, 9:00 a.m.]


[^0]:    Signature of Counsel for Petitioner

[^1]:    Signature of Counsel for Petitioner

[^2]:    * The term "Agent" shall include any person designated as an "attorney-in-fact" or acting in a similar capacity by the Principal's delegation.

[^3]:    NOTE: The Memorandum of real estate outside the Commonwealth of Pennsylvania may, at the election of the personal representative, include the value of each

[^4]:    Form RW-10 eff. 09.01.16

[^5]:    ${ }^{1}$ The Committee's Final Report should not be confused with the official Committee Comments to the rules. Also note that the Supreme Court does not adopt the Committee's Comments or the contents of the Committee's explanatory Final Reports.

[^6]:    ${ }^{1} 45$ Pa.C.S. §§ 1101 et seq., 71 P.S. §§ $732-101$ et seq., and 71 P.S. §§ 745.1 et seq., respectively.

[^7]:    Southeast Region: Regional Solid Waste Manager, 2 East Main Street, Norristown, PA 19401.

    General Permit No. WMGR081SE001. Melmark, Inc., 2600 Wayland Road, Berwyn, PA 19312. This application is for registration under General Permit No. (WMGR081) for the processing prior to reuse or recycling of uncontaminated and source-separated electronic devices and components by sorting, disassembling, or mechanical processing (by sizing, shaping, separating and volume reduction only) at the Melmark, Inc. facility

[^8]:    ${ }^{1}$ In our Final Order at Docket No. M-2015-2490383, Order entered July 5, 2016, Smartenergy Holdings LLC (Smartenergy) was inadvertently listed as compliant with providing its required security. To date, Smartenergy has not provided an approved security in the amount directed by the Commission.

[^9]:    $\begin{array}{lll}\text { All concentrations in } \mu \mathrm{g} / \mathrm{L} & \mathrm{M}=\text { Maximum Contaminant Level } & \mathrm{N}=\text { Inhalation } \\ \mathrm{R}=\text { Residential } & \mathrm{H}=\text { Lifetime health advisory level } & \mathrm{S}=\text { Aqueous solubility cap }\end{array}$ $\mathrm{NR}=$ Non-Residential $\quad \mathrm{G}=$ Ingestion

    THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.
    HAAs-The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.

[^10]:    $\begin{array}{lll}\text { All concentrations in } \mu \mathrm{g} / \mathrm{L} & \mathrm{M}=\text { Maximum Contaminant Level } & \mathrm{N}=\text { Inhalation } \\ \mathrm{R}=\text { Residential } & \mathrm{H}=\text { Lifetime health advisory level } & \mathrm{S}=\text { Aqueous solubility cap }\end{array}$ $\mathrm{NR}=$ Non-Residential $\quad \mathrm{G}=$ Ingestion

    THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.

[^11]:    $\begin{array}{lll}\text { All concentrations in } \mu \mathrm{g} / \mathrm{L} & \mathrm{M}=\text { Maximum Contaminant Level } & \mathrm{N}=\text { Inhalation } \\ \mathrm{R}=\text { Residential } & \mathrm{H}=\text { Lifetime health advisory level } & \mathrm{S}=\text { Aqueous solubility cap }\end{array}$ $\mathrm{G}=$ Ingestion

    THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.

[^12]:    $\begin{array}{lll}\text { All concentrations in } \mu \mathrm{g} / \mathrm{L} & \mathrm{M}=\text { Maximum Contaminant Level } & \mathrm{N}=\text { Inhalation } \\ \mathrm{R}=\text { Residential } & \mathrm{H}=\text { Lifetime health advisory level } & \mathrm{S}=\text { Aqueous solubility cap }\end{array}$ $\begin{array}{ll}R=\text { Residential } & G R=\text { Non-Residential }\end{array} \quad G=$ Ingestion

    THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.

[^13]:    $\begin{array}{ll}\text { All concentrations in } \mu \mathrm{g} / \mathrm{L} & \mathrm{M}=\text { Maximum Contaminant Level } \\ \mathrm{R}=\text { Residential } & \mathrm{H}=\text { Lifetime health advisory level }\end{array}$
    $\mathrm{R}=$ Residential $\quad \mathrm{H}=$ Lifetime health advisory level $\quad \mathrm{S}=$ Aqueous solubility cap $\begin{array}{ll}\text { NR }=\text { Non-Residential } & G=\text { Ingestion } \\ \text { THMs-The values listed for trihalomethanes (TH }\end{array}$

    THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.
    HAAs-The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.

[^14]:    $\begin{array}{ll}\mathrm{M}=\text { Maximum Contaminant Level } & \mathrm{N}=\text { Inhalation } \\ \mathrm{H}=\text { Lifetime health advisory level } & \mathrm{S}=\text { Aqueous solubility cap }\end{array}$ $\mathrm{G}=$ Ingestion
    THMs -The values listed for trihalomethanes (THMs) are the total for all THMs combined.

[^15]:    $\begin{array}{lll}\text { All concendial } & \mathrm{M} \text { in } \mathrm{g} / \mathrm{L} & \mathrm{H}=\text { Lifetime health advisory level }\end{array}$ $\mathrm{NR}=$ Non-Residential $\quad \mathrm{G}=$ Ingestion

    THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.
    HAAs-The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.

[^16]:    $\begin{array}{lll}\text { All concentrations in } \mu \mathrm{g} / \mathrm{L} & \mathrm{M}=\text { Liximum Contaminant Level } & \mathrm{N}=\text { Inalation } \\ \mathrm{R}=\text { Residential } & \mathrm{H}=\text { Lifetime health advisory level } & \mathrm{S}=\text { Aqueous solubility cap }\end{array}$ $\mathrm{NR}=$ Non-Residential $\quad \mathrm{G}=$ Ingestion

    THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.
    HAAs-The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.

[^17]:    $\begin{array}{ll}\text { All concentrations in } \mu \mathrm{g} / \mathrm{L} & \mathrm{M}=\text { Maximum Contaminant Level } \\ \mathrm{H}=\text { Residential } & \mathrm{H}=\text { Lifetime health advisory level }\end{array}$
    $\mathrm{R}=$ Residential $\quad \mathrm{H}=$ Lifetime health advisory level $\quad \mathrm{S}=$ Aqueous solubility cap
    $\begin{array}{ll}\text { NR }=\text { Non-Residential } & G=\text { Ingestion } \\ \text { THMs-The values listed for trihalomethanes (TH }\end{array}$
    HAAs-The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.

[^18]:    $\begin{array}{lll}\text { All concenten } \\ \mathrm{R}=\text { Residential } & \mathrm{M}=\text { Lifimum } / L & \mathrm{H}=\text { Lifetime health advisory level }\end{array}$ NR = Non-Residential $\quad G=$ Ingestion

    THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined.
    HAAs-The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.

[^19]:    $\begin{array}{ll}\mathrm{M}=\text { Maximum Contaminant Level } & \mathrm{N}=\text { Inhalation } \\ \mathrm{H}=\text { Lifetime health advisory level } & \mathrm{S}=\text { Aqueous sol }\end{array}$
    $\mathrm{S}=$ Aqueous solubility cap
    NR $=$ Non-Residential
    THMs-The values listed for trihalomethanes (THMs) are the total for all THMs combined $R=$ Residential
    All concentrations in $\mu \mathrm{g} / \mathrm{L}$
    NR = Non-Residential HAAs-The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.

[^20]:    $\mathrm{R}=$ Residential
    $\mathrm{R}=$ Residential
    $\mathrm{NR}=$ Nonresidential

    All concentrations in $\mu \mathrm{g} / \mathrm{L}$ (except asbestos)
    $\mathrm{M}=$ Maximum Contaminant Level
    $\mathrm{M}=$ Maximum Contaminant Level
    SMCL = Secondary Maximum Contaminant Level
    $\mathrm{G}=$ Ingestion
    $\mathrm{N}=$ Inhalation

[^21]:    $R=$ Residential
    $N R=$ Nonresidential

[^22]:    ${ }^{1}$ For other options see Section 250.308
    All concentrations in $\mathrm{mg} / \mathrm{kg}$

[^23]:    All concentrations in $\mathrm{mg} / \mathrm{kg}$
    R-Residential
    NR—Non-Residential
    G-Ingestion
    N -Inhalation
    C- Cap
    U-UBK Model
    S-SEGH Model
    NA-Not Applicable

[^24]:    $\mathrm{N}=$ EPA NCEA Provisional Values
    $\mathrm{P}=$ surrogate
    T = TEF
    X = EPA Provisional Peer-Reviewed Toxicity Value Appendix

[^25]:    Toxicity Value Sources:
    C = California EPA Cancer Potency Factor
    D = ATSDR Minimal Risk Level
    H = Health Effects Assessment Summary Table (HEAST)
    I = Integrated Risk Information System (IRIS)
    P = EPA Provisional Peer-Reviewed Toxicity Value
    $\mathrm{s}=$ surrogate

