State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A 8-89

Facility/Project Name: Mercury Marine	Grid Location: 477,714 ft. ☒ N. ☐ S. / 2,535,376 ft. ☒ E. ☐ W.	Well Name: MW-1
Facility License, Permit or Monitoring Number: _____		Wis. Unique Well Number / DNR Well Number
Type of Well: ~~Water Table~~ Observation Well ☒ 11; Piezometer ☐ 12	Section Location: NW 1/4 of SE 1/4 of Section 34, T 10 N, R 21 ☒ E ☐ W	Date Well Installed: 01/13/93 (m m d d y y)
Distance Well Is From Waste/Source Boundary: unknown ft.	Location of Well Relative to Waste/Source: ☐ Upgradient ☐ Sidegradient ☐ Downgradient ☒ Not Known	Well Installed By: (Person's Name and Firm): Vince Meindel / Layne - Northwest
Is Well A Point of Enforcement Std. Application? ☐ Yes ☒ No		

A. Protective pipe, top elevation 787.37 ft. MSL
B. Well casing, top elevation 787.02 ft. MSL
C. Land surface elevation 787.4 ft. MSL
D. Surface seal, bottom _____ ft. MSL or 4.0 ft.

12. USCS classification of soil near screen:
☐ GP ☐ GM ☐ GC ☐ GW ☒ SW ☐ SP
☐ SM ☒ SC ☐ ML ☐ MH ☒ CL ☐ CH
☐ Bedrock

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50; Hollow Stem Auger ☒ 41; Other ☐ ____

15. Drilling fluid used: Water ☐ 02; Air ☐ 01; Drilling Mud ☐ 03; None ☒ 99

16. Drilling additives used? ☐ Yes ☐ No

Describe _____

17. Source of water (attach analysis):

E. Bentonite seal, top _____ ft. MSL or NA ft.
F. Fine sand, top _____ ft. MSL or 6.0 ft.
G. Filter pack, top _____ ft. MSL or 8.0 ft.
H. Well screen, top _____ ft. MSL or 10.0 ft.
I. Well screen, bottom _____ ft. MSL or 15.0 ft.
J. Filter pack, bottom _____ ft. MSL or 15.0 ft.
K. Borehole, bottom _____ ft. MSL or 15.0 ft.
L. Borehole, diameter 6.0 in.
M. O.D. well casing 2.38 in.
N. I.D. well casing 2.05 in.

1. Cap and lock? ☒ Yes ☐ No
2. ~~Protective cover pipe~~: Flush Mount
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04; Other ☐ ____
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30; Concrete ☒ 01; Other ☐ ____

4. Material between well casing and protective pipe: Bentonite ☐ 30; Annular space seal ☒; Other ☐ ____

5. Annular space seal: Chipped ~~Granular~~ Bentonite ☒ 33
____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
____ Lbs/gal mud weight ..... Bentonite slurry ☐ 31
____ % Bentonite .... Bentonite-cement grout ☐ 50
0.33 Ft³ volume added for any of the above
How installed: Tremie ☐ 01; Tremie pumped ☐ 02; Gravity ☒ 08

6. Bentonite seal: Bentonite granules ☐ 33
☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
None Other ☒ ____

7. Fine sand material: Manufacturer, product name and mesh size
U.S. Silica; Fine sand; 0.2 - 0.3
Volume added 0.33 ft³

8. Filter pack material: Manufacturer, product name and mesh size
American Materials; 0.35 - 0.45
Volume added 1.16 ft³

9. Well casing: Flush threaded PVC schedule 40 ☒ 23; Flush threaded PVC schedule 80 ☐ 24; Other ☐ ____

10. Screen material: same
Screen type: Factory cut ☒ 11; Continuous slot ☐ 01; Other ☐ ____
Manufacturer Monoflex
Slot size: 0.010 in.
Slotted length: 5.0 ft.

11. Backfill material (below filter pack): None ☒; Other ☐ ____

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Dawn Peterson Firm: CH2M HILL

Please complete and return both sides of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with s. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than $5,000 for each day of violation. In accordance

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT
Form 4400-113B 8-89

Facility/Project Name: Mercury Marine
Well Name: MW-1
License, Permit or Monitoring Number: _____
Wis. Unique Well Number: _____ DNR Well Number: _____

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method

surged with bailer and bailed	☒	4 1
surged with bailer and pumped	☐	6 1
surged with block and bailed	☐	4 2
surged with block and pumped	☐	6 2
surged with block, bailed and pumped	☐	7 0
compressed air	☐	2 0
bailed only	☐	1 0
pumped only	☐	5 1
pumped slowly	☐	5 0
Other _____	☐	

3. Time spent developing well: 30 min.
4. Depth of well (from top of well casisng): 14.5 ft.
5. Inside diameter of well: 2.05 in.
6. Volume of water in filter pack and well casing: 2.1 gal.
7. Volume of water removed from well: 30.0 gal.
8. Volume of water added (if any): 0. gal.
9. Source of water added: _____
10. Analysis performed on water added? ☐ Yes ☐ No (If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	10.05 ft.	10.10 ft.
Date (m m d d y y)	01/26/93	01/26/93
Time	7:30 ☒ a.m. ☐ p.m.	4:37 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	1.5 inches	0.5 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe)	Clear ☐ 20 Turbid ☒ 25 (Describe)
Fill in if drilling fluids were used and well is at solid waste facility:		
14. Total suspended solids	_____.__ mg/l	_____.__ mg/l
15. COD	_____.__ mg/l	_____.__ mg/l

Additional comments on development:

Well developed by: Person's Name and Firm

Name: Mike Santas
Firm: Layne - Northwest

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Sam Peters
Firm: C Ham Hill

NOTE: Shaded areas are for DNR use only. See instructions for more information.

State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A 8-89

Facility/Project Name: Mercury Marine	Grid Location: 477,317 ft. ☒ N. ☐ S. / 2,535,677 ft. ☒ E. ☐ W.	Well Name: MW-2
Facility License, Permit or Monitoring Number: _____		Wis. Unique Well Number / DNR Well Number
Type of Well: ~~Water Table~~ Observation Well ☒ 11; Piezometer ☐ 12	Section Location: NW 1/4 of SE 1/4 of Section 34, T 10 N, R 21 ☒ E ☐ W	Date Well Installed: 01/12/93 (m m d d y y)
Distance Well Is From Waste/Source Boundary: unKnown ft.	Location of Well Relative to Waste/Source: ☐ Upgradient ☐ Sidegradient ☐ Downgradient ☒ Not Known	Well Installed By: (Person's Name and Firm): Vince Meindel / Layne-Northwest
Is Well A Point of Enforcement Std. Application? ☐ Yes ☒ No		

A. Protective pipe, top elevation 786.52 ft. MSL
B. Well casing, top elevation 786.27 ft. MSL
C. Land surface elevation 786.4 ft. MSL
D. Surface seal, bottom _____ ft. MSL or 4.0 ft.

12. USCS classification of soil near screen:
☐ GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP
☐ SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH
☒ Bedrock

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used: Rotary ☒ 50; Hollow Stem Auger ☒ 41; Other ☐ _____

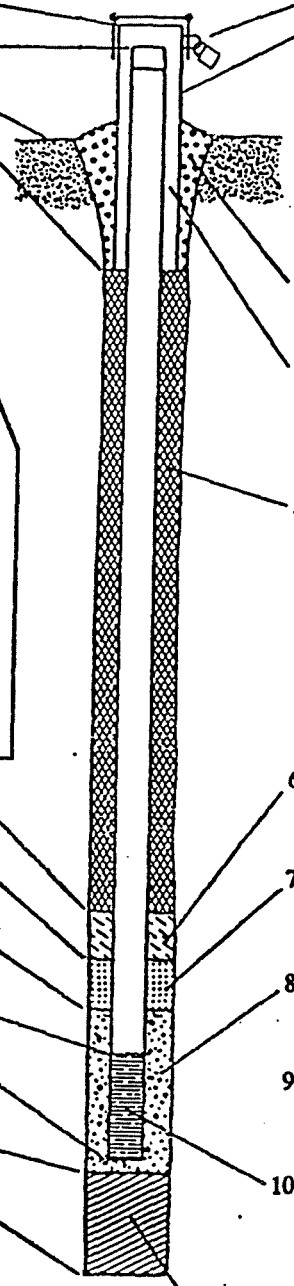
15. Drilling fluid used: Water ☒ 02; Air ☐ 01; Drilling Mud ☐ 03; None ☐ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe _____

17. Source of water (attach analysis):
Water tap inside building (west side)

E. Bentonite seal, top _____ ft. MSL or 38.5 ft.
F. Fine sand, top _____ ft. MSL or 41.0 ft.
G. Filter pack, top _____ ft. MSL or 43.0 ft.
H. Well screen, top _____ ft. MSL or 45.0 ft.
I. Well screen, bottom _____ ft. MSL or 60.0 ft.
J. Filter pack, bottom _____ ft. MSL or 60.0 ft.
K. Borehole, bottom _____ ft. MSL or 60.0 ft.
L. Borehole, diameter 6.0 in.
M. O.D. well casing 2.38 in.
N. I.D. well casing 2.05 in.



1. Cap and lock? ☒ Yes ☐ No
2. ~~Protective cover pipe:~~ Flush Mount
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04; Other ☐ _____
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30; Concrete ☒ 01; Other ☐ _____
4. Material between well casing and protective pipe: Bentonite ☒ 30; Annular space seal ☐; Other ☐ _____
5. Annular space seal: Granular Bentonite ☐ 33
_____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
9.4 Lbs/gal mud weight ..... Bentonite slurry ☒ 31
_____ % Bentonite .... Bentonite-cement grout ☐ 50
5.71 Ft³ volume added for any of the above
How installed: Tremie ☐ 01; Tremie pumped ☒ 02; Gravity ☐ 08
6. Bentonite seal: Bentonite granules ☐ 33
☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
Bentonite Chips (< 3/8") Other ☒
7. Fine sand material: Manufacturer, product name and mesh size
U.S. Silica; 0.2 - 0.3
Volume added 0.33 ft³
8. Filter pack material: Manufacturer, product name and mesh size
American Materials; 0.35-0.45
Volume added 2.81 ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23; Flush threaded PVC schedule 80 ☐ 24; Other ☐ _____
10. Screen material: Same
Screen type: Factory cut ☒ 11; Continuous slot ☐ 01; Other ☐ _____
Manufacturer Monoflex
Slot size: 0.010 in.
Slotted length: 15.0 ft.
11. Backfill material (below filter pack): None ☒; Other ☐ _____

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Tara Peterson
Firm: CHAM HILL

Please complete and return both sides of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with s. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than $5,000 for each day of violation. In accordance

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT
Form 4400-113B 8-89

Facility/Project Name: Mercury Marine

Well Name: MW-2

License, Permit or Monitoring Number: _____

Wis. Unique Well Number: _____ DNR Well Number: _____

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method

surged with bailer and bailed	☐	41
surged with bailer and pumped	☒	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
Other _____	☐	

3. Time spent developing well: 45 min.

4. Depth of well (from top of well casisng): 59.8 ft.

5. Inside diameter of well: 2.05 in.

6. Volume of water in filter pack and well casing: 12.7 gal.

7. Volume of water removed from well: 115.0 gal.

8. Volume of water added (if any): 0. gal.

9. Source of water added: _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	19.87 ft.	20.60 ft.
Date	01/26/93 (m m d d y y)	01/26/93 (m m d d y y)
Time	7:44 ☒ a.m. ☐ p.m.	12:15 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	1.0 inches	0.2 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Lt. brown	Clear ☐ 20 Turbid ☒ 25 (Describe) Lt. brown

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

Additional comments on development:

Borehole gained water during drilling of the last 10-15 feet. Driller blew out 70 gal. water following completion of drilling and prior to development.

Well developed by: Person's Name and Firm

Name: Gene

Firm: Layne - Northwest

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Gene Peterson

Firm: Cham Hill

NOTE: Shaded areas are for DNR use only. See instructions for more information.

State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A 8-89

Facility/Project Name: Mercury Marine	Grid Location: 477,005 ft. ☒ N. ☐ S. / 2,535,484 ft. ☒ E. ☐ W.	Well Name: MW-3
Facility License, Permit or Monitoring Number: _____		Wis. Unique Well Number: _____ DNR Well Number: _____
Type of Well: ~~Water Table~~ Observation Well ☒ 11; Piezometer ☐ 12	Section Location: NW 1/4 of SE 1/4 of Section 34, T 10 N, R 21 ☒ E ☐ W	Date Well Installed: 01/15/93 (m m / d d / y y)
Distance Well Is From Waste/Source Boundary: unknown ft.	Location of Well Relative to Waste/Source: ☐ Upgradient ☐ Sidegradient ☐ Downgradient ☒ Not Known	Well Installed By: (Person's Name and Firm): Vince Meindel / Layne-Northwest
Is Well A Point of Enforcement Std. Application? ☐ Yes ☒ No		

A. Protective pipe, top elevation 799.58 ft. MSL
B. Well casing, top elevation 799.18 ft. MSL
C. Land surface elevation 799.5 ft. MSL
D. Surface seal, bottom _____ ft. MSL or 4.0 ft.

12. USCS classification of soil near screen:
☐ GP ☐ GM ☐ GC ☐ GW ☐ SW ☒ SP
☒ SM ☒ SC ☐ ML ☐ MH ☒ CL ☐ CH
☐ Bedrock

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50; Hollow Stem Auger ☒ 41; Other ☐ ____

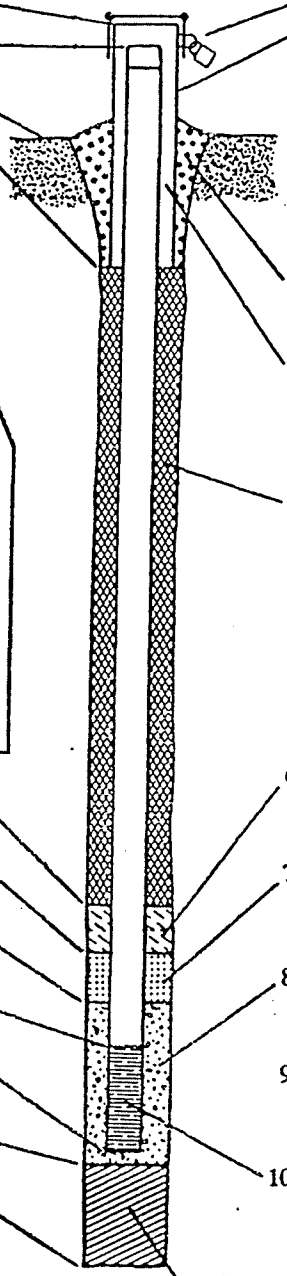
15. Drilling fluid used: Water ☐ 02; Air ☐ 01; Drilling Mud ☐ 03; None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe _____

17. Source of water (attach analysis):

E. Bentonite seal, top _____ ft. MSL or NA ft.
F. Fine sand, top _____ ft. MSL or 26.0 ft.
G. Filter pack, top _____ ft. MSL or 28.0 ft.
H. Well screen, top _____ ft. MSL or 30.0 ft.
I. Well screen, bottom _____ ft. MSL or 35.0 ft.
J. Filter pack, bottom _____ ft. MSL or 35.0 ft.
K. Borehole, bottom _____ ft. MSL or 44.0 ft.
L. Borehole, diameter 6.0 in.
M. O.D. well casing 2.38 in.
N. I.D. well casing 2.05 in.



1. Cap and lock? ☒ Yes ☐ No
2. ~~Protective cover pipe~~: Flush Mount
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04; Other ☐ ____
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30; Concrete ☒ 01; Other ☐ ____
4. Material between well casing and protective pipe: Bentonite ☐ 30; Annular space seal ☒; Other ☐ ____
5. Annular space seal: Chipped ~~Granular~~ Bentonite ☒ 33
_____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
_____ Lbs/gal mud weight ..... Bentonite slurry ☐ 31
_____ % Bentonite .... Bentonite-cement grout ☐ 50
3.64 Ft³ volume added for any of the above
How installed: Tremie ☐ 01; Tremie pumped ☐ 02; Gravity ☒ 08
6. Bentonite seal: Bentonite granules ☐ 33
☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
None Other ☒ ____
7. Fine sand material: Manufacturer, product name and mesh size
U.S. Silica; 0.2-0.3
Volume added 0.33 ft³
8. Filter pack material: Manufacturer, product name and mesh size
American Materials; 0.35-0.45
Volume added 1.16 ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23; Flush threaded PVC schedule 80 ☐ 24; Other ☐ ____
10. Screen material: Same
Screen type: Factory cut ☒ 11; Continuous slot ☐ 01; Other ☐ ____
Manufacturer Monoflex
Slot size: 0.010 in.
Slotted length: 5.0 ft.
11. Backfill material (below filter pack): None ☐; Other ☒
Bentonite Chips

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Dawn Peterson	CHam Hill

Please complete and return both sides of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with s. 144, Wis Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than $5,000 for each day of violation. In accordance

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT
Form 4400-113B 8-89

Facility/Project Name: Mercury Marine

Well Name: MW-3

License, Permit or Monitoring Number: _____

Wis. Unique Well Number: _____ DNR Well Number: _____

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☒	4 1
surged with bailer and pumped	☐	6 1
surged with block and bailed	☐	4 2
surged with block and pumped	☐	6 2
surged with block, bailed and pumped	☐	7 0
compressed air	☐	2 0
bailed only	☐	1 0
pumped only	☐	5 1
pumped slowly	☐	5 0
Other _____	☐	

3. Time spent developing well: 55 min.

4. Depth of well (from top of well casisng): 34.6 ft.

5. Inside diameter of well: 2.05 in.

6. Volume of water in filter pack and well casing: 1.3 gal.

7. Volume of water removed from well: 2.0 gal.

8. Volume of water added (if any): 0.5 gal.

9. Source of water added: store bought distilled water

10. Analysis performed on water added? ☐ Yes ☒ No (If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	31.80 ft.	Purged dry ft.
Date	01/27/93 (m m d d y y)	01/27/93 (m m d d y y)
Time	9:26 ☒ a.m. ☐ p.m.	10:38 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	1.2 inches	1.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe)	Clear ☐ 20 Turbid ☒ 25 (Describe)
Fill in if drilling fluids were used and well is at solid waste facility:		
14. Total suspended solids	_____.__ mg/l	_____.__ mg/l
15. COD	_____.__ mg/l	_____.__ mg/l

Additional comments on development:

Well developed by: Person's Name and Firm

Name: Mike Santas

Firm: Layne-Northwest

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Dawn Peterson

Firm: CH2M Hill

NOTE: Shaded areas are for DNR use only. See instructions for more information.

State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A 8-89

Facility/Project Name: Mercury Marine	Grid Location: 477,433 ft. ☒ N. ☐ S. / 2,535,317 ft. ☒ E. ☐ W.	Well Name: MW-4
Facility License, Permit or Monitoring Number: _____		Wis. Unique Well Number / DNR Well Number
Type of Well: Water Table Observation Well ☒ 11; Piezometer ☐ 12	Section Location: NW 1/4 of SE 1/4 of Section 34, T 10 N, R 21 ☒ E ☐ W	Date Well Installed: 01/12/93 (m m d d y y)
Distance Well Is From Waste/Source Boundary: unknown ft.	Location of Well Relative to Waste/Source: ☐ Upgradient ☐ Sidegradient ☐ Downgradient ☒ Not Known	Well Installed By: (Person's Name and Firm): Vince Meindel / Layne-Northwest
Is Well A Point of Enforcement Std. Application? ☐ Yes ☒ No		

A. Protective pipe, top elevation 786.06 ft. MSL
B. Well casing, top elevation 785.84 ft. MSL
C. Land surface elevation 785.9 ft. MSL
D. Surface seal, bottom _____ ft. MSL or 2.0 ft.

12. USCS classification of soil near screen:
☐ GP ☐ GM ☐ GC ☒ GW ☐ SW ☒ SP
☒ SM ☐ SC ☐ ML ☐ MH ☒ CL ☐ CH
☐ Bedrock

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50; Hollow Stem Auger ☒ 41; Other ☐ ____

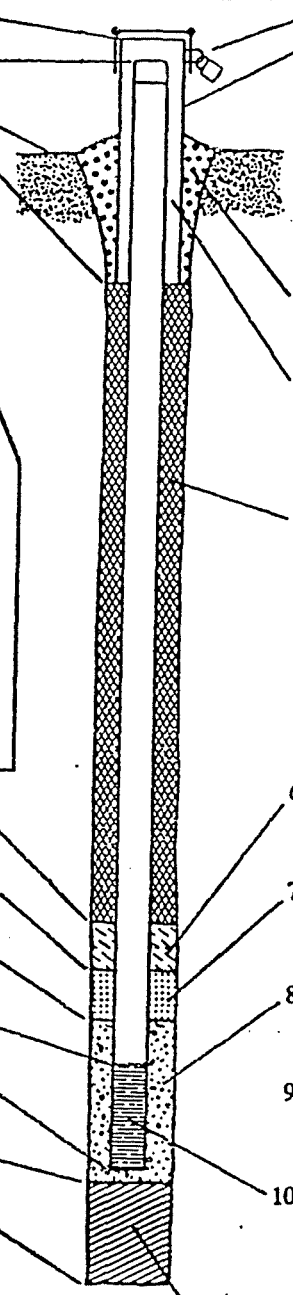
15. Drilling fluid used: Water ☐ 02; Air ☐ 01; Drilling Mud ☐ 03; None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe _____

17. Source of water (attach analysis):

E. Bentonite seal, top _____ ft. MSL or NA ft.
F. Fine sand, top _____ ft. MSL or 3.0 ft.
G. Filter pack, top _____ ft. MSL or 4.0 ft.
H. Well screen, top _____ ft. MSL or 5.0 ft.
I. Well screen, bottom _____ ft. MSL or 15.0 ft.
J. Filter pack, bottom _____ ft. MSL or 15.0 ft.
K. Borehole, bottom _____ ft. MSL or 15.0 ft.
L. Borehole, diameter 6.0 in.
M. O.D. well casing 2.38 in.
N. I.D. well casing 2.05 in.



1. Cap and lock? ☒ Yes ☐ No
2. ~~Protective cover pipe:~~ Flush Mount
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04; Other ☐ ____
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30; Concrete ☒ 01; Other ☐ ____
4. Material between well casing and protective pipe: Bentonite ☐ 30; Annular space seal ☒; Other ☐ ____
5. Annular space seal: Chipped ~~Granular~~ Bentonite ☒ 33
____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
____ Lbs/gal mud weight ..... Bentonite slurry ☐ 31
____ % Bentonite .... Bentonite-cement grout ☐ 50
0.17 Ft³ volume added for any of the above
How installed: Tremie ☐ 01; Tremie pumped ☐ 02; Gravity ☒ 08
6. Bentonite seal: Bentonite granules ☐ 33
☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
None Other ☒ ____
7. Fine sand material: Manufacturer, product name and mesh size
U.S. Silica; 0.2-0.3
Volume added 0.17 ft³
8. Filter pack material: Manufacturer, product name and mesh size
American Materials; 0.35-0.45
Volume added 1.82 ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23; Flush threaded PVC schedule 80 ☐ 24; Other ☐ ____
10. Screen material: Same
Screen type: Factory cut ☒ 11; Continuous slot ☐ 01; Other ☐ ____
Manufacturer Monoflex
Slot size: 0.010 in.
Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒; Other ☐ ____

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Thom Peterson | Firm: Cham Hill

Please complete and return both sides of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with s. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than $5,000 for each day of violation. In accordance

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT
Form 4400-113B 8-89

Facility/Project Name: Mercury Marine
Well Name: MW-4
License, Permit or Monitoring Number: _____
Wis. Unique Well Number: _____ DNR Well Number: _____

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☒	4 1
surged with bailer and pumped	☐	6 1
surged with block and bailed	☐	4 2
surged with block and pumped	☐	6 2
surged with block, bailed and pumped	☐	7 0
compressed air	☐	2 0
bailed only	☐	1 0
pumped only	☐	5 1
pumped slowly	☐	5 0
Other _____	☐	

3. Time spent developing well: 80 min.

4. Depth of well (from top of well casisng): 14.6 ft.

5. Inside diameter of well: 2.05 in.

6. Volume of water in filter pack and well casing: 3.3 gal.

7. Volume of water removed from well: 20.0 gal.

8. Volume of water added (if any): 0. gal.

9. Source of water added: _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	7.73 ft.	10.36 ft.
Date	01/27/93 (m m d d y y)	01/27/93 (m m d d y y)
Time	7:50 ☒ a.m. ☐ p.m.	9:29 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	2.0 inches	1.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe)	Clear ☐ 20 Turbid ☒ 25 (Describe)
Fill in if drilling fluids were used and well is at solid waste facility:		
14. Total suspended solids	_____ mg/l	_____ mg/l
15. COD	_____ mg/l	_____ mg/l

Additional comments on development:

Well developed by: Person's Name and Firm

Name: Mike Santas

Firm: Layne-Northwest

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Tom Peterson

Firm: Cham Hill

NOTE: Shaded areas are for DNR use only. See instructions for more information.

State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A 8-89

Facility/Project Name: Mercury Marine
Facility License, Permit or Monitoring Number: _____

Grid Location: 477,680 ft. [X] N. [ ] S. ; 2,535,210 ft. [X] E. [ ] W.

Well Name: MW-5
Wis. Unique Well Number: _____ DNR Well Number: _____

Type of Well: ~~Water Table~~ Observation Well [X] 11; Piezometer [ ] 12

Section Location: NW 1/4 of SE 1/4 of Section 34, T 10 N, R 21 [X] E [ ] W

Date Well Installed: 01/27/93 (m m / d d / y y)

Distance Well Is From Waste/Source Boundary: unknown ft.

Location of Well Relative to Waste/Source: [ ] Upgradient [ ] Sidegradient [ ] Downgradient [X] Not Known

Well Installed By: (Person's Name and Firm): Vince Meindel, Layne-Northwest

Is Well A Point of Enforcement Std. Application? [ ] Yes [X] No

A. Protective pipe, top elevation 793.43 ft. MSL
B. Well casing, top elevation 793.20 ft. MSL
C. Land surface elevation 793.2 ft. MSL
D. Surface seal, bottom _____ ft. MSL or 4.0 ft.

12. USCS classification of soil near screen:
[ ] GP [ ] GM [ ] GC [ ] GW [ ] SW [ ] SP
[ ] SM [ ] SC [ ] ML [ ] MH [X] CL [ ] CH
[ ] Bedrock

13. Sieve analysis attached? [ ] Yes [X] No

14. Drilling method used: Rotary [ ] 50; Hollow Stem Auger [X] 41; Other [ ] ____

15. Drilling fluid used: Water [ ] 02; Air [ ] 01; Drilling Mud [ ] 03; None [X] 99

16. Drilling additives used? [ ] Yes [X] No

Describe _____

17. Source of water (attach analysis): _____

E. Bentonite seal, top _____ ft. MSL or NA ft.
F. Fine sand, top _____ ft. MSL or 11.5 ft.
G. Filter pack, top _____ ft. MSL or 12.5 ft.
H. Well screen, top _____ ft. MSL or 14.5 ft.
I. Well screen, bottom _____ ft. MSL or 19.5 ft.
J. Filter pack, bottom _____ ft. MSL or 19.5 ft.
K. Borehole, bottom _____ ft. MSL or 19.5 ft.
L. Borehole, diameter 6.0 in.
M. O.D. well casing 2.38 in.
N. I.D. well casing 2.05 in.

1. Cap and lock? [X] Yes [ ] No
2. ~~Protective cover pipe~~: Flush Mount
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel [X] 04; Other [ ] ____
d. Additional protection? [ ] Yes [X] No
If yes, describe: _____

3. Surface seal: Bentonite [ ] 30; Concrete [X] 01; Other [ ] ____

4. Material between well casing and protective pipe: Bentonite [ ] 30; Annular space seal [X]; Other [ ] ____

5. Annular space seal: Chipped ~~Granular~~ Bentonite [X] 33
_____ Lbs/gal mud weight ... Bentonite-sand slurry [ ] 35
_____ Lbs/gal mud weight ..... Bentonite slurry [ ] 31
_____ % Bentonite .... Bentonite-cement grout [ ] 50
1.24 Ft^3 volume added for any of the above
How installed: Tremie [ ] 01; Tremie pumped [ ] 02; Gravity [X] 08

6. Bentonite seal: Bentonite granules [ ] 33
[ ] 1/4 in. [ ] 3/8 in. [ ] 1/2 in. Bentonite pellets [ ] 32
None Other [X] ____

7. Fine sand material: Manufacturer, product name and mesh size
U.S. Silica; 0.2-0.3
Volume added 0.17 ft^3

8. Filter pack material: Manufacturer, product name and mesh size
American Materials; 0.35-0.45
Volume added 1.16 ft^3

9. Well casing: Flush threaded PVC schedule 40 [X] 23; Flush threaded PVC schedule 80 [ ] 24; Other [ ] ____

10. Screen material: Same
Screen type: Factory cut [X] 11; Continuous slot [ ] 01; Other [ ] ____
Manufacturer Monoflex
Slot size: 0.010 in.
Slotted length: 5.0 ft.

11. Backfill material (below filter pack): None [X]; Other [ ] ____

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Laura Peterson Firm: CH2M HILL

Please complete and return both sides of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with ch. 144, Wis Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than $5,000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than $10,000 for each day of violation.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT
Form 4400-113B 8-89

Facility/Project Name: Mercury Marine

Well Name: MW-5

License, Permit or Monitoring Number: _____

Wis. Unique Well Number: _____ DNR Well Number: _____

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method

surged with bailer and bailed	☒	4 1
surged with bailer and pumped	☐	6 1
surged with block and bailed	☐	4 2
surged with block and pumped	☐	6 2
surged with block, bailed and pumped	☐	7 0
compressed air	☐	2 0
bailed only	☐	1 0
pumped only	☐	5 1
pumped slowly	☐	5 0
Other _____	☐	

3. Time spent developing well: 30 min.

4. Depth of well (from top of well casisng): 19.2 ft.

5. Inside diameter of well: 2.05 in.

6. Volume of water in filter pack and well casing: 1.7 gal.

7. Volume of water removed from well: 20.0 gal.

8. Volume of water added (if any): 0. gal.

9. Source of water added: _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	15.67 ft.	15.42 ft.
Date	01/27/93 (m m d d y y)	01/27/93 (m m d d y y)
Time	11:05 ☒ a.m. ☐ p.m.	11:45 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	2.1 inches	1.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe)	Clear ☐ 20 Turbid ☒ 25 (Describe)
Fill in if drilling fluids were used and well is at solid waste facility:		
14. Total suspended solids	_____ mg/l	_____ mg/l
15. COD	_____ mg/l	_____ mg/l

Additional comments on development:

Well developed by: Person's Name and Firm

Name: Mike Santas

Firm: Layne - Northwest

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Laura Peterson

Firm: CH2M Hill

NOTE: Shaded areas are for DNR use only. See instructions for more information.