Class 1 Permit Modification

Revise Permit to Correct References, Inconsistencies and Figures

Waste Isolation Pilot Plant
Carlsbad, New Mexico

WIPP HWFP #NM4890139088-TSDF

January 2007

Table of Contents

Acronyms and Abbreviations

CBFO	Carlsbad Field Office
CFR	Code of Federal Regulations
DOE	Department of Energy
HWFP	Hazardous Waste Facility Permit
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
PMN	Permit Modification Notification
RCRA	Resource Conservation and Recovery Act
TSDF	Treatment, Storage and Disposal Facility
WIPP	Waste Isolation Pilot Plant
WTS	Washington TRU Solutions LLC

Overview of the Permit Modification Notification

This document contains several Class 1 Permit Modification Notifications (**PMNs**) to the Hazardous Waste Facility Permit (**HWFP**) at the Waste Isolation Pilot Plant (**WIPP**), Permit Number NM4890139088-TSDF hereinafter referred to as the WIPP HWFP.

These PMNs are being submitted by the U.S. Department of Energy (**DOE**), Carlsbad Field Office (**CBFO**) and Washington TRU Solutions LLC (**WTS**), collectively referred to as the Permittees, in accordance with the WIPP HWFP, Condition I.B.1 (20.4.1.900 New Mexico Administrative Code (**NMAC**) incorporating Title 40 of the Code of Federal Regulations (40 **CFR**) §270.42(a)). The PMNs in this document are necessary for the following reasons:

- to resolve inconsistencies, incorrect references and correct various figures in the HWFP issued by the New Mexico Environment Department on October 17, 2006.

These changes do not reduce the ability of the Permittees to provide continued protection to human health and the environment.

The requested modifications to the WIPP HWFP and related supporting documents are provided in this PMN. The proposed modifications to the text of the WIPP HWFP has been identified using a double underline and revision bar in the right hand margin for added information, and a ~~strikeout~~ font for deleted information. All direct quotations are indicated by italicized text.

Attachment A

Description of the Class 1 Permit Modification Notifications

Table 1. Class 1 Hazardous Waste Facility Permit Modification Notification

No.	Affected Permit Section	Item	Category
1	a. Attachment B3, Table B3-11	Revise table	A.1
2	a. Attach N, Sect N-3e(1) b. Attach N, Section N-4c c. Attach N, Sect N-5c d. Attach N, Table N-1 e. Attach N, Table N-2	Revise section reference Referenced figure has been deleted Revise section reference Revise method reference Revise “Completeness” values	A.1 A.1 A.1 A.1 A.1
3	a. Attach B6, Number 7 b. Attach B6, Number 8 c. Attach B6, Number 152 d. Attach B6, Number 155 e. Attach B6, Number 161 f. Attach B6, Number 237	Delete “homogenous” Revise question wording Change “confirmation” to “augmentation” in header Change “confirmation” to “characterization” Delete “confirmatory” before “headspace gas” Revise question wording	A.1 A.1 A.1 A.1 A.1 A.1
4	a. Module V, Table V.C.1 b. Attach L, Figures L-10 through L-16	Revise coordinates and elevations Revise top of casing elevation	A.1 A.1

Item 1

Description:

Revise the HWFP to correct requirements in Batch Data Reports.

Basis:

These changes are administrative and informational in nature and therefore is a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Discussion:

On October 17, 2006, the NMED issued a new permit as a result of a Class 3 modification, negotiations with stakeholders, a public hearing and a final report from the Hearing Officer. This new permit contains an inconsistency which, if not corrected, will impact the procedures which must be revised by the generator/storage sites relative to waste characterization. This change involves deletion of the visual examination expert requirements which must be included in the Batch Data Report as indicated in Table B3-11. These requirements were removed from the text in the permit issued on October 17, 2006 but were inadvertently left within the table.

The Permittees are not requesting any change which would impact the agreement reached with the stakeholders nor will any of these changes impact any Findings of Fact or Conclusions of Law inssued by either the Hearing Officer or the NMED. These changes are simply administrative and informational clarifications.

Revised Permit Text:

Item 1a Table B3-11

Required Information	Radiography	Visual Examination	Comment
Batch Data Report Date	X	X	
Batch number	X	X	
Waste container number	X	X	
Waste stream name and/or number	O	O	
Waste Matrix Code	X	X	Summary Category Group included in waste matrix code

Required Information	Radiography	Visual Examination	Comment
Implementing procedure (specific version used)	X	X	If procedure cited contains more than one method, the method used must also be cited. Can use revision number, date, or other means to track specific version used.
Container type	O	O	Drums, Standard Waste Box, Ten Drum Overpack, etc.
Video media reference	X	X	Reference to Video media applicable to each container. For visual examination of newly generated waste, video media not required if two trained operators review the contents of the waste container to ensure correct reporting.
Imaging check	O		
Camera check		O	
Audio check	O	O	
QC documentation	X	X	
Verification that the physical form matches the waste stream description and Waste Matrix Code.	X	X	Summary Category Group included in waste matrix code
Comments	X	X	
Reference to or copy of associated NCRs, if any	X	X	Copies of associated NCRs must be available.
~~Visual examination expert decisions~~		~~X~~	~~Only applicable if visual examination expert is consulted during visual examination.~~

Required Information	Radiography	Visual Examination	Comment
Verify absence of prohibited items	X	X	
Operator signature and date of test	X	X	Signatures of both operators required for Visual Verification of Acceptable Knowledge
~~Signature of visual examination expert and date~~		~~X~~	
Data review checklists	X	X	All data review checklists will be identified

Item 2

Description:

Revise the HWFP to correct references and tables in Attachment N

Basis:

These changes are administrative and informational in nature and therefore is a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Discussion:

On October 17, 2006, the NMED issued a new permit as a result of a Class 3 modification, negotiations with stakeholders, a public hearing and a final report from the Hearing Officer.

The changes include the following:

- correct a reference to an incorrect section in Section N-3e(1),
- delete the reference to Figure N-4 in Section N-4c since this figure was deleted from the HWFP,
- correct a reference to an incorrect section in Section N-5c,
- correct method reference in Table N-1, and
- correct the "Completeness" column in Table N-2 to correlate with the requirement in Section N-5g.

The Permittees are not requesting any change which would impact the agreement reached with the stakeholders nor will any of these changes impact any Findings of Fact or Conclusions of Law inssued by either the Hearing Officer or the NMED. These changes are simply administrative and informational clarifications.

Revised Permit Text:

Item 2a Section N-3e(1)

When the Permittees receive laboratory analytical data from an air sampling event, the data will be validated as specified in Section N-5d~~e~~. After obtaining validated data from an air sampling event, the data will be evaluated to determine whether the VOC emissions from the Underground HWDUs exceed the COCs. The COCs for each of the nine target VOCs are presented in Permit Module IV, Table IV.F.2.c. The values are presented in terms of micrograms per cubic meter (µg/m^3) and ppbv.

Item 2b Section N-4c

Field sampling data sheets will be used to document the sampler conditions under which each sample is collected. These data sheets have been developed specifically for VOC monitoring at the WIPP facility. The individuals assigned to collect the specific samples will be required to fill in all of the appropriate sample data and to maintain this record in sample logbooks. The program team leader will review these forms for each sampling event.

All sample containers will be marked with identification at the time of collection of the sample. A Request-for-Analysis Form will be completed to identify the sample canister number(s), sample type and type of analysis requested.

All samples will be maintained, and shipped if necessary, at ambient temperatures. Collected samples will be transported in appropriate containers. Prior to leaving the underground for analysis, sample containers may undergo radiological screening. No potentially contaminated samples or equipment will be transported to the surface. No samples will be accepted by the receiving laboratory personnel unless they are properly labeled and sealed to ensure a tamper free shipment.

An important component of the sampling program is a demonstration that collected samples were obtained from the locations stated and that they reached the laboratory without alteration. To satisfy this requirement, evidence of collection, shipment, laboratory receipt, and custody will be documented with a completed Chain-of-Custody Form ~~(Figure N-4)~~. Chain-of-custody procedures will be followed closely, and additional requirements imposed by the laboratory for sample analysis will be included as necessary.

Item 2c Section N-5c

Calibration procedures and frequencies for analytical instrumentation are listed in Section N-4e~~(4)~~.

Item 2d Table N-1

Target Analyte	EPA Standard Analytical Method
Carbon tetrachloride	EPA TO-15[a] ~~EPA SW-846[b]~~ EPA ~~SW-~~8260B[b]
Chlorobenzene	
Chloroform	
1,1-Dichloroethylene	
1,2-Dichloroethane	
Methylene chloride	
1,1,2,2 -Tetrachloroethane	
Toluene	
1,1,1- Trichloroethane	

Item 2e **Table N-2**

Compound	Accuracy (Percent Recovery)	Precision (RPD) Laboratory	Precision (RPD) Field	Required MRL (ppbv)	Completeness (Percent)
Carbon tetrachloride	60 to 140	25	35	2	~~90~~ 95
Chlorobenzene	60 to 140	25	35	2	~~90~~ 95
Chloroform	60 to 140	25	35	2	~~90~~ 95
1,1-Dichloroethylene	60 to 140	25	35	5	~~90~~ 95
1,2-Dichloroethane	60 to 140	25	35	2	~~90~~ 95
Methylene chloride	60 to 140	25	35	5	~~90~~ 95
1,1,2,2-Tetrachloroethane	60 to 140	25	35	2	~~90~~ 95
Toluene	60 to 140	25	35	5	~~90~~ 95
1,1,1-Trichloroethane	60 to 140	25	35	5	~~90~~ 95

Item 3

Description:

Revise the HWFP to correct wording in Attachment B6.

Basis:

These changes are administrative and informational in nature and therefore is a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Discussion:

On October 17, 2006, the NMED issued a new permit as a result of a Class 3 modification, negotiations with stakeholders, a public hearing and a final report from the Hearing Officer.

Some editorial changes are required in Attachment B6 to clarify the HWFP.

Revised Permit Text:

Item 3a Attachment B6, Item 7

Are procedures in place to ensure that Summary Category Groups are defined as follows:

S3000- Homogeneous solids are solid material, inorganic process residues, inorganic sludges, salt waste, and pyrochemical salt waste excluding soils, that do not meet NMED criteria for classification as debris and are at least 50 percent by volume homogeneous ~~homogenious~~ solids or comprise the majority of the waste stream

S4000- Waste streams that are at least 50 percent by volume soil/gravel, or comprise the majority of the waste stream

S5000- Waste streams that are at least 50 percent volume materials that meet the NMED criteria for debris, or comprise the majority matrix of materials. The criteria for debris are solid materials intended for disposal that exceed 2.36 inch particle size and is a manufactured object, plant or animal matter, or natural geologic material. Particles smaller than 2.36 inches in size may be considered debris if the debris is a manufactured object and if it is not a particle of S3000 or S4000 material.

Item 3b Attachment B6, Item 8

Does the generator/storage facility have procedures in place to ensure that the following waste characterization parameters will be obtained:

- Determination whether TRU mixed waste streams comply with the applicable provisions of the TSDF-WAC
- Determination whether TRU mixed wastes exhibit a hazardous characteristic per 20.4.1.200 NMAC (incorporating 40 CFR 261 Subpart C)
- Determination whether TRU mixed wastes are listed per 20.4.1.200 NMAC (incorporating 40 CFR 261 Subpart D)
- Estimation of waste material parameter weights

Item 3c Attachment B6, Item 152

~~CONFIRMATION~~ AUGMENTATION OF ACCEPTABLE KNOWLEDGE

Does the generator site have written procedures for the augmentation of all acceptable knowledge information using sampling and analysis. Sampling and analysis consists of radiography, visual examination, headspace gas, and homogeneous waste sampling and analysis. Do site procedures indicate that the following sampling and analysis will be conducted based upon the results of the Determination Request

Any scenario denied - 100% RTR or VE and statistical HSG or solids S&A

Scenario 1 Granted -No sampling and analysis radiography/visual examination is required

Scenario 2 Granted-Radiography/visual examination is not required but statistical HSG or solids S&A is required

Scenario 3 Granted-100% RTR or VE is required, sampling and analysis is not required

Item 3d Attachment B6, Item 155

Does the generator site have procedures for reevaluating acceptable knowledge if the results of the waste ~~confirmation~~ characterization indicate that the waste to be shipped does not match the approved waste stream or if the data from radiography or visual examination for waste streams without an AK Sufficiency Determination exhibit this discrepancy? Does this procedure describe how the waste is reassigned, acceptable knowledge reevaluation, and appropriate hazardous waste codes are assigned?

Item 3e Attachment B6, Item 161

Do site procedures ensure that headspace gas and solid/soil analytical data are used to resolve AK assignments for hazardous waste, as necessary? If a constituent is detected in headspace gas that the site believes isn't from the waste process, the site must provide documentation to support any determination that organic constituents are associated with packaging materials, radiolysis, or other uses not consistent with solvent use. If the source of the detected headspace gas solvents cannot be identified, the appropriate F listing will be assigned. If a constituent in a listed waste is present in solid/soil analytical results, the appropriate listed waste shall be added to the waste stream. F-listed waste assigned by acceptable knowledge shall not be removed based on ~~confirmatory~~ headspace gas or solids analysis. In the case of totals/TCLP analysis, do procedures reflect the allowance for concentration assessments, wherein sites may add or remove total/TCLP and non-toxic F003 constituents found in headspace and solid/soil analyses?

Item 3f Attachment B6, Item 237

Do procedures or other supporting documentation ensure that the physical form determined by radiography ~~are~~ is compared with the waste stream descriptions? If discrepancies are noted, will a new waste stream be identified?

Item 4

Description:

Revise the table in Module V and figures in Attachment L to reflect new coordinates and elevations based upon a recent well survey.

Basis:

These changes are administrative and informational in nature and therefore is a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Discussion:

The monitoring wells for the WIPP facility have recently been re-surveyed as requested by the NMED Groundwater Bureau on October 17, 2006. This data has recently been transmitted to the NMED with a commitment to supply a Class 1 modification updating the appropriate table and figures in Module V and Attachment L of the HWFP. This modification complies with that commitment.

Revised Permit Text:

a. Table V.C.1

Table V.C.1 - Well Locations				
Well Name	**State Plane Coordinates**	**Top of Casing Elevation (ft amsl)**	**Screen Interval Depth (ft below ground surface ~~casing top~~)**	**Sampled Unit**
WQSP-1	~~663600E, 503774N~~ 663595E, 503784N	3419.2	702 - 727	Culebra
WQSP-2	~~667598E, 505542N~~ 667580E, 505537N	3463.9	811 - 836	Culebra
WQSP-3	~~670576E, 504030N~~ 670573E, 503991N	~~3480.3~~ 3480.1	844 - 869	Culebra
WQSP-4	~~670658E, 495000N~~ 670645E, 494986N	~~3433.0~~ 3433.1	764 - 789	Culebra
WQSP-5	~~667170E, 493666N~~ 667165E, 493665N	3384.4	646 - 671	Culebra
WQSP-6	~~663691E, 494942N~~ 663681E, 494948N	3364.7	581 - 606	Culebra
WQSP-6a	~~663625E, 494969N~~ 663615E, 494974N	3363.8	189 - 214	Dewey Lake

b. Revised Figures L-10 to L-16 are attached.

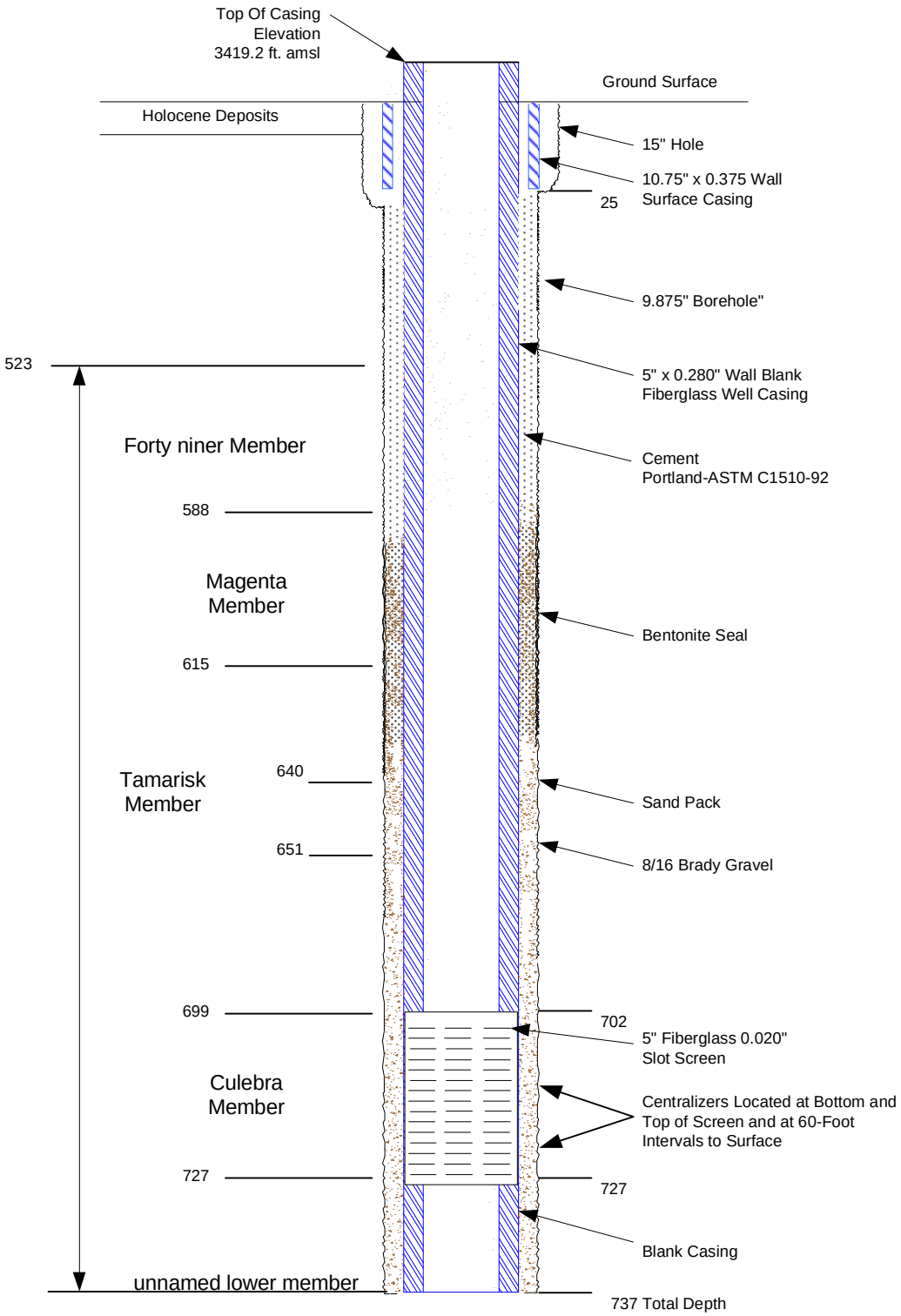
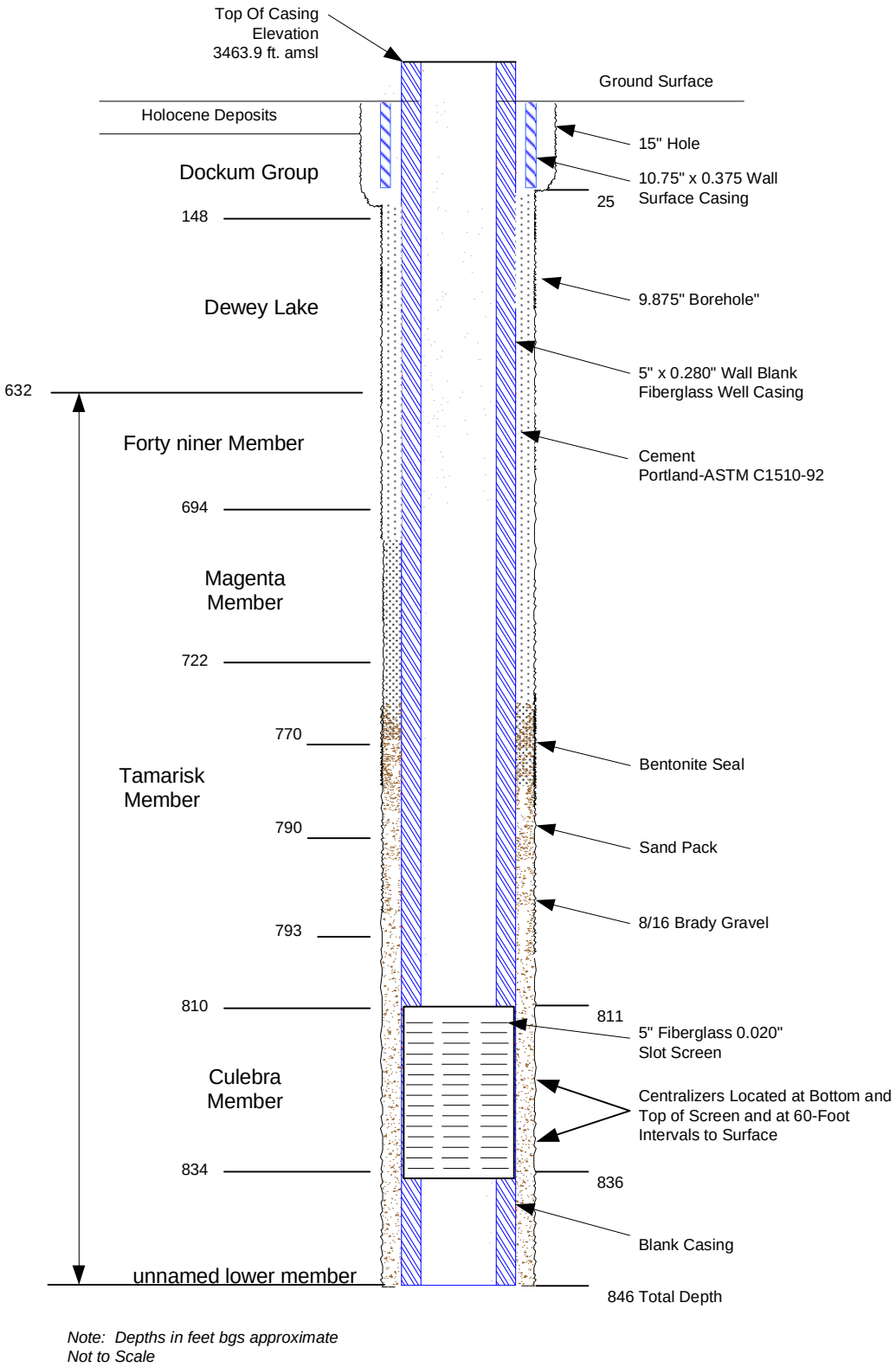


Figure L-10
As-Built Configuration of Well WQSP-1



Note: Depths in feet bgs approximate
Not to Scale

Figure L-11
As-Built Configuration of Well WQSP-2

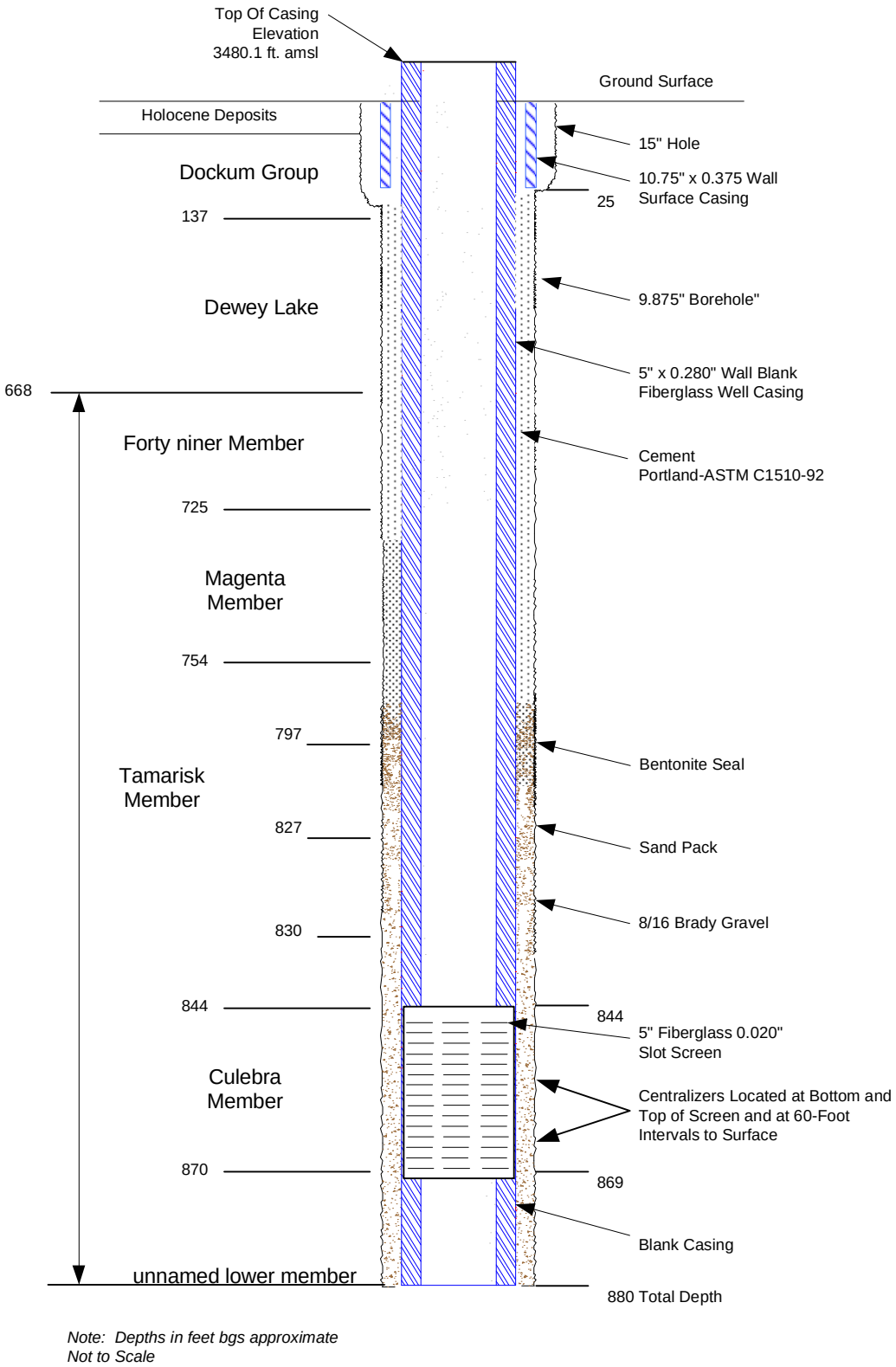
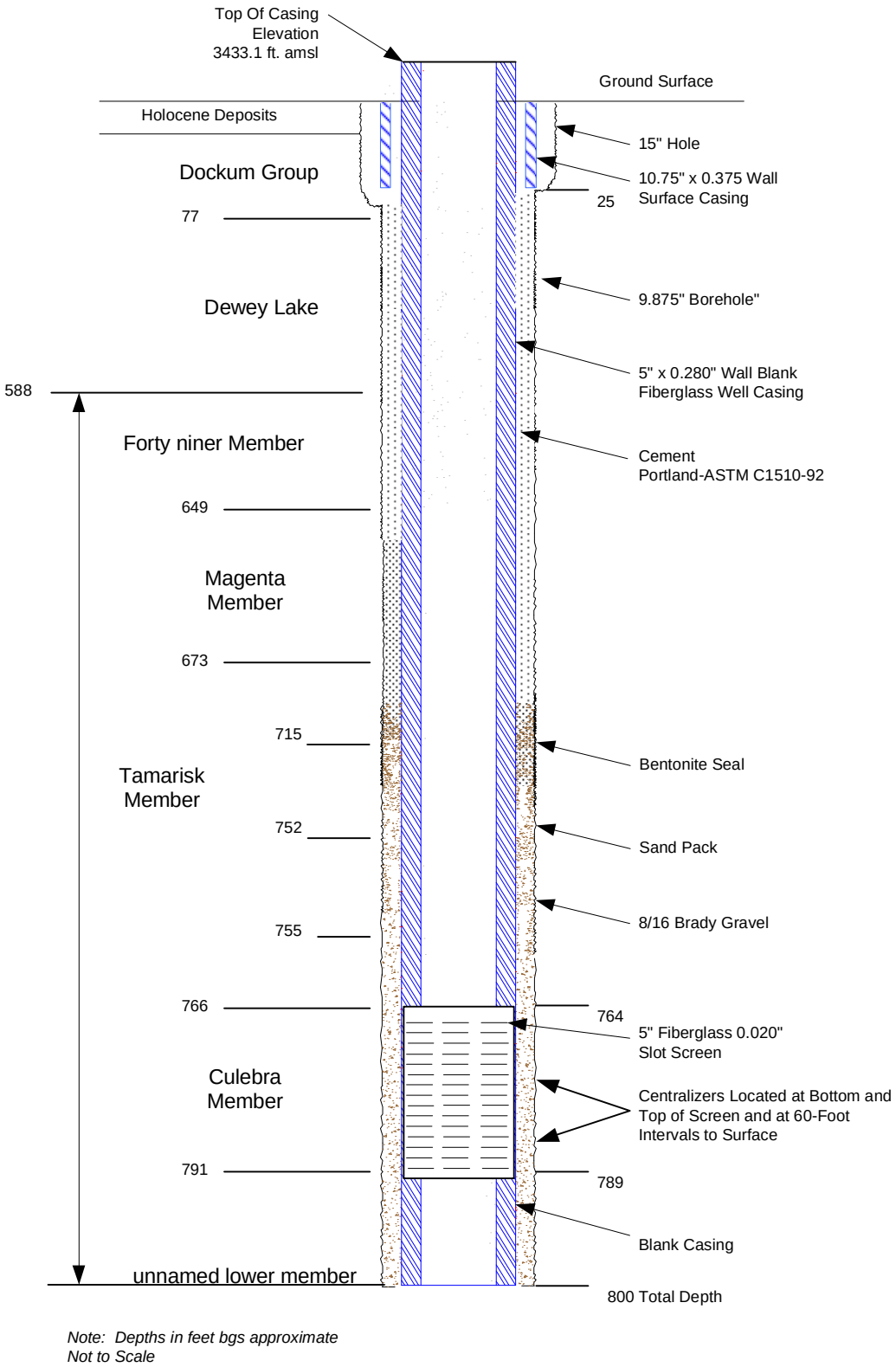
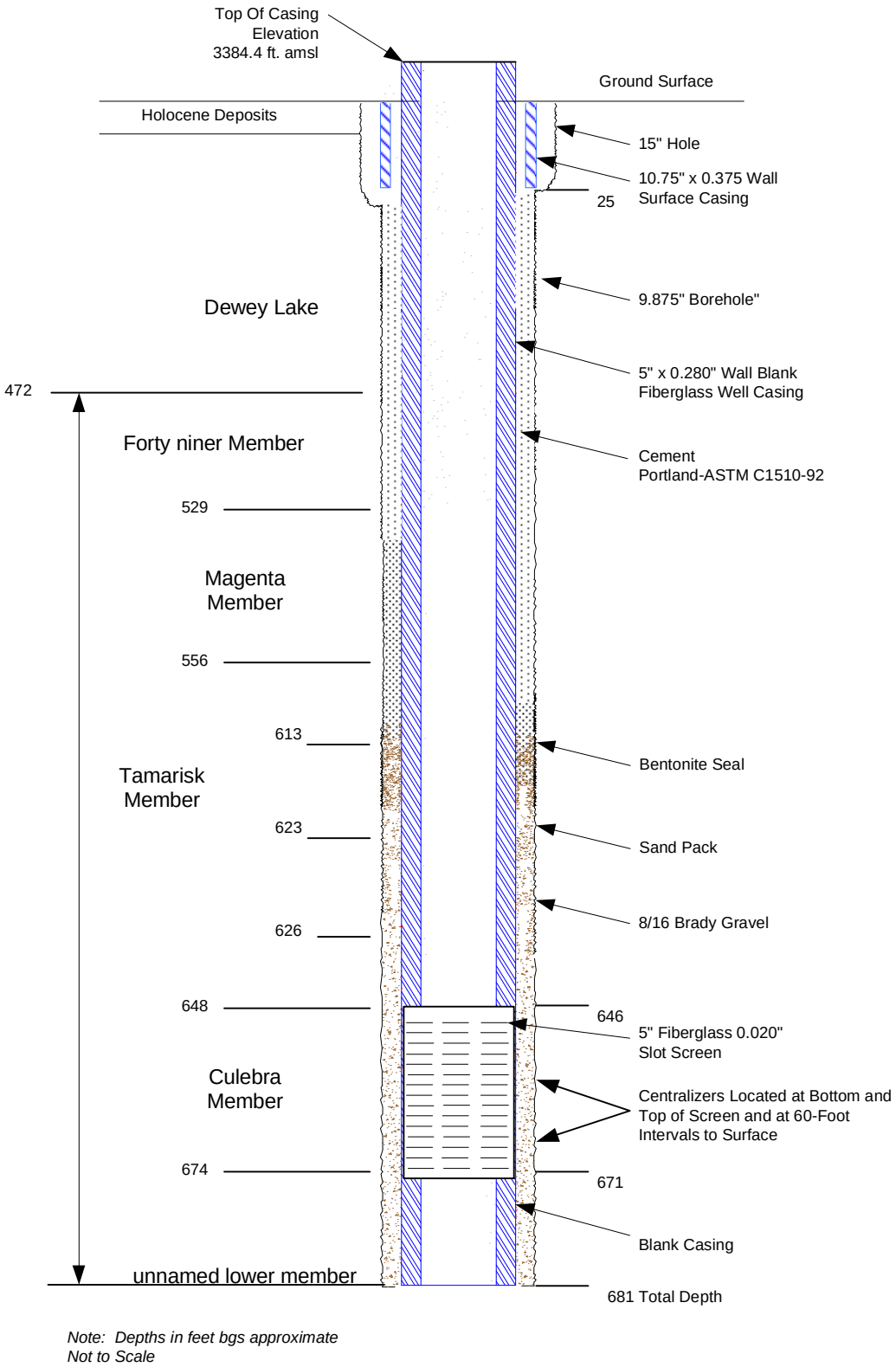


Figure L-12
As-Built Configuration of Well WQSP-3



Note: Depths in feet bgs approximate
Not to Scale

Figure L-13
As-Built Configuration of Well WQSP-4



Note: Depths in feet bgs approximate
Not to Scale

Figure L-14
As-Built Configuration of Well WQSP-5

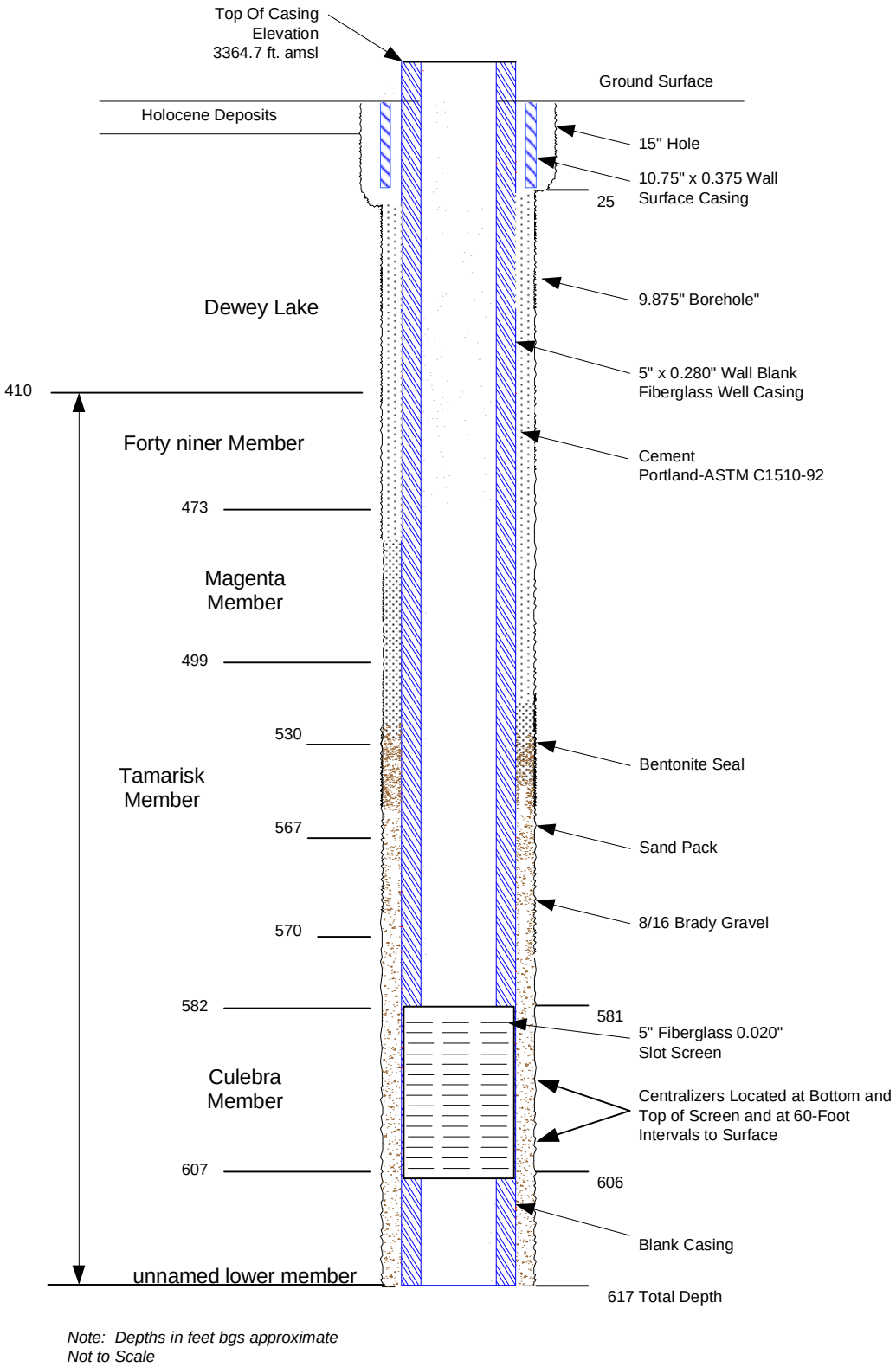
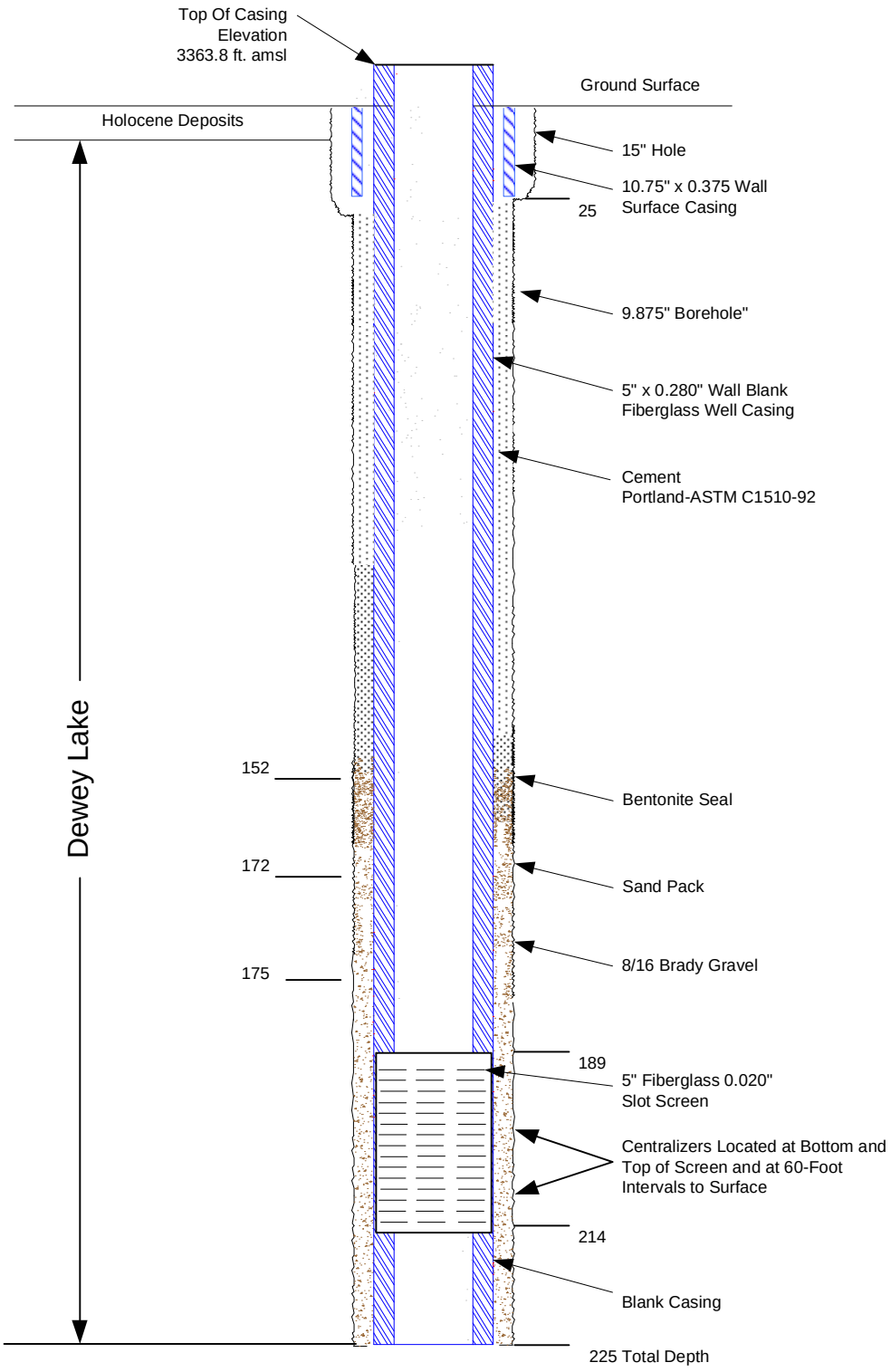


Figure L-15
As-Built Configuration of Well WQSP-6



Note: Depths in feet bgs approximate
Not to Scale

Figure L-16
As-Built Configuration of Well WQSP-6A