Calculating or Determining the 90th Percentile during Initial, Follow-up, Routine, and Reduced Monitoring

If you collect 5 samples, calculate your 90th percentile like this:

- Rank your samples in order of concentration (mg/L), starting from lowest to highest.
- Find the average of the two highest results by adding them together and dividing by 2.
- The resultant number is recorded for the 90th percentile.

Sample Site #	Sample results
1	0.001
2	0.001
3	0.006
4	**0.008**
5	**0.014**

0.008
\+ **0.014**
0.022

Average divide 0.022 by 2 = **0.011**

This is the number to record on Form 141A.

(This is an example. Insert your own sample results.)

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Calculating the 90th Percentile for 6 samples or more:

- Rank your samples in order of concentration starting from lowest to highest.
- Take the total number of samples collected and multiply it by 0.90. The resultant number will tell you which sample to record.
  - If the number is not a whole number, you need to round to the nearest whole number.
    - If the number is exactly in the middle of two whole numbers, you round to the nearest even number.
      - i.e. 12.5 would be rounded to 12, and 13.5 would be rounded to 14.

Example: If you collect 10 samples, determine your 90th percentile like this:

- *10 x 0.90 = 9*

Sample Site #	Sample results
1	0.001
2	0.001
3	0.001
4	0.001
5	0.001
6	0.004
7	0.005
8	0.006
9	**0.008**
10	0.010

This sample should be recorded as the 90th percentile result on Form 141A.

(This is an example. Insert your own sample results.)

(Use this form if your laboratory does not provide a 90th percentile summary for you)

Public Water Supply ID No. _____

Name of Public Water Supply: _____

Results of Monitoring:

	Date Collected	Sample Location	Lead Result	Which Tier?
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

90th Percentile for Lead:

	Date Collected	Sample Location	Copper Result	Which Tier?
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

90th Percentile for Copper:

Mail to : Water Supply Operations Section
Iowa Department of Natural Resources
502 E. 9th St.
Des Moines, IA 50319-0034

PWSID # _____

NAME OF PUBLIC WATER SUPPLY: _____

Month & Year Samples were Collected: _____

SAMPLES SITE IDENTIFICATION AND CERTIFICATION

RESULTS OF MONITORING

Samples Required _____# Samples Submitted _____

90th Percentile Lead _____ **mg/L**
90th Percentile Copper _____ **mg/L**

CHANGE OF SAMPLING SITES

Original Site Address:

_____
_____
_____

New Site Address:

_____
_____
_____

Distance between Sites (approximately):

_____

Targeting Criteria: NEW: _____
OLD: _____

Reason for Change (attach additional pages if necessary):

_____
_____

SIGNATURE (name & title) Today's Date: _____

_____

DNR Field Office_____