§ 63.1084 What heat exchange systems are exempt from the requirements of this subpart?

Your heat exchange system is exempt from the requirements in §§63.1085 and 63.1086 if it meets any one of the criteria in paragraphs (a) through (e) of this section.

(a) Your heat exchange system operates with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.

(b) Your heat exchange system contains an intervening cooling fluid, containing less than 5 percent by weight of total HAP listed in Table 1 to this subpart, between the process and the cooling water. This intervening fluid must serve to isolate the cooling water from the process fluid and must not be sent through a cooling tower or discharged. For purposes of this section, discharge does not include emptying for maintenance purposes.

(c) The once-through heat exchange system is subject to a National Pollution Discharge Elimination System (NPDES) permit with an allowable discharge limit of 1 part per million by volume (ppmv) or less above influent concentration, or 10 percent or less above influent concentration, whichever is greater.

(d) Your once-through heat exchange system is subject to a NPDES permit that meets all of the conditions in paragraphs (d)(1) through (4) of this section.

(1) The permit requires monitoring of a parameter or condition to detect a leak of process fluids to cooling water.

(2) The permit specifies the normal range of the parameter or condition.

(3) The permit requires monthly or more frequent monitoring for the parameters selected as leak indicators.

(4) The permit requires you to report and correct leaks to the cooling water when the parameter or condition exceeds the normal range.

(e) Your recirculating or once-through heat exchange system cools process fluids that contain less than 5 percent by weight of total HAP listed in Table 1 to this subpart.
(a) Monitoring periods. For existing sources, monitor cooling water as specified in paragraph (a)(2)(i) of this section. Monitor heat exchange systems at new sources according to the specifications in paragraph (a)(2)(ii) of this section.

(i) Monitor monthly for 6 months, both initially and following completion of a leak repair. Then monitor as provided in either paragraph (a)(2)(i)(A) or (a)(2)(i)(B) of this section, as appropriate.

(A) If no leaks are detected by monitoring monthly for a 6-month period, monitor quarterly thereafter until a leak is detected.

(B) If a leak is detected, monitor monthly until the leak has been repaired. Upon completion of repair, monitor according to the specifications in paragraph (a)(2)(ii) of this section.

(ii) Monitor weekly for 6 months, both initially and following completion of a leak repair. Then monitor as provided in paragraph (a)(2)(i)(A) or (B) of this section, as appropriate.

(A) If no leaks are detected by monitoring weekly for a 6-month period, monitor monthly thereafter until a leak is detected.

(B) If a leak is detected, monitor weekly until the leak has been repaired. Upon completion of repair, monitor according to the specifications in paragraph (a)(2)(ii) of this section.

(3) Determine the concentration of the monitored substance in the heat exchange system cooling water using any method listed in 40 CFR part 136. Use the same method for both entrance and exit samples. You may validate 40 CFR part 136 methods for the HAP listed in Table 1 to this subpart according to the procedures in appendix D to this part. Alternative methods may be used upon approval by the Administrator.

(4) Take a minimum of three sets of samples at each entrance and exit.

(5) Calculate the average entrance and exit concentrations, correcting for the addition of make-up water and evaporative losses, if applicable. Using a one-sided statistical procedure at the 0.05 level of significance, if the exit mean concentration is at least 10 percent greater than the entrance mean of the HAP (total or specified) in Table 1 to this subpart or other representative substance, and the leak is at least 3.06 kg/hr, you have detected a leak.

(b) Individual heat exchangers. Monitor the cooling water at the entrance and exit of each heat exchanger for the HAP in Table 1 to this subpart (either total or specified) or other representative substances (e.g., total organic carbon or VOC) that indicate the presence of a leak in a heat exchanger according to the requirements in paragraphs (b)(1) through (4) of this section.

(1) Monitoring periods. For existing sources, monitor cooling water as specified in paragraph (b)(1)(i) of this section. Monitor each heat exchanger at new sources according to the specifications in paragraph (b)(1)(ii) of this section.

(i) Monitor monthly for 6 months, both initially and following completion of a leak repair. Then monitor as provided in paragraph (b)(1)(i)(A) or (b)(1)(i)(B) of this section, as appropriate.

(A) If no leaks are detected by monitoring monthly for a 6-month period, monitor quarterly thereafter until a leak is detected.

(B) If a leak is detected, monitor monthly until the leak has been repaired. Upon completion of repair, monitor according to the specifications in paragraph (b)(1)(i) of this section.

(ii) Monitor weekly for 6 months, both initially and following completion of a leak repair. Then monitor as provided in paragraph (b)(1)(ii)(A) or (B) of this section, as appropriate.

(A) If no leaks are detected by monitoring weekly for a 6-month period, monitor monthly thereafter until a leak is detected.

(B) If a leak is detected, monitor weekly until the leak has been repaired. Upon completion of repair, monitor according to the specifications in paragraph (b)(1)(ii) of this section.

(2) Monitoring periods. For existing sources, monitor cooling water as specified in paragraph (a)(2)(i) of this section. Monitor heat exchange systems at new sources according to the specifications in paragraph (a)(2)(ii) of this section.

(i) Monitor monthly for 6 months, both initially and following completion of a leak repair. Then monitor as provided in either paragraph (a)(2)(i)(A) or (a)(2)(i)(B) of this section, as appropriate.

(A) If no leaks are detected by monitoring monthly for a 6-month period, monitor quarterly thereafter until a leak is detected.

(B) If a leak is detected, monitor monthly until the leak has been repaired. Upon completion of repair, monitor according to the specifications in paragraph (a)(2)(i) of this section.
§ 63.1086

(2) Determine the concentration of the monitored substance in the cooling water using any method listed in 40 CFR part 136, as long as the method is sensitive to concentrations as low as 10 ppmv. Use the same method for both entrance and exit samples. Validation of 40 CFR part 136 methods for the HAP listed in Table 1 to this subpart may be determined according to the provisions of appendix D to this part. Alternative methods may be used upon approval by the Administrator.

(3) Take a minimum of three sets of samples at each heat exchanger entrance and exit.

(4) Calculate the average entrance and exit concentrations, correcting for the addition of make-up water and evaporative losses, if applicable. Using a one-sided statistical procedure at the 0.05 level of significance, if the exit mean concentration is at least 1 ppmv or 10 percent greater than the entrance mean, whichever is greater, you have detected a leak.

(c) Surrogate parameters. You may elect to comply with the requirements of this section by monitoring using a surrogate indicator of leaks, provided that you comply with the requirements of paragraphs (c)(1) through (3) of this section. Surrogate indicators that could be used to develop an acceptable monitoring program are ion specific electrode monitoring, pH, conductivity, or other representative indicators.

(1) You shall prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling waters. The plan shall require monitoring of one or more process parameters or other conditions that indicate a leak. Monitoring that is already being conducted for other purposes may be used to satisfy the requirements of this section. The plan shall include the information specified in paragraphs (c)(1)(i) through (iv) of this section.

(i) A description of the parameter or condition to be monitored and an explanation of how the selected parameter or condition will reliably indicate the presence of a leak.

(ii) The parameter level(s) or condition(s) that shall constitute a leak. This shall be documented by data or calculations showing that the selected levels or conditions will reliably identify leaks. The monitoring must be sufficiently sensitive to determine the range of parameter levels or conditions when the system is not leaking. When the selected parameter level or condition is outside that range, you have detected a leak.

(iii) Monitoring periods. For existing sources, monitor cooling water as specified in paragraph (c)(1)(iii)(A) of this section. Monitor heat exchange systems at new sources according to the specifications in paragraph (c)(1)(iii)(B) of this section.

(A) Monitor monthly for 6 months, both initially and following completion of a leak repair. Then monitor as provided in paragraph (c)(1)(iii)(A)(1) or (c)(1)(iii)(A)(2) of this section, as appropriate.

(1) If no leaks are detected, monitor quarterly thereafter until a leak is detected.

(2) If a leak is detected, monitor monthly until the leak has been repaired. Upon completion of repair, monitor according to the specifications in paragraph (c)(1)(iii)(A) of this section.

(B) Monitor the cooling water weekly for heat exchange systems at new sources.

(iv) The records that will be maintained to document compliance with the requirements of this section.

(2) If a leak is identified by audio, visual, or olfactory inspection, a method listed in 40 CFR part 136, or any other means other than those described in the monitoring plan, and the method(s) specified in the plan could not detect the leak, you shall revise the plan and document the basis for the changes. You shall complete the revisions to the plan no later than 180 days after discovery of the leak.

(3) You shall maintain, at all times, the monitoring plan that is currently in use. The current plan shall be maintained on-site, or shall be accessible from a central location by computer or other means that provide access within 2 hours after a request. If the monitoring plan is changed, you must retain the most recent superseded plan for at
Environmental Protection Agency § 63.1089
least 5 years from the date of its cre-
tion. The superseded plan shall be re-
tained on-site or accessible from a cen-
tral location by computer or other
means that provide access within 2
hours after a request.
(d) Simplifying assumptions for en-
trance mean concentration. If you are
complying with paragraph (a) or (b) of
this section, you may elect to deter-
mine the entrance mean concentration
as specified in paragraph (d)(1) or (2) of
this section.
(1) Assume that the entrance mean
concentration of the monitored sub-
stance is zero; or,
(2) Determine the entrance mean con-
centration of a monitored substance at
a sampling location anywhere up-
stream of the heat exchanger or heat
exchange system, provided that there
is not a reasonable opportunity for the
concentration to change at the en-
trance to each heat exchanger or heat
exchange system.
[67 FR 46271, July 12, 2002, as amended at 70
FR 19271, Apr. 13, 2005]

REPAIR REQUIREMENTS FOR HEAT
EXCHANGE SYSTEMS
§ 63.1087 What actions must I take if a
leak is detected?
If a leak is detected, you must com-
ply with the requirements in para-
graphs (a) and (b) of this section unless
repair is delayed according to §63.1088.
(a) Repair the leak as soon as prac-
tical but not later than 45 calendar
days after you received the results of
monitoring tests that indicated a leak.
You must repair the leak unless you
demonstrate that the results are due to
a condition other than a leak.
(b) Once the leak has been repaired,
use the monitoring requirements in
§63.1086 within 7 calendar days of the
repair or startup, whichever is later, to
confirm that the heat exchange system
has been repaired.

§ 63.1088 In what situations may I
delay leak repair, and what actions
must I take for delay of repair?
You may delay the repair of heat ex-
change systems if the leaking equip-
ment is isolated from the process. You
may also delay repair if repair is tech-
nically infeasible without a shutdown,
and you meet one of the conditions in
paragraphs (a) through (c) of this section.
(a) If a shutdown is expected within
the next 2 months of determining delay
of repair is necessary, you are not re-
quired to have a special shutdown be-
fore that planned shutdown.
(b) If a shutdown is not expected
within the next 2 months of deter-
mining delay of repair is necessary, you
may delay repair if a shutdown for
repair would cause greater emissions
than the potential emissions from de-
laying repair until the next shutdown
of the process equipment associated
with the leaking heat exchanger. You
must document the basis for the deter-
mination that a shutdown for repair
would cause greater emissions than the
emissions likely to result from delay of
repair. The documentation process
must include the activities in para-
graphs (b)(1) through (4) of this section.
(1) State the reason(s) for delaying
repair.
(2) Specify a schedule for completing
the repair as soon as practical.
(3) Calculate the potential emissions
from the leaking heat exchanger by
multiplying the concentration of HAP
listed in Table 1 to this subpart (or
other monitored substances) in the
cooling water from the leaking heat
exchanger by the flow rate of the cool-
ing water from the leaking heat ex-
changer and by the expected duration
of the delay.
(4) Determine emissions of HAP list-
ed in Table 1 to this subpart (or other
monitored substances) from purging
and depressurizing the equipment that
will result from the unscheduled shut-
down for the repair.
(c) If repair is delayed because the
necessary equipment, parts or per-
sonnel are not available, you may
delay repair a maximum of 120 cal-
endar days. You must demonstrate
that the necessary equipment, parts or
personnel were not available.

RECORDKEEPING AND REPORTING RE-
QUIREMENTS FOR HEAT EXCHANGE SYS-
TEMS
§ 63.1089 What records must I keep?
You must keep the records in para-
graphs (a) through (e) of this section,