CLEAN HARBORS
GRASSY MOUNTAIN FACILITY

SURFACE IMPOUNDMENT B
DESIGN ENGINEERING REPORT

(HAL Project No.: 064.84.100)

NOVEMBER 2017

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HANSEN ALLEN & LUCE INC
ENGINEERS

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EXECUTIVE SUMMARY

In our professional opinion:

1. The design of surface impoundment B presented herein meets the intended design requirements of 40 CFR §264 and UAC R315-264 for Surface Impoundments.
2. The double lining system consisting of a top 60-mil HDPE geomembrane liner and a bottom composite 60-mil HDPE geomembrane liner overlying a compacted clay liner will meet the compatibility, strength, and permeability requirements for the proposed surface impoundment.
3. The lining systems will cover all areas expected to come into contact with waste materials in the surface impoundment.
4. The leak detection system is adequate in meeting the Action Leakage Rate of 100 gallons per acre per day without causing backup of leachate in the leak detection system and without exceeding one foot of head on the bottom liner system floor area of the leak detection system.
5. The surface impoundment meets the Action Leakage Rate (ALR) of 100 gallons per acre per day for surface impoundments as provided for in Module V – Surface Impoundments of the Grassy Mountain Facility Permit.
6. A freeboard of 3 feet after long term settlement (4 feet at the time of construction) will provide adequate protection from overtopping of the surface impoundment embankments.
7. Based on the Geotechnical Investigation provided, the subsurface soils will provide suitable support for the surface impoundment, the 3 horizontal to 1 vertical interior and exterior embankment slopes provide sufficient stability against failure, on-site soils are suitable for embankment and clay liner construction, and construction of the surface impoundment is feasible.
8. The proposed embankment erosion protection, which has been successfully used on previous landfill and surface impoundment projects, is suitable for the proposed surface impoundment.
9. The existing storm water management system is adequate for construction and operation of the proposed surface impoundment.
10. The proposed closure plan should leave the area of the surface impoundment “clean” upon completion of closure and should leave the site free of continued maintenance.
11. The post-closure plan will provide a year of groundwater monitoring using monitoring wells that will be installed for surface impoundment monitoring. Should statistical analysis show no statistically significant hazardous contamination, the monitoring wells can be abandoned or removed without adverse effects on the site or monitoring system.

CHAPTER 1 - INTRODUCTION

BACKGROUND

Clean Harbors, Grassy Mountain Facility, is proposing the construction of a new surface impoundment (designated Surface Impoundment B) to be located in the southwest quarter of Section 16, Township 1 North, Range 12 West, Salt Lake Base and Meridian (see the design drawings in Appendix A). Surface Impoundment B will be located to the south of Landfill Cell 7 in the previous land treatment area that has been closed. Surface Impoundment B will receive non-hazardous wastewaters received from off-site sources and site-generated leachate and wastewaters (excluding PCB-contaminated liquids and sludges) in accordance with Module V Surface Impoundments of the Grassy Mountain Facility Permit. The non-hazardous wastewaters and leachate are often referred to as “liquids” throughout this report.

Scope of Services

The scope of services for this project included the following:

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1. Design of Surface Impoundment B to meet the design requirements for surface impoundments as defined in 40 CFR §264.221 and §264.222 of the Code of Federal Regulations and in UAC R315-264-221 and 222 of the Utah Department of Environmental Quality "Utah Hazardous Waste Management Rules".
2. Provide a closure and post-closure care plan for Surface Impoundment B with cost estimates in accordance with applicable sections of 40 CFR §264.110-120, 144, and 228; and with applicable sections of UAC R315-264-110 through 120, 144, and 228.
3. Provide a closure and post-closure care plan for Surface Impoundment B with cost estimates consistent with Attachment II-7 – Closure and Post-Closure Care Plan in the Grassy Mountain Facility Permit.

This Design Engineering Report for Surface Impoundment B has been prepared to address current federal and state regulations pertaining to liners and leak detection systems for surface impoundments. The following sections are presented in this report: 1) Introduction, 2) Surface Impoundment Design, 3) Action Leakage Rate, 4) Storm Water Management, and 5) Closure and Post-Closure Care, and 6) Construction Quality Assurance.

Permit design drawings for Surface Impoundment B are included in Appendix A. A geotechnical investigation for Surface Impoundment B was completed by Applied Geotechnical Engineering Consultants (AGEC) of Salt Lake City, Utah and is included in Appendix B. The design calculations for the HDPE geomembrane liners are presented in Appendix C. Design calculations for the Leak Detection System (Leachate Collection and Removal System) are presented in Appendix D. Freeboard evaluations for prevention of overtopping of the surface impoundment are presented in Appendix E. Calculations for embankment erosion protection are presented in Appendix F. Surface Impoundment B evaporation calculations are provided in Appendix G. And, closure / post-closure cost calculations are provided in Appendix H.

CHAPTER 2 – SURFACE IMPOUNDMENT DESIGN

GENERAL LAYOUT AND DESIGN

Surface Impoundment B is 361 feet square as measured by top inside dimensions above the primary liner. The top inside dimensions provide an area of approximately 3.0 acres. The design elevation for the top of the perimeter embankments is 4256 feet with a high liquid design elevation (operational high liquid level) of 4252 feet. This provides an initial freeboard within the surface impoundment of 4 feet prior to settlement. The resulting freeboard after the estimated long term settlement is 3 feet. The high liquid design elevation is 9.4 feet above the low point in the primary sump on the primary liner system. Interior and exterior embankment slopes are designed to be 3 horizontal to 1 vertical (3H:1V).

An operational capacity of 5.0 million gallons is provided between the floor and the operational high liquid level. The top three feet (after settlement) will be maintained as freeboard to comply with the conditions of Module V of the Grassy Mountain Facility Permit. Permit design drawings are provided in Appendix A.

GEOTECHNICAL INVESTIGATION

A geotechnical investigation for Surface Impoundment B was completed by Applied Geotech (AGEC) of Salt Lake City, Utah. The geotechnical investigation report is provided in Appendix B. Results and recommendations provided in the geotechnical investigation report will be referenced in various sections of this report.

General results and recommendations provided in the geotechnical investigation are presented below.

1. The natural subsurface soils encountered at the site are suitable for support of the proposed surface impoundment.
2. Embankment slopes may be constructed at 3 horizontal to 1 vertical or flatter.
3. The on-site soil is suitable for construction of the proposed embankments. The upper mud flat soils are suitable for the clay liner. Significant moisture conditioning (wetting or drying) of the material will likely be needed to facilitate compaction.
4. It is anticipated that required excavation can be accomplished using typical excavation equipment. Excavation extending more than several feet below existing grade will require use of low ground pressure equipment or equipment supported from above the excavation area. Care should be exercised to avoid disturbing the natural soil on the slopes and base of the impoundment during excavation and during placement of clay liner.
5. Settlement from liquefaction is estimated to be on the order of 1½ inches or less. Settlement from liquefaction will be within acceptable tolerances.
6. Stability of the interior and exterior embankment slopes have a minimum safety factor against failure of 2.9 under long-term static conditions and 2.1 under seismic conditions.
7. Long-term settlement after construction and filling of the surface impoundment to capacity ranges from 18 inches under the west embankment to 22 inches below the east embankment, and 7 inches to 13 inches under the floor area.

8. Bearing capacity of the clay liner material is 1,500 pounds per square foot under static conditions and 2,000 pounds per square foot under impact loading conditions.
9. Provide erosion protection on the exterior embankment slopes. Consideration should be given to using the same graded gravel material that has been used on previous construction projects at the facility.
10. Fill areas should be cleared of topsoil, unsuitable fill, organics, debris, and other deleterious materials prior to placement of fill.
11. Subgrades to fill materials should be scarified to a depth of 8 inches and re-compacted to at least 95 percent of maximum dry density determined by ASTM D-698 with the moisture content within approximately 2 percent of optimum.
12. Subgrade below the proposed clay liner should be cut to undisturbed natural soil or properly compacted embankment.
13. Where soft wet soil conditions are encountered, consideration may be given to excavating to approximately 1 to 2 feet below the proposed clay liner subgrade and placing a geotextile grid (such as TX7 or equivalent) underlain be a filter fabric. A sacrificial clay liner material slightly below optimum moisture content may be placed and compacted above the geotextile grid to provide stabilization for construction of the first lift of clay liner in the soft wet areas. Another consideration would be to place a layer of cement treated soil below the base of the clay liner in these areas to provide a stable base for construction.
14. Embankments may be constructed using a mixture of clay, silt, or sand soils.
15. Embankment fill should be compacted to at least 95 percent of the maximum dry density as determined by ASTM D-698 with the moisture content ideally within 2 percent of optimum.
16. Fill should be placed in uniform lifts not exceeding 8 inches thick for compaction with heavy compaction equipment and no more than 4 inches thick for compaction with hand operated compaction equipment.
17. Clay liner materials previously mined from the mud flats near the site is classified as CL, CL-ML, and ML soil based on the Unified Soil Classification System. These soils have been successfully used in obtaining a permeability of 1×10^{-7} cm/sec or less. To consistently achieve the required permeability, a deflocculant should be added.
18. The clay liner material should be compacted to at least 95 percent of the maximum dry density as determined by ASTM D-698 at a moisture content that is not more than 3 percent below optimum.
19. Test fills should be used to determine construction, density and moisture contents that will consistently achieve the permeability required.
20. Positive measures should be taken to keep the clay liner surface moist to prevent surface cracking.

LINING SYSTEM PROPERTIES AND STRENGTH EVALUATIONS

40CFR §264.221(a)(1) and UAC R315-264-221(a)(1)

The HDPE liners must have appropriate chemical properties and must have sufficient strength and thickness to prevent failure due to the following conditions: pressure gradients (static head and external hydrogeologic forces), chemical compatibility (contact with waste materials and leachate), climatic conditions, installation stresses, and stresses from daily operation. Summarized below are design considerations in analyzing the above indicated stresses for conditions to be encountered in Surface Impoundment B. Supporting calculations are provided in Appendix C.

Pressure Gradients

Static Head is a result of liquids creating pressure head above the liner systems. The membrane (impermeable) portions of the primary and secondary liner systems consists 60-mil high density polyethylene (HDPE) geomembrane. Since the hydraulic head on the secondary (lowermost) liner system must be restricted to less than one foot, the maximum hydrostatic forces are expected to occur as a result of liquid depth above the uppermost, or primary, liner system.

Stresses to the geomembrane liner from the normal loading of liquids placed above the liner system occur when the liner is required to bridge gaps in the materials that support the liner. The widest gaps the liner system must span are between the ridges in the geonet material that makes up the drainage medium for the leak detection system.

Strength of the liner to withstand stresses caused by bridging the gap between ridges of the geonet was analyzed by a methodology proposed by J.P. Giroud in a publication entitled, "Design of Geotextiles Associated with Geomembranes," (Giroud, J. P., 1982). Normal loads used in the analysis included forces caused by the liquids placed on top of the.

The high liquid elevation in the surface impoundment is 4252 feet, which provides a liquid level 9.4 feet above the lowest point on the primary liner system (elevation 4242.6 feet). Assuming a liquid density of 65 lbs/ft^3 (which is slightly above the density of water) results in a hydrostatic pressure of 611 lbs/ft^2 or 29.2 kN/m^2. The minimum yield tensile strength of 60-mil HDPE geomembrane from several geomembrane manufacturers is 126 lbs/in or 21.8 kN/m. Calculations were completed on the geomembrane using a gap of 0.5 inch which is larger than the gap expected for the underlying geonet materials. Results of calculations provided in Appendix C show a safety factor of 34 against hydrostatic pressures exceeding the yield tensile strength of the geomembrane.

Hydrogeologic Forces are a result of uplift on the lining system created by the presence of ground water. The lowest point on the lowermost, or secondary, geomembrane is 4241.1 (see Sheet C-3 of the design drawings in Exhibit A). The geotechnical investigation completed for Surface Impoundment B shows an estimated settlement in the proximity of the sumps of nearly 8.5 inches (about 0.7 foot) resulting from embankment and liquid loading and from potential liquefaction under seismic conditions. The estimated elevation of the low point on the secondary geomembrane after settlement is 4240.4 feet.

The estimated historic high groundwater elevation in the vicinity of Surface Impoundment B is between 4232 and 4232.5 feet which occurred in the spring of 1986. Assuming a historic high groundwater elevation of 4232.5 results in a separation between ground water and the lowest point of the secondary geomembrane after settlement of 7.9 feet.

With a projected separation of 7.9 feet between the historic high ground water elevation and the low point on the secondary geomembrane, there should be no hydrogeologic pressures on the geomembrane liners within the surface impoundment.

Chemical Compatibility

Based on the criteria provided in the Grassy Mountain Facility Permit (Paragraph V.B.3 of module V – Surface Impoundments), waste placed in the surface impoundment that is different from waste that has historically been accepted by Clean Harbors facilities will be tested to ensure compatibility with the liner system in accordance with one of the Waste Analysis Plans.

Industry compatibility testing for the waste materials may also be accepted. The waste analysis plans are provided in Attachment II-WAP and Attachment II-PCB of the Permit. Materials that show to be incompatible with the geomembrane liners will not be placed in Surface Impoundment B.

Resistance to Climatic Conditions

Climatic conditions that may adversely affect the geomembrane liner systems are temperature extremes and ultraviolet (UV) radiation exposure. The geomembrane materials proposed for the lining systems in Surface Impoundment B consist of high density polyethylene (HDPE). Historically these materials have been successfully used at the Grassy Mountain Facility in landfill applications and their closures, and in Surface Impoundment A. The uppermost liner systems in several of the facilities have been exposed to climatic conditions for more than two decades and continue to remain serviceable.

Temperature Extremes affect the yield and tensile properties of the HDPE geomembrane materials. Laboratory tests were conducted by Gundle Lining Systems, Inc. (currently GSE) to determine the elongation and tensile strength properties of HDPE liner under different temperature conditions. The results from these tests, which would be generally representative of typical HDPE geomembranes manufactured for waste disposal applications, are presented in Laboratory Report #443 and Laboratory Report #207. Strength properties of the HDPE geomembrane material were tested in the laboratory while subjected to varying temperatures. According to the results, the yield strength increases with decreasing temperature and elongation at yield decreases with decreasing temperature. For example, the elongation at yield decreased for both the 80 mil and 40 mil HDPE liner from 15 percent at 20°C (68°F) to 6.7 percent at -50°C (-58°F). Although -50°C is an extreme temperature not anticipated at the Grassy Mountain Facility, the tensile properties at -50°C were assumed in evaluating elongation at yield. A tensile strength of 126 lbs/in at 20°C is appropriate for areas of the geomembrane liner system subjected to tensile stresses since liquids placed above the geomembrane liners will mitigate temperature extremes and will provide a more moderate temperature.

The tensile yield strength was used to determine the ability of the HDPE geomembrane to bridge a 0.5-inch gap which is wider than the gap that will be expected in the geonet materials. The evaluation resulted in a safety factor of 34 against failure.

Other supporting documentation regarding effects of low temperatures on HDPE geomembrane is provided in GSE Technical Note TN010. The document states that ASTM D746 (Standard Test Method for Brittleness Temperature of Plastics and Elastomers by Impact) was used to determine the brittleness performance of HDPE resins. Test results show that there were no indications of failure at temperatures as low as -90°C (-130°F).

Ultraviolet (UV) Radiation Exposure causes deterioration which changes mechanical properties and limits serviceable life of plastic polymers. The various manufacturers of HDPE geomembranes used in lining waste add carbon black in the manufacturing process at a rate of 2-3%. The Geosynthetics Research Institute at Drexel University has an ongoing study (GRI White Paper #6, Geomembrane Lifetime Prediction: Unexposed and Exposed Conditions) regarding the life expectancy of geoembrane materials. The study began for geomembranes under exposed conditions in 2005 using a fluorescent UV light source to accelerate the weathering process of the material. Their correlation studies between field performance and fluorescent UV light exposure showed an acceleration factor of 6.8. After 6 years of accelerated exposure the HDPE geomembrane with 2-3% carbon black continued to retain 80-85% of its strength. The lifetime expectancy for geomembrane materials is generally accepted to be until

the strength reduction has reached 50%, or its half-life. As of the February 8, 2011 revision to the published study, exposed HDPE geomembrane in dry and arid climates (which is the type of climate exposure at Grassy Mountain) has an exposed lifetime prediction greater than 36 years. The testing for the study is ongoing and is expected to be updated periodically.

Resistance to Installation Stresses

Installation of the geomembrane materials will be completed by a contractor with significant experience in HDPE geomembrane. The only vehicular equipment that will be allowed to operate on the geomembrane materials during installation will be low ground pressure type ATV's after approval. The manufacturer's installation specifications and the requirements of the Grassy Mountain Facility Construction Quality Assurance Plan will also be followed for approvals provided and to provide documentation and certifications associated with the quality of the materials used and the quality of installation completed.

With the exception of cold weather deployment, it is recommended that the geomembrane liner systems be installed to provide slack at each seam equal to one percent of the panel width. This slack is recommended to reduce the potential of stress cracking at the seams resulting from high tensile stresses that can otherwise develop during cold temperature extremes.

Resistance to Stresses of Daily Operation

Daily operations mainly consist of adding and removing liquids in the impoundment. There may also be an occasional cleaning of solid materials that settle out of the liquids. Liquids will be added and removed using equipment that will minimize the potential for damage to the lining systems. Cleaning of solids from the surface of the uppermost liner should only be by equipment and methods that will not result in damage to the geomembrane materials, e.g. washing, sweeping, use of approved low ground pressure vehicles, and other approved methods.

LINER SYSTEM FOUNDATION

40 CFR §264.221(a)(2) and UAC R315-264-221(a)(2)

The foundation must be capable of resisting pressure gradients above and below the liner and prevent failure of the liner systems due to settlement, compression, or uplift. Supporting calculations are provided in the geotechnical investigation report provided in Appendix B and in the liner system calculations provided in Appendix C.

Support to Resist Pressure Gradients

The geomembrane lining systems are directly supported by the compacted clay liner that forms the lowermost layer of the secondary composite liner system. The compacted clay liner has a bearing capacity of 1,500 lbs/ft^2. The bearing capacity of the clay liner is greater than the normal loading of approximately 611 lbs/ft^2 that will be applied from the liquid waste in the impoundment.

There are no expected uplift forces or pressures from underlying clay liner or foundation materials.

Prevent Failure to Settlement, Compression, or Uplift

Results from the geotechnical investigation provide long term settlement estimates and differential settlement estimates for the embankments and the floor area of the surface impoundment. Settlement estimates are primarily a result of consolidation (or compression) within the foundation soils. The east and west embankments are estimated to settle about 20 inches and 15 inches, respectively without the loading from liquids and as much as 17.5 inches and 22 inches, respectively at full capacity. The estimated elevation difference between east and west embankments after settlement is about 5 inches.

The floor is expected to have 1 to 6 inches of settlement (from the west side to the east side) prior to filling the surface impoundment with liquid. When filled to capacity the floor is estimated to settle from about 7 inches to about 13.5 inches (from the west side to the east side). Therefore, the differential settlement between the floor and the east and west embankments is 11.5 inches and 10.5 inches, respectively, with the embankments settling more than the floor. The higher floor elevations are also projected to settle more than the lower floor elevations.

Since the embankments are projected to experience more settlement than the floor area, the geomembrane liners will experience a shortening rather than lengthening of slope lengths. The shortening of slope lengths will not result in any added tensile stresses in the liner systems. The liner systems will also experience some movement in adjusting to settlement since the overlying materials will consist of liquids that will not hold the liner systems rigidly in place. It is not anticipated that the movement that the liner systems might experience will result in failure of the geomembrane liner systems.

The only potential for uplift forces or pressures on the geomembrane linier systems is from displacement of underlying foundation or clay liner materials due to uneven loadings within the surface impoundment or from failure of the interior embankment slopes. Since the load on the liner systems will not exceed the bearing capacity of the clay, and since the loading will be nearly uniform, there should be no displacement to the clay liner or the foundation soils from normal loading conditions that will cause uplift forces on the geomembrane liner.

According to the geotechnical investigation completed by AGEC, there is a safety factor against failure of the interior embankment slopes of 2.9 under long-term static conditions and 2.1 under seismic conditions. Therefore, slope failure is not expected to cause any uplift forces on the geomembrane liner systems.

EXTENT OF LINER SYSTEM INSTALLATION
40 CFR §264.221(a)(3) and UAC R315-264-221(a)(3)

The surface impoundment is constructed entirely of raised embankments to provide complete containment of liquids placed within the raised embankments. The double liner and leak detection (leachate collection and removal) system with be constructed and installed to cover the entire liquid containment area within the surface impoundment. The facility also anticipates installing a dewatering box on the embankment of the surface impoundment for operational purposes in separating liquids. A 60-mil HDPE textured geomembrane liner will be installed to extend across the top of the embankment under the location of the dewatering box. An additional 60-mil HDPE textured geomembrane protective sheet will also be placed above the uppermost liner system on the interior slope where liquids from the dewatering box will be discharged into the surface impoundment.

The liner systems will, therefore, cover all areas of the surface impoundment likely to be in contact with wastewater or leachate.

EXEMPTIONS FROM DESIGN REQUIREMENTS

40 CFR §264.221(b) and UAC R315-264-221(b)

No exemptions are being requested from design requirements in 40 CFR §264 or R315-264.

LINING AND LEAK DETECTION SYSTEMS DESIGNS

40 CFR §264.221(c) and UAC R315-264-221(c)

Federal and State Regulations require that surface impoundments be designed and constructed with two or more liner systems and a leachate collection and removal system between each of the liner systems. The lowermost leachate collection and removal system is also considered to be the leak detection system.

Surface Impoundment B is designed with two liner systems and a leachate collection and removal system between the liner systems that serves as the leak detection system. The liner systems will consist of a top (primary) synthetic liner consisting of 60-mil HDPE geomembrane, and a bottom (secondary) composite synthetic liner consisting of 60-mil HDPE geomembrane overlying a minimum three-foot thick compacted clay liner (CCL). The leak detection system will consist of a synthetic geonet material placed between the geomembrane liner systems across the floor and on the interior slopes of the surface impoundment. The floor of the surface impoundment slopes toward a sump system in which leachate that enters the leak detection system can be collected for removal. Design drawings presented in Appendix A show the configuration of the liner and leak detection systems. Supporting calculations for design of the liner systems are provided in Appendix C and supporting calculations for design of the leak detection system are provided in Appendix D.

Liner Systems

40 CFR §264.221(c)(1)(i)-(ii) and UAC R315-264-221(c)(1)(i)-(ii)

Top Liner System. The top (primary) liner system consists of a 60-mil HDPE textured geomembrane. The HDPE geomembrane provides an impermeable barrier for containing the liquids placed in the surface impoundment. As presented earlier in this report, the geomembrane liner has material properties and strength sufficient to prevent failure from pressure gradients, physical contact with the liquids to which it will be exposed, climatic conditions, installation stresses, and stresses from daily operation. The foundation materials to the liner system provide support necessary to resist pressure gradients, and to prevent failure from settlement, compression, and uplift. The liner system will also cover all earth materials likely to be in contact with the waste or leachate that will be placed in the surface impoundment.

Composite Bottom Liner System. The composite bottom (secondary) liner system consists of a 60-mil HDPE textured geomembrane placed directly over and in contact with a 3-foot thick compacted clay liner. The geomembrane meets the same criteria in materials and strength as stated above with the top liner system. The compacted clay liner is designed to meet the minimum permeability of 1×10^{-7} cm/sec required by federal and state regulations.

The compacted clay liner will be processed and compacted generally using the same borrow source areas and methodologies that have historically been used at the site for clay liner construction. The methodology used is provided in the construction quality assurance plan for the facility. The geotechnical investigation report completed by AGEC and provided in appendix B includes recommended procedures for mining, processing, placement, compaction, and maintenance of the compacted clay liner.

Leak Detection System (Leachate Collection and Removal System)
40 CFR §264.221(c)(2)(i)-(v) and UAC R315-264-221(c)(2)(i)-(v)

The leak detection system is located between the geomembrane components of the bottom and top liner systems. A sump is located at the low point of the leak detection system into which leachate will be collected for removal.

The surface impoundment floor is designed and will be constructed with slopes of one percent or more. The floor is divided into two planar surfaces that intersect to form a valley along the east-west centerline of the floor. The north surface has a one percent slope to the south and one percent slope to the west providing a resultant slope of 1.41% toward the sump. The south surface mirrors the north surface along the east-west center line and has a one percent slope to the north and one percent slope to the west providing a resultant slope of 1.41% toward the sump. The valley formed by the intersecting floor surfaces is designed with a one percent slope to the sump.

Geonet with a minimum transmissivity of 3×10^{-3} m^2/sec will be installed between the geomembrane liner systems. This is greater than the minimum transmissivity requirements provided in the federal and state regulations of 3×10^{-4} m^2/sec. A higher transmissivity was selected in order to provide flow capacity within the geonet to meet the desired action leakage rate of 100 gallons per acre per day (300 gallons per day for the 3 acre area) as presented in Module V – Surface Impoundments in the Grassy Mountain Facility Permit. In addition to the ALR, Module V of the facility permit also states that a leakage rate above 200 gallons per acre per day (600 gallons per day for the 3 acre area) will require the facility to cease placement of additional liquids in the surface impoundment and to provide a written action plan to locate and repair leaks in the lining system. Sufficient capacity is provided within the geonet to prevent back-up of leachate within the leak detection system and to maintain less than 0.2 foot of head on the bottom liner system at the leakage rate of 600 gallons per day (twice the ALR). A minimum safety factor of 2 was selected at the rate of 600 gallons per day to account for potential biological and chemical clogging. This results in safety factor of 4 in preventing backup of leachate in the system and in maintaining less than 0.2 foot of head on the bottom liner for the ALR of 300 gallons per day.

The geonet is high density polyethylene (HDPE) consistent with the materials used in manufacturing the geomembrane liners. Therefore, waste compatibility with the geomembrane materials will also provide compatibility with the geonet materials. Waste compatibility with the HDPE geomembrane materials is presented in the section of this report on Liner System Properties and Strength Evaluations.

The leak detection sump will consist of ¾-inch rounded washed rock which is assumed to provide a porosity of 30%. The total sump capacity within the pore spaces of the rock is estimated to be 1060 gallons. The pump for the leak detection system should have a minimum capacity of 2.5 gallons per minute. Assuming 4 hours of operation per day, the pump will have the capacity to remove 600 gallons of leachate per day (twice the ALR) in the four hours of operation. Therefore the leak detection sump will have sufficient capacity within the void spaces of the rock and the pump will have sufficient capacity for collection and removal of leachate without causing a back-up into the geonet of the leak detection system.

Leak Detection System Operation
40 CFR §264.221(c)(3)-(4) and UAC R315-264-221(c)(3)-(4)

Attachment II-3 of the Grassy Mountain Facility Permit requires inspections to occur at a minimum every 7 days for the presence of leachate in and for the proper functioning of the leak detection system. The inspection schedule provided should result in proper collection and removal of leachate within the leak detection system to minimize the head on the bottom liner system. If leakage rates are sufficient to require more frequent inspection and removal of leachate from the leak detection system, the inspection schedule should be adjusted accordingly.

The leak detection system is located over 7 feet above the historic high ground water elevation. Therefore, the leak detection system should not be adversely affected by the presence of ground water.

ALTERNATIVE DESIGNS, WAIVERS, AND EXEMPTIONS

40 CFR §264.221(d)-(f) and UAC R315-264-221(d)-(f)

No alternative designs, waivers, or exemptions are requested.

PREVENTION OF SURFACE IMPOUNDMENT OVERTOPPING

40 CFR §264.221(g) and UAC R315-264-221(g)

The surface impoundment is required to be designed, constructed, maintained, and operated to prevent overtopping resulting from normal or abnormal operations; overfilling; wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms, and other equipment; and human error.

Module V – Surface Impoundments of the Grassy Mountain Facility Permit states that 3 feet of freeboard will be provided in the surface impoundments at the facility. The surface impoundment is designed to provide an initial 4 feet of freeboard and 3 feet of freeboard after the effects of differential settlement between the operational high liquid level and the top of the lined surface impoundment embankments. Supporting calculations in evaluating adequacy of the freeboard provided are included in Appendix E.

Normal and Abnormal Operation, and Overfilling

A physical (visual) method of liquid level detection should be provided with markings on the slope of the primary liner system, a gaging pole, or by some other acceptable method to provide verification that normal and abnormal operation of the surface impoundment is not exceeding the high liquid level. Attachment II-3 of the Grassy Mountain Facility Permit requires daily inspections to occur to verify that the required freeboard is maintained within the surface impoundment.

Wind and Wave Action

Wind and wave action primarily consists of: 1) wind setup resulting from tilting, or sloping, or the water surface caused by the movement of surface water toward the leeward shore under the action of sustained wind, 2) from wave height above the tilted water surface, and 3) wave run-up onto the side slope of the surface impoundment.

Average wind velocities were obtained for Aragonite (nearest the facility) from 1997 through 2015. The highest average winds speeds of 25 to 32 miles per hour are predominately from the south-southwest direction. The wind speed of 32 miles per hour was used for the calculations for wind and wave action. The average liquid depth within the surface impoundment at the design high liquid level is 6.5 feet and the longest distance across the liquid surface is a diagonal between opposite corners and is about 477 feet (0.09 mile). Using the data presented, the resulting height from wind set-up is 0.01 foot.

Wave height is also a function of wind speed and distance across the liquid surface. The wave height is calculated to be 0.43 foot from the crest to the valley between waves. The true wave height above the average water surface is half of the height from the valley to the crest of the wave which is 0.22 foot.

Wave run-up is the height to which wave will run up the side slope of the surface impoundment. The calculations show the wave run-up to be 0.67 foot.

The total effect of wind and wave action on the freeboard provided is 0.90 foot. This still leaves 2.1 feet out of the 3 feet of freeboard provided after settlement between the water surface and the top of the lined area inside the surface impoundment. The freeboard provided will prevent overtopping from wind and wave action.

Rainfall and Run-on

Rainfall results in direct precipitation into the surface impoundment and run-on water that may enter from the top of the embankments. No additional water from run-on outside the surface impoundment area is expected since the surface impoundment is constructed of raised embankments. The total area to the outside top of the surface impoundment was used to determine depth of precipitation storage needed to prevent overtopping.

The SCS Curve Number methodology was used to estimate the depth of precipitation that will enter the surface impoundment from the 100-year, 24-hour precipitation event. A weighted curve number of 97 is estimated to represent direct precipitation, precipitation on the lined surfaces, and precipitation runoff from the gravel surface on the top of the embankments. The calculations show the added depth to the liquid within the surface impoundment from precipitation to be 0.25 foot. Adding precipitation to the temporary effects of wind and wave action will result in 1.85 feet of freeboard, and 2.75 feet of freeboard when the temporary effects of wind and wave action cease.

Malfunction of controllers, alarms, and other equipment

There is always the potential of malfunctions associated with level controllers, alarms, and other equipment that may be used to provide warning of overfilling of the surface impoundment. The main protection against overtopping the surface impoundment causing discharges of liquids contained therein onto surrounding areas is with the 3 feet of freeboard provided between the high liquid elevation and the top of the surface impoundment embankments. The total combined effects of wind and wave action is a temporary rise in the liquid surface of 0.90 foot leaving 2.10 feet of freeboard remaining. At the operational high liquid level there is about 8,470 gallons of liquid storage for each 0.01 foot of height within the impoundment. Therefore, should alarms or other warning mechanisms fail with the delivery of a tanker truck (which consists of about 9,000 gallons of liquid) the liquid level would rise less than 0.02 foot. Combining all of the conditions of presented above with a full tanker truck of liquid would still leave 1.83 feet of the freeboard available to prevent overtopping of the surface impoundment. It

should be noted, however, that wind and wave action are temporary. With only the effects of precipitation and malfunctions the rise in liquid level is only expected to be 0.27 foot. The remaining freeboard would then be 2.73 feet.

Human Error

Attachment II-3 of the Grassy Mountain Facility Permit requires daily inspections to ensure maintenance of 3 feet of freeboard. These daily inspections will provide the protection against encroachment on the freeboard and overtopping of the surface impoundment.

EMBANKMENT DESIGN, CONSTRUCTION, AND MAINTENANCE

40 CFR §264.221(h) and UAC R315-264-221(h)

The surface impoundment embankments (dikes) must have sufficient structural integrity to prevent massive failure. Massive failures are prevented by providing proper stability for the embankment slopes and protecting the embankment slopes from erosion. Evaluations and results regarding the structural integrity of the embankments (or stability against failure) are provided in the geotechnical investigation report provided in Appendix C. Calculations supporting erosion control measures for the embankment slopes are provided in Appendix F.

Embankment slope stability

Results of the geotechnical investigation state that the stability of the interior and exterior embankment slopes have a minimum safety factor against failure of 2.9 under long-term static conditions and 2.1 under seismic conditions. These results are based on the 3 horizontal to 1 vertical interior and exterior slopes, using on-site borrow sources for construction, and on compacting the embankment and clay liner materials to a maximum dry density of at least 95 percent as determined by ASTM D-698. The construction quality assurance (CQA) plan for landfill construction (Attachment VI-2, Appendix A of the Grassy Mountain Facility Permit) will also apply to construction of the surface impoundment embankments, clay liner, sumps, HDPE pipe, HDPE geosynthetic liners and geonet, and erosion protection. The CQA plan will be followed during construction to ensure that the construction requirements are met.

Embankment Erosion Protection

On-site inspections show that erosion of the exterior embankment slopes and closure caps of the existing landfill cells at the Grassy Mountain Facility has been effectively controlled by the placement of a gravel layer (stone mulch or gravel armor plating) on the embankment slopes and closure cap surfaces. Surface Impoundment B is designed to receive a three-inch thick stone mulch on the exterior slopes and a four-inch thick gravel layer on the top surfaces of the embankments.

Use of the stone mulch material is in keeping with procedures for controlling erosion on steep side slopes of embankments or cuts as proposed by the Federal Highway Administration in the National Cooperative Highway Research Project NCHRP Report 221 "Erosion Control During Highway Construction Manual on Principles and Practices," (Israelsen, et. al., 1980). The principles presented in this manual were developed for the Transportation Research Board by personnel of the Utah Water Research Laboratory, College of Engineering, Utah State University in Logan, Utah. These same principles, but specific to Utah, were published by the Utah Water Research Laboratory in a report entitled, "Erosion and Sedimentation in Utah: A guide for Control," (Israelsen, et. al., 1984).

The above referenced documents identify a procedure for designing a "stone mulch" to provide erosion control on steep embankment slopes. The stone mulch (gravel armor plating) material used historically at the facility and proposed for use on Surface Impoundment B meets the criteria for the stone mulch proposed in the documents. The design procedure identifies a required thickness for the stone mulch in order to maintain soil loss at less than 1 ton per acre per year during a designated recurrence interval. A 100-year recurrence interval was selected for the erosion control design of the surface impoundment. EPA guidance recommends controlling erosion to a level of less than 2 tons/acre/year (EPA, 1991). Calculations with accompanying assumptions and design procedures used in this analysis are presented in Appendix F. The procedure recommends a minimum stone mulch thickness of one inch on the exterior embankment slopes and no requirement for stone mulch on the top. A minimum four-inch thickness will be placed on the top of the embankments to provide a proper surface for vehicular access around the top of the surface impoundment. A minimum three-inch thickness of stone mulch will be placed on the exterior slopes due to the difficulty in only placing one inch of thickness.

CHAPTER 3 – ACTION LEAKAGE RATE (ALR)

40 CFR §264.222(a) and UAC R315-264-222(a)

The Action Leakage Rate (ALR) is defined as the maximum design flow rate that the leak detection system can remove without the fluid head on the bottom liner exceeding one foot. The ALR must include an adequate safety margin to allow for uncertainties in the design, e.g., slope, hydraulic conductivity or geonet transmissivity, thickness of drainage material, construction, operation, and location of the leak detection system, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the leak detection system, and proposed response actions, e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover, and creep of synthetic components of the system, overburden pressures, etc.

Module V - Surface Impoundment (Paragraph V.G.1.) of the Grassy Mountain Facility Permit provides for an ALR of 100 gallons per acre per day (about 300 gallons per day for the 3 acre impoundment). Flows in excess of the ALR require the facility to provide daily monitoring and to provide notice to the Director within 72 hours.

Paragraphs V.G.2 and 3. State that a leakage rate above 200 gallons per acre per day (600 gallons per day for the 3 acre impoundment) requires the facility to discontinue adding liquids to the surface impoundment and to prepare and implement a written action plan for locating and repairing the leaks. A report documenting repairs, including CQA documentation, must be submitted to the Director and written approval must be received by the Director prior to placing the surface impoundment back in operation.

The leak detection and removal system was designed with capacity sufficient to convey, collect, and remove a leachate volume of 600 gallons per day without exceeding 0.2-foot fluid head on the bottom liner system with a safety factor of 2. This flow rate is double the ALR resulting in a safety factor of 4 for the system to convey, collect, and remove the ALR without exceeding a fluid head of 0.2 foot on the bottom liner system. Calculations are provided in Appendix D.

LEAK DETECTION SYSTEM

The conveyance system will consist of a geonet with a minimum transmissivity of 3×10^{-3} m^2/sec. The boundary conditions in meeting the minimum transmissivity consist of geomembrane above and below the geonet, a hydraulic gradient of one percent, and a minimum normal loading condition of 611 pounds per square foot. The normal loading is based on a liquid depth of 9.4 feet from the lowest elevation on the primary liner system (4242.6) to the high liquid design elevation (4252.0).

LEACHATE COLLECTION (LEAK DETECTION SUMP)

Collection of leachate for removal will be in the leak detection sump located at the low point on the floor. A stage capacity calculation for the leak detection sump where leachate will collect for removal is provided with the calculations in Appendix D. The sump will be filled with ¾-inch rounded washed rock with a total leachate storage capacity within the pore spaces in the rock of 1060 gallons (assuming a porosity of 30%). Therefore, the system has sufficient capacity to collect the ALR of 300 gallons per day (and the 600 gallon per day limit above which the action plan for locating and repairing leaks is required) for removal.

LEACHATE REMOVAL (PUMP)

Leachate collected in the sump from the leak detection system will be removed by a pump that will be lowered into the sump through a 12-inch diameter (SDR-17) HDPE leachate withdrawal pipe. The pump will have the capacity to pump a minimum of 2.5 gallons per minute of leachate into a mobile containment vessel. A minimum pump capacity of 2.5 gallons per minute will provide removal of 600 gallons of leachate within a 4-hour time period. This will meet the requirements of the ALR and of the leakage limit beyond which the surface impoundment will be taken out of service, and the rate at which a plan for locating and repairing leaks will written and implemented before approval will be given by the Director to place the surface impoundment into service.

CHAPTER 4 – STORM WATER MANAGEMENT

GENERAL DESCRIPTION OF STORM WATER MANAGEMENT SYSTEM

Storm water management at the Grassy Mountain Facility provides for the control of surface water drainage, resulting from precipitation events on areas that are tributary to or from the landfill cells and surface impoundments. A portion of the precipitation that falls on the site will infiltrate directly into the ground, a portion will evaporate, some will adhere directly to vegetation, soil, and gravel surfaces, and some will run off and be directed towards collection points or drainage ditches, and then conveyed to containment ponds. The storm water management plan consists of facilities to control runoff inside and outside of the landfill disposal units and surface impoundment facilities. Control of runoff from precipitation which falls both inside and outside of these facilities will be referred to as the runoff management system. The runoff management system must be capable of collecting and controlling the flow rate and volume resulting from runoff during a 25-year, 24-hour storm event. Clean Harbors has conservatively chosen to design the runoff management system based on a 100-year, 24-hour storm event.

The runoff management system inside the landfill cells and surface impoundments will consist of maintaining sufficient storage capacity inside of these facilities to totally contain precipitation from the 100-year, 24-hour precipitation event. A discussion regarding containment of precipitation inside of Surface Impoundment B is provided in the section in Chapter 3 titled "Prevention of Surface Impoundment Overtopping."

Facilities associated with the runoff management system from the non-contaminated areas outside the landfill cells and surface impoundments include containment dikes, conveyance facilities, and ponds. These facilities are designed to handle the flow rates and volumes generated from storm water runoff; including from the exterior embankment surfaces, and from the closure caps of the landfill cells.

Due to the flatness of the terrain on which the Grassy Mountain Facility is located; storm water control facilities are needed to minimize accumulation of runoff along the exterior toes of embankment slopes and in low lying areas around the facility. Such accumulations of uncontaminated storm water would be a nuisance to facility operations. The existing runoff containment ponds at the facility provide a destination point for storm water to collect inside the containment dike systems at the facility. Existing conveyance ditches have been designed to collect and convey uncontaminated storm water to the runoff containment ponds.

SURFACE IMPOUNDMENT B STORM WATER MANAGEMENT

Surface Impoundment B will be located (with Landfill Cell 7) inside the existing containment dike system which surrounds the former land treatment area that was previously abandoned and closed. The former land treatment area is subdivided into four quadrants by existing dikes that were constructed to an elevation of 2 feet above the existing ground surface. Drainage ditches and runoff containment ponds constructed during construction of Landfill Cell 7 will also provide the storm water control system from the embankments of proposed Surface Impoundment B. A more detailed description of these facilities is presented in the "USPCI/ Laidlaw, Inc. "Design Engineering Report – Landfill Cell 7 – Grassy Mountain Facility" dated December 1995 and

prepared by HA&L Engineering. This report was prepared and submitted with the permit application for Landfill Cell 7.

Surface Impoundment B will not increase the flow or the volume of water that will be conveyed or contained within the existing storm water management system. Flow and volume of water will instead decrease due to the direct precipitation that will be contained within the surface impoundment.

Storm water drainage from Surface Impoundment B embankments will be totally contained within the system of containment dikes, conveyance ditches and runoff containment ponds constructed with the construction of Landfill Cell 7. Runoff from the north, and from most of the west and east embankments will be directed to two runoff containment ponds, a permanent runoff containment pond near the S1/4 corner of Section 16; and a temporary runoff containment pond located in the southeast corner of the northwest quadrant of the old land treatment area. Runoff from the south embankment and from part of the west and east embankments will be contained within the containment dike system for the southwest quadrant of the former land treatment area.

The permanent runoff containment pond located at the S1/4 of Section 16 is lined with a 60-mil HDPE geomembrane liner. The temporary runoff containment pond is referred to as a temporary pond because it is anticipated that at some future date, additional landfill units and surface impoundments will be constructed both to the east and south of Landfill Cell 7 and Surface Impoundment B. The temporary runoff containment pond will be re-located to accommodate the construction of the future facilities.

CHAPTER 5 – CLOSURE PLAN AND POST-CLOSURE CARE

40 CFR §264.110-120, 144, & 228 and UAC R315-264-110 through 120, 144, & 228 (as applicable)

CLOSURE PLAN

Surface Impoundment B has a capacity of 5.0 million gallons at the design operational high liquid level and has a lined area of approximately 3 acres. The depth of liquid containment from lowest floor elevation on the top liner system to the operational high liquid level is 9.4 feet.

At closure the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste. The current closure plan for surface impoundments at the facility is provided in Section 5.3 of Attachment II-7 in the Grassy Mountain Facility Permit. The closure plan complies with the federal and state requirements for closure of surface impoundments and is intended to provide for the removal of all contaminated material components used in constructing and operating the surface impoundment.

Remaining Waste Water

Prior to closing the surface impoundment, receipts of wastes will be stopped and the waste water and leachate placed in the surface impoundment will be allowed to evaporate. The Owner may also choose the option for removal of waste water and leachate for closure to occur.

Evaporation of Waste Water and Leachate. The time required for evaporation of waste water and leachate to occur was approximated assuming an estimated annual lake evaporation rate for the Wendover, Utah area of 38.89 inches. This estimate was obtained from research conducted by the Utah Agricultural Experiment Station, Utah State University and is presented the publication "Consumptive Use of Irrigated Crops in Utah, Research Report 145." An average annual precipitation rate of 7.88 inches was obtained or Knolls, Utah from "Annual Precipitation Summary", Western Regional Climate Center – Desert Research Institute – Reno, Nevada. Based on the average annual lake evaporation and precipitation rates, the average annual net evaporation rate from the surface impoundment is 31.01 inches.

The maximum depth of liquid allowed during operation of the surface impoundment is 9.4 feet or 112.8 inches. Using the average annual net evaporation rate it will require about 3.7 years for the liquid to evaporate from an operationally full surface impoundment. Closure costs are based on allowing the liquids to evaporate. Calculations are provided in Appendix G.

Removal of Waste Water and Leachate. Should the Owner decide to remove all or part of the liquids from the surface impoundment prior to closure, the facility closure plan provides for the liquids to be removed and transported to a treatment facility capable of treatment and that has a current NPDES permit.

Waste Residues

Solid residues remaining after evaporation or removal of the liquids will be managed and disposed of as hazardous waste in accordance with the facility waste management plan.

HDPE Geosynthetic and Pipe Materials

Cleaning. The facility's current closure plan states that the HDPE components of the primary liner system, the leak detection system (geonet), and the secondary liner system will be cleaned to a "hard surface" standard as provided in Section 6.0 of Attachment II-7 in the Grassy Mountain Facility Permit. Treatment of rinse water will depend upon the waste codes associated with the surface impoundment. Disposal of rinse waters as leachate is assumed for closure cost purposes.

Removal. Cut geomembrane and geonet materials into manageable sizes for removal and disposal. Remove the geomembrane, geonet, and leachate withdrawal pipe for re-use or disposal. The current facility closure plan allows for the HDPE materials to be re-used at the facility or at other hazardous waste facilities. Otherwise the materials will be managed and disposed of in accordance with the facility waste management plan. Disposal of the materials is assumed for closure cost estimates.

Leak Detection/Leachate Collection Sump Rock

The ¾-inch rock used in the leak detection sump will be removed, managed, and disposed of in accordance with the facility waste management plan. The rock may also be re-used in the sumps of other waste disposal or management units at the facility.

Clay Liner

Examination and Evaluation. Procedures for examining and evaluating potential clay liner contamination are provided in the facility closure plan and are presented below:

1. Examine the clay liner for visual evidence of contamination.
2. Take grab samples of the visually contaminated areas
3. Analyze the samples for parameters appropriate for the waste managed in the surface impoundment.
4. Remove visually contaminated soil for disposal (assume landfill disposal) if required, based on the analyses of the samples.
5. When no visual contamination is observed, samples will be taken from the area most likely to be contaminated (the sump area) and analyzed. The results will determine the options of reuse or disposal of the clay liner material.

Removal. If the clay liner material is determined to be free of contamination the material may either be left in place or removed and stockpiled for reuse elsewhere at the facility. If determined to be contaminated the clay liner material should be removed, managed, and disposed of in accordance with the facility waste management plan.

Embankment and Stone Mulch

Embankment and stone mulch materials should be either left in place or removed and stockpiled for reuse elsewhere at the facility. The area should also be graded to drain to prevent ponding resulting from direct precipitation runoff from surrounding areas.

Groundwater Monitoring Wells

According to the current facility closure plan, groundwater monitoring wells utilized for monitoring of Surface Impoundment B shall continue to be monitored for a period of one year after closure of the surface impoundment. Monitoring will be in accordance with the groundwater monitoring plan. Data collected during the one-year monitoring period with be statistically evaluated with the complete history of monitoring events during the life of the surface impoundment.

1. If there is no statistically significant hazardous contamination detected, the monitoring wells will be abandoned in-place or removed in accordance with regulatory or industry-established standards.
2. If there is statistically significant hazardous contamination detected, Modules VII-Groundwater Monitoring Protection and VIII-Corrective Action for GW Contamination and SW Mgmt Units in the Grassy Mountain Facility Permit will be implemented for corrective actions.

Closure Certification

Certification of closure in accordance with the specifications and the approved closure plan that is signed by the owner or operator and a qualified Professional Engineer will be submitted to the Regional Administrator within 60 days after completion of final closure. Supporting documentation for the certification will also be provided to the Regional Administrator upon request.

POST-CLOSURE CARE

Since closure of Surface Impoundment B provides for removal of all contaminated material components used in constructing the surface impoundment, post-closure care will only consist of the groundwater monitoring as provided in the paragraph on “Groundwater Monitoring Wells” presented herein

COSTS OF CLOSURE AND POST-CLOSURE CARE

The calculations of closure and post-closure care cost are provided in Appendix H.

Closure

There are no anticipated costs associated with removal of liquids from the surface impoundment since the Owner plans to cease the addition of waste water and leachate in the surface impoundment and allow liquids present to evaporate prior to closure. The cost for closure of the surface impoundment is estimated to be about $1,317,000.

Post-Closure Care

All geosynthetic materials used for the liner systems and the leak detection system will be cleaned, removed, and either re-used or disposed of on site or in other waste disposal facilities. The clay liner will be examined and evaluated for contaminated areas. Contaminated material will be removed disposed of as hazardous waste and the remaining clean material will either be left in place or removed and stockpiled for future reuse. Therefore, the only post closure care is associated with the groundwater monitoring wells. Post closure monitoring, and abandonment

or removal of the wells, is discussed previously in the section on Groundwater Monitoring Wells in the Closure Plan. The estimated cost for post-closure care is $15,000.

CHAPTER 6 – CONSTRUCTION QUALITY ASSURANCE

40 CFR §264.19 and UAC R315-264-19

SURFACE IMPOUNDMENT CONSTRUCTION

The Construct Quality Assurance Plan for Landfill Construction and Closure (CQA Plan) provided in Attachment VI-2, Appendix A of the Grassy Mountain Facility Permit covers all aspects that will be required for construction Surface Impoundment B. The only variation is the increased transmissivity of 3×10^{-3} m^2/sec. that will be required for the geonet. The CQA Plan provides a required transmissivity of 5×10^{-4} m^2/sec. Therefore, the approved CQA Plan will be used for construction of the surface impoundment with the modification to the geonet transmissivity as presented.

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APPENDIX A

Surface Impoundment B
Permit Drawings

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.

GRASSY MOUNTAIN FACILITY

SURFACE IMPOUNDMENT B

DRAFT PERMIT DRAWINGS

NOVEMBER 2017

FACILITY LOCATION

KNOLLS, UTAH
Phone: (435) 884–8900

REGIONAL HEADQUARTERS

42 LONGWATER DRIVE
NORWELL, MA 02061
Phone: (781) 792–5000

STATE OF UTAH

VICINITY MAP

PROJECT LOCATION

PROFESSIONAL ENGINEER
GORDON L. JONES
No. 5048470-2202
11/10/2017
STATE OF UTAH

HANSEN ALLEN & LUCE, Inc. ENGINEERS

CONSULTANTS
ENGINEERS

Salt Lake City
Utah

7/95

FILE NAME: PROJECTS\064-6_CLEAN HARBORS\84.100 - SURFACE IMPOUNDMENT B DESIGN\CAD\DESIGN DRAWINGS\G-1 SI-B COVER.DWG
FILE DATE: 11.10.2017 07:59:35 (CAH)

GENERAL NOTES

1. COORDINATES AND ELEVATIONS PROVIDED ARE BASED ON SITE SPECIFIC COORDINATE SYSTEM AND DATUM CONTROL.
2. ALL ELEVATIONS PROVIDED ARE BASED ON ORIGINAL EMBANKMENT DESIGN AND CONSTRUCTION ELEVATIONS.

LINING SYSTEM SUBGRADES & SOIL FILL

1. ALL SURFACES PROVIDING SUBGRADES FOR LINING SYSTEMS SHALL BE PROOF ROLLED FOR SOFT AND/OR YIELDING SURFACES. SOFT AND/OR YIELDING SURFACES SHALL BE COMPACTED TO PROVIDE A FIRM SUBGRADE FOR LINING SYSTEMS.
2. ALL CLAY LINER MATERIALS SHALL BE COMPACTED TO 95% OF ASTM D-698 AT A MOISTURE CONTENT TYPICALLY BETWEEN MINUS 2% AND PLUS 4% OF OPTIMUM. ALL CLAY LINER SHALL MEET THE REQUIRED PERMEABILITY OF 1 X 10-7 CM/SEC.
3. THE SUB-GRADE FOR THE GEOSYNTHETIC MATERIALS SHALL BE FREE OF PROTRUDING ROCKS AND DEBRIS THAT MAY POTENTIALLY CAUSE DAMAGE TO THE GEOSYNTHETIC MATERIALS. THE SUBGRADE SHALL ALSO BE ROLLED WITH A SMOOTH DRUM ROLLER TO LEAVE THE SURFACE SMOOTH.
4. ALL FILL MATERIALS REQUIRING COMPACTION SHALL BE COMPACTED TO 95% OF ASTM D-698.
5. PIPE BACKFILL AND ANCHOR TRENCH BACKFILL SHALL BE COMPACTED TO 90% OF ASTM D-698.

GENERAL GEOSYNTHETICS

1. MANUFACTURER'S CERTIFICATIONS SHALL BE PROVIDED FOR ALL RAW AND MANUFACTURED MATERIALS. CERTIFICATIONS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S MATERIAL SPECIFICATIONS AND PROJECT CQA PLAN CRITERIA AND SHALL INCLUDE ALL TEST DATA FOR MATERIALS DELIVERED AND AT A MINIMUM, THE TEST FREQUENCIES DESIGNATED IN THE MANUFACTURER'S QUALITY ASSURANCE MANUALS AND SPECIFICATIONS AND THE PROJECT CQA PLAN.
2. ALL GEOSYNTHETIC MATERIALS SHALL BE LOADED, TRANSPORTED, OFF-LOADED, STORED, AND HANDLED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
3. AT A MINIMUM, ALL GEOSYNTHETIC MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION GUIDES AND IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND CQA PLAN.

GEOMEMBRANE LINER

1. NO GEOMEMBRANE MATERIALS SHALL BE DEPLOYED IN SUB-FREEZING TEMPERATURES UNLESS APPROVED BY OWNER WITH AN APPROVED COLD WEATHER DEPLOYMENT PLAN.
2. NO SEAMING SHALL BE ALLOWED IN SUB-FREEZING TEMPERATURES WITHOUT OWNER APPROVAL OF AN APPROPRIATE COLD WEATHER SEAMING PLAN AND ONLY AFTER PROPER DEMONSTRATION OF PRE-QUALIFIED TEST SEAMS.
3. FIELD TESTING AND QUALITY CONTROL SHALL FOLLOW, AT A MINIMUM, THE REQUIREMENTS PROVIDED IN THE MOST RECENT VERSION MANUFACTURERS INSTALLATION PROCEDURES, AND/OR THE PROJECT SPECIFICATIONS AND CQA PLAN, WHICHEVER IS MOST STRINGENT.

LEAK DETECTION SYSTEM

1. GEONET SHALL HAVE A TRANSMISSIVITY OF $3X10^{-3}$ M^2/SEC.
2. GEOMEMBRANE MATERIALS SHALL BE CLEANED OF DIRT AND DEBRIS PRIOR TO DEPLOYMENT OF GEONET.
3. THE GEONET SHALL BE FASTENED OR SECURED BY MANUFACTURED APPROVED METHOD.
4. OVERLAPS OF SEAMS SHALL BE, AT A MINIMUM, THE DIMENSIONS RECOMMENDED BY THE MANUFACTURES.

GRAVEL ARMOR PLATING (STONE MULCH)

1. STONE MULCH SHALL BE PLACED TO A MINIMUM THICKNESS OF 4 INCHES ON THE TOP SURFACE AND 3 INCHES ON ALL 3H:1V EXTERIOR SLOPES.
2. MINIMUM D50 SIZE FOR STONE MULCH SHALL BE 1.0 INCH AND SHALL BE VERIFIED BY TESTING.

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G-2	GENERAL NOTES, LEGEND & INDEX OF DRAWINGS

SURFACE IMPOUNDMENT B

C-1	SITE PLAN
C-2	LINER SURFACE PLAN
C-3	SUMP PLANS
C-4	SUMP SECTIONS & DETAILS
C-5	TYPICAL SECTIONS & DETAILS

SECTION & DETAIL IDENTIFICATION

SECTION IDENTIFICATION

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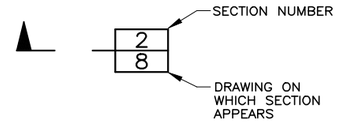

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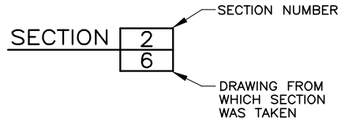

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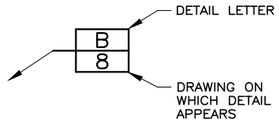

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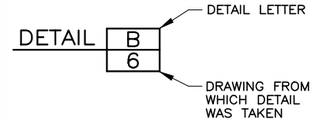

NOTES:

1. IF SECTION AND DETAILS ARE SHOWN ON THE SAME DRAWING AS SECTION CUTS AND SECTION OR DETAIL CALL-OUTS DRAWING NUMBER IS REPLACED BY A LINE.
2. DETAIL LETTERS "I" AND "O" NOT USED.

TABLE OF ABBREVIATIONS

●	=	AIR GAS VENT	MH	=	MANHOLE
@	=	AT	MIN.	=	MINIMUM
AVG.	=	AVERAGE	N.	=	NORTH
C.C.	=	CENTER TO CENTER	N.T.S.	=	NOT TO SCALE
℄	=	CENTER LINE	O.C.	=	ON CENTER
CLR.	=	CLEARANCE	PC	=	POINT OF CURVE
CONT.	=	CONTINUOUS	PI	=	POINT OF INTERSECTION
CPP	=	CORRUGATED POLYETHYLENE PIPE	PSI	=	POUND PER SQUARE INCH
DIA.	=	DIAMETER	PT	=	POINT OF TANGENT
DWG	=	DRAWING	REINF	=	REINFORCEMENT
E.	=	EAST	SDR	=	STANDARD DIMENSIONAL RATIO
EF	=	EACH FACE	SF	=	SQUARE FEET
EL.	=	ELEVATION	SQ.	=	SQUARE
E.W.	=	EACH WAY	STA.	=	STATION
FL	=	FLOW LINE	TL	=	TOP OF LINER
HDPE	=	HIGH DENSITY POLYETHYLENE	T.O.C.	=	TOP OF CONCRETE
ID	=	INSIDE DIAMETER	TYP.	=	TYPICAL
MAX.	=	MAXIMUM	UBC	=	UNTREATED BASE COURSE

FILE NAME: PROJECTS\064 - CLEAN HARBORS\84.100 - SURFACE IMPOUNDMENT B DESIGN\CAD\DESIGN DRAWINGS\G-2 SI-B INDEX_SHEET.DWG
FILE DATE: 11.10.2017 08:02:08 (CAH)

HANSEN ALLEN & LUCE, INC. ENGINEERS

PROFESSIONAL ENGINEER — STATE OF UTAH — JONES — No. 5048470-2202 — 11/10/17 — PROJECT ENGINEER

DESIGNED	KCS	3			
DRAFTED	CAH	2			
CHECKED	GLJ	1			
DATE	NOVEMBER 2017	NO.	DATE	REVISIONS	BY / APVD.

SCALE: NOT TO SCALE

CleanHarbors® ENVIRONMENTAL SERVICES, INC.

GRASSY MOUNTAIN FACILITY
GENERAL
GENERAL NOTES, LEGEND & INDEX OF DRAWINGS

SHEET G-2

064.84.100

10/07

EXISTING CELL 4
EXISTING CELL 5
EXISTING CELL 6B
EXISTING INDUSTRIAL WASTE CELL 1
EXISTING INDUSTRIAL WASTE CELL 2
EXISTING CELL 7
SURFACE IMPOUNDMENT B
EXISTING RUNOFF CONTAINMENT POND
EXISTING TEMPORARY RUNOFF CONTAINMENT POND
EXISTING OFFICE COMPLEX
EXISTING RUNOFF CONTAINMENT POND

MW 31 MW 17 MW 26 MW 9 MW 42 MW 33 MW 6 MW 43 MW 44 MW 45 MW 46 MW 50 MW 51 MW 53 MW 54 MW 55 MW 56 MW 76 MW 78 MW 34 MW 8 MW 77 MW 79 MW 35 MW 5 MW 20 MW 47 MW 48 MW 49 MW 19 MW 8

4235 4240

N 1000
S 1000
S 2000

WEST 1/4 CORNER
SECTION 16
T1N, R12W

EAST 1/4 CORNER
SECTION 16
T1N, R12W
EL 4238.66
N O, S O

SW CORNER
SECTION 16
T1N, R12W

SE CORNER
SECTION 16
T1N, R12W

SOUTH 1/4 CORNER
SECTION 16

W 5000 W 4000 W 3000 W 2000 W 1000

N
0 200 400
SCALE IN FEET

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FILE DATE: 11.10.2017 08:03:54 (CAH)

HANSEN ALLEN & LUCE ENGINEERS

PROFESSIONAL ENGINEER
GREGORY L. JONES
No. 5048470-2202
11/10/2017
STATE OF UTAH
PROJECT ENGINEER

DESIGNED	KCS	3				
DRAFTED	CAH	2				
CHECKED	GLJ	1				
DATE	NOVEMBER 2017	NO.	DATE	REVISIONS	BY	APVD.

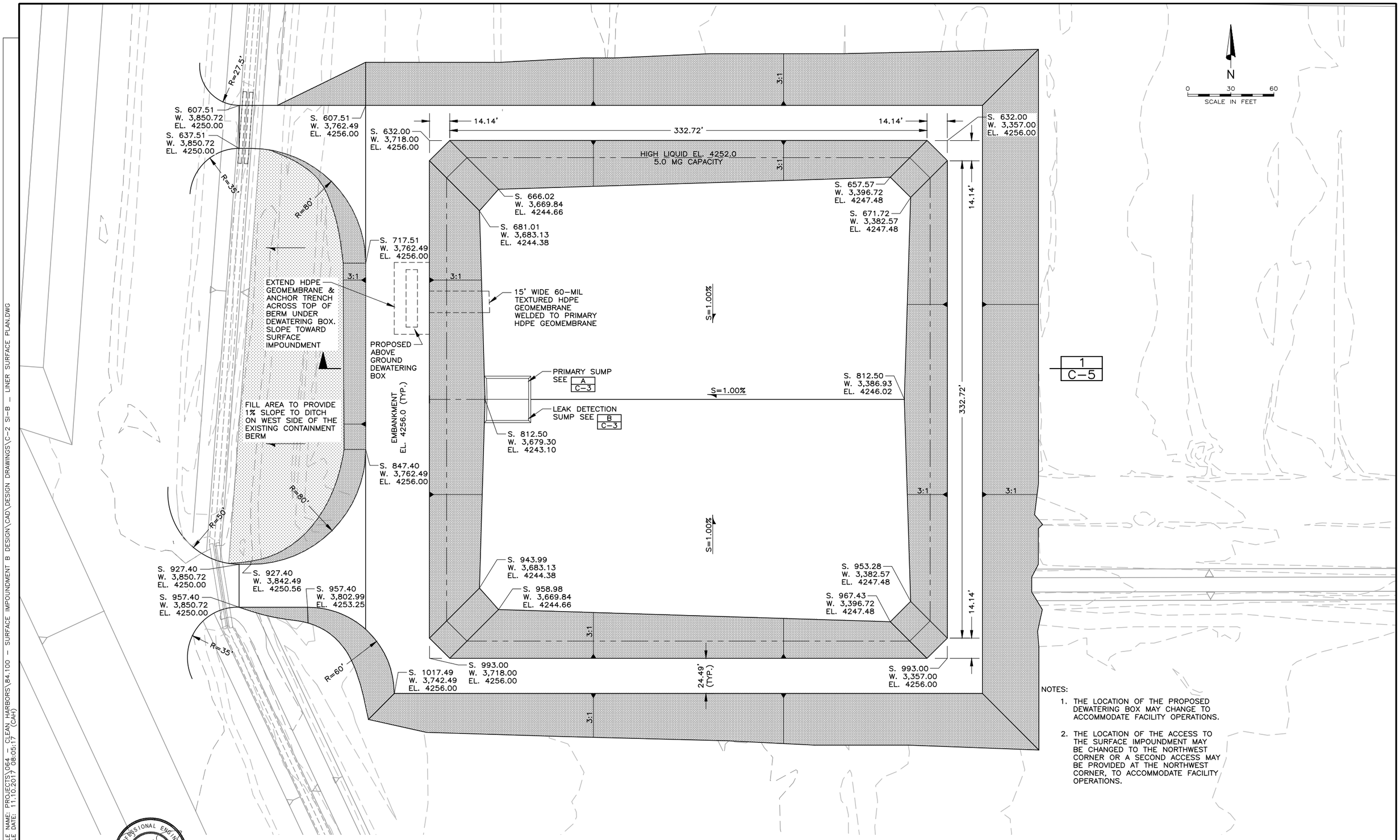
SCALE
AS SHOWN

CleanHarbors
ENVIRONMENTAL SERVICES, INC.

GRASSY MOUNTAIN FACILITY
SURFACE IMPOUNDMENT B
SITE PLAN

SHEET
C-1
064.84.100

10/07



NOTES:

1. THE LOCATION OF THE PROPOSED DEWATERING BOX MAY CHANGE TO ACCOMMODATE FACILITY OPERATIONS.
2. THE LOCATION OF THE ACCESS TO THE SURFACE IMPOUNDMENT MAY BE CHANGED TO THE NORTHWEST CORNER OR A SECOND ACCESS MAY BE PROVIDED AT THE NORTHWEST CORNER, TO ACCOMMODATE FACILITY OPERATIONS.

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HANSEN ALLEN & LUCE ENGINEERS

PROFESSIONAL ENGINEER — JONES No. 5048470-2202 — 11/10/2017 — STATE OF UTAH
PROJECT ENGINEER

DESIGNED	KCS	3			
DRAFTED	CAH	2			
CHECKED	GLJ	1			
DATE	NOVEMBER 2017	NO.	DATE	REVISIONS	BY / APVD.

SCALE: AS SHOWN

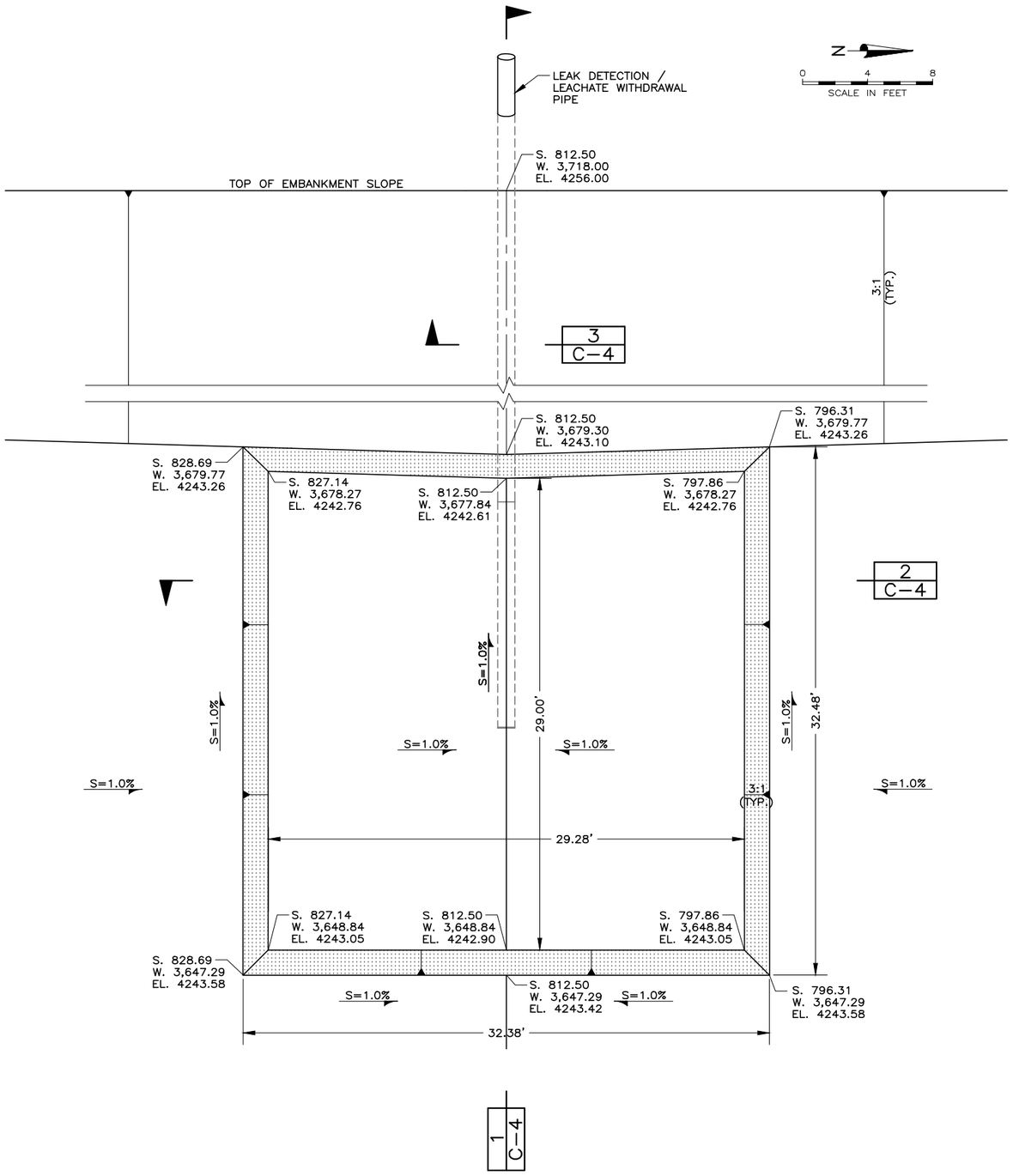
CleanHarbors® ENVIRONMENTAL SERVICES, INC.

GRASSY MOUNTAIN FACILITY SURFACE IMPOUNDMENT B LINER SURFACE PLAN

SHEET C-2

064.84.100

10/07



PRIMARY SUMP A C-2
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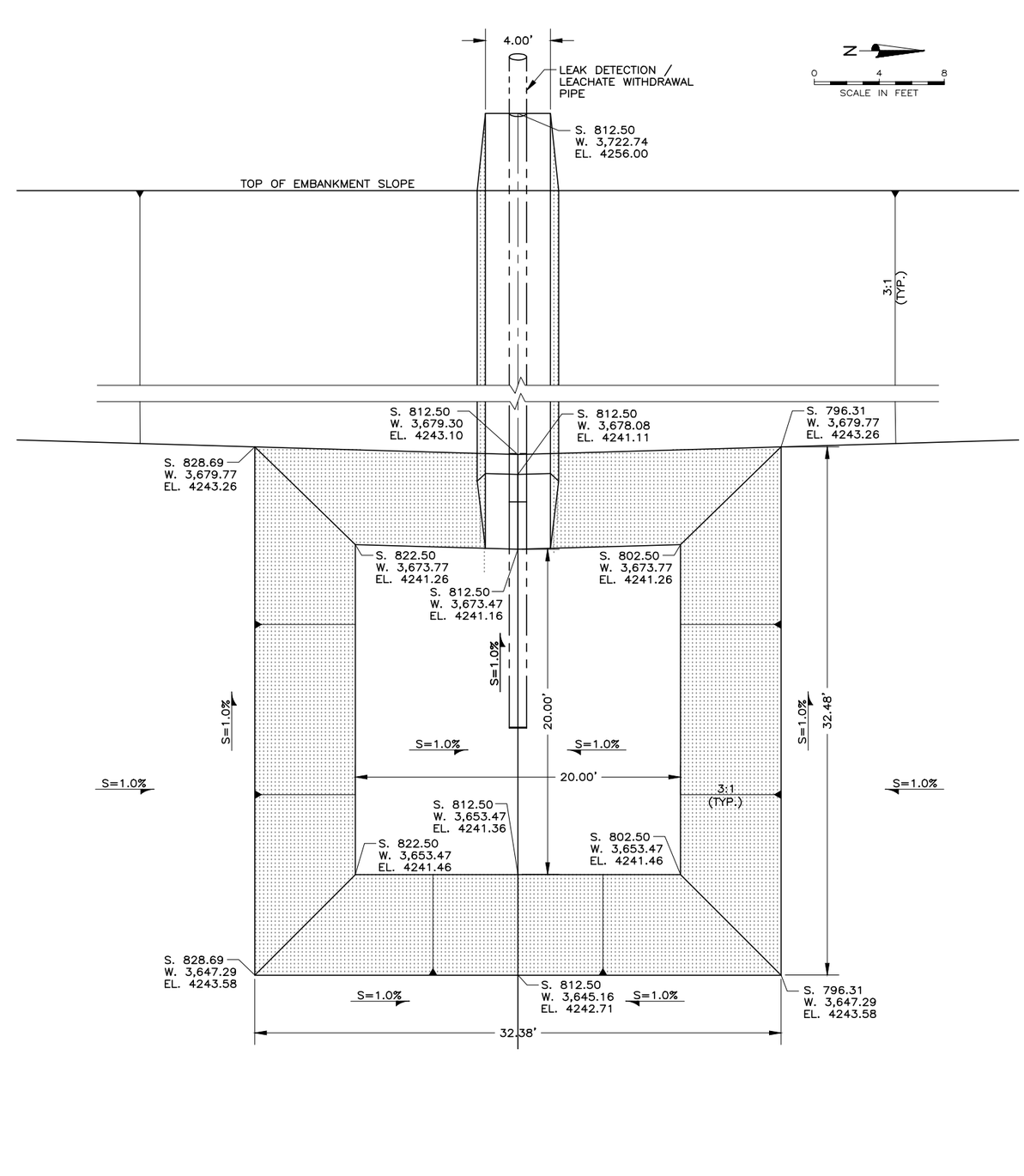

LEAK DETECTION SUMP B C-2
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FILE DATE: 11.10.2017 08:06:25 (CAH)

10/07

HANSEN ALLEN & LUCE INC ENGINEERS

PROFESSIONAL ENGINEER GORDON L. JONES No. 5048470-2202 11/10/2017 STATE OF UTAH
PROJECT ENGINEER

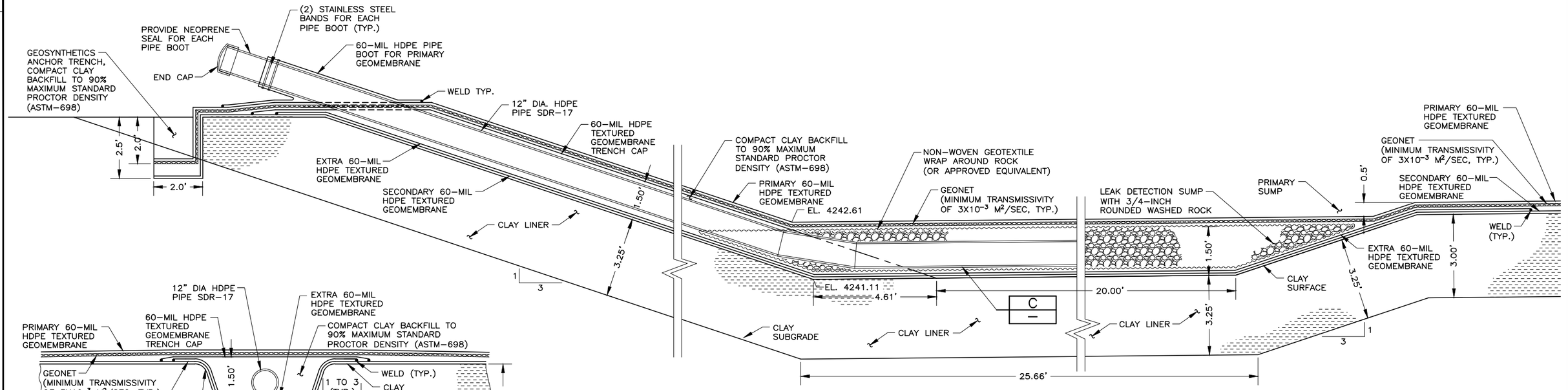
DESIGNED KCS	3				
DRAFTED CAH	2				
CHECKED GLJ	1				
DATE NOVEMBER 2017	NO.	DATE	REVISIONS	BY	APVD.

SCALE AS SHOWN

CleanHarbors ENVIRONMENTAL SERVICES, INC.

GRASSY MOUNTAIN FACILITY
SURFACE IMPOUNDMENT B
SUMP PLANS

SHEET C-3
064.84.100



SUMP SECTION 1 / C-3
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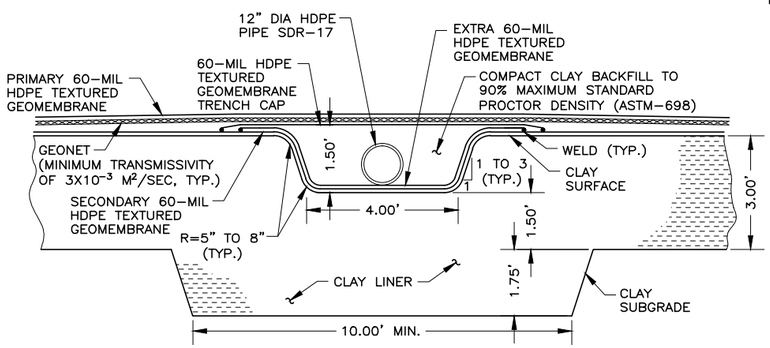
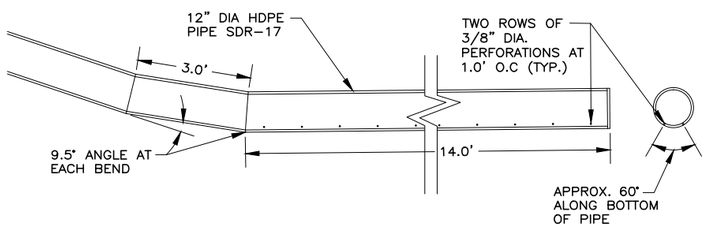


PIPE TRENCH SECTION 3 / C-3
N.T.S.

NOTE:

DIMENSIONS AND GRADES IN THE TRENCH ON THE CLAY SURFACE MAY BE ADJUSTED BY THE ENGINEER DEPENDING ON THE DIMENSIONS AND GRADES IN THE TRENCH ON THE CLAY SUBGRADE. ADJUSTMENTS OF DIMENSIONS AND GRADES SHALL RESULT IN MINIMUM CLAY THICKNESS AS DESIGNATED ON THIS SECTION.



PIPE DETAIL C / —
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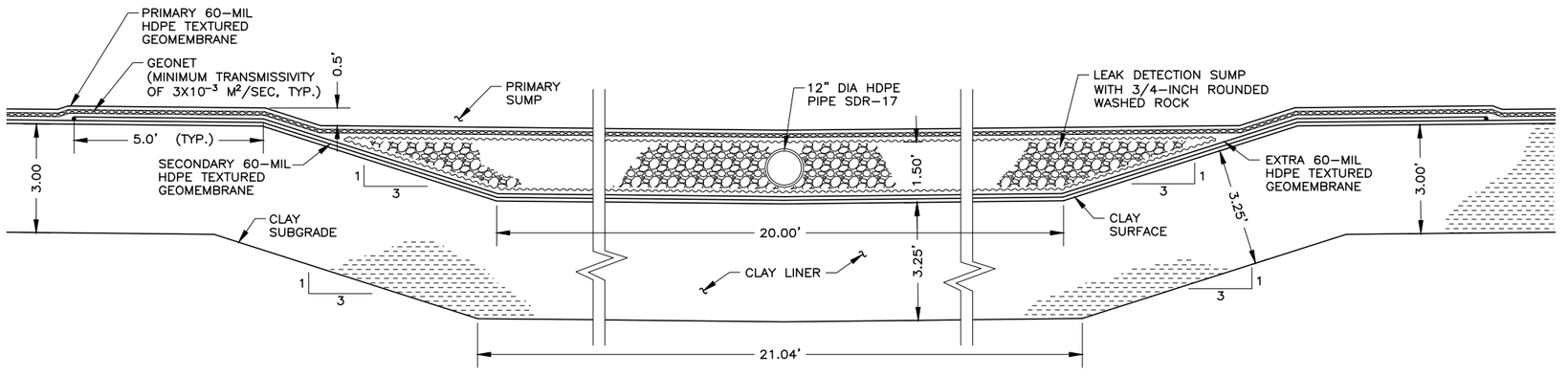

SUMP SECTION 2 / C-3
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HANSEN ALLEN & LUCE, Inc. ENGINEERS

PROFESSIONAL ENGINEER — JACOBSON — JONES — No. 5048470-2202 — STATE OF UTAH
PROJECT ENGINEER

DESIGNED KCS	3					
DRAFTED CAH	2					
CHECKED GLJ	1					
DATE NOVEMBER 2017	NO.	DATE	REVISIONS	BY	APVD.	

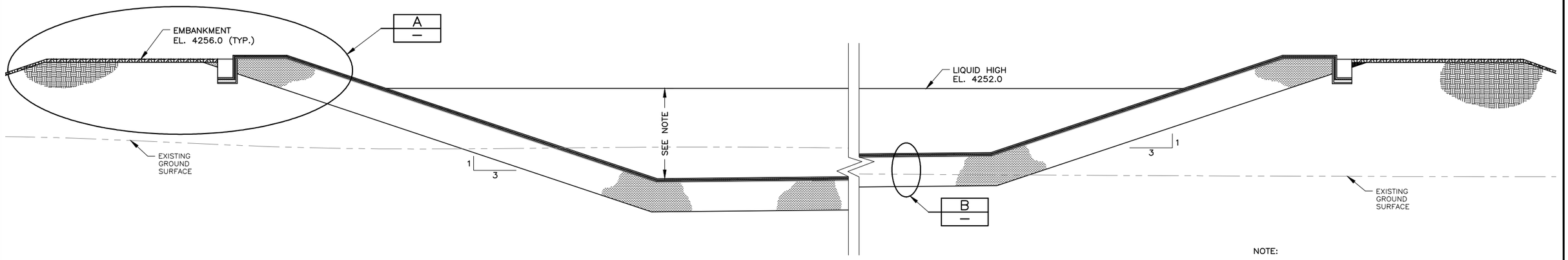
SCALE: AS SHOWN

CleanHarbors ENVIRONMENTAL SERVICES, INC.

GRASSY MOUNTAIN FACILITY SURFACE IMPOUNDMENT B SUMP SECTIONS & DETAILS

SHEET C-4
064.84.100

10/07

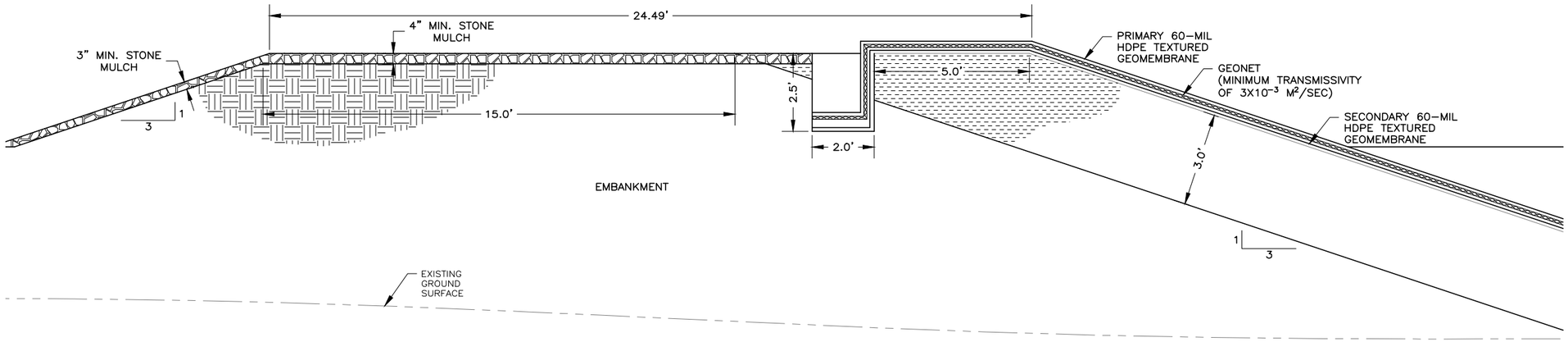


NOTE:

AT THE LIQUID HIGH EL., LIQUID DEPTH VARIES FROM 9.4' (LOWEST POINT ON THE FLOOR) TO 4.5' (HIGHEST POINT ON THE FLOOR) ABOVE THE PRIMARY LINER SYSTEM.

TYPICAL OVERALL SECTION 1 / C–5

N.T.S.



EMBANKMENT DETAIL A / —

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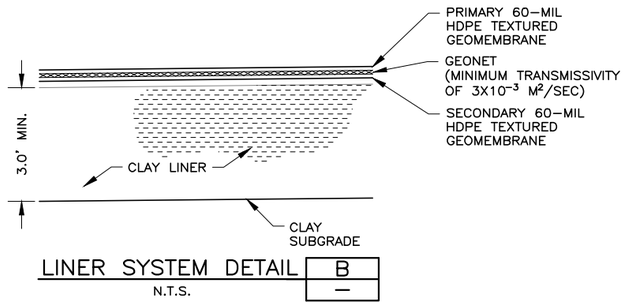

LINER SYSTEM DETAIL B / —

N.T.S.

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HANSEN ALLEN & LUCE, Inc. ENGINEERS

PROFESSIONAL ENGINEER — JONES No. 5048470-2202 — 11/10/2017 — STATE OF UTAH — PROJECT ENGINEER

DESIGNED	KCS	3			
DRAFTED	CAH	2			
CHECKED	GLJ	1			
DATE	NOVEMBER 2017	NO.	DATE	REVISIONS	BY / APVD.

SCALE: AS SHOWN

CleanHarbors® ENVIRONMENTAL SERVICES, INC.

GRASSY MOUNTAIN FACILITY
SURFACE IMPOUNDMENT B
TYPICAL SECTIONS & DETAILS

SHEET C–5

064.84.100

10/07

APPENDIX B

Geotechnical Investigation
Proposed Surface Impoundment
Clean Harbors Facility
Tooele County, Utah

Prepared by:

Applied Geotechnical Engineering Consultants, Inc.
Salt Lake City, Utah

AGEC
Applied GeoTech

GEOTECHNICAL INVESTIGATION

PROPOSED SURFACE IMPOUNDMENT B

CLEAN HARBORS FACILITY

TOOELE COUNTY, UTAH

PREPARED FOR:

CLEAN HARBORS
2027 INDEPENDENCE PARKWAY
LAPORTE, TEXAS 77571

ATTENTION: FAIZUR KHAN

PROJECT NO. 1160276A **APRIL 12, 2017**

600 West Sandy Parkway • Sandy, Utah 84070 • (801) 566-6399 • FAX (801) 566-6493

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- B. Excavation. . . . . Page 11
- C. Subgrade Preparation. . . . . Page 12
- D. Embankment Construction. . . . . Page 13
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FIGURES

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EXPLORATORY BORING B-1A AND B-2A LOGS	FIGURE 2
EXPLORATORY BORING B-3A LOG	FIGURE 3
EXPLORATORY BORING LEGEND AND NOTES	FIGURE 4
CONSOLIDATION TEST RESULTS	FIGURES 5-12
SUMMARY OF LABORATORY TEST RESULTS	TABLE I

APPENDIX

- A - PREVIOUS BORING AND CPT DATA
- B - SETTLEMENT CALCULATIONS
- C - LIQUEFACTION CALCULATIONS
- D - STABILITY CALCULATIONS

EXECUTIVE SUMMARY

1. In our professional opinion, the natural subsurface soils encountered at the site are suitable for support of the proposed surface impoundment.

2. Embankment slopes may be constructed at 3 horizontal to 1 vertical or flatter.

3. The on-site soil is suitable for construction of the proposed embankments. The upper mud flat soils are suitable for the clay liner. Significant moisture conditioning (wetting or drying) of the material will likely be needed to facilitate compaction.

4. Excavations extending more than several feet below existing grade will require the use of low ground pressure equipment or equipment supported from above the excavation area. Care will be required to avoid disturbing the natural soil on the slopes and at the base of the impoundment.

5. Geotechnical information related to subgrade preparation, materials, compaction and other details are included in the report.

SCOPE

This report presents the results of a geotechnical investigation for the proposed surface impoundment to be constructed south of Landfill Cell 7 at the Clean Harbors Grassy Mountain Facility in Tooele County, Utah. The site is located in the west-central portion of Section 16, Township 1 North, Range 12 West, Salt Lake Base and Meridian in Tooele County, Utah. Our services are provided in general accordance with our proposal dated June 8, 2016.

Geotechnical investigations have been conducted at the Grassy Mountain Facility for Landfill Cells 1 through 7, A, X, Y and Z, along with Industrial Waste Cells 2 and 3. Geotechnical investigations have also been conducted for the other facilities at the Grassy Mountain Facility, which are included within Section 16. The previous geotechnical investigations conducted for Landfill Cells 1 through 5, X and Y were conducted by Chen and Associates, Inc. and Chen-Northern, Inc. The Cell 6, 7 and Z investigations were conducted by Applied Geotechnical Engineering Consultants, Inc. The Cell A investigation was conducted by Kleinfelder. Subsurface exploration and laboratory testing was previously conducted in the land treatment area, in which the proposed surface impoundment is located.

This report has been prepared to summarize the data obtained, to present our conclusions and recommendations based on the subsurface conditions encountered and the proposed construction of the surface impoundment. Construction considerations related to the geotechnical engineering aspects of the facility are included.

SITE CONDITIONS

The Grassy Mountain Facility consists of landfill cells and an office/laboratory complex.

The ground surface in the area of the proposed surface impoundment is relatively flat and has a gentle downward slope to the east.

A containment dike is located along the west sides of the proposed impoundment, which is part of a low dike encompassing a portion of the old land treatment area of which the site was once a part.

Portions of the land treatment area were used to spread and treat contaminated hydrocarbons. This process has since been abandoned and the contaminated soil removed.

Vegetation at the site consists of grass and weeds.

FIELD STUDY

The subsoil conditions in the area proposed for the surface impoundment have been investigated during this and during previous studies. The locations of borings drilled and cone penetration tests performed in the area of the proposed surface impoundment are shown on Figure 1. Listed below is a summary of the explorations in the general area, the date of the exploration and project numbers.

Boring or CPT	Date of Exploration	Project Number
Boring L-10	April 1992	AGEC #20591
CPTs L-7, L-11 and L-18	April 1992	AGEC #20591
CPT L-33	August 1995	AGEC #45995
Borings B-1A, B-2A and B-3A	August 2016	(this study)

Boring L-10 was drilled using 8-inch diameter hollow stem auger. Cone penetration tests, which are designated by X's on Figure 1, were pushed using standard cone penetration test equipment. Borings B-1A, B-2A and B-3A were drilled using direct push methods.

Borings were logged and samples obtained by engineers from AGEC. Logs for Borings B-1A, B-2A and B-3A are presented on Figures 2 and 3 with Legend and Notes on Figure 4. A log of Boring L-10 and results of CPT soundings L-7, L-11, L-18 and L-33 are included in Appendix A.

Water levels were measured several weeks after drilling Borings B-1A, B-2A and B-3A for this study. Following the water level measurements, the borings were abandoned by introducing bentonite grout into to the bottom of the boring and pumping grout to fill the boring. The following notes relate to the abandonment of these borings:

Boring Number	Boring Depth (feet)	Date Grouted	Theoretical Volume (ft^3)	Approximate Volume of Grout Placed (ft^3)	Notes
B-1A	40	9/7/2016	3.1	4½	Grout placed with tremie pipe
B-2A	40	9/7/2016	3.1	4½	Grout placed with tremie pipe
B-3A	100	10/11/2016	7.7	11½	Grout placed with tremie pipe

Notes:

1. Grout was pumped through tremie pipe in each boring until grout was observed at the surface of the bore hole. Additional grout was pumped in stages as the tremie pipe was removed.

2. The initial portion of the bentonite grout was diluted by the groundwater in the bore hole as the grout displaced the water to the surface. Several additional cubic feet of grout were pumped in each boring, as needed, to ensure that undiluted grout extended to the ground surface

Borings and CPT soundings from previous studies at the site were backfilled with bentonite at the time of the earlier studies.

LABORATORY TESTING

Laboratory testing was conducted during this study and previous studies for the land treatment area to study the engineering characteristics of the materials obtained from the exploratory borings. Laboratory testing conducted during the study includes natural moisture content, dry density, Atterberg Limits, grain size distribution, strength and consolidation. The test results are shown on Figures 2 and 3 and summarized on Table I .

Samples obtained from the exploratory borings were examined and classified in the laboratory by the project engineer.

A discussion of the laboratory testing procedures is presented below. The testing procedures are primarily those of the American Society for Testing and Materials (ASTM).

Index Properties - The Unified Soil Classification System (ASTM D-2487) was used to classify the soil. This system is based on index property tests including the determination of natural water content (ASTM D-2216), liquid and plastic limits (ASTM D-4318) and grain-size distribution (ASTM D-422). Results of the moisture content, dry density, Atterberg Limits and percentage of soil passing the No. 200 sieve are presented on Table I.

Consolidation - Consolidation tests were performed during this and earlier investigations. Consolidation test samples were prepared and placed in a consolidometer ring between porous disks. An initial seating load of 250 or 500 pounds per square foot was placed on the sample. The sample was then saturated with water and the percent of change in sample heights was measured with

a dial gauge as the sample was loaded incrementally until a straight line relationship between load and strain was obtained. In some cases, the loads were reduced to measure the rebound portion of the consolidation curve. The consolidation test procedures described are similar to ASTM Method D-2435. Results of consolidation tests are plotted as a curve of the final strain at each increment of pressure against the log of accumulated pressure. Test results are included on Figures 5 through 12.

Uniaxial Compressive Strength - Unconfined compressive strength testing was conducted on samples of soils (ASTM D-2166). Each sample was prepared by cutting the ends of the specimen parallel to each other and at right angles to the longitudinal axis of the soil sample. The load was applied continuously and without shock to produce a constant range of deformation until failure occurred. The axial deformation during the tests are recorded. Results of the unconfined compressive strength testing are included on Table I and on the boring logs.

SUBSURFACE CONDITIONS

Subsurface conditions at the site were determined by drilling exploratory borings and performing cone penetration tests. Since the subsurface soils consist of multiple layers of silt, sand and clay, the cone penetration tests provided a more detailed subsurface profile.

Based on the explorations, the subsoil profile generally consists of approximately 19 feet of clay to sandy clay overlying interlayered sand, silt and clay. The interlayered sand, silt and clay extends to the maximum depth investigated, which was approximately 120 feet.

The natural clay soil was found to be interlayered with thin sand and silt lenses. Consistency of the clay ranged from very soft to hard. Moisture content of the clay ranged from slightly moist near the ground surface to wet at the water level and deeper. Color ranged from light to olive brown and gray.

The interlayered clay and silty sand had a consistency and density ranging from soft to medium stiff or very loose to medium dense. This material was observed to contain occasional cemented layers. Moisture content generally ranged from very moist to wet with olive brown to gray color.

The engineering characteristics of the soils were tested during this and earlier investigations. These parameters have been reviewed and are incorporated into our analysis to estimate the behavior of the soil for the proposed surface impoundment.

SUBSURFACE WATER

Water was encountered in all of the borings and cone penetration test holes at the time of the investigations. Water levels measured within the borings are shown on the logs. From the borings, the water level is estimated to be at approximate elevation 4231 to 4232 feet.

PROPOSED CONSTRUCTION

The proposed surface impoundment location is shown on Figure 1. The proposed impoundment includes an area approximately 500 feet by 500 feet in size.

We understand that the proposed impoundment will be constructed by placing fill for the embankments and some cut and fill in the interior of the impoundment. The floor will generally slope down to the west. The lowest part of the impoundment (with the exception of the sump) will be cut approximately 3 feet below existing grade to final grade. A 3 -foot thick clay liner is planned. Temporary excavation for construction of the clay liner is expected to extend to depths ranging from approximately 1½ to 6 feet below the existing ground surface except in the sump at the west end of the area, which will extend to a depth

of approximately 9 feet below existing grade. Embankments around the perimeter have a crest elevation of 4256 feet resulting in fills on the order of 10 to 13 feet above the existing grade. The crest of the embankments is planned to have a width of approximately 24½ feet and the interior and exterior slopes are planned at 3 horizontal to 1 vertical. We anticipate that the embankments will be constructed by placing compacted soil obtained from borrow sources near the site. These borrow areas near the site have previously been used for embankment borrow in construction of landfill cells.

A 3-foot thick clay liner is planned below the impoundment. We understand that a geosynthetic lining system will be constructed above the clay liner. This liner will include a textured 60 mil HDPE with a geonet and a second textured 60 mil HDPE over the geonet. There will be a leak detection system between the liners.

A maximum liquid elevation of 4252 feet is planned.

If the proposed construction is different from what is described above, we should be notified to reevaluate our recommendations.

SEISMICITY AND LIQUEFACTION

Seismicity

A bedrock peak horizontal ground acceleration (PGA) of 0.15g was used for our seismic analysis considering a seismic event with a 90 percent probability of not being exceeded in a 250 year period (Petersen et al., 2008). Soil response to the bedrock acceleration was evaluated during previous studies at the facility. Based on the results of the soil response analysis, a PGA of 0.20g was used at the ground surface.

A seismic coefficient of one-half of the PGA (k = 0.10g) was used for the pseudo-static stability analysis.

Liquefaction

The liquefaction hazard at the site was evaluated based on cone penetration (CPT) soundings conducted at the site in 1992 and 1995.

Settlement resulting from liquefaction was analyzed based on available CPT data in the general area of the proposed surface impoundment. A spread sheet was used to perform the analysis and is based on methods presented by Robertson and Wride (1998). The printouts of the analysis are included in Appendix C.

The liquefaction assessment indicates the following settlement due to liquefaction from a seismic event having a 90 percent probability of not being exceeded in a 250 year period.

CPT	Settlement (inches)
L-7	0.9
L-11	1.2
L-18	1.6
L-33	0.3

Based on our analysis, settlement from liquefaction is estimated to be on the order of 1½ inches or less. It is our professional opinion that the settlement resulting from liquefaction will be within acceptable tolerances for the proposed surface impoundment. Liquefaction is not expected during a more frequent seismic event such as an event with a mean return period of approximately 500 years.

STABILITY

Stability analysis was performed for the proposed embankments as well as for the construction of the impoundment relative to Landfill Cell 7. The soil parameters used for the analysis are based on information presented in the above-referenced geotechnical reports and from our previous consultation.

The results of the analysis indicate that the construction of the proposed impoundment adjacent to Landfill Cell 7 does not reduce the stability of the landfill cell below acceptable safety factors under long term static or seismic conditions. Results of the analysis for the impoundment slopes indicate minimum safety factors of 2.9 and 2.1 under long term static and seismic conditions, respectively. Results of the stability analysis are included in Appendix D.

SETTLEMENT

Elevations of the tops of embankments for Landfill Cells 4, 5, 6B, 7 and Z have been monitored over many years. Prior to estimating the settlement for the proposed impoundment, we obtained these measurement from Hansen, Allen and Luce and used this information to calibrate our model used to predict settlement at the site. This revised settlement model was developed based on the measured elevations of the embankments over time relative to their design elevations. Subsurface conditions obtained from explorations and laboratory test results were also considered in development of this model. The revised model was used to estimate the anticipated settlement for the proposed surface impoundment.

Calculations indicate that settlement below the proposed embankments range from approximately 18 to 22 inches with settlement due to the load of fluid over the impoundment area to be on the order of 7 to 13 inches. A profile of the estimated settlement along with settlement calculations are included in Appendix B.

This settlement is expected to occur over a long period of time following construction.

BEARING CAPACITY

Bearing capacity of the clay liner material was evaluated to determine the loads that can safely be supported by the clay liner. The analysis indicates that the clay liner can support an allowable pressure of 1,500 pounds per square foot under static conditions. Under impact loading conditions, a bearing capacity of 2,000 pounds per square foot may be used.

RECOMMENDATIONS

Based on the subsurface conditions encountered, laboratory test results, and the proposed construction, the following recommendations are given:

A. Embankment Slopes

The interior and exterior embankment slopes may be constructed at 3 horizontal to 1 vertical or flatter.

The exterior portions of the embankment should be protected to reduce erosion. Erosion on existing embankments at the site has been reduced by placement and compaction of a graded gravel material. Consideration should be given to using similar material for the exterior portion of the proposed embankments.

B. Excavation

We anticipate excavation can be accomplished with typical excavation equipment. Excavation for construction of the clay liner near the west end of the impoundment,

particularly the area of the sump, may extend to depths where relatively soft, wet soil is anticipated. Excavation extending more than several feet below existing grade will likely require the use of low ground pressure equipment or equipment supported from above the excavation area. Care should be taken to avoid disturbing the natural soil at the base of the impoundment during excavation and placement of clay liner.

C. Subgrade Preparation

Prior to placing embankment fill, the topsoil, unsuitable fill, organics, debris and other deleterious materials should be removed. The subgrade below proposed embankments should be scarified to a depth of approximately 8 inches, the moisture adjusted to within approximately 2 percent of the optimum moisture content and the subgrade compacted to at least 95 percent of the maximum dry density as determined by ASTM D-698.

The subgrade below the proposed clay liner should be cut to undisturbed natural soil or properly compacted embankment. Care should be taken to avoid disturbance of the natural soil below the proposed clay liner as discussed in the Excavation section above.

Relatively soft, wet soil may be encountered in areas where excavation for construction of clay liner extends more than several feet below the existing grade. In areas where relatively soft, wet soil is encountered in excavations, stabilization of the subgrade may be needed to facilitate placement and compaction of clay liner materials. Where such conditions are encountered, consideration may be given to excavating to approximately 1 to 2 feet below the base of the proposed clay liner and placing a geotextile grid such as a Tensar TX7 or equivalent underlain by a filter fabric. A sacrificial layer of clay liner material that is slightly below the optimum moisture content may be placed and compacted above the geotextile grid to provide stabilization for construction of the first lift of clay liner. Another consideration for

stabilization would be to place a layer of cement treated soil below the base of the clay liner in areas where stabilization is needed to facilitate construction of the clay liner.

D. Embankment Construction

1. Materials

The embankment may be constructed with a mixture of clay, silt or sand soils.

Materials for construction of the embankment are likely available from the excavation of the impoundment and/or the surrounding areas that have previously been used for embankment borrow. Significant moisture conditioning (wetting or drying) of the material will likely be needed to facilitate compaction. Drying of the soil may not be practical during cold or wet periods of the year.

2. Compaction

Embankment fill should be placed and compacted to at least 95 percent of the maximum dry density as determined by ASTM D-698. The moisture content of the fill should be close to optimum to facilitate the compaction process. Ideally, the moisture content would be within 2 percent of the optimum moisture content.

Fill should be placed in uniform lifts not more than 8 inches thick for compaction. Compaction should be accomplished with heavy compaction equipment. Lifts compacted by hand operated equipment should be no more than 4 inches in thickness.

Based on previous experience at the Grassy Mountain Facility, the first few lifts of embankment material are difficult to place and compact within specification.

Typically, it has been found that the material is moisture sensitive with respect to compaction. Once the moisture of the fill material is near optimum and relatively uniform, compaction is more easily obtained. This difficulty has also been encountered as embankments are constructed of fill materials obtained from near the ground surface in the borrow areas. These materials have typically been dry and difficult to moisture condition prior to placement and compaction.

3. Construction Quality Control

The material should be observed and tested by a representative of the soils engineer to verify that the material type, densities and moisture contents meet project specifications.

E. Clay Liner Construction

We understand that the proposed impoundment will be provided with a low permeable soil liner at least 3 feet thick. Synthetic liners will be placed above the soil liner.

1. Materials

Clay liner material may be obtained from near the site. Laboratory and field tests conducted during previous investigations indicate that the permeability of the remolded clay soils ranges from $2x10^{-8}$ to $1x10^{-6}$ cm/sec. The slower permeabilities were obtained on samples remolded at moisture contents above the optimum moisture content. The faster permeabilities were obtained on samples remolded below the optimum moisture content.

The soil used for liner on previous projects is classified as CL, CL-ML and ML soil based on the Unified Soil Classification System. The percent passing the No. 200 sieve has ranged from 85 to 99. The liquid limits have ranged from

22 to 49 with plasticity indexes from 5 to 25. The materials have been tested to have a permeability of less than $1x10^{-7}$ cm/sec.

Previous liner construction at the site has been accomplished by mining clay from the mud flats and allowing the clay to dry to within a few percentage points of optimum. To consistently achieve the required low permeability, a deflocculent should be added to the clay and the clay should be disced with a disc and kneaded with a sheepsfoot compactor while it is drying.

2. Placement and Compaction

Clay liner should be compacted to at least 95 percent of the maximum dry density as determined by ASTM D-698 with a moisture content that is not more than 3 percent below the optimum moisture content.

Placement and compaction procedures need to be selected and consistently followed so the desired permeability is obtained. Test fills have been constructed for past embankment construction projects to determine a suitable construction method. We recommend that a test fill be constructed in the field to determine the construction technique, density and moisture contents that will consistently obtain the permeability required by regulation. Commercial additives have been used in the past to achieve the permeability using on-site clay soils. Previous liners have been constructed using the on-site clay soils mixed with 3 pounds of sodium hexametaphosphate for every 50 cubic feet of loose clay, or 3-1/2 pounds of sodium tripolyphosphate per 50 cubic feet of loose clay. Permeability tests conducted on the compacted clay have found permeabilities of treated and compacted clay to be less than $1x10^{-7}$ cm/sec.

To prevent surface cracking, positive measures should be taken to keep the surface of the clay liner moist.

LIMITATIONS

This report has been prepared in accordance with generally accepted geotechnical engineering practices in the area for the use of the client for design purposes. The conclusions and recommendations included in the report are based on the information obtained from the explorations performed at the approximate locations indicated on Figure 1, the data obtained from laboratory testing and our experience at the site. Variations in the subsurface conditions may not become evident until additional exploration or excavation is conducted. If the subsurface conditions or groundwater level is found to be significantly different from what is described above, we should be notified to reevaluate the recommendations given.

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

Jay R. McQuivey, P.E.

Reviewed by Douglas R. Hawkes, P.E., P.G.

Reviewed by James E. Nordquist, P.E., G.E.

JRM/bw

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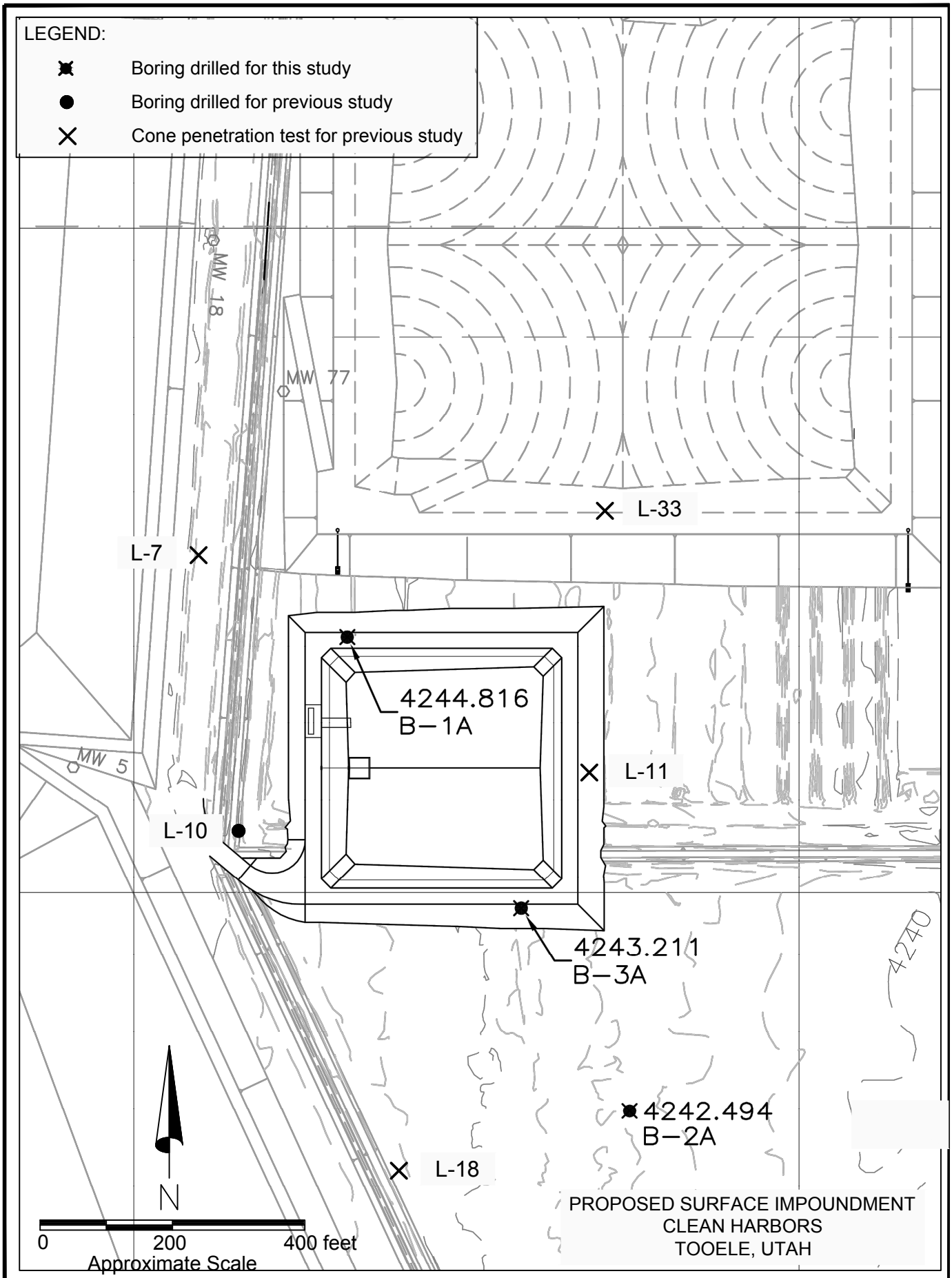
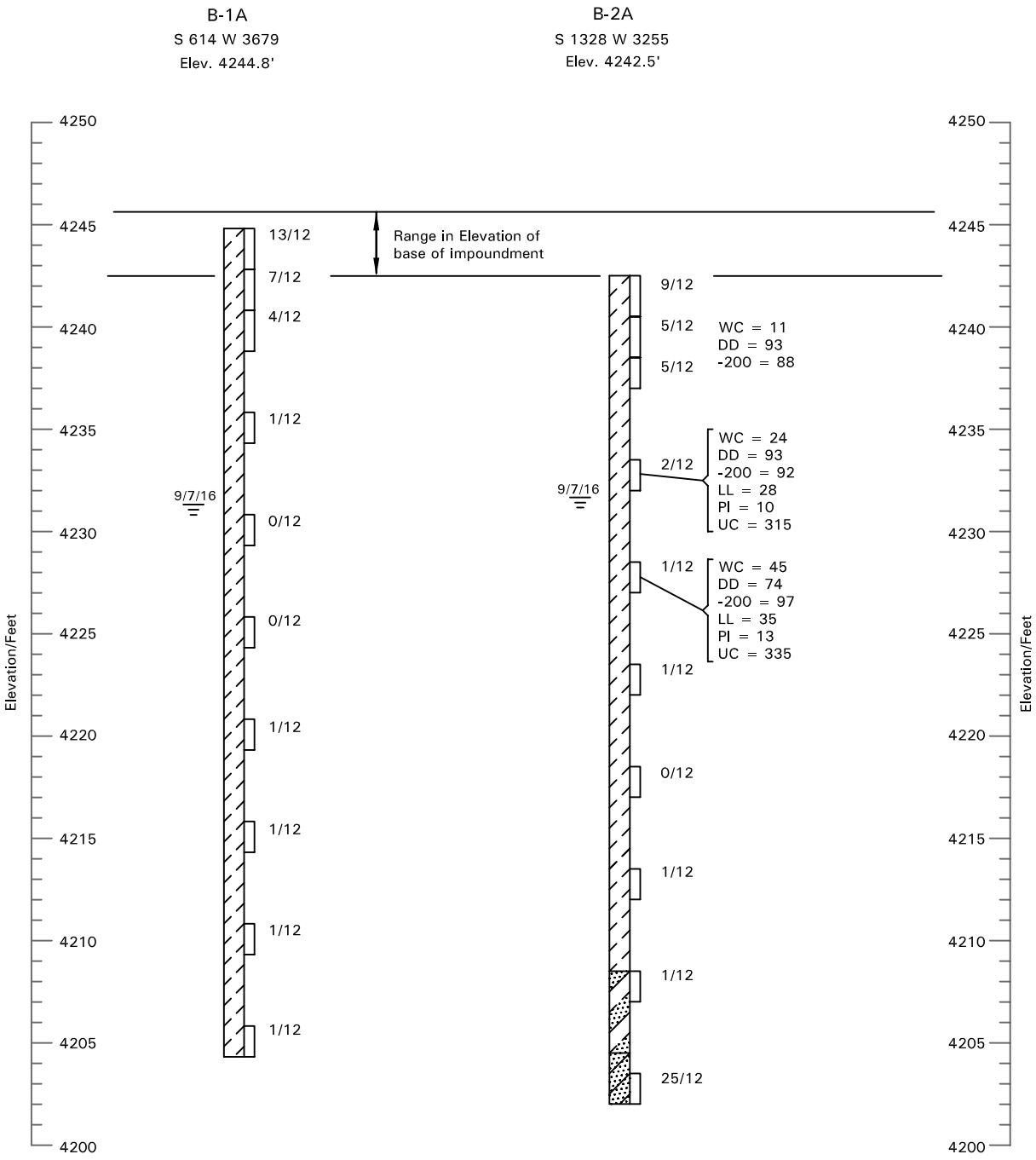
Petersen, Mark D., Frankel, Arthur D., Harmsen, Stephen C., Mueller, Charles S., Haller, Kathleen M., Wheeler, Russell L., Wesson, Robert L., Zeng, Yuehua, Boyd, Oliver S., Perkins, David M., Luco, Nicolas, Field, Edward H., Wills, Chris J., and Rukstales, Kenneth S., 2008; Documentation for the 2008 Update of the United States National Seismic Hazard Maps, U.S. Geological Survey, Open-file Report 2008-1128.

Robertson, P.K. and Wride, C.E. 1998; "Evaluating Cyclic Liquefaction Potential Using the Cone Penetration Test," Canadian Geotechnical Journal, 35:442-459.



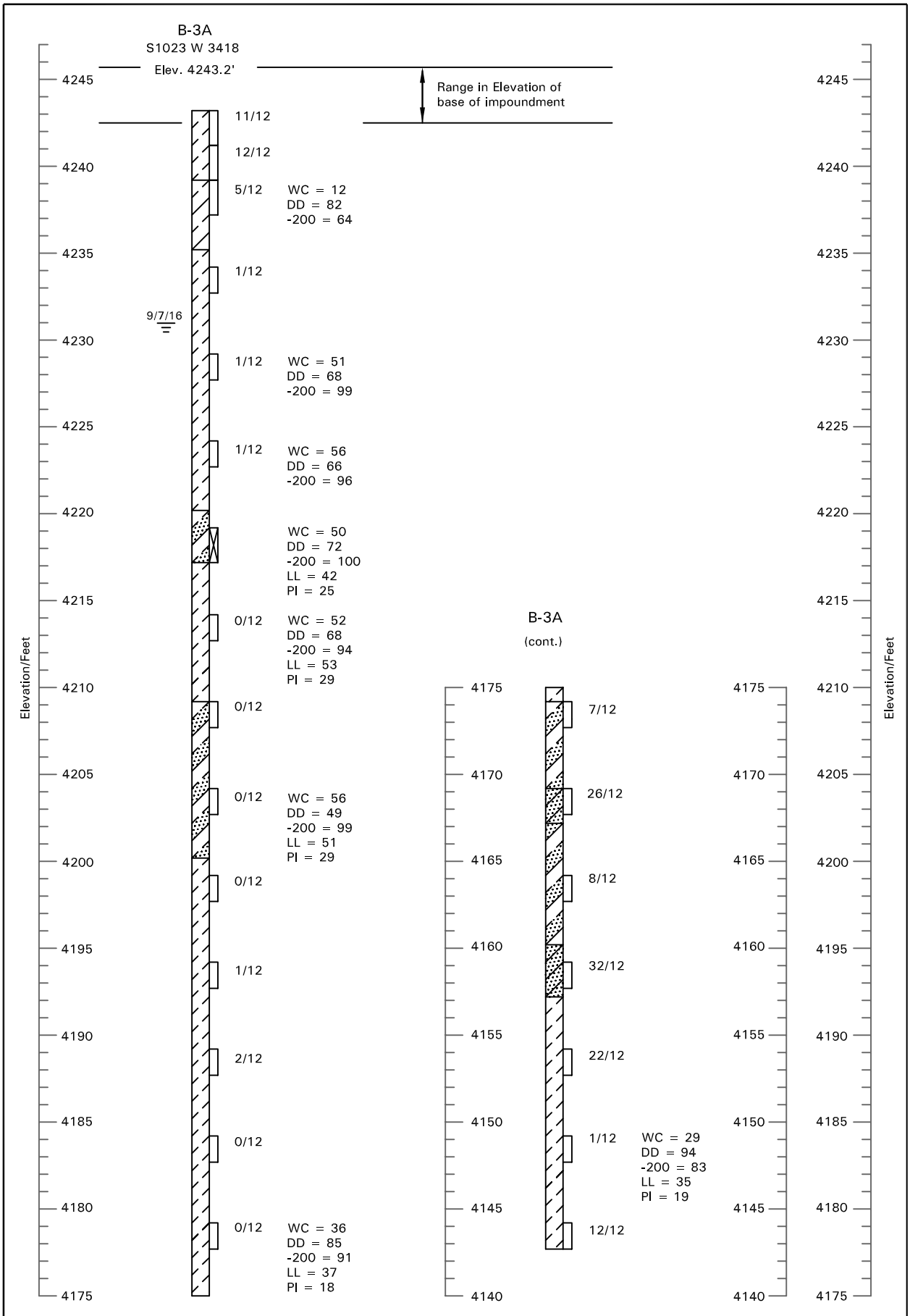
1160276A	AGEC	Boring and CPT Locations	Figure 1



Approximate Vertical Scale 1" = 8'

See Figure 4 for legend and notes.

1160276A	AGEC	Exploratory Boring B-1A and B-2A Logs	Figure 2



Approximate Vertical Scale 1" = 8'

See Figure 8 for legend and notes.

1160276A	AGEC	Exploratory Boring B-3A Log	Figure 3

LEGEND:

Lean Clay (CL); thin silt and sand layers, occasional cemented layers, small to moderate amount of sand, slightly moist to wet, medium stiff to stiff in the upper 3 to 5 feet, very soft to medium stiff at depth, slightly moist to wet, light brown to gray, sulfurous odor.

Lean Clay and Silt (CL/ML); interlayered, small to moderate amount of sand, silty sand and clayey sand layers, stiff, wet, gray.

Lean Clay and Silty Sand (CL/SM); interlayered, sandy silt layers, very soft to medium stiff, medium dense, wet, gray, sulfurous odor.

Silty Sand (SM); clay and sandy silt layers, medium dense, wet, gray to dark gray, sulfurous odor.

California Drive sample taken. The symbol 10/12 indicates that 10 blows from a 140 pound automatic hammer falling 30 inches were required to drive the sampler 12 inches.

Indicates a Shelby tube sample was taken.

Indicates the depth to free water and the date the measurement was taken.

NOTES:

1. The borings were drilled on August 2 through 10, 2016 using direct push methods.
2. Locations of the borings were surveyed by Hansen Allen and Luce.
3. Elevations of the borings were surveyed by Hansen Allen and Luce.
4. The boring locations and elevations should be considered accurate only to the degree implied by the method used.
5. The lines between materials shown on the boring logs represent the approximate boundaries between material types and the transitions may be gradual.
6. Water level readings shown on the logs were made at the time and under the conditions indicated. Fluctuations in the water level will occur with time.
7. WC = Water Content (%);
   DD = Dry Density (pcf);
   -200 = Percent Passing the No. 200 Sieve;
   LL = Liquid Limit (%);
   PI = Plasticity Index (%);
   UC = Unconfined Compressive Strength (psf).

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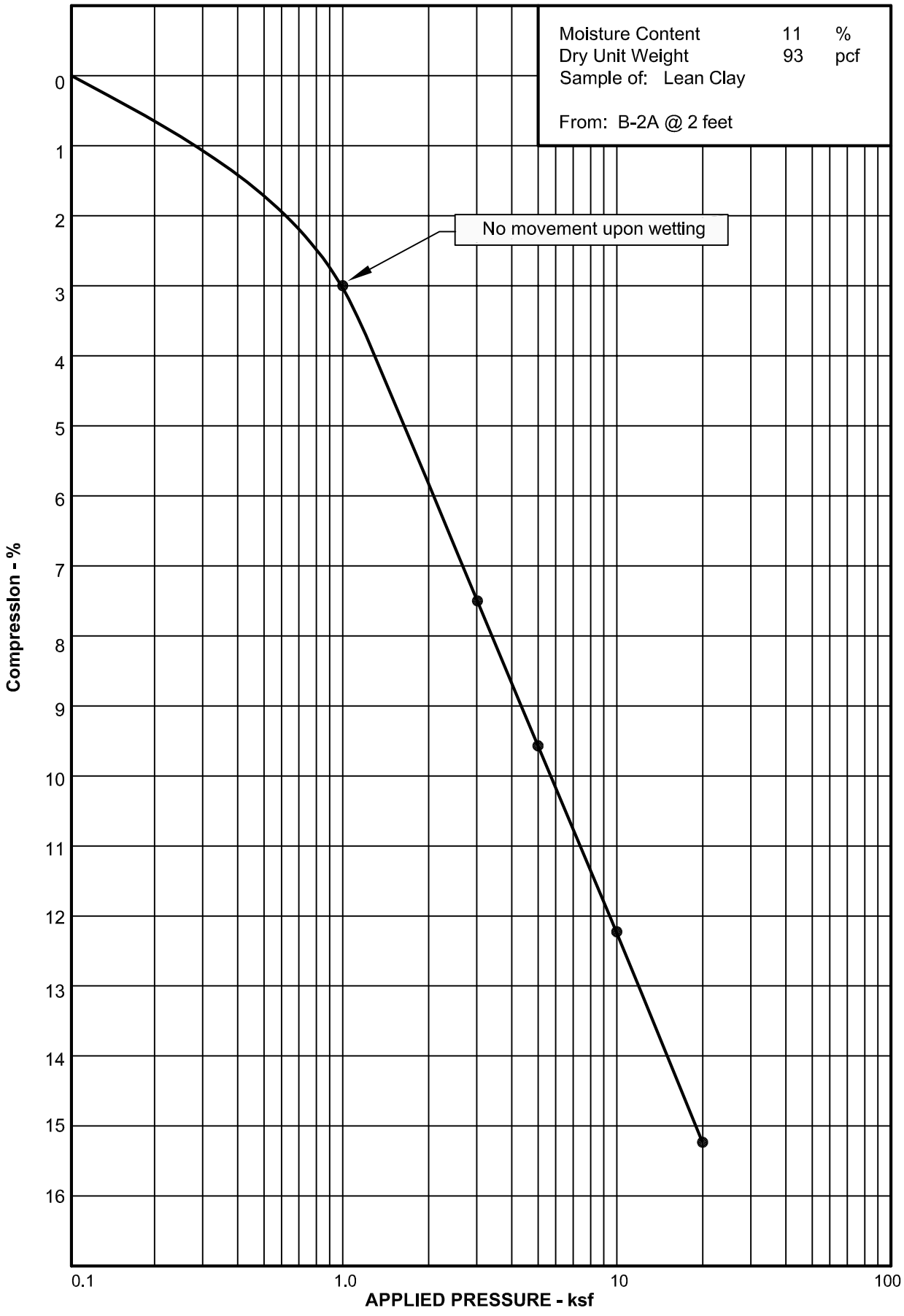
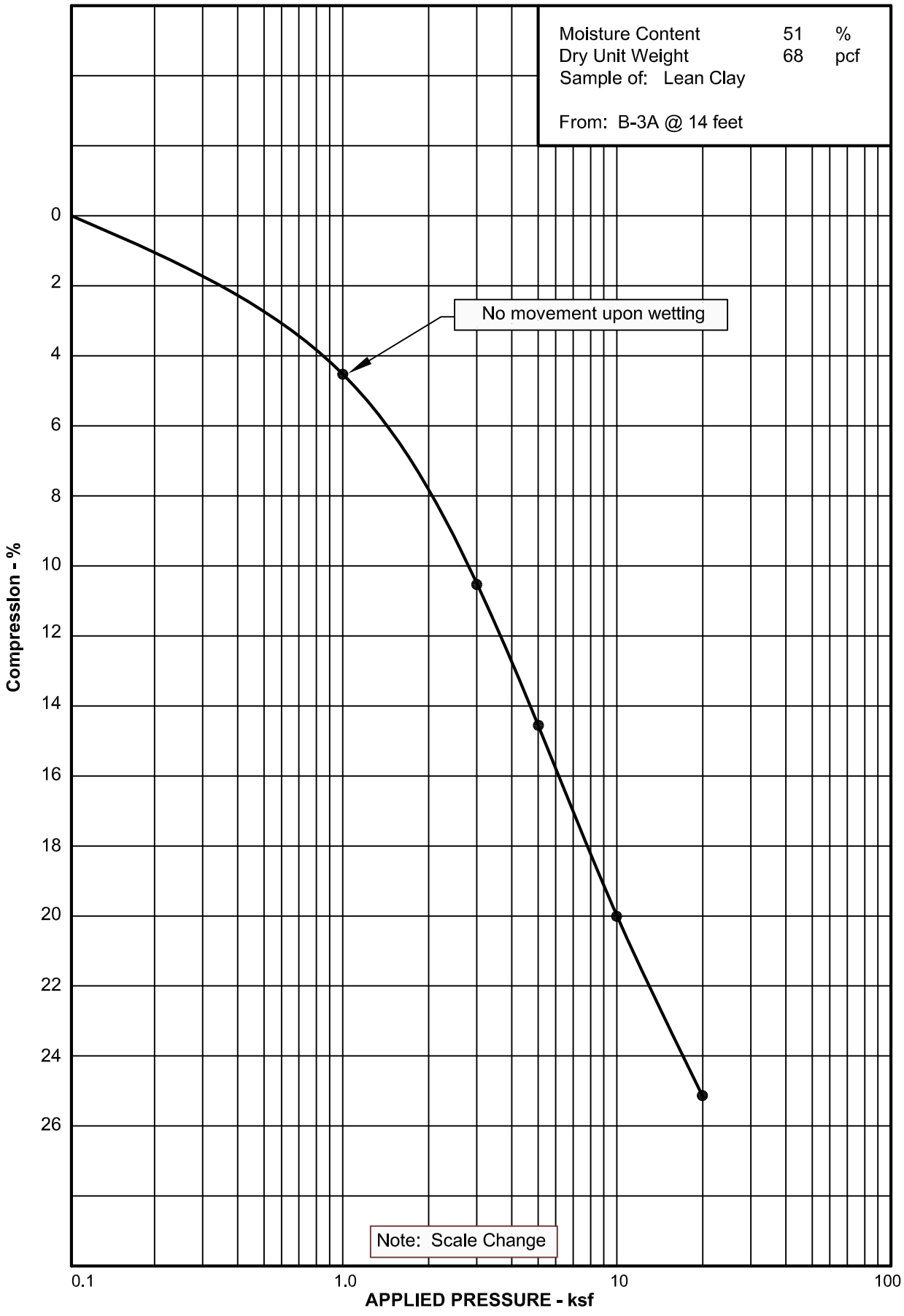


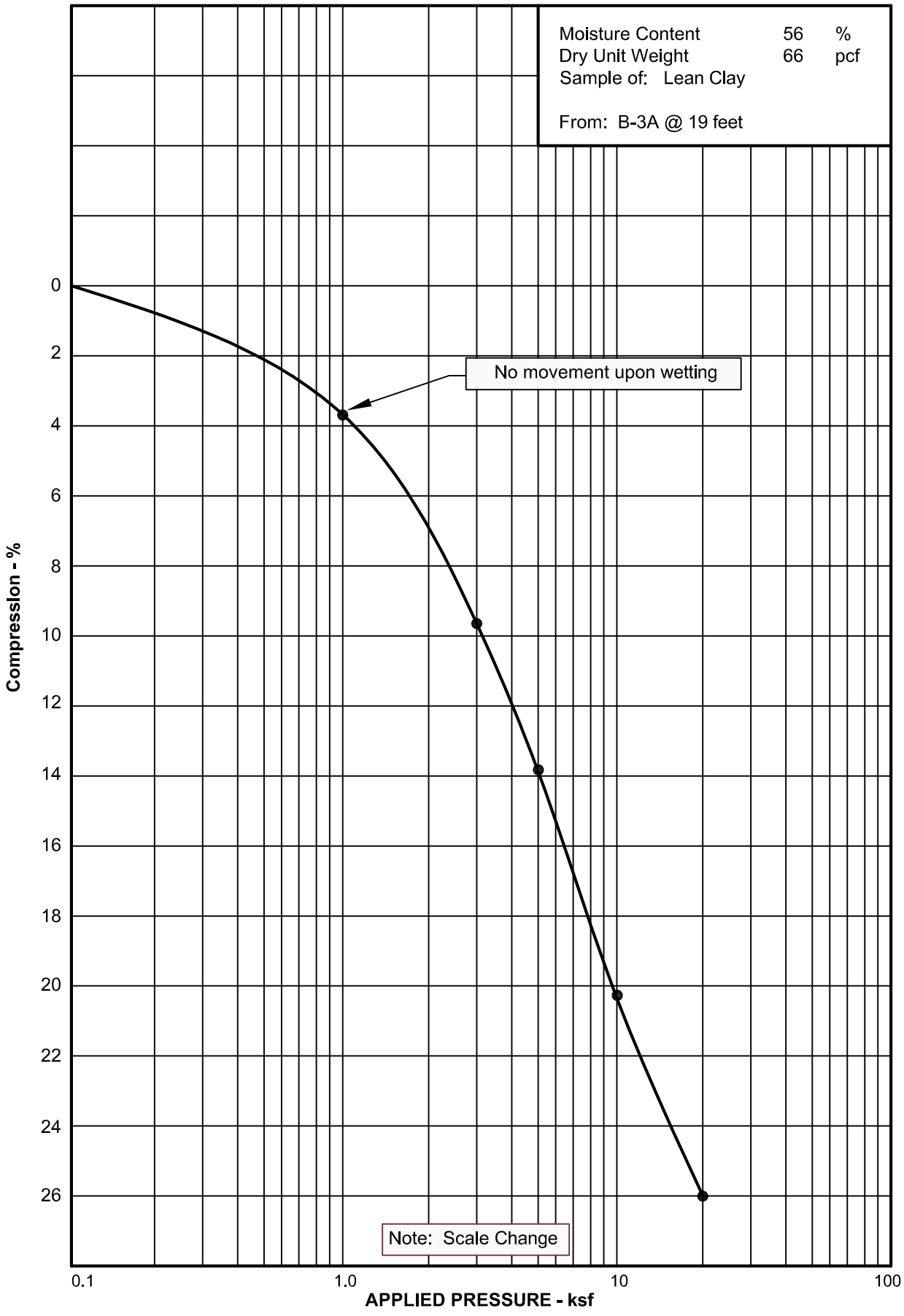
Project No. 1160276A **CONSOLIDATION TEST RESULTS** **Figure 5**

Applied Geotechnical Engineering Consultants, Inc.



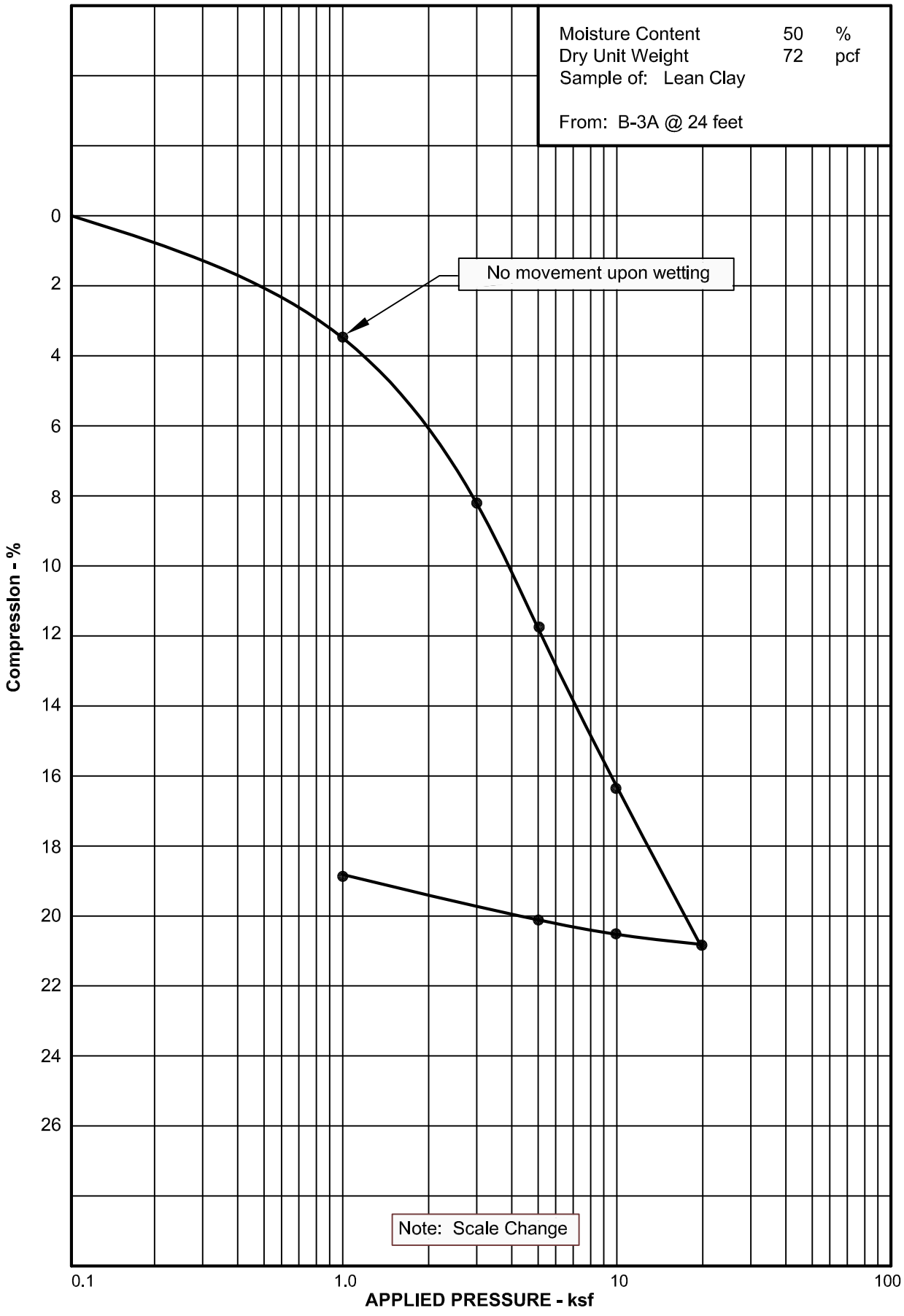
Project No. 1160276A **CONSOLIDATION TEST RESULTS** **Figure 6**

Applied Geotechnical Engineering Consultants, Inc.



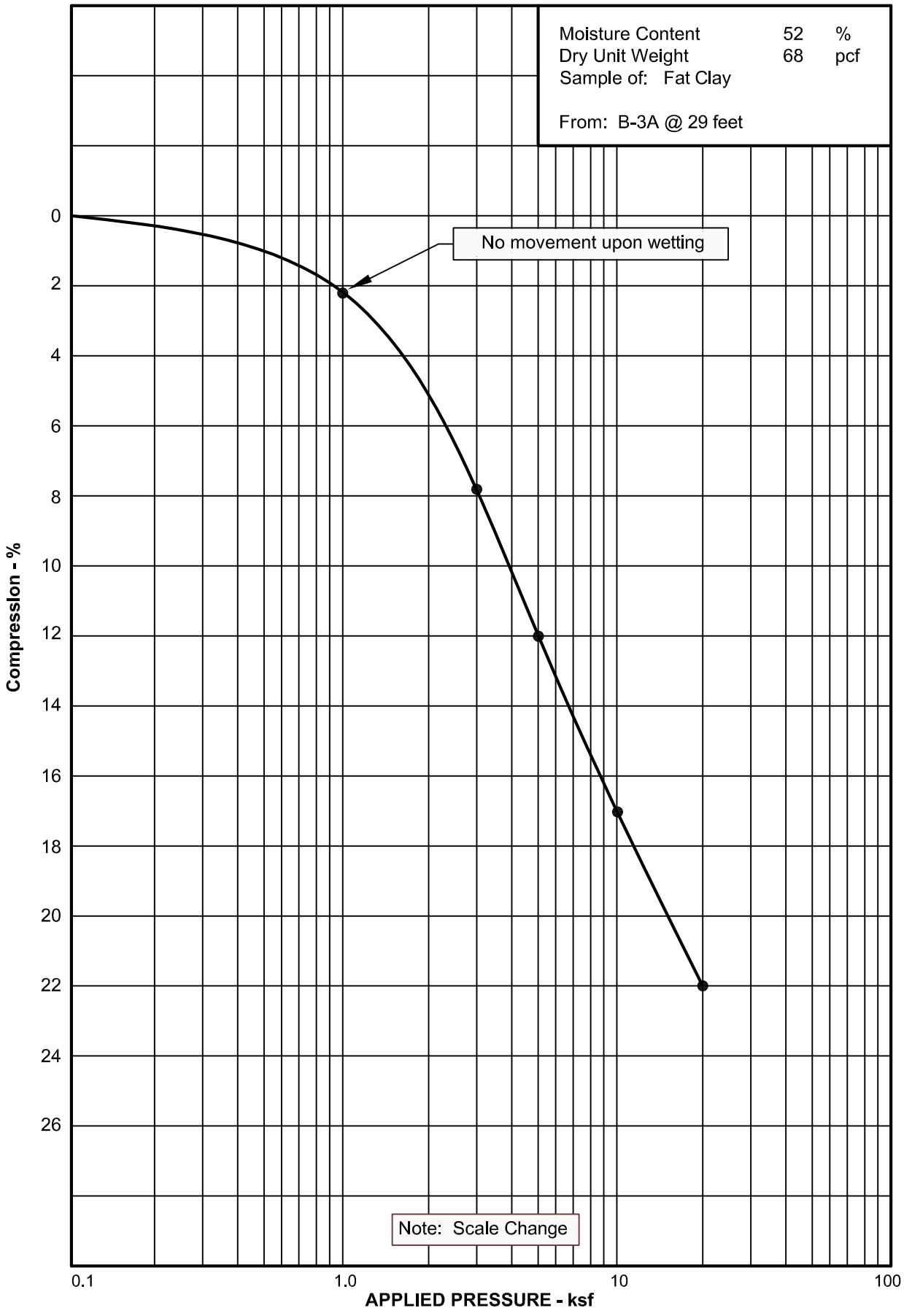
Project No. 1160276A **CONSOLIDATION TEST RESULTS** **Figure 7**

Applied Geotechnical Engineering Consultants, Inc.



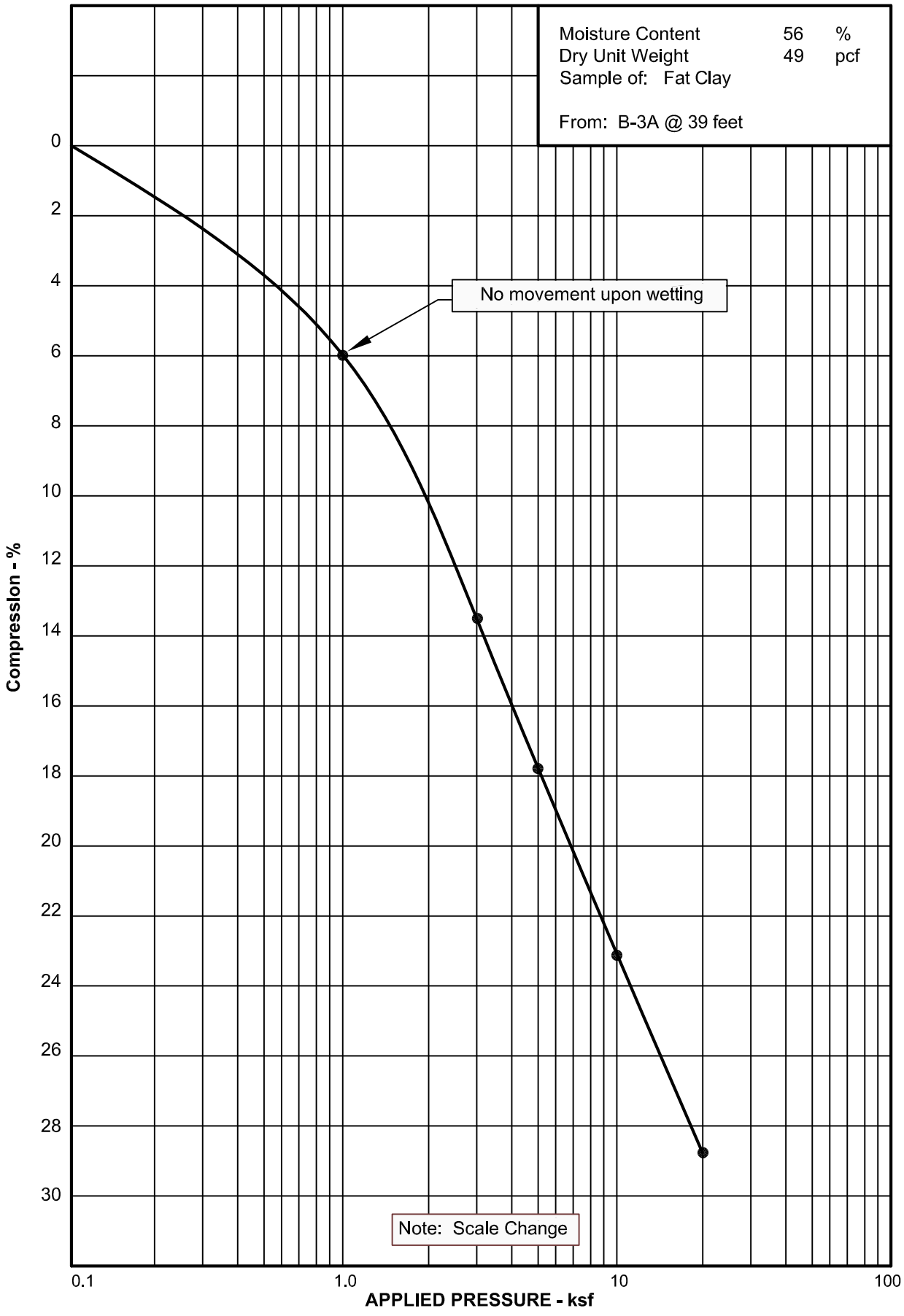
Project No. 1160276A **CONSOLIDATION TEST RESULTS** **Figure 8**

Applied Geotechnical Engineering Consultants, Inc.



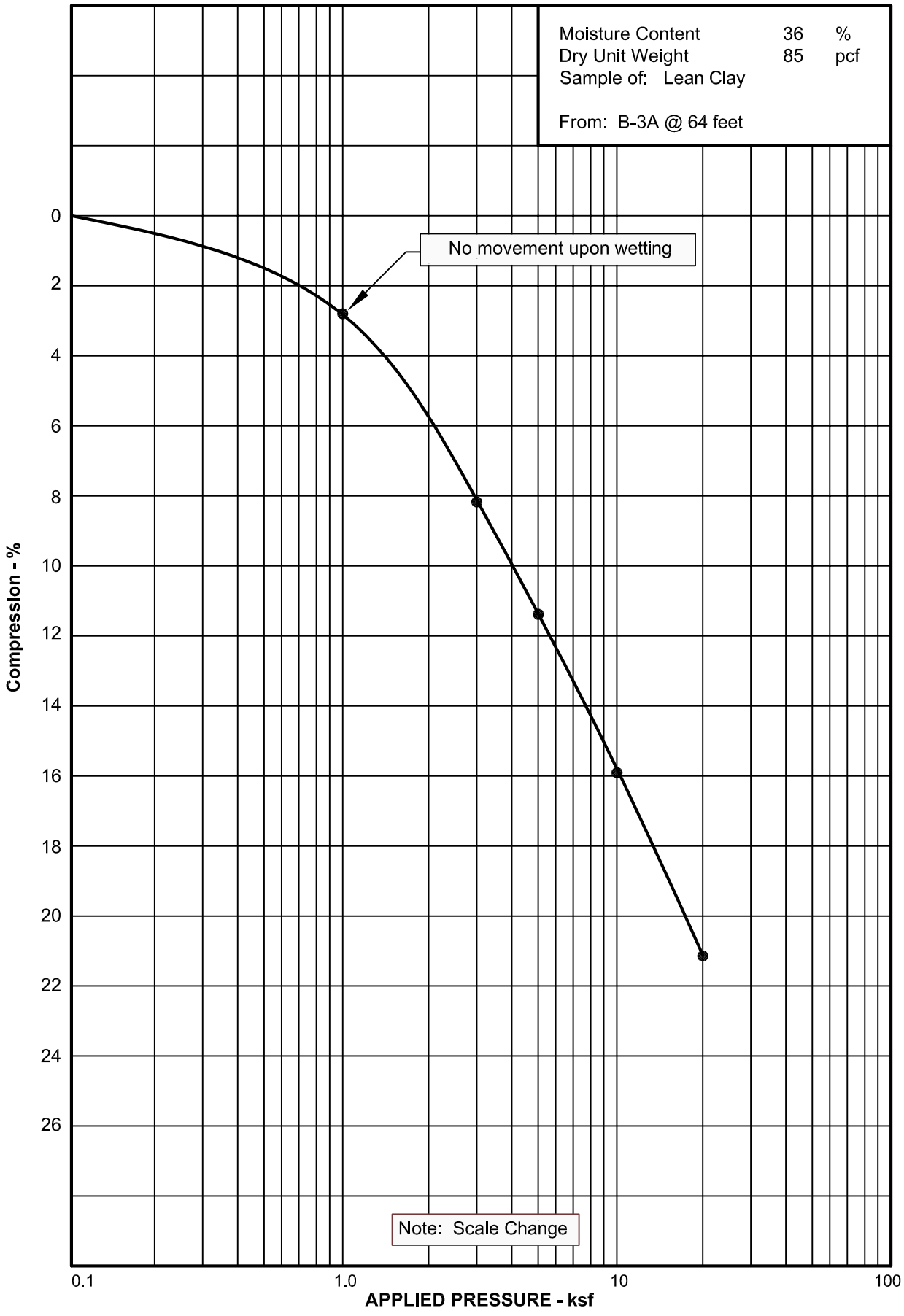
Project No. 1160276A **CONSOLIDATION TEST RESULTS** **Figure 9**

Applied Geotechnical Engineering Consultants, Inc.



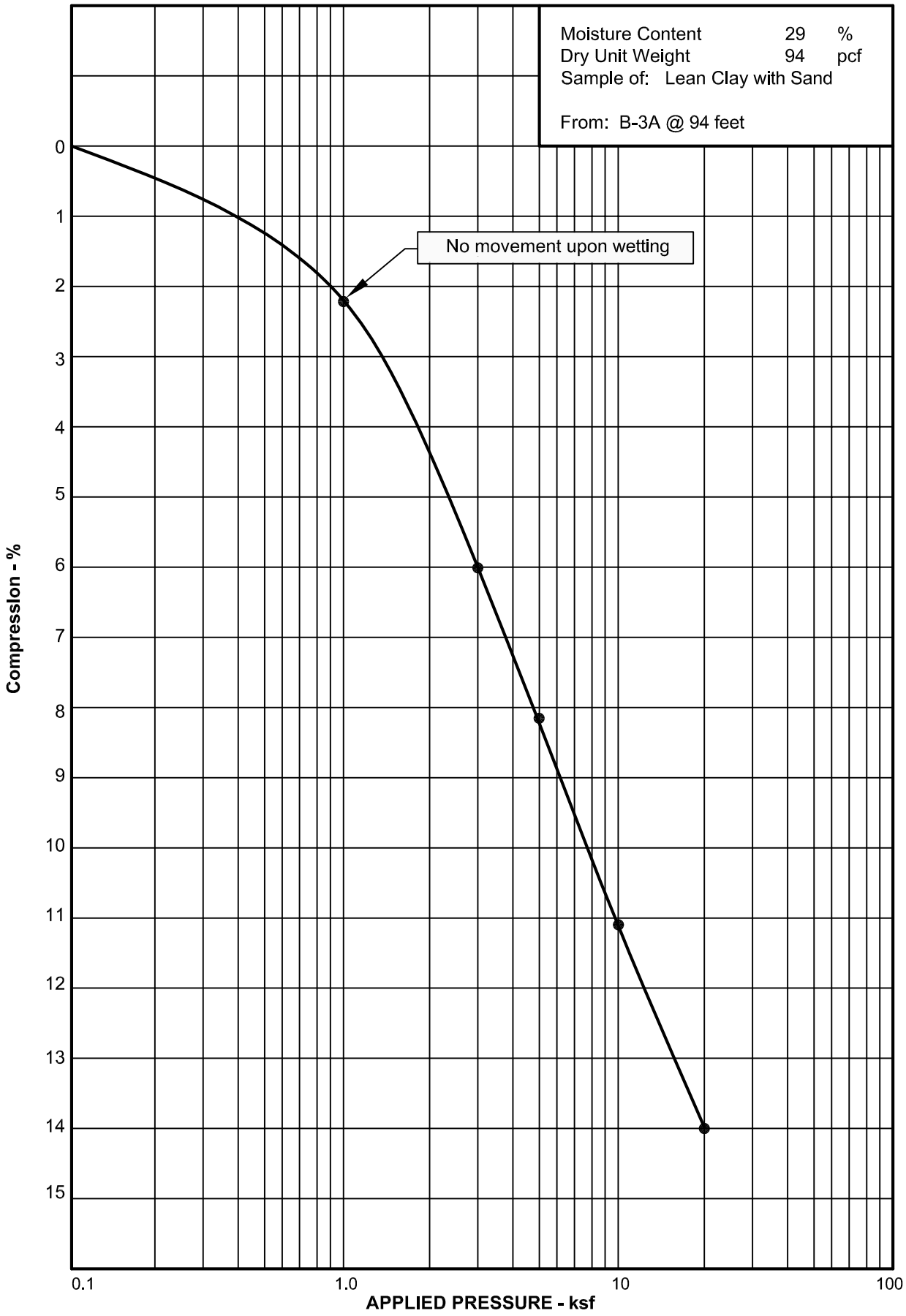
Project No. 1160276A **CONSOLIDATION TEST RESULTS** **Figure 10**

Applied Geotechnical Engineering Consultants, Inc.



Project No. 1160276A **CONSOLIDATION TEST RESULTS** **Figure 11**

Applied Geotechnical Engineering Consultants, Inc.



Project No. 1160276A **CONSOLIDATION TEST RESULTS** **Figure 12**

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

TABLE I

SUMMARY OF LABORATORY TEST RESULTS

PROJECT NUMBER 1160276A

SAMPLE LOCATION		NATURAL MOISTURE CONTENT (%)	NATURAL DRY DENSITY (PCF)	GRADATION			ATTERBERG LIMITS		UNCONFINED COMPRESSIVE STRENGTH (PSF)	WATER SOLUBLE SULFATE (%)	SAMPLE CLASSIFICATION
BORING	DEPTH (FEET)			GRAVEL (%)	SAND (%)	SILT/ CLAY (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)			
B-2A	2	11	93			88					Lean Clay
	9	24	93			92	28	10	315		Lean Clay
	14	45	74			97	35	13	335		Lean Clay
B-3A	4	12	82			64					Sandy Lean Clay/Silt
	14	51	68			99					Lean Clay
	19	56	66			96					Lean Clay
	24	50	72			100	42	25			Lean Clay
	29	52	68			94	53	29			Fat Clay
	39	56	49			99	51	29			Fat Clay
	64	36	85			91	37	18			Lean Clay
	94	29	94			83	35	19			Lean Clay with Sand

APPENDIX A

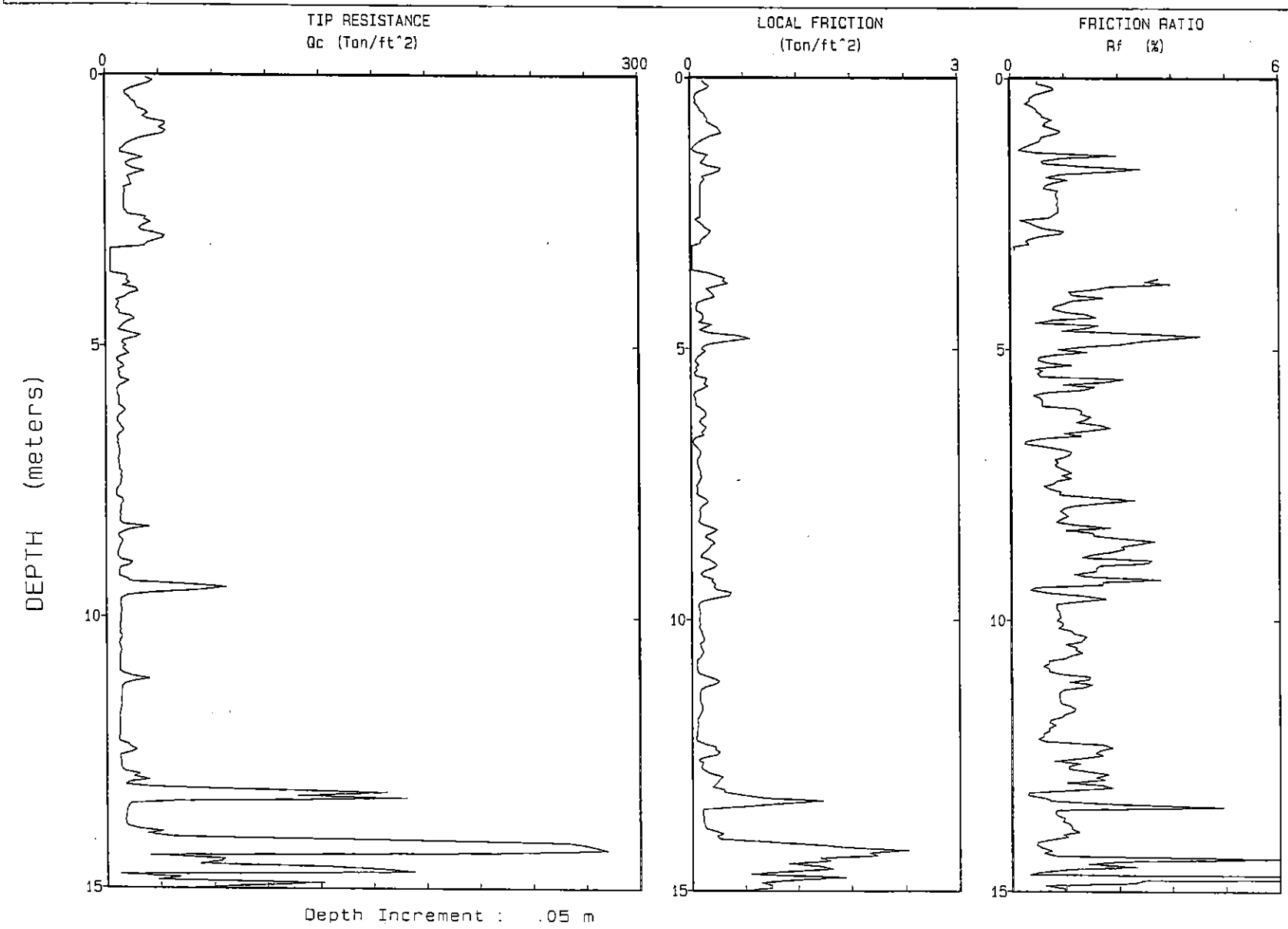
PREVIOUS BORING AND CPT DATA

AGEC

Engineer : JM
Location : C-L7

CPT Date : 04/27/92 09:22
Cone Used : H215

Page No: 1 / 2
Job No. : 20591

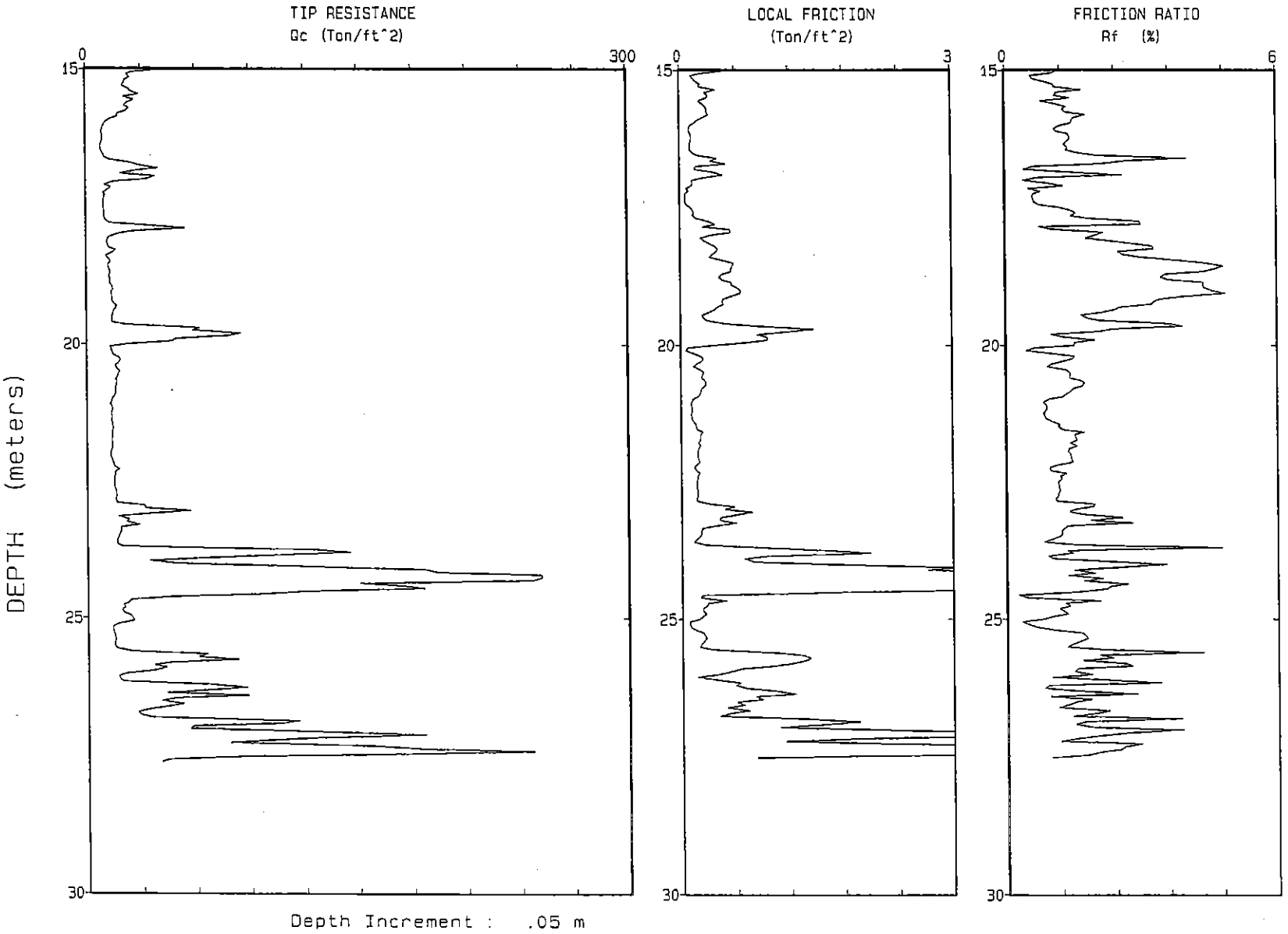


AGEC

Engineer : JM
Location : C-L7

CPT Date : 04/27/92 09:22
Cone Used : H215

Page No: 2 / 2
Job No. : 20591

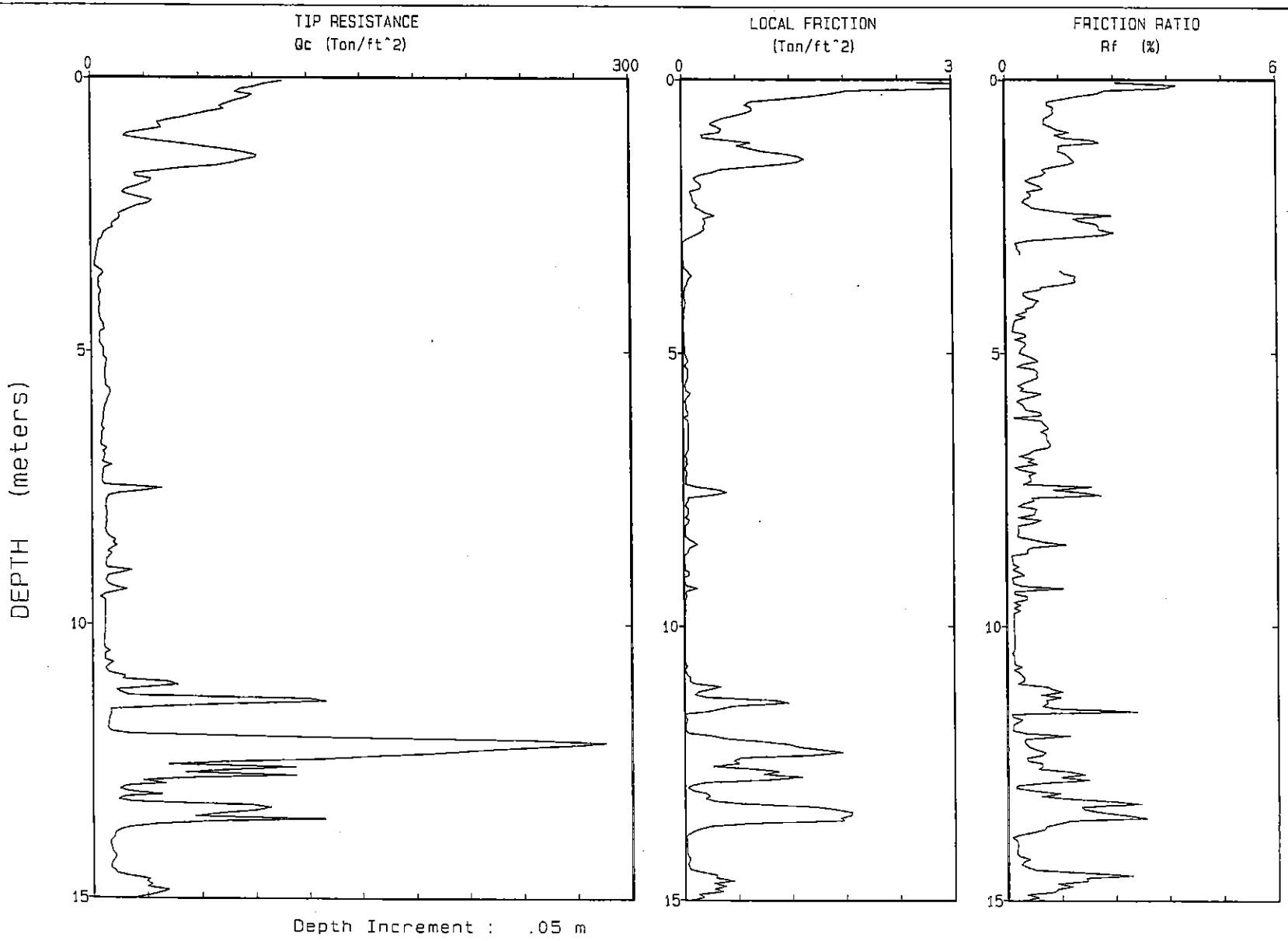


AGEC

Engineer : JM
Location : C-L11

CPT Date : 04/27/92 11:34
Cone Used : H215

Job No. : 20591

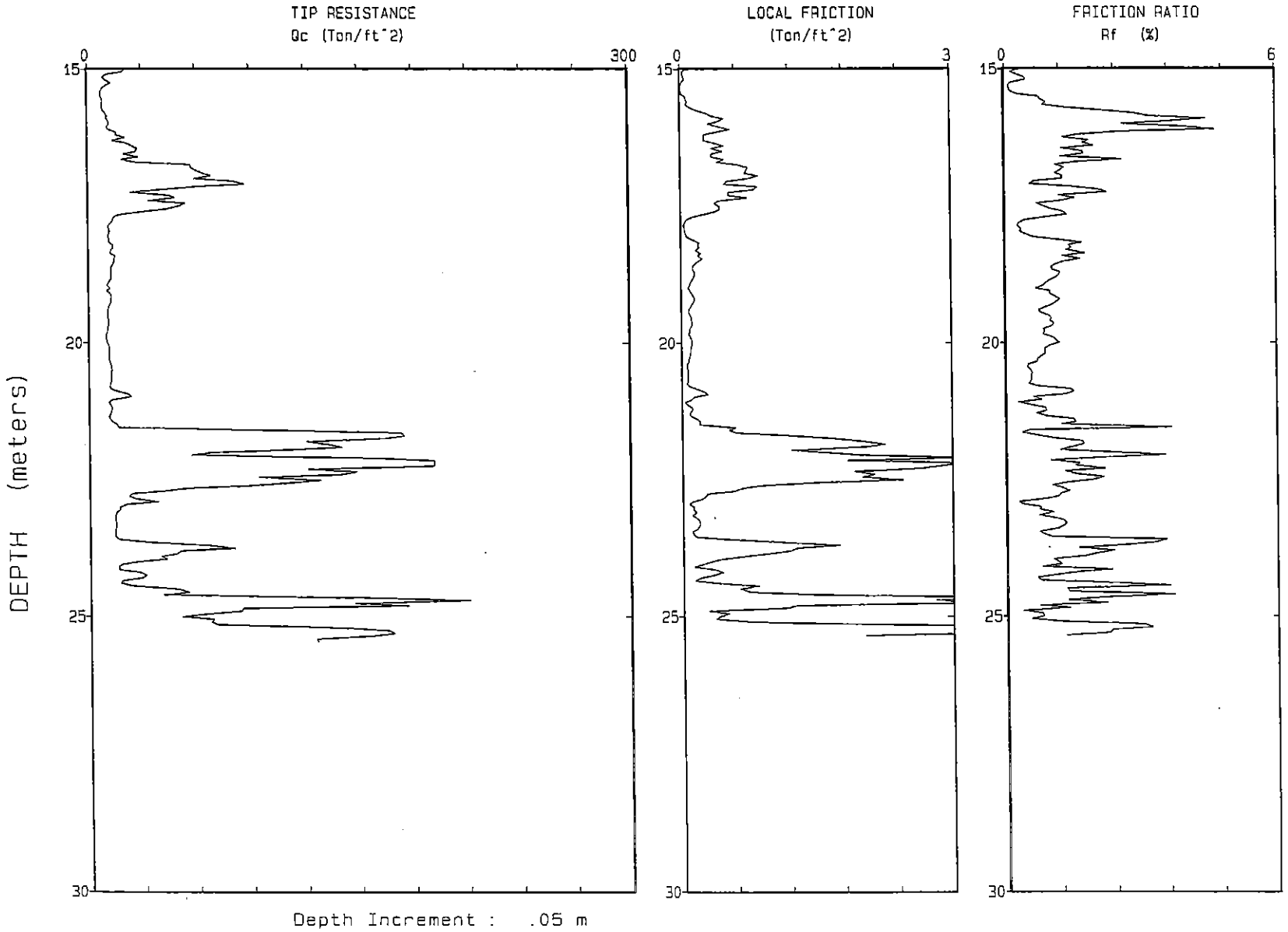


Depth Increment : .05 m

AGEC

Engineer : JM | CPT Date : 04/27/92 11:34 | Page No: 2 / 2

Location : C-L11 | Cone Used : H215 | Job No. : 20591



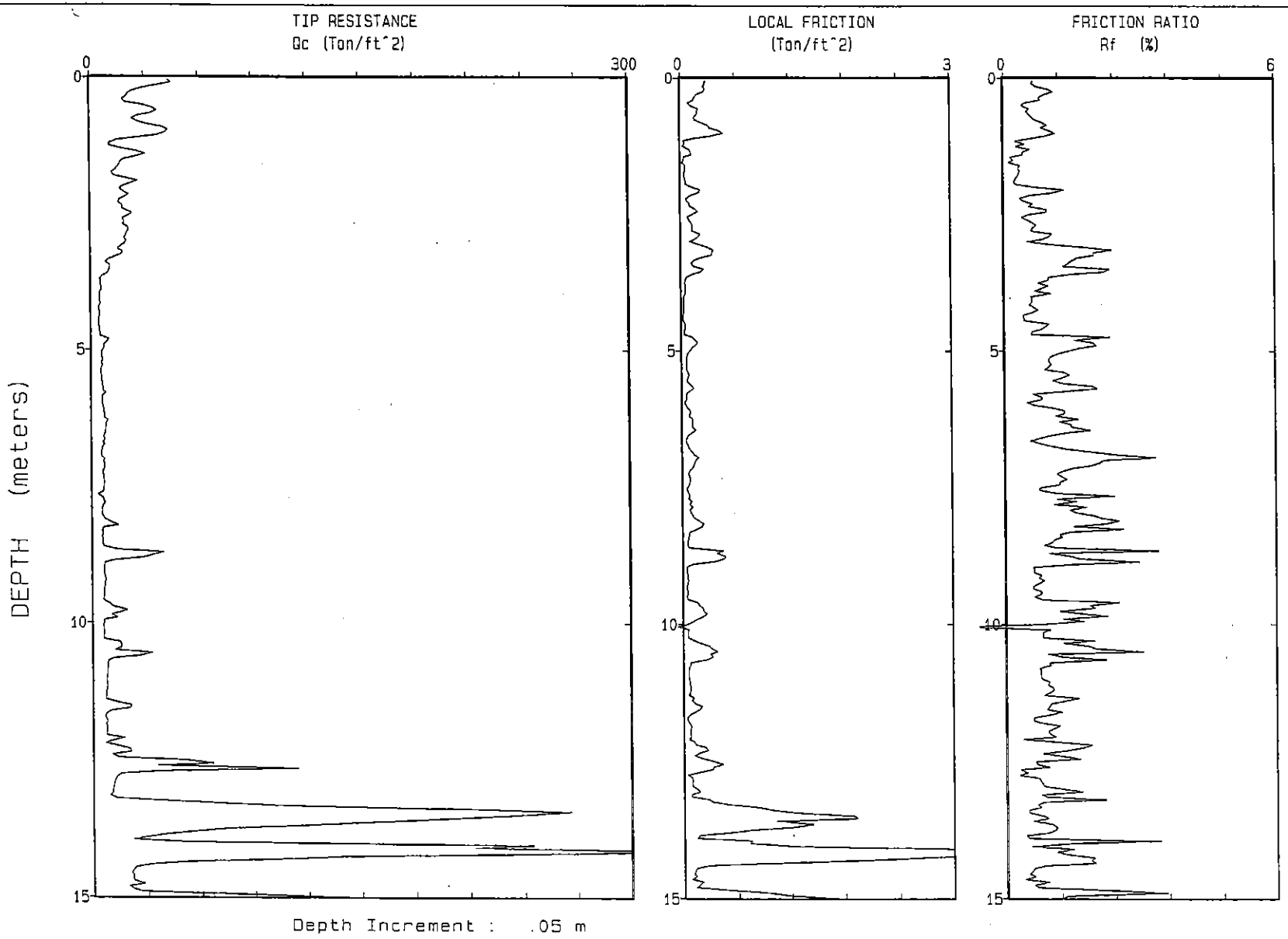
Depth Increment : .05 m

AGEC

Engineer : JM
Location : C-L18

CPT Date : 07/23/92 11:05
Cone Used : H215

Job No. : 20591

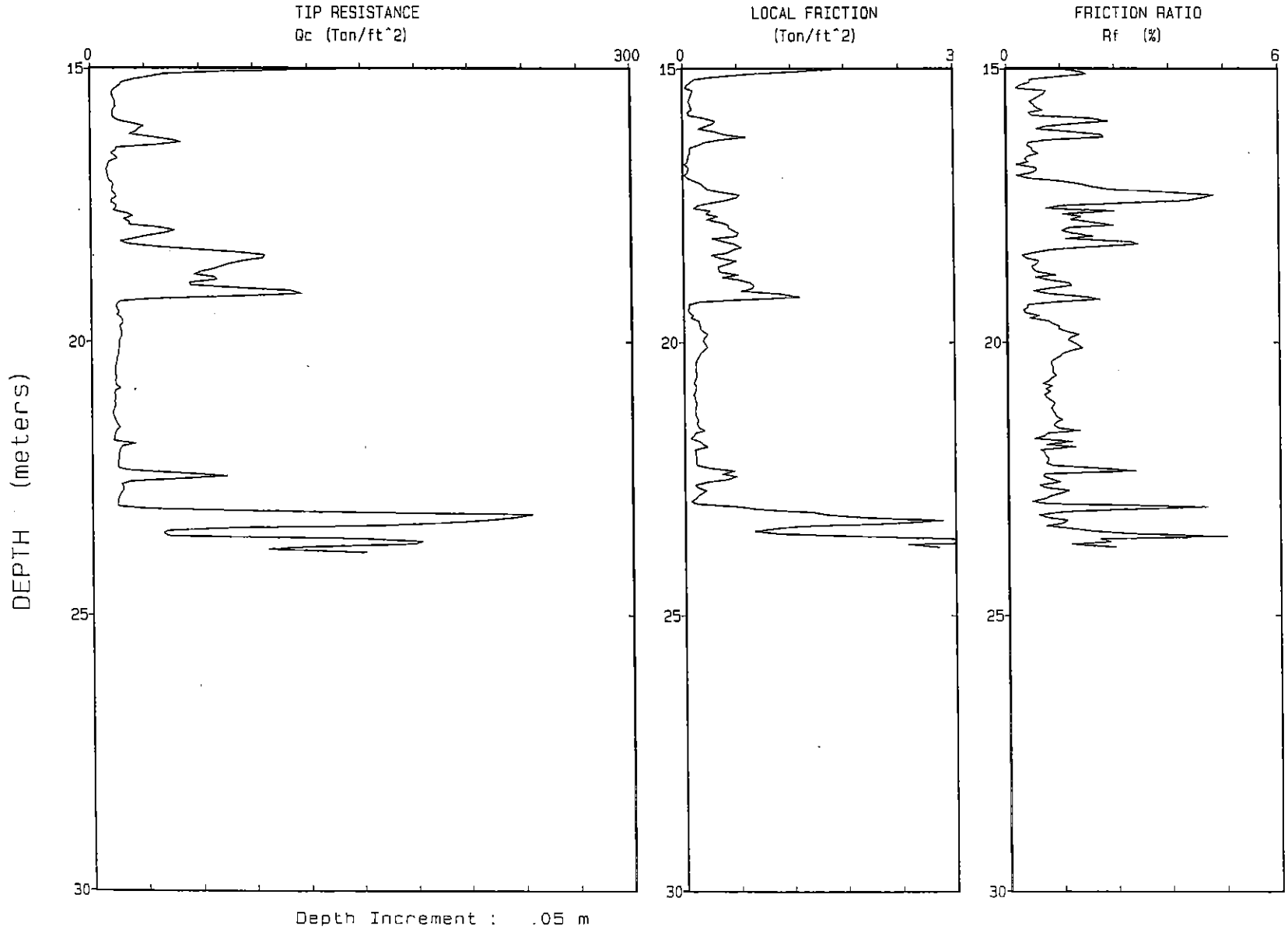


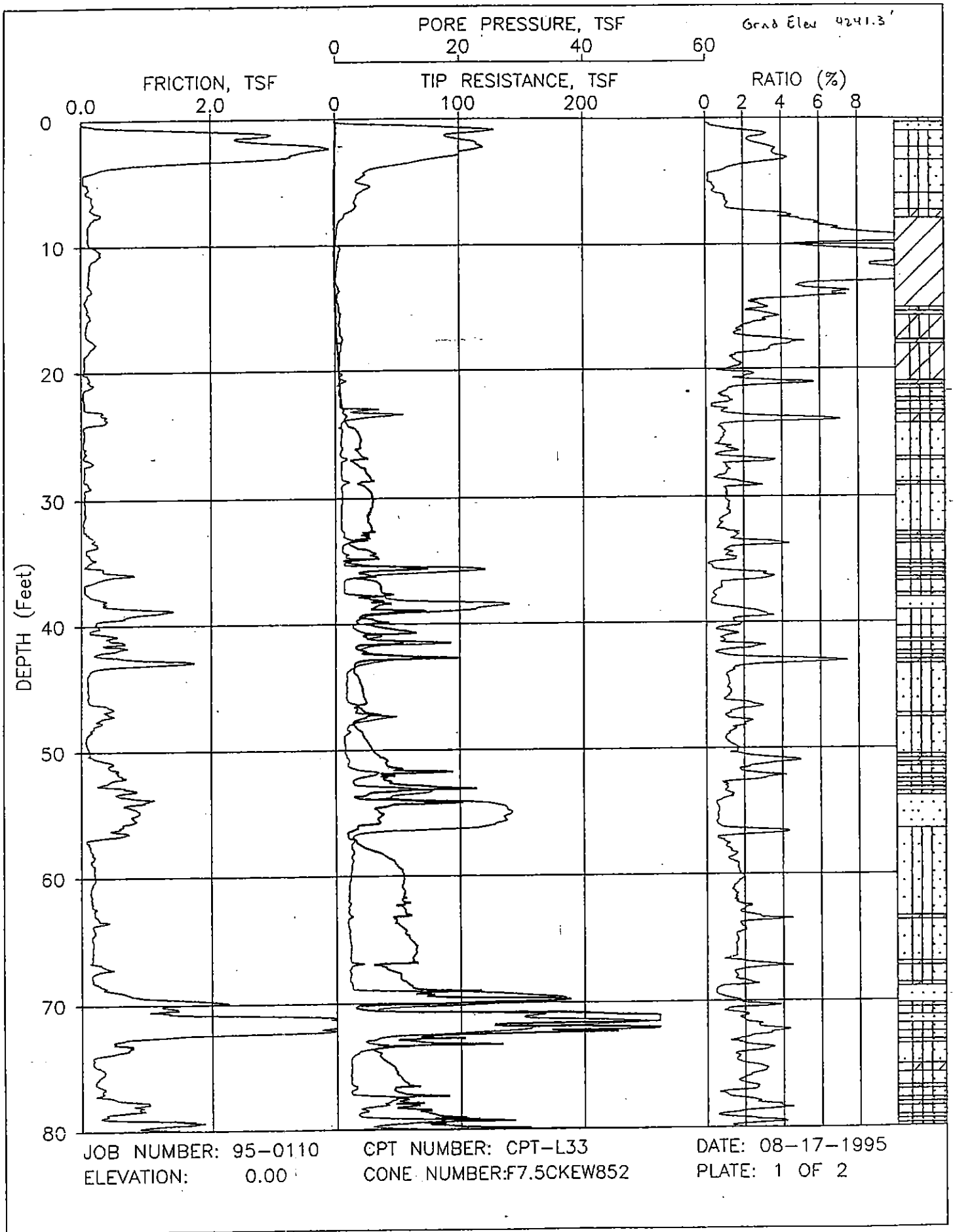
Depth Increment : .05 m

AGEC

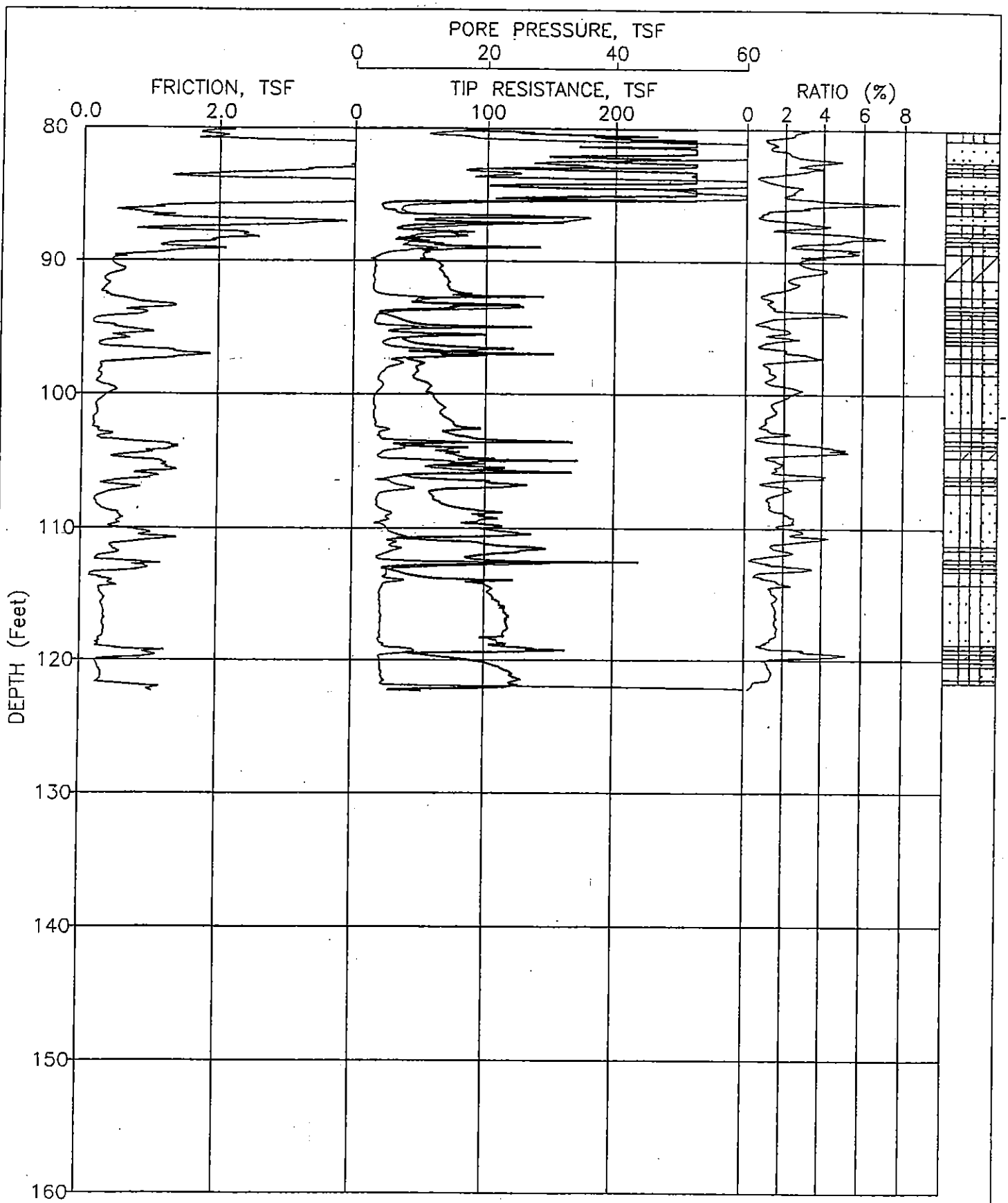
Engineer : JM | CPT Date : 04/23/92 11:05 | Page No: 2 / 2

Location : C-L18 | Cone Used : H215 | Job No. : 20591





FUGRO GEOSCIENCES,INC

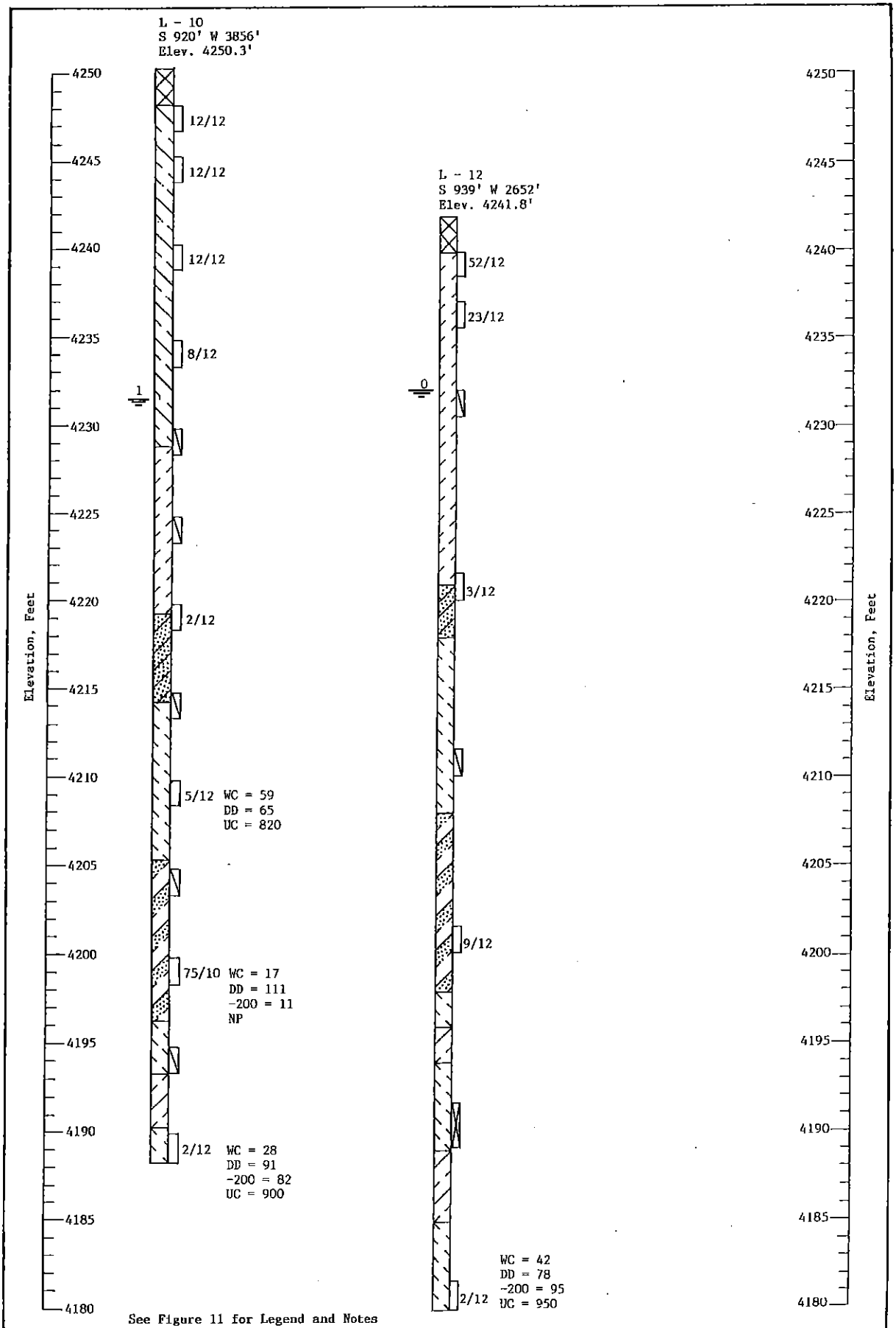


JOB NUMBER: 95-0110
ELEVATION: 0.00

CPT NUMBER: CPT-L33
CONE NUMBER:F7.5CKEW852

DATE: 08-17-1995
PLATE: 2 OF 2

FUGRO GEOSCIENCES,INC



See Figure 11 for Legend and Notes

20491	A G E C	LOGS OF EXPLORATORY BORINGS	FIGURE 5

NOTES:

1. Exploratory borings were drilled on March 30, 1992 through May 12, 1992 with 8-inch diamter hollowstem auger.

2. Locations and elevations of exploratory borings were surveyed by Sorenson once drilling was completed.

3. The exploratory boring locations and elevations should be considered accurate only to the degree implied by the method used.

4. The lines between the materials shown on the boring logs represent the approximate boundaries between material types and the transitions may be gradual.

5. Water level readings shown on the logs were made at the time and under the conditions indicated. Fluctuations in the water level may occur with time.

6. WC = Water Content (%);
   DD = Dry Density (pcf);
   -200 = Percent Passing No. 200 Sieve;
   LL = Liquid Limit (%);
   PI = Plasticity Index (%);
   NP = Nonplastic;
   UC = Unconfined Compressive Strength (psf).

7. All borings were backfilled with bentonite.

LEGEND:

Fill; sandy lean clay, slightly moist to moist, light gray brown.

Lean Clay (CL); slightly moist to wet, very hard in upper 3 - 5 feet grading to very stiff to medium stiff with depth, slightly moist to wet with depth, light brown to light gray brown.

Lean Clay (CL); thin silt and sand layers, occasional cemented layers, very soft to stiff, very moist to wet, light brown to gray, sulfurous odor.

Interlayered Sandy Silt and Sandy Lean Clay (ML-CL); silty sand and clayey sand layers, very hard to very soft with depth, moist to wet, light brown, sulfates.

Interlayered Sandy Silt and Lean Clay (ML-CL); occasional thin silty sand layers, medium to very stiff, very moist to wet, light brown to gray, sulfurous odor.

Interlayered Silty Sand and Lean clay (SM-CL); sandy silt layers, medium to very dense, medium to very stiff, very moist to wet, light brown to gray, sulfurous odor.

Silty Sand (SM); clay and sandy silt layers, medium to very dense, wet, gray to dark gray, sulfurous odor.

10/12 California Drive Sample. The symbol 10/12 indicates that 10 blows from a 140 pound hammer falling 30 inches were required to drive the sampler 12 inches.

Indicates 2½ inch inside diameter sampler used. The sampler was pushed not driven with a hammer.

Indicates a Shelby tube sample was taken.

1 Indicates depth to free water and the number of days after drilling the measurement was taken.

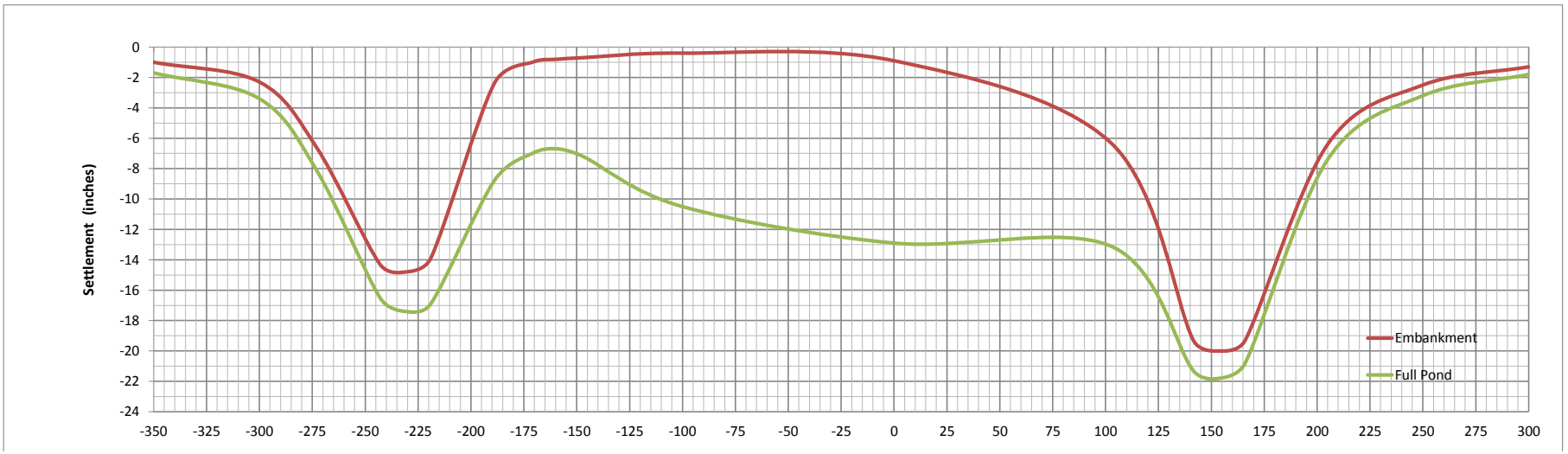
20591	AGEC	Legend and Notes of Exploratory Borings	Figure 11

APPENDIX B

SETTLEMENT CALCULATIONS

Clean Harbors
Surface Impondment Settlement Estimate

AGEC Project No. 1160276



Settle3D Analysis Information
1160276

Project Settings

Document Name	1160276 Surf Impound revised design
Project Title	1160276
Analysis	Surface Impoundment
Author	JRM
Company	AGEC
Date Created	8/10/2016, 8:52:24 AM
Stress Computation Method	Boussinesq
Use average properties to calculate layered stresses	

Stage Settings

Stage #	Name
1	Stage 1
2	Stage 2
3	Stage 3

Results

Time taken to compute: 0 seconds

Stage: Stage 1

Data Type	Minimum	Maximum
Total Settlement [in]	-1.00757	0
Consolidation Settlement [in]	-1.00757	0
Immediate Settlement [in]	0	0
Loading Stress [ksf]	-0.667663	0
Effective Stress [ksf]	-0.00154407	27.496
Total Stress [ksf]	-0.00154407	60.9424
Total Strain	-0.00931932	0
Pore Water Pressure [ksf]	0	33.4464
Degree of Consolidation [%]	0	100
Pre-consolidation Stress [ksf]	0.084	27.4925
Over-consolidation Ratio	1	10.04
Void Ratio	1.1	1.11598
Hydroconsolidation Settlement [in]	0	0
Undrained Shear Strength	0	5.50042

Stage: Stage 2

Data Type	Minimum	Maximum
Total Settlement [in]	-0.222499	20.0116
Consolidation Settlement [in]	-0.222499	20.0116
Immediate Settlement [in]	0	0
Loading Stress [ksf]	-0.664929	1.56
Effective Stress [ksf]	-0.00102474	27.5622
Total Stress [ksf]	-0.00102474	61.0086
Total Strain	-0.0092728	0.103328
Pore Water Pressure [ksf]	0	33.4464
Degree of Consolidation [%]	0	100
Pre-consolidation Stress [ksf]	0.0840005	27.5512
Over-consolidation Ratio	1	9.9252
Void Ratio	0.883011	1.11591
Hydroconsolidation Settlement [in]	0	0
Undrained Shear Strength	0	5.50306

Stage: Stage 3

Data Type	Minimum	Maximum
Total Settlement [in]	0	21.7746
Consolidation Settlement [in]	0	21.7746
Immediate Settlement [in]	0	0
Loading Stress [ksf]	7.51399e-013	1.56
Effective Stress [ksf]	7.51399e-013	27.6398
Total Stress [ksf]	7.51399e-013	61.0862
Total Strain	2.15477e-007	0.103328
Pore Water Pressure [ksf]	0	33.4464
Degree of Consolidation [%]	0	100
Pre-consolidation Stress [ksf]	0.0840005	27.6288
Over-consolidation Ratio	1	1
Void Ratio	0.883011	1.1
Hydroconsolidation Settlement [in]	0	0
Undrained Shear Strength	0	5.50616

Loads

1. Rectangular Load

Length	18 ft
Width	400 ft
Rotation angle	0 degrees
Load Type	Flexible
Area of Load	7200 ft^2
Load	0.5616 ksf
Depth	0 ft
Installation Stage	Stage 3

Coordinates

X [ft]	Y [ft]
-189	-200
-171	-200
-171	200
-189	200

2. Rectangular Load

Length	24 ft
Width	400 ft
Rotation angle	0 degrees
Load Type	Flexible
Area of Load	9600 ft^2
Load	0.7176 ksf
Depth	0 ft
Installation Stage	Stage 3

Coordinates

X [ft]	Y [ft]
-171	-200
-147	-200
-147	200
-171	200

3. Rectangular Load

Length	30 ft
Width	400 ft
Rotation angle	0 degrees
Load Type	Flexible
Area of Load	12000 ft^2
Load	0.5616 ksf
Depth	0 ft
Installation Stage	Stage 3

Coordinates

X [ft]	Y [ft]
-147	-200
-117	-200
-117	200
-147	200

4. Rectangular Load

Length	92 ft
Width	400 ft
Rotation angle	0 degrees
Load Type	Flexible
Area of Load	36800 ft^2
Load	0.5304 ksf
Depth	0 ft
Installation Stage	Stage 3

Coordinates

X [ft]	Y [ft]
-117	-200
-25	-200
-25	200
-117	200

5. Rectangular Load

Length	127.5 ft
Width	400 ft
Rotation angle	0 degrees
Load Type	Flexible
Area of Load	51000 ft^2
Load	0.4992 ksf
Depth	0 ft
Installation Stage	Stage 3

Coordinates

X [ft]	Y [ft]
-25	-200
102.5	-200
102.5	200
-25	200

Embankments

1. Embankment

Center Line	(-231.25, -200) to (-231.25, 200)
Number of Layers	1
Near End Angle	18.43 degrees
Far End Angle	18.43 degrees
Base Width	84

Layer	Stage	Left Bench Width (ft)	Left Angle (deg)	Height (ft)	Unit Weight (kips/ft^3)	Right Angle (deg)	Right Bench Width (ft)
1	Stage 2	0	18.43	10	0.12	18.43	0

2. Embankment

Center Line	(153.75, -200) to (153.75, 200)
Number of Layers	1
Near End Angle	18.43 degrees
Far End Angle	18.43 degrees
Base Width	100

Layer	Stage	Left Bench Width (ft)	Left Angle (deg)	Height (ft)	Unit Weight (kips/ft^3)	Right Angle (deg)	Right Bench Width (ft)
1	Stage 2	0	18.43	13	0.12	18.43	0

Excavations

1. Excavation

Depth 3 ft
Installation Stage Stage 1

Coordinates

X [ft]	Y [ft]
-189	-200
-171	-200
-171	200
-189	200

2. Excavation

Depth 5.5 ft
Installation Stage Stage 1

Coordinates

X [ft]	Y [ft]
-171	-200
-147	-200
-147	200
-171	200

3. Excavation

Depth 2.5 ft
Installation Stage Stage 1

Coordinates

X [ft]	Y [ft]
-147	-200
-117	-200
-117	200
-147	200

4. Excavation

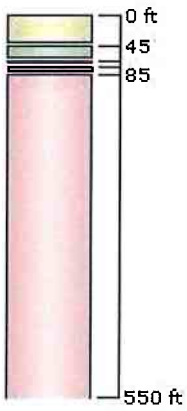
Depth 1 ft
Installation Stage Stage 1

Coordinates

X [ft]	Y [ft]
-117	-200
-25	-200
-25	200
-117	200

Soil Layers

Layer #	Type	Thickness [ft]	Depth [ft]
1	Layer 1	45	0
2	Layer 2	20	45
3	Layer 3	10	65
4	Layer 4	10	75
5	Layer 5	465	85
6	Layer 5	0	550
7	Layer 5	0	550
8	Layer 5	0	550
9	Layer 5	0	550
10	Layer 5	0	550
11	Layer 5	0	550
12	Layer 5	0	550
13	Layer 5	0	550
14	Layer 5	0	550
15	Layer 5	0	550
16	Layer 5	0	550
17	Layer 5	0	550
18	Layer 5	0	550
19	Layer 5	0	550



Soil Properties

Property	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5
Color					
Unit Weight [kips/ft^3]	0.12	0.11	0.11	0.11	0.11
Saturated Unit Weight [kips/ft^3]	0.12	0.11	0.11	0.11	0.11
Primary Consolidation	Enabled	Enabled	Enabled	Enabled	Enabled
Material Type	Non-Linear	Non-Linear	Non-Linear	Non-Linear	Non-Linear
Cce	0.08	0.15	0.04	0.02	0.08
Cre	0.008	0.015	0.004	0.002	0.008
Pc [ksf]	0	0	0	0	0
Undrained Su A [kips/ft2]	0	0	0	0	0
Undrained Su S	0.2	0.2	0.2	0.2	0.2
Undrained Su m	0.8	0.8	0.8	0.8	0.8
Piezo Line ID	1	1	1	1	1

Groundwater

Groundwater method	Piezometric Lines
Water Unit Weight	0.0624 kips/ft^3

Piezometric Line Entities

ID	Depth (ft)
1	14 ft

Query Points

Point #	(X,Y) Location	Number of Divisions
1	-350, 0	Auto: 61
2	-300, 0	Auto: 61
3	-269.6, 0	Auto: 61
4	-231.25, 0	Auto: 61
5	-189, 0	Auto: 67
6	-171, 0	Auto: 73
7	-100, 0	Auto: 67
8	0, 0	Auto: 61
9	102.5, 0	Auto: 61
10	153.75, 0	Auto: 61
11	205, 0	Auto: 61
12	250, 0	Auto: 61
13	300, 0	Auto: 61
14	-243, 0	Auto: 61
15	-219, 0	Auto: 61
16	141.5, 0	Auto: 61
17	166, 0	Auto: 61
18	-147, 0	Auto: 73
19	-147, 0	Auto: 73
20	-159, 0	Auto: 67
21	-100, 0	Auto: 67

APPENDIX C

LIQUEFACTION CALCULATIONS

Project No.	1160276		uses n = 0.7 vs Conetec using 0.75 for transitional soil		
Project Description	L-7			Direct	Thin Layer
Water Table	5	ft	Idriss Settlement	0.3	0.0
Earthquake Magnitude	5.2	M_W	Robertson Settlement	0.9	0.0
Acceleration	0.2	g			
Soil Unit Wt	125	pcf			
Pa	1.06	tsf			

CPT INPUT DATA			LIQUEFACTION POTENTIAL														LIQUEFACTION INDUCED SETTLEMENT										
Depth, m	q_C, tsf	fs, tsf	Total Stress, tsf	Effective. Stress, tsf	F, %	n	I_C	Fines Content, %	q_{c1N}	K_C	q_{c1N-cs}	Stress Reduct. Coeff., r_d	$CRR_{7.5}$	CSR	K_σ	Factor of Safety	$(N1)_{60-cs}$	Limiting Shear Strain, γ_{lim}	Parameter F_α	Maximum Shear Strain, γ_{max}	Layer Thick., m ΔH_i	ΔLDI_i,in	Cum. LDI, in	Vertical Reconsol Strain, ε_v	Sett., in, ΔS_i	Cum. S., in.	Zhang Settle, in	Zhang Cum. Settle, in
0.250	22.980	0.140	0.051	0.051	0.61	0.5	1.79	8	36.9	1.09	40.2	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
0.300	26.560	0.160	0.062	0.062	0.60	0.5	1.77	7	42.6	1.08	45.9	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
0.350	23.750	0.220	0.072	0.072	0.93	0.5	1.94	11	38.1	1.22	46.6	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
0.400	19.150	0.190	0.082	0.082	1.00	0.5	2.06	15	30.7	1.38	42.3	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
0.450	13.530	0.100	0.092	0.092	0.74	0.5	2.14	17	21.7	1.52	32.9	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
0.500	11.230	0.060	0.103	0.103	0.54	0.5	2.16	18	18.0	1.57	28.3	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
0.550	11.490	0.050	0.113	0.113	0.44	0.5	2.13	17	18.4	1.00	18.4	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
0.600	13.530	0.060	0.123	0.123	0.45	0.5	2.09	16	21.7	1.00	21.7	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
0.650	14.810	0.050	0.133	0.133	0.34	0.5	2.02	14	23.8	1.00	23.8	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
0.700	16.850	0.080	0.144	0.144	0.48	0.5	2.05	14	27.0	1.00	27.0	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
0.750	17.360	0.100	0.154	0.154	0.58	0.5	2.09	15	27.8	1.42	39.6	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
0.800	18.380	0.110	0.164	0.164	0.60	0.5	2.09	15	29.5	1.42	41.9	1.00	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
0.850	22.980	0.160	0.174	0.174	0.70	0.5	2.05	14	36.9	1.35	49.9	1.00	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
0.900	23.750	0.170	0.185	0.185	0.72	0.5	2.05	14	38.1	1.36	51.9	1.00	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
0.950	21.190	0.200	0.195	0.195	0.95	0.5	2.17	18	34.0	1.58	53.7	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.000	24.000	0.190	0.205	0.205	0.80	0.5	2.09	15	38.5	1.43	54.9	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.050	33.450	0.250	0.215	0.215	0.75	0.5	1.96	12	53.6	1.25	66.9	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.100	33.190	0.310	0.226	0.226	0.94	0.5	2.03	14	53.2	1.33	70.9	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.150	30.130	0.340	0.236	0.236	1.14	0.5	2.12	16	48.3	1.48	71.7	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.200	33.700	0.350	0.246	0.246	1.05	0.5	2.07	15	54.0	1.39	75.1	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.250	32.170	0.230	0.256	0.256	0.72	0.5	2.00	13	51.6	1.29	66.6	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.300	25.020	0.170	0.267	0.267	0.69	0.5	2.09	15	40.1	1.43	57.2	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.350	18.890	0.120	0.277	0.277	0.64	0.5	2.19	19	30.3	1.63	49.5	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.400	15.060	0.070	0.287	0.287	0.47	0.5	2.23	20	24.2	1.00	24.2	0.99	na	0.129	1.07	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.450	12.260	0.040	0.297	0.297	0.33	0.5	2.27	21	19.7	1.00	19.7	0.99	na	0.129	1.07	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.500	10.470	0.020	0.308	0.308	0.20	0.5	2.28	22	16.8	1.00	16.8	0.99	na	0.129	1.06	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.550	8.680	0.050	0.318	0.315	0.60	0.5	2.52	31	13.9	2.83	39.4	0.99	0.083	0.130	1.08	1.76	10.2	0.500	0.943	0.001	0.05	0.0	0.28	0.001	0.00	0.26	0.00	0.9
1.600	8.430	0.200	0.328	0.320	2.47	1.0	2.62	36	13.5	3.44	46.5	0.99	na	0.132	1.08	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.650	15.060	0.170	0.338	0.325	1.15	0.5	2.44	28	24.2	2.45	59.2	0.99	0.099	0.134	1.09	2.07	14.8	0.500	0.943	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.700	21.190	0.150	0.349	0.331	0.72	0.5	2.20	19	34.0	1.67	56.7	0.99	0.097	0.136	1.09	1.98	12.8	0.500	0.943	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.750	15.060	0.110	0.359	0.336	0.75	0.5	2.35	24	24.2	2.10	50.8	0.99	0.092	0.137	1.08	1.85	12.2	0.500	0.943	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.800	11.750	0.200	0.369	0.341	1.76	0.7	2.56	33	18.8	3.05	57.5	0.99	0.098	0.139	1.09	1.95	15.2	0.500	0.943	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.850	12.000	0.350	0.379	0.346	3.01	0.7	2.69	40	19.2	3.93	75.6	0.99	na	0.141	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.900	15.580	0.330	0.390	0.351	2.17	0.5	2.59	35	25.0	3.27	81.7	0.99	0.131	0.142	1.10	2.58	22.0	0.475	0.910	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
1.950	22.210	0.250	0.400	0.356	1.15	0.5	2.31	23	35.6	1.96	69.8	0.99	0.112	0.144	1.09	2.16	16.5	0.500	0.942	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
2.000	16.090	0.130	0.410	0.361	0.83	0.5	2.36	25	25.8	2.14	55.2	0.99	0.096	0.146	1.08	1.81	13.3	0.500	0.943	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
2.050	12.510	0.160	0.420	0.367	1.32	0.5	2.56	34	20.1	3.08	61.9	0.99	0.102	0.147	1.08	1.92	16.4	0.500	0.943	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
2.100	13.530	0.130	0.431	0.372	0.99	0.5	2.47	29	21.6	2.61	56.3	0.99	0.097	0.149	1.08	1.79	14.3	0.500	0.943	0.000	0.05	0.0	0.28	0.000	0.00	0.26	0.00	0.9
2.150	13.790	0.110	0.441	0.377	0.82	0.5	2.43	28	21.8	2.41	52.7	0.99	0.094	0.150	1.08	1.71	13.1	0.500	0.943	0.001	0.05	0.0	0.28	0.001	0.00	0.26	0.00	0.9
2.200	14.810	0.110	0.451	0.382	0.77	0.5	2.39	26	23.3	2.25	52.3	0.99	0.093	0.151	1.07	1.69	12.8	0.500	0.943	0.001	0.05	0.0	0.28	0.001	0.00	0.26	0.00	0.9
2.250	10.260	0.110	0.461	0.387	1.12	0.7	2.54	32	16.5	2.95	48.6	0.98	0.090	0.153	1.07	1.62	12.8	0.500	0.943	0.001	0.05	0.0	0.28	0.001	0.00	0.26	0.00	0.9
2.300	10.770	0.110	0.472	0.392	1.07	0.5	2.59	35	16.7	3.24	54.0	0.98	0.095	0.154	1.07	1.69	14.5	0.500	0.943	0.001	0.05	0.0	0.27	0.001	0.00	0.26	0.00	0.9
2.350	10.770	0.110	0.482	0.397	1.07	0.5	2.59	35	16.6	3.25	54.0	0.98	0.095	0.155	1.07	1.67	14.5	0.500	0.943	0.001	0.05	0.0	0.27	0.001	0.00	0.26	0.00	0.9
2.400	10.260	0.110	0.492	0.402	1.13	0.7	2.55	33	16.5	3.02	49.7	0.98	0.091	0.156	1.07	1.59	13.1	0.500	0.943	0.001	0.05	0.0	0.27	0.001	0.00	0.25	0.00	0.9
2.450	10.260	0.110	0.502	0.408	1.13	0.7	2.55	33	16.5	3.04	50.1	0.98	0.092	0.158	1.07	1.59	13.3	0.500	0.943	0.001	0.05	0.0	0.27	0.001	0.00	0.25	0.00	0.9
2.500	10.510	0.110	0.513	0.413	1.10	0.7	2.54	33	16.9	2.98	50.3	0.98	0.092	0.159	1.07	1.58	13.2	0.500	0.943	0.001	0.05	0.0	0.26	0.001	0.00	0.25	0.00	0.9
2.550	10.260	0.110	0.523	0.418	1.13	0.7	2.56	34	16.5	3.09	50.8	0.98	0.092	0.160	1.07	1.57	13.5	0.500	0.943	0.001	0.05	0.0	0.26	0.001	0.00	0.25	0.00	0.9
2.600	10.260	0.110	0.533	0.423	1.13	0.7	2.57	34	16.5	3.11	51.2	0.98	0.092	0.161	1.07	1.56	13.6	0.500	0.943	0.001	0.05	0.0	0.26	0.001	0.00	0.25	0.00	0.9
2.650	10.260	0.110	0.543	0.428	1.13	0.7	2.57	34	16.5	3.13	51.5	0.98	0.093	0.162	1.07	1.56	13.7	0.500	0.943	0.001	0.05	0.0	0.26	0.001	0.00	0.24	0.00	0.9
2.700	11.260	0.110	0.554	0.433	1.03	0.5	2.58	35	16.6	3.21	53.4	0.98	0.094	0.163	1.07	1.57	14.3	0.500	0.943	0.001	0.05	0.0	0.25	0.001	0.00	0.24	0.00	0.9
2.750	12.510	0.110	0.564	0.438	0.92	0.5	2.52	32	18.4	2.86	52.6	0.98	0.094	0.164	1.06	1.55	13.7	0.500	0.943	0.001	0.05	0.0	0.25	0.001	0.00	0.24	0.00	0.9
2.800	22.510	0.050	0.574	0.444	0.23	0.5	2.05	14	32.8	1.00	32.8	0.98	0.077	0.165	1.05	1.26	7.0	0.500	0.943	0.005	0.05	0.0	0.25	0.005	0.01	0.24	0.12	0.9

2.850	21.770	0.100	0.584	0.449	0.47	0.5	2.17	18	31.6	1.00	31.6	0.98	0.076	0.166	1.05	1.23	7.0	0.500	0.943	0.005	0.05	0.0	0.24	0.006	0.01	0.23	0.12	0.8
2.900	25.280	0.140	0.595	0.454	0.57	0.5	2.15	17	36.4	1.55	56.4	0.98	0.097	0.167	1.06	1.57	12.5	0.500	0.943	0.001	0.05	0.0	0.23	0.001	0.00	0.22	0.00	0.6
2.950	21.450	0.160	0.605	0.459	0.77	0.5	2.28	22	30.8	1.87	57.7	0.98	0.098	0.168	1.06	1.58	13.5	0.500	0.943	0.001	0.05	0.0	0.23	0.001	0.00	0.21	0.00	0.6
3.000	19.150	0.230	0.615	0.464	1.24	0.5	2.43	28	27.3	2.44	66.6	0.98	0.107	0.169	1.07	1.73	16.6	0.500	0.943	0.001	0.05	0.0	0.22	0.000	0.00	0.21	0.00	0.6
3.050	19.660	0.220	0.625	0.469	1.16	0.5	2.41	27	27.9	2.33	65.1	0.98	0.106	0.170	1.07	1.69	16.1	0.500	0.943	0.001	0.05	0.0	0.22	0.000	0.00	0.21	0.00	0.6
3.100	27.320	0.190	0.636	0.474	0.71	0.5	2.18	18	38.5	1.60	61.7	0.98	0.102	0.171	1.06	1.62	13.8	0.500	0.943	0.001	0.05	0.0	0.22	0.001	0.00	0.21	0.00	0.6
3.150	32.940	0.140	0.646	0.479	0.43	0.5	2.01	13	46.2	1.00	46.2	0.98	0.088	0.171	1.05	1.39	9.6	0.500	0.943	0.003	0.05	0.0	0.22	0.002	0.00	0.21	0.00	0.6
3.200	32.170	0.110	0.656	0.485	0.35	0.5	1.98	12	44.9	1.00	44.9	0.98	0.087	0.172	1.05	1.36	9.3	0.500	0.943	0.003	0.05	0.0	0.21	0.003	0.00	0.21	0.00	0.6
3.250	26.560	0.110	0.666	0.490	0.42	0.5	2.09	16	36.9	1.00	36.9	0.98	0.081	0.173	1.05	1.25	8.0	0.500	0.943	0.005	0.05	0.0	0.21	0.005	0.01	0.20	0.01	0.6
3.300	22.980	0.020	0.677	0.495	0.09	0.5	1.99	13	31.7	1.00	31.7	0.98	0.076	0.174	1.05	1.17	6.6	0.500	0.943	0.007	0.05	0.0	0.20	0.008	0.02	0.19	0.12	0.6
3.350	21.700	0.020	0.687	0.500	0.10	0.5	2.02	13	29.8	1.00	29.8	0.98	0.075	0.174	1.04	1.14	6.3	0.500	0.943	0.009	0.05	0.0	0.18	0.010	0.02	0.18	0.12	0.5
3.400	2.810	0.020	0.697	0.505	0.95	1.0	3.09	65	4.5	7.77	35.0	0.98	na	0.175	1.05	na	na	0.000	0.000	0.000	0.05	0.0	0.17	0.000	0.00	0.16	0.00	0.4
3.450	2.810	0.020	0.707	0.510	0.95	1.0	3.10	65	4.5	7.85	35.4	0.98	na	0.176	1.05	na	na	0.000	0.000	0.000	0.05	0.0	0.17	0.000	0.00	0.16	0.00	0.4
3.500	2.810	0.020	0.718	0.515	0.96	1.0	3.10	66	4.5	7.94	35.8	0.98	na	0.177	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.17	0.000	0.00	0.16	0.00	0.4
3.550	2.810	0.020	0.728	0.521	0.96	1.0	3.11	66	4.5	8.02	36.1	0.98	na	0.177	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.17	0.000	0.00	0.16	0.00	0.4
3.600	2.810	0.020	0.738	0.526	0.97	1.0	3.12	67	4.5	8.11	36.5	0.98	na	0.178	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.17	0.000	0.00	0.16	0.00	0.4
3.650	2.810	0.020	0.748	0.531	0.97	1.0	3.12	67	4.5	8.19	36.9	0.97	na	0.179	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.17	0.000	0.00	0.16	0.00	0.4
3.700	2.810	0.020	0.759	0.536	0.97	1.0	3.13	68	4.5	8.28	37.3	0.97	na	0.179	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.17	0.000	0.00	0.16	0.00	0.4
3.750	2.810	0.020	0.769	0.541	0.98	1.0	3.14	68	4.5	8.36	37.7	0.97	na	0.180	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.17	0.000	0.00	0.16	0.00	0.4
3.800	2.810	0.200	0.779	0.546	9.85	1.0	3.65	100	4.5	16.91	76.2	0.97	na	0.181	1.06	na	na	0.000	0.000	0.000	0.05	0.0	0.17	0.000	0.00	0.16	0.00	0.4
3.850	2.810	0.300	0.789	0.551	14.85	1.0	3.76	100	4.5	19.37	87.3	0.97	na	0.181	1.06	na	na	0.000	0.000	0.000	0.05	0.0	0.17	0.000	0.00	0.16	0.00	0.4
3.900	11.750	0.390	0.800	0.556	3.56	1.0	2.81	46	18.8	4.81	90.7	0.97	na	0.182	1.06	na	na	0.000	0.000	0.000	0.05	0.0	0.17	0.000	0.00	0.16	0.00	0.4
3.950	12.260	0.370	0.810	0.562	3.23	1.0	2.77	44	19.7	4.49	88.4	0.97	na	0.182	1.06	na	na	0.000	0.000	0.000	0.05	0.0	0.17	0.000	0.00	0.16	0.00	0.4
4.000	11.750	0.420	0.820	0.567	3.84	1.0	2.83	48	18.8	5.06	95.3	0.97	na	0.183	1.06	na	na	0.000	0.000	0.000	0.05	0.0	0.17	0.000	0.00	0.16	0.00	0.4
4.050	13.530	0.300	0.830	0.572	2.36	1.0	2.65	38	21.7	3.66	79.4	0.97	na	0.184	1.06	na	na	0.000	0.000	0.000	0.05	0.0	0.17	0.000	0.00	0.16	0.00	0.4
4.100	9.700	0.180	0.841	0.577	2.03	1.0	2.75	43	15.6	4.34	67.5	0.97	na	0.184	1.05	na	na	0.000	0.000	0.000	0.05	0.0	0.17	0.000	0.00	0.16	0.00	0.4
4.150	16.850	0.220	0.851	0.582	1.38	0.5	2.55	33	21.4	3.03	65.0	0.97	0.106	0.185	1.05	1.53	17.2	0.500	0.943	0.002	0.05	0.0	0.17	0.001	0.00	0.16	0.00	0.4
4.200	18.130	0.250	0.861	0.587	1.45	0.5	2.54	32	23.0	2.95	67.8	0.97	0.109	0.185	1.05	1.58	17.8	0.500	0.943	0.001	0.05	0.0	0.16	0.001	0.00	0.15	0.00	0.4
4.250	13.020	0.270	0.871	0.592	2.22	1.0	2.67	39	20.9	3.74	78.2	0.97	na	0.186	1.05	na	na	0.000	0.000	0.000	0.05	0.0	0.16	0.000	0.00	0.15	0.00	0.4
4.300	10.980	0.150	0.882	0.598	1.49	1.0	2.64	37	17.6	3.56	62.6	0.97	na	0.186	1.05	na	na	0.000	0.000	0.000	0.05	0.0	0.16	0.000	0.00	0.15	0.00	0.4
4.350	5.870	0.070	0.892	0.603	1.41	1.0	2.90	52	9.4	5.64	53.1	0.97	na	0.187	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.16	0.000	0.00	0.15	0.00	0.4
4.400	7.150	0.070	0.902	0.608	1.12	1.0	2.77	44	11.5	4.49	51.4	0.97	na	0.187	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.16	0.000	0.00	0.15	0.00	0.4
4.450	6.380	0.060	0.912	0.613	1.10	1.0	2.82	47	10.2	4.91	50.2	0.97	na	0.188	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.16	0.000	0.00	0.15	0.00	0.4
4.500	5.870	0.070	0.923	0.618	1.41	1.0	2.91	53	9.4	5.77	54.3	0.97	na	0.188	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.16	0.000	0.00	0.15	0.00	0.4
4.550	7.660	0.130	0.933	0.623	1.93	1.0	2.86	50	12.3	5.34	65.6	0.97	na	0.189	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.16	0.000	0.00	0.15	0.00	0.4
4.600	7.400	0.140	0.943	0.628	2.17	1.0	2.91	53	11.8	5.77	67.9	0.97	na	0.189	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.16	0.000	0.00	0.15	0.00	0.4
4.650	14.300	0.140	0.953	0.634	1.05	0.5	2.58	34	17.5	3.17	55.3	0.97	0.096	0.189	1.04	1.34	14.8	0.500	0.943	0.003	0.05	0.0	0.16	0.002	0.00	0.15	0.00	0.4
4.700	16.090	0.090	0.964	0.639	0.59	0.5	2.42	27	19.6	2.38	46.5	0.97	0.089	0.190	1.03	1.24	11.5	0.500	0.943	0.005	0.05	0.0	0.15	0.004	0.01	0.15	0.01	0.4
4.750	12.260	0.240	0.974	0.644	2.13	1.0	2.71	41	19.0	4.06	77.3	0.97	na	0.190	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.14	0.000	0.00	0.14	0.00	0.4
4.800	9.700	0.160	0.984	0.649	1.84	1.0	2.77	44	14.9	4.53	67.8	0.97	na	0.191	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.14	0.000	0.00	0.14	0.00	0.4
4.850	8.680	0.100	0.995	0.654	1.30	1.0	2.75	43	13.3	4.32	57.4	0.97	na	0.191	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.14	0.000	0.00	0.14	0.00	0.4
4.900	6.890	0.210	1.005	0.659	3.57	1.0	3.08	64	10.5	7.65	80.0	0.97	na	0.191	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.14	0.000	0.00	0.14	0.00	0.4
4.950	12.260	0.520	1.015	0.664	4.62	1.0	2.93	54	18.5	5.96	110.0	0.97	na	0.192	1.05	na	na	0.000	0.000	0.000	0.05	0.0	0.14	0.000	0.00	0.14	0.00	0.4
5.000	19.410	0.670	1.025	0.669	3.64	1.0	2.70	41	29.0	3.99	115.7	0.97	na	0.192	1.06	na	na	0.000	0.000	0.000	0.05	0.0	0.14	0.000	0.00	0.14	0.00	0.4
5.050	16.340	0.470	1.036	0.675	3.07	1.0	2.72	41	24.2	4.11	99.4	0.97	na	0.193	1.05	na	na	0.000	0.000	0.000	0.05	0.0	0.14	0.000	0.00	0.14	0.00	0.4
5.100	9.700	0.240	1.046	0.680	2.77	1.0	2.89	51	14.3	5.59	79.8	0.96	na	0.193	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.14	0.000	0.00	0.14	0.00	0.4
5.150	9.190	0.150	1.056	0.685	1.84	1.0	2.82	47	13.4	4.92	66.1	0.96	na	0.193	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.14	0.000	0.00	0.14	0.00	0.4
5.200	11.230	0.120	1.066	0.690	1.18	1.0	2.64	37	16.3	3.56	57.9	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.14	0.000	0.00	0.14	0.00	0.4
5.250	9.450	0.160	1.077	0.695	1.91	1.0	2.82	47	13.6	4.95	67.3	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.14	0.000	0.00	0.14	0.00	0.4
5.300	11.490	0.110	1.087	0.700	1.06	1.0	2.61	36	16.4	3.39	55.6	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.14	0.000	0.00	0.14	0.00	0.4
5.350	12.770	0.080	1.097	0.705	0.69	0.5	2.57	34	14.8	3.11	46.0	0.96	0.088	0.195	1.03	1.19	12.2	0.500	0.943	0.007	0.05	0.0	0.14	0.005	0.01	0.14	0.01	0.4
5.400	8.170	0.050	1.107	0.711	0.71	1.0	2.69	40	11.5	3.93	45.2	0.96	na	0.195	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
5.450	5.870	0.050	1.118	0.716	1.05	1.0	2.92	54	8.2	5.92	48.5	0.96	na	0.195	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
5.500	6.640	0.090	1.128	0.721	1.63	1.0	2.96	56	9.2	6.25	57.6	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
5.550	9.190	0.050	1.138	0.726	0.62	1.0	2.63	37	12.7	3.49	44.1	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
5.600	9.960	0.070	1.148	0.731	0.79	1.0	2.64	37	13.6	3.55	48.4	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
5.650	6.640	0.040	1.159	0.736	0.73	1.0	2.81	47	9.0	4.89	44.1	0.96	na	0.197	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
5.700	7.660	0.050	1.169	0.741	0.77	1.0	2.76	44	10.3	4.43	45.8	0.96	na	0.197	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
5.750	7.150	0.180	1.179	0.746	3.01	1.0	3.08	64	9.6	7.63	73.1	0.96	na	0.197	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
5.800	8.170	0.170	1.189	0.752	2.44	1.0	2.97	57	10.9	6.43	69.9	0.96	na	0.197	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
5.850	12.770	0.150	1.200	0.757	1.30	1.0	2.65	38	16.9	3.60	60.8	0.96	na	0.198	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
5.900	10.210	0.190	1.210	0.762	2.11	1.0	2.85	49	13.4	5.22	70.0	0.96	na	0.198	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
5.950	7.400	0.120	1.220	0.767	1.94	1.0	2.97	57	9.6	6.44	62.1	0.96	na	0.198	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.000	6.130	0.050	1.230	0.772	1.02	1.0	2.94	54	7.9	6.04	48.0	0.96	na	0.198	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.050	6.130	0.030	1.241	0.777	0.61	1.0	2.86	49	7.9	5.25	41.4	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4

6.100	6.130	0.040	1.251	0.782	0.82	1.0	2.91	52	7.8	5.73	44.9	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.150	7.150	0.050	1.261	0.788	0.85	1.0	2.84	48	9.1	5.10	46.3	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.200	7.150	0.050	1.271	0.793	0.85	1.0	2.84	48	9.0	5.14	46.3	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.250	7.150	0.050	1.282	0.798	0.85	1.0	2.85	49	9.0	5.17	46.3	0.96	na	0.200	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.300	6.890	0.100	1.292	0.803	1.79	1.0	3.01	59	8.6	6.84	58.7	0.96	na	0.200	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.350	9.450	0.150	1.302	0.808	1.84	1.0	2.88	51	11.7	5.47	64.0	0.95	na	0.200	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.400	10.980	0.170	1.312	0.813	1.76	1.0	2.81	46	13.5	4.83	65.2	0.95	na	0.200	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.450	8.940	0.160	1.323	0.818	2.10	1.0	2.94	54	10.9	6.06	66.2	0.95	na	0.200	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.500	7.150	0.120	1.333	0.823	2.06	1.0	3.04	61	8.7	7.14	62.0	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.550	6.130	0.090	1.343	0.829	1.88	1.0	3.09	65	7.4	7.81	57.8	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.600	6.130	0.120	1.353	0.834	2.51	1.0	3.16	70	7.4	8.66	63.7	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.650	7.660	0.170	1.364	0.839	2.70	1.0	3.08	64	9.1	7.60	69.4	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.700	8.430	0.150	1.374	0.844	2.13	1.0	2.98	57	10.0	6.51	65.0	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.750	9.960	0.120	1.384	0.849	1.40	1.0	2.82	47	11.7	4.92	57.7	0.95	na	0.202	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.800	8.940	0.140	1.394	0.854	1.86	1.0	2.93	54	10.5	5.97	62.5	0.95	na	0.202	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.850	6.890	0.050	1.405	0.859	0.91	1.0	2.91	53	8.0	5.82	46.6	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.900	6.130	0.020	1.415	0.865	0.42	1.0	2.86	50	7.1	5.31	37.6	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
6.950	6.640	0.020	1.425	0.870	0.38	1.0	2.81	47	7.6	4.84	37.0	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.000	6.380	0.050	1.435	0.875	1.01	1.0	2.98	57	7.3	6.51	47.5	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.050	6.890	0.080	1.446	0.880	1.47	1.0	3.02	60	7.8	6.90	54.0	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.100	7.400	0.100	1.456	0.885	1.68	1.0	3.01	59	8.4	6.86	57.3	0.95	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.150	7.660	0.100	1.466	0.890	1.61	1.0	2.99	58	8.6	6.61	56.9	0.95	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.200	7.660	0.090	1.476	0.895	1.46	1.0	2.97	57	8.6	6.41	54.9	0.95	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.250	7.150	0.070	1.487	0.901	1.24	1.0	2.98	57	7.9	6.46	51.3	0.95	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.3	6.64	0.07	1.497	0.906	1.36	1.0	3.03	61	7.3	7.11	52.1	0.95	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.35	7.15	0.07	1.507	0.911	1.24	1.0	2.98	57	7.9	6.53	51.2	0.94	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.4	7.4	0.08	1.517	0.916	1.36	1.0	2.99	58	8.1	6.57	53.1	0.94	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.45	7.4	0.09	1.528	0.921	1.53	1.0	3.01	59	8.0	6.87	55.2	0.94	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.5	7.4	0.1	1.538	0.926	1.71	1.0	3.04	61	8.0	7.15	57.1	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.55	8.94	0.1	1.548	0.931	1.35	1.0	2.90	52	9.6	5.71	54.8	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.6	8.17	0.11	1.558	0.936	1.66	1.0	2.99	58	8.7	6.62	57.8	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.65	8.68	0.09	1.569	0.942	1.27	1.0	2.91	53	9.2	5.77	53.2	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.7	8.43	0.08	1.579	0.947	1.17	1.0	2.91	53	8.9	5.78	51.5	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.75	8.17	0.06	1.589	0.952	0.91	1.0	2.88	51	8.6	5.51	47.3	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.8	7.92	0.07	1.599	0.957	1.11	1.0	2.94	54	8.3	6.04	50.0	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.85	6.38	0.07	1.610	0.962	1.47	1.0	3.10	66	6.6	7.92	52.5	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.9	5.62	0.06	1.620	0.967	1.50	1.0	3.18	71	5.8	8.90	51.7	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
7.95	5.62	0.1	1.630	0.972	2.51	1.0	3.28	80	5.8	10.43	60.3	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
8	6.13	0.17	1.640	0.978	3.79	1.0	3.33	84	6.3	11.22	70.3	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
8.05	8.94	0.19	1.651	0.983	2.61	1.0	3.07	63	9.1	7.55	68.7	0.94	na	0.205	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
8.1	9.7	0.14	1.661	0.988	1.74	1.0	2.95	55	9.8	6.15	60.4	0.94	na	0.205	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
8.15	8.43	0.1	1.671	0.993	1.48	1.0	2.98	57	8.5	6.51	55.3	0.94	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
8.2	8.17	0.09	1.681	0.998	1.39	1.0	2.99	58	8.2	6.56	53.7	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
8.25	8.43	0.1	1.692	1.003	1.48	1.0	2.99	58	8.4	6.57	55.2	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
8.3	7.92	0.1	1.702	1.008	1.61	1.0	3.04	61	7.9	7.12	56.0	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
8.35	8.17	0.09	1.712	1.013	1.39	1.0	2.99	58	8.1	6.66	53.7	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
8.4	7.92	0.08	1.722	1.019	1.29	1.0	3.00	58	7.8	6.69	52.0	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
8.45	7.66	0.11	1.733	1.024	1.86	1.0	3.09	65	7.5	7.77	58.1	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
8.5	9.45	0.21	1.743	1.029	2.72	1.0	3.08	64	9.2	7.63	70.1	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.4
8.55	24	0.29	1.753	1.034	1.30	0.5	2.52	32	22.9	2.88	66.0	0.93	0.107	0.205	1.00	1.33	17.2	0.500	0.943	0.003	0.05	0.0	0.13	0.002	0.00	0.13	0.00	0.4
8.6	13.79	0.25	1.763	1.039	2.08	1.0	2.86	49	13.3	5.26	69.8	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
8.65	9.19	0.17	1.774	1.044	2.29	1.0	3.06	63	8.8	7.39	65.0	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
8.7	6.64	0.16	1.784	1.049	3.29	1.0	3.30	81	6.3	10.67	67.5	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
8.75	7.15	0.23	1.794	1.055	4.29	1.0	3.33	83	6.8	11.11	75.3	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
8.8	8.94	0.26	1.804	1.060	3.64	1.0	3.19	72	8.4	9.03	76.2	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
8.85	8.94	0.22	1.815	1.065	3.09	1.0	3.15	69	8.4	8.53	71.6	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
8.9	7.92	0.2	1.825	1.070	3.28	1.0	3.22	75	7.4	9.53	70.5	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
8.95	7.15	0.16	1.835	1.075	3.01	1.0	3.25	77	6.7	10.00	66.5	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
9	6.64	0.12	1.845	1.080	2.50	1.0	3.25	77	6.1	9.99	61.4	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
9.05	6.38	0.1	1.856	1.085	2.21	1.0	3.25	77	5.9	9.95	58.5	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
9.1	6.38	0.2	1.866	1.090	4.43	1.0	3.41	91	5.9	12.45	72.8	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
9.15	8.17	0.25	1.876	1.096	3.97	1.0	3.26	78	7.5	10.14	75.6	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
9.2	14.81	0.29	1.886	1.101	2.24	1.0	2.87	50	13.5	5.37	72.3	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
9.25	12.77	0.24	1.897	1.106	2.21	1.0	2.93	54	11.5	5.97	68.9	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
9.3	7.92	0.15	1.907	1.111	2.49	1.0	3.18	71	7.1	8.92	63.6	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4

9.35	7.15	0.1	1.917	1.116	1.91	1.0	3.18	71	6.4	8.89	56.9	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
9.4	7.15	0.12	1.927	1.121	2.30	1.0	3.22	74	6.4	9.46	60.3	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
9.45	7.15	0.24	1.938	1.126	4.60	1.0	3.38	88	6.3	11.93	75.7	0.92	na	0.205	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
9.5	11.23	0.23	1.948	1.132	2.48	1.0	3.02	60	9.9	6.98	69.2	0.91	na	0.205	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
9.55	13.28	0.27	1.958	1.137	2.38	1.0	2.94	55	11.7	6.11	71.3	0.91	na	0.205	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.12	0.000	0.00	0.12	0.00	0.4
9.6	46.98	0.25	1.969	1.142	0.56	0.5	2.09	16	42.7	1.43	61.2	0.91	0.101	0.205	0.99	1.26	13.2	0.500	0.943	0.005	0.05	0.0	0.12	0.003	0.01	0.12	0.01	0.4
9.65	67.15	0.28	1.979	1.147	0.43	0.5	1.90	10	60.9	1.00	60.9	0.91	0.101	0.204	0.99	1.25	12.2	0.500	0.943	0.005	0.05	0.0	0.12	0.003	0.01	0.12	0.01	0.4
9.7	52.6	0.45	1.989	1.152	0.89	0.5	2.15	17	47.6	1.55	73.8	0.91	0.117	0.204	0.99	1.46	16.3	0.500	0.936	0.002	0.05	0.0	0.11	0.001	0.00	0.11	0.00	0.4
9.75	25.53	0.43	1.999	1.157	1.83	1.0	2.62	36	22.1	3.44	75.9	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
9.8	12.26	0.26	2.010	1.162	2.54	1.0	3.00	59	10.5	6.74	71.1	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
9.85	8.43	0.12	2.020	1.167	1.87	1.0	3.11	66	7.2	8.04	58.1	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
9.9	7.92	0.08	2.030	1.173	1.36	1.0	3.08	64	6.8	7.67	51.8	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
9.95	7.92	0.08	2.040	1.178	1.36	1.0	3.08	64	6.7	7.71	51.8	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10	7.92	0.08	2.051	1.183	1.36	1.0	3.09	65	6.7	7.74	51.8	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.05	8.43	0.09	2.061	1.188	1.41	1.0	3.06	63	7.1	7.46	52.9	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.1	8.43	0.09	2.071	1.193	1.42	1.0	3.07	63	7.1	7.49	52.9	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.15	8.17	0.09	2.081	1.198	1.48	1.0	3.09	65	6.8	7.82	53.3	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.2	7.92	0.08	2.092	1.203	1.37	1.0	3.10	65	6.6	7.87	51.8	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.25	7.92	0.09	2.102	1.209	1.55	1.0	3.12	67	6.6	8.19	53.7	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.3	7.92	0.09	2.112	1.214	1.55	1.0	3.13	67	6.5	8.23	53.7	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.35	7.66	0.08	2.122	1.219	1.44	1.0	3.13	68	6.3	8.31	52.3	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.4	7.4	0.1	2.133	1.224	1.90	1.0	3.21	74	6.0	9.32	56.4	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.45	7.92	0.11	2.143	1.229	1.90	1.0	3.17	71	6.4	8.87	57.1	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.5	7.15	0.12	2.153	1.234	2.40	1.0	3.28	79	5.8	10.37	60.1	0.89	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.55	8.68	0.14	2.163	1.239	2.15	1.0	3.16	70	7.0	8.63	60.5	0.89	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.6	8.43	0.13	2.174	1.245	2.08	1.0	3.17	70	6.8	8.77	59.4	0.89	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.65	7.4	0.09	2.184	1.250	1.73	1.0	3.20	73	5.9	9.22	54.6	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.7	6.89	0.1	2.194	1.255	2.13	1.0	3.28	80	5.5	10.45	57.4	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.75	7.66	0.11	2.204	1.260	2.02	1.0	3.22	74	6.1	9.46	57.5	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.8	8.17	0.13	2.215	1.265	2.18	1.0	3.20	73	6.5	9.25	59.7	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.85	8.17	0.11	2.225	1.270	1.85	1.0	3.17	71	6.4	8.81	56.7	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.9	7.4	0.09	2.235	1.275	1.74	1.0	3.21	74	5.8	9.41	54.6	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
10.95	7.15	0.06	2.245	1.280	1.22	1.0	3.17	71	5.6	8.79	49.1	0.88	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11	7.15	0.06	2.256	1.286	1.23	1.0	3.17	71	5.6	8.83	49.1	0.88	na	0.201	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.05	7.15	0.05	2.266	1.291	1.02	1.0	3.14	69	5.5	8.44	46.8	0.88	na	0.201	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.1	7.15	0.06	2.276	1.296	1.23	1.0	3.18	71	5.5	8.91	49.1	0.88	na	0.201	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.15	7.15	0.06	2.286	1.301	1.23	1.0	3.18	71	5.5	8.94	49.2	0.88	na	0.201	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.2	7.15	0.08	2.297	1.306	1.65	1.0	3.24	76	5.5	9.73	53.3	0.88	na	0.201	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.25	9.19	0.16	2.307	1.311	2.32	1.0	3.17	71	7.0	8.87	62.2	0.88	na	0.200	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.3	15.06	0.26	2.317	1.316	2.04	1.0	2.92	53	11.4	5.85	66.9	0.88	na	0.200	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.35	24	0.31	2.327	1.322	1.43	1.0	2.64	37	18.2	3.57	64.9	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.4	15.06	0.27	2.338	1.327	2.12	1.0	2.93	54	11.4	5.97	67.8	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.45	9.96	0.16	2.348	1.332	2.10	1.0	3.12	67	7.5	8.16	61.0	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.5	8.68	0.1	2.358	1.337	1.58	1.0	3.13	68	6.5	8.34	54.2	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.55	8.43	0.09	2.368	1.342	1.48	1.0	3.14	68	6.3	8.41	52.8	0.87	na	0.199	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.6	8.43	0.09	2.379	1.347	1.49	1.0	3.14	69	6.3	8.44	52.8	0.87	na	0.199	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.65	8.43	0.09	2.389	1.352	1.49	1.0	3.15	69	6.2	8.48	52.8	0.87	na	0.199	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.7	8.43	0.09	2.399	1.357	1.49	1.0	3.15	69	6.2	8.51	52.8	0.86	na	0.199	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.75	8.17	0.09	2.409	1.363	1.56	1.0	3.18	71	6.0	8.89	53.3	0.86	na	0.198	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.8	8.43	0.11	2.420	1.368	1.83	1.0	3.19	72	6.2	9.11	56.1	0.86	na	0.198	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.85	8.43	0.12	2.430	1.373	2.00	1.0	3.21	74	6.1	9.39	57.7	0.86	na	0.198	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.9	7.92	0.11	2.440	1.378	2.01	1.0	3.25	77	5.7	9.92	57.0	0.86	na	0.198	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
11.95	7.66	0.09	2.450	1.383	1.73	1.0	3.24	76	5.5	9.79	54.2	0.86	na	0.198	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12	7.15	0.08	2.461	1.388	1.71	1.0	3.28	79	5.2	10.38	53.5	0.86	na	0.197	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.05	6.89	0.06	2.471	1.393	1.36	1.0	3.26	78	4.9	10.11	50.0	0.86	na	0.197	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.1	7.15	0.06	2.481	1.399	1.29	1.0	3.23	76	5.1	9.67	49.5	0.85	na	0.197	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.15	7.15	0.07	2.491	1.404	1.50	1.0	3.26	78	5.1	10.12	51.6	0.85	na	0.197	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.2	7.15	0.06	2.502	1.409	1.29	1.0	3.24	76	5.1	9.75	49.5	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.25	7.15	0.06	2.512	1.414	1.29	1.0	3.24	76	5.1	9.79	49.5	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.3	7.15	0.05	2.522	1.419	1.08	1.0	3.21	74	5.0	9.38	47.2	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.35	7.15	0.05	2.532	1.424	1.08	1.0	3.21	74	5.0	9.41	47.3	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.4	6.89	0.04	2.543	1.429	0.92	1.0	3.21	74	4.8	9.40	45.3	0.84	na	0.195	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.45	6.64	0.05	2.553	1.434	1.22	1.0	3.29	80	4.6	10.48	48.5	0.84	na	0.195	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.5	6.89	0.14	2.563	1.440	3.24	1.0	3.46	95	4.8	13.26	63.5	0.84	na	0.195	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.55	12	0.27	2.573	1.445	2.86	1.0	3.14	68	8.3	8.42	69.9	0.84	na	0.195	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4

12.6	13.02	0.26	2.584	1.450	2.49	1.0	3.07	63	9.0	7.56	67.9	0.84	na	0.194	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.65	16.6	0.31	2.594	1.455	2.21	1.0	2.94	54	11.4	6.06	69.1	0.84	na	0.194	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.7	13.79	0.28	2.604	1.460	2.50	1.0	3.05	62	9.4	7.30	68.9	0.84	na	0.194	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.75	7.4	0.11	2.614	1.465	2.30	1.0	3.35	86	5.1	11.51	58.1	0.83	na	0.194	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.8	7.4	0.07	2.625	1.470	1.47	1.0	3.27	78	5.0	10.18	51.2	0.83	na	0.193	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.85	7.92	0.12	2.635	1.476	2.27	1.0	3.31	82	5.4	10.91	58.5	0.83	na	0.193	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.9	7.92	0.1	2.645	1.481	1.90	1.0	3.28	79	5.3	10.38	55.5	0.83	na	0.193	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
12.95	7.92	0.1	2.655	1.486	1.90	1.0	3.28	80	5.3	10.42	55.5	0.83	na	0.192	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13	8.43	0.15	2.666	1.491	2.60	1.0	3.31	82	5.7	10.90	61.6	0.83	na	0.192	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.05	9.7	0.21	2.676	1.496	2.99	1.0	3.27	79	6.5	10.26	66.5	0.83	na	0.192	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.1	18.64	0.35	2.686	1.501	2.19	1.0	2.90	52	12.4	5.67	70.4	0.82	na	0.192	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.15	15.06	0.31	2.696	1.506	2.51	1.0	3.03	60	10.0	7.01	70.0	0.82	na	0.191	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.2	24	0.29	2.707	1.512	1.36	1.0	2.69	40	15.9	3.89	61.7	0.82	na	0.191	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.25	13.02	0.26	2.717	1.517	2.52	1.0	3.10	65	8.6	7.86	67.4	0.82	na	0.191	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.3	10.21	0.23	2.727	1.522	3.07	1.0	3.26	78	6.7	10.09	67.7	0.82	na	0.190	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.35	25.28	0.36	2.737	1.527	1.60	1.0	2.71	41	16.6	4.02	66.5	0.82	na	0.190	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.4	101.62	0.37	2.748	1.532	0.37	0.5	1.77	7	79.7	1.00	79.7	0.81	0.127	0.190	0.97	1.65	15.2	0.497	0.918	0.001	0.05	0.0	0.10	0.001	0.00	0.11	0.00	0.4
13.45	157.54	0.55	2.758	1.537	0.36	0.5	1.59	4	123.4	1.00	123.4	0.81	0.255	0.189	0.95	3.27	22.2	0.179	0.567	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.5	106.99	0.81	2.768	1.542	0.78	0.5	1.91	11	83.7	1.20	100.0	0.81	0.173	0.189	0.96	2.24	20.1	0.311	0.793	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.55	168.78	1.48	2.778	1.547	0.89	0.5	1.79	8	131.8	1.10	144.3	0.81	0.360	0.189	0.94	4.58	27.8	0.108	0.320	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.6	39.58	0.98	2.789	1.553	2.66	1.0	2.66	39	25.5	3.72	94.9	0.81	na	0.189	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.65	13.28	0.63	2.799	1.558	6.01	1.0	3.31	82	8.5	10.88	92.8	0.81	na	0.188	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.7	12	0.12	2.809	1.563	1.31	1.0	3.01	59	7.7	6.86	52.7	0.80	na	0.188	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.75	11.49	0.11	2.819	1.568	1.27	1.0	3.03	61	7.3	7.07	51.8	0.80	na	0.188	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.8	10.98	0.11	2.830	1.573	1.35	1.0	3.07	63	7.0	7.51	52.4	0.80	na	0.187	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.85	10.98	0.13	2.840	1.578	1.60	1.0	3.10	66	7.0	7.94	55.2	0.80	na	0.187	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.9	10.72	0.12	2.850	1.583	1.52	1.0	3.11	66	6.8	8.00	54.2	0.80	na	0.187	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
13.95	10.21	0.13	2.860	1.589	1.77	1.0	3.17	70	6.4	8.75	56.2	0.80	na	0.186	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
14	10.47	0.14	2.871	1.594	1.84	1.0	3.16	70	6.6	8.70	57.2	0.79	na	0.186	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
14.05	11.23	0.15	2.881	1.599	1.80	1.0	3.12	67	7.0	8.18	57.4	0.79	na	0.186	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
14.1	17.87	0.27	2.891	1.604	1.80	1.0	2.90	52	11.1	5.70	63.5	0.79	na	0.185	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.10	0.000	0.00	0.11	0.00	0.4
14.15	30.9	0.35	2.901	1.609	1.25	0.5	2.51	31	23.7	2.81	66.5	0.79	0.107	0.185	0.97	1.43	17.2	0.500	0.943	0.002	0.05	0.0	0.10	0.001	0.00	0.11	0.00	0.4
14.2	22.47	0.28	2.912	1.614	1.43	1.0	2.75	43	13.9	4.39	61.1	0.79	na	0.185	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.11	0.00	0.4
14.25	37.02	0.31	2.922	1.619	0.91	0.5	2.37	25	28.3	2.18	61.5	0.79	0.102	0.184	0.97	1.36	14.9	0.500	0.943	0.003	0.05	0.0	0.09	0.002	0.00	0.11	0.00	0.4
14.3	149.12	0.84	2.932	1.624	0.57	0.5	1.73	7	113.6	1.05	119.5	0.78	0.239	0.184	0.95	3.13	22.5	0.197	0.610	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
14.35	259.68	1.42	2.943	1.630	0.55	0.5	1.52	3	197.6	1.00	197.6	0.78	0.461	0.184	0.89	5.70	34.7	0.024	-0.416	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
14.4	269.38	1.76	2.953	1.635	0.66	0.5	1.56	4	204.6	1.00	204.6	0.78	0.461	0.183	0.88	5.65	36.4	0.019	-0.520	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
14.45	276.53	2.43	2.963	1.640	0.89	0.5	1.64	5	209.7	0.99	208.3	0.78	0.461	0.183	0.87	5.62	38.1	0.016	-0.574	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
14.5	281.89	1.99	2.973	1.645	0.71	0.5	1.57	4	213.5	1.00	213.5	0.78	0.461	0.183	0.87	5.59	38.1	0.013	-0.652	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
14.55	216.27	2.08	2.984	1.650	0.98	0.5	1.75	7	163.5	1.06	174.1	0.78	0.461	0.182	0.91	5.88	33.0	0.048	-0.078	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
14.6	123.58	1.45	2.994	1.655	1.20	0.5	1.99	13	93.3	1.28	119.7	0.77	0.240	0.182	0.94	3.17	24.9	0.196	0.607	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
14.65	65.88	1.56	3.004	1.660	2.48	0.5	2.41	27	49.7	2.36	117.0	0.77	0.229	0.182	0.95	3.04	29.0	0.209	0.636	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
14.7	64.35	1.09	3.014	1.666	1.78	0.5	2.33	24	48.4	2.03	98.3	0.77	0.168	0.181	0.95	2.26	23.4	0.323	0.806	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
14.75	52.09	1.46	3.025	1.671	2.98	1.0	2.62	36	31.2	3.45	107.5	0.77	na	0.181	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
14.8	123.84	1.59	3.035	1.676	1.32	0.5	2.02	14	92.9	1.32	122.6	0.77	0.251	0.181	0.94	3.34	25.7	0.183	0.576	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
14.85	158.56	1	3.045	1.681	0.64	0.5	1.74	7	118.8	1.06	125.9	0.77	0.265	0.180	0.94	3.53	23.8	0.169	0.540	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
14.9	173.37	0.66	3.055	1.686	0.39	0.5	1.59	4	129.7	1.00	129.7	0.76	0.283	0.180	0.94	3.76	23.3	0.154	0.497	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
14.95	7.4	1.74	3.066	1.691	40.14	1.0	4.16	100	4.4	29.35	128.4	0.76	na	0.180	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15	40.6	1.2	3.076	1.696	3.20	1.0	2.74	42	23.9	4.25	101.8	0.76	na	0.179	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.05	28.34	0.78	3.086	1.701	3.09	1.0	2.86	50	16.7	5.34	88.9	0.76	na	0.179	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.1	121.8	0.9	3.096	1.707	0.76	0.5	1.88	10	90.6	1.16	105.4	0.76	0.189	0.179	0.95	2.56	21.0	0.274	0.747	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.15	76.86	0.9	3.107	1.712	1.22	0.5	2.17	18	57.1	1.58	90.4	0.76	0.149	0.178	0.95	2.03	20.1	0.388	0.863	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.2	45.96	0.53	3.117	1.717	1.24	0.5	2.37	25	34.1	2.16	73.7	0.75	0.117	0.178	0.96	1.61	17.9	0.500	0.937	0.001	0.05	0.0	0.09	0.001	0.00	0.10	0.00	0.4
15.25	25.28	0.26	3.127	1.722	1.17	1.0	2.69	40	14.7	3.90	57.3	0.75	na	0.178	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.3	22.98	0.13	3.137	1.727	0.66	1.0	2.62	36	13.3	3.45	45.9	0.75	na	0.177	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.35	24.26	0.15	3.148	1.732	0.71	1.0	2.61	36	14.0	3.39	47.5	0.75	na	0.177	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.4	21.96	0.18	3.158	1.737	0.96	1.0	2.72	41	12.6	4.09	51.7	0.75	na	0.177	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.45	21.45	0.23	3.168	1.743	1.26	1.0	2.78	45	12.3	4.61	56.8	0.75	na	0.176	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.5	20.17	0.22	3.178	1.748	1.29	1.0	2.82	47	11.5	4.91	56.7	0.74	na	0.176	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.55	23.75	0.4	3.189	1.753	1.95	1.0	2.84	48	13.5	5.07	68.7	0.74	na	0.176	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.6	24.77	0.28	3.199	1.758	1.30	1.0	2.73	42	14.1	4.19	59.1	0.74	na	0.175	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.65	29.11	0.32	3.209	1.763	1.24	1.0	2.65	38	16.5	3.63	59.9	0.74	na	0.175	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.7	20.94	0.3	3.219	1.768	1.69	1.0	2.86	50	11.8	5.32	63.0	0.74	na	0.175	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.75	26.56	0.21	3.230	1.773	0.90	1.0	2.63	37	15.0	3.48	52.2	0.74	na	0.174	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.8	23.24	0.25	3.240	1.779	1.25	1.0	2.75	43	13.1	4.39	57.3	0.73	na	0.174	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4

15.85	21.45	0.29	3.250	1.784	1.59	1.0	2.84	48	12.0	5.14	61.8	0.73	na	0.174	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.9	23.75	0.3	3.260	1.789	1.46	1.0	2.78	45	13.3	4.60	61.1	0.73	na	0.173	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
15.95	22.47	0.3	3.271	1.794	1.56	1.0	2.82	47	12.5	4.94	61.9	0.73	na	0.173	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16	17.87	0.32	3.281	1.799	2.19	1.0	3.00	58	9.9	6.71	66.6	0.73	na	0.172	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.05	17.11	0.26	3.291	1.804	1.88	1.0	2.99	58	9.5	6.57	62.3	0.73	na	0.172	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.1	13.53	0.2	3.301	1.809	1.96	1.0	3.11	66	7.5	8.02	60.0	0.72	na	0.172	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.15	10.98	0.16	3.312	1.814	2.09	1.0	3.23	76	6.1	9.70	58.7	0.72	na	0.171	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.2	9.96	0.12	3.322	1.820	1.81	1.0	3.26	78	5.5	10.10	55.3	0.72	na	0.171	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.25	9.19	0.1	3.332	1.825	1.71	1.0	3.30	81	5.0	10.68	53.8	0.72	na	0.171	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.3	8.94	0.1	3.342	1.830	1.79	1.0	3.33	83	4.9	11.11	54.3	0.72	na	0.170	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.35	8.68	0.12	3.353	1.835	2.25	1.0	3.39	89	4.7	12.18	57.6	0.72	na	0.170	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.4	9.19	0.13	3.363	1.840	2.23	1.0	3.36	86	5.0	11.60	57.9	0.71	na	0.170	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.45	9.19	0.13	3.373	1.845	2.23	1.0	3.36	86	5.0	11.63	57.9	0.71	na	0.169	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.5	8.94	0.12	3.383	1.850	2.16	1.0	3.37	87	4.8	11.82	57.1	0.71	na	0.169	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.55	8.43	0.11	3.394	1.856	2.18	1.0	3.41	91	4.5	12.51	56.9	0.71	na	0.169	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.6	7.92	0.11	3.404	1.861	2.44	1.0	3.48	97	4.3	13.65	58.1	0.71	na	0.168	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.65	8.17	0.11	3.414	1.866	2.31	1.0	3.45	94	4.4	13.13	57.5	0.71	na	0.168	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.7	8.68	0.14	3.424	1.871	2.66	1.0	3.44	93	4.6	12.98	60.2	0.71	na	0.168	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.75	9.45	0.19	3.435	1.876	3.16	1.0	3.43	92	5.0	12.74	64.2	0.70	na	0.167	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.8	10.21	0.41	3.445	1.881	6.06	1.0	3.54	100	5.4	14.71	79.8	0.70	na	0.167	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.85	12.77	0.34	3.455	1.886	3.65	1.0	3.30	81	6.8	10.67	72.2	0.70	na	0.167	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.9	24.51	0.51	3.465	1.891	2.42	1.0	2.91	52	13.0	5.74	74.4	0.70	na	0.167	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.09	0.000	0.00	0.10	0.00	0.4
16.95	28.85	0.18	3.476	1.897	0.71	0.5	2.46	29	20.3	2.57	52.3	0.70	0.093	0.166	0.96	1.37	13.2	0.500	0.943	0.003	0.05	0.0	0.09	0.002	0.00	0.10	0.00	0.4
17	39.58	0.16	3.486	1.902	0.44	0.5	2.24	20	27.9	1.00	27.9	0.70	0.073	0.166	0.97	1.09	6.4	0.500	0.943	0.012	0.05	0.0	0.08	0.015	0.03	0.10	0.12	0.4
17.05	26.81	0.37	3.496	1.907	1.59	1.0	2.77	45	14.1	4.55	63.9	0.69	na	0.166	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.05	0.000	0.00	0.07	0.00	0.2
17.1	18.64	0.48	3.506	1.912	3.17	1.0	3.09	65	9.7	7.83	76.3	0.69	na	0.165	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.05	0.000	0.00	0.07	0.00	0.2
17.15	38.05	0.28	3.517	1.917	0.81	0.5	2.37	25	26.7	2.19	58.4	0.69	0.099	0.165	0.95	1.46	14.2	0.500	0.943	0.002	0.05	0.0	0.05	0.001	0.00	0.07	0.00	0.2
17.2	33.45	0.13	3.527	1.922	0.43	0.5	2.31	23	23.4	1.00	23.4	0.69	0.070	0.165	0.97	1.04	5.5	0.500	0.943	0.019	0.05	0.0	0.05	0.026	0.05	0.06	0.12	0.2
17.25	15.32	0.14	3.537	1.927	1.19	1.0	2.98	57	7.9	6.50	51.6	0.69	na	0.164	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
17.3	10.21	0.13	3.547	1.933	1.95	1.0	3.30	81	5.3	10.66	56.3	0.69	na	0.164	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
17.35	14.04	0.07	3.558	1.938	0.67	1.0	2.93	54	7.2	5.97	43.2	0.69	na	0.164	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
17.4	11.75	0.09	3.568	1.943	1.10	1.0	3.11	66	6.0	8.06	48.7	0.68	na	0.163	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
17.45	9.7	0.06	3.578	1.948	0.98	1.0	3.21	74	5.0	9.36	46.6	0.68	na	0.163	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
17.5	10.21	0.06	3.588	1.953	0.91	1.0	3.17	70	5.2	8.76	45.8	0.68	na	0.163	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
17.55	9.7	0.06	3.599	1.958	0.98	1.0	3.21	74	5.0	9.41	46.6	0.68	na	0.162	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
17.6	9.45	0.06	3.609	1.963	1.03	1.0	3.24	76	4.8	9.78	47.1	0.68	na	0.162	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
17.65	9.45	0.07	3.619	1.968	1.20	1.0	3.27	78	4.8	10.19	48.9	0.68	na	0.162	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
17.7	9.45	0.11	3.629	1.974	1.89	1.0	3.35	86	4.8	11.51	55.1	0.68	na	0.161	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
17.75	9.7	0.14	3.640	1.979	2.31	1.0	3.38	88	4.9	11.92	58.5	0.67	na	0.161	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
17.8	9.7	0.15	3.650	1.984	2.48	1.0	3.39	89	4.9	12.19	59.6	0.67	na	0.161	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
17.85	9.7	0.14	3.660	1.989	2.32	1.0	3.38	88	4.9	11.99	58.5	0.67	na	0.161	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
17.9	9.96	0.18	3.670	1.994	2.86	1.0	3.41	91	5.0	12.48	62.4	0.67	na	0.160	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
17.95	10.47	0.31	3.681	1.999	4.57	1.0	3.49	98	5.2	13.84	72.5	0.67	na	0.160	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18	13.02	0.39	3.691	2.004	4.18	1.0	3.35	86	6.5	11.51	74.8	0.67	na	0.160	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.05	33.7	0.25	3.701	2.010	0.83	0.5	2.44	28	23.1	2.47	57.0	0.67	0.097	0.159	0.95	1.48	14.3	0.500	0.943	0.002	0.05	0.0	0.01	0.001	0.00	0.01	0.00	0.1
18.1	54.64	0.55	3.711	2.015	1.08	0.5	2.30	23	37.4	1.93	72.3	0.66	0.115	0.159	0.95	1.75	17.0	0.500	0.939	0.001	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.15	26.04	0.56	3.722	2.020	2.51	1.0	2.92	53	12.9	5.85	75.4	0.66	na	0.159	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.2	17.11	0.34	3.732	2.025	2.54	1.0	3.11	66	8.4	8.00	67.6	0.66	na	0.159	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.25	13.02	0.23	3.742	2.030	2.48	1.0	3.24	76	6.4	9.80	62.8	0.66	na	0.158	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.3	11.75	0.26	3.752	2.035	3.25	1.0	3.36	86	5.8	11.58	66.8	0.66	na	0.158	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.35	11.49	0.32	3.763	2.040	4.14	1.0	3.43	92	5.6	12.73	71.7	0.66	na	0.158	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.4	11.75	0.38	3.773	2.046	4.76	1.0	3.45	94	5.7	13.12	75.4	0.66	na	0.157	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.45	12.51	0.41	3.783	2.051	4.70	1.0	3.41	91	6.1	12.51	76.3	0.65	na	0.157	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.5	16.09	0.4	3.793	2.056	3.25	1.0	3.20	73	7.8	9.25	72.4	0.65	na	0.157	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.55	13.53	0.35	3.804	2.061	3.60	1.0	3.31	82	6.6	10.87	71.4	0.65	na	0.157	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.6	10.98	0.33	3.814	2.066	4.61	1.0	3.48	97	5.3	13.73	73.0	0.65	na	0.156	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.65	12.26	0.47	3.824	2.071	5.57	1.0	3.47	96	5.9	13.51	80.0	0.65	na	0.156	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.7	13.28	0.59	3.834	2.076	6.25	1.0	3.46	95	6.4	13.32	85.2	0.65	na	0.156	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.75	12	0.58	3.845	2.081	7.11	1.0	3.55	100	5.8	14.89	85.8	0.65	na	0.155	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.8	12	0.56	3.855	2.087	6.88	1.0	3.54	100	5.8	14.75	84.8	0.65	na	0.155	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.85	12.77	0.56	3.865	2.092	6.29	1.0	3.48	98	6.1	13.77	84.1	0.64	na	0.155	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.9	13.02	0.46	3.875	2.097	5.03	1.0	3.42	92	6.2	12.65	78.5	0.64	na	0.155	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
18.95	12.51	0.43	3.886	2.102	4.99	1.0	3.44	93	6.0	12.99	77.3	0.64	na	0.154	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19	12.77	0.46	3.896	2.107	5.18	1.0	3.44	93	6.1	12.99	78.7	0.64	na	0.154	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.05	12.77	0.56	3.906	2.112	6.32	1.0	3.49	98	6.0	13.89	83.9	0.64	na	0.154	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1

19.1	13.02	0.57	3.917	2.117	6.26	1.0	3.48	97	6.1	13.69	84.2	0.64	na	0.154	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.15	14.3	0.63	3.927	2.123	6.07	1.0	3.43	92	6.7	12.76	85.9	0.64	na	0.153	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.2	14.55	0.67	3.937	2.128	6.31	1.0	3.43	92	6.8	12.80	87.5	0.64	na	0.153	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.25	13.53	0.66	3.947	2.133	6.89	1.0	3.49	98	6.3	13.85	87.8	0.63	na	0.153	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.3	14.04	0.56	3.958	2.138	5.55	1.0	3.42	91	6.6	12.59	82.7	0.63	na	0.153	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.35	13.79	0.47	3.968	2.143	4.79	1.0	3.39	89	6.4	12.14	78.1	0.63	na	0.152	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.4	14.04	0.46	3.978	2.148	4.57	1.0	3.37	87	6.5	11.83	77.3	0.63	na	0.152	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.45	14.55	0.47	3.988	2.153	4.45	1.0	3.35	85	6.8	11.45	77.4	0.63	na	0.152	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.5	16.34	0.41	3.999	2.158	3.32	1.0	3.22	75	7.6	9.55	72.3	0.63	na	0.152	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.55	15.83	0.38	4.009	2.164	3.21	1.0	3.23	76	7.3	9.68	70.8	0.63	na	0.151	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.6	14.81	0.31	4.019	2.169	2.87	1.0	3.24	76	6.8	9.81	67.0	0.63	na	0.151	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.65	14.55	0.24	4.029	2.174	2.28	1.0	3.20	73	6.7	9.23	61.8	0.63	na	0.151	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.7	14.04	0.25	4.040	2.179	2.50	1.0	3.24	76	6.4	9.80	63.1	0.62	na	0.151	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.75	14.04	0.29	4.050	2.184	2.90	1.0	3.28	79	6.4	10.30	66.2	0.62	na	0.150	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.8	13.79	0.5	4.060	2.189	5.14	1.0	3.42	91	6.3	12.62	79.5	0.62	na	0.150	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.85	22.47	0.88	4.070	2.194	4.78	1.0	3.18	71	10.2	8.90	91.1	0.62	na	0.150	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.9	62.3	1.47	4.081	2.200	2.52	1.0	2.61	36	28.3	3.38	95.8	0.62	na	0.150	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
19.95	58.73	1.21	4.091	2.205	2.21	0.5	2.47	30	38.4	2.63	101.0	0.62	0.176	0.149	0.92	2.77	25.7	0.304	0.785	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20	85.28	0.84	4.101	2.210	1.03	0.5	2.14	17	55.7	1.52	84.6	0.62	0.136	0.149	0.93	2.17	18.6	0.444	0.896	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.05	77.37	0.96	4.111	2.215	1.31	0.5	2.23	20	50.5	1.75	88.1	0.62	0.144	0.149	0.93	2.29	20.2	0.409	0.877	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.1	48.77	0.96	4.122	2.220	2.15	1.0	2.67	39	22.0	3.73	82.0	0.62	na	0.149	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.15	46.98	0.71	4.132	2.225	1.66	1.0	2.62	36	21.1	3.41	72.1	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.2	22.73	0.34	4.142	2.230	1.83	1.0	2.95	55	10.2	6.17	62.8	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.25	13.02	0.08	4.152	2.235	0.90	1.0	3.10	66	5.8	7.93	46.2	0.61	na	0.148	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.3	13.28	0.06	4.163	2.241	0.66	1.0	3.04	61	5.9	7.21	42.7	0.61	na	0.148	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.35	13.79	0.13	4.173	2.246	1.35	1.0	3.14	69	6.1	8.45	51.9	0.61	na	0.148	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.4	14.55	0.22	4.183	2.251	2.12	1.0	3.20	73	6.5	9.28	60.0	0.61	na	0.147	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.45	17.11	0.25	4.193	2.256	1.94	1.0	3.10	66	7.6	7.93	60.1	0.61	na	0.147	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.5	18.38	0.23	4.204	2.261	1.62	1.0	3.03	61	8.1	7.07	57.5	0.61	na	0.147	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.55	17.36	0.17	4.214	2.266	1.29	1.0	3.02	60	7.7	6.90	52.9	0.61	na	0.147	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.6	15.58	0.14	4.224	2.271	1.23	1.0	3.07	63	6.9	7.47	51.3	0.61	na	0.146	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.65	16.09	0.21	4.234	2.277	1.77	1.0	3.12	67	7.1	8.15	57.6	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.7	17.87	0.25	4.245	2.282	1.83	1.0	3.08	64	7.8	7.59	59.5	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.75	17.11	0.24	4.255	2.287	1.87	1.0	3.10	66	7.5	7.92	59.3	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.8	16.6	0.23	4.265	2.292	1.86	1.0	3.12	67	7.2	8.13	58.9	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.85	15.83	0.26	4.275	2.297	2.25	1.0	3.18	72	6.9	8.99	62.0	0.60	na	0.145	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.9	16.34	0.28	4.286	2.302	2.32	1.0	3.18	71	7.1	8.88	63.0	0.60	na	0.145	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
20.95	16.09	0.27	4.296	2.307	2.29	1.0	3.18	72	7.0	8.96	62.5	0.60	na	0.145	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21	15.58	0.23	4.306	2.312	2.04	1.0	3.17	71	6.7	8.87	59.8	0.60	na	0.145	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.05	15.58	0.22	4.316	2.318	1.95	1.0	3.17	70	6.7	8.76	58.9	0.60	na	0.145	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.1	15.83	0.21	4.327	2.323	1.83	1.0	3.15	69	6.8	8.48	57.8	0.60	na	0.144	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.15	15.32	0.19	4.337	2.328	1.73	1.0	3.15	69	6.6	8.59	56.5	0.60	na	0.144	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.2	14.04	0.13	4.347	2.333	1.34	1.0	3.15	69	6.0	8.59	51.7	0.59	na	0.144	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.25	13.53	0.11	4.357	2.338	1.20	1.0	3.16	70	5.8	8.62	49.9	0.59	na	0.144	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.3	12.77	0.11	4.368	2.343	1.31	1.0	3.21	74	5.4	9.32	50.8	0.59	na	0.144	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.35	13.53	0.12	4.378	2.348	1.31	1.0	3.17	71	5.8	8.87	51.1	0.59	na	0.143	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.4	13.79	0.12	4.388	2.354	1.28	1.0	3.16	70	5.9	8.67	50.8	0.59	na	0.143	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.45	13.53	0.11	4.398	2.359	1.20	1.0	3.16	70	5.7	8.70	49.9	0.59	na	0.143	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.5	13.28	0.11	4.409	2.364	1.24	1.0	3.18	71	5.6	8.94	50.2	0.59	na	0.143	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.55	13.79	0.12	4.419	2.369	1.28	1.0	3.16	70	5.8	8.73	50.8	0.59	na	0.143	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.6	13.28	0.13	4.429	2.374	1.47	1.0	3.21	74	5.6	9.40	52.6	0.59	na	0.142	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.65	13.79	0.16	4.439	2.379	1.71	1.0	3.22	75	5.8	9.53	55.2	0.59	na	0.142	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.7	14.04	0.16	4.450	2.384	1.67	1.0	3.21	74	5.9	9.33	54.9	0.59	na	0.142	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.75	14.55	0.18	4.460	2.390	1.78	1.0	3.20	73	6.1	9.25	56.3	0.58	na	0.142	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.8	14.04	0.24	4.470	2.395	2.51	1.0	3.29	81	5.9	10.59	62.1	0.58	na	0.142	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.85	14.04	0.21	4.480	2.400	2.20	1.0	3.27	78	5.9	10.18	59.6	0.58	na	0.142	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.9	13.79	0.21	4.491	2.405	2.26	1.0	3.28	80	5.7	10.44	59.9	0.58	na	0.141	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
21.95	13.53	0.21	4.501	2.410	2.33	1.0	3.30	81	5.6	10.72	60.2	0.58	na	0.141	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22	13.53	0.19	4.511	2.415	2.11	1.0	3.28	80	5.6	10.43	58.4	0.58	na	0.141	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.05	13.53	0.21	4.521	2.420	2.33	1.0	3.31	82	5.6	10.76	60.2	0.58	na	0.141	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.1	13.79	0.19	4.532	2.425	2.05	1.0	3.27	79	5.7	10.22	58.1	0.58	na	0.141	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.15	13.28	0.18	4.542	2.431	2.06	1.0	3.29	81	5.5	10.58	57.8	0.58	na	0.140	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.2	12.77	0.18	4.552	2.436	2.19	1.0	3.33	84	5.2	11.15	58.5	0.58	na	0.140	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.25	12.77	0.18	4.562	2.441	2.19	1.0	3.33	84	5.2	11.17	58.5	0.58	na	0.140	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.3	13.28	0.19	4.573	2.446	2.18	1.0	3.31	82	5.4	10.82	58.7	0.58	na	0.140	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1

22.35	13.79	0.2	4.583	2.451	2.17	1.0	3.29	80	5.6	10.49	59.0	0.58	na	0.140	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.4	14.55	0.16	4.593	2.456	1.61	1.0	3.20	73	5.9	9.18	54.4	0.57	na	0.140	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.45	14.81	0.14	4.603	2.461	1.37	1.0	3.16	70	6.0	8.65	52.1	0.57	na	0.139	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.5	17.62	0.17	4.614	2.467	1.31	1.0	3.06	62	7.1	7.36	52.5	0.57	na	0.139	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.55	15.32	0.2	4.624	2.472	1.87	1.0	3.20	73	6.2	9.25	57.3	0.57	na	0.139	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.6	15.32	0.18	4.634	2.477	1.68	1.0	3.18	72	6.2	8.98	55.5	0.57	na	0.139	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.65	14.81	0.18	4.644	2.482	1.77	1.0	3.21	74	6.0	9.39	56.1	0.57	na	0.139	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.7	15.06	0.17	4.655	2.487	1.63	1.0	3.19	72	6.1	9.06	54.9	0.57	na	0.139	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.75	14.81	0.17	4.665	2.492	1.68	1.0	3.20	73	5.9	9.28	55.1	0.57	na	0.139	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.8	14.81	0.17	4.675	2.497	1.68	1.0	3.21	73	5.9	9.30	55.1	0.57	na	0.138	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.85	15.32	0.18	4.685	2.502	1.69	1.0	3.19	72	6.1	9.07	55.5	0.57	na	0.138	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.9	15.83	0.18	4.696	2.508	1.62	1.0	3.16	70	6.3	8.72	55.0	0.57	na	0.138	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
22.95	15.83	0.18	4.706	2.513	1.62	1.0	3.16	70	6.3	8.74	55.0	0.57	na	0.138	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23	15.83	0.17	4.716	2.518	1.53	1.0	3.16	70	6.3	8.61	54.1	0.57	na	0.138	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.05	15.58	0.17	4.726	2.523	1.57	1.0	3.17	71	6.2	8.80	54.3	0.57	na	0.138	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.1	16.09	0.31	4.737	2.528	2.73	1.0	3.27	78	6.4	10.20	64.9	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.15	30.9	0.59	4.747	2.533	2.26	1.0	2.92	53	12.2	5.84	71.2	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.2	32.17	0.48	4.757	2.538	1.75	1.0	2.84	48	12.7	5.13	65.0	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.25	56.68	0.78	4.767	2.544	1.50	0.5	2.42	27	34.5	2.36	81.5	0.56	0.130	0.137	0.92	2.23	20.2	0.477	0.911	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.3	37.02	0.62	4.778	2.549	1.92	1.0	2.81	46	14.5	4.81	69.8	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.35	16.85	0.43	4.788	2.554	3.56	1.0	3.31	82	6.6	10.84	71.5	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.4	22.73	0.42	4.798	2.559	2.34	1.0	3.07	63	8.9	7.51	66.7	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.45	21.7	0.6	4.808	2.564	3.55	1.0	3.19	72	8.5	9.05	76.6	0.56	na	0.136	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.5	28.6	0.38	4.819	2.569	1.60	1.0	2.88	51	11.1	5.48	61.0	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.55	18.38	0.23	4.829	2.574	1.70	1.0	3.11	66	7.1	7.99	57.1	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.6	18.38	0.22	4.839	2.579	1.62	1.0	3.10	65	7.1	7.89	56.3	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.65	18.13	0.22	4.849	2.585	1.66	1.0	3.11	66	7.0	8.05	56.4	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.7	17.36	0.2	4.860	2.590	1.60	1.0	3.13	68	6.7	8.27	55.4	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.75	16.6	0.16	4.870	2.595	1.36	1.0	3.12	67	6.4	8.20	52.5	0.56	na	0.136	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.8	16.09	0.13	4.880	2.600	1.16	1.0	3.11	66	6.2	8.06	49.9	0.56	na	0.135	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.85	16.09	0.26	4.891	2.605	2.32	1.0	3.25	77	6.2	9.93	61.3	0.55	na	0.135	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.9	18.64	0.89	4.901	2.610	6.48	1.0	3.42	91	7.1	12.59	89.9	0.55	na	0.135	0.91	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
23.95	125.63	1.66	4.911	2.615	1.38	0.5	2.11	16	75.5	1.46	109.9	0.55	0.203	0.135	0.90	3.45	23.9	0.247	0.706	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
24	145.03	2.09	4.921	2.621	1.49	0.5	2.08	15	87.0	1.41	122.9	0.55	0.253	0.135	0.88	4.23	26.4	0.182	0.573	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
24.05	103.16	0.93	4.932	2.626	0.95	0.5	2.08	15	61.8	1.41	87.1	0.55	0.141	0.135	0.91	2.45	18.7	0.419	0.883	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
24.1	69.96	0.7	4.942	2.631	1.08	0.5	2.26	21	41.9	1.81	75.9	0.55	0.121	0.135	0.92	2.10	17.5	0.500	0.931	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
24.15	34.47	0.8	4.952	2.636	2.71	1.0	2.93	54	13.1	5.99	78.3	0.55	na	0.135	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
24.2	48.26	1.7	4.962	2.641	3.93	1.0	2.89	52	18.3	5.62	102.7	0.55	na	0.134	0.90	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
24.25	124.35	3.02	4.973	2.646	2.53	0.5	2.29	22	74.2	1.91	141.7	0.55	0.345	0.134	0.86	5.66	33.2	0.115	0.353	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
24.3	186.65	2.73	4.983	2.651	1.50	0.5	2.00	13	111.3	1.30	144.2	0.55	0.359	0.134	0.86	5.88	30.1	0.108	0.321	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
24.35	193.8	3.73	4.993	2.657	1.98	0.5	2.08	15	115.5	1.40	162.2	0.55	0.461	0.134	0.84	7.34	34.8	0.068	0.087	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
24.4	251.51	3.34	5.003	2.662	1.35	0.5	1.88	10	149.7	1.16	174.0	0.55	0.461	0.134	0.82	7.17	34.6	0.049	-0.076	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
24.45	251.51	5.3	5.014	2.667	2.15	0.5	2.03	14	149.6	1.33	198.8	0.55	0.461	0.134	0.76	6.69	41.8	0.023	-0.434	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
24.5	246.66	4.16	5.024	2.672	1.72	0.5	1.96	12	146.6	1.24	182.3	0.55	0.461	0.134	0.80	7.04	37.4	0.038	-0.194	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
24.55	150.9	4.02	5.034	2.677	2.76	0.5	2.26	21	89.6	1.81	162.5	0.55	0.461	0.134	0.83	7.35	37.6	0.067	0.083	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
24.6	173.63	3.94	5.044	2.682	2.34	0.5	2.16	18	103.0	1.57	162.1	0.55	0.461	0.133	0.83	7.36	36.0	0.068	0.088	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
24.65	186.65	4.11	5.055	2.687	2.26	0.5	2.13	17	110.6	1.51	166.7	0.55	0.461	0.133	0.83	7.30	36.6	0.060	0.025	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
24.7	123.33	1.87	5.065	2.692	1.58	0.5	2.16	18	73.0	1.56	113.8	0.54	0.217	0.133	0.89	3.70	25.2	0.225	0.668	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.1
24.75	93.45	0.23	5.075	2.698	0.26	0.5	1.86	10	55.3	1.00	55.3	0.54	0.096	0.133	0.93	1.71	10.9	0.500	0.943	0.001	0.05	0.0	0.01	0.001	0.00	0.01	0.00	0.1
24.8	47.49	0.2	5.085	2.703	0.47	0.5	2.26	21	28.1	1.00	28.1	0.54	0.073	0.133	0.95	1.33	6.5	0.500	0.943	0.003	0.05	0.0	0.01	0.004	0.01	0.01	0.12	0.1
24.85	24	0.49	5.096	2.708	2.59	1.0	3.09	65	8.9	7.81	69.2	0.54	na	0.133	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.9	22.73	0.29	5.106	2.713	1.65	1.0	3.02	60	8.4	6.95	58.2	0.54	na	0.133	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.95	19.66	0.27	5.116	2.718	1.86	1.0	3.12	67	7.2	8.15	58.9	0.54	na	0.133	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25	20.17	0.23	5.126	2.723	1.53	1.0	3.07	63	7.4	7.50	55.6	0.54	na	0.132	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.05	18.64	0.23	5.137	2.728	1.70	1.0	3.13	68	6.8	8.30	56.7	0.54	na	0.132	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.1	19.66	0.26	5.147	2.734	1.79	1.0	3.12	67	7.2	8.09	58.2	0.54	na	0.132	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.15	23.24	0.23	5.157	2.739	1.27	1.0	2.96	56	8.5	6.31	53.6	0.54	na	0.132	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.2	24.26	0.19	5.167	2.744	1.00	1.0	2.90	52	8.8	5.64	49.8	0.54	na	0.132	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.25	25.28	0.08	5.178	2.749	0.40	1.0	2.73	42	9.2	4.21	38.7	0.54	na	0.132	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.3	16.6	0.08	5.188	2.754	0.70	1.0	3.05	62	6.0	7.23	43.6	0.54	na	0.132	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.35	13.53	0.09	5.198	2.759	1.08	1.0	3.24	76	4.9	9.82	48.1	0.54	na	0.132	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.4	13.53	0.15	5.208	2.764	1.80	1.0	3.34	84	4.9	11.24	55.0	0.54	na	0.132	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.45	14.04	0.23	5.219	2.769	2.61	1.0	3.39	89	5.1	12.09	61.3	0.54	na	0.131	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.5	14.55	0.25	5.229	2.775	2.68	1.0	3.37	87	5.2	11.85	62.2	0.54	na	0.131	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.55	14.81	0.26	5.239	2.780	2.72	1.0	3.37	87	5.3	11.75	62.6	0.54	na	0.131	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0

25.6	15.06	0.24	5.249	2.785	2.45	1.0	3.34	84	5.4	11.25	60.8	0.54	na	0.131	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.65	14.55	0.21	5.260	2.790	2.26	1.0	3.34	85	5.2	11.33	59.1	0.53	na	0.131	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.7	14.55	0.19	5.270	2.795	2.05	1.0	3.32	83	5.2	11.03	57.4	0.53	na	0.131	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.75	15.58	0.33	5.280	2.800	3.20	1.0	3.38	88	5.6	11.93	66.4	0.53	na	0.131	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.8	23.75	1.03	5.290	2.805	5.58	1.0	3.30	81	8.5	10.70	90.6	0.53	na	0.131	0.90	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.85	65.62	1.33	5.301	2.811	2.20	1.0	2.65	38	23.3	3.62	84.5	0.53	na	0.131	0.91	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.9	61.03	1.42	5.311	2.816	2.55	1.0	2.71	41	21.7	4.08	88.5	0.53	na	0.131	0.91	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.95	82.98	1.37	5.321	2.821	1.76	0.5	2.34	24	48.0	2.06	98.6	0.53	0.169	0.130	0.90	2.97	23.6	0.321	0.804	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26	45.96	1.2	5.331	2.826	2.95	1.0	2.86	50	16.3	5.33	86.7	0.53	na	0.130	0.91	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.05	36	0.99	5.342	2.831	3.23	1.0	2.99	58	12.7	6.57	83.6	0.53	na	0.130	0.91	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.1	42.9	0.66	5.352	2.836	1.76	1.0	2.77	44	15.1	4.49	68.0	0.53	na	0.130	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.15	36.51	0.54	5.362	2.841	1.73	1.0	2.83	48	12.8	5.06	65.0	0.53	na	0.130	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.2	20.94	0.39	5.372	2.846	2.51	1.0	3.18	71	7.4	8.88	65.3	0.53	na	0.130	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.25	16.6	0.16	5.383	2.852	1.43	1.0	3.19	72	5.8	9.03	52.6	0.53	na	0.130	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.3	17.11	0.4	5.393	2.857	3.41	1.0	3.35	85	6.0	11.50	68.9	0.53	na	0.130	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.35	18.89	0.64	5.403	2.862	4.75	1.0	3.38	88	6.6	11.94	78.8	0.53	na	0.130	0.91	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.4	65.88	0.59	5.413	2.867	0.98	0.5	2.28	22	37.8	1.87	70.5	0.53	0.113	0.130	0.92	2.03	16.4	0.500	0.942	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.45	87.84	0.71	5.424	2.872	0.86	0.5	2.14	17	50.3	1.51	76.1	0.53	0.121	0.129	0.91	2.18	16.7	0.500	0.930	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.5	68.43	1.04	5.434	2.877	1.65	0.5	2.39	26	39.2	2.27	88.9	0.53	0.145	0.129	0.90	2.59	21.8	0.401	0.872	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.55	43.66	1.25	5.444	2.882	3.27	1.0	2.92	53	15.1	5.86	88.8	0.53	na	0.129	0.90	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.6	88.6	0.81	5.454	2.888	0.97	0.5	2.16	18	50.6	1.57	79.5	0.53	0.127	0.129	0.91	2.28	17.6	0.500	0.919	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.65	48	0.88	5.465	2.893	2.07	1.0	2.77	44	16.6	4.50	74.6	0.53	na	0.129	0.91	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.7	40.09	0.6	5.475	2.898	1.73	1.0	2.80	46	13.8	4.78	66.2	0.53	na	0.129	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.75	52.34	0.68	5.485	2.903	1.45	1.0	2.65	38	18.0	3.63	65.5	0.52	na	0.129	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.8	43.92	0.49	5.495	2.908	1.28	1.0	2.70	40	15.1	3.96	59.7	0.52	na	0.129	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.85	32.94	0.74	5.506	2.913	2.70	1.0	2.99	58	11.3	6.64	75.0	0.52	na	0.129	0.91	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.9	27.07	0.53	5.516	2.918	2.46	1.0	3.06	63	9.3	7.41	68.7	0.52	na	0.129	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.95	28.6	0.41	5.526	2.924	1.78	1.0	2.96	56	9.8	6.31	61.8	0.52	na	0.129	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27	34.98	1.35	5.536	2.929	4.59	1.0	3.10	66	11.9	7.93	94.8	0.52	na	0.128	0.90	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.05	116.18	1.96	5.547	2.934	1.77	0.5	2.23	20	65.9	1.72	113.4	0.52	0.216	0.128	0.88	3.77	25.8	0.227	0.672	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.1	106.73	1.59	5.557	2.939	1.57	0.5	2.22	20	60.5	1.71	103.4	0.52	0.183	0.128	0.89	3.23	23.5	0.287	0.764	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.15	57.96	1.08	5.567	2.944	2.06	1.0	2.70	40	19.7	3.96	78.0	0.52	na	0.128	0.91	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.2	56.17	2.18	5.577	2.949	4.31	1.0	2.90	52	19.0	5.72	108.9	0.52	na	0.128	0.88	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.25	134.82	3.58	5.588	2.954	2.77	0.5	2.31	23	76.2	1.98	150.5	0.52	0.397	0.128	0.84	6.61	35.6	0.092	0.241	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.3	186.4	3.88	5.598	2.959	2.15	0.5	2.13	17	105.2	1.50	158.3	0.52	0.449	0.128	0.82	7.38	34.7	0.075	0.138	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.35	128.69	1.93	5.608	2.965	1.57	0.5	2.16	18	72.6	1.56	113.2	0.52	0.215	0.128	0.88	3.77	25.1	0.229	0.674	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.4	99.84	1.14	5.618	2.970	1.21	0.5	2.18	18	56.3	1.60	90.2	0.52	0.148	0.128	0.90	2.66	20.2	0.390	0.864	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.45	78.13	2.31	5.629	2.975	3.19	1.0	2.70	41	26.3	4.00	105.1	0.52	na	0.128	0.89	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.5	156.52	4.03	5.639	2.980	2.67	0.5	2.26	21	88.1	1.80	158.7	0.52	0.452	0.128	0.82	7.42	36.6	0.074	0.133	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.55	184.86	4.59	5.649	2.985	2.56	0.5	2.19	19	103.9	1.64	170.0	0.52	0.461	0.128	0.80	7.40	38.2	0.054	-0.021	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.6	247.17	5.04	5.659	2.990	2.09	0.5	2.04	14	138.8	1.35	186.9	0.52	0.461	0.127	0.76	7.06	39.5	0.033	-0.260	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.65	162.14	2.85	5.670	2.995	1.82	0.5	2.13	17	91.0	1.50	136.0	0.52	0.314	0.127	0.85	5.37	29.8	0.132	0.422	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.7	86.3	0.82	5.680	3.001	1.02	0.5	2.19	19	48.4	1.63	79.1	0.52	0.126	0.127	0.91	2.29	17.8	0.500	0.921	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.75	44.43	0.58	5.690	3.006	1.50	1.0	2.74	43	14.8	4.29	63.4	0.52	na	0.127	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.8	40.34	0.9	5.700	3.011	2.60	1.0	2.91	53	13.4	5.79	77.5	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.85	85.79	0.58	5.711	3.016	0.72	0.5	2.12	16	48.0	1.47	70.7	0.52	0.113	0.127	0.91	2.07	15.4	0.500	0.942	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0

Project No.	1160276		uses n = 0.7 vs Conetec using 0.75 for transitional soil		
Project Description	L-11			Direct	Thin Layer
Water Table	5	ft	Idriss Settlement	1.4	0.0
Earthquake Magnitude	5.2	M_W	Robertson Settlement	1.2	0.0
Acceleration	0.2	g			
Soil Unit Wt	125	pcf			
Pa	1.06	tsf			

CPT INPUT DATA			LIQUEFACTION POTENTIAL														LIQUEFACTION INDUCED SETTLEMENT										
Depth, m	q_C, tsf	fs, tsf	Total Stress, tsf	Effective. Stress, tsf	F, %	n	I_C	Fines Content, %	q_{c1N}	K_C	q_{c1N-cs}	Stress Reduct. Coeff., r_d	$CRR_{7.5}$	CSR	K_σ	Factor of Safety	$(N1)_{60-cs}$	Limiting Shear Strain, γ_{lim}	Parameter F_α	Maximum Shear Strain, γ_{max}	Layer Thick., m ΔH_i	ΔLDI_i,in	Cum. LDI, in	Vertical Reconsol Strain, ε_v	Sett., in, ΔS_i	Cum. S., in.	Zhang Settle, in	Zhang Cum. Settle, in
0.250	106.480	2.630	0.051	0.051	2.47	0.5	1.81	8	170.8	1.10	188.6	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
0.300	97.280	3.700	0.062	0.062	3.81	0.5	2.01	13	156.0	1.30	203.2	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
0.350	91.160	3.230	0.072	0.072	3.55	0.5	2.01	13	146.2	1.30	190.6	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
0.400	82.980	1.840	0.082	0.082	2.22	0.5	1.87	10	133.1	1.16	153.7	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
0.450	80.430	1.660	0.092	0.092	2.07	0.5	1.87	10	129.0	1.15	148.6	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
0.500	89.620	1.450	0.103	0.103	1.62	0.5	1.77	7	143.7	1.08	154.8	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
0.550	86.300	1.080	0.113	0.113	1.25	0.5	1.70	6	138.4	1.03	142.9	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
0.600	80.180	0.760	0.123	0.123	0.95	0.5	1.64	5	128.6	0.99	127.8	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
0.650	75.580	0.710	0.133	0.133	0.94	0.5	1.67	6	121.2	1.01	122.7	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
0.700	71.750	0.780	0.144	0.144	1.09	0.5	1.74	7	115.1	1.06	122.1	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
0.750	73.790	0.790	0.154	0.154	1.07	0.5	1.74	7	118.3	1.06	125.3	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
0.800	65.880	0.720	0.164	0.164	1.10	0.5	1.79	8	105.7	1.09	115.6	1.00	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
0.850	58.220	0.580	0.174	0.174	1.00	0.5	1.81	8	93.4	1.11	103.6	1.00	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
0.900	52.090	0.460	0.185	0.185	0.89	0.5	1.82	9	83.5	1.12	93.4	1.00	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
0.950	42.900	0.370	0.195	0.195	0.87	0.5	1.89	10	68.8	1.18	80.8	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.000	37.020	0.320	0.205	0.205	0.87	0.5	1.95	12	59.4	1.24	73.4	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.050	38.300	0.400	0.215	0.215	1.05	0.5	2.00	13	61.4	1.29	79.4	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.100	39.320	0.450	0.226	0.226	1.15	0.5	2.02	14	63.1	1.32	83.5	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.150	29.360	0.420	0.236	0.236	1.44	0.5	2.19	19	47.1	1.64	77.1	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.200	20.680	0.230	0.246	0.246	1.13	0.5	2.26	21	33.2	1.81	60.2	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.250	18.380	0.240	0.256	0.256	1.32	0.5	2.35	24	29.5	2.11	62.1	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.300	26.560	0.520	0.267	0.267	1.98	0.5	2.33	24	42.6	2.05	87.5	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.350	36.770	0.770	0.277	0.277	2.11	0.5	2.25	21	59.0	1.80	106.0	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.400	51.830	0.620	0.287	0.287	1.20	0.5	1.98	13	83.1	1.27	105.8	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.450	62.050	0.750	0.297	0.297	1.21	0.5	1.93	11	99.5	1.22	121.0	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.500	75.580	0.900	0.308	0.308	1.20	0.5	1.87	10	121.2	1.16	140.3	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.550	84.260	1.140	0.318	0.315	1.36	0.5	1.88	10	135.1	1.17	157.5	0.99	0.443	0.130	1.10	9.59	31.4	0.077	0.149	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.600	91.920	1.310	0.328	0.320	1.43	0.5	1.87	10	147.4	1.16	170.9	0.99	0.461	0.132	1.10	9.82	33.9	0.053	-0.033	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.650	91.410	1.360	0.338	0.325	1.49	0.5	1.89	10	146.6	1.17	172.2	0.99	0.461	0.134	1.10	9.68	34.4	0.051	-0.052	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.700	82.980	1.290	0.349	0.331	1.56	0.5	1.94	11	133.1	1.22	162.2	0.99	0.461	0.136	1.10	9.55	33.0	0.067	0.086	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.750	78.640	1.090	0.359	0.336	1.39	0.5	1.92	11	126.1	1.20	151.5	0.99	0.404	0.137	1.10	8.25	30.6	0.089	0.228	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.800	69.200	0.710	0.369	0.341	1.03	0.5	1.87	10	111.0	1.16	128.6	0.99	0.278	0.139	1.10	5.61	25.5	0.158	0.509	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.850	50.810	0.420	0.379	0.346	0.83	0.5	1.92	11	81.5	1.21	98.2	0.99	0.168	0.141	1.10	3.35	19.9	0.324	0.807	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.900	37.790	0.340	0.390	0.351	0.91	0.5	2.05	14	60.6	1.37	83.0	0.99	0.133	0.142	1.10	2.62	17.6	0.461	0.904	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
1.950	24.260	0.200	0.400	0.356	0.84	0.5	2.20	19	38.9	1.66	64.5	0.99	0.105	0.144	1.09	2.02	14.6	0.500	0.943	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
2.000	24.770	0.140	0.410	0.361	0.57	0.5	2.12	16	39.7	1.47	58.5	0.99	0.099	0.146	1.08	1.87	12.8	0.500	0.943	0.000	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
2.050	33.450	0.150	0.420	0.367	0.45	0.5	1.95	12	53.6	1.00	53.6	0.99	0.094	0.147	1.08	1.77	11.0	0.500	0.943	0.001	0.05	0.0	3.77	0.000	0.00	1.44	0.00	1.2
2.100	32.680	0.200	0.431	0.372	0.62	0.5	2.03	14	52.1	1.33	69.4	0.99	0.111	0.149	1.09	2.08	14.6	0.500	0.943	0.000	0.05	0.0	3.76	0.000	0.00	1.44	0.00	1.2
2.150	28.600	0.220	0.441	0.377	0.78	0.5	2.13	17	45.3	1.51	68.4	0.99	0.110	0.150	1.09	2.03	15.0	0.500	0.943	0.000	0.05	0.0	3.76	0.000	0.00	1.44	0.00	1.2
2.200	24.000	0.200	0.451	0.382	0.85	0.5	2.22	20	37.7	1.71	64.5	0.99	0.105	0.151	1.08	1.92	14.7	0.500	0.943	0.000	0.05	0.0	3.76	0.000	0.00	1.44	0.00	1.2
2.250	18.890	0.090	0.461	0.387	0.49	0.5	2.21	19	29.5	1.00	29.5	0.98	0.075	0.153	1.06	1.32	6.7	0.500	0.943	0.004	0.05	0.0	3.76	0.004	0.01	1.44	0.12	1.2
2.300	17.620	0.100	0.472	0.392	0.58	0.5	2.27	21	27.3	1.85	50.4	0.98	0.092	0.154	1.07	1.63	11.7	0.500	0.943	0.001	0.05	0.0	3.76	0.001	0.00	1.43	0.00	1.1
2.350	21.450	0.120	0.482	0.397	0.57	0.5	2.19	19	33.1	1.63	54.0	0.98	0.095	0.155	1.07	1.67	12.1	0.500	0.943	0.001	0.05	0.0	3.75	0.001	0.00	1.43	0.00	1.1
2.400	28.090	0.120	0.492	0.402	0.43	0.5	2.03	14	43.0	1.00	43.0	0.98	0.086	0.156	1.06	1.49	9.1	0.500	0.943	0.002	0.05	0.0	3.75	0.002	0.00	1.43	0.00	1.1
2.450	33.700	0.130	0.502	0.408	0.39	0.5	1.94	11	51.3	1.00	51.3	0.98	0.093	0.158	1.07	1.60	10.4	0.500	0.943	0.001	0.05	0.0	3.75	0.001	0.00	1.43	0.00	1.1
2.500	32.170	0.170	0.513	0.413	0.54	0.5	2.03	14	48.6	1.33	64.6	0.98	0.105	0.159	1.08	1.82	13.6	0.500	0.943	0.000	0.05	0.0	3.75	0.000	0.00	1.43	0.00	1.1
2.550	26.040	0.150	0.523	0.418	0.59	0.5	2.13	17	39.1	1.50	58.8	0.98	0.099	0.160	1.07	1.69	12.9	0.500	0.943	0.001	0.05	0.0	3.75	0.001	0.00	1.43	0.00	1.1
2.600	21.960	0.220	0.533	0.423	1.03	0.5	2.32	23	32.8	2.00	65.5	0.98	0.106	0.161	1.07	1.81	15.5	0.500	0.943	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
2.650	18.640	0.270	0.543	0.428	1.49	0.5	2.47	29	27.7	2.61	72.3	0.98	0.115	0.162	1.08	1.95	18.4	0.500	0.939	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
2.700	15.580	0.370	0.554	0.433	2.46	0.7	2.60	36	25.0	3.34	83.4	0.98	na	0.163	1.08	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
2.750	15.830	0.240	0.564	0.438	1.57	0.5	2.55	33	23.2	3.02	70.0	0.98	0.112	0.164	1.07	1.87	18.5	0.500	0.942	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
2.800	15.580	0.260	0.574	0.444	1.73	0.5	2.58	34	22.7	3.20	72.7	0.98	0.116	0.165	1.07	1.92	19.5	0.500	0.939	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1

2.850	12.770	0.260	0.584	0.449	2.13	0.7	2.65	38	20.5	3.62	74.1	0.98	na	0.166	1.07	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
2.900	11.490	0.240	0.595	0.454	2.20	1.0	2.61	36	18.4	3.37	62.1	0.98	na	0.167	1.07	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
2.950	12.000	0.250	0.605	0.459	2.19	0.7	2.68	40	19.2	3.87	74.4	0.98	na	0.168	1.07	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.000	8.680	0.210	0.615	0.464	2.60	1.0	2.77	44	13.9	4.48	62.3	0.98	na	0.169	1.07	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.050	6.890	0.150	0.625	0.469	2.39	1.0	2.84	48	11.1	5.09	56.3	0.98	na	0.170	1.06	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.100	6.380	0.090	0.636	0.474	1.57	1.0	2.77	45	10.2	4.55	46.6	0.98	na	0.171	1.06	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.150	5.870	0.030	0.646	0.479	0.57	1.0	2.62	36	9.4	3.45	32.5	0.98	na	0.171	1.05	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.200	4.340	0.010	0.656	0.485	0.27	1.0	2.67	39	7.0	3.77	26.2	0.98	na	0.172	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.250	3.830	0.010	0.666	0.490	0.32	1.0	2.76	43	6.1	4.40	27.0	0.98	na	0.173	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.300	3.830	0.010	0.677	0.495	0.32	1.0	2.76	44	6.1	4.45	27.3	0.98	na	0.174	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.350	3.060	0.010	0.687	0.500	0.42	1.0	2.92	53	4.9	5.86	28.7	0.98	na	0.174	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.400	3.060	0.010	0.697	0.505	0.42	1.0	2.93	54	4.9	5.92	29.1	0.98	na	0.175	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.450	2.810	0.010	0.707	0.510	0.48	1.0	2.99	58	4.5	6.64	29.9	0.98	na	0.176	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.500	2.550	0.010	0.718	0.515	0.55	1.0	3.07	63	4.1	7.55	30.9	0.98	na	0.177	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.550	2.300	0.020	0.728	0.521	1.27	1.0	3.27	79	3.7	10.23	37.7	0.98	na	0.177	1.05	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.600	2.040	0.020	0.738	0.526	1.54	1.0	3.38	88	3.3	12.00	39.2	0.98	na	0.178	1.05	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.650	2.040	0.020	0.748	0.531	1.55	1.0	3.39	89	3.3	12.14	39.7	0.97	na	0.179	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.700	4.090	0.050	0.759	0.536	1.50	1.0	3.02	60	6.6	6.93	45.4	0.97	na	0.179	1.05	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.750	6.130	0.080	0.769	0.541	1.49	1.0	2.84	48	9.8	5.11	50.2	0.97	na	0.180	1.05	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.800	6.380	0.100	0.779	0.546	1.79	1.0	2.87	50	10.2	5.35	54.7	0.97	na	0.181	1.05	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.850	4.600	0.070	0.789	0.551	1.84	1.0	3.02	60	7.4	6.94	51.2	0.97	na	0.181	1.05	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.900	3.830	0.060	0.800	0.556	1.98	1.0	3.13	67	6.1	8.23	50.6	0.97	na	0.182	1.05	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
3.950	4.090	0.050	0.810	0.562	1.52	1.0	3.05	62	6.6	7.24	47.5	0.97	na	0.182	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.000	3.830	0.030	0.820	0.567	1.00	1.0	3.00	59	6.1	6.75	41.5	0.97	na	0.183	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.050	3.830	0.030	0.830	0.572	1.00	1.0	3.01	59	6.1	6.81	41.9	0.97	na	0.184	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.100	5.110	0.020	0.841	0.577	0.47	1.0	2.75	43	8.2	4.35	35.6	0.97	na	0.184	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.150	5.110	0.020	0.851	0.582	0.47	1.0	2.75	43	8.2	4.39	35.9	0.97	na	0.185	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.200	4.090	0.020	0.861	0.587	0.62	1.0	2.91	53	6.6	5.79	38.0	0.97	na	0.185	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.250	4.090	0.030	0.871	0.592	0.93	1.0	2.98	57	6.6	6.52	42.8	0.97	na	0.186	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.300	4.600	0.030	0.882	0.598	0.81	1.0	2.90	52	7.4	5.71	42.1	0.97	na	0.186	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.350	4.850	0.030	0.892	0.603	0.76	1.0	2.87	50	7.8	5.40	42.0	0.97	na	0.187	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.400	4.600	0.020	0.902	0.608	0.54	1.0	2.85	49	7.4	5.20	38.4	0.97	na	0.187	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.450	4.340	0.020	0.912	0.613	0.58	1.0	2.90	52	7.0	5.63	39.2	0.97	na	0.188	1.04	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.500	4.340	0.010	0.923	0.618	0.29	1.0	2.81	47	7.0	4.87	33.9	0.97	na	0.188	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.550	4.600	0.020	0.933	0.623	0.55	1.0	2.86	50	7.4	5.34	39.4	0.97	na	0.189	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.600	4.850	0.010	0.943	0.628	0.26	1.0	2.75	43	7.7	4.35	33.6	0.97	na	0.189	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.650	5.360	0.010	0.953	0.634	0.23	1.0	2.69	40	8.5	3.90	33.0	0.97	na	0.189	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.700	6.380	0.010	0.964	0.639	0.18	0.7	2.65	38	8.6	3.65	31.3	0.97	na	0.190	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.750	6.380	0.010	0.974	0.644	0.18	0.7	2.66	38	8.5	3.67	31.3	0.97	na	0.190	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.74	0.000	0.00	1.42	0.00	1.1
4.800	7.150	0.010	0.984	0.649	0.16	0.7	2.59	35	9.5	3.26	31.0	0.97	0.076	0.191	1.03	1.05	8.4	0.500	0.943	0.019	0.05	0.0	3.74	0.021	0.04	1.42	0.12	1.1
4.850	4.850	0.020	0.995	0.654	0.52	1.0	2.86	49	7.4	5.26	39.0	0.97	na	0.191	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
4.900	4.600	0.020	1.005	0.659	0.56	1.0	2.90	52	7.0	5.66	39.5	0.97	na	0.191	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
4.950	4.850	0.010	1.015	0.664	0.26	1.0	2.78	45	7.3	4.61	33.7	0.97	na	0.192	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.000	4.850	0.020	1.025	0.669	0.52	1.0	2.87	50	7.2	5.39	39.1	0.97	na	0.192	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.050	4.600	0.020	1.036	0.675	0.56	1.0	2.91	53	6.8	5.80	39.6	0.97	na	0.193	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.100	5.620	0.020	1.046	0.680	0.44	1.0	2.78	45	8.3	4.58	37.9	0.96	na	0.193	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.150	6.380	0.020	1.056	0.685	0.38	1.0	2.70	40	9.3	3.97	37.0	0.96	na	0.193	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.200	6.640	0.020	1.066	0.690	0.36	1.0	2.68	39	9.6	3.81	36.7	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.250	6.380	0.030	1.077	0.695	0.57	1.0	2.76	44	9.2	4.47	41.0	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.300	6.380	0.040	1.087	0.700	0.76	1.0	2.81	47	9.1	4.89	44.5	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.350	8.430	0.060	1.097	0.705	0.82	1.0	2.70	41	12.0	3.99	47.7	0.96	na	0.195	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.400	8.170	0.030	1.107	0.711	0.42	1.0	2.61	36	11.5	3.40	39.0	0.96	na	0.195	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.450	7.920	0.020	1.118	0.716	0.29	0.7	2.63	37	9.8	3.53	34.7	0.96	na	0.195	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.500	7.920	0.050	1.128	0.721	0.74	1.0	2.72	42	11.0	4.14	45.5	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.550	7.150	0.050	1.138	0.726	0.83	1.0	2.79	46	9.8	4.72	46.5	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.600	7.400	0.050	1.148	0.731	0.80	1.0	2.78	45	10.1	4.56	46.1	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.650	7.150	0.050	1.159	0.736	0.83	1.0	2.80	46	9.7	4.78	46.5	0.96	na	0.197	1.03	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.700	7.400	0.040	1.169	0.741	0.64	1.0	2.74	43	10.0	4.31	43.1	0.96	na	0.197	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.750	7.920	0.030	1.179	0.746	0.45	1.0	2.66	38	10.6	3.70	39.2	0.96	na	0.197	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.800	7.660	0.020	1.189	0.752	0.31	1.0	2.63	37	10.2	3.51	35.8	0.96	na	0.197	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.850	7.920	0.030	1.200	0.757	0.45	1.0	2.67	39	10.5	3.75	39.2	0.96	na	0.198	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.71	0.000	0.00	1.38	0.00	1.0
5.900	9.700	0.030	1.210	0.762	0.35	0.7	2.58	35	11.5	3.21	37.0	0.96	0.081	0.198	1.02	1.06	9.9	0.500	0.943	0.015	0.05	0.0	3.71	0.015	0.03	1.38	0.02	1.0
5.950	10.210	0.080	1.220	0.767	0.89	1.0	2.67	39	13.3	3.77	50.2	0.96	na	0.198	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.000	9.960	0.060	1.230	0.772	0.69	1.0	2.64	37	12.9	3.55	45.8	0.96	na	0.198	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.050	9.190	0.030	1.241	0.777	0.38	0.7	2.62	37	10.8	3.46	37.3	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0

6.100	8.680	0.020	1.251	0.782	0.27	0.7	2.61	36	10.1	3.40	34.4	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.150	8.430	0.030	1.261	0.788	0.42	1.0	2.65	38	10.7	3.62	38.7	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.200	7.660	0.030	1.271	0.793	0.47	1.0	2.71	41	9.7	4.08	39.4	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.250	6.890	0.030	1.282	0.798	0.53	1.0	2.79	45	8.6	4.67	40.3	0.96	na	0.200	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.300	6.640	0.050	1.292	0.803	0.93	1.0	2.90	52	8.3	5.69	47.1	0.96	na	0.200	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.350	6.380	0.050	1.302	0.808	0.98	1.0	2.93	54	7.9	6.02	47.5	0.95	na	0.200	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.400	6.380	0.010	1.312	0.813	0.20	1.0	2.72	42	7.8	4.16	32.6	0.95	na	0.200	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.450	6.380	0.050	1.323	0.818	0.99	1.0	2.94	55	7.8	6.09	47.5	0.95	na	0.200	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.500	6.130	0.050	1.333	0.823	1.04	1.0	2.97	57	7.4	6.44	47.9	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.550	5.620	0.050	1.343	0.829	1.17	1.0	3.04	61	6.8	7.21	48.9	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.600	5.360	0.050	1.353	0.834	1.25	1.0	3.08	64	6.4	7.69	49.4	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.650	6.640	0.050	1.364	0.839	0.95	1.0	2.93	54	7.9	5.94	47.0	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.700	5.620	0.050	1.374	0.844	1.18	1.0	3.05	62	6.7	7.34	48.9	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.750	5.620	0.050	1.384	0.849	1.18	1.0	3.06	63	6.6	7.39	48.9	0.95	na	0.202	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.800	5.620	0.050	1.394	0.854	1.18	1.0	3.06	63	6.6	7.43	48.9	0.95	na	0.202	1.02	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.850	5.360	0.050	1.405	0.859	1.26	1.0	3.10	66	6.2	7.93	49.5	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.900	5.110	0.050	1.415	0.865	1.35	1.0	3.14	69	5.9	8.46	50.0	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
6.950	5.360	0.050	1.425	0.870	1.27	1.0	3.11	66	6.2	8.03	49.5	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
7.000	8.430	0.050	1.435	0.875	0.71	1.0	2.78	45	9.6	4.62	44.5	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
7.050	6.130	0.030	1.446	0.880	0.64	1.0	2.93	54	7.0	5.97	41.6	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
7.100	7.150	0.020	1.456	0.885	0.35	1.0	2.77	44	8.1	4.51	36.4	0.95	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
7.150	6.640	0.040	1.466	0.890	0.77	1.0	2.92	54	7.5	5.91	44.1	0.95	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
7.200	6.380	0.030	1.476	0.895	0.61	1.0	2.91	53	7.1	5.78	41.2	0.95	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
7.250	5.870	0.040	1.487	0.901	0.91	1.0	3.02	60	6.5	6.97	45.4	0.95	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.68	0.000	0.00	1.35	0.00	1.0
7.3	10.98	0.02	1.497	0.906	0.21	0.5	2.54	33	11.2	2.98	33.4	0.95	0.078	0.203	1.01	0.99	8.8	0.500	0.943	0.046	0.05	0.1	3.68	0.049	0.10	1.35	0.05	1.0
7.35	6.64	0.02	1.507	0.911	0.39	1.0	2.84	48	7.3	5.09	37.1	0.94	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.59	0.000	0.00	1.26	0.00	0.9
7.4	6.13	0.04	1.517	0.916	0.87	1.0	3.00	59	6.7	6.72	45.0	0.94	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.59	0.000	0.00	1.26	0.00	0.9
7.45	6.13	0.03	1.528	0.921	0.65	1.0	2.96	56	6.7	6.26	41.7	0.94	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.59	0.000	0.00	1.26	0.00	0.9
7.5	5.62	0.03	1.538	0.926	0.73	1.0	3.03	60	6.1	7.03	42.6	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.59	0.000	0.00	1.26	0.00	0.9
7.55	5.62	0.03	1.548	0.931	0.74	1.0	3.03	61	6.0	7.07	42.7	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.59	0.000	0.00	1.26	0.00	0.9
7.6	5.62	0.02	1.558	0.936	0.49	1.0	2.98	57	6.0	6.46	38.7	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.59	0.000	0.00	1.26	0.00	0.9
7.65	6.89	0.13	1.569	0.942	2.44	1.0	3.16	70	7.3	8.64	63.2	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.59	0.000	0.00	1.26	0.00	0.9
7.7	38.81	0.4	1.579	0.947	1.07	0.5	2.27	22	38.7	1.86	72.0	0.94	0.115	0.204	1.01	1.45	16.8	0.500	0.940	0.002	0.05	0.0	3.59	0.001	0.00	1.26	0.00	0.9
7.75	29.36	0.49	1.589	0.952	1.76	0.5	2.50	31	29.2	2.77	80.9	0.94	0.129	0.204	1.01	1.63	20.9	0.484	0.913	0.002	0.05	0.0	3.58	0.001	0.00	1.25	0.00	0.9
7.8	14.3	0.3	1.599	0.957	2.36	1.0	2.84	48	14.9	5.08	76.0	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
7.85	8.94	0.05	1.610	0.962	0.68	1.0	2.79	46	9.3	4.72	43.8	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
7.9	8.17	0.05	1.620	0.967	0.76	1.0	2.86	50	8.4	5.30	44.7	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
7.95	7.92	0.03	1.630	0.972	0.48	1.0	2.81	46	8.1	4.82	39.3	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8	7.66	0.02	1.640	0.978	0.33	1.0	2.78	45	7.8	4.61	36.1	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.05	7.66	0.05	1.651	0.983	0.83	1.0	2.92	53	7.8	5.83	45.4	0.94	na	0.205	1.01	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.1	7.92	0.05	1.661	0.988	0.80	1.0	2.89	52	8.0	5.62	45.1	0.94	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.15	8.17	0.05	1.671	0.993	0.77	1.0	2.88	50	8.2	5.44	44.7	0.94	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.2	8.17	0.02	1.681	0.998	0.31	1.0	2.75	43	8.2	4.35	35.6	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.25	7.92	0.06	1.692	1.003	0.96	1.0	2.94	54	7.9	6.03	47.6	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.3	8.17	0.05	1.702	1.008	0.77	1.0	2.88	51	8.1	5.52	44.7	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.35	7.92	0.02	1.712	1.013	0.32	1.0	2.78	45	7.8	4.59	35.9	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.4	7.92	0.02	1.722	1.019	0.32	1.0	2.78	45	7.8	4.62	35.9	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.45	7.4	0.02	1.733	1.024	0.35	1.0	2.83	48	7.2	5.05	36.5	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.5	7.92	0.02	1.743	1.029	0.32	1.0	2.79	45	7.7	4.67	35.9	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.55	8.43	0.02	1.753	1.034	0.30	1.0	2.75	43	8.2	4.35	35.5	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.6	9.7	0.05	1.763	1.039	0.63	1.0	2.78	45	9.3	4.60	42.9	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.65	13.02	0.11	1.774	1.044	0.98	1.0	2.72	42	12.5	4.14	51.6	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.7	11.49	0.15	1.784	1.049	1.55	1.0	2.87	50	10.9	5.42	59.3	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.75	13.53	0.07	1.794	1.055	0.60	1.0	2.62	36	12.8	3.43	44.1	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.8	11.23	0.05	1.804	1.060	0.53	1.0	2.69	40	10.6	3.92	41.5	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.85	8.68	0.04	1.815	1.065	0.58	1.0	2.84	48	8.2	5.09	41.5	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	3.58	0.000	0.00	1.25	0.00	0.9
8.9	10.98	0.01	1.825	1.070	0.11	0.5	2.55	33	10.3	3.01	31.0	0.92	0.076	0.205	1.00	0.94	8.2	0.500	0.943	0.500	0.05	1.0	3.58	0.090	0.18	1.25	0.12	0.9
8.95	9.19	0.01	1.835	1.075	0.14	1.0	2.66	38	8.5	3.69	31.5	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	2.59	0.000	0.00	1.08	0.00	0.8
9	7.92	0.01	1.845	1.080	0.16	1.0	2.75	43	7.3	4.39	32.2	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	2.59	0.000	0.00	1.08	0.00	0.8
9.05	7.92	0.01	1.856	1.085	0.16	1.0	2.76	44	7.3	4.41	32.2	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	2.59	0.000	0.00	1.08	0.00	0.8
9.1	7.66	0.02	1.866	1.090	0.35	1.0	2.85	49	7.0	5.18	36.4	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	2.59	0.000	0.00	1.08	0.00	0.8
9.15	8.17	0.01	1.876	1.096	0.16	1.0	2.74	43	7.5	4.30	32.1	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	2.59	0.000	0.00	1.08	0.00	0.8
9.2	21.96	0.06	1.886	1.101	0.30	0.5	2.31	23	20.3	1.00	20.3	0.92	0.067	0.205	1.00	0.83	4.8	0.500	0.943	0.500	0.05	1.0	2.59	0.119	0.23	1.08	0.12	0.8
9.25	15.58	0.06	1.897	1.106	0.44	0.5	2.52	32	14.4	2.86	41.1	0.92	0.084	0.205	1.00	1.05	10.7	0.500	0.943	0.018	0.05	0.0	1.61	0.017	0.03	0.84	0.02	0.7
9.3	8.68	0.01	1.907	1.111	0.15	1.0	2.71	41	7.8	4.07	31.8	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	1.57	0.000	0.00	0.81	0.00	0.6

9.35	7.92	0.01	1.917	1.116	0.17	1.0	2.77	45	7.1	4.55	32.3	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	1.57	0.000	0.00	0.81	0.00	0.6
9.4	7.66	0.01	1.927	1.121	0.17	1.0	2.80	46	6.8	4.76	32.5	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	1.57	0.000	0.00	0.81	0.00	0.6
9.45	8.94	0.03	1.938	1.126	0.43	1.0	2.81	47	7.9	4.84	38.4	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	1.57	0.000	0.00	0.81	0.00	0.6
9.5	12	0.15	1.948	1.132	1.49	1.0	2.88	51	10.6	5.49	58.2	0.91	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	1.57	0.000	0.00	0.81	0.00	0.6
9.55	19.15	0.03	1.958	1.137	0.17	0.5	2.32	23	17.4	1.00	17.4	0.91	0.065	0.205	1.00	0.80	4.1	0.500	0.943	0.500	0.05	1.0	1.57	0.119	0.23	0.81	0.12	0.6
9.6	12.77	0.02	1.969	1.142	0.19	0.5	2.53	32	11.6	2.88	33.5	0.91	0.078	0.205	1.00	0.97	8.7	0.500	0.943	0.083	0.05	0.2	0.59	0.085	0.17	0.58	0.05	0.5
9.65	6.89	0.03	1.979	1.147	0.61	1.0	3.01	59	6.0	6.84	41.1	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
9.7	4.6	0.02	1.989	1.152	0.77	1.0	3.30	81	4.0	10.75	42.9	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
9.75	6.89	0.01	1.999	1.157	0.20	1.0	2.89	52	6.0	5.61	33.4	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
9.8	6.89	0.02	2.010	1.162	0.41	1.0	2.97	56	5.9	6.35	37.6	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
9.85	6.89	0.01	2.020	1.167	0.21	1.0	2.90	52	5.9	5.66	33.4	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
9.9	6.89	0.02	2.030	1.173	0.41	1.0	2.97	57	5.9	6.41	37.7	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
9.95	6.89	0.01	2.040	1.178	0.21	1.0	2.90	52	5.9	5.72	33.5	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10	6.89	0.01	2.051	1.183	0.21	1.0	2.91	52	5.8	5.75	33.5	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.05	6.64	0.01	2.061	1.188	0.22	1.0	2.94	54	5.6	6.05	33.8	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.1	6.64	0.01	2.071	1.193	0.22	1.0	2.94	55	5.6	6.08	33.8	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.15	6.89	0.01	2.081	1.198	0.21	1.0	2.92	53	5.7	5.84	33.6	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.2	6.64	0.01	2.092	1.203	0.22	1.0	2.95	55	5.5	6.14	33.9	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.25	6.64	0.01	2.102	1.209	0.22	1.0	2.95	55	5.5	6.17	33.9	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.3	6.64	0.01	2.112	1.214	0.22	1.0	2.95	55	5.5	6.21	34.0	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.35	6.64	0.01	2.122	1.219	0.22	1.0	2.96	56	5.4	6.24	34.0	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.4	6.38	0.01	2.133	1.224	0.24	1.0	2.99	58	5.2	6.59	34.4	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.45	6.38	0.01	2.143	1.229	0.24	1.0	2.99	58	5.2	6.63	34.4	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.5	6.13	0.01	2.153	1.234	0.25	1.0	3.03	60	5.0	7.01	34.8	0.89	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.55	6.13	0.01	2.163	1.239	0.25	1.0	3.03	60	4.9	7.05	34.9	0.89	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.6	6.13	0.01	2.174	1.245	0.25	1.0	3.03	61	4.9	7.08	34.9	0.89	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.65	6.89	0.01	2.184	1.250	0.21	1.0	2.95	55	5.5	6.13	33.8	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.7	9.45	0.01	2.194	1.255	0.14	1.0	2.73	42	7.5	4.21	31.7	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.75	6.64	0.01	2.204	1.260	0.23	1.0	2.98	57	5.3	6.49	34.2	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.8	6.89	0.01	2.215	1.265	0.21	1.0	2.95	55	5.4	6.22	33.9	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.85	6.64	0.01	2.225	1.270	0.23	1.0	2.98	57	5.2	6.55	34.2	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.9	11.49	0.02	2.235	1.275	0.22	1.0	2.67	39	9.0	3.75	33.8	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
10.95	9.19	0.03	2.245	1.280	0.43	1.0	2.87	50	7.2	5.35	38.4	0.88	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
11	7.15	0.01	2.256	1.286	0.20	1.0	2.94	54	5.6	6.05	33.7	0.88	na	0.201	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
11.05	7.66	0.02	2.266	1.291	0.37	1.0	2.96	56	5.9	6.24	37.1	0.88	na	0.201	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
11.1	9.45	0.03	2.276	1.296	0.42	1.0	2.85	49	7.3	5.24	38.2	0.88	na	0.201	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.41	0.00	0.5
11.15	18.13	0.07	2.286	1.301	0.44	0.5	2.49	30	15.4	2.73	42.1	0.88	0.085	0.201	0.99	1.07	10.8	0.500	0.943	0.015	0.05	0.0	0.43	0.013	0.03	0.41	0.02	0.5
11.2	16.6	0.06	2.297	1.306	0.42	0.5	2.53	32	14.1	2.91	41.0	0.88	0.084	0.201	0.99	1.06	10.7	0.500	0.943	0.017	0.05	0.0	0.40	0.015	0.03	0.38	0.02	0.5
11.25	41.88	0.1	2.307	1.311	0.25	0.5	2.04	14	35.5	1.00	35.5	0.88	0.080	0.200	0.99	1.00	7.5	0.500	0.943	0.035	0.05	0.1	0.36	0.035	0.07	0.35	0.02	0.4
11.3	46.73	0.41	2.317	1.316	0.92	0.5	2.24	20	39.6	1.75	69.1	0.88	0.111	0.200	0.98	1.38	15.8	0.500	0.943	0.003	0.05	0.0	0.29	0.002	0.00	0.28	0.00	0.4
11.35	29.87	0.3	2.327	1.322	1.09	0.5	2.45	29	25.2	2.51	63.5	0.87	0.104	0.200	0.98	1.30	16.0	0.500	0.943	0.004	0.05	0.0	0.29	0.002	0.00	0.28	0.00	0.4
11.4	13.02	0.16	2.338	1.327	1.50	1.0	2.92	53	9.8	5.86	57.5	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.28	0.00	0.4
11.45	16.09	0.12	2.348	1.332	0.87	1.0	2.72	41	12.1	4.10	49.5	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.28	0.00	0.4
11.5	20.17	0.24	2.358	1.337	1.35	1.0	2.71	41	15.1	4.02	60.6	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.28	0.000	0.00	0.28	0.00	0.4
11.55	120.01	1.02	2.368	1.342	0.87	0.5	1.88	10	100.6	1.16	116.8	0.87	0.228	0.199	0.97	2.84	23.2	0.210	0.638	0.000	0.05	0.0	0.28	0.000	0.00	0.28	0.00	0.4
11.6	129.46	1.17	2.379	1.347	0.92	0.5	1.87	10	108.3	1.15	124.9	0.87	0.261	0.199	0.97	3.24	24.7	0.173	0.551	0.000	0.05	0.0	0.28	0.000	0.00	0.28	0.00	0.4
11.65	72.26	0.56	2.389	1.352	0.80	0.5	2.04	14	60.4	1.35	81.4	0.87	0.130	0.199	0.98	1.63	17.2	0.478	0.911	0.002	0.05	0.0	0.28	0.001	0.00	0.28	0.00	0.4
11.7	41.11	0.43	2.399	1.357	1.11	0.5	2.33	24	34.3	2.05	70.3	0.86	0.112	0.199	0.98	1.41	16.8	0.500	0.942	0.003	0.05	0.0	0.28	0.001	0.00	0.27	0.00	0.4
11.75	9.7	0.28	2.409	1.363	3.84	1.0	3.28	80	7.1	10.41	74.1	0.86	na	0.198	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
11.8	10.21	0.01	2.420	1.368	0.13	1.0	2.73	42	7.5	4.23	31.6	0.86	na	0.198	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
11.85	9.7	0.01	2.430	1.373	0.14	1.0	2.77	44	7.1	4.51	31.9	0.86	na	0.198	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
11.9	9.19	0.03	2.440	1.378	0.44	1.0	2.91	53	6.7	5.79	38.6	0.86	na	0.198	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
11.95	8.94	0.02	2.450	1.383	0.31	1.0	2.89	51	6.5	5.55	35.9	0.86	na	0.198	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
12	8.68	0.01	2.461	1.388	0.16	1.0	2.85	49	6.3	5.21	32.6	0.86	na	0.197	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
12.05	8.43	0.01	2.471	1.393	0.17	1.0	2.87	50	6.0	5.42	32.8	0.86	na	0.197	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
12.1	8.43	0.01	2.481	1.399	0.17	1.0	2.88	51	6.0	5.44	32.8	0.85	na	0.197	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
12.15	9.96	0.04	2.491	1.404	0.54	1.0	2.90	52	7.1	5.71	40.5	0.85	na	0.197	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
12.2	21.45	0.3	2.502	1.409	1.58	1.0	2.74	43	15.2	4.26	64.9	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
12.25	120.77	0.47	2.512	1.414	0.40	0.5	1.70	6	98.6	1.00	98.6	0.85	0.169	0.196	0.97	2.14	18.4	0.320	0.804	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
12.3	235.68	0.85	2.522	1.419	0.36	0.5	1.42	2	192.2	1.00	192.2	0.85	0.461	0.196	0.93	5.59	32.8	0.028	-0.336	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
12.35	285.72	1.17	2.532	1.424	0.41	0.5	1.39	1	232.5	1.00	232.5	0.85	0.461	0.196	0.91	5.48	39.2	0.006	-0.943	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
12.4	268.87	1.26	2.543	1.429	0.47	0.5	1.45	2	218.4	1.00	218.4	0.84	0.461	0.195	0.91	5.48	37.5	0.011	-0.727	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
12.45	239.25	1.5	2.553	1.434	0.63	0.5	1.57	4	194.0	1.00	194.0	0.84	0.461	0.195	0.93	5.58	34.6	0.027	-0.363	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
12.5	211.16	1.76	2.563	1.440	0.84	0.5	1.69	6	170.9	1.03	175.5	0.84	0.461	0.195	0.94	5.66	32.6	0.047	-0.097	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
12.55	187.42	1.42	2.573	1.445	0.77	0.5	1.70	6	151.4	1.04	156.8	0.84	0.438	0.195	0.95	5.45	29.3	0.078	0.159	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4

12.6	156.01	0.64	2.584	1.450	0.42	0.5	1.61	5	125.8	1.00	125.8	0.84	0.265	0.194	0.96	3.34	22.8	0.169	0.540	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
12.65	127.16	0.55	2.594	1.455	0.44	0.5	1.70	6	102.4	1.00	102.4	0.84	0.180	0.194	0.97	2.28	19.1	0.294	0.773	0.000	0.05	0.0	0.27	0.000	0.00	0.27	0.00	0.4
12.7	79.41	0.61	2.604	1.460	0.79	0.5	2.02	13	63.8	1.32	84.1	0.84	0.135	0.194	0.97	1.73	17.6	0.450	0.899	0.001	0.05	0.0	0.27	0.001	0.00	0.27	0.00	0.4
12.75	41.88	0.32	2.614	1.465	0.81	0.5	2.27	22	33.6	1.85	62.3	0.83	0.102	0.194	0.97	1.32	14.5	0.500	0.943	0.004	0.05	0.0	0.27	0.002	0.00	0.27	0.00	0.4
12.8	112.09	0.76	2.625	1.470	0.69	0.5	1.86	9	89.8	1.15	103.0	0.83	0.181	0.193	0.96	2.31	20.3	0.290	0.768	0.000	0.05	0.0	0.26	0.000	0.00	0.27	0.00	0.4
12.85	78.39	1.06	2.635	1.476	1.40	0.5	2.17	18	62.7	1.59	99.6	0.83	0.172	0.193	0.96	2.19	22.2	0.314	0.796	0.000	0.05	0.0	0.26	0.000	0.00	0.27	0.00	0.4
12.9	51.32	0.88	2.645	1.481	1.81	0.5	2.39	26	41.0	2.26	92.7	0.83	0.154	0.193	0.97	1.97	22.7	0.368	0.847	0.000	0.05	0.0	0.26	0.000	0.00	0.27	0.00	0.4
12.95	112.86	1.31	2.655	1.486	1.19	0.5	2.00	13	89.9	1.29	116.4	0.83	0.227	0.192	0.96	2.88	24.2	0.212	0.641	0.000	0.05	0.0	0.26	0.000	0.00	0.27	0.00	0.4
13	50.81	0.92	2.666	1.491	1.91	0.5	2.41	27	40.4	2.34	94.8	0.83	0.159	0.192	0.97	2.04	23.4	0.351	0.833	0.000	0.05	0.0	0.26	0.000	0.00	0.27	0.00	0.4
13.05	27.83	0.24	2.676	1.496	0.95	0.5	2.48	30	22.1	2.65	58.6	0.83	0.099	0.192	0.97	1.28	14.9	0.500	0.943	0.004	0.05	0.0	0.26	0.003	0.01	0.27	0.01	0.4
13.1	40.09	0.08	2.686	1.501	0.21	0.5	2.07	15	31.8	1.00	31.8	0.82	0.076	0.192	0.98	1.00	6.8	0.500	0.943	0.036	0.05	0.1	0.26	0.040	0.08	0.26	0.12	0.4
13.15	18.38	0.03	2.696	1.506	0.19	0.5	2.43	28	14.5	2.42	35.2	0.82	0.079	0.191	0.98	1.04	8.8	0.500	0.943	0.021	0.05	0.0	0.18	0.021	0.04	0.18	0.02	0.3
13.2	14.81	0.09	2.707	1.512	0.74	1.0	2.79	45	9.8	4.67	45.7	0.82	na	0.191	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.14	0.000	0.00	0.14	0.00	0.3
13.25	20.68	0.24	2.717	1.517	1.34	1.0	2.75	43	13.6	4.34	59.2	0.82	na	0.191	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.14	0.000	0.00	0.14	0.00	0.3
13.3	38.05	0.28	2.727	1.522	0.79	0.5	2.31	23	30.0	1.98	59.4	0.82	0.100	0.190	0.97	1.30	14.1	0.500	0.943	0.004	0.05	0.0	0.14	0.003	0.01	0.14	0.01	0.3
13.35	17.11	0.23	2.737	1.527	1.60	1.0	2.87	50	11.2	5.42	60.8	0.82	na	0.190	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
13.4	14.3	0.34	2.748	1.532	2.94	1.0	3.09	65	9.3	7.82	73.0	0.81	na	0.190	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
13.45	21.96	0.65	2.758	1.537	3.39	1.0	2.95	55	14.3	6.16	88.1	0.81	na	0.189	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
13.5	88.6	1.45	2.768	1.542	1.69	0.5	2.19	19	69.3	1.63	113.1	0.81	0.214	0.189	0.96	2.77	25.4	0.229	0.675	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
13.55	98.82	1.67	2.778	1.547	1.74	0.5	2.16	18	77.2	1.57	121.1	0.81	0.245	0.189	0.95	3.16	26.9	0.190	0.592	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
13.6	88.6	1.86	2.789	1.553	2.17	0.5	2.26	21	69.1	1.83	126.2	0.81	0.267	0.189	0.95	3.43	29.2	0.168	0.536	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
13.65	71.24	1.86	2.799	1.558	2.72	0.5	2.40	27	55.4	2.31	128.2	0.81	0.276	0.188	0.95	3.55	31.6	0.160	0.513	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
13.7	56.43	1.74	2.809	1.563	3.25	0.5	2.53	32	43.8	2.93	128.4	0.80	0.277	0.188	0.95	3.57	33.6	0.159	0.511	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
13.75	128.95	1.77	2.819	1.568	1.40	0.5	2.01	13	100.0	1.31	131.1	0.80	0.290	0.188	0.95	3.73	27.5	0.149	0.480	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
13.8	67.41	0.77	2.830	1.573	1.19	0.5	2.19	19	52.2	1.64	85.8	0.80	0.139	0.187	0.96	1.82	19.3	0.432	0.890	0.001	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
13.85	35.49	0.3	2.840	1.578	0.92	0.5	2.38	26	27.4	2.23	61.2	0.80	0.101	0.187	0.97	1.34	14.9	0.500	0.943	0.003	0.05	0.0	0.13	0.002	0.00	0.13	0.00	0.3
13.9	19.92	0.16	2.850	1.583	0.94	1.0	2.71	41	12.6	4.07	51.2	0.80	na	0.187	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
13.95	15.06	0.09	2.860	1.589	0.74	1.0	2.80	46	9.5	4.80	45.5	0.80	na	0.186	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14	12.26	0.03	2.871	1.594	0.32	1.0	2.80	46	7.7	4.72	36.3	0.79	na	0.186	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.05	12	0.01	2.881	1.599	0.11	1.0	2.73	42	7.5	4.17	31.3	0.79	na	0.186	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.1	11.23	0.02	2.891	1.604	0.24	1.0	2.82	47	7.0	4.92	34.5	0.79	na	0.185	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.15	9.7	0.02	2.901	1.609	0.29	1.0	2.93	54	6.0	5.94	35.8	0.79	na	0.185	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.2	9.45	0.02	2.912	1.614	0.31	1.0	2.95	55	5.9	6.16	36.1	0.79	na	0.185	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.25	9.7	0.02	2.922	1.619	0.30	1.0	2.93	54	6.0	5.98	35.8	0.79	na	0.184	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.3	10.21	0.02	2.932	1.624	0.27	1.0	2.89	52	6.3	5.62	35.3	0.78	na	0.184	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.35	10.47	0.02	2.943	1.630	0.27	1.0	2.88	51	6.4	5.47	35.1	0.78	na	0.184	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.4	12	0.03	2.953	1.635	0.33	1.0	2.83	47	7.3	4.98	36.6	0.78	na	0.183	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.45	12.51	0.06	2.963	1.640	0.63	1.0	2.89	51	7.6	5.58	42.6	0.78	na	0.183	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.5	11.75	0.04	2.973	1.645	0.46	1.0	2.88	51	7.1	5.48	39.2	0.78	na	0.183	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.55	10.21	0.03	2.984	1.650	0.42	1.0	2.95	55	6.2	6.18	38.2	0.78	na	0.182	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.6	9.7	0.04	2.994	1.655	0.60	1.0	3.03	61	5.9	7.06	41.4	0.77	na	0.182	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.65	9.7	0.06	3.004	1.660	0.90	1.0	3.10	65	5.8	7.83	45.8	0.77	na	0.182	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.7	11.75	0.19	3.014	1.666	2.17	1.0	3.16	70	7.1	8.68	61.2	0.77	na	0.181	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.75	13.02	0.36	3.025	1.671	3.60	1.0	3.23	75	7.8	9.59	74.7	0.77	na	0.181	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.8	19.66	0.34	3.035	1.676	2.05	1.0	2.91	53	11.7	5.76	67.6	0.77	na	0.181	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.85	31.15	0.55	3.045	1.681	1.96	1.0	2.71	41	18.5	4.03	74.8	0.77	na	0.180	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.9	29.36	0.32	3.055	1.686	1.22	1.0	2.62	37	17.4	3.46	60.3	0.76	na	0.180	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
14.95	32.17	0.46	3.066	1.691	1.58	1.0	2.65	38	19.0	3.61	68.6	0.76	na	0.180	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
15	29.87	0.33	3.076	1.696	1.23	1.0	2.62	36	17.6	3.45	60.7	0.76	na	0.179	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.13	0.000	0.00	0.13	0.00	0.3
15.05	41.88	0.43	3.086	1.701	1.11	0.5	2.37	25	31.2	2.20	68.5	0.76	0.110	0.179	0.96	1.51	16.7	0.500	0.943	0.002	0.05	0.0	0.13	0.001	0.00	0.13	0.00	0.3
15.1	37.53	0.15	3.096	1.707	0.44	0.5	2.23	20	27.9	1.00	27.9	0.76	0.073	0.179	0.97	1.02	6.4	0.500	0.943	0.026	0.05	0.1	0.12	0.032	0.06	0.13	0.12	0.3
15.15	31.15	0.21	3.107	1.712	0.75	0.5	2.41	27	23.1	2.36	54.5	0.76	0.095	0.178	0.96	1.31	13.5	0.500	0.943	0.004	0.05	0.0	0.07	0.003	0.01	0.07	0.00	0.1
15.2	21.7	0.07	3.117	1.717	0.38	0.5	2.46	29	16.1	2.57	41.4	0.75	0.084	0.178	0.97	1.17	10.5	0.500	0.943	0.007	0.05	0.0	0.06	0.006	0.01	0.06	0.01	0.1
15.25	19.66	0.03	3.127	1.722	0.18	0.5	2.43	28	14.6	2.42	35.3	0.75	0.079	0.178	0.97	1.11	8.8	0.500	0.943	0.011	0.05	0.0	0.05	0.011	0.02	0.05	0.02	0.1
15.3	10.98	0.03	3.137	1.727	0.38	1.0	2.93	54	6.4	5.92	37.7	0.75	na	0.177	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
15.35	8.94	0.04	3.148	1.732	0.69	1.0	3.13	68	5.2	8.28	42.7	0.75	na	0.177	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
15.4	10.47	0.05	3.158	1.737	0.68	1.0	3.04	61	6.0	7.12	42.9	0.75	na	0.177	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
15.45	13.28	0.02	3.168	1.743	0.20	1.0	2.76	43	7.6	4.39	33.5	0.75	na	0.176	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
15.5	10.72	0.01	3.178	1.748	0.13	1.0	2.86	49	6.1	5.25	32.2	0.74	na	0.176	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
15.55	8.43	0.01	3.189	1.753	0.19	1.0	3.04	61	4.8	7.12	34.3	0.74	na	0.176	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
15.6	7.92	0.01	3.199	1.758	0.21	1.0	3.09	65	4.5	7.77	35.0	0.74	na	0.175	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
15.65	7.4	0.02	3.209	1.763	0.48	1.0	3.22	75	4.2	9.52	40.0	0.74	na	0.175	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
15.7	7.92	0.06	3.219	1.768	1.28	1.0	3.32	83	4.5	11.01	49.3	0.74	na	0.175	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
15.75	8.68	0.07	3.230	1.773	1.28	1.0	3.26	78	4.9	10.15	49.7	0.74	na	0.174	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
15.8	8.68	0.08	3.240	1.779	1.47	1.0	3.29	80	4.9	10.55	51.5	0.73	na	0.174	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1

15.85	8.17	0.07	3.250	1.784	1.42	1.0	3.33	83	4.6	11.08	50.8	0.73	na	0.174	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
15.9	8.43	0.11	3.260	1.789	2.13	1.0	3.38	88	4.7	12.02	56.6	0.73	na	0.173	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
15.95	8.94	0.19	3.271	1.794	3.35	1.0	3.45	94	5.0	13.06	65.1	0.73	na	0.173	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16	10.21	0.29	3.281	1.799	4.19	1.0	3.42	92	5.7	12.67	71.9	0.73	na	0.172	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.05	11.23	0.36	3.291	1.804	4.53	1.0	3.39	89	6.2	12.17	75.7	0.73	na	0.172	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.1	10.98	0.49	3.301	1.809	6.38	1.0	3.49	98	6.1	13.86	84.1	0.72	na	0.172	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.15	12	0.43	3.312	1.814	4.95	1.0	3.38	88	6.6	12.01	79.5	0.72	na	0.171	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.2	12.26	0.32	3.322	1.820	3.58	1.0	3.30	81	6.7	10.63	71.6	0.72	na	0.171	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.25	10.98	0.44	3.332	1.825	5.75	1.0	3.47	96	6.0	13.47	81.1	0.72	na	0.171	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.3	12	0.56	3.342	1.830	6.47	1.0	3.45	95	6.6	13.23	86.8	0.72	na	0.170	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.35	16.09	0.41	3.353	1.835	3.22	1.0	3.15	69	8.8	8.48	74.4	0.72	na	0.170	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.4	16.09	0.26	3.363	1.840	2.04	1.0	3.04	61	8.7	7.21	63.0	0.71	na	0.170	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.45	20.94	0.27	3.373	1.845	1.54	1.0	2.86	50	11.3	5.30	60.2	0.71	na	0.169	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.5	14.04	0.26	3.383	1.850	2.44	1.0	3.15	69	7.6	8.55	64.8	0.71	na	0.169	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.55	21.96	0.38	3.394	1.856	2.05	1.0	2.91	52	11.8	5.73	67.8	0.71	na	0.169	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.6	25.02	0.49	3.404	1.861	2.27	1.0	2.87	50	13.4	5.43	73.1	0.71	na	0.168	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.65	27.58	0.35	3.414	1.866	1.45	1.0	2.73	42	14.8	4.22	62.3	0.71	na	0.168	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.7	27.32	0.47	3.424	1.871	1.97	1.0	2.81	46	14.6	4.82	70.4	0.71	na	0.168	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.75	20.17	0.35	3.435	1.876	2.09	1.0	2.95	55	10.8	6.21	66.8	0.70	na	0.167	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.8	28.6	0.35	3.445	1.881	1.39	1.0	2.71	41	15.2	4.06	61.7	0.70	na	0.167	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.85	18.89	0.49	3.455	1.886	3.17	1.0	3.08	64	10.0	7.68	76.9	0.70	na	0.167	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.9	26.3	0.41	3.465	1.891	1.80	1.0	2.81	46	13.9	4.82	67.0	0.70	na	0.167	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
16.95	57.45	0.64	3.476	1.897	1.19	0.5	2.29	22	40.5	1.91	77.2	0.70	0.123	0.166	0.95	1.79	18.1	0.500	0.927	0.001	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
17	57.96	0.76	3.486	1.902	1.40	0.5	2.33	24	40.8	2.03	82.8	0.70	0.133	0.166	0.95	1.93	19.7	0.463	0.905	0.000	0.05	0.0	0.03	0.000	0.00	0.03	0.00	0.1
17.05	60.26	0.74	3.496	1.907	1.30	0.5	2.30	22	42.4	1.93	81.6	0.69	0.131	0.166	0.95	1.91	19.2	0.476	0.910	0.000	0.05	0.0	0.03	0.000	0.00	0.02	0.00	0.1
17.1	64.35	0.72	3.506	1.912	1.18	0.5	2.25	21	45.2	1.78	80.6	0.69	0.129	0.165	0.95	1.88	18.5	0.488	0.915	0.000	0.05	0.0	0.03	0.000	0.00	0.02	0.00	0.1
17.15	68.69	0.87	3.517	1.917	1.33	0.5	2.26	21	48.2	1.80	86.8	0.69	0.141	0.165	0.94	2.06	20.0	0.422	0.884	0.000	0.05	0.0	0.03	0.000	0.00	0.02	0.00	0.1
17.2	59.49	0.75	3.527	1.922	1.34	0.5	2.31	23	41.7	1.97	82.1	0.69	0.131	0.165	0.95	1.93	19.4	0.471	0.908	0.000	0.05	0.0	0.03	0.000	0.00	0.02	0.00	0.1
17.25	80.69	0.52	3.537	1.927	0.67	0.5	2.03	14	56.5	1.33	75.2	0.69	0.120	0.164	0.95	1.76	15.8	0.500	0.933	0.001	0.05	0.0	0.03	0.000	0.00	0.02	0.00	0.1
17.3	87.33	0.49	3.547	1.933	0.58	0.5	1.97	12	61.0	1.25	76.4	0.69	0.122	0.164	0.95	1.79	15.7	0.500	0.930	0.001	0.05	0.0	0.02	0.000	0.00	0.02	0.00	0.1
17.35	60.77	0.86	3.558	1.938	1.50	0.5	2.33	24	42.4	2.05	86.8	0.69	0.141	0.164	0.94	2.07	20.7	0.422	0.884	0.000	0.05	0.0	0.02	0.000	0.00	0.02	0.00	0.1
17.4	39.32	0.82	3.568	1.943	2.29	1.0	2.71	41	20.2	4.07	82.4	0.68	na	0.163	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.02	0.00	0.1
17.45	24	0.54	3.578	1.948	2.64	1.0	2.95	55	12.3	6.17	76.0	0.68	na	0.163	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.02	0.00	0.1
17.5	45.19	0.54	3.588	1.953	1.30	0.5	2.41	27	31.4	2.34	73.6	0.68	0.117	0.163	0.95	1.74	18.2	0.500	0.937	0.001	0.05	0.0	0.02	0.000	0.00	0.02	0.00	0.1
17.55	48.51	0.75	3.599	1.958	1.67	0.5	2.45	28	33.7	2.50	84.1	0.68	0.135	0.162	0.94	2.01	21.1	0.449	0.898	0.000	0.05	0.0	0.02	0.000	0.00	0.02	0.00	0.1
17.6	33.7	0.42	3.609	1.963	1.40	1.0	2.66	38	17.2	3.70	63.6	0.68	na	0.162	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.02	0.00	0.1
17.65	54.39	0.38	3.619	1.968	0.75	0.5	2.21	19	37.7	1.69	63.6	0.68	0.104	0.162	0.95	1.56	14.4	0.500	0.943	0.001	0.05	0.0	0.02	0.001	0.00	0.02	0.00	0.1
17.7	51.58	0.43	3.629	1.974	0.90	0.5	2.28	22	35.7	1.86	66.3	0.68	0.107	0.161	0.95	1.61	15.4	0.500	0.943	0.001	0.05	0.0	0.02	0.001	0.00	0.02	0.00	0.1
17.75	43.92	0.44	3.640	1.979	1.09	0.5	2.38	26	30.3	2.24	67.9	0.67	0.109	0.161	0.95	1.64	16.6	0.500	0.943	0.001	0.05	0.0	0.02	0.001	0.00	0.02	0.00	0.1
17.8	30.39	0.39	3.650	1.984	1.46	1.0	2.72	41	15.3	4.12	63.0	0.67	na	0.161	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
17.85	17.62	0.24	3.660	1.989	1.72	1.0	3.00	59	8.9	6.72	59.5	0.67	na	0.161	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
17.9	14.3	0.13	3.670	1.994	1.22	1.0	3.04	61	7.2	7.16	51.3	0.67	na	0.160	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
17.95	13.79	0.06	3.681	1.999	0.59	1.0	2.94	54	6.9	6.07	41.8	0.67	na	0.160	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18	12.51	0.04	3.691	2.004	0.45	1.0	2.96	56	6.2	6.28	39.2	0.67	na	0.160	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.05	11.23	0.03	3.701	2.010	0.40	1.0	3.01	59	5.6	6.83	38.2	0.67	na	0.159	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.1	11.49	0.04	3.711	2.015	0.51	1.0	3.03	61	5.7	7.06	40.2	0.66	na	0.159	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.15	12	0.04	3.722	2.020	0.48	1.0	3.00	58	5.9	6.68	39.7	0.66	na	0.159	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.2	11.49	0.05	3.732	2.025	0.64	1.0	3.06	63	5.7	7.46	42.4	0.66	na	0.159	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.25	11.23	0.07	3.742	2.030	0.93	1.0	3.14	68	5.5	8.38	46.4	0.66	na	0.158	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.3	11.75	0.13	3.752	2.035	1.63	1.0	3.21	74	5.8	9.39	54.2	0.66	na	0.158	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.35	11.75	0.2	3.763	2.040	2.50	1.0	3.30	81	5.8	10.70	61.6	0.66	na	0.158	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.4	13.53	0.19	3.773	2.046	1.95	1.0	3.17	71	6.6	8.85	58.6	0.66	na	0.157	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.45	13.79	0.2	3.783	2.051	2.00	1.0	3.17	71	6.7	8.81	59.2	0.65	na	0.157	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.5	12.51	0.17	3.793	2.056	1.95	1.0	3.22	74	6.1	9.48	57.7	0.65	na	0.157	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.55	12.51	0.22	3.804	2.061	2.53	1.0	3.27	79	6.1	10.29	62.5	0.65	na	0.157	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.6	15.06	0.19	3.814	2.066	1.69	1.0	3.09	65	7.3	7.82	57.0	0.65	na	0.156	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.65	14.55	0.24	3.824	2.071	2.24	1.0	3.17	71	7.0	8.83	62.0	0.65	na	0.156	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.7	14.55	0.19	3.834	2.076	1.77	1.0	3.12	67	7.0	8.20	57.5	0.65	na	0.156	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.75	13.53	0.15	3.845	2.081	1.55	1.0	3.14	68	6.5	8.37	54.4	0.65	na	0.155	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.8	12.77	0.13	3.855	2.087	1.46	1.0	3.16	70	6.1	8.65	53.0	0.65	na	0.155	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.85	12.51	0.13	3.865	2.092	1.50	1.0	3.18	71	6.0	8.91	53.3	0.64	na	0.155	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.9	12.51	0.15	3.875	2.097	1.74	1.0	3.21	74	6.0	9.31	55.6	0.64	na	0.155	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
18.95	12.77	0.15	3.886	2.102	1.69	1.0	3.19	72	6.1	9.09	55.2	0.64	na	0.154	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19	12.77	0.14	3.896	2.107	1.58	1.0	3.18	71	6.1	8.93	54.1	0.64	na	0.154	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.05	12.26	0.12	3.906	2.112	1.44	1.0	3.19	72	5.8	9.02	52.4	0.64	na	0.154	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1

19.1	11.23	0.1	3.917	2.117	1.37	1.0	3.23	75	5.3	9.64	51.1	0.64	na	0.154	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.15	10.72	0.09	3.927	2.123	1.32	1.0	3.25	77	5.1	10.00	50.5	0.64	na	0.153	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.2	12	0.08	3.937	2.128	0.99	1.0	3.14	68	5.6	8.37	47.2	0.64	na	0.153	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.25	10.21	0.1	3.947	2.133	1.60	1.0	3.32	83	4.8	11.03	52.8	0.63	na	0.153	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.3	12.26	0.12	3.958	2.138	1.45	1.0	3.19	73	5.7	9.14	52.4	0.63	na	0.153	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.35	12.77	0.14	3.968	2.143	1.59	1.0	3.19	72	6.0	9.09	54.1	0.63	na	0.152	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.4	12.51	0.15	3.978	2.148	1.76	1.0	3.22	75	5.8	9.54	55.6	0.63	na	0.152	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.45	12.51	0.14	3.988	2.153	1.64	1.0	3.21	74	5.8	9.38	54.5	0.63	na	0.152	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.5	11.75	0.12	3.999	2.158	1.55	1.0	3.24	76	5.4	9.75	53.1	0.63	na	0.152	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.55	11.23	0.1	4.009	2.164	1.38	1.0	3.25	77	5.2	9.87	51.2	0.63	na	0.151	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.6	10.98	0.08	4.019	2.169	1.15	1.0	3.23	75	5.1	9.62	48.7	0.63	na	0.151	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.65	10.47	0.08	4.029	2.174	1.24	1.0	3.27	79	4.8	10.28	49.5	0.63	na	0.151	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.7	10.47	0.1	4.040	2.179	1.56	1.0	3.32	82	4.8	10.92	52.5	0.62	na	0.151	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.75	10.98	0.11	4.050	2.184	1.59	1.0	3.29	80	5.0	10.54	53.0	0.62	na	0.150	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.8	11.23	0.11	4.060	2.189	1.53	1.0	3.27	79	5.1	10.26	52.6	0.62	na	0.150	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.85	11.23	0.12	4.070	2.194	1.68	1.0	3.29	80	5.1	10.53	53.9	0.62	na	0.150	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.9	10.98	0.11	4.081	2.200	1.59	1.0	3.30	81	5.0	10.62	53.0	0.62	na	0.150	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
19.95	10.72	0.09	4.091	2.205	1.36	1.0	3.28	80	4.9	10.43	50.7	0.62	na	0.149	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20	10.47	0.09	4.101	2.210	1.41	1.0	3.31	82	4.7	10.79	51.1	0.62	na	0.149	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.05	9.7	0.08	4.111	2.215	1.43	1.0	3.36	86	4.4	11.67	51.1	0.62	na	0.149	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.1	9.7	0.1	4.122	2.220	1.79	1.0	3.41	90	4.4	12.38	54.1	0.62	na	0.149	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.15	9.96	0.11	4.132	2.225	1.89	1.0	3.40	90	4.5	12.27	54.9	0.61	na	0.148	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.2	10.21	0.12	4.142	2.230	1.98	1.0	3.39	89	4.6	12.17	55.7	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.25	11.23	0.11	4.152	2.235	1.55	1.0	3.29	80	5.0	10.50	52.7	0.61	na	0.148	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.3	11.49	0.1	4.163	2.241	1.36	1.0	3.25	77	5.1	9.95	51.0	0.61	na	0.148	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.35	11.49	0.1	4.173	2.246	1.37	1.0	3.25	77	5.1	9.97	51.0	0.61	na	0.148	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.4	11.49	0.1	4.183	2.251	1.37	1.0	3.25	77	5.1	10.00	51.0	0.61	na	0.147	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.45	11.49	0.09	4.193	2.256	1.23	1.0	3.24	76	5.1	9.75	49.7	0.61	na	0.147	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.5	11.49	0.08	4.204	2.261	1.10	1.0	3.22	74	5.1	9.48	48.2	0.61	na	0.147	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.55	11.75	0.08	4.214	2.266	1.06	1.0	3.20	73	5.2	9.23	47.8	0.61	na	0.147	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.6	12.26	0.06	4.224	2.271	0.75	1.0	3.12	67	5.4	8.14	43.9	0.61	na	0.146	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.65	12.51	0.06	4.234	2.277	0.73	1.0	3.10	66	5.5	7.94	43.6	0.60	na	0.146	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.7	12.77	0.07	4.245	2.282	0.82	1.0	3.11	66	5.6	8.04	45.0	0.60	na	0.146	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.75	12.26	0.07	4.255	2.287	0.87	1.0	3.15	69	5.4	8.51	45.6	0.60	na	0.146	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.8	12.51	0.07	4.265	2.292	0.85	1.0	3.13	68	5.5	8.31	45.3	0.60	na	0.146	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.85	12.51	0.07	4.275	2.297	0.85	1.0	3.13	68	5.4	8.33	45.4	0.60	na	0.145	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.9	12.51	0.07	4.286	2.302	0.85	1.0	3.14	68	5.4	8.35	45.4	0.60	na	0.145	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
20.95	12	0.06	4.296	2.307	0.78	1.0	3.15	69	5.2	8.53	44.3	0.60	na	0.145	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21	11.75	0.08	4.306	2.312	1.07	1.0	3.22	74	5.1	9.44	48.0	0.60	na	0.145	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.05	12	0.17	4.316	2.318	2.21	1.0	3.34	84	5.2	11.29	58.4	0.60	na	0.145	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.1	16.09	0.24	4.327	2.323	2.04	1.0	3.16	70	6.9	8.68	60.1	0.60	na	0.144	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.15	22.21	0.29	4.337	2.328	1.62	1.0	2.95	55	9.5	6.22	59.4	0.60	na	0.144	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.2	23.24	0.14	4.347	2.333	0.74	1.0	2.78	45	10.0	4.63	46.1	0.59	na	0.144	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.25	12.77	0.1	4.357	2.338	1.19	1.0	3.19	72	5.5	9.06	49.5	0.59	na	0.144	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.3	11.23	0.03	4.368	2.343	0.44	1.0	3.12	67	4.8	8.20	39.3	0.59	na	0.144	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.35	12	0.07	4.378	2.348	0.92	1.0	3.19	72	5.1	9.03	46.1	0.59	na	0.143	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.4	12.77	0.11	4.388	2.354	1.31	1.0	3.21	74	5.4	9.36	50.8	0.59	na	0.143	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.45	12.51	0.11	4.398	2.359	1.36	1.0	3.23	75	5.3	9.64	51.1	0.59	na	0.143	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.5	12	0.08	4.409	2.364	1.05	1.0	3.21	74	5.1	9.40	47.7	0.59	na	0.143	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.55	11.23	0.1	4.419	2.369	1.47	1.0	3.32	82	4.7	10.92	51.8	0.59	na	0.143	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.6	11.49	0.17	4.429	2.374	2.41	1.0	3.40	90	4.8	12.25	59.3	0.59	na	0.142	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.65	13.02	0.2	4.439	2.379	2.33	1.0	3.32	83	5.5	10.95	59.9	0.59	na	0.142	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.7	15.58	0.19	4.450	2.384	1.71	1.0	3.15	70	6.5	8.60	56.2	0.59	na	0.142	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.75	16.34	0.6	4.460	2.390	5.05	1.0	3.38	87	6.8	11.88	81.2	0.58	na	0.142	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.8	103.67	0.53	4.470	2.395	0.53	0.5	1.93	11	65.1	1.21	78.5	0.58	0.125	0.142	0.93	2.09	15.9	0.500	0.923	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.85	173.63	0.6	4.480	2.400	0.35	0.5	1.64	5	108.9	1.00	108.9	0.58	0.200	0.142	0.91	3.27	19.9	0.253	0.715	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.9	174.91	1.24	4.491	2.405	0.73	0.5	1.80	8	109.5	1.10	120.8	0.58	0.244	0.141	0.90	3.95	23.4	0.191	0.595	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
21.95	163.42	1.67	4.501	2.410	1.05	0.5	1.93	11	102.2	1.21	123.4	0.58	0.255	0.141	0.89	4.12	25.0	0.179	0.567	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22	120.52	2.02	4.511	2.415	1.74	0.5	2.17	18	75.3	1.59	120.1	0.58	0.241	0.141	0.90	3.92	26.8	0.194	0.603	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.05	133.03	2.26	4.521	2.420	1.76	0.5	2.14	17	83.1	1.53	127.2	0.58	0.271	0.141	0.89	4.38	28.0	0.164	0.525	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.1	140.18	2.03	4.532	2.425	1.50	0.5	2.08	15	87.4	1.41	123.3	0.58	0.254	0.141	0.89	4.13	26.5	0.180	0.568	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.15	103.92	1.22	4.542	2.431	1.23	0.5	2.13	17	64.7	1.50	97.0	0.58	0.165	0.140	0.91	2.74	21.2	0.333	0.816	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.2	67.66	1.63	4.552	2.436	2.58	1.0	2.63	37	27.8	3.47	96.3	0.58	na	0.140	0.91	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.25	56.94	2	4.562	2.441	3.82	1.0	2.80	46	23.3	4.73	110.4	0.58	na	0.140	0.90	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.3	160.1	3.21	4.573	2.446	2.06	0.5	2.14	17	99.4	1.51	150.5	0.58	0.397	0.140	0.87	6.27	33.0	0.092	0.242	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1

22.35	191.5	1.84	4.583	2.451	0.98	0.5	1.86	9	118.8	1.14	135.9	0.58	0.314	0.140	0.88	5.05	26.8	0.133	0.423	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.4	191.76	3.09	4.593	2.456	1.65	0.5	2.01	13	118.8	1.31	155.2	0.57	0.428	0.140	0.86	6.72	32.4	0.081	0.180	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.45	191.5	2.91	4.603	2.461	1.56	0.5	1.99	13	118.6	1.28	152.2	0.57	0.408	0.139	0.86	6.44	31.6	0.088	0.220	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.5	121.29	2.64	4.614	2.467	2.26	0.5	2.25	21	75.0	1.80	134.7	0.57	0.307	0.139	0.88	4.96	31.1	0.137	0.438	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.55	148.35	1.92	4.624	2.472	1.34	0.5	2.03	14	91.7	1.33	122.3	0.57	0.250	0.139	0.89	4.10	25.8	0.184	0.579	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.6	138.9	2.14	4.634	2.477	1.59	0.5	2.10	16	85.7	1.45	124.7	0.57	0.260	0.139	0.89	4.26	27.0	0.174	0.553	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.65	93.71	2.01	4.644	2.482	2.26	0.5	2.34	24	57.8	2.07	119.4	0.57	0.238	0.139	0.89	3.92	28.6	0.197	0.610	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.7	127.92	2.46	4.655	2.487	2.00	0.5	2.20	19	78.8	1.65	130.4	0.57	0.286	0.139	0.88	4.66	29.4	0.152	0.489	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.75	111.58	1.51	4.665	2.492	1.41	0.5	2.15	17	68.7	1.53	105.4	0.57	0.189	0.139	0.91	3.15	23.2	0.274	0.747	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.8	86.81	0.87	4.675	2.497	1.06	0.5	2.16	18	53.4	1.57	83.6	0.57	0.134	0.138	0.92	2.28	18.6	0.454	0.901	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.85	54.64	0.67	4.685	2.502	1.34	0.5	2.40	26	33.5	2.29	76.8	0.57	0.122	0.138	0.92	2.08	18.9	0.500	0.928	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.9	41.36	0.57	4.696	2.508	1.55	1.0	2.70	41	16.5	4.00	65.9	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
22.95	23.49	0.28	4.706	2.513	1.49	1.0	2.95	55	9.3	6.14	57.4	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
23	21.96	0.25	4.716	2.518	1.45	1.0	2.97	57	8.7	6.44	56.2	0.57	na	0.138	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
23.05	25.79	0.22	4.726	2.523	1.04	1.0	2.83	48	10.2	5.05	51.7	0.57	na	0.138	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.01	0.000	0.00	0.02	0.00	0.1
23.1	38.05	0.1	4.737	2.528	0.30	0.5	2.27	21	23.2	1.00	23.2	0.56	0.069	0.137	0.95	1.23	5.4	0.500	0.943	0.005	0.05	0.0	0.01	0.008	0.01	0.02	0.12	0.1
23.15	20.94	0.07	4.747	2.533	0.43	1.0	2.80	46	8.3	4.75	39.3	0.56	na	0.137	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.2	16.34	0.12	4.757	2.538	1.04	1.0	3.07	63	6.4	7.53	48.5	0.56	na	0.137	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.25	16.6	0.12	4.767	2.544	1.01	1.0	3.06	63	6.5	7.39	48.3	0.56	na	0.137	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.3	14.81	0.15	4.778	2.549	1.50	1.0	3.20	73	5.8	9.15	53.2	0.56	na	0.137	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.35	14.3	0.1	4.788	2.554	1.05	1.0	3.15	69	5.6	8.59	48.1	0.56	na	0.137	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.4	14.04	0.15	4.798	2.559	1.62	1.0	3.24	77	5.5	9.85	54.1	0.56	na	0.137	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.45	14.3	0.18	4.808	2.564	1.90	1.0	3.27	78	5.6	10.16	56.7	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.5	14.55	0.19	4.819	2.569	1.95	1.0	3.26	78	5.7	10.11	57.3	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.55	14.55	0.18	4.829	2.574	1.85	1.0	3.25	77	5.7	9.97	56.4	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.6	14.3	0.16	4.839	2.579	1.69	1.0	3.25	77	5.5	9.88	54.8	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.65	14.04	0.1	4.849	2.585	1.09	1.0	3.18	71	5.4	8.91	48.4	0.56	na	0.136	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.7	13.79	0.11	4.860	2.590	1.23	1.0	3.21	74	5.3	9.38	50.0	0.56	na	0.136	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.75	14.3	0.14	4.870	2.595	1.48	1.0	3.23	75	5.5	9.57	52.8	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.8	15.83	0.56	4.880	2.600	5.11	1.0	3.44	93	6.1	12.93	78.7	0.56	na	0.135	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.85	35.75	1.18	4.891	2.605	3.82	1.0	3.00	58	13.7	6.70	92.0	0.55	na	0.135	0.91	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.9	65.62	1.75	4.901	2.610	2.88	1.0	2.69	40	25.1	3.92	98.5	0.55	na	0.135	0.91	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.95	80.18	1.26	4.911	2.615	1.67	0.5	2.32	23	48.2	2.00	96.3	0.55	0.163	0.135	0.91	2.79	22.8	0.339	0.822	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24	50.81	1.2	4.921	2.621	2.62	1.0	2.76	44	19.4	4.46	86.6	0.55	na	0.135	0.91	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.05	48.26	0.95	4.932	2.626	2.19	1.0	2.74	43	18.4	4.28	78.7	0.55	na	0.135	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.1	39.58	0.69	4.942	2.631	1.99	1.0	2.80	46	15.0	4.75	71.5	0.55	na	0.135	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.15	42.64	0.43	4.952	2.636	1.14	1.0	2.64	38	16.2	3.59	58.0	0.55	na	0.135	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.2	27.83	0.31	4.962	2.641	1.36	1.0	2.87	50	10.5	5.40	56.9	0.55	na	0.134	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.25	17.62	0.21	4.973	2.646	1.66	1.0	3.14	68	6.7	8.41	56.0	0.55	na	0.134	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.3	15.58	0.12	4.983	2.651	1.13	1.0	3.14	68	5.9	8.39	49.3	0.55	na	0.134	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.35	16.09	0.37	4.993	2.657	3.33	1.0	3.34	84	6.1	11.31	68.5	0.55	na	0.134	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.4	28.09	0.44	5.003	2.662	1.91	1.0	2.94	55	10.6	6.10	64.4	0.55	na	0.134	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.45	31.15	0.33	5.014	2.667	1.26	1.0	2.81	47	11.7	4.84	56.5	0.55	na	0.134	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.5	29.11	0.19	5.024	2.672	0.79	1.0	2.75	43	10.9	4.37	47.6	0.55	na	0.134	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.55	17.62	0.13	5.034	2.677	1.03	1.0	3.06	62	6.6	7.38	48.6	0.55	na	0.134	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.6	16.85	0.4	5.044	2.682	3.39	1.0	3.32	83	6.3	11.06	69.5	0.55	na	0.133	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.65	23.24	0.84	5.055	2.687	4.62	1.0	3.24	76	8.6	9.83	85.0	0.55	na	0.133	0.91	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.7	49.02	0.64	5.065	2.692	1.46	1.0	2.65	38	18.2	3.61	65.7	0.54	na	0.133	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.75	54.9	0.75	5.075	2.698	1.51	1.0	2.61	36	20.4	3.37	68.5	0.54	na	0.133	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.8	40.6	1.51	5.085	2.703	4.25	1.0	2.99	58	15.0	6.62	99.4	0.54	na	0.133	0.90	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.85	165.46	3.49	5.096	2.708	2.18	0.5	2.16	18	97.7	1.56	152.4	0.54	0.409	0.133	0.85	6.66	33.8	0.088	0.217	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.9	210.91	2.82	5.106	2.713	1.37	0.5	1.94	11	124.4	1.22	151.9	0.54	0.406	0.133	0.85	6.61	30.9	0.089	0.223	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.95	146.82	3.22	5.116	2.718	2.27	0.5	2.21	19	86.5	1.68	145.3	0.54	0.365	0.133	0.86	6.02	32.9	0.105	0.307	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25	176.44	1.25	5.126	2.723	0.73	0.5	1.82	9	103.8	1.12	116.1	0.54	0.225	0.132	0.89	3.85	22.6	0.213	0.645	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.05	84.77	1.16	5.137	2.728	1.46	0.5	2.27	21	49.8	1.84	91.9	0.54	0.152	0.132	0.91	2.66	21.3	0.375	0.853	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.1	83.5	0.28	5.147	2.734	0.36	0.5	1.97	12	49.1	1.00	49.1	0.54	0.091	0.132	0.93	1.64	10.1	0.500	0.943	0.001	0.05	0.0	0.00	0.001	0.00	0.00	0.00	0.0
25.15	67.15	0.51	5.157	2.739	0.82	0.5	2.22	20	39.4	1.71	67.4	0.54	0.108	0.132	0.92	1.93	15.3	0.500	0.943	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.2	50.81	0.4	5.167	2.744	0.88	0.5	2.35	24	29.8	2.11	62.8	0.54	0.103	0.132	0.92	1.84	15.1	0.500	0.943	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.25	68.43	0.36	5.178	2.749	0.57	0.5	2.14	17	40.1	1.52	60.8	0.54	0.101	0.132	0.93	1.81	13.3	0.500	0.943	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.3	67.41	0.81	5.188	2.754	1.30	0.5	2.33	24	39.5	2.03	80.2	0.54	0.128	0.132	0.91	2.26	19.1	0.492	0.916	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.35	70.47	2.14	5.198	2.759	3.28	1.0	2.72	42	25.5	4.13	105.6	0.54	na	0.132	0.89	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.4	138.14	4.43	5.208	2.764	3.33	0.5	2.35	25	80.7	2.11	170.7	0.54	0.461	0.132	0.81	7.29	41.1	0.053	-0.030	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.45	165.2	3.8	5.219	2.769	2.38	0.5	2.19	19	96.4	1.63	157.3	0.54	0.442	0.131	0.84	7.18	35.3	0.077	0.151	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.5	168.52	3.8	5.229	2.775	2.33	0.5	2.18	18	98.3	1.60	157.5	0.54	0.444	0.131	0.84	7.20	35.2	0.076	0.149	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.55	155.76	2.03	5.239	2.780	1.35	0.5	2.04	14	90.7	1.34	122.0	0.54	0.249	0.131	0.88	4.25	25.8	0.185	0.582	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0

25.6	125.12	2.79	5.249	2.785	2.33	0.5	2.27	22	72.8	1.85	134.8	0.54	0.308	0.131	0.86	5.18	31.3	0.136	0.437	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.65	125.88	5.9	5.260	2.790	4.89	1.0	2.65	38	45.1	3.61	163.0	0.53	na	0.131	0.83	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.7	185.38	5.89	5.270	2.795	3.27	0.5	2.26	21	107.7	1.82	195.8	0.53	0.461	0.131	0.76	6.80	45.3	0.025	-0.390	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0

Project No.	1160276		uses n = 0.7 vs Conetec using 0.75 for transitional soil		
Project Description	L-18			Direct	Thin Layer
Water Table	5	ft	Idriss Settlement	0.5	0.0
Earthquake Magnitude	5.2	M_W	Robertson Settlement	1.6	0.0
Acceleration	0.2	g			
Soil Unit Wt	125	pcf			
Pa	1.06	tsf			

CPT INPUT DATA			LIQUEFACTION POTENTIAL														LIQUEFACTION INDUCED SETTLEMENT										
Depth, m	q_C, tsf	fs, tsf	Total Stress, tsf	Effective. Stress, tsf	F, %	n	I_C	Fines Content, %	q_{c1N}	K_C	q_{c1N-cs}	Stress Reduct. Coeff., r_d	$CRR_{7.5}$	CSR	K_σ	Factor of Safety	$(N1)_{60-cs}$	Limiting Shear Strain, γ_{lim}	Parameter F_α	Maximum Shear Strain, γ_{max}	Layer Thick., m ΔH_i	ΔLDI_i,in	Cum. LDI, in	Vertical Reconsol Strain, ε_v	Sett., in, ΔS_i	Cum. S., in.	Zhang Settle, in	Zhang Cum. Settle, in
0.250	43.660	0.290	0.051	0.051	0.67	0.5	1.59	4	70.0	1.00	70.0	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
0.300	45.190	0.280	0.062	0.062	0.62	0.5	1.59	4	72.5	1.00	72.5	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
0.350	36.510	0.260	0.072	0.072	0.71	0.5	1.72	7	58.6	1.05	61.4	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
0.400	29.110	0.280	0.082	0.082	0.96	0.5	1.91	11	46.7	1.19	55.4	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
0.450	23.750	0.260	0.092	0.092	1.10	0.5	2.03	14	38.1	1.33	50.8	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
0.500	20.940	0.190	0.103	0.103	0.91	0.5	2.04	14	33.6	1.35	45.5	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
0.550	20.170	0.160	0.113	0.113	0.80	0.5	2.04	14	32.3	1.35	43.7	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
0.600	18.380	0.150	0.123	0.123	0.82	0.5	2.10	16	29.5	1.44	42.6	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
0.650	19.660	0.090	0.133	0.133	0.46	0.5	1.96	12	31.5	1.00	31.5	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
0.700	29.360	0.120	0.144	0.144	0.41	0.5	1.80	8	47.1	1.00	47.1	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
0.750	34.980	0.200	0.154	0.154	0.57	0.5	1.82	9	56.1	1.12	62.6	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
0.800	37.280	0.190	0.164	0.164	0.51	0.5	1.78	8	59.8	1.09	65.1	1.00	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
0.850	33.450	0.190	0.174	0.174	0.57	0.5	1.86	9	53.6	1.15	61.5	1.00	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
0.900	26.300	0.160	0.185	0.185	0.61	0.5	1.97	12	42.2	1.26	53.2	1.00	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
0.950	23.240	0.160	0.195	0.195	0.69	0.5	2.06	15	37.3	1.38	51.3	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
1.000	26.040	0.220	0.205	0.205	0.85	0.5	2.07	15	41.8	1.40	58.5	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
1.050	31.920	0.310	0.215	0.215	0.98	0.5	2.04	14	51.2	1.35	69.3	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
1.100	39.830	0.330	0.226	0.226	0.83	0.5	1.93	11	63.9	1.22	77.6	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
1.150	43.150	0.440	0.236	0.236	1.03	0.5	1.97	12	69.2	1.25	86.7	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
1.200	41.880	0.480	0.246	0.246	1.15	0.5	2.02	13	67.2	1.32	88.4	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
1.250	37.530	0.340	0.256	0.256	0.91	0.5	2.00	13	60.2	1.29	77.8	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
1.300	25.530	0.150	0.267	0.267	0.59	0.5	2.05	14	40.9	1.36	55.8	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
1.350	15.060	0.040	0.277	0.277	0.27	0.5	2.14	17	24.2	1.00	24.2	0.99	na	0.129	1.07	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
1.400	10.720	0.050	0.287	0.287	0.48	0.5	2.37	25	17.2	2.18	37.6	0.99	na	0.129	1.08	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
1.450	10.980	0.030	0.297	0.297	0.28	0.5	2.29	22	17.6	1.00	17.6	0.99	na	0.129	1.06	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
1.500	17.110	0.100	0.308	0.308	0.60	0.5	2.23	20	27.4	1.75	47.9	0.99	na	0.129	1.09	na	na	0.000	0.000	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
1.550	25.280	0.110	0.318	0.315	0.44	0.5	2.03	14	40.5	1.00	40.5	0.99	0.084	0.130	1.08	1.78	8.5	0.500	0.943	0.001	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
1.600	30.640	0.130	0.328	0.320	0.43	0.5	1.95	12	49.1	1.00	49.1	0.99	0.091	0.132	1.08	1.91	10.0	0.500	0.943	0.000	0.05	0.0	0.57	0.000	0.00	0.51	0.00	1.6
1.650	26.300	0.040	0.338	0.325	0.15	0.5	1.87	10	42.2	1.00	42.2	0.99	0.085	0.134	1.08	1.75	8.4	0.500	0.943	0.001	0.05	0.0	0.57	0.001	0.00	0.51	0.00	1.6
1.700	18.890	0.040	0.349	0.331	0.22	0.5	2.05	14	30.3	1.00	30.3	0.99	0.075	0.136	1.07	1.51	6.4	0.500	0.943	0.002	0.05	0.0	0.57	0.002	0.00	0.51	0.12	1.6
1.750	16.850	0.020	0.359	0.336	0.12	0.5	2.05	14	27.0	1.00	27.0	0.99	0.073	0.137	1.07	1.44	5.7	0.500	0.943	0.002	0.05	0.0	0.57	0.003	0.01	0.51	0.12	1.5
1.800	16.340	0.060	0.369	0.341	0.38	0.5	2.19	19	26.2	1.00	26.2	0.99	0.072	0.139	1.06	1.40	5.9	0.500	0.943	0.003	0.05	0.0	0.56	0.003	0.01	0.50	0.12	1.4
1.850	15.320	0.050	0.379	0.346	0.33	0.5	2.21	19	24.6	1.00	24.6	0.99	0.070	0.141	1.06	1.36	5.6	0.500	0.943	0.003	0.05	0.0	0.56	0.004	0.01	0.50	0.12	1.3
1.900	13.790	0.050	0.390	0.351	0.37	0.5	2.27	21	22.1	1.00	22.1	0.99	0.068	0.142	1.06	1.30	5.1	0.500	0.943	0.004	0.05	0.0	0.55	0.006	0.01	0.49	0.12	1.1
1.950	12.000	0.040	0.400	0.356	0.34	0.5	2.32	23	19.2	1.00	19.2	0.99	0.066	0.144	1.06	1.24	4.6	0.500	0.943	0.005	0.05	0.0	0.54	0.008	0.02	0.48	0.12	1.0
2.000	13.020	0.040	0.410	0.361	0.32	0.5	2.28	22	20.9	1.00	20.9	0.99	0.067	0.146	1.06	1.25	4.9	0.500	0.943	0.005	0.05	0.0	0.53	0.007	0.01	0.46	0.12	0.9
2.050	19.150	0.050	0.420	0.367	0.27	0.5	2.09	16	30.7	1.00	30.7	0.99	0.076	0.147	1.06	1.39	6.6	0.500	0.943	0.003	0.05	0.0	0.52	0.003	0.01	0.45	0.12	0.8
2.100	26.300	0.060	0.431	0.372	0.23	0.5	1.95	12	41.9	1.00	41.9	0.99	0.085	0.149	1.07	1.56	8.5	0.500	0.943	0.001	0.05	0.0	0.52	0.001	0.00	0.44	0.00	0.7
2.150	22.730	0.060	0.441	0.377	0.27	0.5	2.03	14	36.0	1.00	36.0	0.99	0.080	0.150	1.06	1.45	7.6	0.500	0.943	0.002	0.05	0.0	0.51	0.002	0.00	0.44	0.00	0.7
2.200	18.130	0.130	0.451	0.382	0.74	0.5	2.30	22	28.5	1.93	55.1	0.99	0.096	0.151	1.08	1.73	13.0	0.500	0.943	0.001	0.05	0.0	0.51	0.000	0.00	0.44	0.00	0.7
2.250	16.340	0.220	0.461	0.387	1.39	0.5	2.48	30	25.5	2.67	68.0	0.98	0.109	0.153	1.08	1.98	17.4	0.500	0.943	0.000	0.05	0.0	0.51	0.000	0.00	0.43	0.00	0.7
2.300	18.640	0.200	0.472	0.392	1.10	0.5	2.38	26	28.9	2.23	64.3	0.98	0.105	0.154	1.08	1.88	15.7	0.500	0.943	0.000	0.05	0.0	0.51	0.000	0.00	0.43	0.00	0.7
2.350	20.940	0.120	0.482	0.397	0.59	0.5	2.21	19	32.3	1.67	53.9	0.98	0.095	0.155	1.07	1.67	12.2	0.500	0.943	0.001	0.05	0.0	0.51	0.001	0.00	0.43	0.00	0.7
2.400	19.150	0.070	0.492	0.402	0.38	0.5	2.17	18	29.3	1.00	29.3	0.98	0.074	0.156	1.06	1.28	6.5	0.500	0.943	0.004	0.05	0.0	0.51	0.005	0.01	0.43	0.12	0.7
2.450	16.090	0.070	0.502	0.408	0.45	0.5	2.27	21	24.5	1.00	24.5	0.98	0.070	0.158	1.05	1.20	5.7	0.500	0.943	0.006	0.05	0.0	0.50	0.008	0.02	0.42	0.12	0.5
2.500	15.830	0.100	0.513	0.413	0.65	0.5	2.35	24	23.9	2.09	50.1	0.98	0.092	0.159	1.07	1.57	12.0	0.500	0.943	0.001	0.05	0.0	0.49	0.001	0.00	0.41	0.00	0.4
2.550	17.870	0.100	0.523	0.418	0.58	0.5	2.28	22	26.9	1.86	50.0	0.98	0.092	0.160	1.07	1.56	11.6	0.500	0.943	0.001	0.05	0.0	0.48	0.001	0.00	0.40	0.00	0.4
2.600	17.870	0.170	0.533	0.423	0.98	0.5	2.39	26	26.7	2.25	60.0	0.98	0.100	0.161	1.07	1.70	14.7	0.500	0.943	0.001	0.05	0.0	0.48	0.001	0.00	0.40	0.00	0.4
2.650	20.170	0.190	0.543	0.428	0.97	0.5	2.34	24	29.9	2.07	62.0	0.98	0.102	0.162	1.07	1.73	14.9	0.500	0.943	0.001	0.05	0.0	0.48	0.000	0.00	0.40	0.00	0.4
2.700	22.980	0.130	0.554	0.433	0.58	0.5	2.18	18	33.9	1.62	54.9	0.98	0.095	0.163	1.07	1.59	12.3	0.500	0.943	0.001	0.05	0.0	0.48	0.001	0.00	0.40	0.00	0.4
2.750	20.430	0.080	0.564	0.438	0.40	0.5	2.17	18	30.0	1.00	30.0	0.98	0.075	0.164	1.05	1.23	6.7	0.500	0.943	0.005	0.05	0.0	0.47	0.006	0.01	0.40	0.12	0.4
2.800	17.870	0.090	0.574	0.444	0.52	0.5	2.27	21	26.1	1.85	48.1	0.98	0.090	0.165	1.06	1.48	11.2	0.500	0.943	0.002	0.05	0.0	0.46	0.002	0.00	0.39	0.00	0.3

2.850	18.890	0.120	0.584	0.449	0.66	0.5	2.29	22	27.4	1.92	52.5	0.98	0.093	0.166	1.06	1.53	12.3	0.500	0.943	0.002	0.05	0.0	0.46	0.001	0.00	0.38	0.00	0.3
2.900	18.130	0.130	0.595	0.454	0.74	0.5	2.34	24	26.1	2.06	53.9	0.98	0.095	0.167	1.06	1.54	12.9	0.500	0.943	0.002	0.05	0.0	0.46	0.001	0.00	0.38	0.00	0.3
2.950	20.680	0.130	0.605	0.459	0.65	0.5	2.26	21	29.6	1.81	53.8	0.98	0.094	0.168	1.06	1.53	12.4	0.500	0.943	0.002	0.05	0.0	0.45	0.001	0.00	0.38	0.00	0.3
3.000	21.190	0.130	0.615	0.464	0.63	0.5	2.25	21	30.2	1.78	53.8	0.98	0.094	0.169	1.06	1.52	12.4	0.500	0.943	0.002	0.05	0.0	0.45	0.001	0.00	0.38	0.00	0.3
3.050	19.920	0.210	0.625	0.469	1.09	0.5	2.39	26	28.2	2.26	63.8	0.98	0.104	0.170	1.07	1.67	15.6	0.500	0.943	0.001	0.05	0.0	0.45	0.001	0.00	0.37	0.00	0.3
3.100	19.660	0.200	0.636	0.474	1.05	0.5	2.39	26	27.7	2.26	62.5	0.98	0.103	0.171	1.06	1.64	15.3	0.500	0.943	0.001	0.05	0.0	0.45	0.001	0.00	0.37	0.00	0.3
3.150	18.640	0.160	0.646	0.479	0.89	0.5	2.38	25	26.1	2.20	57.6	0.98	0.098	0.171	1.06	1.54	14.0	0.500	0.943	0.002	0.05	0.0	0.44	0.001	0.00	0.37	0.00	0.3
3.200	19.660	0.100	0.656	0.485	0.53	0.5	2.25	21	27.4	1.79	49.2	0.98	0.091	0.172	1.06	1.42	11.3	0.500	0.943	0.002	0.05	0.0	0.44	0.002	0.00	0.37	0.00	0.3
3.250	19.150	0.200	0.666	0.490	1.08	0.5	2.41	27	26.6	2.35	62.5	0.98	0.103	0.173	1.06	1.61	15.5	0.500	0.943	0.001	0.05	0.0	0.44	0.001	0.00	0.37	0.00	0.3
3.300	16.850	0.290	0.677	0.495	1.79	0.5	2.58	35	23.3	3.21	74.6	0.98	0.119	0.174	1.07	1.86	20.0	0.500	0.935	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
3.350	15.060	0.360	0.687	0.500	2.50	0.7	2.66	38	24.0	3.69	88.7	0.98	na	0.174	1.07	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
3.400	17.620	0.350	0.697	0.505	2.07	0.7	2.55	33	27.9	3.04	85.0	0.98	0.137	0.175	1.07	2.14	22.5	0.440	0.894	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
3.450	17.110	0.340	0.707	0.510	2.07	0.7	2.57	34	26.9	3.12	84.1	0.98	0.135	0.176	1.07	2.10	22.4	0.449	0.899	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
3.500	13.530	0.220	0.718	0.515	1.72	0.7	2.61	36	21.1	3.38	71.4	0.98	na	0.177	1.06	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
3.550	9.450	0.140	0.728	0.521	1.61	1.0	2.66	38	15.2	3.70	56.0	0.98	na	0.177	1.05	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
3.600	8.430	0.120	0.738	0.526	1.56	1.0	2.70	41	13.5	4.00	54.1	0.98	na	0.178	1.05	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
3.650	10.720	0.140	0.748	0.531	1.40	0.7	2.66	39	16.4	3.72	61.1	0.97	na	0.179	1.05	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
3.700	10.720	0.250	0.759	0.536	2.51	1.0	2.73	42	17.2	4.22	72.5	0.97	na	0.179	1.06	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
3.750	9.960	0.220	0.769	0.541	2.39	1.0	2.75	43	16.0	4.37	69.8	0.97	na	0.180	1.06	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
3.800	9.190	0.130	0.779	0.546	1.55	1.0	2.68	40	14.7	3.85	56.8	0.97	na	0.181	1.05	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
3.850	6.130	0.060	0.789	0.551	1.12	1.0	2.79	45	9.8	4.68	46.0	0.97	na	0.181	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
3.900	5.110	0.050	0.800	0.556	1.16	1.0	2.88	51	8.2	5.51	45.1	0.97	na	0.182	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
3.950	5.360	0.040	0.810	0.562	0.88	1.0	2.81	47	8.6	4.88	41.9	0.97	na	0.182	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.000	5.110	0.050	0.820	0.567	1.17	1.0	2.89	52	8.2	5.60	45.9	0.97	na	0.183	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.050	5.870	0.050	0.830	0.572	0.99	1.0	2.80	46	9.4	4.79	45.1	0.97	na	0.184	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.100	5.870	0.040	0.841	0.577	0.80	1.0	2.77	44	9.4	4.49	42.2	0.97	na	0.184	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.150	4.850	0.050	0.851	0.582	1.25	1.0	2.94	55	7.8	6.12	47.6	0.97	na	0.185	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.200	5.110	0.030	0.861	0.587	0.71	1.0	2.82	47	8.2	4.94	40.5	0.97	na	0.185	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.250	4.850	0.030	0.871	0.592	0.75	1.0	2.86	50	7.8	5.31	41.3	0.97	na	0.186	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.300	4.850	0.030	0.882	0.598	0.76	1.0	2.87	50	7.8	5.36	41.7	0.97	na	0.186	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.350	5.360	0.030	0.892	0.603	0.67	1.0	2.80	46	8.6	4.79	41.1	0.97	na	0.187	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.400	4.600	0.030	0.902	0.608	0.81	1.0	2.91	53	7.4	5.81	42.8	0.97	na	0.187	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.450	4.090	0.030	0.912	0.613	0.94	1.0	3.00	59	6.6	6.75	44.3	0.97	na	0.188	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.500	4.850	0.030	0.923	0.618	0.76	1.0	2.89	51	7.8	5.54	43.1	0.97	na	0.188	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.550	4.850	0.020	0.933	0.623	0.51	1.0	2.83	48	7.8	5.01	38.9	0.97	na	0.189	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.600	4.600	0.020	0.943	0.628	0.55	1.0	2.87	50	7.3	5.38	39.4	0.97	na	0.189	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.650	4.600	0.020	0.953	0.634	0.55	1.0	2.87	50	7.3	5.43	39.4	0.97	na	0.189	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.700	4.090	0.040	0.964	0.639	1.28	1.0	3.08	64	6.4	7.66	49.0	0.97	na	0.190	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.750	4.340	0.040	0.974	0.644	1.19	1.0	3.04	61	6.7	7.19	48.4	0.97	na	0.190	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.800	4.850	0.040	0.984	0.649	1.03	1.0	2.96	56	7.5	6.33	47.3	0.97	na	0.191	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.850	4.850	0.030	0.995	0.654	0.78	1.0	2.92	53	7.4	5.86	43.5	0.97	na	0.191	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.900	5.110	0.030	1.005	0.659	0.73	1.0	2.89	51	7.8	5.55	43.0	0.97	na	0.191	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
4.950	5.110	0.120	1.015	0.664	2.93	1.0	3.17	70	7.7	8.76	67.4	0.97	na	0.192	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.000	9.700	0.150	1.025	0.669	1.73	1.0	2.77	44	14.5	4.53	65.6	0.97	na	0.192	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.050	9.190	0.180	1.036	0.675	2.21	1.0	2.85	49	13.6	5.24	71.4	0.97	na	0.193	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.100	7.400	0.150	1.046	0.680	2.36	1.0	2.96	56	10.9	6.32	68.8	0.96	na	0.193	1.04	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.150	7.150	0.120	1.056	0.685	1.97	1.0	2.94	55	10.4	6.08	63.5	0.96	na	0.193	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.200	6.380	0.090	1.066	0.690	1.69	1.0	2.96	56	9.2	6.30	58.3	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.250	5.870	0.070	1.077	0.695	1.46	1.0	2.97	57	8.4	6.43	54.3	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.300	5.870	0.060	1.087	0.700	1.25	1.0	2.95	55	8.4	6.15	51.5	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.350	6.130	0.060	1.097	0.705	1.19	1.0	2.92	53	8.7	5.87	51.0	0.96	na	0.195	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.400	6.130	0.060	1.107	0.711	1.19	1.0	2.92	54	8.6	5.91	51.0	0.96	na	0.195	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.450	5.870	0.060	1.118	0.716	1.26	1.0	2.96	56	8.2	6.27	51.5	0.96	na	0.195	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.500	6.130	0.060	1.128	0.721	1.20	1.0	2.93	54	8.5	5.99	51.0	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.550	5.620	0.050	1.138	0.726	1.12	1.0	2.96	56	7.7	6.33	49.0	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.600	5.360	0.070	1.148	0.731	1.66	1.0	3.07	63	7.3	7.51	55.1	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.650	5.620	0.080	1.159	0.736	1.79	1.0	3.07	63	7.6	7.47	57.0	0.96	na	0.197	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.700	5.620	0.070	1.169	0.741	1.57	1.0	3.04	61	7.6	7.19	54.5	0.96	na	0.197	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.750	5.620	0.060	1.179	0.746	1.35	1.0	3.02	60	7.5	6.89	51.8	0.96	na	0.197	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.800	6.130	0.080	1.189	0.752	1.62	1.0	3.01	59	8.2	6.86	56.0	0.96	na	0.197	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.850	6.130	0.120	1.200	0.757	2.43	1.0	3.10	66	8.1	7.95	64.4	0.96	na	0.198	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.900	6.380	0.130	1.210	0.762	2.51	1.0	3.10	65	8.4	7.85	65.7	0.96	na	0.198	1.03	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
5.950	6.380	0.080	1.220	0.767	1.55	1.0	3.00	58	8.3	6.66	55.4	0.96	na	0.198	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.000	7.920	0.050	1.230	0.772	0.75	1.0	2.76	44	10.3	4.42	45.3	0.96	na	0.198	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.050	6.130	0.050	1.241	0.777	1.02	1.0	2.94	55	7.9	6.08	48.0	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3

6.100	6.130	0.050	1.251	0.782	1.02	1.0	2.94	55	7.8	6.12	48.0	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.150	6.130	0.030	1.261	0.788	0.62	1.0	2.86	50	7.8	5.32	41.4	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.200	6.130	0.040	1.271	0.793	0.82	1.0	2.91	53	7.7	5.80	44.9	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.250	6.380	0.070	1.282	0.798	1.37	1.0	2.99	58	8.0	6.61	52.9	0.96	na	0.200	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.300	6.890	0.090	1.292	0.803	1.61	1.0	2.99	58	8.6	6.59	56.6	0.96	na	0.200	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.350	6.890	0.090	1.302	0.808	1.61	1.0	2.99	58	8.5	6.63	56.6	0.95	na	0.200	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.400	7.150	0.080	1.312	0.813	1.37	1.0	2.95	55	8.8	6.13	53.9	0.95	na	0.200	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.450	7.400	0.120	1.323	0.818	1.97	1.0	3.01	59	9.0	6.81	61.6	0.95	na	0.200	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.500	9.190	0.110	1.333	0.823	1.40	1.0	2.84	48	11.2	5.12	57.1	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.550	8.170	0.120	1.343	0.829	1.76	1.0	2.94	55	9.9	6.12	60.3	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.600	8.170	0.120	1.353	0.834	1.76	1.0	2.95	55	9.8	6.15	60.3	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.650	7.920	0.150	1.364	0.839	2.29	1.0	3.02	60	9.4	6.97	65.8	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.700	7.920	0.110	1.374	0.844	1.68	1.0	2.96	56	9.4	6.26	58.7	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.750	7.150	0.070	1.384	0.849	1.21	1.0	2.94	55	8.4	6.11	51.4	0.95	na	0.202	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.800	6.640	0.050	1.394	0.854	0.95	1.0	2.94	54	7.8	6.05	47.0	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.850	7.150	0.040	1.405	0.859	0.70	1.0	2.85	49	8.3	5.21	43.3	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.900	6.380	0.050	1.415	0.865	1.01	1.0	2.97	57	7.4	6.43	47.5	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
6.950	6.890	0.070	1.425	0.870	1.28	1.0	2.98	57	7.9	6.53	51.8	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.000	5.870	0.080	1.435	0.875	1.80	1.0	3.13	68	6.7	8.34	55.9	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.050	5.620	0.110	1.446	0.880	2.64	1.0	3.24	76	6.4	9.79	62.5	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.100	5.360	0.130	1.456	0.885	3.33	1.0	3.32	83	6.1	10.98	66.5	0.95	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.150	5.360	0.180	1.466	0.890	4.62	1.0	3.40	90	6.0	12.28	73.9	0.95	na	0.203	1.02	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.200	6.890	0.150	1.476	0.895	2.77	1.0	3.16	70	7.7	8.69	66.8	0.95	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.250	6.640	0.140	1.487	0.901	2.72	1.0	3.18	71	7.4	8.90	65.6	0.95	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.3	6.89	0.13	1.497	0.906	2.41	1.0	3.14	68	7.6	8.35	63.5	0.95	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.35	7.4	0.11	1.507	0.911	1.87	1.0	3.05	62	8.1	7.27	59.1	0.94	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.4	6.38	0.08	1.517	0.916	1.65	1.0	3.10	65	7.0	7.87	54.8	0.94	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.45	6.13	0.07	1.528	0.921	1.52	1.0	3.11	66	6.7	7.97	53.0	0.94	na	0.203	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.5	6.38	0.08	1.538	0.926	1.65	1.0	3.10	66	6.9	7.96	54.8	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.55	6.64	0.09	1.548	0.931	1.77	1.0	3.10	66	7.1	7.91	56.4	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.6	6.64	0.08	1.558	0.936	1.57	1.0	3.08	64	7.1	7.66	54.3	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.65	6.64	0.08	1.569	0.942	1.58	1.0	3.08	64	7.1	7.70	54.3	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.7	6.64	0.05	1.579	0.947	0.99	1.0	3.00	58	7.0	6.71	47.0	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.75	6.64	0.05	1.589	0.952	0.99	1.0	3.00	59	7.0	6.74	47.0	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.8	6.13	0.07	1.599	0.957	1.55	1.0	3.13	68	6.4	8.28	53.0	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.85	3.32	0.08	1.610	0.962	4.68	1.0	3.73	100	3.5	18.72	64.6	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.9	6.13	0.07	1.620	0.967	1.55	1.0	3.14	68	6.3	8.36	53.0	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
7.95	6.38	0.1	1.630	0.972	2.11	1.0	3.18	72	6.6	8.95	58.7	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8	7.4	0.08	1.640	0.978	1.39	1.0	3.02	60	7.6	6.99	52.9	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.05	6.13	0.11	1.651	0.983	2.46	1.0	3.24	76	6.2	9.78	61.0	0.94	na	0.205	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.1	5.62	0.08	1.661	0.988	2.02	1.0	3.25	77	5.7	9.90	56.3	0.94	na	0.205	1.01	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.15	5.87	0.09	1.671	0.993	2.14	1.0	3.24	76	5.9	9.77	57.8	0.94	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.2	5.62	0.11	1.681	0.998	2.79	1.0	3.32	83	5.6	11.02	62.0	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.25	6.13	0.13	1.692	1.003	2.93	1.0	3.29	80	6.1	10.52	64.3	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.3	7.15	0.18	1.702	1.008	3.30	1.0	3.24	76	7.1	9.83	69.7	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.35	10.21	0.23	1.712	1.013	2.71	1.0	3.04	61	10.1	7.12	71.7	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.4	14.55	0.22	1.722	1.019	1.72	1.0	2.78	45	14.3	4.60	65.7	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.45	6.13	0.16	1.733	1.024	3.64	1.0	3.35	85	6.0	11.46	68.6	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.5	5.62	0.08	1.743	1.029	2.06	1.0	3.28	79	5.5	10.31	56.3	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.55	5.87	0.07	1.753	1.034	1.70	1.0	3.22	74	5.7	9.44	53.6	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.6	5.62	0.07	1.763	1.039	1.82	1.0	3.26	77	5.4	10.01	54.2	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.65	5.62	0.06	1.774	1.044	1.56	1.0	3.23	75	5.4	9.63	51.8	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.7	5.87	0.06	1.784	1.049	1.47	1.0	3.20	73	5.6	9.16	51.3	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.75	5.87	0.05	1.794	1.055	1.23	1.0	3.17	70	5.6	8.75	48.7	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.8	6.13	0.07	1.804	1.060	1.62	1.0	3.20	73	5.8	9.17	53.0	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.85	13.28	0.45	1.815	1.065	3.92	1.0	3.04	61	12.5	7.16	89.3	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.43	0.000	0.00	0.36	0.00	0.3
8.9	39.58	0.38	1.825	1.070	1.01	0.5	2.28	22	37.2	1.86	69.3	0.92	0.111	0.205	1.00	1.38	16.1	0.500	0.943	0.003	0.05	0.0	0.43	0.002	0.00	0.36	0.00	0.3
8.95	32.94	0.47	1.835	1.075	1.51	0.5	2.45	28	30.9	2.49	76.9	0.92	0.122	0.205	1.00	1.52	19.3	0.500	0.928	0.002	0.05	0.0	0.43	0.001	0.00	0.36	0.00	0.3
9	28.34	0.46	1.845	1.080	1.74	0.5	2.54	32	26.5	2.95	78.2	0.92	0.124	0.205	1.00	1.55	20.5	0.500	0.924	0.002	0.05	0.0	0.42	0.001	0.00	0.36	0.00	0.3
9.05	11.49	0.34	1.856	1.085	3.53	1.0	3.08	64	10.6	7.64	80.9	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.1	6.64	0.1	1.866	1.090	2.09	1.0	3.22	75	6.1	9.52	57.9	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.15	6.64	0.04	1.876	1.096	0.84	1.0	3.05	62	6.1	7.34	44.5	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.2	6.38	0.04	1.886	1.101	0.89	1.0	3.09	65	5.8	7.76	45.0	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.25	6.38	0.04	1.897	1.106	0.89	1.0	3.09	65	5.8	7.80	45.0	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.3	6.38	0.05	1.907	1.111	1.12	1.0	3.13	68	5.7	8.32	47.8	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3

9.35	6.89	0.05	1.917	1.116	1.01	1.0	3.07	64	6.2	7.58	46.8	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.4	7.15	0.06	1.927	1.121	1.15	1.0	3.08	64	6.4	7.66	48.8	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.45	6.89	0.05	1.938	1.126	1.01	1.0	3.08	64	6.1	7.66	46.8	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.5	6.64	0.04	1.948	1.132	0.85	1.0	3.08	64	5.9	7.60	44.6	0.91	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.55	6.64	0.04	1.958	1.137	0.85	1.0	3.08	64	5.8	7.63	44.6	0.91	na	0.205	1.00	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.6	6.38	0.05	1.969	1.142	1.13	1.0	3.15	69	5.6	8.57	47.9	0.91	na	0.205	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.65	6.38	0.05	1.979	1.147	1.14	1.0	3.16	70	5.6	8.61	47.9	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.7	6.38	0.04	1.989	1.152	0.91	1.0	3.12	67	5.5	8.15	45.2	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.75	6.13	0.05	1.999	1.157	1.21	1.0	3.20	73	5.3	9.15	48.5	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.8	6.38	0.16	2.010	1.162	3.66	1.0	3.40	90	5.5	12.29	67.5	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.85	9.7	0.18	2.020	1.167	2.34	1.0	3.09	65	8.3	7.80	64.8	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.9	11.23	0.22	2.030	1.173	2.39	1.0	3.03	61	9.6	7.07	67.7	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
9.95	19.41	0.23	2.040	1.178	1.32	1.0	2.66	39	16.5	3.72	61.3	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
10	15.32	0.26	2.051	1.183	1.96	1.0	2.85	49	13.0	5.24	67.8	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
10.05	10.21	0.23	2.061	1.188	2.82	1.0	3.12	67	8.6	8.13	69.9	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
10.1	13.53	0.17	2.071	1.193	1.48	1.0	2.85	49	11.3	5.20	59.0	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
10.15	6.38	0.11	2.081	1.198	2.56	1.0	3.34	84	5.3	11.29	60.1	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
10.2	6.38	0.05	2.092	1.203	1.17	1.0	3.19	72	5.3	9.07	48.1	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
10.25	6.13	0.06	2.102	1.209	1.49	1.0	3.26	78	5.1	10.07	51.1	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
10.3	6.13	0.06	2.112	1.214	1.49	1.0	3.26	78	5.1	10.12	51.1	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
10.35	6.13	0.05	2.122	1.219	1.25	1.0	3.23	76	5.0	9.68	48.7	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
10.4	6.13	0.05	2.133	1.224	1.25	1.0	3.24	76	5.0	9.73	48.7	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
10.45	6.13	0.05	2.143	1.229	1.25	1.0	3.24	76	5.0	9.77	48.7	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
10.5	6.13	0.12	2.153	1.234	3.02	1.0	3.41	91	5.0	12.54	62.3	0.89	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
10.55	15.06	0.19	2.163	1.239	1.47	1.0	2.82	47	12.2	4.92	59.8	0.89	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
10.6	15.83	0.29	2.174	1.245	2.12	1.0	2.88	51	12.7	5.48	69.8	0.89	na	0.203	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
10.65	15.83	0.31	2.184	1.250	2.27	1.0	2.90	52	12.7	5.65	71.6	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
10.7	12.51	0.38	2.194	1.255	3.68	1.0	3.12	67	10.0	8.12	80.9	0.89	na	0.202	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.42	0.000	0.00	0.36	0.00	0.3
10.75	32.68	0.3	2.204	1.260	0.98	0.5	2.38	26	28.3	2.22	62.9	0.89	0.103	0.202	0.99	1.28	15.3	0.500	0.943	0.004	0.05	0.0	0.42	0.003	0.01	0.36	0.01	0.3
10.8	26.3	0.33	2.215	1.265	1.37	0.5	2.54	33	22.7	2.98	67.8	0.89	0.109	0.202	0.99	1.36	17.8	0.500	0.943	0.003	0.05	0.0	0.41	0.002	0.00	0.35	0.00	0.3
10.85	11.75	0.26	2.225	1.270	2.73	1.0	3.08	64	9.3	7.63	70.6	0.89	na	0.202	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
10.9	8.43	0.08	2.235	1.275	1.29	1.0	3.09	64	6.6	7.72	51.0	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
10.95	8.17	0.08	2.245	1.280	1.35	1.0	3.11	66	6.4	8.06	51.4	0.88	na	0.202	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11	8.17	0.06	2.256	1.286	1.01	1.0	3.06	63	6.4	7.45	47.3	0.88	na	0.201	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.05	7.92	0.06	2.266	1.291	1.06	1.0	3.09	65	6.1	7.78	47.7	0.88	na	0.201	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.1	7.92	0.06	2.276	1.296	1.06	1.0	3.09	65	6.1	7.81	47.8	0.88	na	0.201	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.15	7.92	0.06	2.286	1.301	1.07	1.0	3.10	65	6.1	7.85	47.8	0.88	na	0.201	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.2	7.66	0.06	2.297	1.306	1.12	1.0	3.13	67	5.9	8.22	48.2	0.88	na	0.201	0.99	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.25	7.4	0.07	2.307	1.311	1.37	1.0	3.18	72	5.6	9.01	50.8	0.88	na	0.200	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.3	7.66	0.07	2.317	1.316	1.31	1.0	3.16	70	5.8	8.65	50.4	0.88	na	0.200	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.35	7.92	0.08	2.327	1.322	1.43	1.0	3.16	70	6.0	8.65	51.9	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.4	7.66	0.08	2.338	1.327	1.50	1.0	3.19	72	5.8	9.06	52.3	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.45	7.4	0.07	2.348	1.332	1.39	1.0	3.20	73	5.6	9.16	50.9	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.5	7.15	0.06	2.358	1.337	1.25	1.0	3.20	73	5.3	9.21	49.3	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.55	6.89	0.11	2.368	1.342	2.43	1.0	3.35	86	5.1	11.50	59.1	0.87	na	0.199	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.6	6.89	0.09	2.379	1.347	1.99	1.0	3.31	82	5.1	10.90	55.7	0.87	na	0.199	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.65	13.53	0.13	2.389	1.352	1.17	1.0	2.86	50	10.0	5.29	53.0	0.87	na	0.199	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.7	21.19	0.2	2.399	1.357	1.06	1.0	2.64	37	15.6	3.57	55.8	0.86	na	0.199	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.75	20.17	0.18	2.409	1.363	1.01	1.0	2.65	38	14.8	3.66	54.2	0.86	na	0.198	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.8	10.72	0.13	2.420	1.368	1.57	1.0	3.04	61	7.8	7.13	55.9	0.86	na	0.198	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.85	7.4	0.07	2.430	1.373	1.41	1.0	3.22	74	5.4	9.45	51.0	0.86	na	0.198	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.9	6.64	0.04	2.440	1.378	0.95	1.0	3.22	74	4.8	9.46	45.6	0.86	na	0.198	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
11.95	6.89	0.04	2.450	1.383	0.90	1.0	3.19	72	5.0	9.05	45.1	0.86	na	0.198	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
12	7.92	0.06	2.461	1.388	1.10	1.0	3.14	68	5.7	8.40	47.9	0.86	na	0.197	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
12.05	6.89	0.08	2.471	1.393	1.81	1.0	3.32	82	4.9	10.93	54.1	0.86	na	0.197	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
12.1	7.66	0.08	2.481	1.399	1.54	1.0	3.23	75	5.5	9.57	52.4	0.85	na	0.197	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
12.15	7.66	0.07	2.491	1.404	1.35	1.0	3.20	73	5.5	9.26	50.5	0.85	na	0.197	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
12.2	7.4	0.07	2.502	1.409	1.43	1.0	3.24	76	5.3	9.72	51.1	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
12.25	7.4	0.08	2.512	1.414	1.64	1.0	3.26	78	5.2	10.13	53.0	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.41	0.000	0.00	0.35	0.00	0.3
12.3	17.11	0.06	2.522	1.419	0.41	0.5	2.54	32	14.0	2.94	41.0	0.85	0.084	0.196	0.98	1.08	10.8	0.500	0.943	0.014	0.05	0.0	0.41	0.013	0.02	0.35	0.02	0.3
12.35	9.7	0.12	2.532	1.424	1.67	1.0	3.12	67	6.8	8.18	55.7	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.38	0.000	0.00	0.32	0.00	0.3
12.4	6.89	0.13	2.543	1.429	2.99	1.0	3.43	93	4.8	12.88	62.1	0.84	na	0.195	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.38	0.000	0.00	0.32	0.00	0.3
12.45	14.04	0.24	2.553	1.434	2.09	1.0	2.99	58	9.8	6.64	65.0	0.84	na	0.195	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.38	0.000	0.00	0.32	0.00	0.3
12.5	20.17	0.27	2.563	1.440	1.53	1.0	2.77	44	14.0	4.48	62.8	0.84	na	0.195	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.38	0.000	0.00	0.32	0.00	0.3
12.55	20.43	0.16	2.573	1.445	0.90	1.0	2.65	38	14.1	3.64	51.4	0.84	na	0.195	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.38	0.000	0.00	0.32	0.00	0.3

12.6	10.21	0.12	2.584	1.450	1.57	1.0	3.09	65	7.0	7.81	55.0	0.84	na	0.194	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.38	0.000	0.00	0.32	0.00	0.3
12.65	13.53	0.22	2.594	1.455	2.01	1.0	3.01	59	9.3	6.81	63.3	0.84	na	0.194	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.38	0.000	0.00	0.32	0.00	0.3
12.7	51.58	0.33	2.604	1.460	0.67	0.5	2.15	17	41.5	1.54	63.8	0.84	0.104	0.194	0.97	1.34	14.1	0.500	0.943	0.003	0.05	0.0	0.38	0.002	0.00	0.32	0.00	0.3
12.75	66.9	0.44	2.614	1.465	0.68	0.5	2.05	14	53.7	1.36	73.1	0.83	0.116	0.194	0.97	1.49	15.5	0.500	0.938	0.002	0.05	0.0	0.37	0.001	0.00	0.32	0.00	0.3
12.8	35.24	0.33	2.625	1.470	1.01	0.5	2.39	26	28.2	2.26	63.8	0.83	0.104	0.193	0.97	1.34	15.6	0.500	0.943	0.003	0.05	0.0	0.37	0.002	0.00	0.32	0.00	0.3
12.85	114.39	0.32	2.635	1.476	0.29	0.5	1.66	5	91.5	1.00	91.5	0.83	0.151	0.193	0.97	1.93	16.9	0.378	0.856	0.000	0.05	0.0	0.36	0.000	0.00	0.31	0.00	0.3
12.9	36.26	0.16	2.645	1.481	0.48	0.5	2.23	20	28.9	1.00	28.9	0.83	0.074	0.193	0.98	0.96	6.6	0.500	0.943	0.105	0.05	0.2	0.36	0.095	0.19	0.31	0.12	0.3
12.95	15.32	0.04	2.655	1.486	0.32	1.0	2.64	37	10.3	3.56	36.7	0.83	na	0.192	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.15	0.000	0.00	0.13	0.00	0.2
13	12.77	0.09	2.666	1.491	0.89	1.0	2.89	51	8.6	5.54	47.5	0.83	na	0.192	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.15	0.000	0.00	0.13	0.00	0.2
13.05	12.26	0.09	2.676	1.496	0.94	1.0	2.92	53	8.2	5.85	48.0	0.83	na	0.192	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.15	0.000	0.00	0.13	0.00	0.2
13.1	11.49	0.09	2.686	1.501	1.02	1.0	2.97	56	7.7	6.37	48.8	0.82	na	0.192	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.15	0.000	0.00	0.13	0.00	0.2
13.15	11.23	0.09	2.696	1.506	1.05	1.0	2.99	58	7.5	6.58	49.1	0.82	na	0.191	0.98	na	na	0.000	0.000	0.000	0.05	0.0	0.15	0.000	0.00	0.13	0.00	0.2
13.2	10.98	0.14	2.707	1.512	1.69	1.0	3.09	65	7.3	7.80	56.6	0.82	na	0.191	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.15	0.000	0.00	0.13	0.00	0.2
13.25	10.72	0.18	2.717	1.517	2.25	1.0	3.17	70	7.1	8.75	61.8	0.82	na	0.191	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.15	0.000	0.00	0.13	0.00	0.2
13.3	10.72	0.08	2.727	1.522	1.00	1.0	3.01	59	7.0	6.81	48.0	0.82	na	0.190	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.15	0.000	0.00	0.13	0.00	0.2
13.35	9.19	0.08	2.737	1.527	1.24	1.0	3.13	68	6.0	8.31	50.0	0.82	na	0.190	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.15	0.000	0.00	0.13	0.00	0.2
13.4	12.77	0.28	2.748	1.532	2.79	1.0	3.13	68	8.3	8.33	69.4	0.81	na	0.190	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.15	0.000	0.00	0.13	0.00	0.2
13.45	38.56	0.31	2.758	1.537	0.87	0.5	2.33	24	30.2	2.04	61.5	0.81	0.102	0.189	0.97	1.33	14.7	0.500	0.943	0.003	0.05	0.0	0.15	0.002	0.00	0.13	0.00	0.2
13.5	75.84	0.5	2.768	1.542	0.68	0.5	2.01	13	59.3	1.31	77.6	0.81	0.123	0.189	0.97	1.61	16.2	0.500	0.926	0.001	0.05	0.0	0.15	0.001	0.00	0.12	0.00	0.2
13.55	110.31	0.81	2.778	1.547	0.75	0.5	1.90	10	86.1	1.18	101.5	0.81	0.177	0.189	0.96	2.30	20.3	0.300	0.781	0.000	0.05	0.0	0.14	0.000	0.00	0.12	0.00	0.2
13.6	209.38	0.98	2.789	1.553	0.47	0.5	1.55	4	163.2	1.00	163.2	0.81	0.461	0.189	0.93	5.81	28.9	0.066	0.073	0.000	0.05	0.0	0.14	0.000	0.00	0.12	0.00	0.2
13.65	266.57	1.26	2.799	1.558	0.48	0.5	1.47	2	207.4	1.00	207.4	0.81	0.461	0.188	0.89	5.56	35.8	0.017	-0.562	0.000	0.05	0.0	0.14	0.000	0.00	0.12	0.00	0.2
13.7	240.27	1.9	2.809	1.563	0.80	0.5	1.65	5	186.7	1.00	186.0	0.80	0.461	0.188	0.91	5.72	34.1	0.034	-0.247	0.000	0.05	0.0	0.14	0.000	0.00	0.12	0.00	0.2
13.75	213.72	1.93	2.819	1.568	0.92	0.5	1.72	7	165.8	1.05	173.9	0.80	0.461	0.188	0.92	5.78	32.7	0.049	-0.075	0.000	0.05	0.0	0.14	0.000	0.00	0.12	0.00	0.2
13.8	183.84	1.03	2.830	1.573	0.57	0.5	1.64	5	142.4	0.99	141.6	0.80	0.344	0.187	0.94	4.41	25.9	0.115	0.354	0.000	0.05	0.0	0.14	0.000	0.00	0.12	0.00	0.2
13.85	146.56	1.44	2.840	1.578	1.00	0.5	1.88	10	113.3	1.16	131.5	0.80	0.291	0.187	0.95	3.76	26.1	0.148	0.476	0.000	0.05	0.0	0.14	0.000	0.00	0.12	0.00	0.2
13.9	111.33	1.21	2.850	1.583	1.12	0.5	2.00	13	85.9	1.29	111.0	0.80	0.207	0.187	0.95	2.70	23.1	0.240	0.695	0.000	0.05	0.0	0.14	0.000	0.00	0.12	0.00	0.2
13.95	74.05	0.79	2.860	1.589	1.11	0.5	2.14	17	57.1	1.53	87.3	0.80	0.142	0.186	0.96	1.87	19.2	0.417	0.881	0.001	0.05	0.0	0.14	0.000	0.00	0.12	0.00	0.2
14	55.41	0.5	2.871	1.594	0.95	0.5	2.22	20	42.6	1.69	72.3	0.79	0.115	0.186	0.97	1.52	16.4	0.500	0.939	0.002	0.05	0.0	0.14	0.001	0.00	0.12	0.00	0.2
14.05	41.11	0.17	2.881	1.599	0.44	0.5	2.18	18	31.6	1.00	31.6	0.79	0.076	0.186	0.98	1.02	7.1	0.500	0.943	0.024	0.05	0.0	0.14	0.027	0.05	0.12	0.12	0.2
14.1	29.62	0.14	2.891	1.604	0.52	0.5	2.35	25	22.7	2.12	48.2	0.79	0.090	0.185	0.97	1.21	11.6	0.500	0.943	0.006	0.05	0.0	0.09	0.005	0.01	0.07	0.01	0.0
14.15	21.96	0.75	2.901	1.609	3.94	1.0	3.01	59	13.6	6.79	92.6	0.79	na	0.185	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.08	0.000	0.00	0.06	0.00	0.0
14.2	51.32	0.73	2.912	1.614	1.51	0.5	2.36	25	39.2	2.15	84.2	0.79	0.135	0.185	0.96	1.80	20.3	0.448	0.898	0.001	0.05	0.0	0.08	0.000	0.00	0.06	0.00	0.0
14.25	245.12	1.28	2.922	1.619	0.53	0.5	1.53	3	187.1	1.00	187.1	0.79	0.461	0.184	0.90	5.77	33.0	0.033	-0.263	0.000	0.05	0.0	0.08	0.000	0.00	0.06	0.00	0.0
14.3	212.7	3.11	2.932	1.624	1.48	0.5	1.88	10	162.1	1.16	188.8	0.78	0.461	0.184	0.90	5.76	37.6	0.031	-0.287	0.000	0.05	0.0	0.08	0.000	0.00	0.06	0.00	0.0
14.35	329.64	3.59	2.943	1.630	1.10	0.5	1.66	5	250.8	1.00	251.7	0.78	0.461	0.184	0.87	5.58	46.3	0.002	-1.240	0.000	0.05	0.0	0.08	0.000	0.00	0.06	0.00	0.0
14.4	264.53	3.49	2.953	1.635	1.33	0.5	1.78	8	201.0	1.09	218.9	0.78	0.461	0.183	0.87	5.58	42.1	0.011	-0.735	0.000	0.05	0.0	0.08	0.000	0.00	0.06	0.00	0.0
14.45	141.2	2.71	2.963	1.640	1.96	0.5	2.09	16	107.1	1.44	153.8	0.78	0.418	0.183	0.93	5.41	33.2	0.084	0.198	0.000	0.05	0.0	0.08	0.000	0.00	0.06	0.00	0.0
14.5	109.28	2.03	2.973	1.645	1.91	0.5	2.17	18	82.8	1.58	130.9	0.78	0.288	0.183	0.94	3.79	29.1	0.150	0.483	0.000	0.05	0.0	0.08	0.000	0.00	0.06	0.00	0.0
14.55	52.09	1.01	2.984	1.650	2.06	0.5	2.44	28	39.4	2.48	97.5	0.78	0.166	0.182	0.95	2.22	24.5	0.329	0.812	0.000	0.05	0.0	0.08	0.000	0.00	0.06	0.00	0.0
14.6	32.17	0.27	2.994	1.655	0.93	0.5	2.44	28	24.3	2.45	59.5	0.77	0.100	0.182	0.97	1.35	14.9	0.500	0.943	0.003	0.05	0.0	0.08	0.002	0.00	0.06	0.00	0.0
14.65	22.73	0.13	3.004	1.660	0.66	1.0	2.61	36	13.7	3.38	46.2	0.77	na	0.182	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.07	0.000	0.00	0.05	0.00	0.0
14.7	21.96	0.12	3.014	1.666	0.63	1.0	2.62	36	13.2	3.44	45.4	0.77	na	0.181	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.07	0.000	0.00	0.05	0.00	0.0
14.75	20.68	0.1	3.025	1.671	0.57	1.0	2.63	37	12.4	3.51	43.5	0.77	na	0.181	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.07	0.000	0.00	0.05	0.00	0.0
14.8	21.7	0.13	3.035	1.676	0.70	1.0	2.65	38	12.9	3.60	46.6	0.77	na	0.181	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.07	0.000	0.00	0.05	0.00	0.0
14.85	21.45	0.08	3.045	1.681	0.43	0.5	2.48	30	16.1	2.67	42.9	0.77	0.086	0.180	0.97	1.18	11.0	0.500	0.943	0.007	0.05	0.0	0.07	0.006	0.01	0.05	0.01	0.0
14.9	21.96	0.2	3.055	1.686	1.06	1.0	2.72	42	13.0	4.14	53.9	0.76	na	0.180	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.06	0.000	0.00	0.04	0.00	0.0
14.95	27.58	0.16	3.066	1.691	0.65	0.5	2.44	28	20.6	2.46	50.7	0.76	0.092	0.180	0.97	1.26	12.7	0.500	0.943	0.005	0.05	0.0	0.06	0.003	0.01	0.04	0.01	0.0
15	19.15	0.13	3.076	1.696	0.81	1.0	2.74	42	11.3	4.25	48.0	0.76	na	0.179	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.05	0.000	0.00	0.03	0.00	0.0
15.05	21.7	0.52	3.086	1.701	2.79	1.0	2.95	55	12.8	6.15	78.4	0.76	na	0.179	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.05	0.000	0.00	0.03	0.00	0.0
15.1	26.56	0.94	3.096	1.707	4.01	1.0	2.96	56	15.6	6.28	97.7	0.76	na	0.179	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.05	0.000	0.00	0.03	0.00	0.0
15.15	90.39	1.2	3.107	1.712	1.37	0.5	2.14	17	67.1	1.53	102.6	0.76	0.181	0.178	0.95	2.45	22.6	0.292	0.771	0.000	0.05	0.0	0.05	0.000	0.00	0.03	0.00	0.0
15.2	143.24	1.72	3.117	1.717	1.23	0.5	1.96	12	106.2	1.24	131.6	0.75	0.292	0.178	0.93	3.91	26.9	0.147	0.475	0.000	0.05	0.0	0.05	0.000	0.00	0.03	0.00	0.0
15.25	75.07	1.24	3.127	1.722	1.72	0.5	2.27	21	55.6	1.85	102.8	0.75	0.181	0.178	0.95	2.46	23.9	0.291	0.770	0.000	0.05	0.0	0.05	0.000	0.00	0.03	0.00	0.0
15.3	41.36	0.74	3.137	1.727	1.94	1.0	2.61	36	23.9	3.34	80.0	0.75	na	0.177	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.05	0.000	0.00	0.03	0.00	0.0
15.35	32.68	0.34	3.148	1.732	1.15	0.5	2.49	30	24.1	2.69	64.8	0.75	0.105	0.177	0.96	1.46	16.6	0.500	0.943	0.002	0.05	0.0	0.05	0.001	0.00	0.03	0.00	0.0
15.4	24.51	0.13	3.158	1.737	0.61	0.5	2.49	30	18.1	2.68	48.4	0.75	0.090	0.177	0.97	1.26	12.4	0.500	0.943	0.005	0.05	0.0	0.04	0.004	0.01	0.03	0.01	0.0
15.45	17.62	0.09	3.168	1.743	0.62	1.0	2.75	43	10.1	4.32	43.7	0.75	na	0.176	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
15.5	16.6	0.05	3.178	1.748	0.37	1.0	2.70	41	9.5	4.00	38.0	0.74	na	0.176	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
15.55	14.3	0.03	3.189	1.753	0.27	1.0	2.75	43	8.2	4.33	35.3	0.74	na	0.176	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
15.6	12.51	0.11	3.199	1.758	1.18	1.0	3.03	61	7.1	7.11	50.6	0.74	na	0.175	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
15.65	12	0.1	3.209	1.763	1.14	1.0	3.05	62	6.8	7.31	49.8	0.74	na	0.175	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
15.7	12.26	0.09	3.219	1.768	1.00	1.0	3.02	60	6.9	6.92	48.0	0.74	na	0.175	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
15.75	12.77	0.08	3.230	1.773	0.84	1.0	2.97	56	7.2	6.37	45.9	0.74	na	0.174	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
15.8	13.53	0.07	3.240	1.779	0.68	1.0	2.91	52	7.6	5.72	43.5	0.73	na	0.174	0.97	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0

15.85	13.28	0.08	3.250	1.784	0.80	1.0	2.94	55	7.4	6.10	45.4	0.73	na	0.174	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
15.9	14.04	0.09	3.260	1.789	0.83	1.0	2.92	53	7.8	5.89	46.3	0.73	na	0.173	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
15.95	12.51	0.1	3.271	1.794	1.08	1.0	3.03	61	7.0	7.06	49.2	0.73	na	0.173	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
16	12.26	0.06	3.281	1.799	0.67	1.0	2.96	56	6.8	6.31	43.0	0.73	na	0.172	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
16.05	12.26	0.07	3.291	1.804	0.78	1.0	2.99	58	6.8	6.59	44.8	0.73	na	0.172	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
16.1	12.51	0.23	3.301	1.809	2.50	1.0	3.20	73	6.9	9.24	63.9	0.72	na	0.172	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
16.15	15.83	0.36	3.312	1.814	2.88	1.0	3.12	67	8.7	8.16	71.2	0.72	na	0.171	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
16.2	22.47	0.34	3.322	1.820	1.78	1.0	2.85	49	12.3	5.25	64.8	0.72	na	0.171	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
16.25	29.62	0.25	3.332	1.825	0.95	1.0	2.60	36	16.2	3.33	54.1	0.72	na	0.171	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
16.3	26.81	0.18	3.342	1.830	0.77	1.0	2.61	36	14.7	3.36	49.2	0.72	na	0.170	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
16.35	25.53	0.35	3.353	1.835	1.58	1.0	2.78	45	13.9	4.57	63.6	0.72	na	0.170	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
16.4	21.7	0.46	3.363	1.840	2.51	1.0	2.95	55	11.8	6.23	73.5	0.71	na	0.170	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
16.45	32.43	0.7	3.373	1.845	2.41	1.0	2.78	45	17.6	4.60	80.8	0.71	na	0.169	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.04	0.000	0.00	0.02	0.00	0.0
16.5	43.41	0.39	3.383	1.850	0.97	0.5	2.35	24	31.0	2.10	65.2	0.71	0.106	0.169	0.96	1.52	15.7	0.500	0.943	0.002	0.05	0.0	0.04	0.001	0.00	0.02	0.00	0.0
16.55	50.05	0.24	3.394	1.856	0.51	0.5	2.16	18	35.7	1.56	55.8	0.71	0.096	0.169	0.96	1.39	12.4	0.500	0.943	0.003	0.05	0.0	0.03	0.002	0.00	0.02	0.00	0.0
16.6	35.24	0.16	3.404	1.861	0.50	0.5	2.31	23	25.1	1.96	49.1	0.71	0.091	0.168	0.96	1.32	11.6	0.500	0.943	0.004	0.05	0.0	0.03	0.003	0.01	0.02	0.00	0.0
16.65	14.3	0.08	3.414	1.866	0.73	1.0	2.91	53	7.7	5.81	44.5	0.71	na	0.168	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
16.7	13.79	0.08	3.424	1.871	0.77	1.0	2.94	55	7.4	6.10	45.0	0.71	na	0.168	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
16.75	11.49	0.08	3.435	1.876	0.99	1.0	3.09	65	6.1	7.74	47.4	0.70	na	0.167	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
16.8	13.28	0.06	3.445	1.881	0.61	1.0	2.93	54	7.1	5.97	42.1	0.70	na	0.167	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
16.85	14.81	0.06	3.455	1.886	0.53	1.0	2.85	49	7.9	5.21	40.9	0.70	na	0.167	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
16.9	10.72	0.05	3.465	1.891	0.69	1.0	3.07	64	5.7	7.58	42.9	0.70	na	0.167	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
16.95	9.7	0.02	3.476	1.897	0.32	1.0	3.04	61	5.1	7.20	36.8	0.70	na	0.166	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17	9.45	0.06	3.486	1.902	1.01	1.0	3.22	74	5.0	9.43	46.9	0.70	na	0.166	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.05	8.94	0.06	3.496	1.907	1.10	1.0	3.27	78	4.7	10.20	47.8	0.69	na	0.166	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.1	9.19	0.05	3.506	1.912	0.88	1.0	3.22	74	4.8	9.43	45.3	0.69	na	0.165	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.15	9.45	0.02	3.517	1.917	0.34	1.0	3.07	63	4.9	7.55	37.2	0.69	na	0.165	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.2	9.7	0.05	3.527	1.922	0.81	1.0	3.17	71	5.0	8.82	44.5	0.69	na	0.165	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.25	10.21	0.12	3.537	1.927	1.80	1.0	3.28	79	5.3	10.39	55.0	0.69	na	0.164	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.3	12.26	0.2	3.547	1.933	2.30	1.0	3.23	75	6.3	9.63	61.1	0.69	na	0.164	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.35	12.26	0.23	3.558	1.938	2.64	1.0	3.26	78	6.3	10.10	63.9	0.69	na	0.164	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.4	11.75	0.27	3.568	1.943	3.30	1.0	3.33	84	6.0	11.22	67.9	0.68	na	0.163	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.45	11.75	0.42	3.578	1.948	5.14	1.0	3.44	93	6.0	12.98	78.3	0.68	na	0.163	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.5	13.53	0.62	3.588	1.953	6.24	1.0	3.42	91	6.9	12.63	87.5	0.68	na	0.163	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.55	13.79	0.6	3.599	1.958	5.89	1.0	3.40	89	7.0	12.25	86.2	0.68	na	0.162	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.6	11.49	0.46	3.609	1.963	5.84	1.0	3.49	98	5.9	13.81	80.8	0.68	na	0.162	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.65	11.49	0.3	3.619	1.968	3.81	1.0	3.39	89	5.8	12.07	70.4	0.68	na	0.162	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.7	13.79	0.17	3.629	1.974	1.67	1.0	3.11	66	7.0	8.06	56.3	0.68	na	0.161	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.75	14.04	0.12	3.640	1.979	1.15	1.0	3.03	61	7.1	7.10	50.4	0.67	na	0.161	0.96	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.8	12.51	0.3	3.650	1.984	3.39	1.0	3.32	83	6.3	10.97	69.2	0.67	na	0.161	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.85	19.92	0.25	3.660	1.989	1.54	1.0	2.92	53	10.0	5.86	58.7	0.67	na	0.161	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.9	22.98	0.38	3.670	1.994	1.97	1.0	2.91	53	11.5	5.76	66.4	0.67	na	0.160	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
17.95	18.38	0.26	3.681	1.999	1.77	1.0	2.99	58	9.2	6.59	60.6	0.67	na	0.160	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
18	21.45	0.42	3.691	2.004	2.36	1.0	2.98	57	10.7	6.54	70.0	0.67	na	0.160	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
18.05	21.19	0.5	3.701	2.010	2.86	1.0	3.04	61	10.5	7.12	75.0	0.67	na	0.159	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
18.1	36.77	0.5	3.711	2.015	1.51	1.0	2.65	38	18.3	3.66	66.7	0.66	na	0.159	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
18.15	45.96	0.56	3.722	2.020	1.33	0.5	2.42	27	31.4	2.37	74.4	0.66	0.118	0.159	0.94	1.79	18.4	0.500	0.935	0.001	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
18.2	41.88	0.61	3.732	2.025	1.60	1.0	2.62	36	20.7	3.41	70.5	0.66	na	0.159	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
18.25	30.9	0.59	3.742	2.030	2.17	1.0	2.81	47	15.2	4.88	74.3	0.66	na	0.158	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
18.3	24.51	0.32	3.752	2.035	1.54	1.0	2.84	48	12.0	5.07	61.1	0.66	na	0.158	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
18.35	16.34	0.45	3.763	2.040	3.58	1.0	3.21	74	8.0	9.41	75.4	0.66	na	0.158	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
18.4	19.92	0.58	3.773	2.046	3.59	1.0	3.13	67	9.7	8.22	80.1	0.66	na	0.157	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
18.45	36.26	0.64	3.783	2.051	1.97	1.0	2.73	42	17.7	4.19	74.1	0.65	na	0.157	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
18.5	56.43	0.55	3.793	2.056	1.04	0.5	2.28	22	38.2	1.88	72.0	0.65	0.115	0.157	0.94	1.76	16.8	0.500	0.940	0.001	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
18.55	82.22	0.49	3.804	2.061	0.62	0.5	2.02	13	55.6	1.32	73.3	0.65	0.117	0.157	0.94	1.79	15.4	0.500	0.937	0.001	0.05	0.0	0.02	0.000	0.00	0.01	0.00	0.0
18.6	95.75	0.31	3.814	2.066	0.34	0.5	1.84	9	64.7	1.00	64.7	0.65	0.105	0.156	0.95	1.63	12.7	0.500	0.943	0.001	0.05	0.0	0.02	0.001	0.00	0.01	0.00	0.0
18.65	94.99	0.41	3.824	2.071	0.45	0.5	1.89	10	64.1	1.00	64.1	0.65	0.105	0.156	0.95	1.62	12.8	0.500	0.943	0.001	0.05	0.0	0.01	0.001	0.00	0.01	0.00	0.0
18.7	84.52	0.59	3.834	2.076	0.73	0.5	2.05	14	57.0	1.36	77.2	0.65	0.123	0.156	0.94	1.89	16.4	0.500	0.927	0.000	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.0
18.75	76.09	0.49	3.845	2.081	0.68	0.5	2.07	15	51.2	1.39	71.4	0.65	0.114	0.155	0.94	1.76	15.3	0.500	0.941	0.001	0.05	0.0	0.01	0.000	0.00	0.01	0.00	0.0
18.8	72.01	0.39	3.855	2.087	0.57	0.5	2.06	15	48.4	1.37	66.4	0.65	0.107	0.155	0.94	1.67	14.1	0.500	0.943	0.001	0.05	0.0	0.01	0.001	0.00	0.01	0.00	0.0
18.85	67.15	0.39	3.865	2.092	0.62	0.5	2.10	16	45.1	1.45	65.2	0.64	0.106	0.155	0.95	1.65	14.1	0.500	0.943	0.001	0.05	0.0	0.01	0.001	0.00	0.01	0.00	0.0
18.9	61.03	0.4	3.875	2.097	0.70	0.5	2.17	18	40.9	1.58	64.6	0.64	0.105	0.155	0.95	1.64	14.4	0.500	0.943	0.001	0.05	0.0	0.01	0.001	0.00	0.00	0.00	0.0
18.95	56.68	0.61	3.886	2.102	1.16	0.5	2.31	23	38.0	1.97	74.8	0.64	0.119	0.154	0.94	1.85	17.7	0.500	0.934	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19	68.18	0.43	3.896	2.107	0.67	0.5	2.11	16	45.6	1.47	67.0	0.64	0.108	0.154	0.94	1.69	14.6	0.500	0.943	0.001	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.05	69.2	0.62	3.906	2.112	0.95	0.5	2.19	19	46.2	1.63	75.2	0.64	0.119	0.154	0.94	1.86	16.9	0.500	0.933	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0

19.1	54.39	0.75	3.917	2.117	1.49	0.5	2.39	26	36.3	2.26	82.0	0.64	0.131	0.154	0.94	2.04	20.1	0.472	0.909	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.15	54.39	0.78	3.927	2.123	1.55	0.5	2.40	26	36.3	2.30	83.4	0.64	0.134	0.153	0.94	2.09	20.5	0.457	0.902	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.2	84.01	0.76	3.937	2.128	0.95	0.5	2.11	16	55.9	1.47	82.4	0.64	0.132	0.153	0.94	2.06	17.9	0.467	0.907	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.25	111.07	0.64	3.947	2.133	0.60	0.5	1.90	10	73.9	1.18	87.3	0.63	0.142	0.153	0.93	2.21	17.5	0.417	0.882	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.3	116.18	1.1	3.958	2.138	0.98	0.5	2.00	13	77.2	1.30	100.2	0.63	0.174	0.153	0.93	2.69	20.9	0.309	0.791	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.35	73.79	1.29	3.968	2.143	1.85	0.5	2.34	24	49.0	2.06	101.0	0.63	0.176	0.152	0.92	2.73	24.2	0.303	0.785	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.4	33.45	0.69	3.978	2.148	2.34	1.0	2.82	47	15.6	4.96	77.2	0.63	na	0.152	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.45	15.83	0.18	3.988	2.153	1.52	1.0	3.07	63	7.4	7.51	55.2	0.63	na	0.152	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.5	13.79	0.06	3.999	2.158	0.61	1.0	2.99	58	6.4	6.59	42.1	0.63	na	0.152	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.55	13.53	0.06	4.009	2.164	0.63	1.0	3.00	59	6.3	6.77	42.3	0.63	na	0.151	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.6	14.55	0.05	4.019	2.169	0.47	1.0	2.92	54	6.7	5.92	39.7	0.63	na	0.151	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.65	15.06	0.06	4.029	2.174	0.54	1.0	2.93	54	6.9	5.92	41.0	0.63	na	0.151	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.7	14.3	0.1	4.040	2.179	0.97	1.0	3.05	62	6.6	7.26	47.6	0.62	na	0.151	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.75	16.09	0.08	4.050	2.184	0.66	1.0	2.92	53	7.4	5.88	43.3	0.62	na	0.150	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.8	17.36	0.16	4.060	2.189	1.20	1.0	2.98	57	7.9	6.55	51.9	0.62	na	0.150	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.85	17.11	0.17	4.070	2.194	1.30	1.0	3.01	59	7.8	6.81	53.1	0.62	na	0.150	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.9	15.58	0.18	4.081	2.200	1.57	1.0	3.09	65	7.1	7.82	55.4	0.62	na	0.150	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.95	15.83	0.18	4.091	2.205	1.53	1.0	3.08	64	7.2	7.68	55.2	0.62	na	0.149	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20	16.34	0.22	4.101	2.210	1.80	1.0	3.10	65	7.4	7.89	58.4	0.62	na	0.149	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.05	16.34	0.26	4.111	2.215	2.13	1.0	3.14	68	7.4	8.36	61.7	0.62	na	0.149	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.1	16.34	0.23	4.122	2.220	1.88	1.0	3.11	66	7.4	8.05	59.2	0.62	na	0.149	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.15	15.58	0.21	4.132	2.225	1.83	1.0	3.13	68	7.0	8.31	58.2	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.2	15.06	0.22	4.142	2.230	2.02	1.0	3.17	71	6.8	8.81	59.5	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.25	15.32	0.24	4.152	2.235	2.15	1.0	3.18	71	6.9	8.89	60.9	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.3	15.06	0.25	4.163	2.241	2.29	1.0	3.20	73	6.7	9.22	62.0	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.35	14.81	0.21	4.173	2.246	1.97	1.0	3.18	71	6.6	8.93	58.9	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.4	14.81	0.18	4.183	2.251	1.69	1.0	3.15	69	6.6	8.53	56.1	0.61	na	0.147	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.45	14.55	0.17	4.193	2.256	1.64	1.0	3.15	69	6.4	8.59	55.4	0.61	na	0.147	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.5	14.04	0.15	4.204	2.261	1.52	1.0	3.16	70	6.2	8.67	53.9	0.61	na	0.147	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.55	13.53	0.13	4.214	2.266	1.40	1.0	3.17	70	6.0	8.74	52.2	0.61	na	0.147	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.6	13.53	0.13	4.224	2.271	1.40	1.0	3.17	70	6.0	8.76	52.2	0.61	na	0.146	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.65	13.02	0.13	4.234	2.277	1.48	1.0	3.20	73	5.7	9.23	52.8	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.7	13.02	0.13	4.245	2.282	1.48	1.0	3.20	73	5.7	9.25	52.8	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.75	13.02	0.13	4.255	2.287	1.48	1.0	3.20	73	5.7	9.28	52.8	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.8	13.02	0.14	4.265	2.292	1.60	1.0	3.22	75	5.7	9.50	53.9	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.85	13.53	0.13	4.275	2.297	1.40	1.0	3.17	71	5.9	8.87	52.2	0.60	na	0.145	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.9	13.02	0.12	4.286	2.302	1.37	1.0	3.19	73	5.7	9.13	51.7	0.60	na	0.145	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.95	13.02	0.1	4.296	2.307	1.15	1.0	3.16	70	5.6	8.71	49.1	0.60	na	0.145	0.95	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21	13.28	0.13	4.306	2.312	1.45	1.0	3.19	73	5.7	9.15	52.5	0.60	na	0.145	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.05	15.58	0.13	4.316	2.318	1.15	1.0	3.06	63	6.7	7.46	50.2	0.60	na	0.145	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.1	12.77	0.12	4.327	2.323	1.42	1.0	3.22	74	5.5	9.46	52.0	0.60	na	0.144	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.15	12.51	0.1	4.337	2.328	1.22	1.0	3.20	73	5.4	9.27	49.8	0.60	na	0.144	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.2	13.02	0.11	4.347	2.333	1.27	1.0	3.19	72	5.6	9.04	50.5	0.59	na	0.144	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.25	12.77	0.12	4.357	2.338	1.43	1.0	3.22	75	5.5	9.52	52.0	0.59	na	0.144	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.3	12.51	0.13	4.368	2.343	1.60	1.0	3.26	77	5.3	10.03	53.5	0.59	na	0.144	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.35	13.02	0.13	4.378	2.348	1.50	1.0	3.22	75	5.5	9.54	52.9	0.59	na	0.143	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.4	12.51	0.12	4.388	2.354	1.48	1.0	3.24	77	5.3	9.85	52.4	0.59	na	0.143	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.45	12	0.12	4.398	2.359	1.58	1.0	3.28	80	5.1	10.43	53.1	0.59	na	0.143	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.5	11.49	0.12	4.409	2.364	1.69	1.0	3.33	83	4.9	11.08	53.9	0.59	na	0.143	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.55	12	0.13	4.419	2.369	1.71	1.0	3.30	81	5.1	10.71	54.3	0.59	na	0.143	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.6	12.51	0.15	4.429	2.374	1.86	1.0	3.29	81	5.3	10.58	55.8	0.59	na	0.142	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.65	13.28	0.14	4.439	2.379	1.58	1.0	3.23	75	5.6	9.62	53.7	0.59	na	0.142	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.7	13.79	0.14	4.450	2.384	1.50	1.0	3.20	73	5.8	9.18	53.1	0.59	na	0.142	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.75	15.32	0.17	4.460	2.390	1.57	1.0	3.15	69	6.4	8.52	54.6	0.58	na	0.142	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.8	13.79	0.22	4.470	2.395	2.36	1.0	3.29	80	5.8	10.54	60.7	0.58	na	0.142	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.85	12.77	0.11	4.480	2.400	1.33	1.0	3.22	75	5.3	9.56	50.9	0.58	na	0.142	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.9	12.51	0.1	4.491	2.405	1.25	1.0	3.23	75	5.2	9.60	50.0	0.58	na	0.141	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.95	12.26	0.07	4.501	2.410	0.90	1.0	3.19	72	5.1	9.03	46.0	0.58	na	0.141	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22	12	0.17	4.511	2.415	2.27	1.0	3.37	87	5.0	11.79	58.6	0.58	na	0.141	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.05	23.75	0.2	4.521	2.420	1.04	1.0	2.85	49	9.8	5.22	51.2	0.58	na	0.141	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.1	16.85	0.25	4.532	2.425	2.03	1.0	3.16	70	6.9	8.65	60.1	0.58	na	0.141	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.15	15.32	0.11	4.542	2.431	1.02	1.0	3.08	64	6.3	7.64	48.1	0.58	na	0.140	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.2	15.06	0.12	4.552	2.436	1.14	1.0	3.11	66	6.2	8.02	49.6	0.58	na	0.140	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.25	14.81	0.12	4.562	2.441	1.17	1.0	3.12	67	6.1	8.21	49.8	0.58	na	0.140	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.3	14.81	0.13	4.573	2.446	1.27	1.0	3.14	68	6.1	8.42	51.0	0.58	na	0.140	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0

22.35	14.55	0.13	4.583	2.451	1.30	1.0	3.16	70	5.9	8.63	51.2	0.58	na	0.140	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.4	14.3	0.12	4.593	2.456	1.24	1.0	3.16	70	5.8	8.65	50.4	0.57	na	0.140	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.45	14.3	0.14	4.603	2.461	1.44	1.0	3.19	72	5.8	9.06	52.6	0.57	na	0.139	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.5	14.3	0.3	4.614	2.467	3.10	1.0	3.35	85	5.8	11.41	66.1	0.57	na	0.139	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.55	19.41	0.55	4.624	2.472	3.72	1.0	3.23	76	7.9	9.70	76.2	0.57	na	0.139	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.6	51.32	0.41	4.634	2.477	0.88	0.5	2.32	23	31.7	2.01	63.7	0.57	0.104	0.139	0.93	1.78	15.1	0.500	0.943	0.001	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.65	74.05	0.57	4.644	2.482	0.82	0.5	2.16	18	45.7	1.57	71.5	0.57	0.114	0.139	0.93	1.94	15.9	0.500	0.941	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.7	47.75	0.46	4.655	2.487	1.07	0.5	2.40	26	29.4	2.29	67.2	0.57	0.108	0.139	0.93	1.85	16.5	0.500	0.943	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.75	20.94	0.24	4.665	2.492	1.47	1.0	3.00	58	8.4	6.68	56.1	0.57	na	0.139	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.8	16.09	0.11	4.675	2.497	0.96	1.0	3.06	62	6.4	7.37	47.5	0.57	na	0.138	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.85	17.36	0.14	4.685	2.502	1.10	1.0	3.04	61	6.9	7.18	49.8	0.57	na	0.138	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.9	17.11	0.23	4.696	2.508	1.85	1.0	3.15	69	6.8	8.53	58.2	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.95	16.09	0.19	4.706	2.513	1.67	1.0	3.16	70	6.4	8.70	55.7	0.57	na	0.138	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23	15.06	0.14	4.716	2.518	1.35	1.0	3.16	70	6.0	8.67	51.9	0.57	na	0.138	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.05	14.55	0.12	4.726	2.523	1.22	1.0	3.16	70	5.8	8.70	50.2	0.57	na	0.138	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.1	14.04	0.07	4.737	2.528	0.75	1.0	3.10	66	5.6	7.95	44.1	0.56	na	0.137	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.15	13.79	0.12	4.747	2.533	1.33	1.0	3.21	74	5.4	9.38	51.1	0.56	na	0.137	0.94	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.2	14.04	0.62	4.757	2.538	6.68	1.0	3.55	100	5.5	15.05	83.3	0.56	na	0.137	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.25	31.15	0.83	4.767	2.544	3.15	1.0	3.00	58	12.2	6.67	81.7	0.56	na	0.137	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.3	112.86	1.41	4.778	2.549	1.30	0.5	2.12	17	68.7	1.49	102.4	0.56	0.180	0.137	0.90	3.03	22.4	0.294	0.773	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.35	244.61	1.6	4.788	2.554	0.67	0.5	1.67	6	148.7	1.01	150.8	0.56	0.399	0.137	0.86	6.40	27.9	0.091	0.237	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.4	234.14	2.07	4.798	2.559	0.90	0.5	1.77	8	142.2	1.08	153.7	0.56	0.418	0.137	0.85	6.67	29.4	0.085	0.199	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.45	219.08	2.86	4.808	2.564	1.33	0.5	1.91	11	132.9	1.19	158.4	0.56	0.449	0.136	0.85	7.13	31.9	0.075	0.138	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.5	192.78	2.29	4.819	2.569	1.22	0.5	1.92	11	116.8	1.21	140.8	0.56	0.340	0.136	0.87	5.53	28.5	0.117	0.364	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.55	159.84	1.31	4.829	2.574	0.85	0.5	1.89	10	96.8	1.17	113.2	0.56	0.215	0.136	0.90	3.61	22.6	0.229	0.674	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.6	77.88	1.02	4.839	2.579	1.40	0.5	2.28	22	47.1	1.87	88.1	0.56	0.144	0.136	0.91	2.46	20.5	0.409	0.877	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.65	41.88	0.77	4.849	2.585	2.08	1.0	2.78	45	16.2	4.58	74.2	0.56	na	0.136	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.7	39.07	1.03	4.860	2.590	3.01	1.0	2.90	52	15.1	5.66	85.4	0.56	na	0.136	0.92	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.75	42.13	2.04	4.870	2.595	5.48	1.0	3.03	61	16.2	7.06	114.7	0.56	na	0.136	0.89	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.8	149.37	3.05	4.880	2.600	2.11	0.5	2.17	18	90.0	1.60	143.6	0.56	0.355	0.135	0.86	5.79	32.0	0.110	0.329	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.85	183.33	4.14	4.891	2.605	2.32	0.5	2.14	17	110.3	1.52	168.2	0.55	0.461	0.135	0.83	7.22	37.0	0.057	0.004	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.9	178.99	2.48	4.901	2.610	1.42	0.5	2.00	13	107.6	1.29	138.7	0.55	0.328	0.135	0.87	5.38	28.8	0.124	0.390	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.95	118.48	2.82	4.911	2.615	2.48	0.5	2.30	22	71.2	1.93	137.6	0.55	0.322	0.135	0.87	5.30	32.4	0.127	0.403	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24	97.28	3.62	4.921	2.621	3.92	1.0	2.64	37	37.1	3.58	133.0	0.55	na	0.135	0.87	na	na	0.000	0.000	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.05	151.93	3.32	4.932	2.626	2.26	0.5	2.19	19	91.1	1.64	148.9	0.55	0.387	0.135	0.86	6.28	33.5	0.096	0.261	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.1	159.08	3.71	4.942	2.631	2.41	0.5	2.20	19	95.3	1.65	157.2	0.55	0.441	0.135	0.85	7.07	35.4	0.077	0.153	0.000	0.05	0.0	0.00	0.000	0.00	0.00	0.00	0.0

Project No.	1160276		uses n = 0.7 vs Conetec using 0.75 for transitional soil		
Project Description	L-33			Direct	Thin Layer
Water Table	5	ft	Idriss Settlement	0.2	0.0
Earthquake Magnitude	5.2	M_W	Robertson Settlement	0.3	0.0
Acceleration	0.2	g			
Soil Unit Wt	125	pcf			
Pa	1.06	tsf			

CPT INPUT DATA			LIQUEFACTION POTENTIAL														LIQUEFACTION INDUCED SETTLEMENT										
Depth, m	q_C, tsf	fs, tsf	Total Stress, tsf	Effective. Stress, tsf	F, %	n	I_C	Fines Content, %	q_{c1N}	K_C	q_{c1N-cs}	Stress Reduct. Coeff., r_d	$CRR_{7.5}$	CSR	K_σ	Factor of Safety	$(N1)_{60-cs}$	Limiting Shear Strain, γ_{lim}	Parameter F_α	Maximum Shear Strain, γ_{max}	Layer Thick., m ΔH_i	ΔLDI_i,in	Cum. LDI, in	Vertical Reconsol Strain, ε_v	Sett., in, ΔS_i	Cum. S., in.	Zhang Settle, in	Zhang Cum. Settle, in
0.100	4.610	0.020	0.021	0.021	0.44	0.5	2.16	18	7.4	1.00	7.4	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.120	18.430	0.080	0.025	0.025	0.43	0.5	1.65	5	29.6	1.00	29.6	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.140	40.960	0.190	0.029	0.029	0.46	0.5	1.41	2	65.7	1.00	65.7	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.160	60.930	0.230	0.033	0.033	0.38	0.5	1.24	0	97.7	1.00	97.7	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.180	79.880	0.400	0.037	0.037	0.50	0.5	1.26	0	128.1	1.00	128.1	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.200	92.680	0.740	0.041	0.041	0.80	0.5	1.39	1	148.6	1.00	148.6	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.220	107.520	1.050	0.045	0.045	0.98	0.5	1.44	2	172.4	1.00	172.4	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.240	121.860	1.320	0.049	0.049	1.08	0.5	1.46	2	195.4	1.00	195.4	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.260	128.010	1.660	0.053	0.053	1.30	0.5	1.52	3	205.3	1.00	205.3	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.280	124.930	2.040	0.057	0.057	1.63	0.5	1.62	5	200.4	1.00	200.4	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.300	118.790	2.400	0.062	0.062	2.02	0.5	1.72	7	190.5	1.05	199.8	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.320	110.600	2.660	0.066	0.066	2.41	0.5	1.81	8	177.4	1.11	196.8	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.340	100.870	2.860	0.070	0.070	2.84	0.5	1.90	10	161.8	1.18	191.2	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.360	92.680	2.960	0.074	0.074	3.20	0.5	1.97	12	148.6	1.25	186.4	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.380	89.090	2.940	0.078	0.078	3.30	0.5	2.00	13	142.9	1.29	183.8	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.400	88.580	2.900	0.082	0.082	3.28	0.5	2.00	13	142.1	1.29	183.4	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.420	89.600	2.730	0.086	0.086	3.05	0.5	1.98	12	143.7	1.26	181.2	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.440	92.160	2.450	0.090	0.090	2.66	0.5	1.92	11	147.8	1.20	178.0	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.460	95.750	2.390	0.094	0.094	2.50	0.5	1.90	10	153.6	1.18	181.0	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.480	100.360	2.410	0.098	0.098	2.40	0.5	1.88	10	161.0	1.16	186.8	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.500	102.920	2.450	0.103	0.103	2.38	0.5	1.87	10	165.1	1.16	190.9	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.520	109.060	2.570	0.107	0.107	2.36	0.5	1.86	9	174.9	1.15	200.5	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.540	112.130	2.690	0.111	0.111	2.40	0.5	1.86	10	179.8	1.15	206.8	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.560	114.180	2.860	0.115	0.115	2.51	0.5	1.88	10	183.1	1.16	213.2	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.580	114.180	3.090	0.119	0.119	2.71	0.5	1.91	11	183.1	1.19	218.7	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.600	114.180	3.310	0.123	0.123	2.90	0.5	1.94	11	183.1	1.22	224.2	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.620	114.690	3.500	0.127	0.127	3.06	0.5	1.96	12	183.9	1.25	229.7	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.640	116.740	3.630	0.131	0.131	3.11	0.5	1.97	12	187.2	1.26	235.2	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.660	118.790	3.760	0.135	0.135	3.17	0.5	1.98	12	190.5	1.26	240.8	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.680	119.300	3.800	0.139	0.139	3.19	0.5	1.98	12	191.3	1.27	242.9	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.700	117.250	3.880	0.144	0.144	3.31	0.5	2.00	13	188.0	1.30	243.8	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.720	113.670	3.910	0.148	0.148	3.44	0.5	2.03	14	182.3	1.33	242.4	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.740	110.600	3.790	0.152	0.152	3.43	0.5	2.04	14	177.4	1.34	237.8	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.760	106.500	3.650	0.156	0.156	3.43	0.5	2.05	14	170.8	1.36	231.9	1.00	na	0.130	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.780	102.400	3.560	0.160	0.160	3.48	0.5	2.06	15	164.2	1.38	227.3	1.00	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.800	100.360	3.470	0.164	0.164	3.46	0.5	2.07	15	161.0	1.39	224.2	1.00	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.820	100.360	3.420	0.168	0.168	3.41	0.5	2.07	15	161.0	1.39	223.6	1.00	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.840	100.360	3.370	0.172	0.172	3.36	0.5	2.06	15	161.0	1.38	222.9	1.00	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.860	99.840	3.290	0.176	0.176	3.30	0.5	2.06	15	160.1	1.38	221.0	1.00	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.880	97.280	3.260	0.180	0.180	3.36	0.5	2.08	15	156.0	1.40	219.1	1.00	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.900	92.680	3.280	0.185	0.185	3.55	0.5	2.11	16	148.6	1.46	217.7	1.00	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.920	87.560	3.230	0.189	0.189	3.70	0.5	2.14	17	140.4	1.53	214.2	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.940	82.440	3.140	0.193	0.193	3.82	0.5	2.17	18	132.2	1.59	209.8	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.960	77.320	2.920	0.197	0.197	3.79	0.5	2.19	19	124.0	1.62	201.1	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
0.980	73.730	2.700	0.201	0.201	3.67	0.5	2.19	19	118.2	1.63	192.8	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.000	69.640	2.300	0.205	0.205	3.31	0.5	2.17	18	111.7	1.59	177.2	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.020	67.080	1.900	0.209	0.209	2.84	0.5	2.13	17	107.6	1.50	161.6	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.040	62.980	1.540	0.213	0.213	2.45	0.5	2.10	16	101.0	1.45	146.1	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.060	59.390	1.230	0.217	0.217	2.08	0.5	2.07	15	95.2	1.39	132.1	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.080	54.790	0.940	0.221	0.221	1.72	0.5	2.03	14	87.9	1.34	117.5	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.100	50.180	0.710	0.226	0.226	1.42	0.5	2.00	13	80.5	1.30	104.4	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.120	45.570	0.600	0.230	0.230	1.32	0.5	2.02	13	73.1	1.32	96.1	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3

1.140	40.450	0.460	0.234	0.234	1.14	0.5	2.02	13	64.9	1.32	85.5	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.160	35.330	0.380	0.238	0.238	1.08	0.5	2.05	14	56.7	1.37	77.5	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.180	31.750	0.310	0.242	0.242	0.98	0.5	2.07	15	50.9	1.39	70.9	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.200	29.190	0.280	0.246	0.246	0.97	0.5	2.10	16	46.8	1.44	67.5	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.220	26.630	0.240	0.250	0.250	0.91	0.5	2.12	16	42.7	1.48	63.2	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.240	25.600	0.210	0.254	0.254	0.83	0.5	2.11	16	41.1	1.47	60.4	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.260	24.580	0.170	0.258	0.258	0.70	0.5	2.09	16	39.4	1.43	56.5	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.280	23.550	0.130	0.262	0.262	0.56	0.5	2.07	15	37.8	1.39	52.4	0.99	na	0.129	1.10	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.300	22.530	0.080	0.267	0.267	0.36	0.5	2.00	13	36.1	1.00	36.1	0.99	na	0.129	1.09	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.320	23.040	0.040	0.271	0.271	0.18	0.5	1.90	10	37.0	1.00	37.0	0.99	na	0.129	1.09	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.340	24.070	0.030	0.275	0.275	0.13	0.5	1.85	9	38.6	1.00	38.6	0.99	na	0.129	1.09	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.360	23.550	0.030	0.279	0.279	0.13	0.5	1.87	10	37.8	1.00	37.8	0.99	na	0.129	1.08	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.380	22.020	0.030	0.283	0.283	0.14	0.5	1.91	11	35.3	1.00	35.3	0.99	na	0.129	1.08	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.400	20.990	0.030	0.287	0.287	0.14	0.5	1.93	11	33.7	1.00	33.7	0.99	na	0.129	1.08	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.420	20.480	0.030	0.291	0.291	0.15	0.5	1.95	12	32.8	1.00	32.8	0.99	na	0.129	1.08	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.440	19.460	0.030	0.295	0.295	0.16	0.5	1.98	12	31.2	1.00	31.2	0.99	na	0.129	1.08	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.460	17.410	0.030	0.299	0.299	0.18	0.5	2.04	14	27.9	1.00	27.9	0.99	na	0.129	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.480	16.900	0.030	0.303	0.303	0.18	0.5	2.06	15	27.1	1.00	27.1	0.99	na	0.129	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.500	16.380	0.030	0.308	0.308	0.19	0.5	2.08	15	26.3	1.00	26.3	0.99	na	0.129	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.520	17.410	0.030	0.312	0.312	0.18	0.5	2.05	14	27.9	1.00	27.9	0.99	na	0.129	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.3
1.540	19.460	0.070	0.316	0.314	0.37	0.5	2.10	16	31.2	1.00	31.2	0.99	0.076	0.129	1.07	1.61	6.8	0.500	0.943	0.001	0.02	0.0	0.58	0.001	0.00	0.22	0.05	0.3
1.560	22.530	0.100	0.320	0.316	0.45	0.5	2.08	15	36.1	1.00	36.1	0.99	0.080	0.130	1.08	1.69	7.8	0.500	0.943	0.001	0.02	0.0	0.58	0.001	0.00	0.22	0.00	0.2
1.580	25.600	0.100	0.324	0.318	0.40	0.5	2.01	13	41.1	1.00	41.1	0.99	0.084	0.131	1.08	1.77	8.6	0.500	0.943	0.001	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.2
1.600	27.650	0.100	0.328	0.320	0.37	0.5	1.96	12	44.3	1.00	44.3	0.99	0.087	0.132	1.08	1.82	9.1	0.500	0.943	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.2
1.620	28.670	0.110	0.332	0.322	0.39	0.5	1.96	12	46.0	1.00	46.0	0.99	0.088	0.133	1.08	1.84	9.4	0.500	0.943	0.000	0.02	0.0	0.58	0.000	0.00	0.22	0.00	0.2
1.640	28.160	0.110	0.336	0.324	0.40	0.5	1.97	12	45.2	1.00	45.2	0.99	0.088	0.133	1.08	1.81	9.3	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.22	0.00	0.2
1.660	26.630	0.120	0.340	0.326	0.46	0.5	2.02	14	42.7	1.00	42.7	0.99	0.086	0.134	1.08	1.76	9.0	0.500	0.943	0.001	0.02	0.0	0.57	0.001	0.00	0.22	0.00	0.2
1.680	24.580	0.110	0.344	0.329	0.45	0.5	2.05	14	39.4	1.00	39.4	0.99	0.083	0.135	1.08	1.69	8.4	0.500	0.943	0.001	0.02	0.0	0.57	0.001	0.00	0.22	0.00	0.2
1.700	23.040	0.100	0.349	0.331	0.44	0.5	2.07	15	37.0	1.00	37.0	0.99	0.081	0.136	1.07	1.63	7.9	0.500	0.943	0.001	0.02	0.0	0.57	0.001	0.00	0.22	0.00	0.2
1.720	22.020	0.070	0.353	0.333	0.32	0.5	2.04	14	35.3	1.00	35.3	0.99	0.079	0.136	1.07	1.59	7.5	0.500	0.943	0.001	0.02	0.0	0.57	0.001	0.00	0.22	0.00	0.2
1.740	21.500	0.070	0.357	0.335	0.33	0.5	2.06	15	34.5	1.00	34.5	0.99	0.079	0.137	1.07	1.57	7.3	0.500	0.943	0.001	0.02	0.0	0.57	0.001	0.00	0.22	0.00	0.2
1.760	19.970	0.080	0.361	0.337	0.41	0.5	2.12	17	32.0	1.00	32.0	0.99	0.077	0.138	1.07	1.52	7.0	0.500	0.943	0.002	0.02	0.0	0.57	0.002	0.00	0.22	0.05	0.2
1.780	18.940	0.090	0.365	0.339	0.48	0.5	2.18	18	30.4	1.00	30.4	0.99	0.075	0.138	1.07	1.48	6.8	0.500	0.943	0.002	0.02	0.0	0.57	0.002	0.00	0.21	0.05	0.2
1.800	17.920	0.120	0.369	0.341	0.68	0.5	2.27	21	28.7	1.83	52.6	0.99	0.094	0.139	1.08	1.86	12.2	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
1.820	17.410	0.150	0.373	0.343	0.88	0.5	2.33	24	27.9	2.04	56.9	0.99	0.097	0.140	1.09	1.93	13.6	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
1.840	16.900	0.170	0.377	0.345	1.03	0.5	2.38	26	27.1	2.21	59.9	0.99	0.100	0.140	1.09	1.98	14.6	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
1.860	16.900	0.170	0.381	0.347	1.03	0.5	2.38	26	27.1	2.22	60.0	0.99	0.100	0.141	1.09	1.97	14.6	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
1.880	17.410	0.160	0.385	0.349	0.94	0.5	2.35	24	27.9	2.10	58.7	0.99	0.099	0.142	1.09	1.93	14.1	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
1.900	16.900	0.160	0.390	0.351	0.97	0.5	2.37	25	27.1	2.17	58.9	0.99	0.099	0.142	1.08	1.92	14.3	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
1.920	16.380	0.170	0.394	0.353	1.06	0.5	2.40	26	26.3	2.31	60.6	0.99	0.101	0.143	1.09	1.95	14.9	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
1.940	15.870	0.150	0.398	0.355	0.97	0.5	2.39	26	25.5	2.28	57.9	0.99	0.098	0.144	1.08	1.89	14.2	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
1.960	15.870	0.160	0.402	0.357	1.03	0.5	2.41	27	25.5	2.34	59.6	0.99	0.100	0.144	1.08	1.91	14.7	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
1.980	15.360	0.170	0.406	0.359	1.14	0.5	2.44	28	24.6	2.49	61.3	0.99	0.101	0.145	1.08	1.94	15.4	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
2.000	15.360	0.170	0.410	0.361	1.14	0.5	2.45	28	24.6	2.50	61.5	0.99	0.102	0.146	1.08	1.93	15.4	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
2.020	14.850	0.190	0.414	0.363	1.32	0.5	2.49	30	23.8	2.72	64.8	0.99	0.105	0.146	1.09	2.00	16.6	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
2.040	15.870	0.190	0.418	0.365	1.23	0.5	2.45	29	25.5	2.53	64.4	0.99	0.105	0.147	1.09	1.98	16.2	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
2.060	16.380	0.180	0.422	0.368	1.13	0.5	2.42	27	26.2	2.40	62.9	0.99	0.103	0.147	1.08	1.94	15.6	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
2.080	16.900	0.170	0.427	0.370	1.03	0.5	2.39	26	27.0	2.27	61.2	0.99	0.101	0.148	1.08	1.89	15.0	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
2.100	16.900	0.160	0.431	0.372	0.97	0.5	2.38	26	26.9	2.22	59.8	0.99	0.100	0.149	1.08	1.86	14.6	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
2.120	16.380	0.150	0.435	0.374	0.94	0.5	2.39	26	26.0	2.24	58.4	0.99	0.099	0.149	1.08	1.82	14.3	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
2.140	15.870	0.150	0.439	0.376	0.97	0.5	2.41	27	25.1	2.33	58.5	0.99	0.099	0.150	1.08	1.82	14.4	0.500	0.943	0.000	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
2.160	15.360	0.140	0.443	0.378	0.94	0.5	2.41	27	24.3	2.35	57.1	0.99	0.097	0.150	1.08	1.78	14.1	0.500	0.943	0.001	0.02	0.0	0.57	0.000	0.00	0.21	0.00	0.1
2.180	14.850	0.170	0.447	0.380	1.18	0.5	2.48	30	23.4	2.64	61.8	0.99	0.102	0.151	1.08	1.87	15.8	0.500	0.943	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.200	13.820	0.180	0.451	0.382	1.35	0.5	2.54	32	21.7	2.94	63.9	0.99	0.104	0.151	1.08	1.90	16.8	0.500	0.943	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.220	12.290	0.200	0.455	0.384	1.69	0.7	2.56	34	19.7	3.08	60.8	0.99	0.101	0.152	1.08	1.83	16.1	0.500	0.943	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.240	10.750	0.250	0.459	0.386	2.43	0.7	2.70	41	17.2	4.01	69.1	0.98	na	0.152	1.08	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.260	8.700	0.290	0.463	0.388	3.52	1.0	2.78	45	14.0	4.57	63.8	0.98	na	0.153	1.08	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.280	7.680	0.310	0.468	0.390	4.30	1.0	2.88	51	12.3	5.47	67.4	0.98	na	0.153	1.08	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.300	7.680	0.300	0.472	0.392	4.16	1.0	2.87	50	12.3	5.40	66.6	0.98	na	0.154	1.08	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.320	7.680	0.300	0.476	0.394	4.16	1.0	2.87	50	12.3	5.42	66.8	0.98	na	0.154	1.08	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.340	7.170	0.270	0.480	0.396	4.04	1.0	2.89	51	11.5	5.60	64.3	0.98	na	0.155	1.08	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.360	7.170	0.200	0.484	0.398	2.99	1.0	2.81	47	11.5	4.88	56.1	0.98	na	0.155	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.380	6.660	0.200	0.488	0.400	3.24	1.0	2.86	50	10.7	5.33	56.9	0.98	na	0.156	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.400	5.630	0.190	0.492	0.402	3.70	1.0	2.96	56	9.0	6.33	57.1	0.98	na	0.156	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.420	4.610	0.160	0.496	0.405	3.89	1.0	3.06	62	7.4	7.36	54.4	0.98	na	0.157	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1

2.440	4.100	0.150	0.500	0.407	4.17	1.0	3.12	67	6.6	8.18	53.8	0.98	na	0.157	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.460	3.070	0.150	0.504	0.409	5.85	1.0	3.33	84	4.9	11.15	54.9	0.98	na	0.158	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.480	3.070	0.140	0.509	0.411	5.47	1.0	3.31	82	4.9	10.91	53.7	0.98	na	0.158	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.500	2.560	0.140	0.513	0.413	6.84	1.0	3.45	94	4.1	13.19	54.2	0.98	na	0.159	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.520	2.560	0.120	0.517	0.415	5.87	1.0	3.42	91	4.1	12.56	51.6	0.98	na	0.159	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.540	2.560	0.110	0.521	0.417	5.39	1.0	3.40	89	4.1	12.24	50.3	0.98	na	0.160	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.560	2.050	0.110	0.525	0.419	7.21	1.0	3.57	100	3.3	15.46	50.8	0.98	na	0.160	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.580	2.050	0.100	0.529	0.421	6.57	1.0	3.55	100	3.3	15.06	49.5	0.98	na	0.161	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.600	2.050	0.110	0.533	0.423	7.25	1.0	3.58	100	3.3	15.59	51.2	0.98	na	0.161	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.620	1.540	0.110	0.537	0.425	10.97	1.0	3.83	100	2.5	20.97	51.8	0.98	na	0.161	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.640	1.540	0.110	0.541	0.427	11.01	1.0	3.84	100	2.5	21.07	52.0	0.98	na	0.162	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.660	1.540	0.100	0.545	0.429	10.05	1.0	3.82	100	2.5	20.61	50.9	0.98	na	0.162	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.680	1.540	0.110	0.550	0.431	11.11	1.0	3.85	100	2.5	21.26	52.5	0.98	na	0.163	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.700	1.540	0.110	0.554	0.433	11.15	1.0	3.85	100	2.5	21.36	52.8	0.98	na	0.163	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.720	1.540	0.110	0.558	0.435	11.20	1.0	3.86	100	2.5	21.46	53.0	0.98	na	0.163	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.740	1.540	0.110	0.562	0.437	11.25	1.0	3.86	100	2.5	21.56	53.2	0.98	na	0.164	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.760	1.540	0.110	0.566	0.439	11.29	1.0	3.86	100	2.5	21.65	53.5	0.98	na	0.164	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.780	1.540	0.110	0.570	0.441	11.34	1.0	3.87	100	2.5	21.75	53.7	0.98	na	0.165	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.800	1.020	0.110	0.574	0.444	24.67	1.0	4.34	100	1.6	34.40	56.3	0.98	na	0.165	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.820	1.020	0.110	0.578	0.446	24.90	1.0	4.35	100	1.6	34.61	56.6	0.98	na	0.165	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.840	1.020	0.110	0.582	0.448	25.13	1.0	4.36	100	1.6	34.82	57.0	0.98	na	0.166	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.860	1.020	0.100	0.586	0.450	23.07	1.0	4.34	100	1.6	34.31	56.1	0.98	na	0.166	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.880	1.020	0.100	0.591	0.452	23.29	1.0	4.35	100	1.6	34.53	56.5	0.98	na	0.167	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.900	1.020	0.110	0.595	0.454	25.86	1.0	4.38	100	1.6	35.48	58.0	0.98	na	0.167	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.92	1.02	0.11	0.599	0.456	26.11	1.0	4.39	100	1.6	35.71	58.4	0.98	na	0.167	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.94	1.02	0.11	0.603	0.458	26.37	1.0	4.39	100	1.6	35.93	58.8	0.98	na	0.168	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.96	1.02	0.11	0.607	0.460	26.63	1.0	4.40	100	1.6	36.16	59.2	0.98	na	0.168	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
2.98	1.02	0.12	0.611	0.462	29.34	1.0	4.43	100	1.6	37.08	60.7	0.98	na	0.168	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3	1.02	0.12	0.615	0.464	29.64	1.0	4.44	100	1.6	37.32	61.0	0.98	na	0.169	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.02	1.02	0.13	0.619	0.466	32.44	1.0	4.47	100	1.6	38.21	62.5	0.98	na	0.169	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.04	1.54	0.16	0.623	0.468	17.46	1.0	4.02	100	2.5	25.51	63.0	0.98	na	0.169	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.06	2.56	0.19	0.627	0.470	9.83	1.0	3.61	100	4.1	16.20	66.5	0.98	na	0.170	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.08	3.58	0.22	0.632	0.472	7.46	1.0	3.40	89	5.7	12.22	70.2	0.98	na	0.170	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.1	4.1	0.25	0.636	0.474	7.22	1.0	3.33	84	6.6	11.20	73.7	0.98	na	0.171	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.12	4.61	0.26	0.640	0.476	6.55	1.0	3.26	78	7.4	10.11	74.8	0.98	na	0.171	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.14	4.1	0.27	0.644	0.478	7.81	1.0	3.36	86	6.6	11.61	76.3	0.98	na	0.171	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.16	4.1	0.29	0.648	0.481	8.40	1.0	3.38	88	6.6	11.97	78.7	0.98	na	0.172	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.18	3.58	0.3	0.652	0.483	10.25	1.0	3.49	98	5.7	13.90	79.8	0.98	na	0.172	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.2	3.07	0.3	0.656	0.485	12.43	1.0	3.61	100	4.9	16.18	79.7	0.98	na	0.172	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.22	3.07	0.29	0.660	0.487	12.03	1.0	3.60	100	4.9	16.04	79.0	0.98	na	0.172	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.24	3.07	0.29	0.664	0.489	12.06	1.0	3.61	100	4.9	16.09	79.2	0.98	na	0.173	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.26	3.07	0.3	0.668	0.491	12.49	1.0	3.62	100	4.9	16.33	80.4	0.98	na	0.173	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.28	2.56	0.29	0.673	0.493	15.36	1.0	3.76	100	4.1	19.26	79.1	0.98	na	0.173	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.3	3.07	0.28	0.677	0.495	11.70	1.0	3.60	100	4.9	16.04	79.0	0.98	na	0.174	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.32	2.56	0.26	0.681	0.497	13.84	1.0	3.73	100	4.1	18.72	76.8	0.98	na	0.174	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.34	2.56	0.25	0.685	0.499	13.33	1.0	3.73	100	4.1	18.54	76.1	0.98	na	0.174	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.36	2.56	0.24	0.689	0.501	12.83	1.0	3.72	100	4.1	18.36	75.4	0.98	na	0.175	1.07	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.38	2.05	0.2	0.693	0.503	14.74	1.0	3.87	100	3.3	21.70	71.3	0.98	na	0.175	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.4	2.05	0.18	0.697	0.505	13.31	1.0	3.84	100	3.3	21.12	69.4	0.98	na	0.175	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.42	1.54	0.16	0.701	0.507	19.08	1.0	4.10	100	2.5	27.65	68.3	0.98	na	0.176	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.44	1.54	0.15	0.705	0.509	17.97	1.0	4.09	100	2.5	27.31	67.4	0.98	na	0.176	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.46	1.54	0.15	0.709	0.511	18.06	1.0	4.09	100	2.5	27.43	67.7	0.98	na	0.176	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.48	1.54	0.14	0.714	0.513	16.94	1.0	4.08	100	2.5	27.06	66.8	0.98	na	0.176	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.5	1.54	0.13	0.718	0.515	15.81	1.0	4.07	100	2.5	26.67	65.9	0.98	na	0.177	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.52	1.54	0.13	0.722	0.517	15.89	1.0	4.07	100	2.5	26.79	66.2	0.98	na	0.177	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.54	1.54	0.13	0.726	0.520	15.97	1.0	4.07	100	2.5	26.91	66.5	0.98	na	0.177	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.56	1.54	0.13	0.730	0.522	16.05	1.0	4.08	100	2.5	27.02	66.7	0.98	na	0.178	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.58	1.54	0.13	0.734	0.524	16.13	1.0	4.08	100	2.5	27.14	67.0	0.98	na	0.178	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.6	1.54	0.13	0.738	0.526	16.21	1.0	4.09	100	2.5	27.26	67.3	0.98	na	0.178	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.62	1.54	0.13	0.742	0.528	16.30	1.0	4.09	100	2.5	27.38	67.6	0.98	na	0.178	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.64	1.54	0.13	0.746	0.530	16.38	1.0	4.10	100	2.5	27.50	67.9	0.98	na	0.179	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.66	1.02	0.13	0.750	0.532	48.24	1.0	4.75	100	1.6	47.42	77.6	0.97	na	0.179	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.68	1.02	0.12	0.755	0.534	45.21	1.0	4.74	100	1.6	47.08	77.0	0.97	na	0.179	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.7	1.02	0.13	0.759	0.536	49.75	1.0	4.78	100	1.6	48.14	78.7	0.97	na	0.179	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.72	1.02	0.13	0.763	0.538	50.54	1.0	4.79	100	1.6	48.51	79.3	0.97	na	0.180	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1

3.74	1.02	0.12	0.767	0.540	47.41	1.0	4.78	100	1.6	48.17	78.8	0.97	na	0.180	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.76	1.02	0.12	0.771	0.542	48.19	1.0	4.79	100	1.6	48.55	79.4	0.97	na	0.180	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.78	1.02	0.12	0.775	0.544	49.00	1.0	4.80	100	1.6	48.93	80.0	0.97	na	0.180	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.8	1.02	0.13	0.779	0.546	53.99	1.0	4.83	100	1.6	50.03	81.8	0.97	na	0.181	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.82	1.02	0.13	0.783	0.548	54.92	1.0	4.84	100	1.6	50.42	82.5	0.97	na	0.181	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.84	1.02	0.12	0.787	0.550	51.59	1.0	4.83	100	1.6	50.11	82.0	0.97	na	0.181	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.86	1.02	0.12	0.792	0.552	52.52	1.0	4.85	100	1.6	50.52	82.6	0.97	na	0.181	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.88	1.02	0.12	0.796	0.554	53.48	1.0	4.86	100	1.6	50.94	83.3	0.97	na	0.182	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.9	1.02	0.12	0.800	0.556	54.47	1.0	4.87	100	1.6	51.36	84.0	0.97	na	0.182	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.92	1.02	0.11	0.804	0.559	50.88	1.0	4.86	100	1.6	51.02	83.5	0.97	na	0.182	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.94	1.02	0.11	0.808	0.561	51.86	1.0	4.87	100	1.6	51.46	84.2	0.97	na	0.182	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.96	1.02	0.11	0.812	0.563	52.89	1.0	4.89	100	1.6	51.90	84.9	0.97	na	0.183	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
3.98	1.02	0.1	0.816	0.565	49.05	1.0	4.88	100	1.6	51.51	84.3	0.97	na	0.183	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4	1.54	0.11	0.820	0.567	15.28	1.0	4.14	100	2.5	28.58	70.6	0.97	na	0.183	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.02	1.54	0.12	0.824	0.569	16.77	1.0	4.16	100	2.5	29.31	72.4	0.97	na	0.183	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.04	2.05	0.13	0.828	0.571	10.64	1.0	3.86	100	3.3	21.59	71.0	0.97	na	0.183	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.06	2.56	0.14	0.833	0.573	8.10	1.0	3.67	100	4.1	17.38	71.4	0.97	na	0.184	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.08	2.56	0.16	0.837	0.575	9.28	1.0	3.71	100	4.1	18.16	74.5	0.97	na	0.184	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.1	2.56	0.16	0.841	0.577	9.31	1.0	3.71	100	4.1	18.21	74.8	0.97	na	0.184	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.12	3.07	0.17	0.845	0.579	7.64	1.0	3.57	100	4.9	15.37	75.7	0.97	na	0.184	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.14	3.58	0.17	0.849	0.581	6.22	1.0	3.45	94	5.7	13.10	75.2	0.97	na	0.185	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.16	3.58	0.17	0.853	0.583	6.23	1.0	3.45	94	5.7	13.14	75.5	0.97	na	0.185	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.18	3.07	0.15	0.857	0.585	6.78	1.0	3.55	100	4.9	14.90	73.4	0.97	na	0.185	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.2	2.56	0.12	0.861	0.587	7.06	1.0	3.65	100	4.1	16.98	69.7	0.97	na	0.185	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.22	1.54	0.1	0.865	0.589	14.82	1.0	4.17	100	2.5	29.38	72.6	0.97	na	0.185	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.24	1.54	0.1	0.869	0.591	14.91	1.0	4.17	100	2.5	29.51	72.9	0.97	na	0.186	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.26	1.54	0.1	0.874	0.593	15.00	1.0	4.18	100	2.5	29.65	73.2	0.97	na	0.186	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.28	1.54	0.11	0.878	0.596	16.61	1.0	4.20	100	2.5	30.45	75.2	0.97	na	0.186	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.3	1.54	0.09	0.882	0.598	13.67	1.0	4.16	100	2.5	29.20	72.1	0.97	na	0.186	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.32	1.54	0.08	0.886	0.600	12.23	1.0	4.14	100	2.5	28.56	70.5	0.97	na	0.186	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.34	1.02	0.07	0.890	0.602	53.82	1.0	5.08	100	1.6	58.51	95.7	0.97	na	0.187	1.06	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.36	1.54	0.07	0.894	0.604	10.84	1.0	4.11	100	2.5	27.96	69.1	0.97	na	0.187	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.38	1.54	0.06	0.898	0.606	9.35	1.0	4.08	100	2.5	27.13	67.0	0.97	na	0.187	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.4	1.54	0.05	0.902	0.608	7.84	1.0	4.05	100	2.5	26.16	64.6	0.97	na	0.187	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.42	1.54	0.07	0.906	0.610	11.05	1.0	4.13	100	2.5	28.37	70.1	0.97	na	0.187	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.44	1.54	0.06	0.910	0.612	9.53	1.0	4.10	100	2.5	27.54	68.0	0.97	na	0.188	1.05	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.46	2.56	0.07	0.915	0.614	4.25	1.0	3.56	100	4.1	15.16	62.2	0.97	na	0.188	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.48	2.56	0.08	0.919	0.616	4.87	1.0	3.59	100	4.1	15.81	64.9	0.97	na	0.188	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.5	3.07	0.09	0.923	0.618	4.19	1.0	3.46	95	4.9	13.33	65.6	0.97	na	0.188	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.52	3.07	0.09	0.927	0.620	4.20	1.0	3.46	95	4.9	13.37	65.8	0.97	na	0.188	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.54	3.07	0.09	0.931	0.622	4.21	1.0	3.47	96	4.9	13.42	66.1	0.97	na	0.188	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.56	3.07	0.1	0.935	0.624	4.68	1.0	3.49	98	4.9	13.90	68.4	0.97	na	0.189	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.58	3.07	0.11	0.939	0.626	5.16	1.0	3.52	100	4.9	14.36	70.4	0.97	na	0.189	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.6	3.07	0.11	0.943	0.628	5.17	1.0	3.52	100	4.9	14.40	70.4	0.97	na	0.189	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.62	3.07	0.1	0.947	0.630	4.71	1.0	3.50	99	4.9	14.03	68.3	0.97	na	0.189	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.64	3.07	0.09	0.951	0.632	4.25	1.0	3.48	97	4.9	13.63	66.1	0.97	na	0.189	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.66	3.07	0.09	0.956	0.635	4.26	1.0	3.48	97	4.8	13.67	66.1	0.97	na	0.189	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.68	4.1	0.11	0.960	0.637	3.50	1.0	3.29	80	6.4	10.53	67.8	0.97	na	0.190	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.7	4.61	0.12	0.964	0.639	3.29	1.0	3.22	75	7.2	9.53	68.8	0.97	na	0.190	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.72	4.61	0.13	0.968	0.641	3.57	1.0	3.24	76	7.2	9.82	70.7	0.97	na	0.190	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.74	4.1	0.14	0.972	0.643	4.48	1.0	3.35	86	6.4	11.52	73.5	0.97	na	0.190	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.76	4.1	0.14	0.976	0.645	4.48	1.0	3.36	86	6.4	11.55	73.4	0.97	na	0.190	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.78	4.1	0.15	0.980	0.647	4.81	1.0	3.37	87	6.3	11.85	75.1	0.97	na	0.190	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.8	4.1	0.15	0.984	0.649	4.81	1.0	3.38	88	6.3	11.89	75.1	0.97	na	0.191	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.82	4.1	0.14	0.988	0.651	4.50	1.0	3.36	86	6.3	11.64	73.3	0.97	na	0.191	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.84	4.1	0.12	0.992	0.653	3.86	1.0	3.33	83	6.3	11.08	69.6	0.97	na	0.191	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.86	4.1	0.11	0.997	0.655	3.54	1.0	3.31	82	6.3	10.80	67.6	0.97	na	0.191	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.88	3.58	0.1	1.001	0.657	3.88	1.0	3.40	89	5.4	12.25	66.7	0.97	na	0.191	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.9	3.58	0.11	1.005	0.659	4.27	1.0	3.42	92	5.4	12.66	68.8	0.97	na	0.191	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.92	3.58	0.1	1.009	0.661	3.89	1.0	3.40	90	5.4	12.32	66.7	0.97	na	0.192	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.94	3.58	0.09	1.013	0.663	3.51	1.0	3.38	88	5.4	11.95	64.5	0.97	na	0.192	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.96	3.07	0.09	1.017	0.665	4.38	1.0	3.51	100	4.6	14.31	66.0	0.97	na	0.192	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
4.98	3.07	0.09	1.021	0.667	4.39	1.0	3.52	100	4.6	14.35	66.0	0.97	na	0.192	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5	3.07	0.08	1.025	0.669	3.91	1.0	3.49	98	4.6	13.90	63.8	0.97	na	0.192	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.02	3.58	0.08	1.029	0.672	3.14	1.0	3.36	86	5.3	11.65	62.1	0.97	na	0.192	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1

5.04	4.1	0.08	1.033	0.674	2.61	1.0	3.25	77	6.1	9.98	60.7	0.97	na	0.193	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.06	4.1	0.08	1.038	0.676	2.61	1.0	3.26	77	6.1	10.01	60.7	0.97	na	0.193	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.08	4.1	0.08	1.042	0.678	2.62	1.0	3.26	78	6.1	10.04	60.7	0.96	na	0.193	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.1	4.1	0.07	1.046	0.680	2.29	1.0	3.23	75	6.0	9.64	58.2	0.96	na	0.193	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.12	4.1	0.07	1.050	0.682	2.29	1.0	3.23	76	6.0	9.67	58.2	0.96	na	0.193	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.14	4.1	0.07	1.054	0.684	2.30	1.0	3.23	76	6.0	9.70	58.2	0.96	na	0.193	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.16	4.1	0.08	1.058	0.686	2.63	1.0	3.26	78	6.0	10.15	60.7	0.96	na	0.193	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.18	4.1	0.08	1.062	0.688	2.63	1.0	3.27	78	6.0	10.18	60.7	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.2	4.1	0.08	1.066	0.690	2.64	1.0	3.27	78	5.9	10.21	60.6	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.22	4.1	0.08	1.070	0.692	2.64	1.0	3.27	79	5.9	10.24	60.6	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.24	4.1	0.08	1.074	0.694	2.64	1.0	3.27	79	5.9	10.26	60.6	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.26	5.12	0.1	1.079	0.696	2.47	1.0	3.15	69	7.4	8.55	62.9	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.28	5.63	0.11	1.083	0.698	2.42	1.0	3.10	66	8.1	7.93	64.0	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.3	5.63	0.13	1.087	0.700	2.86	1.0	3.14	69	8.0	8.44	67.9	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.32	6.14	0.15	1.091	0.702	2.97	1.0	3.11	66	8.7	8.07	70.5	0.96	na	0.194	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.34	6.14	0.18	1.095	0.704	3.57	1.0	3.16	70	8.7	8.66	75.5	0.96	na	0.195	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.36	6.14	0.19	1.099	0.706	3.77	1.0	3.17	71	8.7	8.86	77.0	0.96	na	0.195	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.38	5.63	0.21	1.103	0.708	4.64	1.0	3.26	78	7.9	10.15	80.6	0.96	na	0.195	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.4	5.63	0.22	1.107	0.711	4.86	1.0	3.28	79	7.9	10.35	82.0	0.96	na	0.195	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.42	2.05	0.24	1.111	0.713	25.57	1.0	4.26	100	2.9	31.96	92.0	0.96	na	0.195	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.44	5.63	0.23	1.115	0.715	5.09	1.0	3.29	80	7.9	10.56	83.2	0.96	na	0.195	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.46	5.12	0.22	1.120	0.717	5.50	1.0	3.36	86	7.1	11.55	82.5	0.96	na	0.195	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.48	5.12	0.21	1.124	0.719	5.25	1.0	3.35	85	7.1	11.39	81.1	0.96	na	0.195	1.04	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.5	4.61	0.18	1.128	0.721	5.17	1.0	3.39	89	6.4	12.14	77.6	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.52	4.61	0.16	1.132	0.723	4.60	1.0	3.36	87	6.4	11.69	74.6	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.54	4.61	0.15	1.136	0.725	4.32	1.0	3.35	85	6.4	11.47	72.9	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.56	4.61	0.14	1.140	0.727	4.03	1.0	3.34	84	6.3	11.23	71.2	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.58	4.61	0.13	1.144	0.729	3.75	1.0	3.32	83	6.3	10.98	69.5	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.6	4.61	0.13	1.148	0.731	3.76	1.0	3.32	83	6.3	11.01	69.4	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.62	4.1	0.12	1.152	0.733	4.07	1.0	3.40	90	5.6	12.29	68.7	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.64	3.58	0.11	1.156	0.735	4.54	1.0	3.50	99	4.9	14.01	68.2	0.96	na	0.196	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.66	3.58	0.1	1.161	0.737	4.13	1.0	3.48	97	4.9	13.65	66.3	0.96	na	0.197	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.68	3.58	0.08	1.165	0.739	3.31	1.0	3.43	92	4.8	12.80	62.0	0.96	na	0.197	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.7	3.07	0.07	1.169	0.741	3.68	1.0	3.54	100	4.1	14.86	61.6	0.96	na	0.197	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.72	3.58	0.06	1.173	0.743	2.49	1.0	3.37	87	4.8	11.83	57.0	0.96	na	0.197	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.74	3.58	0.06	1.177	0.745	2.50	1.0	3.37	87	4.8	11.87	57.0	0.96	na	0.197	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.76	3.58	0.06	1.181	0.747	2.50	1.0	3.38	88	4.8	11.90	57.0	0.96	na	0.197	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.78	3.58	0.05	1.185	0.750	2.09	1.0	3.34	85	4.8	11.33	54.1	0.96	na	0.197	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.8	3.58	0.05	1.189	0.752	2.09	1.0	3.34	85	4.8	11.36	54.1	0.96	na	0.197	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.82	3.58	0.05	1.193	0.754	2.10	1.0	3.35	85	4.8	11.39	54.1	0.96	na	0.197	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.84	3.58	0.05	1.198	0.756	2.10	1.0	3.35	85	4.7	11.43	54.1	0.96	na	0.198	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.86	3.58	0.05	1.202	0.758	2.10	1.0	3.35	85	4.7	11.46	54.1	0.96	na	0.198	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.88	3.58	0.06	1.206	0.760	2.53	1.0	3.39	89	4.7	12.10	57.0	0.96	na	0.198	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.9	3.58	0.06	1.210	0.762	2.53	1.0	3.39	89	4.7	12.14	57.0	0.96	na	0.198	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.92	3.58	0.06	1.214	0.764	2.54	1.0	3.39	89	4.7	12.17	57.0	0.96	na	0.198	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.94	3.58	0.06	1.218	0.766	2.54	1.0	3.40	89	4.7	12.21	57.0	0.96	na	0.198	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.96	3.58	0.06	1.222	0.768	2.54	1.0	3.40	89	4.7	12.24	57.1	0.96	na	0.198	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
5.98	3.07	0.06	1.226	0.770	3.25	1.0	3.54	100	4.0	14.85	59.2	0.96	na	0.198	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6	3.07	0.06	1.230	0.772	3.26	1.0	3.55	100	4.0	14.89	59.2	0.96	na	0.198	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.02	3.07	0.05	1.234	0.774	2.72	1.0	3.51	100	4.0	14.23	56.4	0.96	na	0.198	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.04	3.07	0.05	1.239	0.776	2.73	1.0	3.51	100	4.0	14.27	56.4	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.06	3.07	0.05	1.243	0.778	2.74	1.0	3.51	100	3.9	14.31	56.5	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.08	3.07	0.05	1.247	0.780	2.74	1.0	3.52	100	3.9	14.36	56.5	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.1	2.56	0.05	1.251	0.782	3.82	1.0	3.71	100	3.3	18.27	59.8	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.12	3.07	0.03	1.255	0.784	1.65	1.0	3.42	92	3.9	12.67	49.6	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.14	4.61	0.05	1.259	0.787	1.49	1.0	3.16	70	5.9	8.73	51.1	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.16	5.63	0.1	1.263	0.789	2.29	1.0	3.15	69	7.1	8.56	61.1	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.18	5.63	0.1	1.267	0.791	2.29	1.0	3.15	69	7.1	8.58	61.1	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.2	4.61	0.11	1.271	0.793	3.29	1.0	3.33	84	5.8	11.21	65.2	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.22	3.58	0.12	1.275	0.795	5.21	1.0	3.58	100	4.5	15.50	69.8	0.96	na	0.199	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.24	3.07	0.12	1.280	0.797	6.70	1.0	3.73	100	3.9	18.63	71.8	0.96	na	0.200	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.26	3.58	0.13	1.284	0.799	5.66	1.0	3.60	100	4.5	15.95	71.5	0.96	na	0.200	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.28	4.61	0.14	1.288	0.801	4.21	1.0	3.40	89	5.8	12.23	70.4	0.96	na	0.200	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.3	6.66	0.1	1.292	0.803	1.86	1.0	3.04	61	8.3	7.12	59.1	0.96	na	0.200	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.32	8.7	0.12	1.296	0.805	1.62	1.0	2.89	51	10.8	5.53	59.8	0.95	na	0.200	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1

6.34	8.19	0.13	1.300	0.807	1.89	1.0	2.95	55	10.1	6.14	62.3	0.95	na	0.200	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.36	7.17	0.14	1.304	0.809	2.39	1.0	3.06	63	8.9	7.41	65.6	0.95	na	0.200	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.38	5.12	0.14	1.308	0.811	3.67	1.0	3.32	83	6.3	10.97	69.3	0.95	na	0.200	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.4	4.61	0.19	1.312	0.813	5.76	1.0	3.48	97	5.7	13.69	77.6	0.95	na	0.200	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.42	3.58	0.19	1.316	0.815	8.39	1.0	3.71	100	4.4	18.19	79.9	0.95	na	0.200	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.44	1.54	0.17	1.321	0.817	77.46	1.0	5.10	100	1.9	59.16	111.5	0.95	na	0.200	1.03	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.46	4.1	0.14	1.325	0.819	5.04	1.0	3.51	100	5.0	14.29	71.5	0.95	na	0.200	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.48	3.58	0.1	1.329	0.821	4.44	1.0	3.56	100	4.4	15.19	66.2	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.5	3.58	0.07	1.333	0.823	3.12	1.0	3.48	97	4.3	13.76	59.8	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.52	3.58	0.05	1.337	0.826	2.23	1.0	3.42	91	4.3	12.58	54.5	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.54	3.07	0.04	1.341	0.828	2.31	1.0	3.53	100	3.7	14.53	53.9	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.56	3.07	0.04	1.345	0.830	2.32	1.0	3.53	100	3.7	14.57	53.9	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.58	3.07	0.04	1.349	0.832	2.32	1.0	3.53	100	3.7	14.61	53.9	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.6	3.07	0.04	1.353	0.834	2.33	1.0	3.53	100	3.7	14.66	54.0	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.62	3.07	0.04	1.357	0.836	2.34	1.0	3.54	100	3.7	14.70	54.0	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.64	3.07	0.03	1.362	0.838	1.76	1.0	3.48	97	3.7	13.74	50.4	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.66	3.07	0.03	1.366	0.840	1.76	1.0	3.49	98	3.7	13.79	50.4	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.68	3.07	0.03	1.370	0.842	1.76	1.0	3.49	98	3.6	13.83	50.4	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.7	3.58	0.03	1.374	0.844	1.36	1.0	3.34	84	4.2	11.30	47.9	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.72	4.1	0.04	1.378	0.846	1.47	1.0	3.27	79	4.8	10.24	49.6	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.74	4.1	0.03	1.382	0.848	1.10	1.0	3.22	75	4.8	9.53	46.1	0.95	na	0.201	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.76	4.1	0.05	1.386	0.850	1.84	1.0	3.32	82	4.8	10.94	52.8	0.95	na	0.202	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.78	4.1	0.05	1.390	0.852	1.85	1.0	3.32	83	4.8	10.97	52.8	0.95	na	0.202	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.8	4.1	0.05	1.394	0.854	1.85	1.0	3.32	83	4.8	11.00	52.8	0.95	na	0.202	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.82	4.1	0.05	1.398	0.856	1.85	1.0	3.32	83	4.8	11.03	52.8	0.95	na	0.202	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.84	3.58	0.05	1.403	0.858	2.30	1.0	3.45	94	4.2	13.14	54.8	0.95	na	0.202	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.86	3.58	0.05	1.407	0.860	2.30	1.0	3.45	94	4.2	13.17	54.8	0.95	na	0.202	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.88	3.58	0.05	1.411	0.863	2.30	1.0	3.45	95	4.2	13.21	54.8	0.95	na	0.202	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.9	3.58	0.05	1.415	0.865	2.31	1.0	3.46	95	4.1	13.25	54.8	0.95	na	0.202	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.92	3.58	0.04	1.419	0.867	1.85	1.0	3.41	91	4.1	12.53	51.8	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.94	3.58	0.05	1.423	0.869	2.32	1.0	3.46	95	4.1	13.32	54.9	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.96	4.1	0.06	1.427	0.871	2.24	1.0	3.37	87	4.7	11.81	55.6	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
6.98	8.19	0.06	1.431	0.873	0.89	1.0	2.83	48	9.4	5.05	47.4	0.95	na	0.202	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.56	0.000	0.00	0.21	0.00	0.1
7	27.14	0.07	1.435	0.875	0.27	0.5	2.15	17	28.2	1.00	28.2	0.95	0.073	0.202	1.01	0.94	6.2	0.500	0.943	0.500	0.02	0.4	0.56	0.096	0.08	0.21	0.05	0.1
7.02	34.82	0.16	1.439	0.877	0.48	0.5	2.13	17	36.1	1.00	36.1	0.95	0.080	0.202	1.01	1.02	7.9	0.500	0.943	0.025	0.02	0.0	0.17	0.025	0.02	0.13	0.01	0.1
7.04	22.02	0.32	1.444	0.879	1.56	0.5	2.56	34	22.8	3.10	70.7	0.95	0.113	0.202	1.02	1.45	18.8	0.500	0.942	0.002	0.02	0.0	0.15	0.001	0.00	0.12	0.00	0.1
7.06	15.87	0.33	1.448	0.881	2.29	1.0	2.75	43	18.0	4.38	79.0	0.95	na	0.202	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.15	0.000	0.00	0.11	0.00	0.1
7.08	12.29	0.33	1.452	0.883	3.04	1.0	2.93	54	13.9	5.95	82.8	0.95	na	0.203	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.15	0.000	0.00	0.11	0.00	0.1
7.1	20.99	0.3	1.456	0.885	1.54	0.5	2.58	34	21.7	3.20	69.4	0.95	0.111	0.203	1.02	1.42	18.6	0.500	0.943	0.002	0.02	0.0	0.15	0.001	0.00	0.11	0.00	0.1
7.12	43.01	0.31	1.460	0.887	0.75	0.5	2.14	17	44.4	1.52	67.4	0.95	0.108	0.203	1.01	1.39	14.8	0.500	0.943	0.003	0.02	0.0	0.15	0.002	0.00	0.11	0.00	0.1
7.14	54.79	0.34	1.464	0.889	0.64	0.5	2.01	13	56.4	1.31	73.7	0.95	0.117	0.203	1.02	1.50	15.4	0.500	0.937	0.002	0.02	0.0	0.15	0.001	0.00	0.11	0.00	0.1
7.16	47.62	0.38	1.468	0.891	0.82	0.5	2.12	17	49.0	1.49	72.9	0.95	0.116	0.203	1.01	1.48	15.9	0.500	0.938	0.002	0.02	0.0	0.14	0.001	0.00	0.11	0.00	0.1
7.18	37.38	0.38	1.472	0.893	1.06	0.5	2.27	22	38.4	1.86	71.3	0.95	0.114	0.203	1.01	1.45	16.6	0.500	0.941	0.002	0.02	0.0	0.14	0.001	0.00	0.11	0.00	0.1
7.2	28.16	0.36	1.476	0.895	1.35	0.5	2.44	28	28.9	2.47	71.3	0.95	0.114	0.203	1.01	1.45	17.9	0.500	0.941	0.002	0.02	0.0	0.14	0.001	0.00	0.11	0.00	0.1
7.22	20.99	0.37	1.480	0.897	1.90	1.0	2.61	36	23.4	3.35	78.3	0.95	na	0.203	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.24	15.87	0.4	1.485	0.899	2.78	1.0	2.81	47	17.6	4.86	85.8	0.95	na	0.203	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.26	9.73	0.4	1.489	0.902	4.85	1.0	3.15	69	10.8	8.55	92.3	0.95	na	0.203	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.28	7.17	0.38	1.493	0.904	6.69	1.0	3.37	87	7.9	11.71	92.9	0.95	na	0.203	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.3	6.14	0.37	1.497	0.906	7.97	1.0	3.48	97	6.8	13.70	92.9	0.95	na	0.203	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.32	5.63	0.35	1.501	0.908	8.48	1.0	3.54	100	6.2	14.76	91.6	0.95	na	0.203	1.02	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.34	5.12	0.2	1.505	0.910	5.53	1.0	3.48	97	5.6	13.64	76.8	0.94	na	0.203	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.36	5.12	0.09	1.509	0.912	2.49	1.0	3.30	81	5.6	10.62	59.6	0.94	na	0.203	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.38	4.61	0.06	1.513	0.914	1.94	1.0	3.30	81	5.0	10.74	54.2	0.94	na	0.203	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.4	5.12	0.04	1.517	0.916	1.11	1.0	3.14	69	5.6	8.43	47.1	0.94	na	0.203	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.42	5.12	0.04	1.521	0.918	1.11	1.0	3.14	69	5.6	8.45	47.1	0.94	na	0.203	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.44	3.07	0.04	1.526	0.920	2.59	1.0	3.63	100	3.3	16.60	55.4	0.94	na	0.203	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.46	5.12	0.04	1.530	0.922	1.11	1.0	3.15	69	5.6	8.49	47.1	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.48	5.63	0.05	1.534	0.924	1.22	1.0	3.11	66	6.1	8.04	49.0	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.5	5.63	0.05	1.538	0.926	1.22	1.0	3.11	66	6.1	8.05	49.0	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.52	5.63	0.05	1.542	0.928	1.22	1.0	3.11	66	6.1	8.07	49.0	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.54	5.63	0.05	1.546	0.930	1.22	1.0	3.12	67	6.1	8.09	49.0	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.56	5.63	0.05	1.550	0.932	1.23	1.0	3.12	67	6.0	8.11	49.0	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.58	5.12	0.05	1.554	0.934	1.40	1.0	3.20	73	5.5	9.15	50.2	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.6	5.12	0.05	1.558	0.936	1.40	1.0	3.20	73	5.5	9.17	50.2	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.62	5.12	0.05	1.563	0.939	1.41	1.0	3.20	73	5.5	9.20	50.2	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1

7.64	5.12	0.05	1.567	0.941	1.41	1.0	3.20	73	5.4	9.22	50.2	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.66	5.12	0.05	1.571	0.943	1.41	1.0	3.20	73	5.4	9.24	50.2	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.68	5.12	0.05	1.575	0.945	1.41	1.0	3.20	73	5.4	9.26	50.2	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.7	5.12	0.05	1.579	0.947	1.41	1.0	3.20	73	5.4	9.28	50.2	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.72	5.12	0.04	1.583	0.949	1.13	1.0	3.17	70	5.4	8.75	47.2	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.74	5.12	0.04	1.587	0.951	1.13	1.0	3.17	70	5.4	8.77	47.2	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.76	4.61	0.04	1.591	0.953	1.33	1.0	3.26	78	4.8	10.06	48.6	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.78	4.61	0.04	1.595	0.955	1.33	1.0	3.26	78	4.8	10.08	48.7	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.8	4.61	0.04	1.599	0.957	1.33	1.0	3.26	78	4.8	10.10	48.7	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.82	4.61	0.04	1.604	0.959	1.33	1.0	3.26	78	4.8	10.13	48.7	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.84	4.61	0.04	1.608	0.961	1.33	1.0	3.27	78	4.8	10.15	48.7	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.86	4.61	0.04	1.612	0.963	1.33	1.0	3.27	78	4.8	10.18	48.7	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.88	4.61	0.03	1.616	0.965	1.00	1.0	3.22	74	4.8	9.48	45.3	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.9	5.12	0.04	1.620	0.967	1.14	1.0	3.18	71	5.3	8.94	47.3	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.92	5.63	0.07	1.624	0.969	1.75	1.0	3.21	74	5.8	9.31	54.1	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.94	6.14	0.06	1.628	0.971	1.33	1.0	3.11	66	6.3	8.00	50.6	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.96	6.14	0.05	1.632	0.973	1.11	1.0	3.08	64	6.3	7.61	48.0	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
7.98	5.12	0.05	1.636	0.975	1.44	1.0	3.23	75	5.2	9.58	50.3	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8	4.61	0.06	1.640	0.978	2.02	1.0	3.35	86	4.7	11.54	54.4	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.02	4.61	0.07	1.645	0.980	2.36	1.0	3.39	89	4.7	12.07	56.8	0.94	na	0.204	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.04	4.61	0.08	1.649	0.982	2.70	1.0	3.42	91	4.7	12.56	59.0	0.94	na	0.205	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.06	4.1	0.06	1.653	0.984	2.45	1.0	3.47	96	4.2	13.50	56.3	0.94	na	0.205	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.08	4.1	0.05	1.657	0.986	2.05	1.0	3.44	93	4.2	12.90	53.7	0.94	na	0.205	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.1	4.1	0.04	1.661	0.988	1.64	1.0	3.40	89	4.2	12.21	50.7	0.94	na	0.205	1.01	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.12	4.61	0.04	1.665	0.990	1.36	1.0	3.29	80	4.7	10.49	48.9	0.94	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.14	5.12	0.04	1.669	0.992	1.16	1.0	3.20	73	5.2	9.18	47.4	0.94	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.16	6.66	0.06	1.673	0.994	1.20	1.0	3.06	63	6.7	7.40	49.6	0.94	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.18	9.22	0.1	1.677	0.996	1.33	1.0	2.92	53	9.3	5.85	54.2	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.2	9.22	0.14	1.681	0.998	1.86	1.0	2.99	58	9.2	6.60	60.9	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.22	8.19	0.15	1.686	1.000	2.31	1.0	3.09	65	8.2	7.80	63.9	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.24	6.14	0.18	1.690	1.002	4.04	1.0	3.36	86	6.1	11.66	71.5	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.26	5.63	0.19	1.694	1.004	4.83	1.0	3.45	94	5.6	13.14	73.7	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.28	5.12	0.18	1.698	1.006	5.26	1.0	3.52	100	5.1	14.44	73.5	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.3	5.12	0.17	1.702	1.008	4.97	1.0	3.51	100	5.1	14.22	72.2	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.32	5.12	0.11	1.706	1.010	3.22	1.0	3.41	91	5.1	12.48	63.2	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.34	5.12	0.05	1.710	1.012	1.47	1.0	3.25	77	5.1	9.97	50.4	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.36	5.12	0.05	1.714	1.014	1.47	1.0	3.25	77	5.0	9.99	50.4	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.38	5.12	0.05	1.718	1.017	1.47	1.0	3.26	77	5.0	10.02	50.4	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.4	4.61	0.05	1.722	1.019	1.73	1.0	3.35	85	4.5	11.49	52.0	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.42	5.12	0.06	1.727	1.021	1.77	1.0	3.29	81	5.0	10.58	53.1	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.44	5.12	0.05	1.731	1.023	1.48	1.0	3.26	78	5.0	10.08	50.5	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.46	5.12	0.06	1.735	1.025	1.77	1.0	3.30	81	5.0	10.62	53.1	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.48	4.61	0.06	1.739	1.027	2.09	1.0	3.39	89	4.5	12.17	54.7	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.5	4.61	0.06	1.743	1.029	2.09	1.0	3.39	89	4.5	12.20	54.7	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.52	4.61	0.06	1.747	1.031	2.10	1.0	3.40	89	4.5	12.23	54.7	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.54	4.61	0.06	1.751	1.033	2.10	1.0	3.40	90	4.5	12.25	54.7	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.56	5.12	0.06	1.755	1.035	1.78	1.0	3.30	81	4.9	10.74	53.1	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.58	5.12	0.06	1.759	1.037	1.79	1.0	3.31	81	4.9	10.76	53.1	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.6	5.12	0.06	1.763	1.039	1.79	1.0	3.31	82	4.9	10.78	53.1	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.62	5.63	0.05	1.768	1.041	1.29	1.0	3.19	72	5.4	9.10	49.2	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.64	5.12	0.04	1.772	1.043	1.19	1.0	3.24	76	4.9	9.71	47.7	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.66	5.12	0.05	1.776	1.045	1.50	1.0	3.28	79	4.9	10.32	50.6	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.68	5.63	0.04	1.780	1.047	1.04	1.0	3.16	70	5.4	8.63	46.4	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.7	6.14	0.05	1.784	1.049	1.15	1.0	3.13	67	5.9	8.22	48.1	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.72	8.19	0.08	1.788	1.051	1.25	1.0	2.99	58	7.8	6.62	51.5	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.74	11.26	0.1	1.792	1.054	1.06	1.0	2.81	46	10.7	4.82	51.5	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.76	10.24	0.12	1.796	1.056	1.42	1.0	2.91	53	9.7	5.78	56.1	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.78	8.19	0.11	1.800	1.058	1.72	1.0	3.06	62	7.7	7.38	57.2	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.8	6.66	0.12	1.804	1.060	2.47	1.0	3.24	76	6.3	9.77	61.4	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.82	5.63	0.13	1.809	1.062	3.40	1.0	3.40	90	5.3	12.29	65.1	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.84	5.63	0.15	1.813	1.064	3.93	1.0	3.43	93	5.3	12.86	68.1	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.86	5.12	0.15	1.817	1.066	4.54	1.0	3.52	100	4.8	14.43	69.3	0.93	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.88	5.12	0.11	1.821	1.068	3.33	1.0	3.45	94	4.8	13.19	63.2	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.9	5.12	0.07	1.825	1.070	2.12	1.0	3.36	86	4.8	11.61	55.6	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.92	5.12	0.05	1.829	1.072	1.52	1.0	3.30	81	4.8	10.62	50.7	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1

8.94	5.63	0.06	1.833	1.074	1.58	1.0	3.25	77	5.2	9.90	51.9	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.96	5.12	0.06	1.837	1.076	1.83	1.0	3.33	84	4.8	11.20	53.3	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
8.98	5.63	0.06	1.841	1.078	1.58	1.0	3.25	77	5.2	9.94	51.9	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9	5.63	0.06	1.845	1.080	1.59	1.0	3.25	77	5.2	9.96	51.9	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.02	5.63	0.06	1.850	1.082	1.59	1.0	3.25	77	5.2	9.98	51.9	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.04	5.63	0.06	1.854	1.084	1.59	1.0	3.25	77	5.2	10.00	51.9	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.06	5.63	0.06	1.858	1.086	1.59	1.0	3.26	77	5.2	10.02	51.9	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.08	5.63	0.06	1.862	1.088	1.59	1.0	3.26	78	5.2	10.04	51.9	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.1	5.63	0.06	1.866	1.090	1.59	1.0	3.26	78	5.2	10.06	51.9	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.12	5.12	0.06	1.870	1.093	1.85	1.0	3.34	85	4.7	11.38	53.4	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.14	5.12	0.06	1.874	1.095	1.85	1.0	3.35	85	4.7	11.41	53.4	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.16	5.63	0.06	1.878	1.097	1.60	1.0	3.26	78	5.1	10.12	52.0	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.18	5.63	0.06	1.882	1.099	1.60	1.0	3.26	78	5.1	10.14	52.0	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.2	5.63	0.06	1.886	1.101	1.60	1.0	3.27	78	5.1	10.16	52.0	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.22	5.63	0.06	1.891	1.103	1.60	1.0	3.27	78	5.1	10.18	52.0	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.24	5.63	0.06	1.895	1.105	1.61	1.0	3.27	78	5.1	10.20	52.0	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.26	5.63	0.07	1.899	1.107	1.88	1.0	3.30	81	5.1	10.67	54.3	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.28	5.12	0.06	1.903	1.109	1.87	1.0	3.36	86	4.6	11.57	53.4	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.3	5.12	0.06	1.907	1.111	1.87	1.0	3.36	86	4.6	11.60	53.4	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.32	5.12	0.06	1.911	1.113	1.87	1.0	3.36	86	4.6	11.62	53.5	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.34	5.12	0.06	1.915	1.115	1.87	1.0	3.36	86	4.6	11.64	53.5	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.36	5.12	0.06	1.919	1.117	1.87	1.0	3.36	86	4.6	11.67	53.5	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.38	5.12	0.06	1.923	1.119	1.88	1.0	3.36	87	4.6	11.69	53.5	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.4	5.12	0.06	1.927	1.121	1.88	1.0	3.37	87	4.6	11.72	53.5	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.42	5.12	0.06	1.932	1.123	1.88	1.0	3.37	87	4.6	11.74	53.5	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.44	5.12	0.06	1.936	1.125	1.88	1.0	3.37	87	4.5	11.76	53.5	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.46	5.12	0.06	1.940	1.127	1.89	1.0	3.37	87	4.5	11.79	53.5	0.92	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.48	5.12	0.07	1.944	1.130	2.20	1.0	3.40	90	4.5	12.31	55.8	0.91	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.5	5.12	0.07	1.948	1.132	2.21	1.0	3.40	90	4.5	12.34	55.8	0.91	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.52	5.12	0.06	1.952	1.134	1.89	1.0	3.37	87	4.5	11.86	53.6	0.91	na	0.205	1.00	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.54	5.12	0.07	1.956	1.136	2.21	1.0	3.41	90	4.5	12.39	55.8	0.91	na	0.205	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.56	5.12	0.06	1.960	1.138	1.90	1.0	3.38	88	4.5	11.91	53.6	0.91	na	0.205	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.58	5.12	0.06	1.964	1.140	1.90	1.0	3.38	88	4.5	11.93	53.6	0.91	na	0.205	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.6	5.12	0.05	1.969	1.142	1.59	1.0	3.35	85	4.5	11.40	51.1	0.91	na	0.205	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.62	5.12	0.05	1.973	1.144	1.59	1.0	3.35	85	4.5	11.42	51.1	0.91	na	0.205	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.64	4.61	0.04	1.977	1.146	1.52	1.0	3.41	91	4.0	12.46	50.1	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.66	4.61	0.04	1.981	1.148	1.52	1.0	3.41	91	4.0	12.49	50.1	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.68	4.61	0.04	1.985	1.150	1.52	1.0	3.41	91	4.0	12.51	50.2	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.7	5.12	0.04	1.989	1.152	1.28	1.0	3.31	82	4.4	10.88	48.4	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.72	5.12	0.04	1.993	1.154	1.28	1.0	3.31	82	4.4	10.90	48.4	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.74	5.12	0.04	1.997	1.156	1.28	1.0	3.32	82	4.4	10.93	48.4	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.76	5.12	0.05	2.001	1.158	1.60	1.0	3.36	86	4.4	11.58	51.2	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.78	5.12	0.04	2.005	1.160	1.28	1.0	3.32	83	4.4	10.97	48.4	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.8	5.12	0.04	2.010	1.162	1.29	1.0	3.32	83	4.4	10.99	48.4	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.82	5.12	0.04	2.014	1.164	1.29	1.0	3.32	83	4.4	11.02	48.4	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.84	5.12	0.04	2.018	1.166	1.29	1.0	3.32	83	4.4	11.04	48.5	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.86	5.12	0.04	2.022	1.169	1.29	1.0	3.32	83	4.4	11.06	48.5	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.88	5.12	0.04	2.026	1.171	1.29	1.0	3.33	83	4.4	11.08	48.5	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.9	5.12	0.04	2.030	1.173	1.29	1.0	3.33	83	4.4	11.11	48.5	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.92	6.14	0.07	2.034	1.175	1.70	1.0	3.27	78	5.2	10.18	53.2	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.94	6.66	0.08	2.038	1.177	1.73	1.0	3.22	75	5.7	9.56	54.1	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.96	7.68	0.08	2.042	1.179	1.42	1.0	3.11	66	6.5	8.01	52.2	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
9.98	7.17	0.13	2.046	1.181	2.54	1.0	3.27	78	6.1	10.16	61.7	0.91	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10	7.17	0.11	2.051	1.183	2.15	1.0	3.23	75	6.1	9.65	58.5	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.02	7.68	0.13	2.055	1.185	2.31	1.0	3.21	74	6.5	9.37	60.8	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.04	6.66	0.16	2.059	1.187	3.48	1.0	3.38	88	5.6	11.91	66.8	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.06	6.66	0.19	2.063	1.189	4.13	1.0	3.42	91	5.6	12.59	70.5	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.08	8.19	0.21	2.067	1.191	3.43	1.0	3.27	79	6.9	10.23	70.3	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.1	9.22	0.22	2.071	1.193	3.08	1.0	3.19	72	7.7	9.06	70.0	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.12	11.26	0.22	2.075	1.195	2.40	1.0	3.04	61	9.4	7.16	67.5	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.14	13.82	0.18	2.079	1.197	1.53	1.0	2.85	49	11.5	5.20	60.0	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.16	16.9	0.16	2.083	1.199	1.08	1.0	2.69	40	14.1	3.89	54.8	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.18	17.92	0.18	2.087	1.201	1.14	1.0	2.67	39	14.9	3.79	56.6	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.2	14.34	0.23	2.092	1.203	1.88	1.0	2.88	51	11.9	5.48	65.3	0.90	na	0.204	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.22	11.26	0.26	2.096	1.205	2.84	1.0	3.08	64	9.3	7.68	71.7	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1

10.24	8.7	0.25	2.100	1.208	3.79	1.0	3.27	79	7.2	10.24	73.8	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.26	7.17	0.25	2.104	1.210	4.93	1.0	3.43	92	5.9	12.82	76.0	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.28	6.14	0.26	2.108	1.212	6.45	1.0	3.58	100	5.1	15.53	78.7	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.3	6.14	0.23	2.112	1.214	5.71	1.0	3.55	100	5.1	14.98	75.8	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.32	5.63	0.15	2.116	1.216	4.27	1.0	3.53	100	4.6	14.65	67.8	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.34	6.14	0.1	2.120	1.218	2.49	1.0	3.36	87	5.0	11.71	59.0	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.36	6.14	0.08	2.124	1.220	1.99	1.0	3.32	83	5.0	11.00	55.4	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.38	5.63	0.08	2.128	1.222	2.28	1.0	3.40	90	4.6	12.31	56.7	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.4	5.63	0.08	2.133	1.224	2.29	1.0	3.40	90	4.6	12.34	56.7	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.42	6.14	0.08	2.137	1.226	2.00	1.0	3.32	83	5.0	11.06	55.4	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.44	6.14	0.08	2.141	1.228	2.00	1.0	3.33	83	5.0	11.08	55.4	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.46	6.66	0.11	2.145	1.230	2.44	1.0	3.32	83	5.4	10.99	59.5	0.90	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.48	8.19	0.13	2.149	1.232	2.15	1.0	3.18	72	6.6	8.99	59.8	0.89	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.5	10.75	0.13	2.153	1.234	1.51	1.0	2.98	57	8.7	6.46	56.3	0.89	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.52	9.22	0.14	2.157	1.236	1.98	1.0	3.11	66	7.5	8.00	59.7	0.89	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.54	8.19	0.15	2.161	1.238	2.49	1.0	3.22	74	6.6	9.47	62.6	0.89	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.56	8.19	0.15	2.165	1.240	2.49	1.0	3.22	74	6.6	9.48	62.6	0.89	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.58	9.22	0.18	2.169	1.242	2.55	1.0	3.17	70	7.4	8.75	65.0	0.89	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.6	18.94	0.24	2.174	1.245	1.43	1.0	2.71	41	15.2	4.09	62.2	0.89	na	0.203	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.14	0.000	0.00	0.11	0.00	0.1
10.62	20.99	0.19	2.178	1.247	1.01	0.5	2.57	34	18.3	3.11	56.8	0.89	0.097	0.203	0.99	1.21	15.1	0.500	0.943	0.006	0.02	0.0	0.14	0.004	0.00	0.11	0.00	0.1
10.64	18.94	0.16	2.182	1.249	0.95	1.0	2.63	37	15.2	3.51	53.2	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.13	0.000	0.00	0.11	0.00	0.1
10.66	11.78	0.13	2.186	1.251	1.35	1.0	2.92	53	9.4	5.84	55.1	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.13	0.000	0.00	0.11	0.00	0.1
10.68	8.7	0.11	2.190	1.253	1.69	1.0	3.11	66	6.9	8.04	55.9	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.13	0.000	0.00	0.11	0.00	0.1
10.7	7.68	0.1	2.194	1.255	1.82	1.0	3.19	72	6.1	9.12	55.8	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.13	0.000	0.00	0.11	0.00	0.1
10.72	7.17	0.1	2.198	1.257	2.01	1.0	3.25	77	5.7	9.96	56.8	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.13	0.000	0.00	0.11	0.00	0.1
10.74	7.17	0.07	2.202	1.259	1.41	1.0	3.18	72	5.7	8.99	51.2	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.13	0.000	0.00	0.11	0.00	0.1
10.76	8.19	0.06	2.206	1.261	1.00	1.0	3.05	62	6.5	7.28	47.3	0.89	na	0.202	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.13	0.000	0.00	0.11	0.00	0.1
10.78	23.55	0.17	2.210	1.263	0.80	0.5	2.47	29	20.4	2.62	53.3	0.89	0.094	0.202	0.99	1.17	13.6	0.500	0.943	0.007	0.02	0.0	0.13	0.005	0.00	0.11	0.00	0.1
10.8	59.91	0.29	2.215	1.265	0.50	0.5	2.00	13	51.7	1.29	66.7	0.89	0.108	0.202	0.99	1.34	13.9	0.500	0.943	0.003	0.02	0.0	0.13	0.002	0.00	0.10	0.00	0.1
10.82	95.75	0.34	2.219	1.267	0.36	0.5	1.75	7	82.6	1.00	82.6	0.89	0.132	0.202	0.98	1.65	15.7	0.465	0.906	0.002	0.02	0.0	0.13	0.001	0.00	0.10	0.00	0.1
10.84	109.06	0.35	2.223	1.269	0.33	0.5	1.68	6	94.0	1.00	94.0	0.89	0.157	0.202	0.98	1.95	17.4	0.357	0.838	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
10.86	119.81	0.33	2.227	1.271	0.28	0.5	1.61	5	103.2	1.00	103.2	0.89	0.182	0.202	0.98	2.26	18.7	0.288	0.766	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
10.88	120.84	0.34	2.231	1.273	0.29	0.5	1.61	5	104.0	1.00	104.0	0.89	0.185	0.202	0.98	2.29	18.8	0.283	0.759	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
10.9	112.13	0.35	2.235	1.275	0.32	0.5	1.66	5	96.4	1.00	96.4	0.89	0.163	0.202	0.98	2.03	17.8	0.337	0.821	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
10.92	95.75	0.49	2.239	1.277	0.52	0.5	1.83	9	82.3	1.12	92.1	0.88	0.153	0.202	0.98	1.90	18.0	0.373	0.851	0.001	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
10.94	78.34	0.66	2.243	1.279	0.87	0.5	2.02	13	67.3	1.32	88.7	0.88	0.145	0.202	0.98	1.80	18.6	0.404	0.873	0.001	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
10.96	62.98	0.8	2.247	1.281	1.32	0.5	2.21	19	54.0	1.67	90.3	0.88	0.149	0.201	0.98	1.85	20.4	0.389	0.863	0.001	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
10.98	44.55	0.81	2.251	1.284	1.91	0.5	2.43	28	38.2	2.43	92.7	0.88	0.154	0.201	0.98	1.91	23.1	0.368	0.848	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11	32.77	0.6	2.256	1.286	1.97	0.5	2.55	33	28.1	3.02	84.8	0.88	0.137	0.201	0.98	1.70	22.4	0.442	0.895	0.001	0.02	0.0	0.12	0.001	0.00	0.10	0.00	0.1
11.02	26.11	0.46	2.260	1.288	1.93	1.0	2.67	39	20.3	3.75	76.0	0.88	na	0.201	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.04	20.48	0.38	2.264	1.290	2.09	1.0	2.78	45	15.9	4.63	73.5	0.88	na	0.201	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.06	16.38	0.35	2.268	1.292	2.48	1.0	2.92	53	12.7	5.86	74.3	0.88	na	0.201	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.08	12.29	0.3	2.272	1.294	2.99	1.0	3.09	65	9.5	7.76	73.7	0.88	na	0.201	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.1	8.19	0.25	2.276	1.296	4.23	1.0	3.36	86	6.3	11.67	73.8	0.88	na	0.201	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.12	7.68	0.23	2.280	1.298	4.26	1.0	3.40	90	5.9	12.26	72.5	0.88	na	0.201	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.14	7.68	0.2	2.284	1.300	3.71	1.0	3.37	87	5.9	11.73	69.3	0.88	na	0.201	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.16	7.17	0.16	2.288	1.302	3.28	1.0	3.38	88	5.5	11.89	65.5	0.88	na	0.201	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.18	7.17	0.11	2.292	1.304	2.26	1.0	3.30	81	5.5	10.63	58.4	0.88	na	0.201	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.2	7.17	0.06	2.297	1.306	1.23	1.0	3.18	71	5.5	8.95	49.1	0.88	na	0.201	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.22	7.17	0.06	2.301	1.308	1.23	1.0	3.18	72	5.5	8.96	49.1	0.88	na	0.201	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.24	7.17	0.06	2.305	1.310	1.23	1.0	3.18	72	5.5	8.98	49.1	0.88	na	0.201	0.99	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.26	7.17	0.06	2.309	1.312	1.23	1.0	3.18	72	5.5	8.99	49.1	0.88	na	0.200	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.28	7.17	0.06	2.313	1.314	1.24	1.0	3.19	72	5.5	9.01	49.2	0.88	na	0.200	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.3	7.17	0.06	2.317	1.316	1.24	1.0	3.19	72	5.4	9.02	49.2	0.88	na	0.200	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.32	7.17	0.06	2.321	1.318	1.24	1.0	3.19	72	5.4	9.04	49.2	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.34	7.68	0.06	2.325	1.321	1.12	1.0	3.13	68	5.8	8.29	48.2	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.36	7.17	0.06	2.329	1.323	1.24	1.0	3.19	72	5.4	9.07	49.2	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.38	7.17	0.06	2.333	1.325	1.24	1.0	3.19	72	5.4	9.09	49.2	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.4	7.17	0.07	2.338	1.327	1.45	1.0	3.22	75	5.4	9.49	51.3	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.42	7.17	0.09	2.342	1.329	1.86	1.0	3.27	79	5.4	10.21	55.1	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.44	7.68	0.1	2.346	1.331	1.87	1.0	3.23	76	5.8	9.68	55.8	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.46	9.22	0.12	2.350	1.333	1.75	1.0	3.12	67	6.9	8.17	56.5	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.48	16.9	0.13	2.354	1.335	0.89	1.0	2.70	40	12.7	3.98	50.3	0.87	na	0.200	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.12	0.000	0.00	0.10	0.00	0.1
11.5	31.75	0.15	2.358	1.337	0.51	0.5	2.28	22	26.7	1.86	49.6	0.87	0.091	0.200	0.98	1.15	11.5	0.500	0.943	0.008	0.02	0.0	0.12	0.006	0.01	0.10	0.01	0.1
11.52	38.91	0.18	2.362	1.339	0.49	0.5	2.18	18	32.7	1.00	32.7	0.87	0.077	0.199	0.99	0.97	7.3	0.500	0.943	0.065	0.02	0.1	0.11	0.071	0.06	0.09	0.05	0.1

11.54	39.94	0.24	2.366	1.341	0.64	0.5	2.22	20	33.5	1.71	57.3	0.87	0.098	0.199	0.98	1.23	13.1	0.500	0.943	0.005	0.02	0.0	0.06	0.004	0.00	0.04	0.00	0.0
11.56	39.94	0.29	2.370	1.343	0.77	0.5	2.26	21	33.5	1.82	60.9	0.87	0.101	0.199	0.98	1.27	14.1	0.500	0.943	0.004	0.02	0.0	0.06	0.003	0.00	0.03	0.00	0.0
11.58	41.99	0.34	2.375	1.345	0.86	0.5	2.26	21	35.2	1.83	64.3	0.87	0.105	0.199	0.98	1.32	14.9	0.500	0.943	0.004	0.02	0.0	0.06	0.002	0.00	0.03	0.00	0.0
11.6	47.62	0.39	2.379	1.347	0.86	0.5	2.22	20	39.8	1.70	67.7	0.87	0.109	0.199	0.98	1.37	15.4	0.500	0.943	0.003	0.02	0.0	0.05	0.002	0.00	0.03	0.00	0.0
11.62	52.23	0.37	2.383	1.349	0.74	0.5	2.15	17	43.7	1.54	67.2	0.87	0.108	0.199	0.98	1.36	14.8	0.500	0.943	0.003	0.02	0.0	0.05	0.002	0.00	0.03	0.00	0.0
11.64	67.59	0.33	2.387	1.351	0.51	0.5	1.96	12	56.5	1.25	70.5	0.87	0.113	0.199	0.98	1.42	14.5	0.500	0.942	0.003	0.02	0.0	0.05	0.001	0.00	0.03	0.00	0.0
11.66	96.26	0.36	2.391	1.353	0.38	0.5	1.77	7	80.4	1.00	80.4	0.87	0.128	0.199	0.98	1.61	15.4	0.490	0.916	0.002	0.02	0.0	0.05	0.001	0.00	0.03	0.00	0.0
11.68	126.47	0.38	2.395	1.355	0.31	0.5	1.62	5	105.5	1.00	105.5	0.87	0.189	0.199	0.97	2.36	19.1	0.273	0.746	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
11.7	138.25	0.33	2.399	1.357	0.24	0.5	1.54	3	115.3	1.00	115.3	0.86	0.222	0.199	0.97	2.77	20.4	0.218	0.653	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
11.72	139.78	0.35	2.403	1.360	0.25	0.5	1.54	3	116.4	1.00	116.4	0.86	0.227	0.199	0.97	2.83	20.6	0.212	0.641	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
11.74	136.71	0.44	2.407	1.362	0.33	0.5	1.60	4	113.8	1.00	113.8	0.86	0.217	0.199	0.97	2.71	20.5	0.225	0.668	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
11.76	128.01	0.59	2.411	1.364	0.47	0.5	1.70	6	106.5	1.00	106.5	0.86	0.192	0.198	0.97	2.40	19.9	0.267	0.737	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
11.78	119.81	0.77	2.416	1.366	0.66	0.5	1.81	8	99.6	1.11	110.2	0.86	0.204	0.198	0.97	2.55	21.4	0.245	0.703	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
11.8	114.69	0.98	2.420	1.368	0.87	0.5	1.90	10	95.3	1.18	112.3	0.86	0.212	0.198	0.97	2.65	22.5	0.233	0.682	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
11.82	113.67	1.33	2.424	1.370	1.20	0.5	1.99	13	94.3	1.28	120.3	0.86	0.242	0.198	0.97	3.02	24.9	0.193	0.601	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
11.84	111.62	1.41	2.428	1.372	1.29	0.5	2.02	13	92.6	1.31	121.5	0.86	0.247	0.198	0.97	3.08	25.4	0.188	0.588	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
11.86	102.4	1.33	2.432	1.374	1.33	0.5	2.05	14	84.9	1.37	116.0	0.86	0.225	0.198	0.97	2.81	24.6	0.214	0.646	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
11.88	88.07	1.24	2.436	1.376	1.45	0.5	2.13	17	72.9	1.50	109.3	0.86	0.201	0.198	0.97	2.52	23.9	0.250	0.712	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
11.9	72.71	1.16	2.440	1.378	1.65	0.5	2.23	20	60.2	1.73	104.3	0.86	0.186	0.198	0.97	2.33	23.8	0.281	0.757	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
11.92	58.88	0.98	2.444	1.380	1.74	0.5	2.32	23	48.7	2.00	97.2	0.86	0.165	0.198	0.97	2.08	23.0	0.332	0.815	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
11.94	46.08	0.82	2.448	1.382	1.88	0.5	2.43	28	38.1	2.41	91.9	0.86	0.152	0.198	0.97	1.91	22.9	0.375	0.853	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
11.96	33.28	0.75	2.452	1.384	2.43	1.0	2.66	38	24.0	3.71	89.1	0.86	na	0.198	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
11.98	26.11	0.7	2.457	1.386	2.96	1.0	2.81	46	18.8	4.81	90.5	0.86	na	0.197	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12	23.55	0.65	2.461	1.388	3.08	1.0	2.86	49	17.0	5.26	89.2	0.86	na	0.197	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.02	22.02	0.67	2.465	1.390	3.43	1.0	2.91	53	15.8	5.78	91.5	0.86	na	0.197	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.04	19.46	0.55	2.469	1.392	3.24	1.0	2.95	55	14.0	6.13	85.7	0.86	na	0.197	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.06	19.97	0.36	2.473	1.394	2.06	1.0	2.82	47	14.3	4.97	71.2	0.85	na	0.197	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.08	19.46	0.31	2.477	1.396	1.83	1.0	2.81	46	13.9	4.83	67.3	0.85	na	0.197	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.1	16.9	0.24	2.481	1.399	1.66	1.0	2.85	49	12.1	5.19	62.7	0.85	na	0.197	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.12	16.38	0.24	2.485	1.401	1.73	1.0	2.87	50	11.7	5.40	63.1	0.85	na	0.197	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.14	16.9	0.23	2.489	1.403	1.60	1.0	2.84	48	12.0	5.12	61.6	0.85	na	0.197	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.16	18.43	0.23	2.493	1.405	1.44	1.0	2.78	45	13.1	4.61	60.4	0.85	na	0.197	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.18	17.92	0.23	2.498	1.407	1.49	1.0	2.80	46	12.7	4.77	60.8	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.2	14.34	0.27	2.502	1.409	2.28	1.0	3.00	58	10.2	6.66	67.8	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.22	13.82	0.28	2.506	1.411	2.47	1.0	3.03	61	9.8	7.07	69.2	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.24	13.82	0.28	2.510	1.413	2.48	1.0	3.03	61	9.8	7.08	69.2	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.26	13.82	0.29	2.514	1.415	2.56	1.0	3.04	61	9.8	7.18	70.1	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.28	14.34	0.21	2.518	1.417	1.78	1.0	2.94	55	10.1	6.10	61.7	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.3	15.36	0.15	2.522	1.419	1.17	1.0	2.82	47	10.8	4.97	53.8	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.32	16.9	0.13	2.526	1.421	0.90	1.0	2.73	42	11.9	4.21	50.1	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.34	17.92	0.14	2.530	1.423	0.91	1.0	2.71	41	12.6	4.02	50.6	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.36	19.46	0.14	2.534	1.425	0.83	1.0	2.65	38	13.7	3.64	49.7	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.38	20.99	0.25	2.539	1.427	1.35	1.0	2.72	41	14.7	4.11	60.5	0.85	na	0.196	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.4	23.55	0.37	2.543	1.429	1.76	1.0	2.73	42	16.5	4.20	69.2	0.84	na	0.195	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.03	0.00	0.0
12.42	35.33	0.45	2.547	1.431	1.37	0.5	2.45	29	28.7	2.53	72.7	0.84	0.116	0.195	0.97	1.47	18.3	0.500	0.939	0.002	0.02	0.0	0.04	0.001	0.00	0.03	0.00	0.0
12.44	35.33	0.54	2.551	1.433	1.65	0.5	2.50	31	28.7	2.75	78.8	0.84	0.126	0.195	0.97	1.60	20.3	0.500	0.922	0.002	0.02	0.0	0.04	0.001	0.00	0.02	0.00	0.0
12.46	36.35	0.55	2.555	1.436	1.63	0.5	2.49	30	29.5	2.68	79.0	0.84	0.126	0.195	0.97	1.60	20.2	0.500	0.921	0.002	0.02	0.0	0.04	0.001	0.00	0.02	0.00	0.0
12.48	36.87	0.45	2.559	1.438	1.31	0.5	2.43	28	29.9	2.42	72.1	0.84	0.115	0.195	0.97	1.47	18.0	0.500	0.940	0.002	0.02	0.0	0.04	0.001	0.00	0.02	0.00	0.0
12.5	33.79	0.39	2.563	1.440	1.25	0.5	2.45	29	27.4	2.52	68.9	0.84	0.110	0.195	0.97	1.41	17.3	0.500	0.943	0.003	0.02	0.0	0.04	0.001	0.00	0.02	0.00	0.0
12.52	27.65	0.44	2.567	1.442	1.75	1.0	2.67	39	19.2	3.75	71.8	0.84	na	0.195	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.02	0.00	0.0
12.54	25.09	0.44	2.571	1.444	1.95	1.0	2.73	42	17.4	4.22	73.3	0.84	na	0.195	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.04	0.000	0.00	0.02	0.00	0.0
12.56	32.77	0.48	2.575	1.446	1.59	0.5	2.52	32	26.5	2.86	75.8	0.84	0.121	0.195	0.97	1.54	19.7	0.500	0.931	0.002	0.02	0.0	0.04	0.001	0.00	0.02	0.00	0.0
12.58	43.52	0.64	2.580	1.448	1.56	0.5	2.41	27	35.1	2.34	82.1	0.84	0.131	0.194	0.97	1.68	20.3	0.470	0.908	0.001	0.02	0.0	0.03	0.001	0.00	0.02	0.00	0.0
12.6	59.39	0.66	2.584	1.450	1.16	0.5	2.22	20	47.9	1.70	81.6	0.84	0.131	0.194	0.97	1.67	18.5	0.476	0.910	0.001	0.02	0.0	0.03	0.001	0.00	0.02	0.00	0.0
12.62	79.88	0.68	2.588	1.452	0.88	0.5	2.04	14	64.4	1.35	86.8	0.84	0.141	0.194	0.97	1.79	18.3	0.422	0.884	0.001	0.02	0.0	0.03	0.000	0.00	0.02	0.00	0.0
12.64	92.68	0.52	2.592	1.454	0.58	0.5	1.88	10	74.7	1.17	87.2	0.84	0.142	0.194	0.97	1.81	17.4	0.418	0.882	0.001	0.02	0.0	0.03	0.000	0.00	0.02	0.00	0.0
12.66	85	0.34	2.596	1.456	0.41	0.5	1.85	9	68.4	1.00	68.4	0.84	0.110	0.194	0.97	1.41	13.5	0.500	0.943	0.003	0.02	0.0	0.03	0.001	0.00	0.02	0.00	0.0
12.68	64.51	0.37	2.600	1.458	0.60	0.5	2.03	14	51.9	1.34	69.4	0.84	0.111	0.194	0.97	1.42	14.6	0.500	0.943	0.002	0.02	0.0	0.03	0.001	0.00	0.02	0.00	0.0
12.7	44.55	0.52	2.604	1.460	1.24	0.5	2.34	24	35.8	2.09	74.7	0.84	0.119	0.194	0.97	1.52	17.9	0.500	0.934	0.002	0.02	0.0	0.03	0.001	0.00	0.02	0.00	0.0
12.72	31.75	0.65	2.608	1.462	2.23	1.0	2.68	39	21.7	3.82	82.9	0.84	na	0.194	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.03	0.000	0.00	0.02	0.00	0.0
12.74	26.63	0.71	2.612	1.464	2.96	1.0	2.82	47	18.2	4.92	89.5	0.83	na	0.194	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.03	0.000	0.00	0.02	0.00	0.0
12.76	24.07	0.63	2.616	1.466	2.94	1.0	2.86	49	16.4	5.26	86.4	0.83	na	0.193	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.03	0.000	0.00	0.02	0.00	0.0
12.78	22.02	0.58	2.621	1.468	2.99	1.0	2.90	52	15.0	5.65	84.7	0.83	na	0.193	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.03	0.000	0.00	0.02	0.00	0.0
12.8	19.97	0.55	2.625	1.470	3.17	1.0	2.95	55	13.6	6.20	84.2	0.83	na	0.193	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.03	0.000	0.00	0.02	0.00	0.0
12.82	20.99	0.49	2.629	1.472	2.67	1.0	2.89	51	14.3	5.57	79.4	0.83	na	0.193	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.03	0.000	0.00	0.02	0.00	0.0

12.84	23.55	0.32	2.633	1.475	1.53	1.0	2.71	41	16.0	4.05	64.7	0.83	na	0.193	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.03	0.000	0.00	0.02	0.00	0.0
12.86	25.09	0.28	2.637	1.477	1.25	1.0	2.64	37	17.0	3.56	60.5	0.83	na	0.193	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.03	0.000	0.00	0.02	0.00	0.0
12.88	22.02	0.23	2.641	1.479	1.19	1.0	2.69	40	14.9	3.87	57.6	0.83	na	0.193	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.03	0.000	0.00	0.02	0.00	0.0
12.9	20.99	0.2	2.645	1.481	1.09	1.0	2.69	40	14.2	3.90	55.3	0.83	na	0.193	0.98	na	na	0.000	0.000	0.000	0.02	0.0	0.03	0.000	0.00	0.02	0.00	0.0
12.92	22.53	0.26	2.649	1.483	1.31	1.0	2.70	40	15.2	3.96	60.1	0.83	na	0.193	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.03	0.000	0.00	0.02	0.00	0.0
12.94	32.26	0.33	2.653	1.485	1.11	0.5	2.45	29	25.7	2.51	64.7	0.83	0.105	0.192	0.97	1.36	16.3	0.500	0.943	0.003	0.02	0.0	0.03	0.002	0.00	0.02	0.00	0.0
12.96	48.64	0.53	2.657	1.487	1.15	0.5	2.30	22	38.7	1.93	74.7	0.83	0.119	0.192	0.97	1.53	17.5	0.500	0.934	0.002	0.02	0.0	0.02	0.001	0.00	0.01	0.00	0.0
12.98	58.88	0.6	2.662	1.489	1.07	0.5	2.21	19	46.9	1.67	78.3	0.83	0.125	0.192	0.97	1.61	17.7	0.500	0.923	0.002	0.02	0.0	0.02	0.001	0.00	0.01	0.00	0.0
13	73.22	0.71	2.666	1.491	1.01	0.5	2.11	16	58.2	1.47	85.4	0.83	0.138	0.192	0.97	1.77	18.6	0.436	0.892	0.001	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.02	76.29	0.84	2.670	1.493	1.14	0.5	2.13	17	60.6	1.50	90.9	0.83	0.150	0.192	0.97	1.93	19.9	0.383	0.859	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.04	60.93	1.18	2.674	1.495	2.03	0.5	2.36	25	48.4	2.16	104.4	0.83	0.186	0.192	0.96	2.38	25.3	0.280	0.756	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.06	46.08	1.58	2.678	1.497	3.64	1.0	2.68	40	30.8	3.86	118.8	0.82	na	0.192	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.08	39.43	1.71	2.682	1.499	4.65	1.0	2.81	47	26.3	4.84	127.4	0.82	na	0.192	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.1	34.82	1.73	2.686	1.501	5.38	1.0	2.90	52	23.2	5.63	130.6	0.82	na	0.192	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.12	29.19	1.57	2.690	1.503	5.92	1.0	2.99	58	19.4	6.56	127.4	0.82	na	0.191	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.14	25.6	1.25	2.694	1.505	5.46	1.0	3.01	59	17.0	6.83	116.2	0.82	na	0.191	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.16	21.5	0.91	2.698	1.507	4.84	1.0	3.04	61	14.3	7.22	102.9	0.82	na	0.191	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.18	18.43	0.58	2.703	1.509	3.69	1.0	3.03	61	12.2	7.10	86.7	0.82	na	0.191	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.2	16.9	0.37	2.707	1.512	2.61	1.0	2.99	58	11.2	6.56	73.3	0.82	na	0.191	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.22	15.87	0.28	2.711	1.514	2.13	1.0	2.97	56	10.5	6.35	66.6	0.82	na	0.191	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.24	14.34	0.22	2.715	1.516	1.89	1.0	2.99	58	9.5	6.58	62.2	0.82	na	0.191	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.26	13.31	0.17	2.719	1.518	1.61	1.0	2.99	58	8.8	6.59	57.8	0.82	na	0.191	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.28	11.78	0.15	2.723	1.520	1.66	1.0	3.05	62	7.8	7.35	57.0	0.82	na	0.190	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.3	11.26	0.14	2.727	1.522	1.64	1.0	3.08	64	7.4	7.61	56.3	0.82	na	0.190	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.32	10.24	0.13	2.731	1.524	1.73	1.0	3.14	68	6.7	8.37	56.2	0.82	na	0.190	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.34	9.73	0.14	2.735	1.526	2.00	1.0	3.19	73	6.4	9.14	58.3	0.82	na	0.190	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.36	9.22	0.13	2.740	1.528	2.01	1.0	3.22	75	6.0	9.56	57.7	0.82	na	0.190	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.38	9.22	0.12	2.744	1.530	1.85	1.0	3.21	74	6.0	9.34	56.3	0.81	na	0.190	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.4	8.7	0.11	2.748	1.532	1.85	1.0	3.24	76	5.7	9.81	55.7	0.81	na	0.190	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.42	8.7	0.1	2.752	1.534	1.68	1.0	3.22	75	5.7	9.55	54.2	0.81	na	0.190	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.44	8.7	0.1	2.756	1.536	1.68	1.0	3.22	75	5.7	9.56	54.2	0.81	na	0.190	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.46	9.22	0.1	2.760	1.538	1.55	1.0	3.18	71	6.0	8.90	53.3	0.81	na	0.189	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.48	9.22	0.1	2.764	1.540	1.55	1.0	3.18	71	6.0	8.91	53.3	0.81	na	0.189	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.5	9.22	0.1	2.768	1.542	1.55	1.0	3.18	71	6.0	8.92	53.3	0.81	na	0.189	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.52	9.22	0.1	2.772	1.544	1.55	1.0	3.18	71	6.0	8.93	53.3	0.81	na	0.189	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.54	9.22	0.1	2.776	1.546	1.55	1.0	3.18	71	6.0	8.95	53.3	0.81	na	0.189	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.56	9.22	0.11	2.781	1.548	1.71	1.0	3.20	73	6.0	9.21	54.9	0.81	na	0.189	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.58	8.7	0.1	2.785	1.551	1.69	1.0	3.23	75	5.6	9.66	54.2	0.81	na	0.189	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.6	8.7	0.1	2.789	1.553	1.69	1.0	3.23	76	5.6	9.67	54.2	0.81	na	0.189	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.62	8.7	0.11	2.793	1.555	1.86	1.0	3.25	77	5.6	9.96	55.7	0.81	na	0.188	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.64	8.7	0.11	2.797	1.557	1.86	1.0	3.25	77	5.6	9.97	55.7	0.81	na	0.188	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.66	8.7	0.11	2.801	1.559	1.86	1.0	3.25	77	5.6	9.98	55.7	0.81	na	0.188	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.68	8.7	0.11	2.805	1.561	1.87	1.0	3.25	77	5.6	10.00	55.7	0.80	na	0.188	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.7	9.22	0.11	2.809	1.563	1.72	1.0	3.21	73	5.9	9.30	54.9	0.80	na	0.188	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.72	9.22	0.11	2.813	1.565	1.72	1.0	3.21	74	5.9	9.31	54.9	0.80	na	0.188	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.74	9.22	0.1	2.817	1.567	1.56	1.0	3.19	72	5.9	9.07	53.3	0.80	na	0.188	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.76	8.7	0.1	2.822	1.569	1.70	1.0	3.24	76	5.5	9.78	54.2	0.80	na	0.188	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.78	8.7	0.11	2.826	1.571	1.87	1.0	3.26	78	5.5	10.06	55.7	0.80	na	0.187	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.8	9.22	0.11	2.830	1.573	1.72	1.0	3.21	74	5.9	9.36	54.9	0.80	na	0.187	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.82	9.22	0.11	2.834	1.575	1.72	1.0	3.21	74	5.9	9.37	54.9	0.80	na	0.187	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.84	8.7	0.11	2.838	1.577	1.88	1.0	3.26	78	5.5	10.10	55.7	0.80	na	0.187	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.86	8.7	0.11	2.842	1.579	1.88	1.0	3.26	78	5.5	10.12	55.7	0.80	na	0.187	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.88	8.7	0.11	2.846	1.581	1.88	1.0	3.26	78	5.5	10.13	55.7	0.80	na	0.187	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.9	8.7	0.11	2.850	1.583	1.88	1.0	3.26	78	5.5	10.14	55.7	0.80	na	0.187	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.92	8.7	0.11	2.854	1.585	1.88	1.0	3.27	78	5.5	10.16	55.7	0.80	na	0.187	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.94	8.19	0.1	2.858	1.588	1.88	1.0	3.30	81	5.2	10.69	55.2	0.80	na	0.186	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.96	8.19	0.11	2.863	1.590	2.06	1.0	3.32	83	5.2	11.00	56.7	0.80	na	0.186	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
13.98	8.7	0.11	2.867	1.592	1.89	1.0	3.27	78	5.5	10.20	55.7	0.79	na	0.186	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14	8.7	0.11	2.871	1.594	1.89	1.0	3.27	79	5.5	10.21	55.7	0.79	na	0.186	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.02	9.22	0.11	2.875	1.596	1.73	1.0	3.22	75	5.8	9.50	54.9	0.79	na	0.186	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.04	9.73	0.12	2.879	1.598	1.75	1.0	3.19	72	6.1	9.12	55.5	0.79	na	0.186	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.06	9.73	0.13	2.883	1.600	1.90	1.0	3.21	74	6.1	9.35	56.9	0.79	na	0.186	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.08	10.75	0.17	2.887	1.602	2.16	1.0	3.18	72	6.7	9.00	60.4	0.79	na	0.185	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.1	12.29	0.28	2.891	1.604	2.98	1.0	3.19	72	7.7	9.07	69.5	0.79	na	0.185	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.12	15.87	0.37	2.895	1.606	2.85	1.0	3.06	63	9.9	7.43	73.4	0.79	na	0.185	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0

14.14	18.43	0.41	2.899	1.608	2.64	1.0	2.98	57	11.5	6.48	74.3	0.79	na	0.185	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.16	18.94	0.41	2.904	1.610	2.56	1.0	2.96	56	11.8	6.28	73.9	0.79	na	0.185	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.18	15.87	0.46	2.908	1.612	3.55	1.0	3.12	67	9.8	8.10	79.7	0.79	na	0.185	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.2	14.34	0.49	2.912	1.614	4.29	1.0	3.21	74	8.9	9.34	82.9	0.79	na	0.185	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.22	16.9	0.5	2.916	1.616	3.58	1.0	3.09	65	10.5	7.80	81.5	0.79	na	0.185	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.24	17.92	0.46	2.920	1.618	3.07	1.0	3.03	60	11.1	7.05	78.1	0.79	na	0.184	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.26	17.41	0.42	2.924	1.620	2.90	1.0	3.03	60	10.7	7.04	75.7	0.79	na	0.184	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.28	16.9	0.35	2.928	1.622	2.51	1.0	3.01	59	10.4	6.80	70.9	0.78	na	0.184	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.3	15.87	0.38	2.932	1.624	2.94	1.0	3.07	64	9.8	7.57	74.0	0.78	na	0.184	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.32	15.87	0.41	2.936	1.627	3.17	1.0	3.09	65	9.8	7.81	76.2	0.78	na	0.184	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.34	18.43	0.41	2.940	1.629	2.65	1.0	2.98	57	11.3	6.55	74.1	0.78	na	0.184	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.36	25.09	0.48	2.945	1.631	2.17	1.0	2.81	46	15.4	4.83	74.3	0.78	na	0.184	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.38	30.72	0.51	2.949	1.633	1.84	1.0	2.69	40	18.8	3.88	73.0	0.78	na	0.183	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.4	32.77	0.44	2.953	1.635	1.48	1.0	2.61	36	20.0	3.37	67.5	0.78	na	0.183	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.02	0.000	0.00	0.01	0.00	0.0
14.42	49.15	0.36	2.957	1.637	0.78	0.5	2.22	20	37.3	1.71	64.0	0.78	0.104	0.183	0.97	1.40	14.6	0.500	0.943	0.003	0.02	0.0	0.02	0.002	0.00	0.01	0.00	0.0
14.44	45.06	0.31	2.961	1.639	0.74	0.5	2.25	21	34.2	1.78	60.7	0.78	0.101	0.183	0.97	1.36	14.0	0.500	0.943	0.003	0.02	0.0	0.02	0.002	0.00	0.01	0.00	0.0
14.46	38.91	0.3	2.965	1.641	0.83	0.5	2.33	24	29.5	2.05	60.4	0.78	0.100	0.183	0.97	1.35	14.4	0.500	0.943	0.003	0.02	0.0	0.02	0.002	0.00	0.01	0.00	0.0
14.48	33.79	0.27	2.969	1.643	0.88	0.5	2.40	26	25.6	2.31	59.0	0.78	0.099	0.183	0.97	1.34	14.5	0.500	0.943	0.003	0.02	0.0	0.01	0.002	0.00	0.01	0.00	0.0
14.5	29.7	0.24	2.973	1.645	0.90	0.5	2.46	29	22.5	2.57	57.7	0.78	0.098	0.183	0.97	1.32	14.6	0.500	0.943	0.004	0.02	0.0	0.01	0.002	0.00	0.01	0.00	0.0
14.52	26.11	0.29	2.977	1.647	1.25	1.0	2.67	39	15.9	3.77	59.7	0.78	na	0.183	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.54	19.97	0.33	2.981	1.649	1.94	1.0	2.88	51	12.1	5.51	66.7	0.78	na	0.182	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.56	16.9	0.32	2.986	1.651	2.30	1.0	3.00	58	10.2	6.67	68.3	0.78	na	0.182	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.58	15.36	0.28	2.990	1.653	2.26	1.0	3.04	61	9.3	7.13	66.2	0.77	na	0.182	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.6	13.31	0.24	2.994	1.655	2.33	1.0	3.11	66	8.0	8.03	64.6	0.77	na	0.182	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.62	11.78	0.21	2.998	1.657	2.39	1.0	3.18	71	7.1	8.90	63.3	0.77	na	0.182	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.64	10.75	0.2	3.002	1.659	2.58	1.0	3.24	76	6.5	9.81	63.5	0.77	na	0.182	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.66	10.24	0.2	3.006	1.661	2.76	1.0	3.28	80	6.2	10.42	64.2	0.77	na	0.182	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.68	9.73	0.21	3.010	1.663	3.13	1.0	3.34	84	5.8	11.27	65.9	0.77	na	0.181	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.7	9.22	0.18	3.014	1.666	2.90	1.0	3.35	85	5.5	11.49	63.6	0.77	na	0.181	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.72	9.22	0.15	3.018	1.668	2.42	1.0	3.31	82	5.5	10.89	60.2	0.77	na	0.181	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.74	9.22	0.16	3.022	1.670	2.58	1.0	3.33	83	5.5	11.12	61.4	0.77	na	0.181	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.76	10.24	0.16	3.027	1.672	2.22	1.0	3.24	76	6.1	9.77	59.8	0.77	na	0.181	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.78	11.78	0.15	3.031	1.674	1.71	1.0	3.11	66	7.0	8.05	56.7	0.77	na	0.181	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.8	11.26	0.13	3.035	1.676	1.58	1.0	3.12	67	6.7	8.15	54.8	0.77	na	0.181	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.82	10.75	0.11	3.039	1.678	1.43	1.0	3.13	67	6.4	8.23	52.7	0.77	na	0.181	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.84	9.22	0.09	3.043	1.680	1.46	1.0	3.22	74	5.5	9.46	51.9	0.77	na	0.180	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.86	8.19	0.09	3.047	1.682	1.75	1.0	3.32	83	4.9	11.05	53.8	0.77	na	0.180	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.88	7.68	0.09	3.051	1.684	1.94	1.0	3.39	88	4.6	12.05	55.0	0.76	na	0.180	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.9	7.17	0.08	3.055	1.686	1.94	1.0	3.43	93	4.3	12.83	54.6	0.76	na	0.180	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.92	7.17	0.08	3.059	1.688	1.95	1.0	3.43	93	4.2	12.85	54.6	0.76	na	0.180	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.94	7.17	0.08	3.063	1.690	1.95	1.0	3.43	93	4.2	12.87	54.6	0.76	na	0.180	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.96	7.17	0.07	3.068	1.692	1.71	1.0	3.41	91	4.2	12.46	52.8	0.76	na	0.180	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
14.98	7.17	0.08	3.072	1.694	1.95	1.0	3.44	93	4.2	12.91	54.6	0.76	na	0.179	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15	7.17	0.07	3.076	1.696	1.71	1.0	3.41	91	4.2	12.49	52.8	0.76	na	0.179	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.02	7.17	0.08	3.080	1.698	1.96	1.0	3.44	93	4.2	12.94	54.6	0.76	na	0.179	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.04	7.17	0.08	3.084	1.700	1.96	1.0	3.44	93	4.2	12.96	54.7	0.76	na	0.179	0.97	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.06	7.17	0.09	3.088	1.703	2.20	1.0	3.46	95	4.2	13.38	56.4	0.76	na	0.179	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.08	7.68	0.09	3.092	1.705	1.96	1.0	3.40	89	4.5	12.21	55.0	0.76	na	0.179	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.1	7.68	0.1	3.096	1.707	2.18	1.0	3.42	91	4.5	12.58	56.6	0.76	na	0.179	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.12	7.68	0.1	3.100	1.709	2.18	1.0	3.42	91	4.5	12.60	56.6	0.76	na	0.179	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.14	7.68	0.11	3.104	1.711	2.40	1.0	3.44	93	4.5	12.94	58.1	0.76	na	0.178	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.16	7.68	0.12	3.109	1.713	2.63	1.0	3.46	95	4.5	13.27	59.5	0.76	na	0.178	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.18	7.68	0.12	3.113	1.715	2.63	1.0	3.46	95	4.5	13.29	59.5	0.75	na	0.178	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.2	7.68	0.13	3.117	1.717	2.85	1.0	3.48	97	4.5	13.60	60.8	0.75	na	0.178	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.22	7.68	0.13	3.121	1.719	2.85	1.0	3.48	97	4.5	13.62	60.9	0.75	na	0.178	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.24	7.68	0.14	3.125	1.721	3.07	1.0	3.49	98	4.5	13.92	62.1	0.75	na	0.178	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.26	7.68	0.13	3.129	1.723	2.86	1.0	3.48	97	4.5	13.66	60.9	0.75	na	0.178	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.28	7.68	0.13	3.133	1.725	2.86	1.0	3.48	97	4.5	13.67	60.9	0.75	na	0.177	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.3	7.68	0.14	3.137	1.727	3.08	1.0	3.50	99	4.4	13.97	62.1	0.75	na	0.177	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.32	7.68	0.14	3.141	1.729	3.08	1.0	3.50	99	4.4	13.99	62.1	0.75	na	0.177	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.34	8.19	0.11	3.146	1.731	2.18	1.0	3.39	88	4.7	12.05	57.0	0.75	na	0.177	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.36	8.7	0.16	3.150	1.733	2.88	1.0	3.41	90	5.0	12.41	62.3	0.75	na	0.177	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.38	8.7	0.18	3.154	1.735	3.25	1.0	3.43	93	5.0	12.87	64.5	0.75	na	0.177	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.4	8.19	0.21	3.158	1.737	4.17	1.0	3.53	100	4.7	14.53	68.5	0.75	na	0.177	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.42	9.22	0.26	3.162	1.739	4.29	1.0	3.46	96	5.3	13.41	71.1	0.75	na	0.176	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0

15.44	10.24	0.31	3.166	1.742	4.38	1.0	3.41	91	5.9	12.52	73.6	0.75	na	0.176	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.46	10.24	0.35	3.170	1.744	4.95	1.0	3.44	94	5.9	13.03	76.5	0.75	na	0.176	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.48	10.75	0.42	3.174	1.746	5.54	1.0	3.45	94	6.2	13.09	80.6	0.74	na	0.176	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.5	10.75	0.47	3.178	1.748	6.21	1.0	3.48	97	6.2	13.60	83.7	0.74	na	0.176	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.52	10.75	0.49	3.182	1.750	6.47	1.0	3.49	98	6.1	13.80	84.8	0.74	na	0.176	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.54	10.24	0.49	3.187	1.752	6.95	1.0	3.53	100	5.8	14.60	85.3	0.74	na	0.176	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.56	9.73	0.45	3.191	1.754	6.88	1.0	3.55	100	5.5	15.07	83.6	0.74	na	0.175	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.58	9.73	0.42	3.195	1.756	6.43	1.0	3.54	100	5.5	14.75	81.7	0.74	na	0.175	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.6	9.22	0.42	3.199	1.758	6.98	1.0	3.59	100	5.2	15.71	82.4	0.74	na	0.175	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.62	9.73	0.43	3.203	1.760	6.59	1.0	3.55	100	5.5	14.89	82.3	0.74	na	0.175	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.64	11.26	0.44	3.207	1.762	5.46	1.0	3.42	92	6.4	12.71	81.2	0.74	na	0.175	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.66	12.29	0.46	3.211	1.764	5.07	1.0	3.36	86	7.0	11.69	81.4	0.74	na	0.175	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.68	14.34	0.55	3.215	1.766	4.94	1.0	3.29	80	8.1	10.46	85.0	0.74	na	0.175	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.7	16.9	0.58	3.219	1.768	4.24	1.0	3.17	71	9.6	8.86	84.7	0.74	na	0.175	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.72	18.94	0.53	3.223	1.770	3.37	1.0	3.07	63	10.7	7.51	80.3	0.74	na	0.174	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.74	24.58	0.55	3.228	1.772	2.58	1.0	2.89	52	13.9	5.60	77.7	0.74	na	0.174	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.76	32.77	0.57	3.232	1.774	1.93	1.0	2.71	41	18.5	4.02	74.3	0.74	na	0.174	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.78	34.82	0.55	3.236	1.776	1.74	1.0	2.66	38	19.6	3.68	72.1	0.73	na	0.174	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.8	33.28	0.57	3.240	1.779	1.90	1.0	2.70	40	18.7	3.95	74.0	0.73	na	0.174	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.82	32.77	0.62	3.244	1.781	2.10	1.0	2.73	42	18.4	4.18	77.0	0.73	na	0.174	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.84	29.7	0.62	3.248	1.783	2.34	1.0	2.79	46	16.7	4.72	78.6	0.73	na	0.174	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.86	25.6	0.65	3.252	1.785	2.91	1.0	2.91	53	14.3	5.76	82.7	0.73	na	0.173	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.88	24.58	0.69	3.256	1.787	3.24	1.0	2.95	55	13.8	6.21	85.4	0.73	na	0.173	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.9	20.48	0.68	3.260	1.789	3.95	1.0	3.08	64	11.4	7.64	87.5	0.73	na	0.173	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.92	17.92	0.54	3.264	1.791	3.68	1.0	3.12	67	10.0	8.14	81.4	0.73	na	0.173	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.94	16.38	0.47	3.269	1.793	3.58	1.0	3.15	69	9.1	8.57	78.3	0.73	na	0.173	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.96	14.34	0.45	3.273	1.795	4.07	1.0	3.24	77	8.0	9.85	78.7	0.73	na	0.173	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
15.98	13.82	0.42	3.277	1.797	3.98	1.0	3.26	78	7.7	10.04	77.2	0.73	na	0.173	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
16	13.82	0.42	3.281	1.799	3.99	1.0	3.26	78	7.7	10.05	77.2	0.73	na	0.172	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
16.02	13.82	0.36	3.285	1.801	3.42	1.0	3.22	75	7.7	9.53	73.1	0.73	na	0.172	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
16.04	14.85	0.3	3.289	1.803	2.59	1.0	3.12	67	8.2	8.21	67.6	0.73	na	0.172	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
16.06	14.34	0.26	3.293	1.805	2.35	1.0	3.12	67	7.9	8.15	64.7	0.73	na	0.172	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
16.08	15.36	0.36	3.297	1.807	2.98	1.0	3.14	69	8.5	8.43	71.7	0.73	na	0.172	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
16.1	21.5	0.55	3.301	1.809	3.02	1.0	3.00	58	11.9	6.68	79.4	0.72	na	0.172	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
16.12	31.23	0.68	3.305	1.811	2.44	1.0	2.79	45	17.2	4.68	80.8	0.72	na	0.172	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
16.14	45.57	0.66	3.310	1.813	1.56	0.5	2.44	28	32.9	2.46	80.8	0.72	0.129	0.172	0.95	1.83	20.2	0.485	0.914	0.001	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
16.16	59.39	0.77	3.314	1.815	1.37	0.5	2.31	23	42.8	1.95	83.7	0.72	0.134	0.171	0.95	1.90	19.7	0.454	0.901	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
16.18	68.1	0.84	3.318	1.818	1.30	0.5	2.24	20	49.1	1.76	86.4	0.72	0.140	0.171	0.95	1.98	19.8	0.426	0.887	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
16.2	74.76	0.84	3.322	1.820	1.18	0.5	2.18	18	53.8	1.61	86.8	0.72	0.141	0.171	0.95	1.99	19.4	0.422	0.885	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
16.22	77.83	0.77	3.326	1.822	1.03	0.5	2.13	17	56.0	1.51	84.6	0.72	0.136	0.171	0.95	1.93	18.6	0.444	0.896	0.000	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
16.24	77.83	0.65	3.330	1.824	0.87	0.5	2.09	16	56.0	1.43	80.2	0.72	0.128	0.171	0.95	1.82	17.3	0.492	0.916	0.001	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
16.26	75.27	0.56	3.334	1.826	0.78	0.5	2.08	15	54.1	1.41	76.2	0.72	0.121	0.171	0.95	1.72	16.4	0.500	0.930	0.001	0.02	0.0	0.01	0.000	0.00	0.00	0.00	0.0
16.28	69.64	0.53	3.338	1.828	0.80	0.5	2.11	16	50.0	1.47	73.7	0.72	0.117	0.171	0.95	1.67	16.0	0.500	0.937	0.001	0.02	0.0	0.01	0.001	0.00	0.00	0.00	0.0
16.3	61.95	0.57	3.342	1.830	0.97	0.5	2.21	19	44.5	1.67	74.3	0.72	0.118	0.170	0.95	1.69	16.8	0.500	0.935	0.001	0.02	0.0	0.00	0.001	0.00	0.00	0.00	0.0
16.32	53.25	0.58	3.346	1.832	1.16	0.5	2.31	23	38.2	1.96	74.9	0.72	0.119	0.170	0.95	1.70	17.7	0.500	0.934	0.001	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.34	46.08	0.7	3.351	1.834	1.64	0.5	2.45	28	33.0	2.50	82.8	0.72	0.133	0.170	0.95	1.89	20.8	0.463	0.905	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.36	44.03	0.78	3.355	1.836	1.92	1.0	2.60	35	24.0	3.32	79.7	0.72	na	0.170	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.38	45.06	0.86	3.359	1.838	2.06	1.0	2.61	36	24.5	3.39	83.0	0.72	na	0.170	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.4	39.94	1.11	3.363	1.840	3.03	1.0	2.76	44	21.7	4.43	96.1	0.71	na	0.170	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.42	49.67	1.01	3.367	1.842	2.18	0.5	2.50	31	35.5	2.73	97.2	0.71	0.165	0.170	0.94	2.34	25.0	0.332	0.815	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.44	65.03	1.05	3.371	1.844	1.70	0.5	2.33	24	46.5	2.04	95.0	0.71	0.160	0.170	0.94	2.27	22.7	0.348	0.831	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.46	86.53	0.96	3.375	1.846	1.15	0.5	2.13	17	61.9	1.49	92.4	0.71	0.153	0.169	0.94	2.18	20.2	0.370	0.849	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.48	104.45	0.98	3.379	1.848	0.97	0.5	2.01	13	74.6	1.31	97.7	0.71	0.167	0.169	0.94	2.37	20.4	0.328	0.811	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.5	114.69	0.9	3.383	1.850	0.81	0.5	1.93	11	81.9	1.21	99.4	0.71	0.171	0.169	0.94	2.43	20.2	0.315	0.797	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.52	121.86	0.77	3.387	1.852	0.65	0.5	1.86	9	87.0	1.14	99.5	0.71	0.172	0.169	0.94	2.44	19.6	0.314	0.797	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.54	126.47	0.68	3.392	1.854	0.55	0.5	1.80	8	90.2	1.10	99.6	0.71	0.172	0.169	0.94	2.44	19.3	0.314	0.796	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.56	129.54	0.65	3.396	1.857	0.52	0.5	1.78	8	92.3	1.09	100.3	0.71	0.174	0.169	0.94	2.47	19.3	0.308	0.790	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.58	133.13	0.7	3.400	1.859	0.54	0.5	1.78	8	94.8	1.09	103.1	0.71	0.182	0.169	0.94	2.59	19.8	0.289	0.767	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.6	135.69	0.75	3.404	1.861	0.57	0.5	1.78	8	96.6	1.09	105.3	0.71	0.189	0.168	0.94	2.68	20.2	0.274	0.748	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.62	137.22	0.78	3.408	1.863	0.58	0.5	1.79	8	97.7	1.09	106.6	0.71	0.193	0.168	0.94	2.74	20.5	0.266	0.736	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.64	137.73	0.83	3.412	1.865	0.62	0.5	1.80	8	98.0	1.10	107.9	0.71	0.197	0.168	0.94	2.79	20.9	0.259	0.725	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.66	137.73	0.86	3.416	1.867	0.64	0.5	1.81	8	97.9	1.11	108.4	0.71	0.199	0.168	0.94	2.82	21.0	0.255	0.719	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.68	137.73	0.87	3.420	1.869	0.65	0.5	1.81	8	97.9	1.11	108.6	0.71	0.199	0.168	0.94	2.83	21.1	0.254	0.718	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.7	138.25	0.89	3.424	1.871	0.66	0.5	1.82	8	98.2	1.11	109.2	0.71	0.201	0.168	0.94	2.86	21.2	0.251	0.712	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.72	140.29	0.89	3.428	1.873	0.65	0.5	1.81	8	99.6	1.11	110.1	0.70	0.204	0.168	0.93	2.90	21.3	0.245	0.704	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

16.74	141.83	0.9	3.433	1.875	0.65	0.5	1.80	8	100.6	1.10	111.0	0.70	0.207	0.168	0.93	2.95	21.5	0.241	0.695	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.76	141.83	0.88	3.437	1.877	0.64	0.5	1.80	8	100.5	1.10	110.5	0.70	0.206	0.167	0.93	2.93	21.3	0.243	0.700	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.78	141.32	0.84	3.441	1.879	0.61	0.5	1.79	8	100.1	1.09	109.4	0.70	0.202	0.167	0.93	2.88	21.1	0.249	0.710	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.8	140.29	0.81	3.445	1.881	0.59	0.5	1.78	8	99.3	1.09	108.3	0.70	0.198	0.167	0.93	2.83	20.8	0.256	0.721	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.82	138.25	0.77	3.449	1.883	0.57	0.5	1.78	8	97.8	1.09	106.5	0.70	0.192	0.167	0.94	2.75	20.4	0.267	0.737	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.84	136.2	0.77	3.453	1.885	0.58	0.5	1.79	8	96.3	1.09	105.5	0.70	0.189	0.167	0.94	2.71	20.3	0.274	0.746	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.86	135.17	0.79	3.457	1.887	0.60	0.5	1.80	8	95.6	1.10	105.4	0.70	0.189	0.167	0.94	2.71	20.4	0.274	0.747	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.88	135.69	0.8	3.461	1.889	0.61	0.5	1.80	8	95.9	1.10	105.8	0.70	0.190	0.167	0.94	2.72	20.5	0.272	0.744	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.9	135.69	0.82	3.465	1.891	0.62	0.5	1.81	8	95.8	1.11	106.2	0.70	0.191	0.167	0.94	2.74	20.6	0.269	0.740	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.92	137.22	0.84	3.469	1.894	0.63	0.5	1.81	8	96.9	1.11	107.2	0.70	0.195	0.166	0.93	2.79	20.8	0.263	0.730	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.94	137.73	0.82	3.474	1.896	0.61	0.5	1.80	8	97.2	1.10	107.0	0.70	0.194	0.166	0.93	2.78	20.7	0.264	0.733	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.96	136.71	0.79	3.478	1.898	0.59	0.5	1.80	8	96.4	1.10	105.9	0.70	0.190	0.166	0.94	2.74	20.4	0.271	0.743	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
16.98	134.15	0.73	3.482	1.900	0.56	0.5	1.79	8	94.5	1.09	103.4	0.70	0.183	0.166	0.94	2.63	19.9	0.287	0.765	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17	130.57	0.64	3.486	1.902	0.50	0.5	1.78	8	92.0	1.08	99.7	0.70	0.172	0.166	0.94	2.49	19.1	0.313	0.795	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.02	128.52	0.63	3.490	1.904	0.50	0.5	1.78	8	90.5	1.09	98.5	0.70	0.169	0.166	0.94	2.44	18.9	0.322	0.805	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.04	128.52	0.65	3.494	1.906	0.52	0.5	1.79	8	90.4	1.09	98.9	0.69	0.170	0.166	0.94	2.46	19.0	0.319	0.802	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.06	125.96	0.64	3.498	1.908	0.52	0.5	1.80	8	88.6	1.10	97.4	0.69	0.166	0.165	0.94	2.40	18.8	0.330	0.813	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.08	121.86	0.58	3.502	1.910	0.49	0.5	1.80	8	85.6	1.00	85.6	0.69	0.138	0.165	0.94	2.02	16.5	0.433	0.891	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.1	118.28	0.61	3.506	1.912	0.53	0.5	1.83	9	83.1	1.12	93.1	0.69	0.155	0.165	0.94	2.25	18.2	0.364	0.845	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.12	114.69	0.57	3.510	1.914	0.51	0.5	1.83	9	80.5	1.12	90.5	0.69	0.149	0.165	0.94	2.17	17.7	0.387	0.862	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.14	104.45	0.48	3.515	1.916	0.48	0.5	1.85	9	73.3	1.00	73.3	0.69	0.117	0.165	0.95	1.71	14.4	0.500	0.937	0.001	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.16	88.07	0.46	3.519	1.918	0.54	0.5	1.95	12	61.8	1.23	76.0	0.69	0.121	0.165	0.95	1.77	15.5	0.500	0.931	0.001	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.18	68.61	0.5	3.523	1.920	0.77	0.5	2.12	16	48.1	1.49	71.4	0.69	0.114	0.165	0.95	1.68	15.6	0.500	0.941	0.001	0.02	0.0	0.00	0.001	0.00	0.00	0.00	0.0
17.2	48.13	0.63	3.527	1.922	1.41	0.5	2.40	27	33.7	2.31	78.0	0.69	0.124	0.165	0.95	1.82	19.2	0.500	0.924	0.001	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.22	34.82	0.72	3.531	1.924	2.30	1.0	2.76	44	18.1	4.42	79.9	0.69	na	0.164	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.24	24.07	0.73	3.535	1.926	3.55	1.0	3.02	60	12.5	6.90	86.3	0.69	na	0.164	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.26	19.46	0.68	3.539	1.928	4.27	1.0	3.15	69	10.1	8.58	86.6	0.69	na	0.164	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.28	16.9	0.62	3.543	1.930	4.64	1.0	3.24	76	8.8	9.74	85.2	0.69	na	0.164	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.3	14.85	0.53	3.547	1.933	4.69	1.0	3.30	81	7.7	10.66	81.9	0.69	na	0.164	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.32	14.34	0.38	3.552	1.935	3.52	1.0	3.25	77	7.4	9.88	73.2	0.69	na	0.164	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.34	13.82	0.26	3.556	1.937	2.53	1.0	3.19	72	7.1	9.08	64.8	0.69	na	0.164	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.36	13.82	0.17	3.560	1.939	1.66	1.0	3.10	66	7.1	7.90	56.3	0.69	na	0.164	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.38	13.82	0.08	3.564	1.941	0.78	1.0	2.96	56	7.1	6.32	45.0	0.68	na	0.163	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.4	13.82	0.08	3.568	1.943	0.78	1.0	2.96	56	7.1	6.33	45.0	0.68	na	0.163	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.42	14.34	0.08	3.572	1.945	0.74	1.0	2.94	54	7.4	6.04	44.6	0.68	na	0.163	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.44	14.34	0.09	3.576	1.947	0.84	1.0	2.96	56	7.4	6.25	46.0	0.68	na	0.163	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.46	14.85	0.12	3.580	1.949	1.06	1.0	2.98	57	7.6	6.51	49.6	0.68	na	0.163	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.48	13.82	0.11	3.584	1.951	1.07	1.0	3.02	60	7.1	6.96	49.3	0.68	na	0.163	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.5	13.31	0.12	3.588	1.953	1.23	1.0	3.07	63	6.8	7.50	51.1	0.68	na	0.163	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.52	12.29	0.13	3.593	1.955	1.49	1.0	3.15	69	6.3	8.51	53.5	0.68	na	0.163	0.96	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.54	12.29	0.15	3.597	1.957	1.73	1.0	3.18	71	6.3	8.89	55.8	0.68	na	0.162	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.56	12.29	0.14	3.601	1.959	1.61	1.0	3.16	70	6.3	8.72	54.7	0.68	na	0.162	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.58	12.29	0.14	3.605	1.961	1.61	1.0	3.16	70	6.3	8.73	54.7	0.68	na	0.162	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.6	12.29	0.14	3.609	1.963	1.61	1.0	3.16	70	6.3	8.73	54.7	0.68	na	0.162	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.62	12.8	0.14	3.613	1.965	1.52	1.0	3.13	68	6.5	8.30	54.1	0.68	na	0.162	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.64	13.31	0.15	3.617	1.967	1.55	1.0	3.11	67	6.8	8.08	54.7	0.68	na	0.162	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.66	13.82	0.17	3.621	1.970	1.67	1.0	3.11	66	7.0	8.03	56.3	0.68	na	0.162	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.68	14.34	0.18	3.625	1.972	1.68	1.0	3.09	65	7.3	7.81	56.8	0.68	na	0.162	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.7	14.34	0.18	3.629	1.974	1.68	1.0	3.09	65	7.3	7.82	56.8	0.68	na	0.161	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.72	14.34	0.17	3.634	1.976	1.59	1.0	3.08	64	7.3	7.69	55.8	0.67	na	0.161	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.74	14.34	0.18	3.638	1.978	1.68	1.0	3.10	65	7.3	7.84	56.8	0.67	na	0.161	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.76	13.31	0.19	3.642	1.980	1.97	1.0	3.17	70	6.7	8.76	58.9	0.67	na	0.161	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.78	12.8	0.21	3.646	1.982	2.29	1.0	3.22	75	6.5	9.50	61.3	0.67	na	0.161	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.8	12.8	0.2	3.650	1.984	2.19	1.0	3.21	74	6.5	9.36	60.4	0.67	na	0.161	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.82	12.29	0.2	3.654	1.986	2.32	1.0	3.24	77	6.2	9.86	61.0	0.67	na	0.161	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.84	12.29	0.19	3.658	1.988	2.20	1.0	3.23	76	6.2	9.71	60.0	0.67	na	0.161	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.86	12.8	0.18	3.662	1.990	1.97	1.0	3.19	72	6.4	9.08	58.4	0.67	na	0.161	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.88	13.31	0.16	3.666	1.992	1.66	1.0	3.14	68	6.7	8.35	55.8	0.67	na	0.160	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.9	13.31	0.15	3.670	1.994	1.56	1.0	3.12	67	6.7	8.19	54.7	0.67	na	0.160	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.92	13.31	0.15	3.675	1.996	1.56	1.0	3.12	67	6.7	8.20	54.7	0.67	na	0.160	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.94	13.31	0.16	3.679	1.998	1.66	1.0	3.14	68	6.7	8.37	55.8	0.67	na	0.160	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.96	13.31	0.17	3.683	2.000	1.77	1.0	3.15	69	6.7	8.54	56.8	0.67	na	0.160	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
17.98	12.8	0.18	3.687	2.002	1.98	1.0	3.19	73	6.4	9.14	58.4	0.67	na	0.160	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18	12.8	0.2	3.691	2.004	2.20	1.0	3.22	74	6.4	9.45	60.4	0.67	na	0.160	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.02	12.8	0.21	3.695	2.006	2.31	1.0	3.23	75	6.4	9.61	61.3	0.67	na	0.160	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

18.04	12.29	0.2	3.699	2.009	2.33	1.0	3.25	77	6.1	9.96	61.0	0.67	na	0.159	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.06	12.29	0.21	3.703	2.011	2.45	1.0	3.26	78	6.1	10.13	61.9	0.67	na	0.159	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.08	12.29	0.2	3.707	2.013	2.33	1.0	3.25	77	6.1	9.98	61.0	0.66	na	0.159	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.1	12.29	0.2	3.711	2.015	2.33	1.0	3.25	77	6.1	9.99	61.0	0.66	na	0.159	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.12	12.29	0.2	3.716	2.017	2.33	1.0	3.25	77	6.1	10.00	61.0	0.66	na	0.159	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.14	12.29	0.2	3.720	2.019	2.33	1.0	3.26	77	6.1	10.01	61.0	0.66	na	0.159	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.16	12.29	0.2	3.724	2.021	2.33	1.0	3.26	77	6.1	10.02	61.0	0.66	na	0.159	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.18	12.29	0.21	3.728	2.023	2.45	1.0	3.27	78	6.1	10.19	61.9	0.66	na	0.159	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.2	11.78	0.2	3.732	2.025	2.49	1.0	3.29	81	5.8	10.59	61.6	0.66	na	0.159	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.22	11.78	0.2	3.736	2.027	2.49	1.0	3.29	81	5.8	10.60	61.6	0.66	na	0.158	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.24	11.78	0.22	3.740	2.029	2.74	1.0	3.32	82	5.8	10.93	63.4	0.66	na	0.158	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.26	12.29	0.21	3.744	2.031	2.46	1.0	3.27	79	6.1	10.23	61.9	0.66	na	0.158	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.28	12.29	0.2	3.748	2.033	2.34	1.0	3.26	78	6.0	10.08	60.9	0.66	na	0.158	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.3	11.78	0.22	3.752	2.035	2.74	1.0	3.32	83	5.8	10.96	63.4	0.66	na	0.158	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.32	11.78	0.23	3.757	2.037	2.87	1.0	3.33	83	5.8	11.12	64.3	0.66	na	0.158	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.34	11.78	0.22	3.761	2.039	2.74	1.0	3.32	83	5.8	10.98	63.4	0.66	na	0.158	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.36	11.26	0.22	3.765	2.041	2.94	1.0	3.36	86	5.5	11.62	64.1	0.66	na	0.158	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.38	11.26	0.21	3.769	2.043	2.80	1.0	3.35	85	5.5	11.47	63.2	0.66	na	0.157	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.4	11.26	0.2	3.773	2.046	2.67	1.0	3.34	84	5.5	11.32	62.3	0.66	na	0.157	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.42	10.75	0.19	3.777	2.048	2.72	1.0	3.37	87	5.3	11.83	62.1	0.66	na	0.157	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.44	10.75	0.18	3.781	2.050	2.58	1.0	3.36	86	5.2	11.65	61.1	0.66	na	0.157	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.46	10.75	0.18	3.785	2.052	2.58	1.0	3.36	86	5.2	11.66	61.1	0.65	na	0.157	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.48	10.75	0.17	3.789	2.054	2.44	1.0	3.35	85	5.2	11.48	60.1	0.65	na	0.157	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.5	10.24	0.17	3.793	2.056	2.64	1.0	3.40	89	5.0	12.23	60.9	0.65	na	0.157	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.52	10.24	0.16	3.798	2.058	2.48	1.0	3.38	88	5.0	12.03	59.9	0.65	na	0.157	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.54	10.24	0.16	3.802	2.060	2.49	1.0	3.39	88	5.0	12.04	59.9	0.65	na	0.157	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.56	10.24	0.15	3.806	2.062	2.33	1.0	3.37	87	5.0	11.84	58.8	0.65	na	0.156	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.58	10.24	0.15	3.810	2.064	2.33	1.0	3.37	87	5.0	11.85	58.8	0.65	na	0.156	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.6	10.24	0.15	3.814	2.066	2.33	1.0	3.37	87	5.0	11.86	58.8	0.65	na	0.156	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.62	10.75	0.15	3.818	2.068	2.16	1.0	3.33	84	5.2	11.15	58.0	0.65	na	0.156	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.64	10.75	0.14	3.822	2.070	2.02	1.0	3.32	82	5.2	10.94	56.8	0.65	na	0.156	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.66	10.75	0.14	3.826	2.072	2.02	1.0	3.32	83	5.2	10.96	56.8	0.65	na	0.156	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.68	10.24	0.15	3.830	2.074	2.34	1.0	3.38	88	4.9	11.91	58.8	0.65	na	0.156	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.7	10.24	0.15	3.834	2.076	2.34	1.0	3.38	88	4.9	11.92	58.8	0.65	na	0.156	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.72	10.24	0.15	3.839	2.078	2.34	1.0	3.38	88	4.9	11.94	58.8	0.65	na	0.156	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.74	10.24	0.16	3.843	2.080	2.50	1.0	3.39	89	4.9	12.17	59.9	0.65	na	0.155	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.76	9.73	0.16	3.847	2.082	2.72	1.0	3.44	94	4.7	13.02	60.8	0.65	na	0.155	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.78	10.24	0.16	3.851	2.085	2.50	1.0	3.39	89	4.9	12.19	59.9	0.65	na	0.155	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.8	10.24	0.15	3.855	2.087	2.35	1.0	3.38	88	4.9	11.99	58.8	0.65	na	0.155	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.82	10.24	0.16	3.859	2.089	2.51	1.0	3.40	89	4.9	12.22	59.9	0.65	na	0.155	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.84	10.24	0.17	3.863	2.091	2.67	1.0	3.41	91	4.9	12.45	61.0	0.64	na	0.155	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.86	9.73	0.16	3.867	2.093	2.73	1.0	3.45	94	4.6	13.09	60.9	0.64	na	0.155	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.88	9.73	0.16	3.871	2.095	2.73	1.0	3.45	94	4.6	13.10	60.9	0.64	na	0.155	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.9	10.24	0.18	3.875	2.097	2.83	1.0	3.42	92	4.9	12.69	62.0	0.64	na	0.155	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.92	11.26	0.18	3.880	2.099	2.44	1.0	3.34	84	5.4	11.25	60.4	0.64	na	0.154	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.94	11.78	0.16	3.884	2.101	2.03	1.0	3.27	79	5.6	10.27	57.6	0.64	na	0.154	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.96	11.26	0.17	3.888	2.103	2.31	1.0	3.33	83	5.4	11.08	59.4	0.64	na	0.154	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
18.98	10.75	0.18	3.892	2.105	2.62	1.0	3.38	88	5.1	11.97	61.1	0.64	na	0.154	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19	10.24	0.19	3.896	2.107	2.99	1.0	3.44	93	4.9	12.95	63.0	0.64	na	0.154	0.95	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.02	9.73	0.24	3.900	2.109	4.12	1.0	3.54	100	4.6	14.80	68.3	0.64	na	0.154	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.04	9.73	0.24	3.904	2.111	4.12	1.0	3.54	100	4.6	14.82	68.3	0.64	na	0.154	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.06	10.24	0.23	3.908	2.113	3.63	1.0	3.48	97	4.8	13.73	66.5	0.64	na	0.154	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.08	10.24	0.2	3.912	2.115	3.16	1.0	3.45	95	4.8	13.20	63.9	0.64	na	0.154	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.1	10.24	0.2	3.917	2.117	3.16	1.0	3.45	95	4.8	13.21	63.9	0.64	na	0.154	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.12	9.73	0.21	3.921	2.119	3.61	1.0	3.51	100	4.6	14.32	65.7	0.64	na	0.153	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.14	9.73	0.21	3.925	2.121	3.62	1.0	3.52	100	4.6	14.34	65.7	0.64	na	0.153	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.16	9.73	0.2	3.929	2.124	3.45	1.0	3.51	100	4.6	14.15	64.8	0.64	na	0.153	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.18	10.24	0.2	3.933	2.126	3.17	1.0	3.46	95	4.8	13.27	63.9	0.64	na	0.153	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.2	10.75	0.21	3.937	2.128	3.08	1.0	3.42	92	5.1	12.66	64.0	0.64	na	0.153	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.22	11.78	0.23	3.941	2.130	2.93	1.0	3.36	86	5.5	11.61	64.2	0.64	na	0.153	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.24	13.31	0.26	3.945	2.132	2.78	1.0	3.28	79	6.2	10.38	64.8	0.64	na	0.153	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.26	12.8	0.26	3.949	2.134	2.94	1.0	3.31	82	6.0	10.90	65.4	0.63	na	0.153	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.28	11.26	0.27	3.953	2.136	3.70	1.0	3.44	93	5.3	12.93	68.1	0.63	na	0.153	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.3	9.73	0.27	3.958	2.138	4.68	1.0	3.58	100	4.6	15.53	70.7	0.63	na	0.153	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.32	9.73	0.27	3.962	2.140	4.68	1.0	3.58	100	4.5	15.54	70.7	0.63	na	0.152	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

19.34	9.22	0.42	3.966	2.142	7.99	1.0	3.74	100	4.3	18.87	81.2	0.63	na	0.152	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.36	9.73	0.4	3.970	2.144	6.94	1.0	3.67	100	4.5	17.44	79.2	0.63	na	0.152	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.38	8.7	0.35	3.974	2.146	7.41	1.0	3.76	100	4.1	19.32	78.3	0.63	na	0.152	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.4	9.73	0.25	3.978	2.148	4.35	1.0	3.56	100	4.5	15.26	69.1	0.63	na	0.152	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.42	9.73	0.19	3.982	2.150	3.31	1.0	3.50	100	4.5	14.14	64.0	0.63	na	0.152	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.44	9.73	0.17	3.986	2.152	2.96	1.0	3.48	97	4.5	13.72	62.0	0.63	na	0.152	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.46	9.73	0.18	3.990	2.154	3.14	1.0	3.49	98	4.5	13.95	63.0	0.63	na	0.152	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.48	9.73	0.18	3.994	2.156	3.14	1.0	3.50	99	4.5	13.97	63.0	0.63	na	0.152	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.5	9.73	0.19	3.999	2.158	3.32	1.0	3.51	100	4.5	14.19	64.0	0.63	na	0.152	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.52	10.24	0.19	4.003	2.161	3.05	1.0	3.46	95	4.7	13.30	63.0	0.63	na	0.151	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.54	10.24	0.21	4.007	2.163	3.37	1.0	3.48	97	4.7	13.69	64.8	0.63	na	0.151	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.56	10.75	0.22	4.011	2.165	3.26	1.0	3.44	94	5.0	13.06	64.9	0.63	na	0.151	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.58	10.75	0.21	4.015	2.167	3.12	1.0	3.44	93	5.0	12.90	64.0	0.63	na	0.151	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.6	10.75	0.22	4.019	2.169	3.27	1.0	3.45	94	5.0	13.08	64.9	0.63	na	0.151	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.62	10.24	0.22	4.023	2.171	3.54	1.0	3.49	98	4.7	13.93	65.7	0.63	na	0.151	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.64	10.24	0.2	4.027	2.173	3.22	1.0	3.47	96	4.7	13.57	64.0	0.63	na	0.151	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.66	10.24	0.19	4.031	2.175	3.06	1.0	3.46	95	4.7	13.39	63.0	0.63	na	0.151	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.68	10.24	0.17	4.035	2.177	2.74	1.0	3.44	93	4.7	12.99	61.1	0.63	na	0.151	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.7	10.75	0.17	4.040	2.179	2.53	1.0	3.39	89	4.9	12.20	60.2	0.62	na	0.151	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.72	10.75	0.16	4.044	2.181	2.39	1.0	3.38	88	4.9	12.01	59.2	0.62	na	0.150	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.74	10.75	0.17	4.048	2.183	2.54	1.0	3.40	89	4.9	12.23	60.2	0.62	na	0.150	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.76	10.75	0.17	4.052	2.185	2.54	1.0	3.40	89	4.9	12.24	60.2	0.62	na	0.150	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.78	10.75	0.17	4.056	2.187	2.54	1.0	3.40	90	4.9	12.25	60.2	0.62	na	0.150	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.8	10.75	0.18	4.060	2.189	2.69	1.0	3.41	91	4.9	12.47	61.2	0.62	na	0.150	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.82	10.75	0.18	4.064	2.191	2.69	1.0	3.41	91	4.9	12.48	61.2	0.62	na	0.150	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.84	10.75	0.19	4.068	2.193	2.84	1.0	3.42	92	4.9	12.69	62.2	0.62	na	0.150	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.86	11.26	0.19	4.072	2.195	2.64	1.0	3.38	88	5.1	11.97	61.4	0.62	na	0.150	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.88	11.26	0.19	4.076	2.197	2.64	1.0	3.38	88	5.1	11.98	61.4	0.62	na	0.150	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.9	11.26	0.19	4.081	2.200	2.65	1.0	3.38	88	5.1	11.99	61.4	0.62	na	0.150	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.92	11.78	0.18	4.085	2.202	2.34	1.0	3.33	84	5.4	11.15	59.7	0.62	na	0.149	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.94	11.78	0.18	4.089	2.204	2.34	1.0	3.33	84	5.3	11.16	59.7	0.62	na	0.149	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.96	11.78	0.18	4.093	2.206	2.34	1.0	3.33	84	5.3	11.17	59.7	0.62	na	0.149	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
19.98	11.78	0.18	4.097	2.208	2.34	1.0	3.33	84	5.3	11.18	59.7	0.62	na	0.149	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20	11.78	0.18	4.101	2.210	2.34	1.0	3.33	84	5.3	11.19	59.7	0.62	na	0.149	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.02	11.26	0.17	4.105	2.212	2.38	1.0	3.36	86	5.1	11.68	59.4	0.62	na	0.149	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.04	11.78	0.18	4.109	2.214	2.35	1.0	3.33	84	5.3	11.21	59.7	0.62	na	0.149	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.06	11.26	0.18	4.113	2.216	2.52	1.0	3.38	88	5.1	11.89	60.4	0.62	na	0.149	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.08	11.26	0.18	4.117	2.218	2.52	1.0	3.38	88	5.1	11.90	60.4	0.62	na	0.149	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.1	11.78	0.18	4.122	2.220	2.35	1.0	3.34	84	5.3	11.24	59.7	0.62	na	0.149	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.12	11.26	0.18	4.126	2.222	2.52	1.0	3.38	88	5.1	11.93	60.4	0.62	na	0.149	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.14	11.26	0.17	4.130	2.224	2.38	1.0	3.37	87	5.1	11.74	59.5	0.62	na	0.148	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.16	11.26	0.17	4.134	2.226	2.39	1.0	3.37	87	5.1	11.75	59.5	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.18	11.26	0.17	4.138	2.228	2.39	1.0	3.37	87	5.1	11.77	59.5	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.2	11.26	0.17	4.142	2.230	2.39	1.0	3.37	87	5.0	11.78	59.5	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.22	10.75	0.18	4.146	2.232	2.73	1.0	3.43	92	4.8	12.72	61.3	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.24	11.26	0.17	4.150	2.234	2.39	1.0	3.37	87	5.0	11.80	59.5	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.26	11.26	0.17	4.154	2.237	2.39	1.0	3.37	87	5.0	11.81	59.5	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.28	11.26	0.17	4.158	2.239	2.39	1.0	3.37	87	5.0	11.82	59.5	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.3	11.26	0.16	4.163	2.241	2.25	1.0	3.36	86	5.0	11.63	58.5	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.32	11.26	0.14	4.167	2.243	1.97	1.0	3.33	84	5.0	11.21	56.3	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.34	11.78	0.22	4.171	2.245	2.89	1.0	3.39	89	5.2	12.06	63.3	0.61	na	0.148	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.36	15.36	0.3	4.175	2.247	2.68	1.0	3.23	75	6.8	9.58	65.5	0.61	na	0.147	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.38	22.02	0.3	4.179	2.249	1.68	1.0	2.95	55	9.8	6.17	60.4	0.61	na	0.147	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.4	17.92	0.33	4.183	2.251	2.40	1.0	3.13	67	8.0	8.22	65.4	0.61	na	0.147	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.42	13.31	0.36	4.187	2.253	3.95	1.0	3.39	89	5.9	12.12	71.6	0.61	na	0.147	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.44	12.29	0.38	4.191	2.255	4.69	1.0	3.47	97	5.5	13.59	74.0	0.61	na	0.147	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.46	11.78	0.44	4.195	2.257	5.80	1.0	3.55	100	5.2	14.97	78.1	0.61	na	0.147	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.48	11.78	0.49	4.199	2.259	6.46	1.0	3.58	100	5.2	15.49	80.8	0.61	na	0.147	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.5	11.26	0.37	4.204	2.261	5.24	1.0	3.55	100	5.0	15.02	74.8	0.61	na	0.147	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.52	10.24	0.29	4.208	2.263	4.81	1.0	3.59	100	4.5	15.74	71.2	0.61	na	0.147	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.54	10.24	0.26	4.212	2.265	4.31	1.0	3.57	100	4.5	15.27	69.0	0.61	na	0.147	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.56	10.75	0.22	4.216	2.267	3.37	1.0	3.48	97	4.7	13.69	64.9	0.61	na	0.147	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.58	11.26	0.2	4.220	2.269	2.84	1.0	3.42	91	5.0	12.56	62.3	0.61	na	0.147	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.6	11.26	0.17	4.224	2.271	2.42	1.0	3.38	88	5.0	12.00	59.5	0.61	na	0.146	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.62	11.78	0.16	4.228	2.273	2.12	1.0	3.33	84	5.2	11.14	57.7	0.61	na	0.146	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

20.64	11.26	0.16	4.232	2.276	2.28	1.0	3.37	87	4.9	11.82	58.5	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.66	11.26	0.16	4.236	2.278	2.28	1.0	3.37	87	4.9	11.83	58.5	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.68	11.26	0.17	4.240	2.280	2.42	1.0	3.39	88	4.9	12.05	59.5	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.7	10.75	0.17	4.245	2.282	2.61	1.0	3.43	92	4.7	12.81	60.4	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.72	10.75	0.18	4.249	2.284	2.77	1.0	3.44	94	4.7	13.03	61.4	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.74	10.75	0.18	4.253	2.286	2.77	1.0	3.44	94	4.7	13.05	61.4	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.76	10.75	0.18	4.257	2.288	2.77	1.0	3.44	94	4.7	13.06	61.4	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.78	10.75	0.17	4.261	2.290	2.62	1.0	3.43	93	4.7	12.86	60.4	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.8	11.26	0.2	4.265	2.292	2.86	1.0	3.42	92	4.9	12.69	62.4	0.60	na	0.146	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.82	11.78	0.25	4.269	2.294	3.33	1.0	3.43	92	5.1	12.81	65.8	0.60	na	0.145	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.84	12.29	0.27	4.273	2.296	3.37	1.0	3.41	90	5.4	12.44	66.6	0.60	na	0.145	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.86	12.29	0.29	4.277	2.298	3.62	1.0	3.43	92	5.3	12.72	68.0	0.60	na	0.145	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.88	12.29	0.31	4.281	2.300	3.87	1.0	3.44	93	5.3	13.00	69.4	0.60	na	0.145	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.9	12.8	0.35	4.286	2.302	4.11	1.0	3.43	93	5.6	12.85	71.4	0.60	na	0.145	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.92	12.8	0.38	4.290	2.304	4.47	1.0	3.45	94	5.6	13.20	73.3	0.60	na	0.145	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.94	12.8	0.36	4.294	2.306	4.23	1.0	3.44	93	5.5	12.99	72.1	0.60	na	0.145	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.96	12.8	0.34	4.298	2.308	4.00	1.0	3.43	92	5.5	12.77	70.8	0.60	na	0.145	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
20.98	12.8	0.41	4.302	2.310	4.82	1.0	3.47	96	5.5	13.55	75.1	0.60	na	0.145	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21	14.34	0.48	4.306	2.312	4.78	1.0	3.41	91	6.2	12.47	77.3	0.60	na	0.145	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.02	26.63	0.56	4.310	2.315	2.51	1.0	2.97	56	11.5	6.36	73.1	0.60	na	0.145	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.04	58.88	0.63	4.314	2.317	1.15	0.5	2.32	23	37.6	1.99	74.7	0.60	0.119	0.145	0.93	1.95	17.7	0.500	0.934	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.06	101.89	0.67	4.318	2.319	0.69	0.5	1.98	12	65.0	1.27	82.4	0.60	0.132	0.145	0.93	2.16	17.0	0.467	0.907	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.08	124.42	0.71	4.323	2.321	0.59	0.5	1.87	10	79.3	1.16	91.7	0.60	0.152	0.144	0.92	2.47	18.2	0.377	0.854	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.1	138.25	0.75	4.327	2.323	0.56	0.5	1.82	9	88.1	1.11	98.2	0.60	0.168	0.144	0.92	2.73	19.1	0.324	0.808	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.12	147.46	0.77	4.331	2.325	0.54	0.5	1.78	8	93.9	1.09	102.4	0.60	0.180	0.144	0.91	2.91	19.7	0.294	0.773	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.14	156.17	0.87	4.335	2.327	0.57	0.5	1.78	8	99.4	1.09	107.9	0.60	0.197	0.144	0.91	3.18	20.7	0.258	0.724	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.16	166.41	0.91	4.339	2.329	0.56	0.5	1.75	7	105.9	1.07	112.9	0.60	0.214	0.144	0.91	3.44	21.4	0.230	0.677	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.18	177.16	1.08	4.343	2.331	0.62	0.5	1.75	7	112.7	1.07	120.4	0.59	0.242	0.144	0.90	3.87	22.9	0.193	0.600	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.2	183.82	1.37	4.347	2.333	0.76	0.5	1.79	8	116.9	1.10	128.0	0.59	0.275	0.144	0.90	4.37	24.7	0.161	0.516	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.22	185.35	1.62	4.351	2.335	0.90	0.5	1.83	9	117.8	1.13	132.6	0.59	0.297	0.144	0.89	4.69	25.9	0.144	0.463	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.24	183.82	1.84	4.355	2.337	1.03	0.5	1.87	10	116.8	1.16	135.3	0.59	0.310	0.144	0.89	4.90	26.9	0.135	0.430	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.26	182.28	2.05	4.359	2.339	1.15	0.5	1.91	11	115.8	1.19	138.0	0.59	0.324	0.144	0.89	5.10	27.8	0.126	0.398	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.28	180.74	2.21	4.364	2.341	1.25	0.5	1.94	11	114.7	1.22	139.9	0.59	0.335	0.144	0.88	5.26	28.4	0.120	0.375	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.3	176.14	2.28	4.368	2.343	1.33	0.5	1.96	12	111.8	1.25	139.4	0.59	0.332	0.144	0.88	5.22	28.6	0.122	0.380	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.32	165.38	1.93	4.372	2.345	1.20	0.5	1.95	12	104.9	1.24	129.8	0.59	0.283	0.143	0.89	4.50	26.6	0.154	0.495	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.34	146.44	1.59	4.376	2.347	1.12	0.5	1.98	12	92.8	1.26	117.2	0.59	0.230	0.143	0.90	3.70	24.2	0.208	0.633	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.36	115.72	1.24	4.380	2.349	1.11	0.5	2.06	15	73.3	1.37	100.8	0.59	0.175	0.143	0.91	2.85	21.5	0.305	0.787	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.38	100.87	1.22	4.384	2.352	1.26	0.5	2.14	17	63.9	1.52	97.3	0.59	0.166	0.143	0.92	2.71	21.4	0.330	0.814	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.4	73.73	1.28	4.388	2.354	1.85	0.5	2.36	25	46.7	2.13	99.3	0.59	0.171	0.143	0.92	2.79	23.9	0.316	0.799	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.42	54.79	1.46	4.392	2.356	2.90	1.0	2.72	42	23.3	4.14	96.2	0.59	na	0.143	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.44	39.43	1.47	4.396	2.358	4.20	1.0	2.95	55	16.7	6.13	102.6	0.59	na	0.143	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.46	33.79	1.47	4.400	2.360	5.00	1.0	3.05	62	14.3	7.33	104.9	0.59	na	0.143	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.48	32.77	1.21	4.405	2.362	4.27	1.0	3.02	60	13.9	6.97	96.7	0.59	na	0.143	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.5	32.26	1.04	4.409	2.364	3.73	1.0	2.99	58	13.6	6.65	90.8	0.59	na	0.143	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.52	34.82	1.27	4.413	2.366	4.18	1.0	2.99	58	14.7	6.65	97.9	0.59	na	0.143	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.54	57.35	1.37	4.417	2.368	2.59	1.0	2.68	39	24.2	3.81	92.3	0.59	na	0.143	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.56	102.92	1.33	4.421	2.370	1.35	0.5	2.15	17	64.9	1.55	100.6	0.59	0.175	0.143	0.91	2.86	22.2	0.307	0.788	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.58	145.93	1.82	4.425	2.372	1.29	0.5	2.02	13	92.0	1.32	121.2	0.59	0.246	0.143	0.90	3.95	25.4	0.189	0.591	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.6	165.9	2.36	4.429	2.374	1.46	0.5	2.01	13	104.6	1.31	137.1	0.59	0.319	0.142	0.88	5.06	28.7	0.129	0.410	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.62	168.97	2.87	4.433	2.376	1.74	0.5	2.06	15	106.5	1.38	147.0	0.59	0.376	0.142	0.87	5.89	31.3	0.100	0.286	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.64	160.78	3.42	4.437	2.378	2.19	0.5	2.15	17	101.3	1.54	155.8	0.59	0.432	0.142	0.86	6.69	34.4	0.080	0.172	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.66	153.1	3.84	4.441	2.380	2.58	0.5	2.22	20	96.4	1.70	163.4	0.59	0.461	0.142	0.85	7.07	37.1	0.065	0.069	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.68	151.05	4.08	4.446	2.382	2.78	0.5	2.24	21	95.1	1.77	168.3	0.59	0.461	0.142	0.85	7.01	38.7	0.057	0.003	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.7	153.1	4.08	4.450	2.384	2.74	0.5	2.24	20	96.3	1.75	168.3	0.59	0.461	0.142	0.85	7.02	38.5	0.057	0.003	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.72	163.85	3.91	4.454	2.386	2.45	0.5	2.18	18	103.0	1.61	165.6	0.59	0.461	0.142	0.85	7.05	37.0	0.062	0.040	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.74	194.57	4.11	4.458	2.388	2.16	0.5	2.09	15	122.3	1.42	174.0	0.58	0.461	0.142	0.84	6.95	37.5	0.049	-0.077	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.76	228.36	4.59	4.462	2.391	2.05	0.5	2.02	14	143.5	1.32	189.8	0.58	0.461	0.142	0.81	6.71	39.9	0.030	-0.302	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.78	244.75	4.46	4.466	2.393	1.86	0.5	1.97	12	153.7	1.26	193.0	0.58	0.461	0.142	0.80	6.66	39.7	0.027	-0.349	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.8	251.92	4.35	4.470	2.395	1.76	0.5	1.94	11	158.1	1.23	194.0	0.58	0.461	0.142	0.80	6.64	39.5	0.027	-0.362	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.82	247.82	4.17	4.474	2.397	1.71	0.5	1.94	11	155.5	1.22	190.1	0.58	0.461	0.142	0.81	6.71	38.7	0.030	-0.307	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.84	231.95	4.27	4.478	2.399	1.88	0.5	1.99	13	145.5	1.28	186.2	0.58	0.461	0.142	0.82	6.78	38.6	0.034	-0.249	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.86	216.07	4.62	4.482	2.401	2.18	0.5	2.06	15	135.4	1.38	186.8	0.58	0.461	0.141	0.81	6.77	39.8	0.033	-0.258	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.88	195.59	4.82	4.487	2.403	2.52	0.5	2.14	17	122.6	1.52	185.8	0.58	0.461	0.141	0.82	6.79	40.8	0.034	-0.244	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.9	175.11	4.35	4.491	2.405	2.55	0.5	2.17	18	109.7	1.59	174.7	0.58	0.461	0.141	0.84	6.96	39.0	0.048	-0.086	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.92	161.29	4.06	4.495	2.407	2.59	0.5	2.20	19	101.0	1.66	167.9	0.58	0.461	0.141	0.85	7.05	37.9	0.058	0.008	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

21.94	157.7	3.84	4.499	2.409	2.51	0.5	2.20	19	98.7	1.65	163.2	0.58	0.461	0.141	0.85	7.10	36.8	0.066	0.072	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.96	156.68	3.76	4.503	2.411	2.47	0.5	2.20	19	98.0	1.65	161.5	0.58	0.461	0.141	0.85	7.12	36.4	0.069	0.095	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
21.98	152.07	3.96	4.507	2.413	2.68	0.5	2.23	20	95.1	1.74	165.3	0.58	0.461	0.141	0.85	7.08	37.8	0.062	0.044	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22	142.34	4.09	4.511	2.415	2.97	0.5	2.28	22	89.0	1.89	168.0	0.58	0.461	0.141	0.84	7.05	39.3	0.058	0.007	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.02	128.01	3.86	4.515	2.417	3.13	0.5	2.33	24	80.0	2.05	163.8	0.58	0.461	0.141	0.85	7.10	39.1	0.065	0.064	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.04	113.67	3.17	4.519	2.419	2.90	0.5	2.35	24	71.0	2.10	148.9	0.58	0.387	0.141	0.87	6.10	35.8	0.096	0.262	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.06	100.36	2.35	4.523	2.421	2.45	0.5	2.34	24	62.6	2.06	128.9	0.58	0.279	0.141	0.89	4.50	30.8	0.157	0.506	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.08	80.39	1.66	4.528	2.423	2.19	0.5	2.38	26	50.2	2.21	110.9	0.58	0.207	0.141	0.90	3.39	27.0	0.241	0.696	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.1	61.44	1.45	4.532	2.425	2.55	1.0	2.66	38	25.3	3.67	92.9	0.58	na	0.141	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.12	48.64	1.23	4.536	2.428	2.79	1.0	2.77	44	20.0	4.50	90.1	0.58	na	0.141	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.14	40.45	0.97	4.540	2.430	2.70	1.0	2.83	48	16.6	5.04	83.9	0.58	na	0.141	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.16	35.84	0.69	4.544	2.432	2.20	1.0	2.83	48	14.7	5.03	74.2	0.58	na	0.140	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.18	33.28	0.67	4.548	2.434	2.33	1.0	2.88	51	13.7	5.44	74.4	0.58	na	0.140	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.2	32.26	0.58	4.552	2.436	2.09	1.0	2.86	50	13.2	5.33	70.6	0.58	na	0.140	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.22	29.7	0.52	4.556	2.438	2.07	1.0	2.90	52	12.2	5.64	68.8	0.58	na	0.140	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.24	25.09	0.49	4.560	2.440	2.39	1.0	3.00	59	10.3	6.77	69.6	0.58	na	0.140	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.26	23.04	0.51	4.564	2.442	2.76	1.0	3.08	64	9.4	7.62	71.9	0.58	na	0.140	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.28	24.07	0.53	4.569	2.444	2.72	1.0	3.05	62	9.8	7.34	72.3	0.58	na	0.140	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.3	25.6	0.5	4.573	2.446	2.38	1.0	3.00	58	10.5	6.68	69.9	0.58	na	0.140	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.32	29.7	0.78	4.577	2.448	3.10	1.0	3.00	58	12.1	6.67	81.0	0.58	na	0.140	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.34	41.47	0.7	4.581	2.450	1.90	1.0	2.74	43	16.9	4.26	72.2	0.58	na	0.140	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.36	32.26	0.78	4.585	2.452	2.82	1.0	2.94	54	13.2	6.06	79.7	0.58	na	0.140	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.38	61.44	0.78	4.589	2.454	1.37	0.5	2.35	25	38.1	2.12	80.8	0.57	0.129	0.140	0.92	2.18	19.5	0.486	0.914	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.4	48.13	0.74	4.593	2.456	1.70	1.0	2.65	38	19.6	3.65	71.5	0.57	na	0.140	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.42	39.43	0.72	4.597	2.458	2.07	1.0	2.78	45	16.0	4.60	73.8	0.57	na	0.140	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.44	31.23	0.73	4.601	2.460	2.74	1.0	2.95	55	12.7	6.14	78.0	0.57	na	0.140	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.46	24.58	0.67	4.605	2.462	3.35	1.0	3.10	65	10.0	7.89	78.7	0.57	na	0.139	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.48	20.99	0.57	4.610	2.464	3.48	1.0	3.18	71	8.5	8.94	76.1	0.57	na	0.139	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.5	17.92	0.52	4.614	2.467	3.91	1.0	3.28	80	7.3	10.43	75.7	0.57	na	0.139	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.52	17.41	0.47	4.618	2.469	3.67	1.0	3.28	80	7.1	10.42	73.5	0.57	na	0.139	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.54	17.41	0.37	4.622	2.471	2.89	1.0	3.23	75	7.0	9.62	67.8	0.57	na	0.139	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.56	16.38	0.28	4.626	2.473	2.38	1.0	3.22	74	6.6	9.46	62.7	0.57	na	0.139	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.58	14.34	0.23	4.630	2.475	2.37	1.0	3.29	80	5.8	10.51	60.9	0.57	na	0.139	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.6	13.82	0.19	4.634	2.477	2.07	1.0	3.28	80	5.6	10.41	58.1	0.57	na	0.139	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.62	12.8	0.17	4.638	2.479	2.08	1.0	3.33	84	5.2	11.14	57.5	0.57	na	0.139	0.94	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.64	12.29	0.19	4.642	2.481	2.48	1.0	3.39	89	5.0	12.13	60.1	0.57	na	0.139	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.66	11.78	0.2	4.646	2.483	2.80	1.0	3.44	94	4.7	13.02	61.8	0.57	na	0.139	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.68	11.78	0.19	4.651	2.485	2.67	1.0	3.43	93	4.7	12.84	60.9	0.57	na	0.139	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.7	11.26	0.19	4.655	2.487	2.88	1.0	3.48	97	4.5	13.64	61.8	0.57	na	0.139	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.72	11.26	0.18	4.659	2.489	2.73	1.0	3.47	96	4.5	13.45	60.9	0.57	na	0.139	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.74	11.26	0.18	4.663	2.491	2.73	1.0	3.47	96	4.5	13.47	60.9	0.57	na	0.139	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.76	11.26	0.18	4.667	2.493	2.73	1.0	3.47	96	4.5	13.48	60.9	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.78	11.26	0.19	4.671	2.495	2.88	1.0	3.48	97	4.5	13.69	61.8	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.8	11.26	0.21	4.675	2.497	3.19	1.0	3.50	100	4.5	14.09	63.5	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.82	11.78	0.22	4.679	2.499	3.10	1.0	3.47	96	4.7	13.47	63.5	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.84	11.78	0.24	4.683	2.501	3.38	1.0	3.49	98	4.7	13.82	65.1	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.86	11.78	0.27	4.688	2.504	3.81	1.0	3.51	100	4.7	14.30	67.3	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.88	12.29	0.3	4.692	2.506	3.95	1.0	3.50	99	4.9	13.99	68.6	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.9	11.78	0.32	4.696	2.508	4.52	1.0	3.55	100	4.7	15.05	70.7	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.92	11.78	0.34	4.700	2.510	4.80	1.0	3.57	100	4.7	15.33	72.0	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.94	11.78	0.35	4.704	2.512	4.95	1.0	3.58	100	4.7	15.47	72.6	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.96	11.26	0.36	4.708	2.514	5.49	1.0	3.63	100	4.5	16.52	74.0	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
22.98	11.26	0.35	4.712	2.516	5.35	1.0	3.62	100	4.5	16.40	73.4	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23	11.78	0.35	4.716	2.518	4.95	1.0	3.58	100	4.7	15.51	72.6	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.02	11.26	0.35	4.720	2.520	5.35	1.0	3.62	100	4.5	16.43	73.4	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.04	11.26	0.33	4.724	2.522	5.05	1.0	3.61	100	4.5	16.17	72.2	0.57	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.06	11.26	0.31	4.729	2.524	4.75	1.0	3.60	100	4.5	15.90	70.9	0.56	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.08	10.75	0.29	4.733	2.526	4.82	1.0	3.63	100	4.3	16.58	70.5	0.56	na	0.138	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.1	11.26	0.27	4.737	2.528	4.14	1.0	3.57	100	4.5	15.31	68.2	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.12	11.26	0.26	4.741	2.530	3.99	1.0	3.56	100	4.5	15.17	67.5	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.14	11.26	0.27	4.745	2.532	4.14	1.0	3.57	100	4.4	15.34	68.2	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.16	11.78	0.25	4.749	2.534	3.56	1.0	3.51	100	4.6	14.17	65.9	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.18	11.78	0.23	4.753	2.536	3.27	1.0	3.49	98	4.6	13.85	64.3	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.2	11.26	0.22	4.757	2.538	3.38	1.0	3.53	100	4.4	14.53	64.4	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.22	11.26	0.23	4.761	2.540	3.54	1.0	3.54	100	4.4	14.72	65.2	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

23.24	11.26	0.22	4.765	2.543	3.39	1.0	3.53	100	4.4	14.55	64.4	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.26	11.26	0.22	4.770	2.545	3.39	1.0	3.53	100	4.4	14.56	64.4	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.28	11.78	0.25	4.774	2.547	3.57	1.0	3.51	100	4.6	14.24	65.9	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.3	12.29	0.28	4.778	2.549	3.73	1.0	3.49	98	4.8	13.95	67.3	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.32	13.82	0.3	4.782	2.551	3.32	1.0	3.40	90	5.4	12.29	66.6	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.34	15.87	0.33	4.786	2.553	2.98	1.0	3.30	81	6.2	10.68	66.4	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.36	15.72	0.36	4.790	2.555	3.29	1.0	3.33	83	6.2	11.12	68.4	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.38	15.51	0.36	4.794	2.557	3.36	1.0	3.34	84	6.1	11.31	68.6	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.4	15.36	0.33	4.798	2.559	3.12	1.0	3.33	84	6.0	11.14	66.9	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.42	13.31	0.32	4.802	2.561	3.76	1.0	3.45	94	5.2	13.19	68.5	0.56	na	0.137	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.44	11.78	0.31	4.806	2.563	4.45	1.0	3.56	100	4.6	15.25	70.1	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.46	11.26	0.34	4.811	2.565	5.27	1.0	3.63	100	4.4	16.59	72.8	0.56	na	0.136	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.48	11.26	0.34	4.815	2.567	5.28	1.0	3.63	100	4.4	16.61	72.8	0.56	na	0.136	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.5	11.26	0.32	4.819	2.569	4.97	1.0	3.62	100	4.4	16.34	71.6	0.56	na	0.136	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.52	11.78	0.27	4.823	2.571	3.88	1.0	3.54	100	4.6	14.70	67.4	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.54	12.8	0.22	4.827	2.573	2.76	1.0	3.41	91	5.0	12.47	62.0	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.56	21.5	0.35	4.831	2.575	2.10	1.0	3.07	64	8.3	7.57	63.2	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.58	35.84	0.47	4.835	2.577	1.52	1.0	2.77	44	13.9	4.51	62.8	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.6	46.08	0.5	4.839	2.579	1.21	1.0	2.61	36	17.9	3.40	60.7	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.62	49.15	0.54	4.843	2.582	1.22	0.5	2.42	27	29.7	2.40	71.3	0.56	0.114	0.136	0.92	1.97	17.7	0.500	0.941	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.64	49.15	0.55	4.847	2.584	1.24	0.5	2.43	28	29.7	2.42	71.8	0.56	0.114	0.136	0.92	1.99	17.9	0.500	0.940	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.66	48.64	0.71	4.852	2.586	1.62	1.0	2.66	38	18.8	3.69	69.3	0.56	na	0.136	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.68	45.57	0.88	4.856	2.588	2.16	1.0	2.75	43	17.6	4.39	77.2	0.56	na	0.136	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.7	43.01	1.02	4.860	2.590	2.67	1.0	2.83	48	16.6	5.03	83.5	0.56	na	0.136	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.72	43.52	1.02	4.864	2.592	2.64	1.0	2.82	47	16.8	4.96	83.2	0.56	na	0.136	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.74	40.96	1.04	4.868	2.594	2.88	1.0	2.87	50	15.8	5.38	85.0	0.56	na	0.136	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.76	38.4	0.93	4.872	2.596	2.77	1.0	2.89	51	14.8	5.54	82.0	0.56	na	0.136	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.78	41.47	0.8	4.876	2.598	2.19	1.0	2.80	46	16.0	4.73	75.6	0.56	na	0.136	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.8	41.99	0.87	4.880	2.600	2.34	1.0	2.81	47	16.1	4.84	78.1	0.56	na	0.135	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.82	32.26	0.94	4.884	2.602	3.43	1.0	3.01	59	12.4	6.86	85.0	0.55	na	0.135	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.84	26.63	0.9	4.888	2.604	4.14	1.0	3.14	69	10.2	8.43	86.2	0.55	na	0.135	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.86	21.5	0.87	4.893	2.606	5.24	1.0	3.30	81	8.2	10.63	87.7	0.55	na	0.135	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.88	18.94	0.89	4.897	2.608	6.34	1.0	3.40	90	7.3	12.36	89.8	0.55	na	0.135	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.9	22.02	0.96	4.901	2.610	5.61	1.0	3.30	81	8.4	10.74	90.6	0.55	na	0.135	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.92	25.09	0.77	4.905	2.612	3.81	1.0	3.15	69	9.6	8.52	81.8	0.55	na	0.135	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.94	25.09	0.62	4.909	2.614	3.07	1.0	3.10	65	9.6	7.84	75.3	0.55	na	0.135	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.96	20.48	0.42	4.913	2.616	2.70	1.0	3.16	70	7.8	8.68	68.0	0.55	na	0.135	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
23.98	18.43	0.38	4.917	2.619	2.81	1.0	3.22	75	7.0	9.54	67.2	0.55	na	0.135	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24	17.41	0.39	4.921	2.621	3.12	1.0	3.28	79	6.6	10.32	68.6	0.55	na	0.135	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.02	17.41	0.41	4.925	2.623	3.28	1.0	3.29	80	6.6	10.50	69.7	0.55	na	0.135	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.04	17.92	0.32	4.929	2.625	2.46	1.0	3.21	74	6.8	9.35	63.8	0.55	na	0.135	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.06	18.94	0.3	4.934	2.627	2.14	1.0	3.15	69	7.2	8.55	61.7	0.55	na	0.135	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.08	24.58	0.35	4.938	2.629	1.78	1.0	2.98	57	9.4	6.54	61.2	0.55	na	0.135	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.1	36.87	0.58	4.942	2.631	1.82	1.0	2.81	46	14.0	4.82	67.6	0.55	na	0.135	0.93	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.12	57.35	0.99	4.946	2.633	1.89	1.0	2.64	37	21.8	3.54	77.1	0.55	na	0.135	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.14	82.44	1.33	4.950	2.635	1.72	0.5	2.32	23	49.3	1.99	98.3	0.55	0.168	0.135	0.90	2.89	23.3	0.323	0.806	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.16	88.58	1.73	4.954	2.637	2.07	0.5	2.34	24	53.0	2.09	110.5	0.55	0.205	0.135	0.89	3.49	26.5	0.243	0.700	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.18	81.41	1.54	4.958	2.639	2.01	0.5	2.37	25	48.7	2.17	105.5	0.55	0.189	0.134	0.90	3.23	25.5	0.274	0.747	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.2	73.22	1.88	4.962	2.641	2.75	1.0	2.64	38	27.7	3.59	99.4	0.55	na	0.134	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.22	62.47	1.77	4.966	2.643	3.08	1.0	2.73	42	23.6	4.22	99.7	0.55	na	0.134	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.24	56.83	1.64	4.970	2.645	3.16	1.0	2.77	45	21.5	4.55	97.8	0.55	na	0.134	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.26	45.06	1.29	4.975	2.647	3.22	1.0	2.87	50	17.0	5.37	91.4	0.55	na	0.134	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.28	35.33	1.14	4.979	2.649	3.76	1.0	3.01	59	13.3	6.78	90.4	0.55	na	0.134	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.3	29.19	0.96	4.983	2.651	3.97	1.0	3.10	65	11.0	7.88	86.8	0.55	na	0.134	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.32	30.21	0.89	4.987	2.653	3.53	1.0	3.06	62	11.4	7.35	83.7	0.55	na	0.134	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.34	39.43	1.05	4.991	2.655	3.05	1.0	2.91	53	14.8	5.76	85.5	0.55	na	0.134	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.36	60.93	1.4	4.995	2.658	2.50	1.0	2.69	40	22.9	3.89	89.3	0.55	na	0.134	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.38	76.8	1.72	4.999	2.660	2.40	0.5	2.44	28	45.7	2.46	112.3	0.55	0.212	0.134	0.89	3.60	28.1	0.233	0.682	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.4	103.43	2.19	5.003	2.662	2.23	0.5	2.31	23	61.6	1.98	122.0	0.55	0.249	0.134	0.88	4.19	28.9	0.185	0.582	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.42	91.14	2.21	5.007	2.664	2.57	0.5	2.40	26	54.2	2.29	124.3	0.55	0.259	0.134	0.88	4.35	30.6	0.175	0.557	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.44	82.44	1.81	5.011	2.666	2.34	0.5	2.41	27	49.0	2.32	113.9	0.55	0.217	0.134	0.89	3.69	28.1	0.225	0.667	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.46	69.12	1.75	5.016	2.668	2.73	1.0	2.67	39	25.9	3.74	96.8	0.55	na	0.134	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.48	62.47	1.72	5.020	2.670	2.99	1.0	2.73	42	23.4	4.19	98.0	0.55	na	0.134	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.5	55.3	1.85	5.024	2.672	3.68	1.0	2.83	48	20.7	5.02	104.0	0.55	na	0.134	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.52	57.35	2.04	5.028	2.674	3.90	1.0	2.83	48	21.4	5.05	108.3	0.55	na	0.134	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

24.54	71.68	2.13	5.032	2.676	3.20	1.0	2.70	40	26.8	3.96	106.0	0.55	na	0.134	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.56	84.48	2.05	5.036	2.678	2.58	0.5	2.43	28	50.1	2.41	120.9	0.55	0.244	0.134	0.88	4.13	30.1	0.190	0.594	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.58	90.12	2.01	5.040	2.680	2.36	0.5	2.38	26	53.5	2.22	118.5	0.55	0.235	0.133	0.89	3.98	28.9	0.202	0.620	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.6	89.09	1.69	5.044	2.682	2.01	0.5	2.34	24	52.8	2.06	108.9	0.55	0.200	0.133	0.89	3.42	26.0	0.253	0.715	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.62	100.36	2.42	5.048	2.684	2.54	0.5	2.36	25	59.5	2.16	128.5	0.55	0.277	0.133	0.88	4.65	31.1	0.159	0.510	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.64	131.59	2.59	5.052	2.686	2.05	0.5	2.21	19	78.0	1.68	131.3	0.55	0.290	0.133	0.87	4.85	29.7	0.149	0.478	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.66	185.86	3.45	5.057	2.688	1.91	0.5	2.08	15	110.1	1.41	155.3	0.55	0.428	0.133	0.84	6.92	33.3	0.081	0.179	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.68	252.43	4.27	5.061	2.690	1.73	0.5	1.96	12	149.5	1.24	185.1	0.54	0.461	0.133	0.79	7.00	37.9	0.035	-0.234	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.7	311.82	5.3	5.065	2.692	1.73	0.5	1.89	10	184.6	1.18	217.3	0.54	0.461	0.133	0.72	6.36	43.5	0.012	-0.710	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.72	345.62	6.12	5.069	2.695	1.80	0.5	1.88	10	204.5	1.16	238.0	0.54	0.461	0.133	0.72	6.36	47.3	0.005	-1.027	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.74	371.22	6.67	5.073	2.697	1.82	0.5	1.87	10	219.6	1.15	252.8	0.54	0.461	0.133	0.72	6.36	50.0	0.002	-1.257	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.76	385.55	6.01	5.077	2.699	1.58	0.5	1.81	8	228.0	1.11	251.9	0.54	0.461	0.133	0.72	6.36	48.8	0.002	-1.244	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.78	401.94	6.04	5.081	2.701	1.52	0.5	1.78	8	237.6	1.09	258.5	0.54	0.461	0.133	0.72	6.36	49.6	0.001	-1.347	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.8	417.81	5.94	5.085	2.703	1.44	0.5	1.75	7	246.8	1.07	263.6	0.54	0.461	0.133	0.72	6.36	50.1	0.001	-1.427	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.82	453.65	5.69	5.089	2.705	1.27	0.5	1.69	6	267.9	1.02	274.5	0.54	0.461	0.133	0.72	6.36	51.0	0.000	-1.598	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.84	477.72	5.76	5.094	2.707	1.22	0.5	1.66	5	282.0	1.01	283.6	0.54	0.461	0.133	0.72	6.36	52.2	0.000	-1.743	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.86	485.91	6.59	5.098	2.709	1.37	0.5	1.70	6	286.8	1.03	295.4	0.54	0.461	0.133	0.72	6.36	55.0	0.000	-1.930	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.88	463.38	8.46	5.102	2.711	1.85	0.5	1.81	8	273.4	1.11	303.5	0.54	0.461	0.133	0.72	6.36	58.9	0.000	-2.059	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.9	444.95	9.44	5.106	2.713	2.15	0.5	1.88	10	262.4	1.16	304.7	0.54	0.461	0.133	0.72	6.36	60.6	0.000	-2.079	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.92	434.71	9.45	5.110	2.715	2.20	0.5	1.89	10	256.2	1.17	300.9	0.54	0.461	0.133	0.72	6.36	60.1	0.000	-2.018	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.94	433.17	9.34	5.114	2.717	2.18	0.5	1.89	10	255.2	1.17	299.3	0.54	0.461	0.133	0.72	6.36	59.8	0.000	-1.993	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.96	446.48	8.98	5.118	2.719	2.03	0.5	1.86	9	263.0	1.14	301.0	0.54	0.461	0.133	0.72	6.36	59.4	0.000	-2.020	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
24.98	433.68	8.86	5.122	2.721	2.07	0.5	1.87	10	255.4	1.16	295.1	0.54	0.461	0.133	0.72	6.36	58.5	0.000	-1.925	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25	416.28	8.51	5.126	2.723	2.07	0.5	1.88	10	245.0	1.16	285.4	0.54	0.461	0.132	0.72	6.36	56.8	0.000	-1.772	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.02	390.16	7.85	5.130	2.725	2.04	0.5	1.89	10	229.6	1.18	269.8	0.54	0.461	0.132	0.72	6.36	53.9	0.001	-1.524	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.04	353.81	7.68	5.135	2.727	2.20	0.5	1.95	12	208.1	1.23	255.4	0.54	0.461	0.132	0.72	6.36	52.1	0.002	-1.298	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.06	316.94	7.72	5.139	2.729	2.48	0.5	2.02	13	186.3	1.31	244.5	0.54	0.461	0.132	0.72	6.36	51.2	0.003	-1.128	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.08	264.72	8.06	5.143	2.731	3.11	0.5	2.14	17	155.6	1.53	237.3	0.54	0.461	0.132	0.72	6.37	52.2	0.005	-1.017	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.1	219.15	8.13	5.147	2.734	3.80	0.5	2.26	21	128.7	1.82	234.5	0.54	0.461	0.132	0.72	6.37	54.3	0.006	-0.973	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.12	183.82	7.75	5.151	2.736	4.34	0.5	2.36	25	107.9	2.13	229.7	0.54	0.461	0.132	0.72	6.37	55.4	0.007	-0.899	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.14	156.68	6.73	5.155	2.738	4.44	0.5	2.41	27	92.0	2.33	214.6	0.54	0.461	0.132	0.71	6.37	53.0	0.013	-0.670	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.16	141.83	6.08	5.159	2.740	4.45	0.5	2.44	28	83.2	2.46	204.6	0.54	0.461	0.132	0.74	6.56	51.2	0.019	-0.519	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.18	136.71	5.22	5.163	2.742	3.97	0.5	2.41	27	80.2	2.34	187.9	0.54	0.461	0.132	0.78	6.96	46.4	0.032	-0.274	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.2	152.58	4.72	5.167	2.744	3.20	0.5	2.31	23	89.5	1.96	175.6	0.54	0.461	0.132	0.81	7.19	41.5	0.046	-0.099	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.22	179.21	3.94	5.171	2.746	2.26	0.5	2.15	17	105.0	1.54	161.7	0.54	0.461	0.132	0.83	7.41	35.7	0.068	0.093	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.24	186.38	4.06	5.176	2.748	2.24	0.5	2.13	17	109.2	1.51	164.8	0.54	0.461	0.132	0.83	7.37	36.1	0.063	0.052	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.26	171.02	4.46	5.180	2.750	2.69	0.5	2.22	20	100.2	1.70	170.4	0.54	0.461	0.132	0.82	7.28	38.7	0.054	-0.026	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.28	137.73	4	5.184	2.752	3.02	0.5	2.32	23	80.6	2.00	161.6	0.54	0.461	0.132	0.83	7.41	38.4	0.069	0.094	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.3	103.94	3.3	5.188	2.754	3.34	0.5	2.44	28	60.8	2.47	150.5	0.54	0.397	0.132	0.85	6.51	37.7	0.092	0.242	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.32	86.53	3.37	5.192	2.756	4.14	1.0	2.72	41	31.4	4.09	128.5	0.54	na	0.132	0.87	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.34	82.95	3.33	5.196	2.758	4.28	1.0	2.74	43	30.1	4.28	128.7	0.54	na	0.132	0.87	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.36	86.53	3.01	5.200	2.760	3.70	1.0	2.68	40	31.3	3.86	120.9	0.54	na	0.132	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.38	114.69	2.79	5.204	2.762	2.55	0.5	2.33	24	67.0	2.02	135.7	0.54	0.312	0.132	0.86	5.24	32.3	0.133	0.426	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.4	120.84	2.4	5.208	2.764	2.08	0.5	2.25	21	70.6	1.78	125.8	0.54	0.265	0.132	0.87	4.50	28.9	0.170	0.541	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.42	126.47	2.02	5.212	2.766	1.67	0.5	2.17	18	73.9	1.58	116.9	0.54	0.229	0.132	0.88	3.92	26.0	0.209	0.636	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.44	125.45	1.95	5.217	2.768	1.62	0.5	2.16	18	73.2	1.57	115.1	0.54	0.222	0.132	0.89	3.81	25.6	0.218	0.654	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.46	107.01	1.41	5.221	2.770	1.39	0.5	2.18	18	62.4	1.60	99.8	0.54	0.172	0.131	0.90	3.00	22.3	0.312	0.795	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.48	96.26	1.31	5.225	2.773	1.44	0.5	2.22	20	56.2	1.72	96.3	0.54	0.163	0.131	0.90	2.85	21.9	0.338	0.822	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.5	90.63	1.43	5.229	2.775	1.67	0.5	2.29	22	52.8	1.89	100.1	0.54	0.173	0.131	0.90	3.02	23.4	0.310	0.792	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.52	134.66	2.04	5.233	2.777	1.58	0.5	2.13	17	78.5	1.51	118.2	0.54	0.234	0.131	0.88	4.00	25.9	0.203	0.623	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.54	233.48	2.96	5.237	2.779	1.30	0.5	1.89	10	136.0	1.18	160.1	0.54	0.461	0.131	0.83	7.45	32.0	0.071	0.115	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.56	339.98	3.91	5.241	2.781	1.17	0.5	1.75	7	198.0	1.06	210.7	0.54	0.461	0.131	0.71	6.38	40.0	0.015	-0.610	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.58	393.23	4.18	5.245	2.783	1.08	0.5	1.68	6	229.0	1.02	233.0	0.54	0.461	0.131	0.71	6.37	43.2	0.006	-0.951	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.6	412.18	4.74	5.249	2.785	1.16	0.5	1.69	6	239.9	1.03	246.1	0.54	0.461	0.131	0.71	6.37	45.8	0.003	-1.153	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.62	419.86	5.15	5.253	2.787	1.24	0.5	1.71	6	244.3	1.04	253.3	0.54	0.461	0.131	0.71	6.37	47.4	0.002	-1.265	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.64	400.91	5.55	5.258	2.789	1.40	0.5	1.76	7	233.2	1.07	250.1	0.53	0.461	0.131	0.71	6.37	47.7	0.002	-1.216	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.66	372.75	5.57	5.262	2.791	1.52	0.5	1.81	8	216.7	1.11	239.5	0.53	0.461	0.131	0.71	6.37	46.4	0.004	-1.051	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.68	344.59	6.27	5.266	2.793	1.85	0.5	1.89	10	200.3	1.18	235.8	0.53	0.461	0.131	0.71	6.37	47.2	0.005	-0.993	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.7	309.77	7.25	5.270	2.795	2.38	0.5	2.01	13	180.0	1.31	235.1	0.53	0.461	0.131	0.71	6.37	49.1	0.005	-0.982	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.72	274.44	7.31	5.274	2.797	2.72	0.5	2.09	15	159.4	1.43	227.3	0.53	0.461	0.131	0.71	6.37	49.0	0.008	-0.862	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.74	243.72	6.76	5.278	2.799	2.84	0.5	2.14	17	141.5	1.51	214.3	0.53	0.461	0.131	0.71	6.37	47.1	0.013	-0.664	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.76	236.04	6.66	5.282	2.801	2.89	0.5	2.15	17	137.0	1.55	211.7	0.53	0.461	0.131	0.71	6.37	46.8	0.014	-0.625	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.78	237.58	7.02	5.286	2.803	3.02	0.5	2.17	18	137.8	1.58	217.1	0.53	0.461	0.131	0.71	6.37	48.3	0.012	-0.708	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.8	250.89	7.18	5.290	2.805	2.92	0.5	2.14	17	145.5	1.52	221.2	0.53	0.461	0.131	0.71	6.37	48.6	0.010	-0.769	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.82	257.04	7.55	5.294	2.807	3.00	0.5	2.14	17	149.0	1.52	227.2	0.53	0.461	0.131	0.71	6.37	50.0	0.008	-0.861	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

25.84	261.64	8.34	5.299	2.810	3.25	0.5	2.16	18	151.6	1.57	238.7	0.53	0.461	0.131	0.71	6.37	53.1	0.005	-1.039	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.86	282.12	8	5.303	2.812	2.89	0.5	2.10	16	163.4	1.45	237.3	0.53	0.461	0.131	0.71	6.37	51.4	0.005	-1.017	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.88	320.01	7.43	5.307	2.814	2.36	0.5	2.00	13	185.3	1.29	239.4	0.53	0.461	0.131	0.71	6.37	49.8	0.004	-1.050	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.9	363.02	6.56	5.311	2.816	1.83	0.5	1.88	10	210.1	1.16	244.5	0.53	0.461	0.131	0.71	6.37	48.6	0.003	-1.127	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.92	372.24	6.07	5.315	2.818	1.65	0.5	1.84	9	215.4	1.13	243.1	0.53	0.461	0.131	0.71	6.37	47.6	0.004	-1.107	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.94	369.17	6.06	5.319	2.820	1.67	0.5	1.84	9	213.5	1.13	241.8	0.53	0.461	0.130	0.71	6.37	47.5	0.004	-1.086	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.96	350.74	6.55	5.323	2.822	1.90	0.5	1.90	10	202.8	1.18	239.8	0.53	0.461	0.130	0.71	6.37	48.1	0.004	-1.055	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
25.98	294.93	7.13	5.327	2.824	2.46	0.5	2.04	14	170.5	1.34	228.9	0.53	0.461	0.130	0.71	6.37	48.3	0.007	-0.888	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26	267.28	6.53	5.331	2.826	2.49	0.5	2.07	15	154.4	1.39	214.9	0.53	0.461	0.130	0.71	6.37	45.9	0.013	-0.673	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.02	239.11	6.15	5.335	2.828	2.63	0.5	2.12	16	138.1	1.48	204.1	0.53	0.461	0.130	0.73	6.59	44.5	0.019	-0.513	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.04	198.67	5.74	5.340	2.830	2.97	0.5	2.21	19	114.7	1.68	193.0	0.53	0.461	0.130	0.76	6.88	43.7	0.027	-0.349	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.06	148.49	5.41	5.344	2.832	3.78	0.5	2.38	25	85.7	2.20	188.6	0.53	0.461	0.130	0.77	6.98	45.9	0.031	-0.285	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.08	105.48	4.65	5.348	2.834	4.64	1.0	2.69	40	37.2	3.93	146.2	0.53	na	0.130	0.85	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.1	76.29	3.4	5.352	2.836	4.79	1.0	2.81	47	26.9	4.86	130.8	0.53	na	0.130	0.87	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.12	57.86	2.06	5.356	2.838	3.92	1.0	2.85	49	20.4	5.23	106.7	0.53	na	0.130	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.14	44.55	1.54	5.360	2.840	3.93	1.0	2.95	55	15.7	6.21	97.4	0.53	na	0.130	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.16	39.43	1.17	5.364	2.842	3.43	1.0	2.97	56	13.9	6.36	88.2	0.53	na	0.130	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.18	36.87	1.06	5.368	2.844	3.36	1.0	2.99	58	13.0	6.60	85.5	0.53	na	0.130	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.2	35.84	1.19	5.372	2.846	3.91	1.0	3.04	61	12.6	7.17	90.2	0.53	na	0.130	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.22	35.84	0.88	5.376	2.849	2.89	1.0	2.96	56	12.6	6.32	79.5	0.53	na	0.130	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.24	34.82	0.55	5.381	2.851	1.87	1.0	2.87	50	12.2	5.42	66.2	0.53	na	0.130	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.26	34.82	0.49	5.385	2.853	1.66	1.0	2.85	49	12.2	5.18	63.3	0.53	na	0.130	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.28	37.38	0.71	5.389	2.855	2.22	1.0	2.88	51	13.1	5.51	72.2	0.53	na	0.130	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.3	38.4	0.87	5.393	2.857	2.64	1.0	2.91	53	13.4	5.81	78.0	0.53	na	0.130	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.32	39.94	0.85	5.397	2.859	2.46	1.0	2.88	51	14.0	5.49	76.6	0.53	na	0.130	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.34	43.01	0.98	5.401	2.861	2.61	1.0	2.86	50	15.0	5.33	80.2	0.53	na	0.130	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.36	76.29	1.34	5.405	2.863	1.89	0.5	2.39	26	43.8	2.25	98.5	0.53	0.169	0.130	0.90	2.98	24.1	0.322	0.805	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.38	135.17	1.05	5.409	2.865	0.81	0.5	1.96	12	77.6	1.24	96.1	0.53	0.163	0.130	0.90	2.87	19.7	0.340	0.823	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.4	176.14	1.02	5.413	2.867	0.60	0.5	1.78	8	101.0	1.09	110.0	0.53	0.204	0.130	0.89	3.56	21.1	0.246	0.704	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.42	180.23	1.33	5.417	2.869	0.76	0.5	1.84	9	103.3	1.13	116.5	0.53	0.227	0.130	0.88	3.94	22.8	0.211	0.640	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.44	175.52	1.65	5.422	2.871	0.97	0.5	1.91	11	100.6	1.19	119.9	0.53	0.240	0.129	0.88	4.15	24.1	0.195	0.605	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.46	170.76	2.47	5.426	2.873	1.49	0.5	2.04	14	97.8	1.35	132.3	0.53	0.295	0.129	0.86	5.03	28.0	0.145	0.466	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.48	166.05	3.31	5.430	2.875	2.06	0.5	2.15	17	95.1	1.54	146.7	0.53	0.374	0.129	0.84	6.23	32.4	0.101	0.290	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.5	161.29	3.84	5.434	2.877	2.46	0.5	2.21	19	92.4	1.69	156.4	0.53	0.436	0.129	0.83	7.14	35.5	0.079	0.164	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.52	147.46	3.89	5.438	2.879	2.74	0.5	2.28	22	84.4	1.86	157.2	0.53	0.442	0.129	0.83	7.23	36.6	0.077	0.153	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.54	159.75	3.41	5.442	2.881	2.21	0.5	2.18	18	91.4	1.62	147.9	0.53	0.381	0.129	0.84	6.34	33.1	0.098	0.274	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.56	132.61	3.28	5.446	2.883	2.58	0.5	2.29	22	75.9	1.91	144.7	0.53	0.362	0.129	0.85	6.05	33.9	0.107	0.315	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.58	109.57	3.15	5.450	2.886	3.03	0.5	2.40	26	62.7	2.30	144.3	0.53	0.360	0.129	0.85	6.02	35.5	0.108	0.320	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.6	89.09	2.59	5.454	2.888	3.10	1.0	2.64	37	30.9	3.55	109.5	0.53	na	0.129	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.62	72.71	2.02	5.458	2.890	3.00	1.0	2.70	41	25.2	4.00	100.6	0.53	na	0.129	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.64	62.98	1.43	5.463	2.892	2.49	1.0	2.71	41	21.8	4.02	87.6	0.53	na	0.129	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.66	54.27	1.09	5.467	2.894	2.23	1.0	2.74	42	18.8	4.26	79.8	0.53	na	0.129	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.68	45.57	0.88	5.471	2.896	2.19	1.0	2.80	46	15.7	4.79	75.4	0.53	na	0.129	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.7	40.96	0.79	5.475	2.898	2.23	1.0	2.85	49	14.1	5.22	73.7	0.53	na	0.129	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.72	44.03	1.19	5.479	2.900	3.09	1.0	2.90	52	15.2	5.70	86.6	0.53	na	0.129	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.74	62.98	1.77	5.483	2.902	3.08	1.0	2.76	44	21.7	4.47	96.9	0.52	na	0.129	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.76	73.22	2.25	5.487	2.904	3.32	1.0	2.73	42	25.2	4.20	105.8	0.52	na	0.129	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.78	62.98	2.41	5.491	2.906	4.19	1.0	2.85	49	21.7	5.20	112.6	0.52	na	0.129	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.8	53.25	2.43	5.495	2.908	5.09	1.0	2.97	56	18.3	6.34	116.2	0.52	na	0.129	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.82	48.13	2.36	5.500	2.910	5.54	1.0	3.03	60	16.5	7.02	116.2	0.52	na	0.129	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.84	45.06	2.37	5.504	2.912	5.99	1.0	3.07	64	15.5	7.58	117.3	0.52	na	0.129	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.86	41.47	2.49	5.508	2.914	6.92	1.0	3.15	69	14.2	8.50	120.9	0.52	na	0.129	0.87	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.88	40.96	2.59	5.512	2.916	7.31	1.0	3.17	70	14.0	8.77	123.1	0.52	na	0.129	0.87	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.9	37.38	2	5.516	2.918	6.28	1.0	3.16	70	12.8	8.67	111.1	0.52	na	0.129	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.92	31.75	1.98	5.520	2.920	7.55	1.0	3.28	79	10.9	10.32	112.2	0.52	na	0.129	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.94	30.21	1.89	5.524	2.922	7.66	1.0	3.30	81	10.3	10.69	110.5	0.52	na	0.129	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.96	37.89	1.96	5.528	2.925	6.06	1.0	3.15	69	13.0	8.48	109.9	0.52	na	0.129	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
26.98	41.99	1.85	5.532	2.927	5.07	1.0	3.06	62	14.3	7.37	105.8	0.52	na	0.129	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27	40.45	1.45	5.536	2.929	4.15	1.0	3.02	60	13.8	6.92	95.6	0.52	na	0.128	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.02	39.94	1.29	5.541	2.931	3.75	1.0	3.00	58	13.6	6.68	91.1	0.52	na	0.128	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.04	37.89	1.23	5.545	2.933	3.80	1.0	3.02	60	12.9	6.97	90.0	0.52	na	0.128	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.06	36.35	1.15	5.549	2.935	3.73	1.0	3.03	61	12.4	7.11	88.1	0.52	na	0.128	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.08	43.01	1.16	5.553	2.937	3.10	1.0	2.92	53	14.6	5.86	85.8	0.52	na	0.128	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.1	57.35	1.52	5.557	2.939	2.93	1.0	2.79	46	19.5	4.69	91.6	0.52	na	0.128	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.12	62.47	1.93	5.561	2.941	3.39	1.0	2.80	46	21.2	4.75	100.9	0.52	na	0.128	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

27.14	51.71	2.1	5.565	2.943	4.55	1.0	2.95	55	17.6	6.18	108.5	0.52	na	0.128	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.16	41.99	1.68	5.569	2.945	4.61	1.0	3.03	61	14.3	7.10	101.2	0.52	na	0.128	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.18	41.47	1.44	5.573	2.947	4.01	1.0	3.00	59	14.1	6.73	94.8	0.52	na	0.128	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.2	32.26	1.31	5.577	2.949	4.91	1.0	3.16	70	10.9	8.64	94.5	0.52	na	0.128	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.22	26.11	1.22	5.582	2.951	5.94	1.0	3.30	81	8.8	10.66	94.3	0.52	na	0.128	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.24	23.55	1.08	5.586	2.953	6.01	1.0	3.35	85	8.0	11.44	91.2	0.52	na	0.128	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.26	21.5	0.89	5.590	2.955	5.59	1.0	3.37	87	7.3	11.83	86.1	0.52	na	0.128	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.28	19.46	0.67	5.594	2.957	4.83	1.0	3.39	88	6.6	12.04	79.2	0.52	na	0.128	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.3	18.94	0.47	5.598	2.959	3.52	1.0	3.32	83	6.4	11.06	70.8	0.52	na	0.128	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.32	17.41	0.48	5.602	2.961	4.07	1.0	3.40	90	5.9	12.34	72.5	0.52	na	0.128	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.34	16.38	0.64	5.606	2.964	5.94	1.0	3.53	100	5.5	14.55	80.4	0.52	na	0.128	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.36	15.36	0.48	5.610	2.966	4.92	1.0	3.52	100	5.2	14.38	74.5	0.52	na	0.128	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.38	12.29	0.45	5.614	2.968	6.74	1.0	3.73	100	4.1	18.65	77.3	0.52	na	0.128	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.4	16.38	0.44	5.618	2.970	4.09	1.0	3.44	93	5.5	12.96	71.5	0.52	na	0.128	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.42	16.38	0.44	5.623	2.972	4.09	1.0	3.44	93	5.5	12.97	71.5	0.52	na	0.128	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.44	15.87	0.44	5.627	2.974	4.30	1.0	3.47	96	5.3	13.49	72.0	0.52	na	0.128	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.46	15.36	0.43	5.631	2.976	4.42	1.0	3.49	98	5.2	13.95	72.0	0.52	na	0.128	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.48	15.36	0.45	5.635	2.978	4.63	1.0	3.51	100	5.2	14.16	73.0	0.52	na	0.128	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.5	15.36	0.46	5.639	2.980	4.73	1.0	3.51	100	5.2	14.26	73.5	0.52	na	0.128	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.52	15.36	0.47	5.643	2.982	4.84	1.0	3.52	100	5.2	14.36	74.0	0.52	na	0.128	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.54	15.87	0.5	5.647	2.984	4.89	1.0	3.50	100	5.3	14.07	74.9	0.52	na	0.128	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.56	15.87	0.53	5.651	2.986	5.19	1.0	3.52	100	5.3	14.34	76.2	0.52	na	0.128	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.58	15.36	0.58	5.655	2.988	5.98	1.0	3.57	100	5.1	15.34	78.9	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.6	14.85	0.62	5.659	2.990	6.75	1.0	3.62	100	5.0	16.31	81.0	0.52	na	0.127	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.62	14.85	0.62	5.664	2.992	6.75	1.0	3.62	100	5.0	16.32	81.0	0.52	na	0.127	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.64	14.85	0.62	5.668	2.994	6.75	1.0	3.62	100	5.0	16.33	81.0	0.52	na	0.127	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.66	14.85	0.6	5.672	2.996	6.54	1.0	3.61	100	5.0	16.18	80.2	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.68	14.85	0.56	5.676	2.998	6.10	1.0	3.60	100	5.0	15.86	78.6	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.7	14.85	0.5	5.680	3.001	5.45	1.0	3.57	100	4.9	15.34	75.9	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.72	14.85	0.46	5.684	3.003	5.02	1.0	3.55	100	4.9	14.97	74.1	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.74	14.34	0.41	5.688	3.005	4.74	1.0	3.56	100	4.8	15.13	72.2	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.76	14.34	0.38	5.692	3.007	4.39	1.0	3.54	100	4.8	14.80	70.6	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.78	14.34	0.36	5.696	3.009	4.16	1.0	3.53	100	4.8	14.58	69.5	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.8	14.34	0.34	5.700	3.011	3.94	1.0	3.52	100	4.8	14.35	68.4	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.82	14.85	0.32	5.705	3.013	3.50	1.0	3.47	96	4.9	13.50	66.5	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.84	14.85	0.32	5.709	3.015	3.50	1.0	3.47	96	4.9	13.51	66.5	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.86	14.85	0.33	5.713	3.017	3.61	1.0	3.48	97	4.9	13.64	67.1	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.88	14.85	0.34	5.717	3.019	3.72	1.0	3.48	97	4.9	13.77	67.7	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.9	14.85	0.35	5.721	3.021	3.83	1.0	3.49	98	4.9	13.89	68.3	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.92	14.85	0.39	5.725	3.023	4.27	1.0	3.52	100	4.9	14.35	70.5	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.94	14.85	0.4	5.729	3.025	4.39	1.0	3.52	100	4.9	14.47	71.0	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.96	14.34	0.39	5.733	3.027	4.53	1.0	3.55	100	4.7	15.02	71.1	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
27.98	14.34	0.38	5.737	3.029	4.42	1.0	3.55	100	4.7	14.92	70.6	0.52	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28	14.34	0.36	5.741	3.031	4.19	1.0	3.53	100	4.7	14.69	69.5	0.51	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.02	14.34	0.34	5.746	3.033	3.96	1.0	3.52	100	4.7	14.46	68.4	0.51	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.04	13.82	0.34	5.750	3.035	4.21	1.0	3.56	100	4.6	15.18	69.1	0.51	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.06	14.34	0.32	5.754	3.037	3.73	1.0	3.51	100	4.7	14.23	67.2	0.51	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.08	14.34	0.32	5.758	3.040	3.73	1.0	3.51	100	4.7	14.24	67.2	0.51	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.1	14.85	0.31	5.762	3.042	3.41	1.0	3.47	96	4.9	13.50	65.9	0.51	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.12	14.85	0.28	5.766	3.044	3.08	1.0	3.45	94	4.9	13.12	64.0	0.51	na	0.127	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.14	15.87	0.28	5.770	3.046	2.77	1.0	3.39	88	5.2	12.05	62.8	0.51	na	0.127	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.16	17.41	0.35	5.774	3.048	3.01	1.0	3.35	85	5.7	11.47	65.5	0.51	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.18	19.97	0.38	5.778	3.050	2.68	1.0	3.25	77	6.5	9.94	65.1	0.51	na	0.127	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.2	23.55	0.34	5.782	3.052	1.91	1.0	3.09	65	7.7	7.82	60.3	0.51	na	0.126	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.22	29.19	0.41	5.787	3.054	1.75	1.0	2.97	57	9.6	6.40	61.2	0.51	na	0.126	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.24	42.5	0.41	5.791	3.056	1.12	1.0	2.71	41	13.9	4.02	55.9	0.51	na	0.126	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.26	59.91	0.5	5.795	3.058	0.92	0.5	2.32	23	33.3	2.00	66.4	0.51	0.107	0.126	0.91	1.98	15.8	0.500	0.943	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.28	61.44	0.61	5.799	3.060	1.10	0.5	2.35	24	34.1	2.10	71.5	0.51	0.114	0.126	0.91	2.10	17.2	0.500	0.941	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.3	57.35	0.66	5.803	3.062	1.28	1.0	2.61	36	18.7	3.35	62.8	0.51	na	0.126	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.32	52.23	0.74	5.807	3.064	1.59	1.0	2.70	40	17.0	3.94	67.2	0.51	na	0.126	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.34	46.59	0.78	5.811	3.066	1.91	1.0	2.79	45	15.2	4.64	70.5	0.51	na	0.126	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.36	43.01	0.84	5.815	3.068	2.26	1.0	2.86	49	14.0	5.28	74.0	0.51	na	0.126	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.38	44.03	0.97	5.819	3.070	2.54	1.0	2.88	51	14.3	5.46	78.3	0.51	na	0.126	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.4	52.74	1.17	5.823	3.072	2.49	1.0	2.80	46	17.2	4.76	81.8	0.51	na	0.126	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.42	71.17	1.34	5.828	3.074	2.05	1.0	2.63	37	23.1	3.52	81.5	0.51	na	0.126	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

28.44	92.68	1.38	5.832	3.077	1.59	0.5	2.28	22	51.3	1.89	96.8	0.51	0.164	0.126	0.89	2.96	22.6	0.334	0.818	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.46	128.52	1.36	5.836	3.079	1.11	0.5	2.07	15	71.1	1.39	99.1	0.51	0.171	0.126	0.89	3.07	21.2	0.317	0.800	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.48	129.54	1.25	5.840	3.081	1.01	0.5	2.04	14	71.7	1.35	96.8	0.51	0.164	0.126	0.89	2.96	20.5	0.334	0.818	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.5	115.72	1.01	5.844	3.083	0.92	0.5	2.06	15	64.0	1.38	88.2	0.51	0.144	0.126	0.90	2.61	18.8	0.408	0.876	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.52	95.75	0.75	5.848	3.085	0.83	0.5	2.11	16	53.0	1.46	77.4	0.51	0.123	0.126	0.90	2.26	16.8	0.500	0.927	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.54	72.2	0.65	5.852	3.087	0.98	0.5	2.26	21	39.9	1.81	72.2	0.51	0.115	0.126	0.91	2.12	16.7	0.500	0.939	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.56	52.23	0.8	5.856	3.089	1.73	1.0	2.72	41	16.9	4.10	69.4	0.51	na	0.126	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.58	37.38	0.91	5.860	3.091	2.89	1.0	2.98	57	12.1	6.50	78.6	0.51	na	0.126	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.6	30.21	0.96	5.865	3.093	3.94	1.0	3.15	69	9.8	8.54	83.4	0.51	na	0.126	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.62	25.6	0.95	5.869	3.095	4.81	1.0	3.27	79	8.3	10.30	85.2	0.51	na	0.126	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.64	20.99	0.89	5.873	3.097	5.89	1.0	3.42	91	6.8	12.63	85.6	0.51	na	0.126	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.66	17.41	0.88	5.877	3.099	7.63	1.0	3.58	100	5.6	15.58	87.5	0.51	na	0.126	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.68	16.9	0.61	5.881	3.101	5.54	1.0	3.52	100	5.4	14.38	78.4	0.51	na	0.126	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.7	16.9	0.42	5.885	3.103	3.81	1.0	3.43	92	5.4	12.81	69.8	0.51	na	0.126	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.72	16.9	0.32	5.889	3.105	2.91	1.0	3.37	87	5.4	11.80	64.2	0.51	na	0.126	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.74	16.38	0.22	5.893	3.107	2.10	1.0	3.32	83	5.3	11.01	58.0	0.51	na	0.126	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.76	15.87	0.19	5.897	3.109	1.91	1.0	3.32	83	5.1	11.02	56.2	0.51	na	0.126	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.78	15.87	0.17	5.901	3.111	1.71	1.0	3.30	81	5.1	10.69	54.5	0.51	na	0.126	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.8	15.36	0.16	5.906	3.113	1.69	1.0	3.32	83	4.9	10.99	54.2	0.51	na	0.126	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.82	15.36	0.16	5.910	3.116	1.69	1.0	3.32	83	4.9	11.00	54.2	0.51	na	0.126	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.84	15.36	0.16	5.914	3.118	1.69	1.0	3.32	83	4.9	11.01	54.2	0.51	na	0.126	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.86	15.87	0.18	5.918	3.120	1.81	1.0	3.31	82	5.1	10.89	55.4	0.51	na	0.125	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.88	17.92	0.28	5.922	3.122	2.33	1.0	3.29	81	5.7	10.58	60.7	0.51	na	0.125	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.9	25.09	0.47	5.926	3.124	2.45	1.0	3.13	68	8.0	8.25	66.3	0.51	na	0.125	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.92	38.91	0.5	5.930	3.126	1.52	1.0	2.82	47	12.4	4.93	61.3	0.51	na	0.125	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.94	54.27	0.47	5.934	3.128	0.97	0.5	2.38	25	29.8	2.20	65.7	0.51	0.106	0.125	0.91	1.98	16.0	0.500	0.943	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.96	54.27	0.56	5.938	3.130	1.16	1.0	2.62	36	17.3	3.42	59.3	0.51	na	0.125	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
28.98	42.5	0.67	5.942	3.132	1.83	1.0	2.82	47	13.6	4.97	67.4	0.51	na	0.125	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29	31.75	0.78	5.947	3.134	3.02	1.0	3.07	63	10.1	7.51	76.1	0.51	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.02	26.11	0.89	5.951	3.136	4.41	1.0	3.25	77	8.3	9.93	82.7	0.51	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.04	25.6	1.03	5.955	3.138	5.24	1.0	3.30	81	8.2	10.72	87.5	0.51	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.06	31.23	1.04	5.959	3.140	4.12	1.0	3.15	69	9.9	8.58	85.3	0.51	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.08	41.99	0.86	5.963	3.142	2.39	1.0	2.89	52	13.4	5.60	74.8	0.51	na	0.125	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.1	53.76	0.64	5.967	3.144	1.34	1.0	2.66	38	17.1	3.66	62.6	0.51	na	0.125	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.12	59.39	0.45	5.971	3.146	0.84	0.5	2.31	23	32.5	1.96	63.8	0.51	0.104	0.125	0.91	1.94	15.1	0.500	0.943	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.14	54.79	0.49	5.975	3.148	1.00	0.5	2.38	26	30.0	2.22	66.6	0.51	0.107	0.125	0.91	2.00	16.2	0.500	0.943	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.16	44.55	0.62	5.979	3.150	1.61	1.0	2.78	45	14.1	4.57	64.6	0.51	na	0.125	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.18	35.84	0.65	5.983	3.153	2.18	1.0	2.94	55	11.4	6.08	69.1	0.51	na	0.125	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.2	30.21	0.7	5.988	3.155	2.89	1.0	3.08	64	9.6	7.69	73.6	0.51	na	0.125	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.22	26.63	0.61	5.992	3.157	2.96	1.0	3.15	69	8.4	8.50	71.7	0.51	na	0.125	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.24	26.11	0.47	5.996	3.159	2.34	1.0	3.10	66	8.3	7.94	65.6	0.51	na	0.125	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.26	23.55	0.35	6.000	3.161	1.99	1.0	3.12	67	7.5	8.16	60.8	0.51	na	0.125	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.28	22.02	0.32	6.004	3.163	2.00	1.0	3.16	70	7.0	8.62	60.0	0.51	na	0.125	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.3	21.5	0.25	6.008	3.165	1.61	1.0	3.13	67	6.8	8.22	55.8	0.51	na	0.125	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.32	22.02	0.26	6.012	3.167	1.62	1.0	3.11	67	7.0	8.08	56.2	0.51	na	0.125	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.34	22.53	0.25	6.016	3.169	1.51	1.0	3.09	65	7.1	7.76	55.1	0.51	na	0.125	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.36	24.58	0.25	6.020	3.171	1.35	1.0	3.02	60	7.8	6.95	53.9	0.51	na	0.125	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.38	26.63	0.28	6.024	3.173	1.36	1.0	2.98	57	8.4	6.52	54.7	0.51	na	0.125	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.4	30.21	0.4	6.029	3.175	1.65	1.0	2.96	56	9.5	6.30	59.9	0.51	na	0.125	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.42	37.89	0.68	6.033	3.177	2.13	1.0	2.91	53	11.9	5.82	69.4	0.51	na	0.125	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.44	47.11	0.94	6.037	3.179	2.29	1.0	2.84	48	14.8	5.10	75.6	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.46	65.03	1.27	6.041	3.181	2.15	1.0	2.69	40	20.4	3.94	80.5	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.48	60.42	1.37	6.045	3.183	2.52	1.0	2.76	44	19.0	4.46	84.6	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.5	54.27	1.34	6.049	3.185	2.78	1.0	2.83	48	17.0	5.03	85.7	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.52	52.74	1.43	6.053	3.187	3.06	1.0	2.87	50	16.5	5.36	88.7	0.50	na	0.125	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.54	61.44	1.68	6.057	3.189	3.03	1.0	2.81	46	19.3	4.81	92.6	0.50	na	0.125	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.56	73.22	1.88	6.061	3.192	2.80	1.0	2.72	41	22.9	4.11	94.3	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.58	86.53	1.81	6.065	3.194	2.25	0.5	2.41	27	47.0	2.35	110.4	0.50	0.205	0.124	0.87	3.67	27.3	0.244	0.701	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.6	81.92	1.6	6.070	3.196	2.11	1.0	2.60	35	25.6	3.32	85.2	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.62	61.95	1.41	6.074	3.198	2.52	1.0	2.76	43	19.4	4.40	85.2	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.64	46.59	1.36	6.078	3.200	3.36	1.0	2.94	55	14.6	6.09	88.7	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.66	32.77	1.23	6.082	3.202	4.61	1.0	3.17	71	10.2	8.80	90.1	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.68	28.16	1	6.086	3.204	4.53	1.0	3.23	76	8.8	9.67	85.0	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.7	30.21	0.81	6.090	3.206	3.36	1.0	3.13	67	9.4	8.23	77.6	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.72	33.79	0.64	6.094	3.208	2.31	1.0	2.99	58	10.5	6.59	69.4	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

29.74	35.84	0.45	6.098	3.210	1.51	1.0	2.87	50	11.2	5.37	59.9	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.76	37.38	0.29	6.102	3.212	0.93	1.0	2.75	43	11.6	4.36	50.8	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.78	35.84	0.27	6.106	3.214	0.91	1.0	2.77	44	11.2	4.49	50.1	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.8	33.28	0.27	6.111	3.216	0.99	1.0	2.82	47	10.3	4.93	51.0	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.82	30.21	0.29	6.115	3.218	1.20	1.0	2.90	52	9.4	5.71	53.6	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.84	28.16	0.29	6.119	3.220	1.32	1.0	2.96	56	8.7	6.24	54.5	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.86	26.63	0.28	6.123	3.222	1.37	1.0	2.99	58	8.3	6.62	54.7	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.88	25.09	0.29	6.127	3.224	1.53	1.0	3.04	61	7.8	7.22	56.2	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.9	24.07	0.28	6.131	3.226	1.56	1.0	3.07	63	7.5	7.52	56.1	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.92	23.55	0.27	6.135	3.228	1.55	1.0	3.08	64	7.3	7.65	55.8	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.94	23.04	0.26	6.139	3.231	1.54	1.0	3.09	65	7.1	7.78	55.5	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.96	22.53	0.25	6.143	3.233	1.53	1.0	3.10	66	7.0	7.91	55.1	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
29.98	20.99	0.24	6.147	3.235	1.62	1.0	3.15	69	6.5	8.55	55.5	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30	20.48	0.26	6.152	3.237	1.81	1.0	3.19	72	6.3	9.05	57.2	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.02	19.97	0.29	6.156	3.239	2.10	1.0	3.23	75	6.2	9.66	59.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.04	19.46	0.29	6.160	3.241	2.18	1.0	3.25	77	6.0	9.99	60.0	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.06	18.94	0.29	6.164	3.243	2.27	1.0	3.28	79	5.8	10.35	60.4	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.08	18.94	0.28	6.168	3.245	2.19	1.0	3.27	79	5.8	10.25	59.8	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.1	18.43	0.27	6.172	3.247	2.20	1.0	3.29	80	5.7	10.50	59.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.12	17.92	0.26	6.176	3.249	2.21	1.0	3.31	82	5.5	10.77	59.4	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.14	18.43	0.24	6.180	3.251	1.96	1.0	3.27	78	5.7	10.15	57.6	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.16	18.94	0.23	6.184	3.253	1.80	1.0	3.23	76	5.8	9.69	56.4	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.18	19.97	0.22	6.188	3.255	1.60	1.0	3.18	71	6.1	8.94	54.8	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.2	20.99	0.23	6.193	3.257	1.55	1.0	3.15	69	6.4	8.50	54.8	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.22	21.5	0.25	6.197	3.259	1.63	1.0	3.14	69	6.6	8.46	55.8	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.24	22.02	0.28	6.201	3.261	1.77	1.0	3.15	69	6.8	8.51	57.4	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.26	22.02	0.32	6.205	3.263	2.02	1.0	3.18	71	6.7	8.88	59.9	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.28	22.02	0.39	6.209	3.265	2.47	1.0	3.22	74	6.7	9.47	63.8	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.3	21.5	0.43	6.213	3.268	2.81	1.0	3.26	78	6.6	10.07	66.3	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.32	20.99	0.48	6.217	3.270	3.25	1.0	3.31	81	6.4	10.76	69.1	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.34	20.48	0.49	6.221	3.272	3.44	1.0	3.33	84	6.3	11.17	69.9	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.36	19.97	0.5	6.225	3.274	3.64	1.0	3.36	86	6.1	11.60	70.7	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.38	18.94	0.52	6.229	3.276	4.09	1.0	3.41	91	5.8	12.53	72.4	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.4	18.43	0.48	6.234	3.278	3.94	1.0	3.42	92	5.6	12.64	71.1	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.42	17.41	0.44	6.238	3.280	3.94	1.0	3.45	95	5.3	13.21	70.1	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.44	16.9	0.41	6.242	3.282	3.85	1.0	3.47	96	5.1	13.43	69.1	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.46	16.9	0.39	6.246	3.284	3.66	1.0	3.45	95	5.1	13.23	68.1	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.48	16.38	0.38	6.250	3.286	3.75	1.0	3.48	97	5.0	13.67	68.1	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.5	15.87	0.36	6.254	3.288	3.74	1.0	3.50	99	4.8	14.02	67.7	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.52	15.87	0.34	6.258	3.290	3.54	1.0	3.49	98	4.8	13.80	66.5	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.54	15.36	0.33	6.262	3.292	3.63	1.0	3.51	100	4.7	14.28	66.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.56	15.36	0.31	6.266	3.294	3.41	1.0	3.50	99	4.7	14.04	65.4	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.58	14.85	0.3	6.271	3.296	3.50	1.0	3.53	100	4.5	14.55	65.5	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.6	14.85	0.28	6.275	3.298	3.27	1.0	3.51	100	4.5	14.28	64.3	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.62	14.85	0.26	6.279	3.300	3.03	1.0	3.50	99	4.5	14.00	63.0	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.64	14.85	0.24	6.283	3.302	2.80	1.0	3.48	97	4.5	13.70	61.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.66	14.85	0.23	6.287	3.304	2.69	1.0	3.47	96	4.5	13.56	60.9	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.68	14.85	0.22	6.291	3.307	2.57	1.0	3.46	96	4.5	13.40	60.2	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.7	14.85	0.21	6.295	3.309	2.45	1.0	3.46	95	4.5	13.24	59.4	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.72	15.36	0.21	6.299	3.311	2.32	1.0	3.42	92	4.6	12.66	58.7	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.74	15.87	0.22	6.303	3.313	2.30	1.0	3.40	90	4.8	12.28	58.9	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.76	15.87	0.23	6.307	3.315	2.41	1.0	3.41	91	4.8	12.45	59.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.78	16.38	0.23	6.312	3.317	2.28	1.0	3.38	88	4.9	11.94	59.0	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.8	15.87	0.22	6.316	3.319	2.30	1.0	3.40	90	4.8	12.31	58.9	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.82	15.87	0.23	6.320	3.321	2.41	1.0	3.41	91	4.8	12.47	59.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.84	15.36	0.24	6.324	3.323	2.66	1.0	3.45	94	4.6	13.19	61.0	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.86	15.36	0.24	6.328	3.325	2.66	1.0	3.45	94	4.6	13.20	61.0	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.88	14.85	0.24	6.332	3.327	2.82	1.0	3.49	98	4.5	13.82	61.7	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.9	14.85	0.24	6.336	3.329	2.82	1.0	3.49	98	4.5	13.83	61.7	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.92	14.85	0.23	6.340	3.331	2.70	1.0	3.48	97	4.5	13.68	61.0	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.94	14.85	0.22	6.344	3.333	2.59	1.0	3.47	96	4.5	13.52	60.2	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.96	14.85	0.2	6.348	3.335	2.35	1.0	3.45	94	4.5	13.19	58.7	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
30.98	14.85	0.19	6.353	3.337	2.24	1.0	3.44	94	4.4	13.02	57.9	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31	15.36	0.17	6.357	3.339	1.89	1.0	3.39	89	4.6	12.08	55.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.02	15.36	0.17	6.361	3.341	1.89	1.0	3.39	89	4.6	12.09	55.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

31.04	15.87	0.17	6.365	3.344	1.79	1.0	3.36	86	4.7	11.57	54.9	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.06	15.87	0.17	6.369	3.346	1.79	1.0	3.36	86	4.7	11.58	54.9	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.08	16.38	0.17	6.373	3.348	1.70	1.0	3.33	83	4.9	11.10	54.3	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.1	16.38	0.18	6.377	3.350	1.80	1.0	3.34	84	4.9	11.28	55.2	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.12	16.9	0.18	6.381	3.352	1.71	1.0	3.31	82	5.0	10.83	54.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.14	16.9	0.18	6.385	3.354	1.71	1.0	3.31	82	5.0	10.83	54.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.16	16.38	0.18	6.389	3.356	1.80	1.0	3.34	84	4.9	11.30	55.2	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.18	16.38	0.19	6.394	3.358	1.90	1.0	3.35	85	4.9	11.48	56.0	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.2	16.38	0.17	6.398	3.360	1.70	1.0	3.33	84	4.9	11.15	54.3	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.22	17.41	0.16	6.402	3.362	1.45	1.0	3.26	78	5.2	10.11	52.4	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.24	20.99	0.19	6.406	3.364	1.30	1.0	3.13	68	6.2	8.30	51.8	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.26	25.09	0.26	6.410	3.366	1.39	1.0	3.05	62	7.5	7.26	54.1	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.28	27.14	0.26	6.414	3.368	1.25	1.0	2.99	58	8.1	6.58	53.0	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.3	25.09	0.24	6.418	3.370	1.29	1.0	3.03	61	7.4	7.09	52.8	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.32	21.5	0.25	6.422	3.372	1.66	1.0	3.17	70	6.4	8.75	55.8	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.34	19.46	0.27	6.426	3.374	2.07	1.0	3.27	78	5.8	10.18	58.7	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.36	19.46	0.44	6.430	3.376	3.38	1.0	3.37	87	5.8	11.83	68.2	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.38	19.46	0.46	6.435	3.378	3.53	1.0	3.38	88	5.8	12.00	69.1	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.4	19.46	0.44	6.439	3.380	3.38	1.0	3.37	87	5.8	11.84	68.2	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.42	17.92	0.31	6.443	3.383	2.70	1.0	3.37	87	5.3	11.82	62.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.44	20.48	0.25	6.447	3.385	1.78	1.0	3.21	74	6.1	9.35	56.5	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.46	20.48	0.24	6.451	3.387	1.71	1.0	3.20	73	6.0	9.24	55.9	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.48	20.48	0.26	6.455	3.389	1.85	1.0	3.22	74	6.0	9.47	57.2	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.5	22.02	0.3	6.459	3.391	1.93	1.0	3.19	72	6.5	9.03	58.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.52	32.77	0.53	6.463	3.393	2.01	1.0	3.00	58	9.7	6.68	64.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.54	62.98	0.66	6.467	3.395	1.17	0.5	2.38	25	33.2	2.20	73.0	0.50	0.116	0.124	0.90	2.16	17.8	0.500	0.938	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.56	87.04	0.81	6.471	3.397	1.01	0.5	2.21	19	45.9	1.68	77.2	0.50	0.123	0.124	0.90	2.27	17.5	0.500	0.927	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.58	79.36	1.07	6.476	3.399	1.47	0.5	2.34	24	41.8	2.07	86.7	0.50	0.141	0.124	0.89	2.57	20.8	0.423	0.885	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.6	64	1.3	6.480	3.401	2.26	1.0	2.74	43	18.8	4.27	80.4	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.62	50.69	1.29	6.484	3.403	2.92	1.0	2.90	52	14.9	5.64	84.1	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.64	41.99	1.41	6.488	3.405	3.97	1.0	3.05	62	12.3	7.32	90.3	0.50	na	0.124	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.66	36.35	1.33	6.492	3.407	4.45	1.0	3.14	69	10.7	8.45	90.1	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.68	38.91	1.41	6.496	3.409	4.35	1.0	3.11	66	11.4	8.01	91.4	0.50	na	0.124	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.7	39.43	1.27	6.500	3.411	3.86	1.0	3.07	63	11.6	7.56	87.3	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.72	33.28	1.31	6.504	3.413	4.89	1.0	3.21	73	9.7	9.30	90.7	0.50	na	0.124	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.74	27.14	1.19	6.508	3.415	5.77	1.0	3.34	84	7.9	11.30	89.8	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.76	25.09	0.95	6.512	3.417	5.11	1.0	3.35	85	7.3	11.41	83.8	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.78	22.53	1.04	6.517	3.419	6.49	1.0	3.46	95	6.6	13.32	87.7	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.8	21.5	1.05	6.521	3.422	7.01	1.0	3.50	100	6.3	14.09	88.6	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.82	21.5	0.89	6.525	3.424	5.94	1.0	3.46	95	6.3	13.35	83.8	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.84	19.97	0.74	6.529	3.426	5.51	1.0	3.48	97	5.8	13.70	79.9	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.86	18.43	0.59	6.533	3.428	4.96	1.0	3.50	100	5.4	14.05	75.5	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.88	18.43	0.49	6.537	3.430	4.12	1.0	3.46	95	5.4	13.27	71.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.9	18.94	0.44	6.541	3.432	3.55	1.0	3.41	90	5.5	12.42	68.6	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.92	20.48	0.54	6.545	3.434	3.88	1.0	3.39	88	6.0	12.04	71.8	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.94	27.14	0.68	6.549	3.436	3.30	1.0	3.21	73	7.9	9.29	73.4	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.96	46.08	0.9	6.553	3.438	2.28	1.0	2.88	51	13.4	5.48	73.4	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
31.98	65.03	1.14	6.558	3.440	1.95	1.0	2.70	41	18.9	3.98	75.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32	75.78	1.19	6.562	3.442	1.72	1.0	2.61	36	22.0	3.37	74.2	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.02	77.32	1.17	6.566	3.444	1.65	0.5	2.38	26	40.5	2.24	90.5	0.50	0.149	0.124	0.88	2.71	22.1	0.387	0.862	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.04	81.92	1.25	6.570	3.446	1.66	0.5	2.36	25	42.9	2.16	92.4	0.50	0.153	0.124	0.88	2.79	22.4	0.370	0.849	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.06	76.29	1.23	6.574	3.448	1.76	1.0	2.61	36	22.1	3.40	75.2	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.08	64	1.18	6.578	3.450	2.05	1.0	2.72	42	18.5	4.13	76.7	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.1	56.83	1.25	6.582	3.452	2.49	1.0	2.82	47	16.5	4.90	80.7	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.12	54.27	1.26	6.586	3.454	2.64	1.0	2.85	49	15.7	5.21	81.8	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.14	59.91	1.22	6.590	3.456	2.29	1.0	2.78	45	17.3	4.56	79.0	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.16	69.12	1.36	6.594	3.459	2.18	1.0	2.71	41	20.0	4.02	80.3	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.18	76.29	1.4	6.599	3.461	2.01	1.0	2.65	38	22.0	3.61	79.7	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.2	86.02	1.34	6.603	3.463	1.69	0.5	2.35	24	44.9	2.11	94.7	0.50	0.159	0.124	0.88	2.88	22.8	0.351	0.833	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.22	97.28	1.03	6.607	3.465	1.14	0.5	2.20	19	50.8	1.66	84.3	0.50	0.136	0.124	0.89	2.48	19.0	0.447	0.898	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.24	98.82	0.84	6.611	3.467	0.91	0.5	2.14	17	51.6	1.53	78.7	0.50	0.125	0.124	0.89	2.31	17.3	0.500	0.922	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.26	86.53	0.79	6.615	3.469	0.99	0.5	2.21	19	45.1	1.69	76.2	0.50	0.121	0.124	0.90	2.24	17.3	0.500	0.930	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.28	66.56	0.93	6.619	3.471	1.55	1.0	2.64	37	19.2	3.57	68.4	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.3	46.08	1.12	6.623	3.473	2.84	1.0	2.94	54	13.3	6.05	80.3	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.32	37.38	1.14	6.627	3.475	3.71	1.0	3.09	65	10.8	7.81	84.0	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

32.34	32.26	1.04	6.631	3.477	4.06	1.0	3.18	71	9.3	8.95	83.0	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.36	29.19	0.98	6.635	3.479	4.35	1.0	3.24	76	8.4	9.83	82.5	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.38	24.58	1.02	6.640	3.481	5.69	1.0	3.39	89	7.1	12.16	85.8	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.4	23.55	0.83	6.644	3.483	4.91	1.0	3.38	88	6.8	11.90	80.5	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.42	16.9	0.62	6.648	3.485	6.05	1.0	3.61	100	4.8	16.10	78.1	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.44	26.63	0.51	6.652	3.487	2.55	1.0	3.16	70	7.6	8.71	66.5	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.46	28.16	0.46	6.656	3.489	2.14	1.0	3.10	65	8.1	7.85	63.4	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.48	28.67	0.33	6.660	3.491	1.50	1.0	3.01	59	8.2	6.86	56.4	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.5	30.21	0.29	6.664	3.493	1.23	1.0	2.95	55	8.6	6.16	53.3	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.52	31.75	0.36	6.668	3.495	1.44	1.0	2.95	55	9.1	6.23	56.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.54	35.33	0.53	6.672	3.498	1.85	1.0	2.96	56	10.1	6.26	63.2	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.56	39.94	0.71	6.677	3.500	2.13	1.0	2.93	54	11.4	6.02	68.7	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.58	43.01	0.87	6.681	3.502	2.39	1.0	2.93	54	12.3	5.96	73.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.6	46.59	0.81	6.685	3.504	2.03	1.0	2.86	49	13.3	5.26	69.9	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.62	46.08	0.71	6.689	3.506	1.80	1.0	2.83	48	13.1	5.06	66.5	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.64	40.96	0.66	6.693	3.508	1.93	1.0	2.90	52	11.7	5.68	66.4	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.66	32.26	0.55	6.697	3.510	2.15	1.0	3.03	61	9.2	7.11	65.4	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.68	26.63	0.44	6.701	3.512	2.21	1.0	3.13	68	7.6	8.33	63.2	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.7	23.04	0.39	6.705	3.514	2.39	1.0	3.23	75	6.6	9.59	62.9	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.72	20.48	0.37	6.709	3.516	2.69	1.0	3.32	82	5.8	10.93	63.7	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.74	19.46	0.33	6.713	3.518	2.59	1.0	3.34	84	5.5	11.27	62.3	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.76	18.94	0.29	6.718	3.520	2.37	1.0	3.34	84	5.4	11.24	60.5	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.78	18.94	0.26	6.722	3.522	2.13	1.0	3.31	82	5.4	10.89	58.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.8	18.43	0.23	6.726	3.524	1.97	1.0	3.31	82	5.2	10.90	57.0	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.82	17.92	0.2	6.730	3.526	1.79	1.0	3.31	82	5.1	10.89	55.3	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.84	17.92	0.21	6.734	3.528	1.88	1.0	3.32	83	5.1	11.04	56.1	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.86	17.41	0.19	6.738	3.530	1.78	1.0	3.33	84	4.9	11.17	55.1	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.88	17.41	0.2	6.742	3.532	1.87	1.0	3.34	85	4.9	11.34	55.9	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.9	17.92	0.22	6.746	3.535	1.97	1.0	3.33	84	5.1	11.21	56.8	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.92	17.92	0.23	6.750	3.537	2.06	1.0	3.34	85	5.1	11.36	57.5	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.94	17.92	0.23	6.754	3.539	2.06	1.0	3.34	85	5.1	11.36	57.5	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.96	17.92	0.23	6.759	3.541	2.06	1.0	3.34	85	5.1	11.37	57.5	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
32.98	17.41	0.24	6.763	3.543	2.25	1.0	3.38	88	4.9	11.96	58.8	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33	17.92	0.26	6.767	3.545	2.33	1.0	3.37	87	5.1	11.78	59.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.02	18.43	0.28	6.771	3.547	2.40	1.0	3.36	86	5.2	11.61	60.3	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.04	18.94	0.29	6.775	3.549	2.38	1.0	3.34	85	5.3	11.33	60.5	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.06	19.97	0.29	6.779	3.551	2.20	1.0	3.29	81	5.6	10.59	59.5	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.08	20.99	0.31	6.783	3.553	2.18	1.0	3.26	78	5.9	10.14	59.9	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.1	22.53	0.36	6.787	3.555	2.29	1.0	3.24	76	6.3	9.72	61.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.12	24.07	0.39	6.791	3.557	2.26	1.0	3.20	73	6.8	9.18	62.1	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.14	26.11	0.46	6.795	3.559	2.38	1.0	3.17	70	7.3	8.77	64.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.16	28.67	0.55	6.800	3.561	2.51	1.0	3.13	68	8.1	8.32	67.0	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.18	29.19	0.54	6.804	3.563	2.41	1.0	3.12	67	8.2	8.09	66.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.2	29.19	0.53	6.808	3.565	2.37	1.0	3.11	66	8.2	8.04	65.9	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.22	27.65	0.57	6.812	3.567	2.74	1.0	3.17	71	7.8	8.82	68.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.24	25.09	0.59	6.816	3.569	3.23	1.0	3.26	78	7.0	10.04	70.6	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.26	24.58	0.57	6.820	3.571	3.21	1.0	3.27	78	6.9	10.18	70.1	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.28	25.09	0.62	6.824	3.574	3.39	1.0	3.27	79	7.0	10.22	71.8	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.3	26.63	0.58	6.828	3.576	2.93	1.0	3.21	73	7.4	9.30	69.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.32	27.14	0.56	6.832	3.578	2.76	1.0	3.18	72	7.6	8.99	68.2	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.34	25.6	0.54	6.836	3.580	2.88	1.0	3.22	75	7.2	9.53	68.2	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.36	21.5	0.52	6.841	3.582	3.55	1.0	3.36	86	6.0	11.65	70.0	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.38	20.48	0.54	6.845	3.584	3.96	1.0	3.41	91	5.7	12.52	71.6	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.4	16.38	0.57	6.849	3.586	5.98	1.0	3.64	100	4.6	16.78	76.7	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.42	21.5	0.53	6.853	3.588	3.62	1.0	3.37	87	6.0	11.74	70.4	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.44	22.53	0.45	6.857	3.590	2.87	1.0	3.29	80	6.3	10.53	66.1	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.46	24.07	0.4	6.861	3.592	2.32	1.0	3.21	74	6.7	9.34	62.6	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.48	24.58	0.42	6.865	3.594	2.37	1.0	3.20	73	6.8	9.25	63.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.5	25.09	0.53	6.869	3.596	2.91	1.0	3.24	76	7.0	9.75	68.0	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.52	25.6	0.67	6.873	3.598	3.58	1.0	3.28	79	7.1	10.31	73.3	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.54	26.11	0.74	6.877	3.600	3.85	1.0	3.28	80	7.3	10.42	75.6	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.56	26.63	0.82	6.882	3.602	4.15	1.0	3.29	80	7.4	10.56	78.1	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.58	26.63	0.93	6.886	3.604	4.71	1.0	3.32	83	7.4	11.04	81.6	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.6	28.16	1.01	6.890	3.606	4.75	1.0	3.30	81	7.8	10.66	83.3	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.62	30.72	1.03	6.894	3.608	4.32	1.0	3.24	76	8.5	9.72	82.7	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

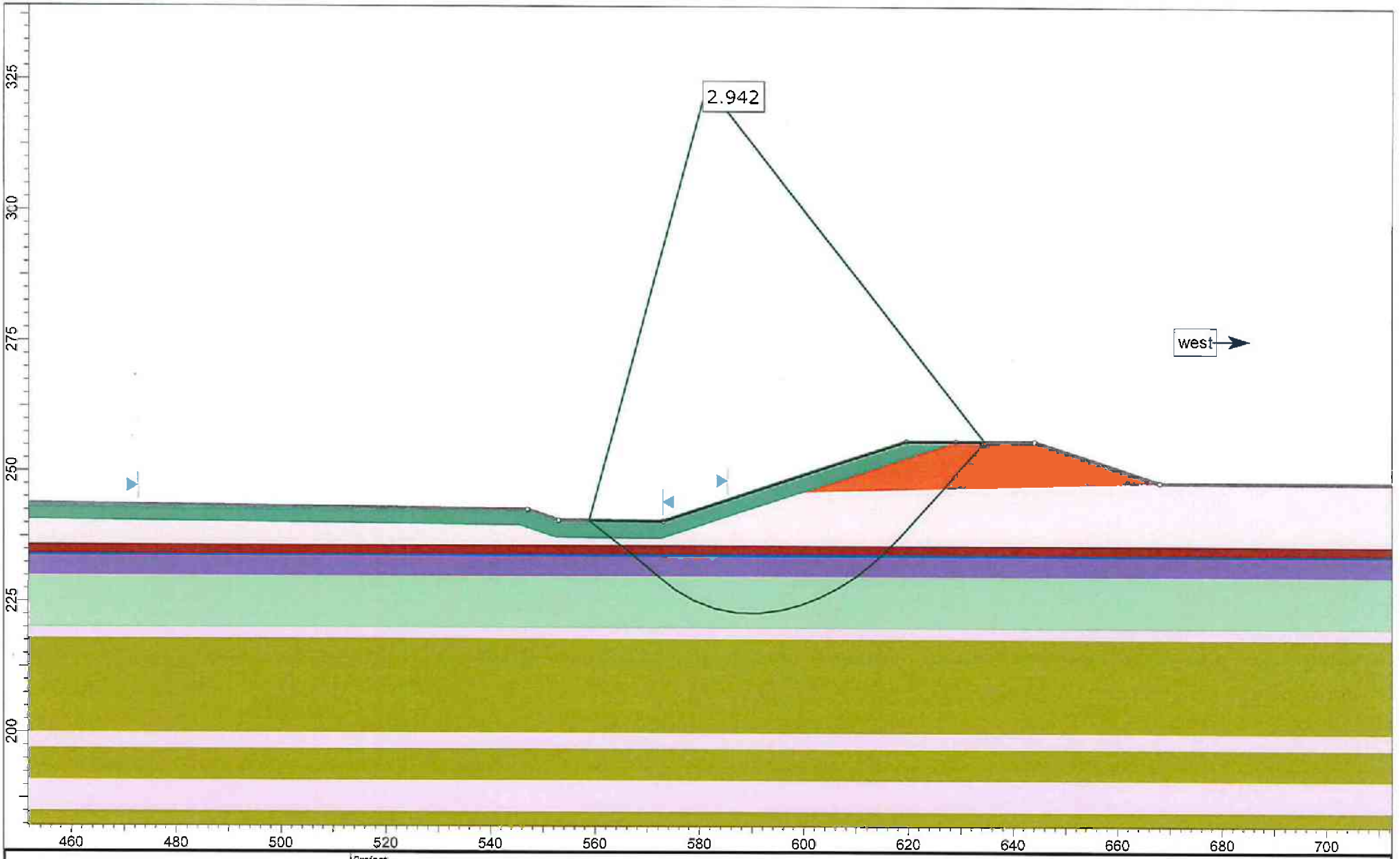
33.64	32.26	0.96	6.898	3.611	3.79	1.0	3.18	71	8.9	8.95	79.9	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.66	33.28	0.92	6.902	3.613	3.49	1.0	3.15	69	9.2	8.49	78.2	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.68	34.82	0.86	6.906	3.615	3.08	1.0	3.10	65	9.6	7.85	75.6	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.7	38.4	0.94	6.910	3.617	2.99	1.0	3.05	62	10.6	7.24	76.8	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.72	41.99	1.26	6.914	3.619	3.59	1.0	3.05	62	11.6	7.32	85.0	0.50	na	0.124	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.74	40.96	1.4	6.918	3.621	4.11	1.0	3.10	65	11.3	7.87	89.1	0.50	na	0.124	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.76	35.33	1.25	6.923	3.623	4.40	1.0	3.18	71	9.8	8.93	87.1	0.50	na	0.124	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.78	28.16	1.15	6.927	3.625	5.42	1.0	3.33	84	7.8	11.22	87.2	0.50	na	0.124	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.8	26.11	0.98	6.931	3.627	5.11	1.0	3.36	86	7.2	11.56	83.2	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.82	30.72	0.87	6.935	3.629	3.66	1.0	3.20	73	8.5	9.17	77.7	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.84	33.28	0.76	6.939	3.631	2.89	1.0	3.10	66	9.2	7.94	72.8	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.86	31.23	0.62	6.943	3.633	2.55	1.0	3.11	66	8.6	7.96	68.4	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.88	29.19	0.49	6.947	3.635	2.20	1.0	3.11	66	8.0	7.96	63.9	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.9	28.16	0.43	6.951	3.637	2.03	1.0	3.11	66	7.7	7.97	61.7	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.92	27.65	0.43	6.955	3.639	2.08	1.0	3.12	67	7.6	8.15	61.9	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.94	29.19	0.45	6.959	3.641	2.02	1.0	3.09	65	8.0	7.75	62.1	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.96	33.79	0.48	6.964	3.643	1.79	1.0	2.99	58	9.3	6.61	61.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
33.98	37.38	0.46	6.968	3.645	1.51	1.0	2.91	52	10.3	5.75	59.0	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34	35.33	0.48	6.972	3.647	1.69	1.0	2.96	56	9.7	6.27	60.7	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.02	32.26	0.52	6.976	3.650	2.06	1.0	3.04	61	8.8	7.22	63.8	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.04	30.21	0.53	6.980	3.652	2.28	1.0	3.10	65	8.3	7.88	65.2	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.06	28.16	0.57	6.984	3.654	2.69	1.0	3.17	71	7.7	8.81	67.9	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.08	27.14	0.56	6.988	3.656	2.78	1.0	3.20	73	7.4	9.16	68.0	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.1	24.07	0.49	6.992	3.658	2.87	1.0	3.26	78	6.6	10.15	66.8	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.12	23.04	0.41	6.996	3.660	2.56	1.0	3.26	78	6.3	10.12	63.7	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.14	20.99	0.32	7.000	3.662	2.29	1.0	3.29	80	5.7	10.55	60.5	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.16	18.94	0.26	7.005	3.664	2.18	1.0	3.34	85	5.2	11.35	58.7	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.18	17.92	0.26	7.009	3.666	2.38	1.0	3.40	89	4.9	12.21	59.7	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.2	17.92	0.22	7.013	3.668	2.02	1.0	3.36	86	4.9	11.67	57.0	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.22	19.97	0.23	7.017	3.670	1.78	1.0	3.27	79	5.4	10.24	55.7	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.24	22.02	0.22	7.021	3.672	1.47	1.0	3.18	71	6.0	8.90	53.4	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.26	32.26	0.48	7.025	3.674	1.90	1.0	3.03	61	8.8	7.06	62.0	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.28	56.83	0.69	7.029	3.676	1.39	1.0	2.71	41	15.5	4.02	62.1	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.3	112.13	0.85	7.033	3.678	0.81	0.5	2.08	15	56.8	1.41	79.8	0.50	0.127	0.124	0.89	2.32	17.1	0.497	0.918	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.32	149.51	1.01	7.037	3.680	0.71	0.5	1.94	11	75.7	1.22	92.1	0.50	0.153	0.124	0.88	2.74	18.7	0.373	0.852	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.34	151.56	1.18	7.042	3.682	0.82	0.5	1.96	12	76.7	1.25	95.8	0.50	0.162	0.124	0.87	2.90	19.7	0.342	0.825	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.36	128.01	0.76	7.046	3.684	0.63	0.5	1.97	12	64.8	1.25	81.1	0.50	0.130	0.124	0.89	2.36	16.7	0.482	0.913	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.38	93.7	0.94	7.050	3.686	1.08	0.5	2.22	20	47.4	1.70	80.6	0.50	0.129	0.124	0.89	2.34	18.3	0.487	0.915	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.4	67.08	0.93	7.054	3.689	1.55	1.0	2.66	38	18.2	3.71	67.5	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.42	54.27	0.99	7.058	3.691	2.10	1.0	2.82	47	14.7	4.95	72.7	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.44	40.45	0.99	7.062	3.693	2.97	1.0	3.03	61	11.0	7.06	77.3	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.46	28.16	0.92	7.066	3.695	4.36	1.0	3.29	80	7.6	10.52	80.2	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.48	25.6	0.82	7.070	3.697	4.43	1.0	3.34	84	6.9	11.30	78.3	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.5	25.6	0.73	7.074	3.699	3.94	1.0	3.31	82	6.9	10.87	75.2	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.52	25.6	0.5	7.078	3.701	2.70	1.0	3.23	75	6.9	9.57	66.2	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.54	26.11	0.22	7.083	3.703	1.16	1.0	3.04	61	7.1	7.21	50.8	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.56	25.6	0.16	7.087	3.705	0.86	1.0	3.00	59	6.9	6.75	46.6	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.58	25.6	0.14	7.091	3.707	0.76	1.0	2.98	57	6.9	6.51	45.0	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.6	25.6	0.14	7.095	3.709	0.76	1.0	2.98	57	6.9	6.52	45.0	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.62	24.58	0.13	7.099	3.711	0.74	1.0	3.00	59	6.6	6.74	44.7	0.50	na	0.124	0.92	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.64	23.04	0.23	7.103	3.713	1.44	1.0	3.15	70	6.2	8.60	53.4	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.66	23.55	0.32	7.107	3.715	1.95	1.0	3.20	73	6.3	9.24	58.6	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.68	27.14	0.28	7.111	3.717	1.40	1.0	3.06	63	7.3	7.41	54.1	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.7	34.82	0.41	7.115	3.719	1.48	1.0	2.95	55	9.4	6.14	57.5	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.72	39.43	0.47	7.119	3.721	1.45	1.0	2.88	51	10.6	5.52	58.5	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.74	37.38	0.45	7.124	3.723	1.49	1.0	2.91	53	10.0	5.81	58.4	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.76	29.7	0.4	7.128	3.726	1.77	1.0	3.06	63	8.0	7.44	59.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.78	25.09	0.41	7.132	3.728	2.28	1.0	3.20	73	6.7	9.26	62.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.8	23.04	0.43	7.136	3.730	2.70	1.0	3.29	80	6.2	10.46	64.6	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.82	23.04	0.5	7.140	3.732	3.14	1.0	3.32	83	6.2	10.98	67.8	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.84	22.53	0.53	7.144	3.734	3.44	1.0	3.35	86	6.0	11.51	69.4	0.50	na	0.124	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.86	22.53	0.38	7.148	3.736	2.47	1.0	3.28	79	6.0	10.37	62.5	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.88	22.02	0.28	7.152	3.738	1.88	1.0	3.24	76	5.9	9.73	57.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.9	22.02	0.27	7.156	3.740	1.82	1.0	3.23	75	5.9	9.63	56.7	0.50	na	0.124	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.92	21.5	0.28	7.160	3.742	1.95	1.0	3.26	78	5.7	10.05	57.7	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

34.94	21.5	0.29	7.165	3.744	2.02	1.0	3.27	78	5.7	10.16	58.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.96	20.99	0.28	7.169	3.746	2.03	1.0	3.28	79	5.6	10.38	58.1	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
34.98	20.99	0.29	7.173	3.748	2.10	1.0	3.29	80	5.6	10.49	58.7	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35	20.48	0.29	7.177	3.750	2.18	1.0	3.31	82	5.5	10.83	59.2	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.02	20.48	0.3	7.181	3.752	2.26	1.0	3.32	83	5.5	10.95	59.8	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.04	20.48	0.31	7.185	3.754	2.33	1.0	3.32	83	5.5	11.06	60.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.06	20.99	0.33	7.189	3.756	2.39	1.0	3.32	82	5.6	10.92	61.0	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.08	20.99	0.33	7.193	3.758	2.39	1.0	3.32	82	5.6	10.93	61.0	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.1	20.99	0.34	7.197	3.760	2.47	1.0	3.32	83	5.6	11.03	61.6	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.12	20.99	0.36	7.201	3.762	2.61	1.0	3.34	84	5.6	11.23	62.6	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.14	20.99	0.35	7.206	3.765	2.54	1.0	3.33	84	5.6	11.14	62.1	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.16	20.48	0.35	7.210	3.767	2.64	1.0	3.35	86	5.4	11.50	62.5	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.18	20.48	0.34	7.214	3.769	2.56	1.0	3.35	85	5.4	11.41	62.0	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.2	20.99	0.34	7.218	3.771	2.47	1.0	3.32	83	5.6	11.06	61.6	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.22	21.5	0.32	7.222	3.773	2.24	1.0	3.29	80	5.7	10.54	60.1	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.24	20.99	0.3	7.226	3.775	2.18	1.0	3.30	81	5.6	10.67	59.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.26	21.5	0.31	7.230	3.777	2.17	1.0	3.29	80	5.7	10.45	59.5	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.28	20.99	0.31	7.234	3.779	2.25	1.0	3.31	82	5.6	10.79	59.9	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.3	20.99	0.32	7.238	3.781	2.33	1.0	3.31	82	5.6	10.89	60.5	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.32	22.02	0.33	7.242	3.783	2.23	1.0	3.28	79	5.8	10.35	60.2	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.34	21.5	0.33	7.247	3.785	2.32	1.0	3.30	81	5.7	10.67	60.6	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.36	20.99	0.34	7.251	3.787	2.47	1.0	3.33	83	5.5	11.11	61.6	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.38	21.5	0.34	7.255	3.789	2.39	1.0	3.31	82	5.7	10.78	61.2	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.4	21.5	0.35	7.259	3.791	2.46	1.0	3.31	82	5.7	10.88	61.7	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.42	21.5	0.35	7.263	3.793	2.46	1.0	3.31	82	5.7	10.89	61.7	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.44	20.99	0.35	7.267	3.795	2.55	1.0	3.34	84	5.5	11.23	62.1	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.46	21.5	0.35	7.271	3.797	2.46	1.0	3.31	82	5.7	10.90	61.7	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.48	21.5	0.35	7.275	3.799	2.46	1.0	3.31	82	5.7	10.90	61.7	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.5	21.5	0.35	7.279	3.802	2.46	1.0	3.31	82	5.7	10.91	61.7	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.52	22.02	0.34	7.283	3.804	2.31	1.0	3.29	80	5.8	10.50	60.8	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.54	22.02	0.35	7.288	3.806	2.38	1.0	3.29	81	5.8	10.59	61.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.56	22.02	0.35	7.292	3.808	2.38	1.0	3.29	81	5.8	10.60	61.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.58	22.02	0.35	7.296	3.810	2.38	1.0	3.30	81	5.8	10.61	61.3	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.6	21.5	0.37	7.300	3.812	2.61	1.0	3.33	83	5.6	11.13	62.8	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.62	21.5	0.36	7.304	3.814	2.54	1.0	3.32	83	5.6	11.04	62.2	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.64	22.02	0.34	7.308	3.816	2.31	1.0	3.29	80	5.8	10.53	60.8	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.66	21.5	0.34	7.312	3.818	2.40	1.0	3.31	82	5.6	10.86	61.2	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.68	21.5	0.33	7.316	3.820	2.33	1.0	3.31	82	5.6	10.77	60.6	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.7	21.5	0.33	7.320	3.822	2.33	1.0	3.31	82	5.6	10.78	60.6	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.72	20.99	0.33	7.324	3.824	2.41	1.0	3.33	83	5.5	11.12	61.0	0.50	na	0.124	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.74	21.5	0.33	7.329	3.826	2.33	1.0	3.31	82	5.6	10.79	60.6	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.76	21.5	0.34	7.333	3.828	2.40	1.0	3.31	82	5.6	10.89	61.2	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.78	21.5	0.35	7.337	3.830	2.47	1.0	3.32	83	5.6	10.99	61.7	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.8	21.5	0.35	7.341	3.832	2.47	1.0	3.32	83	5.6	11.00	61.7	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.82	21.5	0.36	7.345	3.834	2.54	1.0	3.33	83	5.6	11.10	62.2	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.84	21.5	0.36	7.349	3.836	2.54	1.0	3.33	83	5.6	11.10	62.2	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.86	21.5	0.35	7.353	3.838	2.47	1.0	3.32	83	5.6	11.02	61.7	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.88	21.5	0.35	7.357	3.841	2.47	1.0	3.32	83	5.6	11.02	61.7	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.9	20.99	0.34	7.361	3.843	2.49	1.0	3.34	84	5.5	11.27	61.6	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.92	20.99	0.35	7.365	3.845	2.57	1.0	3.34	85	5.5	11.38	62.1	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.94	20.48	0.35	7.370	3.847	2.67	1.0	3.37	87	5.3	11.75	62.6	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.96	20.99	0.35	7.374	3.849	2.57	1.0	3.35	85	5.5	11.39	62.1	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
35.98	20.99	0.34	7.378	3.851	2.50	1.0	3.34	84	5.5	11.30	61.6	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36	21.5	0.35	7.382	3.853	2.48	1.0	3.32	83	5.6	11.06	61.7	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.02	21.5	0.33	7.386	3.855	2.34	1.0	3.31	82	5.6	10.87	60.6	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.04	21.5	0.3	7.390	3.857	2.13	1.0	3.29	80	5.6	10.57	58.9	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.06	20.48	0.28	7.394	3.859	2.14	1.0	3.32	83	5.3	11.04	58.6	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.08	19.46	0.27	7.398	3.861	2.24	1.0	3.36	87	5.0	11.69	58.9	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.1	19.97	0.28	7.402	3.863	2.23	1.0	3.35	85	5.2	11.43	59.1	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.12	20.48	0.3	7.406	3.865	2.29	1.0	3.34	84	5.3	11.29	59.8	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.14	20.48	0.27	7.411	3.867	2.07	1.0	3.32	83	5.3	10.95	58.0	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.16	20.99	0.24	7.415	3.869	1.77	1.0	3.27	79	5.4	10.26	55.7	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.18	23.04	0.29	7.419	3.871	1.86	1.0	3.23	75	6.0	9.61	57.2	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.2	24.07	0.28	7.423	3.873	1.68	1.0	3.18	72	6.2	9.00	55.9	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.22	24.07	0.28	7.427	3.875	1.68	1.0	3.18	72	6.2	9.00	55.9	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

36.24	23.04	0.23	7.431	3.877	1.47	1.0	3.18	72	5.9	8.99	53.4	0.50	na	0.125	0.91	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.26	24.58	0.3	7.435	3.880	1.75	1.0	3.18	72	6.3	8.96	56.7	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.28	29.19	0.44	7.439	3.882	2.02	1.0	3.12	67	7.5	8.15	61.3	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.3	39.94	0.53	7.443	3.884	1.63	1.0	2.92	53	10.3	5.90	60.6	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.32	46.08	0.66	7.448	3.886	1.71	1.0	2.87	50	11.9	5.36	63.6	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.34	46.59	1.24	7.452	3.888	3.17	1.0	3.01	59	12.0	6.81	81.6	0.50	na	0.125	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.36	47.62	1.08	7.456	3.890	2.69	1.0	2.96	56	12.2	6.27	76.7	0.50	na	0.125	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.38	41.47	0.93	7.460	3.892	2.73	1.0	3.02	60	10.7	6.98	74.3	0.50	na	0.125	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.4	47.11	0.96	7.464	3.894	2.42	1.0	2.94	54	12.1	6.06	73.3	0.50	na	0.125	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.42	33.79	1.04	7.468	3.896	3.95	1.0	3.20	73	8.7	9.29	80.5	0.50	na	0.125	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.44	25.09	1.12	7.472	3.898	6.36	1.0	3.47	96	6.4	13.44	86.5	0.50	na	0.125	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.46	21.5	1.1	7.476	3.900	7.84	1.0	3.60	100	5.5	15.96	88.0	0.50	na	0.125	0.87	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.48	20.48	0.99	7.480	3.902	7.62	1.0	3.62	100	5.2	16.34	85.8	0.50	na	0.125	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.5	20.48	0.9	7.484	3.904	6.93	1.0	3.60	100	5.2	15.88	83.3	0.50	na	0.125	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.52	20.99	0.55	7.489	3.906	4.07	1.0	3.46	95	5.4	13.25	71.2	0.50	na	0.125	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.54	20.99	0.28	7.493	3.908	2.07	1.0	3.31	82	5.4	10.84	58.2	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.56	21.5	0.25	7.497	3.910	1.79	1.0	3.27	78	5.5	10.17	55.9	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.58	20.99	0.23	7.501	3.912	1.71	1.0	3.27	79	5.4	10.26	55.0	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.6	20.99	0.24	7.505	3.914	1.78	1.0	3.28	79	5.4	10.39	55.7	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.62	21.5	0.25	7.509	3.917	1.79	1.0	3.27	78	5.5	10.19	55.9	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.64	21.5	0.25	7.513	3.919	1.79	1.0	3.27	78	5.5	10.19	55.9	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.66	21.5	0.26	7.517	3.921	1.86	1.0	3.28	79	5.5	10.31	56.6	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.68	20.99	0.26	7.521	3.923	1.93	1.0	3.30	81	5.4	10.65	57.0	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.7	21.5	0.27	7.525	3.925	1.93	1.0	3.28	80	5.5	10.44	57.2	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.72	21.5	0.27	7.530	3.927	1.93	1.0	3.28	80	5.5	10.44	57.2	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.74	21.5	0.28	7.534	3.929	2.00	1.0	3.29	80	5.5	10.56	57.8	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.76	21.5	0.28	7.538	3.931	2.01	1.0	3.29	80	5.5	10.57	57.8	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.78	21.5	0.3	7.542	3.933	2.15	1.0	3.31	82	5.5	10.79	59.0	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.8	22.02	0.3	7.546	3.935	2.07	1.0	3.29	80	5.6	10.46	58.5	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.82	22.53	0.31	7.550	3.937	2.07	1.0	3.27	79	5.7	10.26	58.7	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.84	22.02	0.32	7.554	3.939	2.21	1.0	3.30	81	5.6	10.68	59.7	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.86	22.53	0.32	7.558	3.941	2.14	1.0	3.28	79	5.7	10.37	59.3	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.88	22.53	0.32	7.562	3.943	2.14	1.0	3.28	79	5.7	10.38	59.3	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.9	22.02	0.32	7.566	3.945	2.21	1.0	3.30	81	5.6	10.69	59.7	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.92	22.02	0.32	7.571	3.947	2.21	1.0	3.30	81	5.6	10.70	59.7	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.94	22.02	0.32	7.575	3.949	2.22	1.0	3.30	81	5.6	10.70	59.7	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.96	22.53	0.31	7.579	3.951	2.07	1.0	3.27	79	5.7	10.30	58.7	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
36.98	22.53	0.31	7.583	3.953	2.07	1.0	3.28	79	5.7	10.31	58.7	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
37	23.04	0.31	7.587	3.956	2.01	1.0	3.26	77	5.8	10.02	58.4	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
37.02	24.07	0.3	7.591	3.958	1.82	1.0	3.21	74	6.1	9.38	57.1	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
37.04	24.58	0.29	7.595	3.960	1.71	1.0	3.19	72	6.2	9.05	56.2	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
37.06	24.07	0.27	7.599	3.962	1.64	1.0	3.19	72	6.1	9.10	55.3	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
37.08	22.53	0.24	7.603	3.964	1.61	1.0	3.23	75	5.7	9.59	54.5	0.50	na	0.125	0.90	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
37.1	22.02	0.42	7.607	3.966	2.91	1.0	3.36	86	5.6	11.66	64.7	0.50	na	0.125	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
37.12	22.02	0.59	7.612	3.968	4.09	1.0	3.44	93	5.5	12.95	71.9	0.50	na	0.125	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
37.14	24.58	0.77	7.616	3.970	4.54	1.0	3.40	90	6.2	12.35	76.5	0.50	na	0.125	0.88	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
37.16	56.83	0.94	7.620	3.972	1.91	1.0	2.81	47	14.3	4.86	69.5	0.50	na	0.125	0.89	na	na	0.000	0.000	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
37.18	150.02	1.18	7.624	3.974	0.83	0.5	1.99	13	73.1	1.28	93.2	0.50	0.155	0.125	0.87	2.76	19.3	0.363	0.844	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
37.2	227.34	1.12	7.628	3.976	0.51	0.5	1.71	6	110.7	1.04	115.4	0.50	0.223	0.125	0.84	3.84	21.6	0.217	0.652	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
37.22	284.17	1.05	7.632	3.978	0.38	0.5	1.56	4	138.4	1.00	138.4	0.50	0.326	0.125	0.81	5.40	24.6	0.125	0.393	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
37.24	304.65	0.99	7.636	3.980	0.33	0.5	1.51	3	148.3	1.00	148.3	0.50	0.383	0.125	0.79	6.21	25.9	0.097	0.269	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
37.26	320.53	1.02	7.640	3.982	0.33	0.5	1.48	3	156.0	1.00	156.0	0.50	0.433	0.125	0.78	6.89	27.1	0.080	0.169	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0
37.28	355.34	1.08	7.644	3.984	0.31	0.5	1.43	2	172.9	1.00	172.9	0.50	0.461	0.125	0.74	6.97	29.5	0.050	-0.061	0.000	0.02	0.0	0.00	0.000	0.00	0.00	0.00	0.0

APPENDIX D

STABILITY CALCULATIONS



rocscience	Project	SLIDE - An Interactive Slope Stability Program		
	Analysis Description	Surface Impoundment		
	Drawn By	JRM	Scale 1:304	Company AGEC
	Date	10/3/2016, 3:17:47 PM		File Name 1160276 Surface Impoundment Revised Design W.slim

SLIDEINTERPRET 7.013

Slide Analysis Information

SLIDE - An Interactive Slope Stability Program

Project Summary

File Name:	1160276 Surface Impoundment Revised Design W
Slide Modeler Version:	7.013
Project Title:	SLIDE - An Interactive Slope Stability Program
Analysis:	Surface Impoundment
Author:	JRM
Company:	AGEC
Date Created:	10/3/2016, 3:17:47 PM

General Settings

Units of Measurement:	Imperial Units
Time Units:	days
Permeability Units:	feet/second
Failure Direction:	Right to Left
Data Output:	Standard
Maximum Material Properties:	20
Maximum Support Properties:	20

Analysis Options

Slices Type:	Vertical
Analysis Methods Used	
	Bishop simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes

Groundwater Analysis

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [lbs/ft3]:	62.4
Advanced Groundwater Method:	None

Random Numbers

Pseudo-random Seed: 10116
Random Number Generation Method: Park and Miller v.3

Surface Options

Search Method: Auto Refine Search
Divisions along slope: 10
Circles per division: 10
Number of iterations: 10
Divisions to use in next iteration: 50%
Number of vertices per surface: 12
Minimum Elevation: Not Defined
Minimum Depth: Not Defined
Minimum Area: Not Defined
Minimum Weight: Not Defined

Seismic

Advanced seismic analysis: No
Staged pseudostatic analysis: No

Material Properties

Property	Clay Liner	Embankment	Clay 1	Clay 2	Clay 3	Clay 4	CL/SM	Lower Clay
Color								
Strength Type	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb
Unit Weight [lbs/ft3]	110	130	130	120	110	110	110	110
Cohesion [psf]	270	400	200	200	200	200	200	200
Friction Angle [deg]	28	34	30	30	30	27	30	27
Water Surface	Water Table	Water Table	Water Table	Water Table	Water Table	Water Table	Water Table	Water Table
Hu Value	1	1	1	1	1	1	1	1

Global Minimums

Method: bishop simplified

FS	2.941920
Axis Location:	581.320, 324.000
Left Slip Surface Endpoint:	558.838, 240.642
Right Slip Surface Endpoint:	634.518, 256.000
Resisting Moment:	8.60811e+006 lb-ft
Driving Moment:	2.92602e+006 lb-ft
Total Slice Area:	1194.47 ft2
Surface Horizontal Width:	75.6797 ft
Surface Average Height:	15.7832 ft

Global Minimum Coordinates

Method: bishop simplified

X	Y
558.838	240.642
563.098	237.307
567.213	234.015
571.434	230.518
575.288	227.445
578.842	225.389
582.875	223.87
587.005	223.072
591.323	222.966
595.862	223.586
599.374	224.553
602.912	225.95
606.46	227.781
609.944	230.01
612.868	232.402
615.529	234.838
618.084	237.4
622.465	242.224
626.668	246.922
629.865	250.692
634.518	256

Valid / Invalid Surfaces

Method: bishop simplified

Number of Valid Surfaces: 1995
Number of Invalid Surfaces: 2506

Error Codes:

Error Code -105 reported for 341 surfaces
Error Code -108 reported for 10 surfaces
Error Code -113 reported for 2151 surfaces
Error Code -1000 reported for 4 surfaces

Error Codes

The following errors were encountered during the computation:

-105 = More than two surface / slope intersections with no valid slip surface.
-108 = Total driving moment or total driving force < 0.1. This is to limit the calculation of extremely high safety factors if the driving force is very small (0.1 is an arbitrary number).
-113 = Surface intersects outside slope limits.
-1000 = No valid slip surfaces are generated at a grid center. Unable to draw a surface.

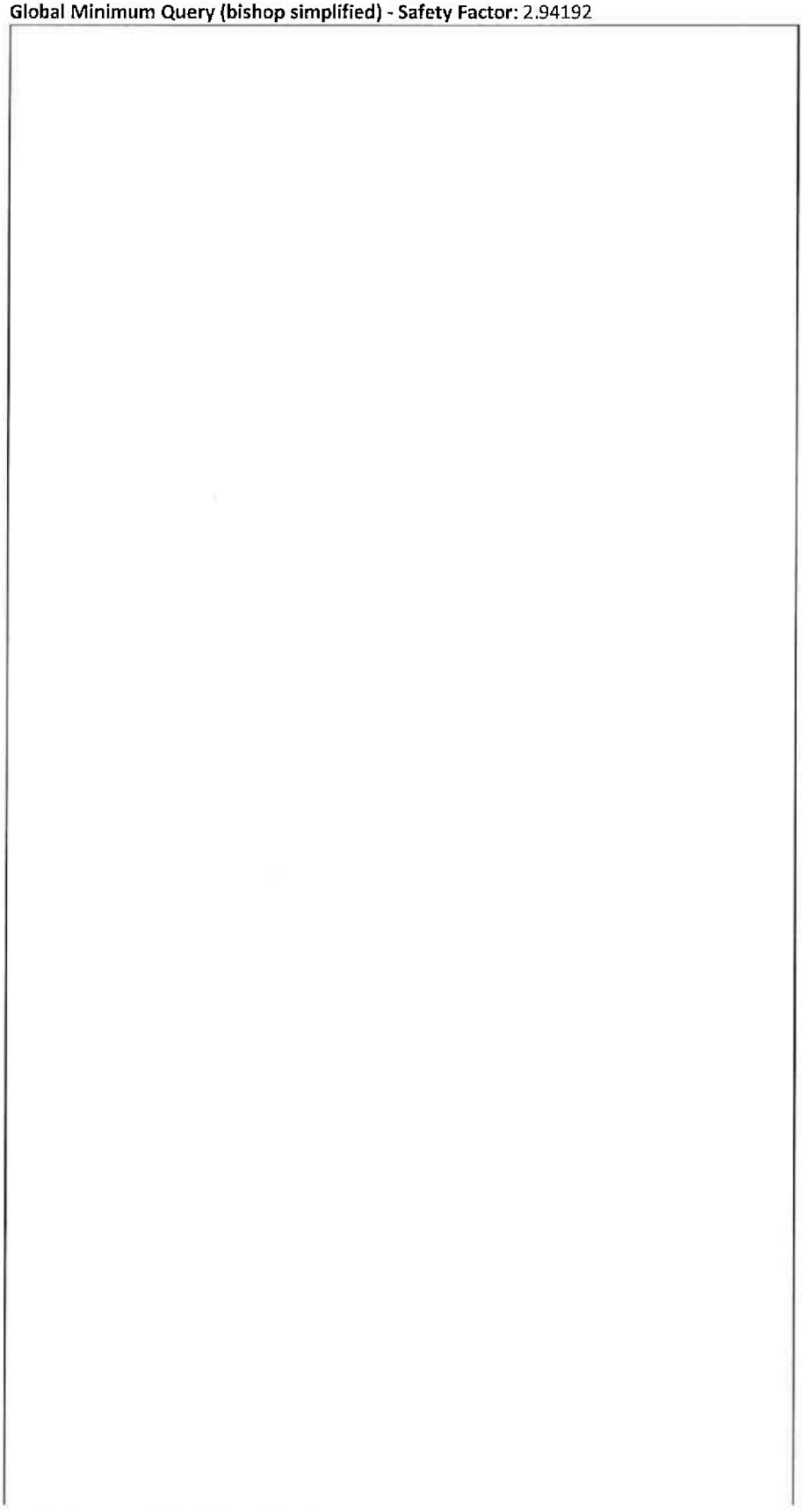
Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 2.94192

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [degrees]	Base Material	Base Cohesion [psf]	Base Friction Angle [degrees]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]
1	2.12993	192.853	-38.058	Clay Liner	270	28	125.966	370.581	189.165	-362.409	189.165
2	2.12993	578.558	-38.058	Clay Liner	270	28	164.089	482.737	400.102	-258.354	400.102
3	0.0151359	5.49184	-38.6588	Clay Liner	270	28	183.95	541.166	509.989	-205.948	509.989
4	1.61805	722.584	-38.6588	Clay 1	200	30	184 605	543.094	594.256	-165.185	594.256
5	1.24096	730.207	-38.6588	Clay 2	200	30	217.626	640.238	762.516	-93.8267	762.516
6	1.24096	876.04	-38.6588	Clay 2	200	30	244.983	720.721	901.914	-31.88	901.914
7	0.0175413	13.4288	-39.6369	Clay 2	200	30	260.584	766.618	981.41	-0.45335	981.41
8	2.10162	1809.07	-39.6369	Clay 3	200	30	270.176	794.835	1084.6	54.3158	1030.29
9	2.10162	2205.79	-39.6369	Clay 3	200	30	288.956	850.084	1288.92	162.947	1125.98
10	0.649793	761.577	-38.5727	Clay 3	200	30	298.975	879.561	1410.46	233.432	1177.03
11	1.60183	2046.12	-38.5727	Clay 4	200	27	277.399	816.085	1498.59	289.457	1209.14
12	1.60183	2365.39	-38.5727	Clay 4	200	27	301.434	886.795	1717.08	369.171	1347.91
13	1.77708	2979.34	-30.0495	Clay 4	200	27	313.349	921.847	1857.81	441.104	1416.71
14	1.77708	3316.85	-30.0495	Clay 4	200	27	337.557	993.066	2061.73	505.254	1556.48
15	1.34447	2713.59	-20.6419	Clay 4	200	27	344.206	1012.63	2148	553.131	1594.87
16	1.34447	2866.64	-20.6419	Clay 4	200	27	359.443	1057.45	2267.58	584.735	1682.85
17	1.34447	3019.7	-20.6419	Clay 4	200	27	374.681	1102.28	2387.17	616.339	1770.83
18	1.37648	3231.03	-10.9299	Clay 4	200	27	376.188	1106.72	2419.97	640.435	1779.53
19	1.37648	3353.19	-10.9299	Clay 4	200	27	389.119	1144.76	2511.21	657.021	1854.19
20	1.37648	3475.36	-10.9299	Clay 4	200	27	402.05	1182.8	2602.46	673.608	1928.85
21	1.43954	3746.07	-1.40958	Clay 4	200	27	402.102	1182.95	2612.16	683.007	1929.15
22	1.43954	3841.27	-1.40958	Clay 4	200	27	413.22	1215.66	2678.57	685.217	1993.36
23	1.43954	3936.48	-1.40958	Clay 4	200	27	424.342	1248.38	2744.98	687.427	2057.56
24	2.26957	6353.91	7.78193	Clay 4	200	27	425.222	1250.97	2741.5	678.855	2062.64
25	2.26957	6499.18	7.78193	Clay 4	200	27	439.325	1292.46	2803.58	659.501	2144.08
26	1.75603	5104.78	15.3906	Clay 4	200	27	440.525	1295.99	2785.74	634.743	2151
27	1.75603	5144.73	15.3906	Clay 4	200	27	449.271	1321.72	2806.08	604.58	2201.5
28	1.76858	5201.4	21.5554	Clay 4	200	27	448.353	1319.02	2763.9	567.701	2196.2
29	1.76858	5201.28	21.5554	Clay 4	200	27	455.407	1339.77	2761.04	524.106	2236.93
30	1.77421	5196.8	27.2959	Clay 4	200	27	452.769	1332.01	2695.43	473.742	2221.69
31	1.77421	5154.8	27.2959	Clay 4	200	27	458.089	1347.66	2669.02	416.61	2252.41
32	1.74202	4999.82	32.6023	Clay 4	200	27	453.636	1334.56	2579.98	353.282	2226.7
33	1.74202	4918.1	32.6023	Clay 4	200	27	457.161	1344.93	2530.82	283.758	2247.06
34	1.4618	4042.91	39.2897	Clay 3	200	30	490.459	1442.89	2364.42	211.68	2152.74
35	1.4618	3943.39	39.2897	Clay 3	200	30	491.567	1446.15	2295.44	137.048	2158.39
36	1.7458	4562.81	42.4738	Clay 3	200	30	484.129	1424.27	2170.37	49.866	2120.5
37	0.915598	2319.37	42.4738	Clay 2	200	30	479.048	1409.32	2094.61	-26.1525	2094.61
38	1.15892	2848.88	45.0705	Clay 2	200	30	459.924	1353.06	1997.16	-88.5525	1997.16
39	1.39624	3285.38	45.0705	Clay 1	200	30	442.673	1302.31	1909.25	-168.47	1909.25
40	1.46033	3241.23	47.7561	Clay 1	200	30	414.077	1218.18	1763.55	-262.311	1763.55
41	1.46033	2987.12	47.7561	Clay 1	200	30	385.997	1135.57	1620.46	-362.654	1620.46
42	1.46033	2696.25	47.7561	Clay 1	200	30	353.855	1041.01	1456.68	-462.996	1456.68
43	1.40108	2311.32	48.1851	Clay 1	200	30	321.253	945.101	1290.56	-562.032	1290.56
44	1.40108	2039.32	48.1851	Clay 1	200	30	290.008	853.181	1131.35	-659.764	1131.35
45	1.40108	1767.32	48.1851	Clay 1	200	30	258.763	761.261	972.135	-757.495	972.135
46	1.59852	1673.97	49.7011	Embankment	400	34	296.028	870.89	698.123	-865.172	698.123
47	1.59852	1297	49.7011	Embankment	400	34	253.466	745.676	512.485	-982.795	512.485
48	1.55085	891.722	48.7626	Embankment	400	34	212.275	624.495	332.827	-1096.81	332.827
49	1.55085	535.033	48.7626	Embankment	400	34	170.475	501.525	150.516	-1207.2	150.516
50	1.55085	178.344	48.7626	Embankment	400	34	128.676	378.554	-31.7944	-1317.6	-31.7944

Interslice Data

Global Minimum Query (bishop simplified) - Safety Factor: 2.94192



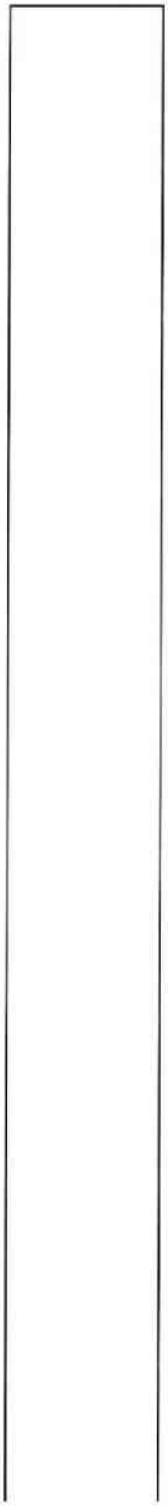
Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [degrees]
1	558.838	240.642	0	0	0
2	560.968	238.974	583.741	0	0
3	563.098	237.307	1600.43	0	0
4	563.113	237.294	1609.39	0	0
5	564.731	236	2677.29	0	0
6	565.972	235.007	3704.33	0	0
7	567.213	234.015	4903.71	0	0
8	567.231	234	4922.54	0	0
9	569.332	232.259	7378.52	0	0
10	571.434	230.518	10229.7	0	0
11	572.084	230	11154.9	0	0
12	573.686	228.723	13513.6	0	0
13	575.288	227.445	16190	0	0
14	577.065	226.417	18656.8	0	0
15	578.842	225.389	21376.2	0	0
16	580.186	224.882	22926.9	0	0
17	581.531	224.376	24558.6	0	0
18	582.875	223.87	26271.4	0	0
19	584.252	223.604	27432.5	0	0
20	585.628	223.338	28635.6	0	0
21	587.005	223.072	29880.8	0	0
22	588.444	223.037	30552.2	0	0
23	589.884	223.001	31241.9	0	0
24	591.323	222.966	31950	0	0
25	593.593	223.276	32064.7	0	0
26	595.862	223.586	32192.3	0	0
27	597.618	224.07	31619.3	0	0
28	599.374	224.553	31051.8	0	0
29	601.143	225.252	29913.8	0	0
30	602.912	225.95	28790.2	0	0
31	604.686	226.866	27125.7	0	0
32	606.46	227.781	25494.7	0	0
33	608.202	228.896	23410.4	0	0
34	609.944	230.01	21387.1	0	0
35	611.406	231.206	19276.1	0	0
36	612.868	232.402	17249.3	0	0
37	614.613	234	14625.6	0	0
38	615.529	234.838	13308.5	0	0
39	616.688	236	11521.2	0	0
40	618.084	237.4	9466.98	0	0
41	619.544	239.008	7235.8	0	0
42	621.005	240.616	5193.71	0	0
43	622.465	242.224	3368.05	0	0
44	623.866	243.79	1796.89	0	0
45	625.267	245.356	431.296	0	0
46	626.668	246.922	-728.714	0	0
47	628.267	248.807	-1571.46	0	0
48	629.865	250.692	-2132.32	0	0
49	631.416	252.462	-2391.95	0	0
50	632.967	254.231	-2393.86	0	0
51	634.518	256	0	0	0

List Of Coordinates

Water Table

X	Y
0	234
750	234

External Boundary



X	Y
0	240
0	236
0	234
0	232
0	230
0	220
0	218
0	200
0	197
0	191
0	185
0	175
0	169
0	165
0	153
0	149
0	140
0	119
0	104
0	93
0	0
750	0
750	93
750	104
750	119
750	140
750	149
750	153
750	165
750	169
750	175
750	185
750	191
750	197
750	200
750	218
750	220
750	230
750	232
750	234
750	236
750	248
668	248
644	256
629	256
619.5	256
573	240.5
553	240.7
547	242.7
291	245.3
258.5	256
249	256
234	256
195	243

Material Boundary

X	Y
249	256
290	242.3
545.5	239.7
552.5	237.4
572.6	237.2
600	246.2
629	256

Material Boundary

X	Y
195	243
290	242.3

Material Boundary

X	Y
600	246.2
668	248

Material Boundary

X	Y
0	236
750	236

Material Boundary

X	Y
0	234
750	234

Material Boundary

X	Y
0	230
750	230

Material Boundary

X	Y
0	220
750	220

Material Boundary

X	Y
0	218
750	218

Material Boundary

X	Y
0	200
750	200

Material Boundary

X	Y
0	197
750	197

Material Boundary

X	Y
0	191
750	191

Material Boundary

X	Y
0	185
750	185

Material Boundary

X	Y
0	175
750	175

Material Boundary

X	Y
0	169
750	169

Material Boundary

X	Y
0	165
750	165

Material Boundary

X	Y
0	153
750	153

Material Boundary

X	Y
0	149
750	149

Material Boundary

X	Y
0	140
750	140

Material Boundary

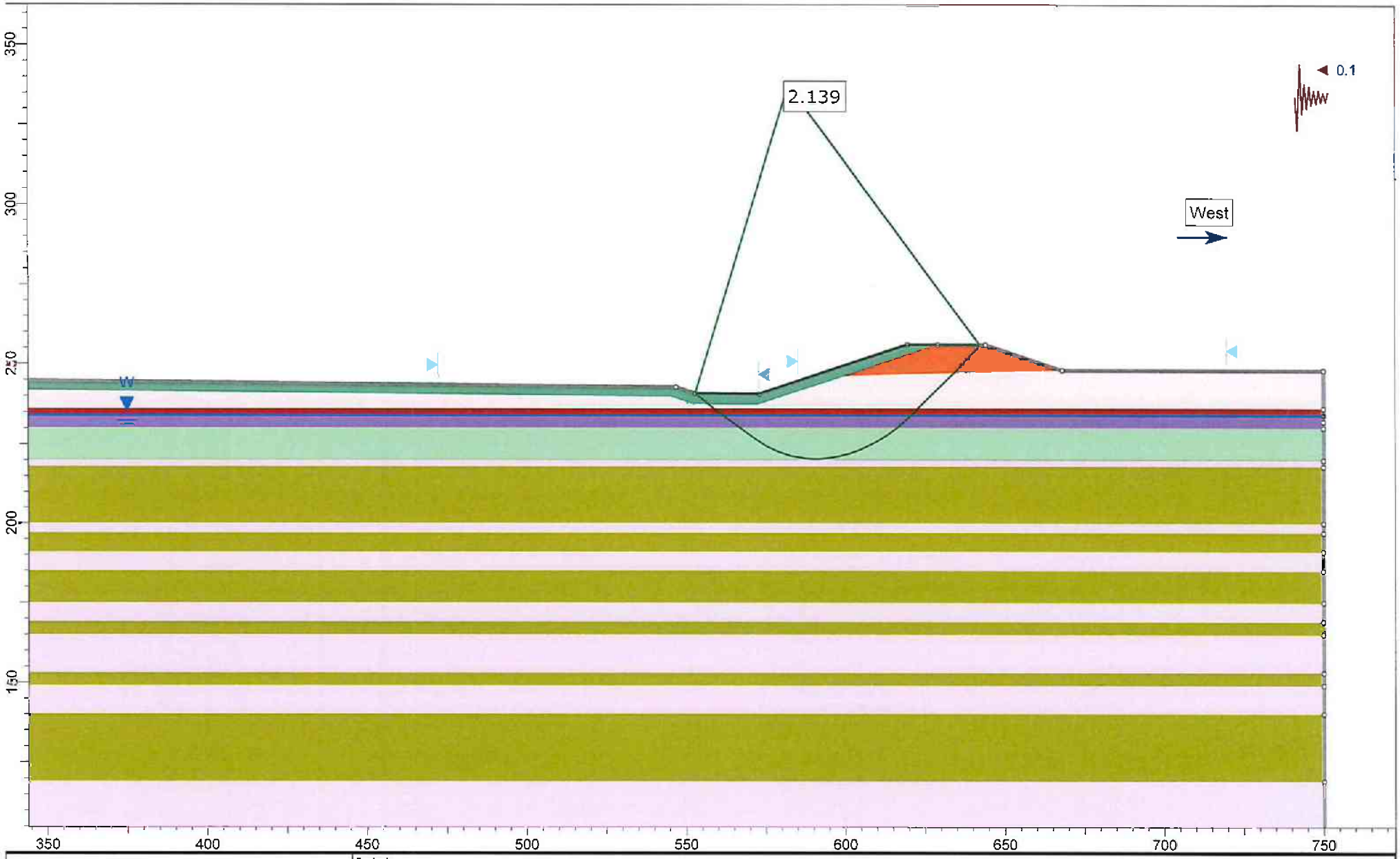
X	Y
0	119
750	119

Material Boundary

X	Y
0	104
750	104

Material Boundary

X	Y
0	93
750	93



rocscience	Project: SLIDE - An Interactive Slope Stability Program		
	Analysis Description: Surface Impoundment		
	Drawn By: JRM	Scale: 1:499	Company: AGEC
SLIDEINTERPRET 7.013	Date: 10/3/2016, 3:17:47 PM		File Name: 1160276 Surface Impoundment Revised Design WEQ.slim

Slide Analysis Information

SLIDE - An Interactive Slope Stability Program

Project Summary

File Name:	1160276 Surface Impoundment Revised Design WEQ
Slide Modeler Version:	7.013
Project Title:	SLIDE - An Interactive Slope Stability Program
Analysis:	Surface Impoundment
Author:	JRM
Company:	AGEC
Date Created:	10/3/2016, 3:17:47 PM

General Settings

Units of Measurement:	Imperial Units
Time Units:	days
Permeability Units:	feet/second
Failure Direction:	Right to Left
Data Output:	Standard
Maximum Material Properties:	20
Maximum Support Properties:	20

Analysis Options

Slices Type:	Vertical
Analysis Methods Used	
	Bishop simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes

Groundwater Analysis

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [lbs/ft3]:	62.4
Advanced Groundwater Method:	None

Random Numbers

Pseudo-random Seed: 10116
Random Number Generation Method: Park and Miller v.3

Surface Options

Search Method:	Auto Refine Search
Divisions along slope:	10
Circles per division:	10
Number of iterations:	10
Divisions to use in next iteration:	50%
Number of vertices per surface:	12
Minimum Elevation:	Not Defined
Minimum Depth:	Not Defined
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

Seismic

Advanced seismic analysis: No
Staged pseudostatic analysis: No

Loading

Seismic Load Coefficient (Horizontal): 0.1

Material Properties

Property	Clay Liner	Embankment	Clay 1	Clay 2	Clay 3	Clay 4	CL/SM	Lower Clay
Color								
Strength Type	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb
Unit Weight [lbs/ft3]	110	130	130	120	110	110	110	110
Cohesion [psf]	270	400	200	200	200	200	200	200
Friction Angle [deg]	28	34	30	30	30	27	30	27
Water Surface	Water Table	Water Table	Water Table	Water Table	Water Table	Water Table	Water Table	Water Table
Hu Value	1	1	1	1	1	1	1	1

Global Minimums

Method: bishop simplified

FS	2.139410
Axis Location:	582.313, 337.576
Left Slip Surface Endpoint:	553.000, 240.700
Right Slip Surface Endpoint:	642.226, 256.000
Resisting Moment:	1.21425e+007 lb-ft
Driving Moment:	5.67561e+006 lb-ft
Total Slice Area:	1566.93 ft2
Surface Horizontal Width:	89.2261 ft
Surface Average Height:	17.5613 ft

Global Minimum Coordinates

Method: bishop simplified

X	Y
553	240.7
557.149	237.339
558.915	235.997
562.623	233.262
567.152	230.013
571.184	227.141
575.274	224.443
578.955	222.638
582.961	221.308
587.493	220.501
591.26	220.345
595.165	220.642
597.978	221.135
601.42	222.051
604.885	223.321
609.417	225.515
612.701	227.497
616.239	230.013
619.35	232.792
622.688	235.985
626.53	239.691
630.353	243.42
634.172	247.121
636.033	249.159
637.695	250.982
642.226	256

Valid / Invalid Surfaces

Method: bishop simplified

Number of Valid Surfaces: 1583
Number of Invalid Surfaces: 2918

Error Codes:

Error Code -105 reported for 504 surfaces
Error Code -113 reported for 2410 surfaces

Error Code -1000 reported for 4 surfaces

Error Codes

The following errors were encountered during the computation:

-105 = More than two surface / slope intersections with no valid slip surface.
-113 = Surface intersects outside slope limits.
-1000 = No valid slip surfaces are generated at a grid center. Unable to draw a surface.

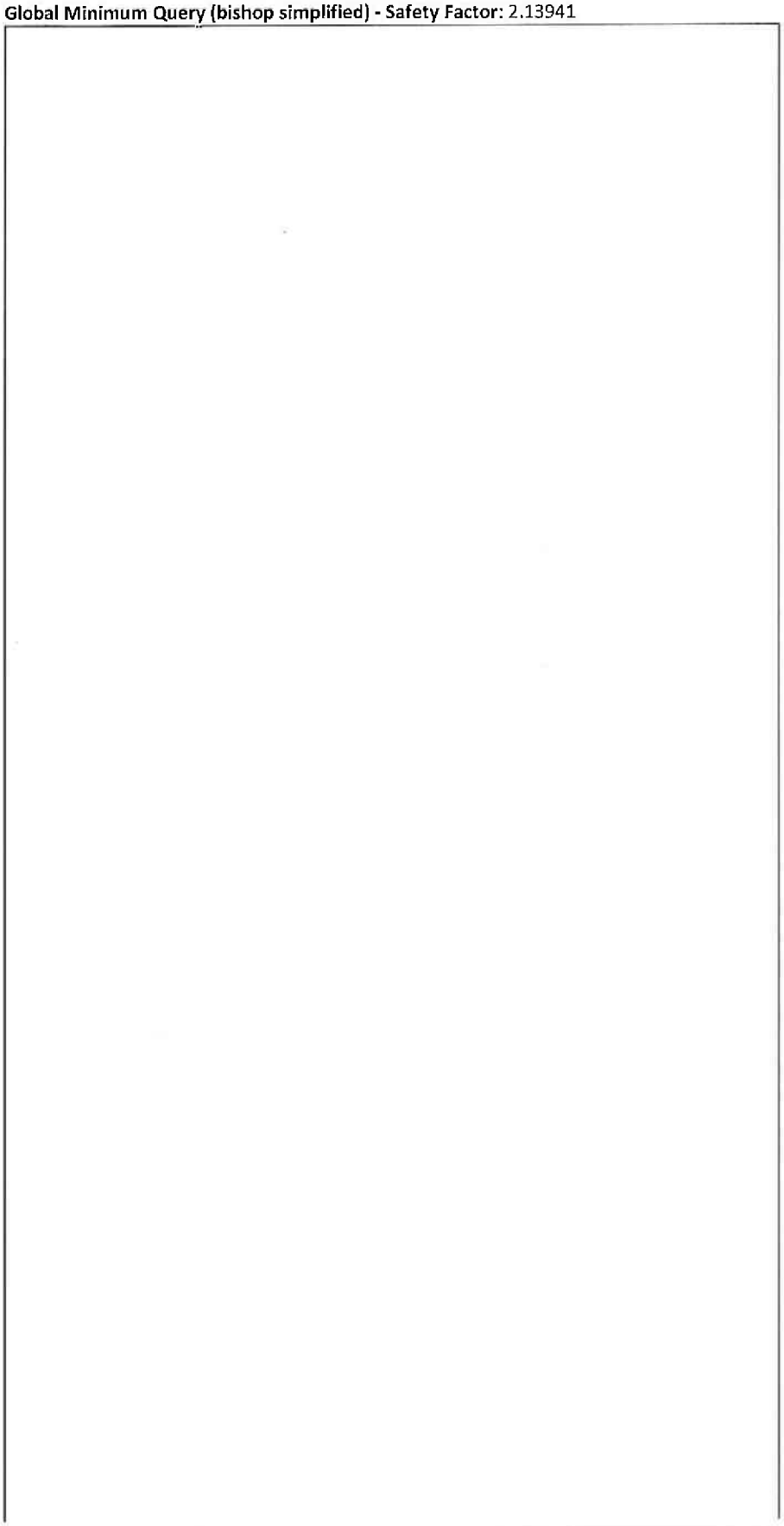
Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 2.13941

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [degrees]	Base Material	Base Cohesion [psf]	Base Friction Angle [degrees]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]
1	2.06548	187.714	-39.0074	Clay Liner	270	28	186.292	398.555	241.778	-365.881	241.778
2	2.06548	563.141	-39.0074	Clay Liner	270	28	242.852	519.56	469.354	-261.483	469.354
3	0.0179204	6.53122	-39.0074	Clay 1	200	30	245.502	525.229	563.314	-208.832	563.314
4	1.76628	797.445	-37.2308	Clay 1	200	30	270.869	579.5	657.315	-166.503	657.315
5	2.70753	1775.12	-36.4146	Clay 2	200	30	337.623	722.314	904.676	-62.3136	904.676
6	1.00076	814.272	-36.4146	Clay 3	200	30	383.108	819.625	1096.25	23.0325	1073.22
7	2.26427	2131.77	-35.6582	Clay 3	200	30	398.629	852.831	1227.49	96.7506	1130.73
8	2.26427	2529.73	-35.6582	Clay 3	200	30	423.523	906.09	1421.1	198.122	1222.98
9	2.01594	2586	-35.4569	Clay 4	200	27	396.279	847.803	1564.99	293.601	1271.39
10	2.01594	2899.08	-35.4569	Clay 4	200	27	415.128	888.129	1733.72	383.187	1350.53
11	2.04498	3251.01	-33.4153	Clay 4	200	27	427.286	914.14	1871.65	470.075	1401.58
12	2.04498	3666.25	-33.4153	Clay 4	200	27	460.872	985.995	2096.87	554.265	1542.6
13	1.84069	3682.56	-26.1165	Clay 4	200	27	476.907	1020.3	2234.44	624.515	1609.93
14	1.84069	4011.77	-26.1165	Clay 4	200	27	509.949	1090.99	2429.49	680.825	1748.67
15	2.0031	4704.88	-18.3731	Clay 4	200	27	520.235	1113	2521.59	729.737	1791.86
16	2.0031	5024.96	-18.3731	Clay 4	200	27	550.823	1178.44	2691.54	771.251	1920.29
17	2.26569	6025.92	-10.0897	Clay 4	200	27	558.976	1195.88	2759.11	804.587	1954.52
18	2.26569	6348.35	-10.0897	Clay 4	200	27	588.111	1258.21	2906.6	829.744	2076.85
19	1.88339	5495.94	-2.37059	Clay 4	200	27	593.126	1268.94	2942.66	844.756	2097.91
20	1.88339	5665.45	-2.37059	Clay 4	200	27	613.604	1312.75	3033.52	849.621	2183.89
21	1.95285	6028.8	4.34599	Clay 4	200	27	615.759	1317.36	3040.37	847.423	2192.95
22	1.95285	6161.8	4.34599	Clay 4	200	27	633.862	1356.09	3107.11	838.162	2268.95
23	1.40612	4508.27	9.94239	Clay 4	200	27	633.922	1356.22	3095.05	825.841	2269.21
24	1.40612	4555.63	9.94239	Clay 4	200	27	645.14	1380.22	3126.77	810.461	2316.31
25	1.72105	5625.62	14.9053	Clay 4	200	27	643.392	1376.48	3097.45	788.478	2308.97
26	1.72105	5667.15	14.9053	Clay 4	200	27	655.199	1401.74	3118.44	759.892	2358.55
27	1.7329	5731.95	20.1158	Clay 4	200	27	651.563	1393.96	3069.08	725.797	2343.28
28	1.7329	5741.36	20.1158	Clay 4	200	27	661.43	1415.07	3070.91	686.192	2384.71
29	1.51049	4997.36	25.8414	Clay 4	200	27	652.853	1396.72	2992.26	643.566	2348.69
30	1.51049	4974.89	25.8414	Clay 4	200	27	659.425	1410.78	2974.2	597.917	2376.28
31	1.51049	4952.42	25.8414	Clay 4	200	27	665.992	1424.83	2956.14	552.269	2403.87
32	1.64191	5340.14	31.1129	Clay 4	200	27	655.176	1401.69	2856.97	498.526	2358.44
33	1.64191	5278.23	31.1129	Clay 4	200	27	660.196	1412.43	2816.23	436.69	2379.54
34	1.76905	5599.17	35.4108	Clay 4	200	27	649.941	1390.49	2703	366.531	2336.47
35	1.76905	5490.33	35.4108	Clay 4	200	27	653.395	1397.88	2639.02	288.051	2350.97
36	1.55572	4714.04	41.7747	Clay 3	200	30	689.536	1475.2	2414.16	205.451	2208.71
37	1.55572	4581.31	41.7747	Clay 3	200	30	689.84	1475.85	2328.57	118.731	2209.84
38	1.26293	3593.23	43.7233	Clay 3	200	30	676.514	1447.34	2198.14	37.6854	2160.45
39	2.07501	5542.89	43.7233	Clay 2	200	30	647.295	1384.83	2052.18	-61.9178	2052.18
40	1.92065	4696.72	43.9779	Clay 1	200	30	597.749	1278.83	1868.58	-181.659	1868.58
41	1.92065	4258.9	43.9779	Clay 1	200	30	548.941	1174.41	1687.73	-297.307	1687.73
42	1.91183	3802.09	44.2813	Clay 1	200	30	498.875	1067.3	1502.2	-413.301	1502.2
43	1.91183	3357.22	44.2813	Clay 1	200	30	449.163	960.943	1317.99	-529.644	1317.99
44	1.9094	2892.92	44.1046	Clay 1	200	30	398.201	851.915	1129.15	-645.554	1129.15
45	1.9094	2433.55	44.1046	Clay 1	200	30	346.737	741.812	938.446	-761.034	938.446
46	1.86071	1901.2	47.6019	Embankment	400	34	378.434	809.625	607.295	-882.356	607.295
47	1.66201	1281.12	47.6387	Embankment	400	34	319.52	683.585	420.435	-1002.8	420.435
48	1.51046	821.133	47.918	Embankment	400	34	265.622	568.274	249.476	-1111.86	249.476
49	1.51046	492.68	47.918	Embankment	400	34	214.806	459.558	88.2985	-1216.23	88.2985
50	1.51046	164.227	47.918	Embankment	400	34	163.99	350.842	-72.8794	-1320.61	-72.8794

Interslice Data

Global Minimum Query (bishop simplified) - Safety Factor: 2.13941



Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [degrees]
1	553	240.7	0	0	0
2	555.065	239.027	770.516	0	0
3	557.131	237.354	2001.05	0	0
4	557.149	237.339	2012.98	0	0
5	558.915	235.997	3293.89	0	0
6	561.623	234	5837.35	0	0
7	562.623	233.262	6948.6	0	0
8	564.888	231.637	9632.12	0	0
9	567.152	230.013	12646.8	0	0
10	569.168	228.577	15433.8	0	0
11	571.184	227.141	18469.9	0	0
12	573.229	225.792	21543.8	0	0
13	575.274	224.443	24948.7	0	0
14	577.115	223.541	27474.7	0	0
15	578.955	222.638	30204.5	0	0
16	580.958	221.973	32453.7	0	0
17	582.961	221.308	34845.3	0	0
18	585.227	220.904	36621.5	0	0
19	587.493	220.501	38491	0	0
20	589.376	220.423	39287.9	0	0
21	591.26	220.345	40113.5	0	0
22	593.212	220.494	40261.9	0	0
23	595.165	220.642	40422.4	0	0
24	596.571	220.889	40100.1	0	0
25	597.978	221.135	39781	0	0
26	599.699	221.593	38906.8	0	0
27	601.42	222.051	38039.1	0	0
28	603.153	222.686	36647.1	0	0
29	604.885	223.321	35270.1	0	0
30	606.396	224.052	33567.5	0	0
31	607.906	224.784	31890.3	0	0
32	609.417	225.515	30238.5	0	0
33	611.059	226.506	27949.1	0	0
34	612.701	227.497	25714.4	0	0
35	614.47	228.755	22904.7	0	0
36	616.239	230.013	20192.5	0	0
37	617.795	231.402	17438.7	0	0
38	619.35	232.792	14817.7	0	0
39	620.613	234	12657.7	0	0
40	622.688	235.985	9373.92	0	0
41	624.609	237.838	6589.22	0	0
42	626.53	239.691	4089.75	0	0
43	628.441	241.556	1862.51	0	0
44	630.353	243.42	-71.8278	0	0
45	632.263	245.271	-1690.44	0	0
46	634.172	247.121	-3008.46	0	0
47	636.033	249.159	-3732.01	0	0
48	637.695	250.982	-4095.36	0	0
49	639.205	252.655	-4193.57	0	0
50	640.716	254.327	-4066.08	0	0
51	642.226	256	0	0	0

List Of Coordinates

Water Table

X	Y
0	234
750	234

External Boundary

X	Y
0	240
0	236
0	234
0	232
0	230
0	220
0	218
0	200
0	197
0	191
0	185
0	175
0	169
0	165
0	153
0	149
0	140
0	119
0	104
0	93
0	0
750	0
750	93
750	104
750	119
750	140
750	149
750	153
750	165
750	169
750	175
750	185
750	191
750	197
750	200
750	218
750	220
750	230
750	232
750	234
750	236
750	248
668	248
644	256
629	256
619.5	256
573	240.5
553	240.7
547	242.7
291	245.3
258.5	256
249	256
234	256
195	243

Material Boundary

X	Y
249	256
290	242.3
545.5	239.7
552.5	237.4
572.6	237.2
600	246.2
629	256

Material Boundary

X	Y
195	243
290	242.3

Material Boundary

X	Y
600	246.2
668	248

Material Boundary

X	Y
0	236
750	236

Material Boundary

X	Y
0	234
750	234

Material Boundary

X	Y
0	230
750	230

Material Boundary

X	Y
0	220
750	220

Material Boundary

X	Y
0	218
750	218

Material Boundary

X	Y
0	200
750	200

Material Boundary

X	Y
0	197
750	197

Material Boundary

X	Y
0	191
750	191

Material Boundary

X	Y
0	185
750	185

Material Boundary

X	Y
0	175
750	175

Material Boundary

X	Y
0	169
750	169

Material Boundary

X	Y
0	165
750	165

Material Boundary

X	Y
0	153
750	153

Material Boundary

X	Y
0	149
750	149

Material Boundary

X	Y
0	140
750	140

Material Boundary

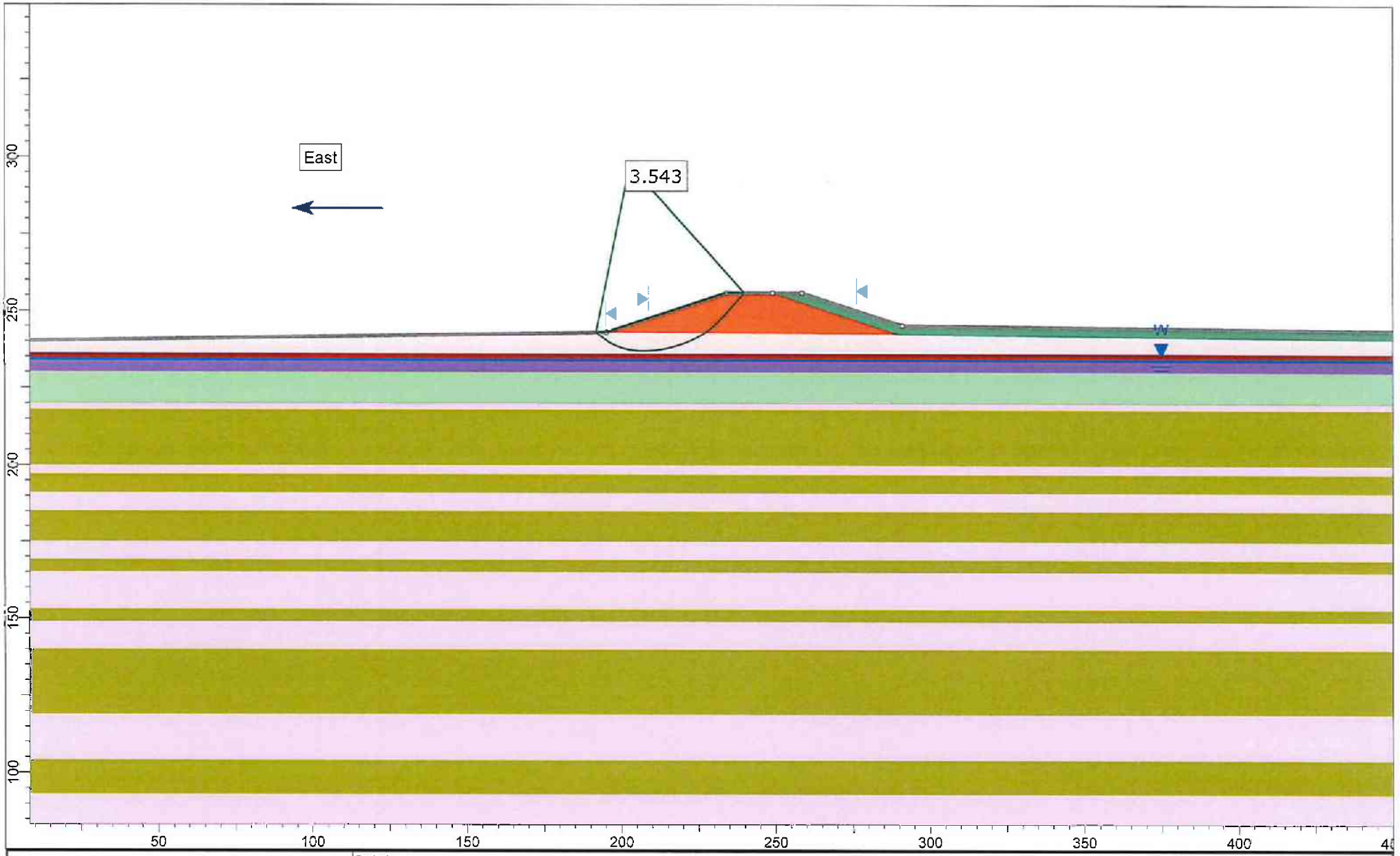
X	Y
0	119
750	119

Material Boundary

X	Y
0	104
750	104

Material Boundary

X	Y
0	93
750	93



rocscience	Project	SLIDE - An Interactive Slope Stability Program		
	Analysis Description	Surface Impoundment		
	Drawn By	JRM	Scale	1:514
	Company	AGEC		
	Date	10/3/2016, 3:17:47 PM	File Name	1160276 Surface Impoundment Revised Design E.slim

SLIVEINTERPRET 7.013

Slide Analysis Information

SLIDE - An Interactive Slope Stability Program

Project Summary

File Name:	1160276 Surface Impoundment Revised Design E
Slide Modeler Version:	7.013
Project Title:	SLIDE - An Interactive Slope Stability Program
Analysis:	Surface Impoundment
Author:	JRM
Company:	AGEC
Date Created:	10/3/2016, 3:17:47 PM

General Settings

Units of Measurement:	Imperial Units
Time Units:	days
Permeability Units:	feet/second
Failure Direction:	Right to Left
Data Output:	Standard
Maximum Material Properties:	20
Maximum Support Properties:	20

Analysis Options

Slices Type:	Vertical
Analysis Methods Used	
	Bishop simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes

Groundwater Analysis

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [lbs/ft3]:	62.4
Advanced Groundwater Method:	None

Random Numbers

Pseudo-random Seed:	10116
Random Number Generation Method:	Park and Miller v.3

Surface Options

Search Method:	Auto Refine Search
Divisions along slope:	10
Circles per division:	10
Number of iterations:	10
Divisions to use in next iteration:	50%
Number of vertices per surface:	12
Minimum Elevation:	Not Defined
Minimum Depth:	Not Defined
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

Seismic

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No

Material Properties

Property	Clay Liner	Embankment	Clay 1	Clay 2	Clay 3	Clay 4	CL/SM	Lower Clay
Color								
Strength Type	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb
Unit Weight [lbs/ft3]	110	130	130	120	110	110	110	110
Cohesion [psf]	270	400	200	200	200	200	200	200
Friction Angle [deg]	28	34	30	30	30	27	30	27
Water Surface	Water Table	Water Table	Water Table	Water Table	Water Table	Water Table	Water Table	Water Table
Hu Value	1	1	1	1	1	1	1	1

Global Minimums

Method: bishop simplified

FS	3.543010
Axis Location:	202.720, 297.506
Left Slip Surface Endpoint:	191.755, 242.950
Right Slip Surface Endpoint:	239.786, 256.000
Resisting Moment:	2.73388e+006 lb-ft
Driving Moment:	771626 lb-ft
Total Slice Area:	399.247 ft2
Surface Horizontal Width:	48.0307 ft
Surface Average Height:	8.31233 ft

Global Minimum Coordinates

Method: bishop simplified

X	Y
191.755	242.95
193.643	241.523
196.01	239.776
197.819	238.797
199.976	237.968
202.414	237.358
205.184	236.992
207.946	236.914
210.875	237.103
212.96	237.396
215.078	237.823
217.175	238.373
219.751	239.222
222.314	240.27
224.749	241.464
227.01	242.77
229.005	244.423
230.745	245.999
231.873	247.103
232.856	248.128
233.707	249.071
235.412	251.05
237.097	252.988
238.853	254.972
239.786	256

Valid / Invalid Surfaces

Method: bishop simplified

Number of Valid Surfaces: 1946
Number of Invalid Surfaces: 2555

Error Codes:

Error Code -105 reported for 355 surfaces
Error Code -113 reported for 2200 surfaces

Error Codes

The following errors were encountered during the computation:

-105 = More than two surface / slope intersections with no valid slip surface.
-113 = Surface intersects outside slope limits.

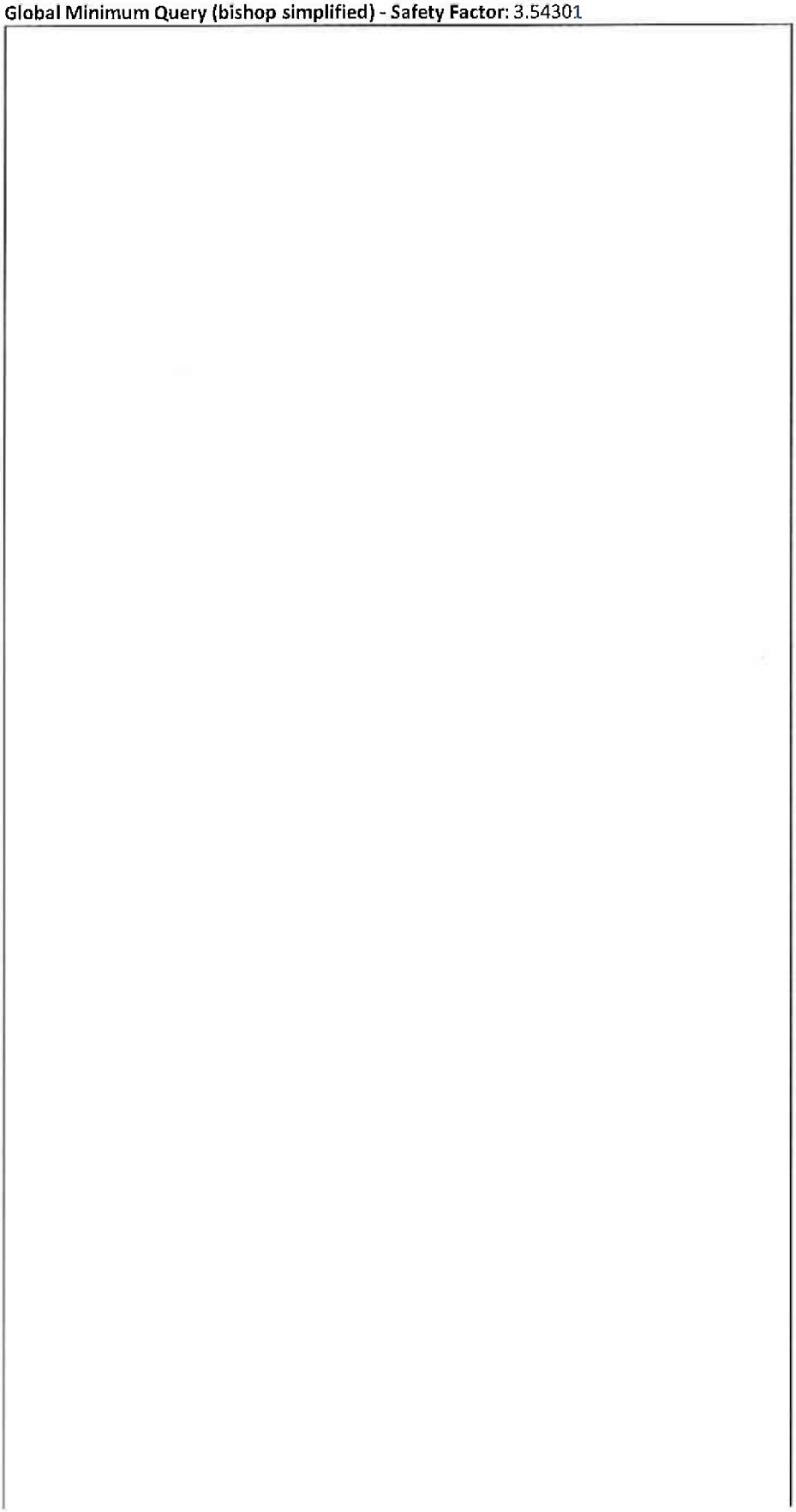
Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 3.54301

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [degrees]	Base Material	Base Cohesion [psf]	Base Friction Angle [degrees]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]
1	0.943858	44.6539	-37.0804	Clay 1	200	30	73.1697	259.241	102.608	-536.229	102.608
2	0.943858	133.962	-37.0804	Clay 1	200	30	90.7542	321.543	210.518	-491.717	210.518
3	1.18386	292.671	-36.4295	Clay 1	200	30	109.959	389.587	328.374	-442.2	328.374
4	1.18386	451.04	-36.4295	Clay 1	200	30	134.739	477.381	480.437	-387.678	480.437
5	0.904241	465.058	-28.4191	Clay 1	200	30	153.822	544.993	597.545	-345.15	597.545
6	0.904241	558.009	-28.4191	Clay 1	200	30	172.193	610.081	710.281	-314.617	710.281
7	1.07847	775.211	-21.0214	Clay 1	200	30	185.178	656.088	789.968	-286.42	789.968
8	1.07847	883.718	-21.0214	Clay 1	200	30	202.669	718.057	897.301	-260.558	897.301
9	0.812868	732.032	-14.0469	Clay 1	200	30	211.836	750.536	953.556	-241.282	953.556
10	0.812868	782.157	-14.0469	Clay 1	200	30	222.311	787.65	1017.84	-228.591	1017.84
11	0.812868	832.281	-14.0469	Clay 1	200	30	232.787	824.765	1082.12	-215.901	1082.12
12	1.38485	1518.67	-7.53634	Clay 1	200	30	240.331	851.495	1128.43	-203.839	1128.43
13	1.38485	1634.76	-7.53634	Clay 1	200	30	254.292	900.96	1214.1	-192.407	1214.1
14	0.920513	1145.12	-1.62096	Clay 1	200	30	260.367	922.482	1251.38	-185.878	1251.38
15	0.920513	1184.96	-1.62096	Clay 1	200	30	267.451	947.583	1294.85	-184.252	1294.85
16	0.920513	1224.8	-1.62096	Clay 1	200	30	274.536	972.683	1338.33	-182.627	1338.33
17	0.976526	1337.11	3.70139	Clay 1	200	30	276.658	980.202	1351.35	-183.785	1351.35
18	0.976526	1370.41	3.70139	Clay 1	200	30	282.158	999.687	1385.1	-187.727	1385.1
19	0.976526	1403.71	3.70139	Clay 1	200	30	287.657	1019.17	1418.85	-191.669	1418.85
20	1.0426	1530.11	7.98924	Clay 1	200	30	288.99	1023.89	1427.02	-198.205	1427.02
21	1.0426	1557.38	7.98924	Clay 1	200	30	293.157	1038.66	1452.59	-207.336	1452.59
22	1.05872	1604.88	11.4126	Clay 1	200	30	293.802	1040.95	1456.56	-218.57	1456.56
23	1.05872	1624.04	11.4126	Clay 1	200	30	296.657	1051.06	1474.08	-231.906	1474.08
24	1.04884	1623.48	14.6759	Clay 1	200	30	296.049	1048.9	1470.34	-247.144	1470.34
25	1.04884	1633.7	14.6759	Clay 1	200	30	297.571	1054.3	1479.69	-264.284	1479.69
26	0.858535	1341.62	18.2553	Clay 1	200	30	295.227	1045.99	1465.31	-281.69	1465.31
27	0.858535	1341.95	18.2553	Clay 1	200	30	295.287	1046.21	1465.67	-299.361	1465.67
28	0.858535	1342.29	18.2553	Clay 1	200	30	295.347	1046.42	1466.04	-317.032	1466.04
29	0.854453	1332.5	22.2253	Clay 1	200	30	291.185	1031.67	1440.49	-336.761	1440.49
30	0.854453	1325.35	22.2253	Clay 1	200	30	289.907	1027.14	1432.66	-358.547	1432.66
31	0.854453	1318.21	22.2253	Clay 1	200	30	288.63	1022.62	1424.82	-380.333	1424.82
32	0.811426	1241.7	26.1423	Clay 1	200	30	283.166	1003.26	1391.28	-403.652	1391.28
33	0.811426	1228.22	26.1423	Clay 1	200	30	280.659	994.378	1375.91	-428.503	1375.91
34	0.811426	1214.74	26.1423	Clay 1	200	30	278.153	985.498	1360.52	-453.354	1360.52
35	1.1304	1662.59	30.0012	Clay 1	200	30	270.659	958.946	1314.53	-486.143	1314.53
36	1.1304	1622.06	30.0012	Clay 1	200	30	265.317	940.021	1281.76	-526.869	1281.76
37	0.997929	1382.02	39.6426	Embankment	400	34	325.248	1152.36	1115.42	-573.029	1115.42
38	0.997929	1317.91	39.6426	Embankment	400	34	314.684	1114.93	1059.93	-624.622	1059.93
39	0.869646	1092.41	42.1765	Embankment	400	34	300.254	1063.8	984.128	-675.001	984.128
40	0.869646	1036.11	42.1765	Embankment	400	34	289.741	1026.56	928.908	-724.166	928.908
41	1.12828	1254.33	44.3816	Embankment	400	34	273.574	969.276	843.989	-783.199	843.989
42	0.98271	1001.48	46.1878	Embankment	400	34	256.094	907.342	752.164	-849.608	752.164
43	0.851758	792.966	47.9098	Embankment	400	34	239.629	849.008	665.682	-910.988	665.682
44	0.852215	711.008	49.2697	Embankment	400	34	222.53	788.427	575.867	-971.289	575.867
45	0.852215	603.212	49.2697	Embankment	400	34	202.81	718.557	472.28	-1033.05	472.28
46	0.842655	489.151	48.9944	Embankment	400	34	183.279	649.36	369.691	-1094.17	369.691
47	0.842655	382.983	48.9944	Embankment	400	34	163.602	579.642	266.33	-1154.64	266.33
48	0.87805	287.149	48.482	Embankment	400	34	144.157	510.75	164.194	-1215.83	164.194
49	0.87805	173.935	48.482	Embankment	400	34	123.955	439.173	58.076	-1277.72	58.076
50	0.932319	62.29	47.7909	Embankment	400	34	103.826	367.856	-47.6555	-1340.73	-47.6555

Interslice Data

Global Minimum Query (bishop simplified) - Safety Factor: 3.54301



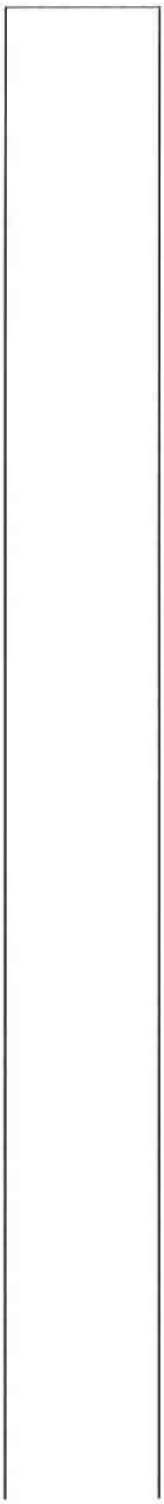
Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [degrees]
1	191.755	242.95	0	0	0
2	192.699	242.237	142.255	0	0
3	193.643	241.523	378.082	0	0
4	194.826	240.65	795.177	0	0
5	196.01	239.776	1374.47	0	0
6	196.915	239.287	1805.95	0	0
7	197.819	238.797	2309.2	0	0
8	198.897	238.383	2836.31	0	0
9	199.976	237.968	3426.77	0	0
10	200.789	237.765	3792.9	0	0
11	201.601	237.562	4180.61	0	0
12	202.414	237.358	4589.92	0	0
13	203.799	237.175	5129.48	0	0
14	205.184	236.992	5704.08	0	0
15	206.105	236.966	5976.35	0	0
16	207.025	236.94	6256.27	0	0
17	207.946	236.914	6543.85	0	0
18	208.922	236.977	6728.64	0	0
19	209.899	237.04	6916.68	0	0
20	210.875	237.103	7107.95	0	0
21	211.918	237.25	7200.43	0	0
22	212.96	237.396	7293.52	0	0
23	214.019	237.61	7293.28	0	0
24	215.078	237.823	7292.32	0	0
25	216.127	238.098	7198.95	0	0
26	217.175	238.373	7104.6	0	0
27	218.034	238.656	6943.11	0	0
28	218.893	238.939	6781.56	0	0
29	219.751	239.222	6619.96	0	0
30	220.606	239.571	6365.83	0	0
31	221.46	239.921	6113.35	0	0
32	222.314	240.27	5862.52	0	0
33	223.126	240.668	5538.19	0	0
34	223.937	241.066	5217.97	0	0
35	224.749	241.464	4901.83	0	0
36	225.879	242.117	4349.83	0	0
37	227.01	242.77	3813.18	0	0
38	228.007	243.597	3215.52	0	0
39	229.005	244.423	2653.2	0	0
40	229.875	245.211	2138.92	0	0
41	230.745	245.999	1659.01	0	0
42	231.873	247.103	1035.76	0	0
43	232.856	248.128	516.969	0	0
44	233.707	249.071	93.3491	0	0
45	234.56	250.06	-286.962	0	0
46	235.412	251.05	-581.557	0	0
47	236.254	252.019	-785.41	0	0
48	237.097	252.988	-905.67	0	0
49	237.975	253.98	-941.945	0	0
50	238.853	254.972	-890.708	0	0
51	239.786	256	0	0	0

List Of Coordinates

Water Table

X	Y
0	234
750	234

External Boundary



X	Y
0	240
0	236
0	234
0	232
0	230
0	220
0	218
0	200
0	197
0	191
0	185
0	175
0	169
0	165
0	153
0	149
0	140
0	119
0	104
0	93
0	0
750	0
750	93
750	104
750	119
750	140
750	149
750	153
750	165
750	169
750	175
750	185
750	191
750	197
750	200
750	218
750	220
750	230
750	232
750	234
750	236
750	248
668	248
644	256
629	256
619.5	256
573	240.5
553	240.7
547	242.7
291	245.3
258.5	256
249	256
234	256
195	243

Material Boundary

X	Y
249	256
290	242.3
545.5	239.7
552.5	237.4
572.6	237.2
600	246.2
629	256

Material Boundary

X	Y
195	243
290	242.3

Material Boundary

X	Y
600	246.2
668	248

Material Boundary

X	Y
0	236
750	236

Material Boundary

X	Y
0	234
750	234

Material Boundary

X	Y
0	230
750	230

Material Boundary

X	Y
0	220
750	220

Material Boundary

X	Y

X	Y
0	218
750	218

Material Boundary

X	Y
0	200
750	200

Material Boundary

X	Y
0	197
750	197

Material Boundary

X	Y
0	191
750	191

Material Boundary

X	Y
0	185
750	185

Material Boundary

X	Y
0	175
750	175

Material Boundary

X	Y
0	169
750	169

Material Boundary

X	Y
0	165
750	165

Material Boundary

X	Y
0	153
750	153

Material Boundary

X	Y
0	149
750	149

Material Boundary

X	Y
0	140
750	140

Material Boundary

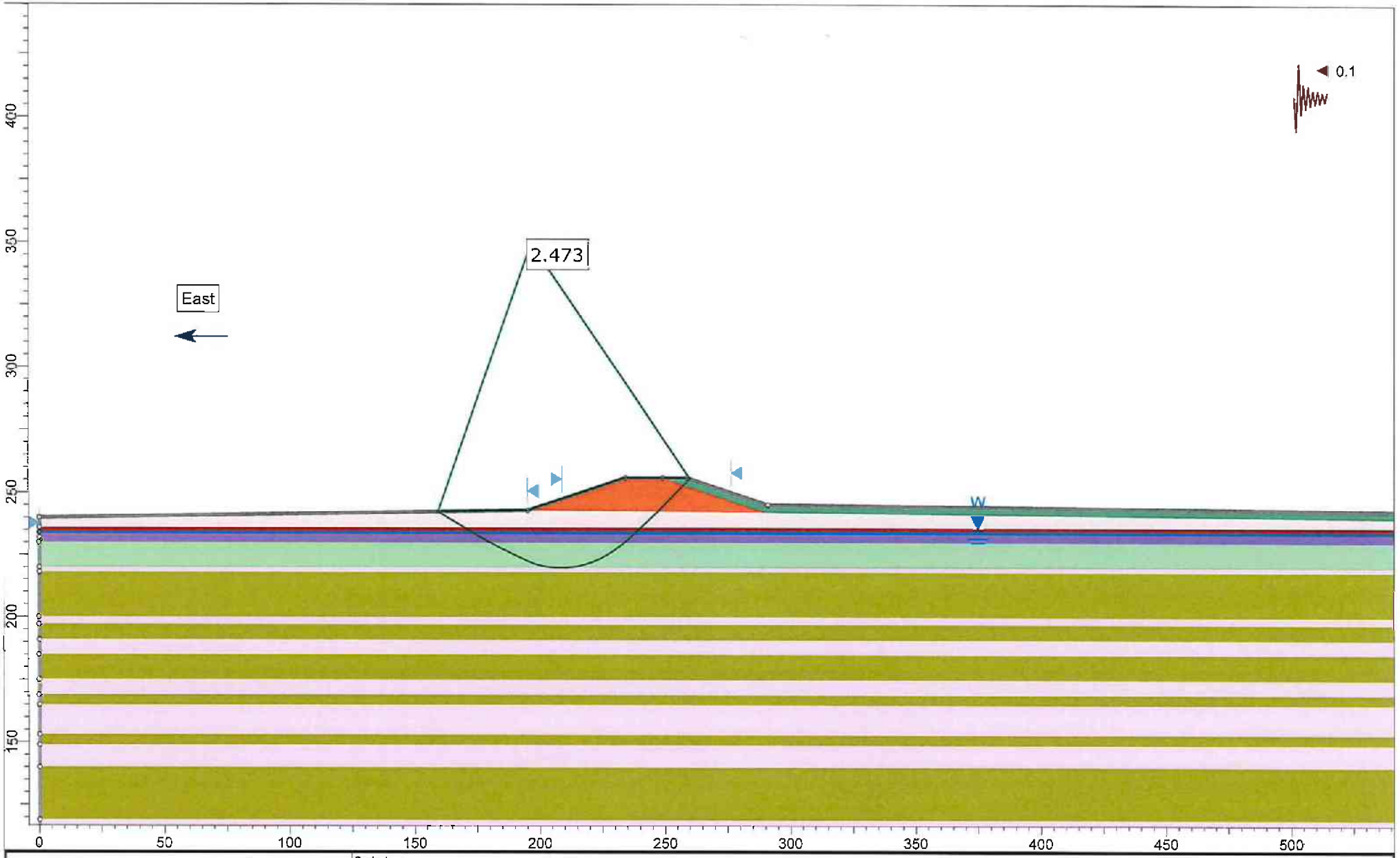
X	Y
0	119
750	119

Material Boundary

X	Y
0	104
750	104

Material Boundary

X	Y
0	93
750	93



rocscience	Project: SLIDE - An Interactive Slope Stability Program		
	Analysis Description: Surface Impoundment		
	Drawn By: JRM	Scale: 1:635	Company: AGEC
	Date: 10/3/2016, 3:17:47 PM		File Name: 1160276 Surface Impoundment Revised Design E EQ.slim

SLIDEINTERPRET 7.013

Slide Analysis Information

SLIDE - An Interactive Slope Stability Program

Project Summary

File Name:	1160276 Surface Impoundment Revised Design E EQ
Slide Modeler Version:	7.013
Project Title:	SLIDE - An Interactive Slope Stability Program
Analysis:	Surface Impoundment
Author:	JRM
Company:	AGEC
Date Created:	10/3/2016, 3:17:47 PM

General Settings

Units of Measurement:	Imperial Units
Time Units:	days
Permeability Units:	feet/second
Failure Direction:	Right to Left
Data Output:	Standard
Maximum Material Properties:	20
Maximum Support Properties:	20

Analysis Options

Slices Type:	Vertical
Analysis Methods Used	
	Bishop simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes

Groundwater Analysis

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [lbs/ft3]:	62.4
Advanced Groundwater Method:	None

Random Numbers

Pseudo-random Seed: 10116
Random Number Generation Method: Park and Miller v.3

Surface Options

Search Method: Auto Refine Search
Divisions along slope: 10
Circles per division: 10
Number of iterations: 10
Divisions to use in next iteration: 50%
Number of vertices per surface: 12
Minimum Elevation: Not Defined
Minimum Depth: Not Defined
Minimum Area: Not Defined
Minimum Weight: Not Defined

Seismic

Advanced seismic analysis: No
Staged pseudostatic analysis: No

Loading

Seismic Load Coefficient (Horizontal): 0.1

Material Properties

Property	Clay Liner	Embankment	Clay 1	Clay 2	Clay 3	Clay 4	CL/SM	Lower Clay
Color								
Strength Type	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb
Unit Weight [lbs/ft3]	110	130	130	120	110	110	110	110
Cohesion [psf]	270	400	200	200	200	200	200	200
Friction Angle [deg]	28	34	30	30	30	27	30	27
Water Surface	Water Table	Water Table	Water Table	Water Table	Water Table	Water Table	Water Table	Water Table
Hu Value	1	1	1	1	1	1	1	1

Global Minimums

Method: bishop simplified

FS	2.473000
Axis Location:	196.421, 349.644
Left Slip Surface Endpoint:	159.207, 242.449
Right Slip Surface Endpoint:	259.848, 255.556
Resisting Moment:	1.58404e+007 lb-ft
Driving Moment:	6.40532e+006 lb-ft
Total Slice Area:	1777.6 ft2
Surface Horizontal Width:	100.641 ft
Surface Average Height:	17.6628 ft

Global Minimum Coordinates

Method: bishop simplified

X	Y
159.207	242.449
162.352	240.526
163.172	240.025
166.582	237.969
169.84	236.014
173.166	234.02
176.247	232.207
180.095	230.011
183.354	228.295
186.63	226.629
189.167	225.372
191.112	224.428
194.194	222.961
198.042	221.369
201.008	220.569
204.043	220.111
207.162	220
211.195	220.021
215.043	220.542
217.659	221.175
221.051	222.334
224.464	223.882
227.769	225.762
228.996	226.56
232.591	229.215
234.516	230.901
236.182	232.448
238.895	234.991
241.985	237.893
244.607	240.361
247.002	242.636
248.675	244.397
250.369	246.177
252.256	248.142
254.123	250.057
255.922	251.875
258.385	254.263
259.848	255.556

Valid / Invalid Surfaces

Method: bishop simplified

Number of Valid Surfaces: 1821
Number of Invalid Surfaces: 2680

Error Codes:

Error Code -105 reported for 180 surfaces
Error Code -113 reported for 2500 surfaces

Error Codes

The following errors were encountered during the computation:

-105 = More than two surface / slope intersections with no valid slip surface.
-113 = Surface intersects outside slope limits.

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 2.473

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [degrees]	Base Material	Base Cohesion [psf]	Base Friction Angle [degrees]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]
1	3.14521	403.149	-31.4497	Clay 1	200	30	129.254	319.644	207.229	-467.223	207.229
2	0.819727	237.521	-31.4437	Clay 1	200	30	173.252	428.452	395.691	-391.569	395.691
3	3.41004	1569.12	-31.0758	Clay 1	200	30	219.131	541.912	592.209	-311.811	592.209
4	3.25793	2370.13	-30.9715	Clay 1	200	30	291.57	721.053	902.49	-186.685	902.49
5	0.0234664	20.1527	-30.9403	Clay 1	200	30	327.152	809.046	1054.9	-125.239	1054.9
6	3.30286	3242.83	-30.9403	Clay 2	200	30	360.549	891.638	1197.95	-63.0277	1197.95
7	0.0341715	37.7649	-30.4872	Clay 2	200	30	392.888	971.612	1336.47	-0.62769	1336.47
8	3.04618	3680.05	-30.4872	Clay 3	200	30	405.601	1003.05	1446.88	55.9548	1390.93
9	3.84862	5520.46	-29.7086	Clay 3	200	30	431.048	1065.98	1680.35	180.424	1499.92
10	3.25836	5397.92	-27.7665	Clay 4	200	27	403.67	998.275	1869.17	302.463	1566.7
11	1.63802	2951.22	-26.954	Clay 4	200	27	417.085	1031.45	2013.79	381.975	1631.82
12	1.63802	3106.67	-26.954	Clay 4	200	27	426.964	1055.88	2113.72	433.951	1679.77
13	2.53743	5114.73	-26.3498	Clay 4	200	27	438.042	1083.28	2232.68	499.152	1733.53
14	1.94477	4164.26	-25.904	Clay 4	200	27	450.094	1113.08	2359.86	567.833	1792.03
15	3.08178	7023.06	-25.4484	Clay 4	200	27	463.344	1145.85	2499.39	643.057	1856.33
16	3.84879	9636.4	-22.4702	Clay 4	200	27	485.997	1201.87	2704.75	738.479	1966.27
17	2.96573	8243.26	-15.1109	Clay 4	200	27	514.646	1272.72	2918.47	813.131	2105.34
18	3.03479	9039.81	-8.57485	Clay 4	200	27	535.613	1324.57	3059.49	852.394	2207.1
19	3.11941	9805.38	-2.04039	Clay 4	200	27	553.296	1368.3	3163.06	870.139	2292.92
20	2.01618	6573.07	0.295757	Clay 4	200	27	572.046	1414.67	3257.21	873.282	2383.92
21	2.01618	6746.91	0.295757	Clay 4	200	27	589.927	1458.89	3343.34	872.632	2470.71
22	1.92434	6575.2	7.70792	Clay 4	200	27	590.352	1459.94	3336.96	864.182	2472.78
23	1.92434	6680.54	7.70792	Clay 4	200	27	604.581	1495.13	3389.78	847.929	2541.85
24	2.61576	9209.65	13.6045	Clay 4	200	27	607.06	1501.26	3373.92	820.053	2553.86
25	1.69588	6016.25	18.8667	Clay 4	200	27	607.833	1503.17	3339.84	782.221	2557.62
26	1.69588	6032.77	18.8667	Clay 4	200	27	616.668	1525.02	3346.57	746.058	2600.51
27	1.70675	6070.18	24.4025	Clay 4	200	27	611.484	1512.2	3279.15	703.818	2575.33
28	1.70675	6051.03	24.4025	Clay 4	200	27	618.471	1529 48	3264.76	655.501	2609.26
29	1.65202	5821.49	29.63	Clay 4	200	27	611.241	1511.6	3176.19	602.027	2574.17
30	1.65202	5769	29.63	Clay 4	200	27	616.199	1523.86	3141.61	543.394	2598.21
31	1.22767	4246.37	33.0383	Clay 4	200	27	610.882	1510.71	3061.59	489.167	2572.42
32	1.79758	6125.28	36.4449	Clay 4	200	27	603.93	1493.52	2961.52	422.839	2538.68
33	1.79758	6002.82	36.4449	Clay 4	200	27	606.563	1500.03	2891.45	340.005	2551.45
34	0.896139	2940.73	41.22	Clay 4	200	27	593.409	1467.5	2761.7	274.094	2487.61
35	1.02841	3316.54	41.22	Clay 3	200	30	649.268	1605.64	2656.12	221.491	2434.63
36	1.66657	5159.37	42.874	Clay 3	200	30	632.624	1564.48	2508.46	145.106	2363.36
37	1.65499	4841.42	43.1568	Clay 3	200	30	617.38	1526.78	2346.47	48.4159	2298.05
38	1.05732	2939.89	43.1568	Clay 2	200	30	598.912	1481.11	2218.95	-30.9313	2218.95
39	1.0743	2858.19	43.1937	Clay 2	200	30	575.795	1423.94	2119.92	-93.3313	2119.92
40	2.01631	4994.31	43.1937	Clay 1	200	30	540.643	1337.01	1969.37	-183.863	1969.37
41	2.62134	5749.93	43.27	Clay 1	200	30	486.134	1202.21	1735.88	-319.915	1735.88
42	2.39527	4515.59	43.5302	Clay 1	200	30	426.425	1054.55	1480.12	-467.899	1480.12
43	1.67336	2715.58	46.4662	Embankment	400	34	469.568	1161.24	1128.59	-593.844	1128.59
44	1.6932	2351.75	46.4327	Embankment	400	34	420.115	1038.94	947.274	-704.334	947.274
45	1.88749	2140.04	46.1419	Embankment	400	34	366.86	907.244	752.019	-821.157	752.019
46	1.86653	1622.14	45.7433	Embankment	400	34	311.57	770.512	549.309	-942.209	549.309
47	1.79909	1104.9	45.2968	Embankment	400	34	258.12	638.33	353.339	-1058.69	353.339
48	1.39014	552.92	44.1077	Embankment	400	34	213.725	528.543	190.573	-1157.45	190.573
49	1.07286	266.405	44.1077	Clay Liner	270	28	134.53	332.693	117.91	-1231.94	117.91
50	1.46354	142.668	41.4716	Clay Liner	270	28	109.357	270.44	0.827139	-1304.74	0.827139

Interslice Data

Global Minimum Query (bishop simplified) - Safety Factor: 2.473

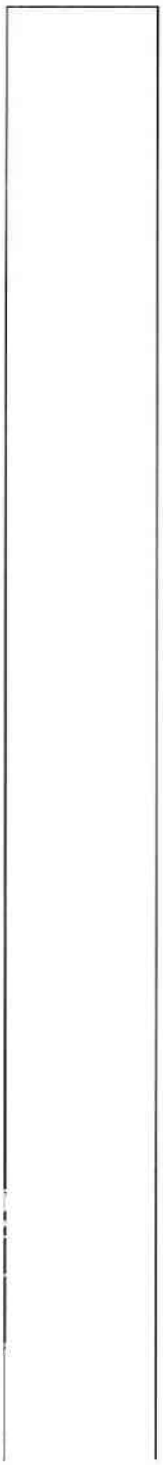
Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [degrees]
1	159.207	242.449	0	0	0
2	162.352	240.526	764.839	0	0
3	163.172	240.025	1081.44	0	0
4	166.582	237.969	2888.82	0	0
5	169.84	236.014	5366.42	0	0
6	169.863	236	5386.92	0	0
7	173.166	234.02	8625.28	0	0
8	173.201	234	8661.82	0	0
9	176.247	232.207	12124.2	0	0
10	180.095	230.011	16921.1	0	0
11	183.354	228.295	20903.2	0	0
12	184.992	227.462	22968.7	0	0
13	186.63	226.629	25118	0	0
14	189.167	225.372	28524.1	0	0
15	191.112	224.428	31211.9	0	0
16	194.194	222.961	35602.9	0	0
17	198.042	221.369	40815.4	0	0
18	201.008	220.569	43854.6	0	0
19	204.043	220.111	45976.1	0	0
20	207.162	220	47073.1	0	0
21	209.179	220.01	47535.2	0	0
22	211.195	220.021	48015.1	0	0
23	213.119	220.281	47624.5	0	0
24	215.043	220.542	47237	0	0
25	217.659	221.175	45768.2	0	0
26	219.355	221.754	44261.8	0	0
27	221.051	222.334	42764.9	0	0
28	222.758	223.108	40662.5	0	0
29	224.464	223.882	38585	0	0
30	226.117	224.822	36028.2	0	0
31	227.769	225.762	33517.4	0	0
32	228.996	226.56	31398.3	0	0
33	230.794	227.887	27940	0	0
34	232.591	229.215	24591.8	0	0
35	233.488	230	22661.4	0	0
36	234.516	230.901	20604.4	0	0
37	236.182	232.448	17261.5	0	0
38	237.837	234	14157.9	0	0
39	238.895	234.991	12297.3	0	0
40	239.969	236	10491.9	0	0
41	241.985	237.893	7354.52	0	0
42	244.607	240.361	3770.33	0	0
43	247.002	242.636	972.264	0	0
44	248.675	244.397	-501.288	0	0
45	250.369	246.177	-1711.33	0	0
46	252.256	248.142	-2710.06	0	0
47	254.123	250.057	-3342.97	0	0
48	255.922	251.875	-3631.39	0	0
49	257.312	253.223	-3646.37	0	0
50	258.385	254.263	-3651.3	0	0
51	259.848	255.556	0	0	0

List Of Coordinates

Water Table

X	Y
0	234
750	234

External Boundary



X	Y
0	240
0	236
0	234
0	232
0	230
0	220
0	218
0	200
0	197
0	191
0	185
0	175
0	169
0	165
0	153
0	149
0	140
0	119
0	104
0	93
0	0
750	0
750	93
750	104
750	119
750	140
750	149
750	153
750	165
750	169
750	175
750	185
750	191
750	197
750	200
750	218
750	220
750	230
750	232
750	234
750	236
750	248
668	248
644	256
629	256
619.5	256
573	240.5
553	240.7
547	242.7
291	245.3
258.5	256
249	256
234	256
195	243

Material Boundary

X	Y
249	256
290	242.3
545.5	239.7
552.5	237.4
572.6	237.2
600	246.2
629	256

Material Boundary

X	Y
195	243
290	242.3

Material Boundary

X	Y
600	246.2
668	248

Material Boundary

X	Y
0	236
750	236

Material Boundary

X	Y
0	234
750	234

Material Boundary

X	Y
0	230
750	230

Material Boundary

X	Y
0	220
750	220

Material Boundary

X	Y
0	218
750	218

Material Boundary

X	Y
0	200
750	200

Material Boundary

X	Y
0	197
750	197

Material Boundary

X	Y
0	191
750	191

Material Boundary

X	Y
0	185
750	185

Material Boundary

X	Y
0	175
750	175

Material Boundary

X	Y
0	169
750	169

Material Boundary

X	Y
0	165
750	165

Material Boundary

X	Y
0	153
750	153

Material Boundary

X	Y
0	149
750	149

Material Boundary

X	Y
0	140
750	140

Material Boundary

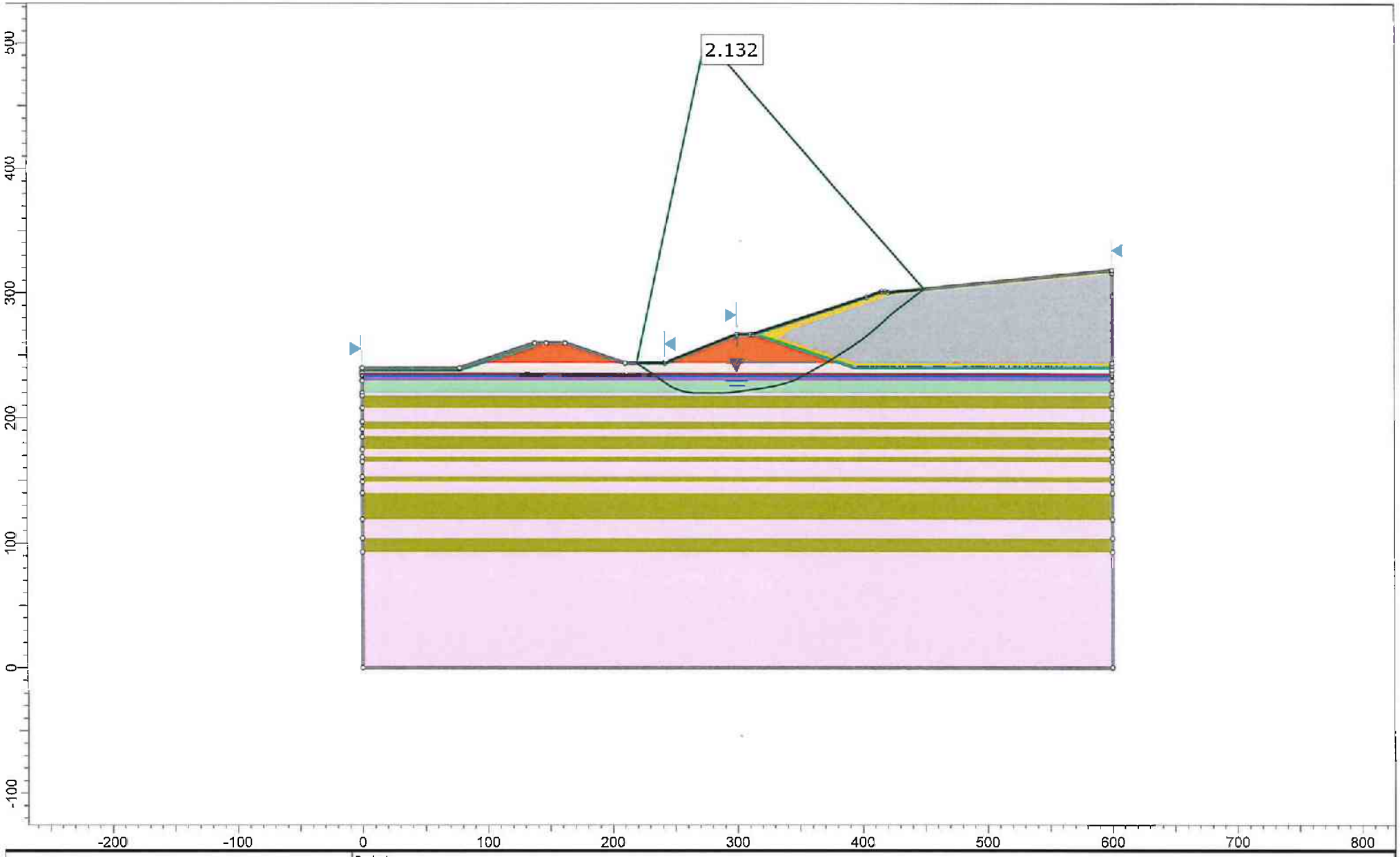
X	Y
0	119
750	119

Material Boundary

X	Y
0	104
750	104

Material Boundary

X	Y
0	93
750	93



rocscience	Project	SLIDE - An Interactive Slope Stability Program		
	Analysis Description	Cell 7 Long Term Static - with Surface Impoundment		
	Drawn By	JRM	Scale 1:1273	Company AGEC
	Date	10/3/2016, 3:17:47 PM		File Name 1160276 Cell 7 impound final design.slim

SLIDEINTERPRET 7.013

Slide Analysis Information

SLIDE - An Interactive Slope Stability Program

Project Summary

File Name:	1160276 Cell 7 impound final design
Slide Modeler Version:	7.013
Project Title:	SLIDE - An Interactive Slope Stability Program
Analysis:	Cell 7 Long Term Static - with Surface Impoundment
Author:	JRM
Company:	AGEC
Date Created:	10/3/2016, 3:17:47 PM

General Settings

Units of Measurement:	Imperial Units
Time Units:	days
Permeability Units:	feet/second
Failure Direction:	Right to Left
Data Output:	Standard
Maximum Material Properties:	20
Maximum Support Properties:	20

Analysis Options

Slices Type:	Vertical
Analysis Methods Used	
	Bishop simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes

Groundwater Analysis

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [lbs/ft3]:	62.4
Advanced Groundwater Method:	None

Random Numbers

Pseudo-random Seed: 10116
Random Number Generation Method: Park and Miller v.3

Surface Options

Search Method:	Auto Refine Search
Divisions along slope:	10
Circles per division:	10
Number of iterations:	10
Divisions to use in next iteration:	50%
Number of vertices per surface:	12
Minimum Elevation:	Not Defined
Minimum Depth:	Not Defined
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

Seismic

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No

Material Properties

Property	Soil Cover	Clay Liner	Embankment	Landfill	Clay 1	Clay 2	Clay 3	Clay 4
Color								
Strength Type	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb
Unit Weight [lbs/ft3]	120	110	130	120	130	120	110	110
Cohesion [psf]	100	270	400	100	200	200	200	200
Friction Angle [deg]	28	28	34	25	30	30	30	27
Water Surface	Piezometric Line 1	Piezometric Line 1	Piezometric Line 1	Piezometric Line 1	Piezometric Line 1	Piezometric Line 1	Piezometric Line 1	Piezometric Line 1
Hu Value	1	1	1	1	1	1	1	1

Property	CL/SM	Lower Clay
Color		
Strength Type	Mohr-Coulomb	Mohr-Coulomb
Unit Weight [lbs/ft3]	110	110
Cohesion [psf]	200	200
Friction Angle [deg]	30	27
Water Surface	Piezometric Line 1	Piezometric Line 1
Hu Value	1	1

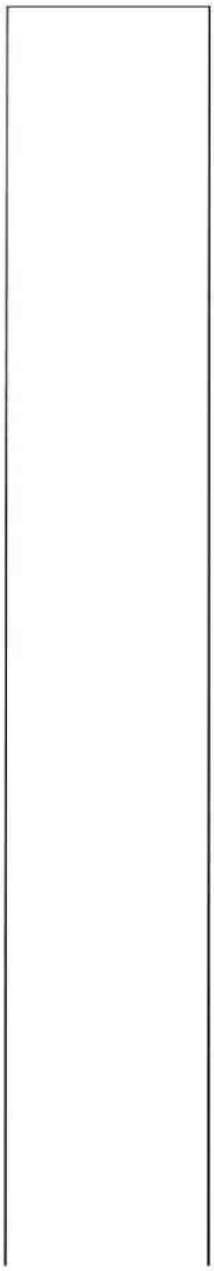
Global Minimums

Method: bishop simplified

FS	2.132150
Axis Location:	275.386, 504.002
Left Slip Surface Endpoint:	219.649, 244.000
Right Slip Surface Endpoint:	449.946, 303.411
Resisting Moment:	1.32061e+008 lb-ft
Driving Moment:	6.19382e+007 lb-ft
Total Slice Area:	7364 ft2
Surface Horizontal Width:	230.297 ft
Surface Average Height:	31.9761 ft

Global Minimum Coordinates

Method: bishop simplified



X	Y
219.649	244
225.513	239.985
231.378	235.971
235.468	233.171
239.558	230.371
247.112	225.2
252.44	222.682
258.222	220.922
264.441	220
282.893	220
290.576	220
294.851	220.29
300.522	221.071
308.289	222.142
316.021	223.188
323.004	224.222
329.885	225.599
336.89	227.378
345.306	230.014
347.868	231.304
351.661	233.29
358.631	237.066
365.014	240.523
371.44	244.025
377.355	247.781
383.269	251.537
389.184	255.293
394.81	259.02
400.018	262.733
405.173	266.705
409.461	270.354
414.349	274.753
419.247	279.16
424.156	283.57
429.218	287.569
434.272	291.544
442.125	297.49
449.946	303.411

Valid / Invalid Surfaces

Method: bishop simplified

Number of Valid Surfaces: 1491
Number of Invalid Surfaces: 3010

Error Codes:

Error Code -105 reported for 769 surfaces
Error Code -113 reported for 2234 surfaces
Error Code -116 reported for 7 surfaces

Error Codes

The following errors were encountered during the computation:

-105 = More than two surface / slope intersections with no valid slip surface.
-113 = Surface intersects outside slope limits.
-116 = Not enough slices to analyze the surface Increase the number of slices in the job control in the modeler.

Slice Data

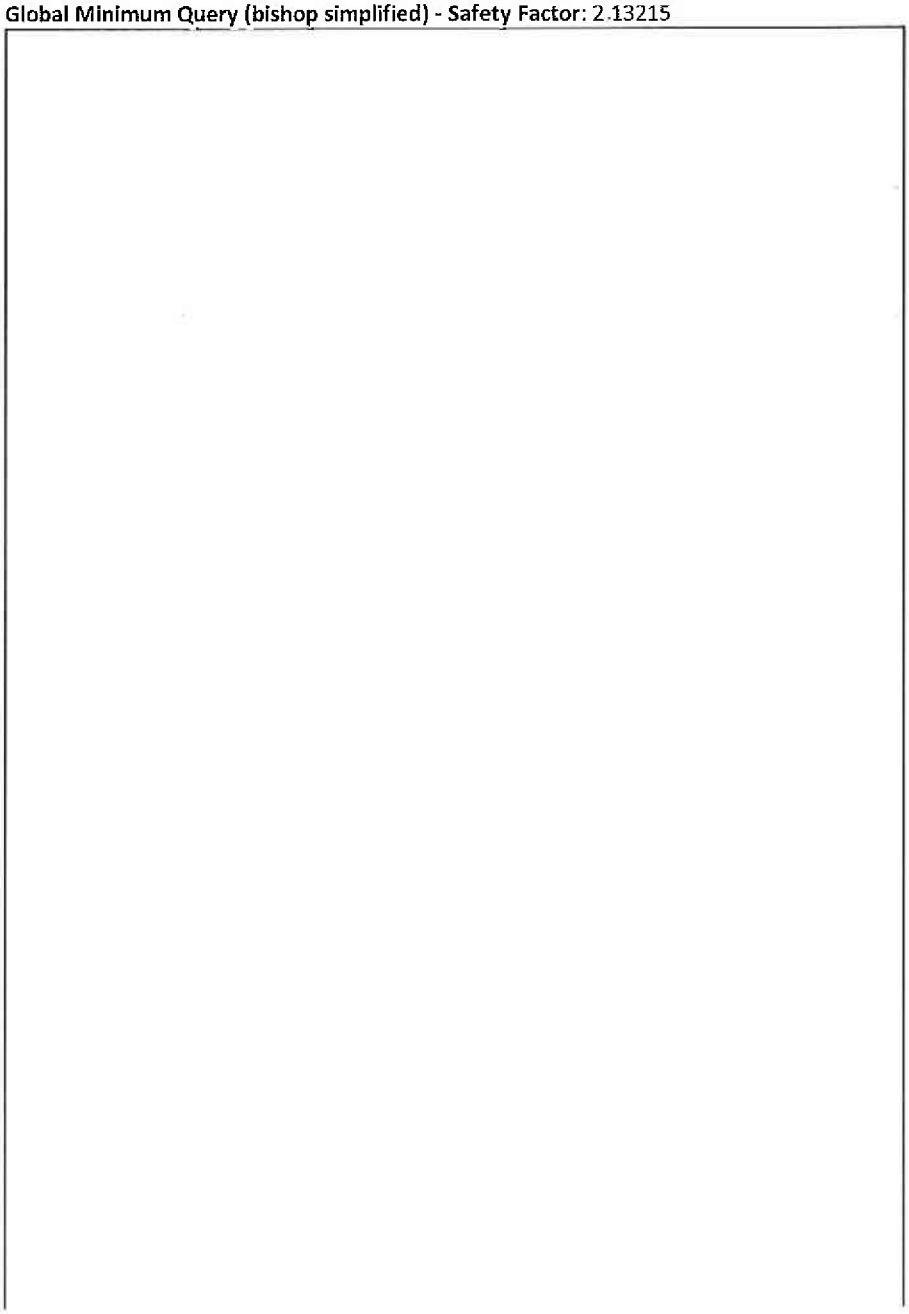
Global Minimum Query (bishop simplified) - Safety Factor: 2.13215

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [degrees]	Base Material	Base Cohesion [psf]	Base Friction Angle [degrees]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]
1	5.86447	1530.32	-34.394	Clay 1	200	30	201.885	430.45	399.15	-498.745	399.15
2	5.86449	4590.97	-34.394	Clay 1	200	30	375.363	800.33	1039.8	-248.235	1039.8
3	2.87896	3344.63	-34.394	Clay 2	200	30	501.311	1068.87	1504.93	-61.4898	1504.93
4	1.21105	1605.37	-34.394	Clay 3	200	30	547.176	1166.66	1700.17	25.866	1674.3
5	4.09006	6238.11	-34.394	Clay 3	200	30	575.883	1227.87	1919.42	139.089	1780.33
6	0.54205	921.263	-34.3939	Clay 3	200	30	600.971	1281.36	2110.99	238.023	1872.96
7	7.01231	14465.6	-34.3939	Clay 4	200	27	587.435	1252.5	2465.02	399.37	2065.65
8	5.32794	14731	-25.2917	Clay 4	200	27	681.481	1453.02	3086.87	627.688	2459.18
9	5.78181	19016.4	-16.9343	Clay 4	200	27	752.653	1604.77	3518.17	761.162	2757.01
10	6.21868	23310.9	-8.43047	Clay 4	200	27	816.626	1741.17	3869.57	844.844	3024.73
11	6.15076	25346.2	1.16664e-006	Clay 4	200	27	869.803	1854.55	4120.82	873.6	3247.22
12	6.15076	27313.5	1.16664e-006	Clay 4	200	27	946.233	2017.51	4440.67	873.6	3567.07
13	6.15076	29280.7	1.16665e-006	Clay 4	200	27	1022.67	2180.48	4760.5	873.6	3886.9
14	7.68365	39341.8	1.88414e-005	Clay 4	200	27	1108.62	2363.75	5120.2	873.6	4246.6
15	4.2747	23148.2	3.88377	Clay 4	200	27	1162.41	2478.44	5336.24	864.545	4471.69
16	5.67058	31832.3	7.84037	Clay 4	200	27	1197.28	2552.78	5448.71	831.129	4617.58
17	7.76704	43753.9	7.85142	Clay 4	200	27	1215.15	2590.88	5465.71	773.349	4692.36
18	7.73179	42836.1	7.70664	Clay 4	200	27	1209.63	2579.12	5376.57	707.288	4669.28
19	6.98383	39217.2	8.42081	Clay 4	200	27	1238.41	2640.48	5432.09	642.387	4789.7
20	6.88018	39395.7	11.3147	Clay 4	200	27	1266.07	2699.46	5472.64	567.179	4905.47
21	7.00494	40636.6	14.2518	Clay 4	200	27	1289.81	2750.07	5473.52	468.715	5004.8
22	4.20842	24543.6	17.3912	Clay 4	200	27	1301.18	2774.32	5424.46	372.077	5052.39
23	4.20842	24569	17.3912	Clay 4	200	27	1320.82	2816.18	5424.37	289.826	5134.55
24	2.5617	14899.2	26.7212	Clay 3	200	30	1418.85	3025.21	5101.87	208.465	4893.41
25	3.79279	21808.5	27.6431	Clay 3	200	30	1420.57	3028.86	5005.98	106.252	4899.72
26	1.30999	7458.12	28.4414	Clay 3	200	30	1421.04	3029.86	4923.6	22.1373	4901.47
27	3.69255	20767	28.4414	Clay 2	200	30	1409.91	3006.14	4860.37	-62.4	4860.37
28	1.96794	10895.1	28.4414	Clay 1	200	30	1389.2	2961.98	4783.88	-158.056	4783.88
29	6.38222	34414.3	28.4414	Clay 1	200	30	1355.17	2889.42	4658.21	-299.165	4658.21
30	6.42653	33223.4	28.5899	Clay 1	200	30	1301.59	2775.19	4460.36	-516.292	4460.36
31	2.80251	13990.2	32.4166	Embankment	400	34	1471.27	3136.97	4057.71	-681.092	4057.71
32	0.115088	566.685	32.4166	Clay 1	200	30	1217.73	2596.38	4150.66	-738.898	4150.66
33	2.99701	14627.2	32.4166	Clay Liner	270	28	1160.04	2473.38	4143.95	-800.557	4143.95
34	0.077256	373.834	32.4166	Clay Liner	270	28	1151.06	2454.23	4107.94	-861.467	4107.94
35	2.17787	10448.9	32.4166	Soil Cover	100	28	1073.38	2288.6	4116.15	-906.147	4116.15
36	3.65948	17164.3	32.4166	Landfill	100	25	941.885	2008.24	4092.25	-1021.8	4092.25
37	5.91461	26699.7	32.4166	Landfill	100	25	908.055	1936.11	3937.56	-1211.49	3937.56
38	5.6265	24152.1	33.5245	Landfill	100	25	860.953	1835.68	3722.19	-1444.98	3722.19

39	5.20788	21141.9	35.4865	Landfill	100	25	808.658	1724.18	3483.07	-1677.12	3483.07
40	5.15421	19604.9	37.6177	Landfill	100	25	752.034	1603.45	3224.15	-1916.88	3224.15
41	4.28813	15250.7	40.3982	Landfill	100	25	695.308	1482.5	2964.77	-2154.66	2964.77
42	4.8886	16073.6	41.9813	Landfill	100	25	640.035	1364.65	2712.06	-2405.76	2712.06
43	4.89797	14350.7	41.9813	Landfill	100	25	574.608	1225.15	2412.88	-2680.51	2412.88
44	4.90827	11403.9	41.9387	Landfill	100	25	463.885	989.072	1906.62	-2955.6	1906.62
45	5.06279	9418.11	38.3016	Landfill	100	25	386.913	824.957	1554.67	-3217.95	1554.67
46	5.05347	7291.61	38.1869	Landfill	100	25	309.265	659.4	1199.64	-3466.72	1199.64
47	3.92678	4241.72	37.13	Landfill	100	25	242.921	517.943	896.282	-3683.49	896.282
48	3.92678	3026.85	37.13	Landfill	100	25	184.87	394.171	630.853	-3869.01	630.853
49	5.27514	2153.97	37.13	Landfill	100	25	116.854	249.15	319.852	-4086.38	319.852
50	2.54505	255.164	37.13	Soil Cover	100	28	60.4835	128.96	54.4655	-4271.11	54.4655

Interslice Data

Global Minimum Query (bishop simplified) - Safety Factor: 2.13215



Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [degrees]
1	219.649	244	0	0	0
2	225.513	239.985	2786.37	0	0
3	231.378	235.971	9162.06	0	0
4	234.257	234	13571.3	0	0
5	235.468	233.171	15643.4	0	0
6	239.558	230.371	23373	0	0
7	240.1	230	24482.1	0	0
8	247.112	225.2	40434.3	0	0
9	252.44	222.682	51836.6	0	0
10	258.222	220.922	62381.8	0	0
11	264.441	220	71026.6	0	0
12	270.591	220	76376.5	0	0
13	276.742	220	82196.6	0	0
14	282.893	220	88486.8	0	0
15	290.576	220	97005	0	0
16	294.851	220.29	100425	0	0
17	300.522	221.071	102960	0	0
18	308.289	222.142	106544	0	0
19	316.021	223.188	110271	0	0
20	323.004	224.222	113304	0	0
21	329.885	225.599	114481	0	0
22	336.89	227.378	113777	0	0
23	341.098	228.696	112103	0	0
24	345.306	230.014	110512	0	0
25	347.868	231.304	107567	0	0
26	351.661	233.29	103011	0	0
27	352.971	234	101379	0	0
28	356.663	236	96864.3	0	0
29	358.631	237.066	94499	0	0
30	365.014	240.523	87045.4	0	0
31	371.44	244.025	79788.2	0	0
32	374.243	245.805	76690	0	0
33	374.358	245.878	76526.8	0	0
34	377.355	247.781	72116.8	0	0
35	377.432	247.83	72004.2	0	0
36	379.61	249.213	68649.2	0	0
37	383.269	251.537	62586.2	0	0
38	389.184	255.293	53167.8	0	0
39	394.81	259.02	44137.3	0	0
40	400.018	262.733	35416.5	0	0
41	405.173	266.705	26486.9	0	0
42	409.461	270.354	18649.3	0	0
43	414.349	274.753	9848.29	0	0
44	419.247	279.16	2028.47	0	0
45	424.156	283.57	-4102.71	0	0
46	429.218	287.569	-8360.34	0	0
47	434.272	291.544	-11565.8	0	0
48	438.199	294.517	-13276.6	0	0
49	442.125	297.49	-14426.2	0	0
50	447.4	301.484	-15087.3	0	0
51	449.946	303.411	0	0	0

List Of Coordinates

Piezoline

X	Y
0	234
600	234

External Boundary

X	Y
0	240
0	237
0	236
0	234
0	230
0	220
0	218
0	208
0	197
0	191
0	185
0	175
0	169
0	165
0	153
0	149
0	140
0	119
0	104
0	93
0	0
600	0
600	93
600	104
600	119
600	140
600	149
600	153
600	165
600	169
600	175
600	185
600	191
600	197
600	208
600	218
600	220
600	230
600	234
600	236
600	238
600	239
600	242

600	244
600	316.5
600	318.5
421	300.5
418.5	301.5
416	301.5
404	297
312.5	267
310.5	267
300	267
242.5	244
210.5	244
162.5	260
147.5	260
138	260
78	240

Material Boundary

X	Y
312.5	267
318.8	267
412	298.1
404	297

Material Boundary

X	Y
318.8	267
327.2	264.5
333.6	264.5
344.5	272
421	298.5
443.5	301.1
600	316.5

Material Boundary

X	Y
327.2	264.5
395	242
600	242

Material Boundary

X	Y
333.6	264.5
395.3	244
600	244

Material Boundary

X	Y
312.5	267
394.5	239
600	239

Material Boundary

X	Y
0	234
600	234

Material Boundary

X	Y
0	230
600	230

Material Boundary

X	Y
0	220
600	220

Material Boundary

X	Y
0	218
600	218

Material Boundary

X	Y
0	208
600	208

Material Boundary

X	Y
0	197
600	197

Material Boundary

X	Y
0	191
600	191

Material Boundary

X	Y
0	185
600	185

Material Boundary

X	Y
0	175
600	175

Material Boundary

X	Y
0	169
600	169

Material Boundary

X	Y
0	165
600	165

Material Boundary

X	Y
0	153
600	153

Material Boundary

X	Y
0	149
600	149

Material Boundary

X	Y
0	140
600	140

Material Boundary

X	Y
0	119
600	119

Material Boundary

X	Y
0	104
600	104

Material Boundary

X	Y
0	93
600	93

Material Boundary

X	Y
0	236
600	236

Material Boundary

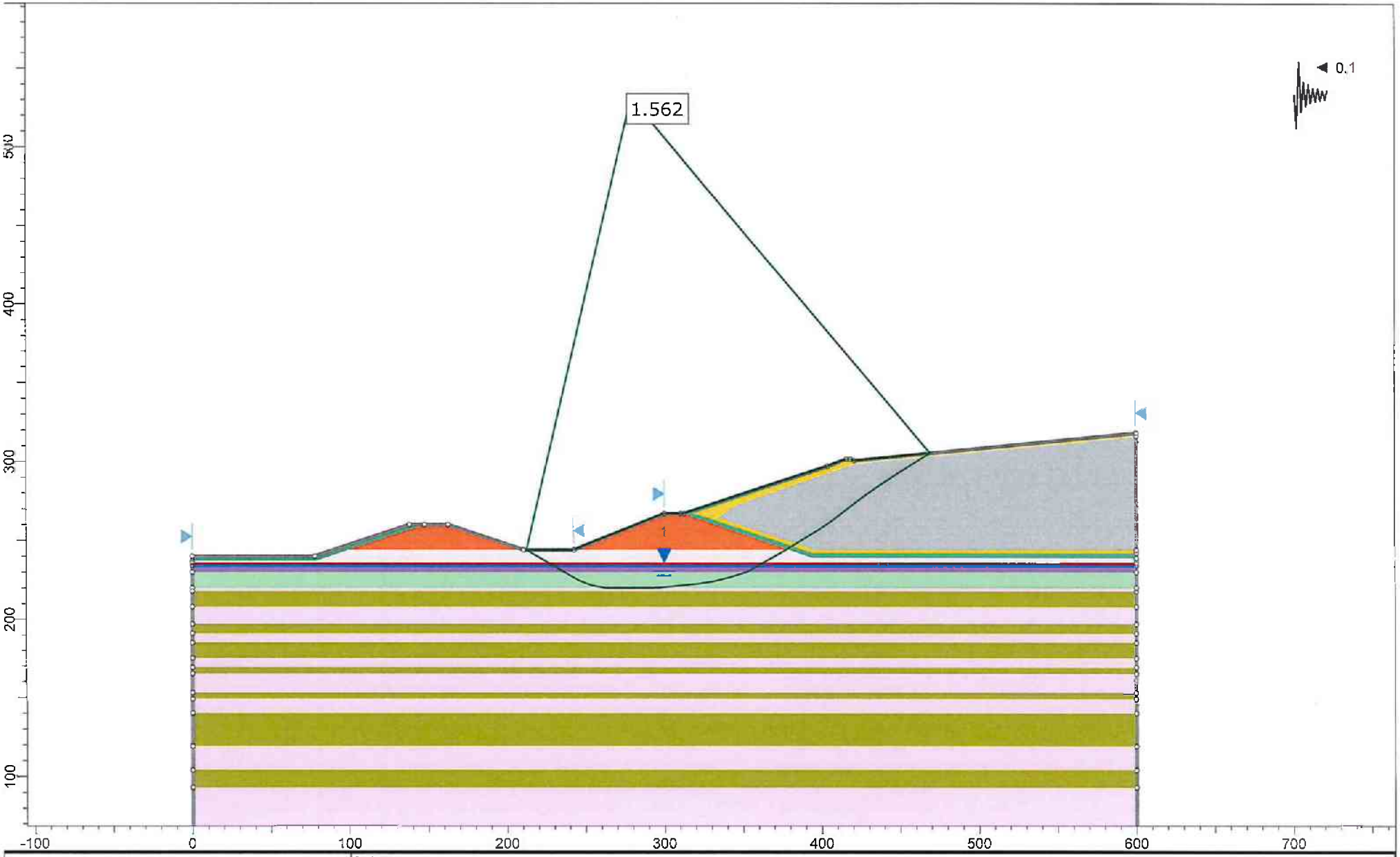
X	Y
242.5	244
379.5	244
312.5	267

Material Boundary

X	Y
0	237
78.5	237
99.5	244
147.5	260

Material Boundary

X	Y
99.5	244
210.5	244



rocscience	Project	SLIDE - An Interactive Slope Stability Program		
	Analysis Description	Cell 7 Long Term Static - with Surface Impoundment		
	Drawn By	JRM	Scale 1:1013	Company AGEC
	Date	10/3/2016, 3:17:47 PM		File Name 1160276 Cell 7 Impound final design EQ.slim

SLIDEINTERPRET 7.013

Slide Analysis Information

SLIDE - An Interactive Slope Stability Program

Project Summary

File Name:	1160276 Cell 7 Impound final design EQ
Slide Modeler Version:	7.013
Project Title:	SLIDE - An Interactive Slope Stability Program
Analysis:	Cell 7 Long Term Static - with Surface Impoundment
Author:	JRM
Company:	AGEC
Date Created:	10/3/2016, 3:17:47 PM

General Settings

Units of Measurement:	Imperial Units
Time Units:	days
Permeability Units:	feet/second
Failure Direction:	Right to Left
Data Output:	Standard
Maximum Material Properties:	20
Maximum Support Properties:	20

Analysis Options

Slices Type:	Vertical
Analysis Methods Used	
	Bishop simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes

Groundwater Analysis

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [lbs/ft3]:	62.4
Advanced Groundwater Method:	None

Random Numbers

Pseudo-random Seed: 10116
Random Number Generation Method: Park and Miller v.3

Surface Options

Search Method:	Auto Refine Search
Divisions along slope:	10
Circles per division:	10
Number of iterations:	10
Divisions to use in next iteration:	50%
Number of vertices per surface:	12
Minimum Elevation:	Not Defined
Minimum Depth:	Not Defined
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

Seismic

Advanced seismic analysis: No
Staged pseudostatic analysis: No

Loading

Seismic Load Coefficient (Horizontal): 0.1

Material Properties

Property	Soil Cover	Clay Liner	Embankment	Landfill	Clay 1	Clay 2	Clay 3	Clay 4
Color								
Strength Type	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb	Mohr-Coulomb
Unit Weight [lbs/ft3]	120	110	130	120	130	120	110	110
Cohesion [psf]	100	270	400	100	200	200	200	200
Friction Angle [deg]	28	28	34	25	30	30	30	27
Water Surface	Piezometric Line 1	Piezometric Line 1	Piezometric Line 1	Piezometric Line 1	Piezometric Line 1	Piezometric Line 1	Piezometric Line 1	Piezometric Line 1
Hu Value	1	1	1	1	1	1	1	1

Property	CL/SM	Lower Clay
Color		
Strength Type	Mohr-Coulomb	Mohr-Coulomb
Unit Weight [lbs/ft3]	110	110
Cohesion [psf]	200	200
Friction Angle [deg]	30	27
Water Surface	Piezometric Line 1	Piezometric Line 1
Hu Value	1	1

Global Minimums

Method: bishop simplified

FS	1.562260
Axis Location:	279.518, 531.433
Left Slip Surface Endpoint:	212.492, 244.000
Right Slip Surface Endpoint:	469.248, 305.352
Resisting Moment:	1.56002e+008 lb-ft
Driving Moment:	9.98568e+007 lb-ft
Total Slice Area:	8222.33 ft2
Surface Horizontal Width:	256.757 ft
Surface Average Height:	32.0238 ft

Global Minimum Coordinates

Method: bishop simplified

X	Y
212.492	244
229.575	234.03
246.011	224.491
253.801	221.575
262.481	220
293.367	220
297.006	220.175
321.489	222.517
331.377	224.183
341.594	226.656
352.202	230.016
360.165	234.28
377.673	244.029
397.992	256.417
406.781	262.402
417.519	270.611
427.018	277.786
437.829	285.322
448.012	291.873
469.248	305.352

Valid / Invalid Surfaces

Method: bishop simplified

Number of Valid Surfaces: 1355
Number of Invalid Surfaces: 3146

Error Codes:

Error Code -105 reported for 685 surfaces
Error Code -113 reported for 2454 surfaces
Error Code -116 reported for 7 surfaces

Error Codes

The following errors were encountered during the computation:

-105 = More than two surface / slope intersections with no valid slip surface.
-113 = Surface intersects outside slope limits.
-116 = Not enough slices to analyze the surface Increase the number of slices in the job control in the modeler.

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.56226

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [degrees]	Base Material	Base Cohesion [psf]	Base Friction Angle [degrees]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]
1	6.85376	1781.98	-30.2687	Clay 1	200	30	285.733	446.39	426.761	-499.2	426.761
2	6.85376	5345.93	-30.2687	Clay 1	200	30	530.752	829.172	1089.76	-249.6	1089.76
3	3.37581	3909.91	-30.2687	Clay 2	200	30	708.961	1107.58	1571.98	-63.3299	1571.98
4	0.051353	65.64	-30.1292	Clay 2	200	30	764.329	1194.08	1721.79	-0.929862	1721.79
5	6.89226	10338.4	-30.1292	Clay 3	200	30	809.961	1265.37	1970.07	124.8	1845.27
6	4.74631	8882.74	-30.1292	Clay 4	200	27	775.818	1212.03	2321.76	335.543	1986.22
7	4.74631	10641.4	-30.1292	Clay 4	200	27	855.735	1336.88	2738.67	507.428	2231.25
8	7.78984	22368.5	-20.5216	Clay 4	200	27	958.349	1497.19	3230.22	684.345	2545.87
9	8.68031	30786.6	-10.2842	Clay 4	200	27	1079.77	1686.88	3742.64	824.46	2918.18
10	6.17708	24829.6	7.51336e-010	Clay 4	200	27	1154.08	1802.98	4019.63	873.6	3146.03
11	6.17708	26813.7	7.42109e-010	Clay 4	200	27	1258.85	1966.65	4340.84	873.6	3467.24
12	6.17708	28797.9	7.51336e-010	Clay 4	200	27	1363.61	2130.31	4662.06	873.6	3788.46
13	6.17708	30782	7.51336e-010	Clay 4	200	27	1468.37	2293.97	4983.26	873.6	4109.66
14	6.17708	32766.1	7.41846e-010	Clay 4	200	27	1573.13	2457.64	5304.46	873.6	4430.86
15	3.63946	20199.3	2.74901	Clay 4	200	27	1629.5	2545.7	5471.85	868.148	4603.7
16	6.12077	35013.9	5.46485	Clay 4	200	27	1666.34	2603.25	5561.08	844.426	4716.65
17	6.12077	34852.6	5.46485	Clay 4	200	27	1669.56	2608.29	5534.42	807.886	4726.54
18	6.12077	34578.7	5.46485	Clay 4	200	27	1666.96	2604.23	5489.91	771.346	4718.56
19	6.12077	35147.9	5.46485	Clay 4	200	27	1707.94	2668.24	5579	734.806	4844.19
20	4.94367	28945	9.56499	Clay 4	200	27	1717.96	2683.9	5565.48	690.545	4874.94
21	4.94367	29363.8	9.56499	Clay 4	200	27	1760.22	2749.92	5643.08	638.563	5004.51
22	5.10887	30685.1	13.6041	Clay 4	200	27	1760.76	2750.76	5580.13	573.997	5006.14
23	5.10887	30927.1	13.6041	Clay 4	200	27	1798.39	2809.56	5618.39	496.848	5121.54
24	5.30405	32249	17.5769	Clay 4	200	27	1793.36	2801.7	5511.98	405.852	5106.12

25	5.30405	32278.5	17.5769	Clay 4	200	27	1826	2852.68	5507.19	301.008	5206.19
26	7.43978	44659.6	28.1675	Clay 3	200	30	1920.45	3000.25	4974.47	124.293	4850.18
27	0.522951	3090.54	28.1675	Clay 2	200	30	1930.11	3015.33	4876.3	-8.73671	4876.3
28	3.08889	18084.2	29.1103	Clay 2	200	30	1900.55	2969.16	4796.34	-71.1367	4796.34
29	7.20923	40914.5	29.1103	Clay 1	200	30	1845.6	2883.3	4647.62	-250.046	4647.62
30	7.20923	39017.7	29.1103	Clay 1	200	30	1764.96	2757.32	4429.42	-500.538	4429.42
31	0.628317	3309.36	31.3689	Embankment	400	34	2002.88	3129.02	4045.94	-637.736	4045.94
32	0.125923	661.181	31.3689	Clay 1	200	30	1688.12	2637.28	4221.48	-652.082	4221.48
33	3.19861	16661.6	31.3689	Clay Liner	270	28	1611.35	2517.34	4226.63	-715.319	4226.63
34	2.23476	11469.6	31.3689	Soil Cover	100	28	1499.62	2342.8	4218.11	-818.67	4218.11
35	7.06601	35156	31.3689	Landfill	100	25	1310.58	2047.47	4176.36	-995.583	4176.36
36	7.06601	33470.6	31.3689	Landfill	100	25	1250.35	1953.37	3974.56	-1264.39	3974.56
37	4.39457	19883.6	34.2562	Landfill	100	25	1175.56	1836.53	3724	-1492.17	3724
38	4.39457	19095.5	34.2562	Landfill	100	25	1131.07	1767.03	3574.96	-1678.93	3574.96
39	5.36891	22261.8	37.3976	Landfill	100	25	1059.81	1655.7	3336.22	-1900.37	3336.22
40	5.36891	20889.4	37.3976	Landfill	100	25	997.689	1558.65	3128.08	-2156.49	3128.08
41	4.74929	16289.1	37.0667	Landfill	100	25	887.618	1386.69	2759.32	-2396.48	2759.32
42	4.74929	14175.9	37.0667	Landfill	100	25	779.243	1217.38	2396.23	-2620.34	2396.23
43	5.40574	14080.9	34.8766	Landfill	100	25	696.579	1088.24	2119.28	-2849.82	2119.28
44	5.40574	11989.4	34.8766	Landfill	100	25	600.983	938.891	1799	-3084.94	1799
45	5.09118	9462.61	32.7559	Landfill	100	25	519.094	810.96	1524.66	-3304.69	1524.66
46	5.09118	7774.25	32.7559	Landfill	100	25	436.056	681.233	1246.46	-3509.08	1246.46
47	6.01103	7024.18	32.4029	Landfill	100	25	347.054	542.188	948.276	-3730.31	948.276
48	6.01103	4708.24	32.4029	Landfill	100	25	250.37	391.143	624.357	-3968.37	624.357
49	6.01103	2392.29	32.4029	Landfill	100	25	153.686	240.097	300.439	-4206.44	300.439
50	3.20366	328.922	32.4029	Soil Cover	100	28	81.3752	127.129	51.0226	-4388.91	51.0226

Interslice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.56226

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [degrees]
1	212.492	244	0	0	0
2	219.345	240	3487.19	0	0
3	226.199	236	10949.3	0	0
4	229.575	234.03	16048.7	0	0
5	229.626	234	16132.7	0	0
6	236.519	230	28561.6	0	0
7	241.265	227.245	37751	0	0
8	246.011	224.491	48292.3	0	0
9	253.801	221.575	62939.7	0	0
10	262.481	220	75128.4	0	0
11	268.658	220	79774.4	0	0
12	274.835	220	84869	0	0
13	281.013	220	90412.3	0	0
14	287.19	220	96404.4	0	0
15	293.367	220	102845	0	0
16	297.006	220.175	105799	0	0
17	303.127	220.76	109241	0	0
18	309.248	221.346	112734	0	0
19	315.368	221.931	116264	0	0
20	321.489	222.517	119937	0	0
21	326.433	223.35	120899	0	0
22	331.377	224.183	121963	0	0
23	336.485	225.42	120991	0	0
24	341.594	226.656	120140	0	0
25	346.898	228.336	117166	0	0
26	352.202	230.016	114370	0	0
27	359.642	234	104375	0	0
28	360.165	234.28	103710	0	0
29	363.254	236	99522.4	0	0
30	370.463	240.014	90079.3	0	0
31	377.673	244.029	81120.6	0	0
32	378.301	244.412	80498.2	0	0
33	378.427	244.488	80320.6	0	0
34	381.625	246.438	75566.3	0	0
35	383.86	247.801	72023.8	0	0
36	390.926	252.109	59777.6	0	0
37	397.992	256.417	48143.6	0	0
38	402.387	259.409	40176	0	0
39	406.781	262.402	32537.7	0	0
40	412.15	266.507	22308.1	0	0
41	417.519	270.611	12736.5	0	0
42	422.268	274.199	5424.05	0	0
43	427.018	277.786	-889.209	0	0
44	432.423	281.554	-6516.84	0	0
45	437.829	285.322	-11245.3	0	0
46	442.92	288.597	-14542.8	0	0
47	448.012	291.873	-17183	0	0
48	454.023	295.688	-19417.1	0	0
49	460.034	299.503	-20764.9	0	0
50	466.045	303.318	-21226.6	0	0
51	469.248	305.352	0	0	0

List Of Coordinates

Piezoline

X	Y
0	234
600	234

External Boundary

X	Y
0	240
0	237
0	236
0	234
0	230
0	220
0	218
0	208
0	197
0	191
0	185
0	175
0	169
0	165
0	153
0	149
0	140
0	119
0	104
0	93
0	0
600	0
600	93
600	104
600	119
600	140
600	149
600	153
600	165
600	169
600	175
600	185
600	191
600	197
600	208
600	218
600	220
600	230
600	234
600	236
600	238
600	239
600	242

600	244
600	316.5
600	318.5
421	300.5
418.5	301.5
416	301.5
404	297
312.5	267
310.5	267
300	267
242.5	244
210.5	244
162.5	260
147.5	260
138	260
78	240

Material Boundary

X	Y
312.5	267
318.8	267
412	298.1
404	297

Material Boundary

X	Y
318.8	267
327.2	264.5
333.6	264.5
344.5	272
421	298.5
443.5	301.1
600	316.5

Material Boundary

X	Y
327.2	264.5
395	242
600	242

Material Boundary

X	Y
333.6	264.5
395.3	244
600	244

Material Boundary

X	Y
312.5	267
394.5	239
600	239

Material Boundary

X	Y
0	234
600	234

Material Boundary

X	Y
0	230
600	230

Material Boundary

X	Y
0	220
600	220

Material Boundary

X	Y
0	218
600	218

Material Boundary

X	Y
0	208
600	208

Material Boundary

X	Y
0	197
600	197

Material Boundary

X	Y
0	191
600	191

Material Boundary

X	Y
0	185
600	185

Material Boundary

X	Y
0	175
600	175

Material Boundary

X	Y
0	169
600	169

Material Boundary

X	Y
0	165
600	165

Material Boundary

X	Y
0	153
600	153

Material Boundary

X	Y
0	149
600	149

Material Boundary

X	Y
0	140
600	140

Material Boundary

X	Y
0	119
600	119

Material Boundary

X	Y
0	104
600	104

Material Boundary

X	Y
0	93
600	93

Material Boundary

X	Y
0	236
600	236

Material Boundary

X	Y
242.5	244
379.5	244
312.5	267

Material Boundary

X	Y
0	237
78.5	237
99.5	244
147.5	260

Material Boundary

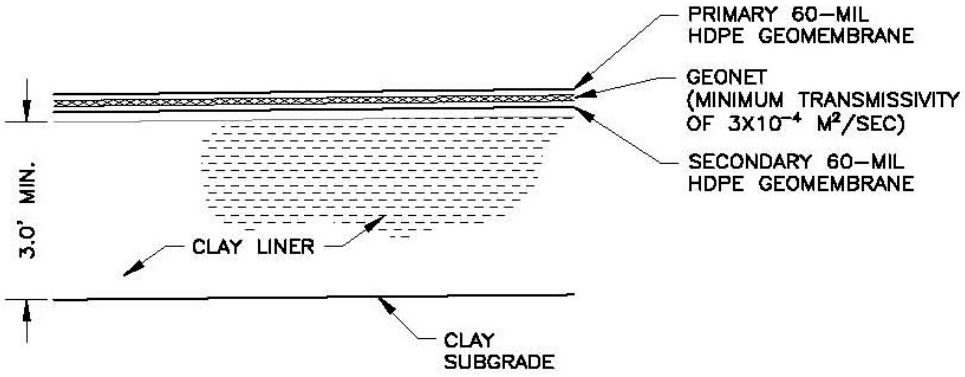
X	Y
99.5	244
210.5	244

APPENDIX C

Liner System Calculations

I. Gap Analysis

Analyze the 60 mil HDPE geomembrane for bridging the small gap of the geonet (drainage net) located between the geomembranes of the double liner system. The following diagram illustrates the soil, geomembrane and geonet configuration for the interior of the surface impoundment.

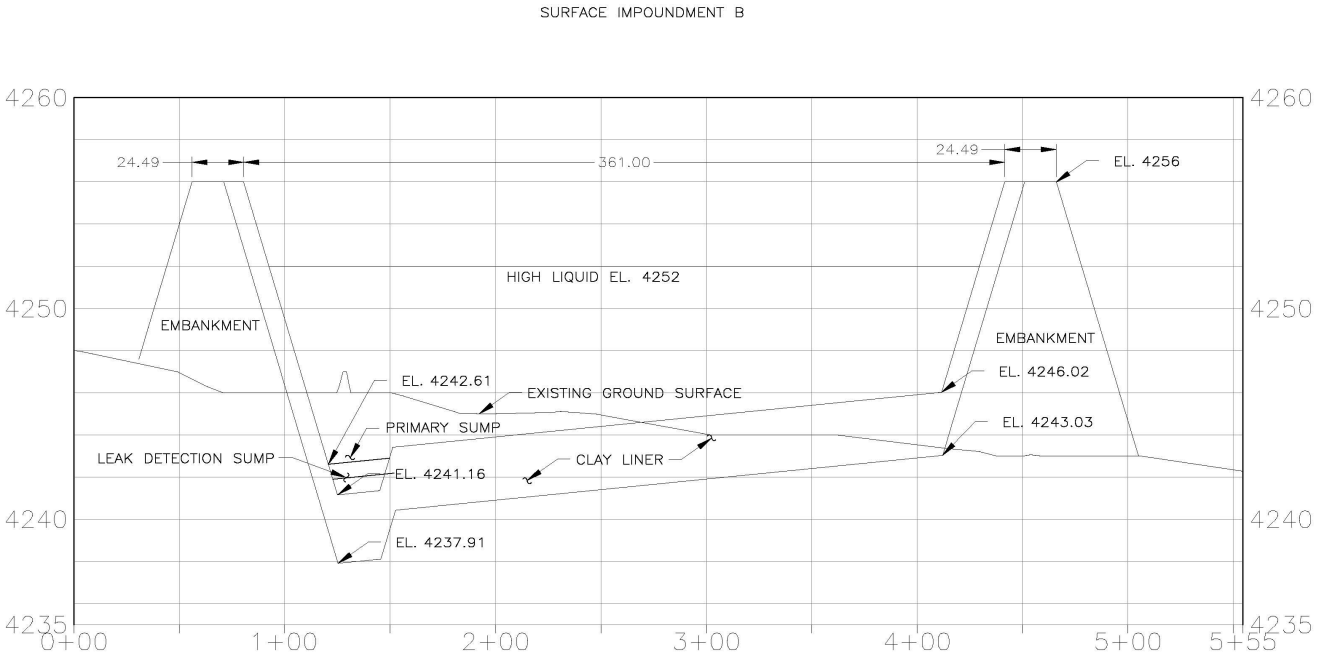


A. Typical properties of 60 mil and 80 mil HDPE geomembranes from various representative suppliers are tabulated below. The most conservative values will be used for calculation purposes.

Property	Test Method	60 Mil	80 Mil
Poly-Flex			
Minimum Thickness (mils)	ASTM D 5199	54	72
Tensile Strength at Break (lbs/inch of width)	ASTM D 6693	***228***	***304***
Yield Strength at Break (lbs/inch of width)	ASTM D 6693	***126***	***168***
Elongation at Break (percent)	ASTM D 6693	700	700
Elongation at yield (percent)	ASTM D 6693	***12***	***12***
GSE			
Minimum Thickness (mils)	ASTM D 5199	54	72
Tensile Strength at Break (lbs/inch of width)	ASTM D 6693	243	405
Yield Strength at Break (lbs/inch of width)	ASTM D 6693	130	216
Elongation at Break (percent)	ASTM D 6693	700	700
Elongation at yield (percent)	ASTM D 6693	13	13
AGRU			
Minimum Thickness (mils)	ASTM D 5199	54	72
Tensile Strength at Break (lbs/inch of width)	ASTM D 6693	240	320
Yield Strength at Break (lbs/inch of width)	ASTM D 6693	132	176
Elongation at Break (percent)	ASTM D 6693	700	700
Elongation at yield (percent)	ASTM D 6693	13	13

B. Load on Geomembrane

Since the allowable bearing capacity of the clay liner material under the geomembrane is 1500 lbs/ft^2 from a non-uniform loading that could cause displacement of the clay liner. Non-uniform operational loadings that could create uneven loading distributions on the clay, and therefore on the geomembrane, must be maintained near to less than 1500 lbs./ft.^{2}.



For the gap analysis, the ultimate loading at the high liquid level is the critical load. The maximum high liquid elevation is 4252.0 and the lowest point on the primary liner system is 4242.6.

Maximum height of liquid over the geomembrane on the net = 4,252.0 - 4,242.6 = 9.4 ft.

Assume the liquid density to be about 65 lbs./ft.^{3}

Ultimate Dead Load at the center on the lining system is:

$$L_D = 9.4(65) = 611\ \frac{lbs}{ft^2} of\ relative\ uniform\ loading$$

$$However, 611\frac{lbs}{ft^2} < 1500\frac{lbs}{ft^2}\ \boldsymbol{OK\ for\ clay\ liner\ bearing\ capacity\ even\ if\ non-uniform}$$

$$L_D = 29.2\ \frac{KN}{m^2}$$

C. Check bridging capability over gap in drainage net.

The geonet typically has a gap between ridges that is less than 0.5 inches. Therefore use a gap of 0.5 inches (1.27 cm) to be conservative.

$$Applied\ load\ over\ the\ gap, P_b = \left(29.2\frac{KN}{m^2}\right)(1.27\ cm)\left(\frac{1\ m}{100\ cm}\right) = 0.37\frac{KN}{m^2}$$

The minimum tensile yield strength of the 60 mil geomembrane is 126 lbs./in from the above table.

$$Yield\ Strength = \left(126\frac{lbs}{in}\right)\left(4.4\frac{N}{lb}\right)\left(39.37\frac{in}{m}\right)\left(\frac{1KN}{1000N}\right)$$

$$Yield\ Strength = 21.8\frac{KN}{m}$$

Presented below is a figure entitled "Fig. 7 Chart for the design of a geotextile bridging a crack." This figure was obtained from a paper entitled "Design of Geotextiles Associated with Geomembranes" by J. P. Giroud, which is presented in a publication entitled, "Geotextiles and Geomembranes Definitions, Properties and Design Selected Papers, Revisions and Comments, Third Edition, Industrial Fabrics Association International, 1985, St. Paul, Minnesota. Curves A, B, and C on the graph in the figure represent three different geotextiles-geomembranes having different properties, i.e. tensile yield strength and elongation at yield. Thus, the points A, B, and C were plotted in the above referenced paper based on α being the tensile strength at yield and ε being the elongation at yield for each specific geotextile-geomembrane. The dashed curves were then drawn by the author of the paper between zero and the points as plotted. These curves represent the relationship between elongation of the geotextile-geomembrane and the tensile force on the geotextile-geomembrane, with the tensile force varying between zero and the tensile strength at yield for the material.

Plotting the yield point (21.8 KN/m-tensile yield strength, 12% elongation at yield) on the figure below, a curve for the 60 mil geomembrane can be developed. Thus, in the same way that the author had generated curves A, B, and C, a curve for the 60 mil HDPE geomembrane was generated by plotting the yield point for the 60 mil geomembrane consisting of the tensile yield strength α = 21.8 kN/m and elongation ε = 12%.

The pb curves presented on the graph were generated by the author based on tension membrane theory identified by the same author, J. P. Giroud in a paper entitled "Designing with Geotextiles" contained in the same publication referenced above. The parameter p represents the overburden pressure on the geomembrane, whereas the parameter b represents the width of a crack that the geomembrane must span, in this case identified as the width between ribs of the geonet. According to the tension membrane theory, α the tensile force per unit width on the geomembrane can be determined from the following equation:

$$\alpha = pbf(\epsilon)$$

Where:
α = tensile force per unit width
p = pressure exerted on the geotextile/geomembrane
b = width of the crack that the geotextile/geomembrane is spanning
$f(\varepsilon)$= function of elongation ε defined in Table II of the publication as:

ε (%)	$f(\varepsilon)$	α (kN/m)
0	∞	∞
2	1.47	0.54
3	1.23	0.46
4	1.08	0.40
5	0.97	0.36
6	0.90	0.33
8	0.80	0.30
10	0.73	0.27
12	0.69	0.26
15	0.64	0.24
20	0.58	0.21
30	0.53	0.20
40	0.51	0.19
45-70	0.50	0.19

The family of pb curves presented on the graph were generated from the above equation for a given value of pb and varying values of elongation ε. Using the above equation, a curve has been plotted on Figure 7 for a value of pb = 0.37 kN/m for Surface Impoundment A. This curve intersects the dashed curve (which was generated and plotted on the graph for the 60 mil HDPE geomembrane) at a value of elongation ε equal to approximately 0.5%. From the above table with a value for elongation ε of 0.5%, *f*(ε) would be approximately 1.6. With *f*(ε) equal to 1.6 and pb equal to 0.4 kN/m, α would be equal to 0.64 kN/m tensile force on the geomembrane (0.64 = 1.6 x 0.4), based on the equation presented above. Thus, the actual factor of safety (which is the yield strength divided by the tensile force on the geomembrane) would be 34 (34 = 21.8 /0.64).

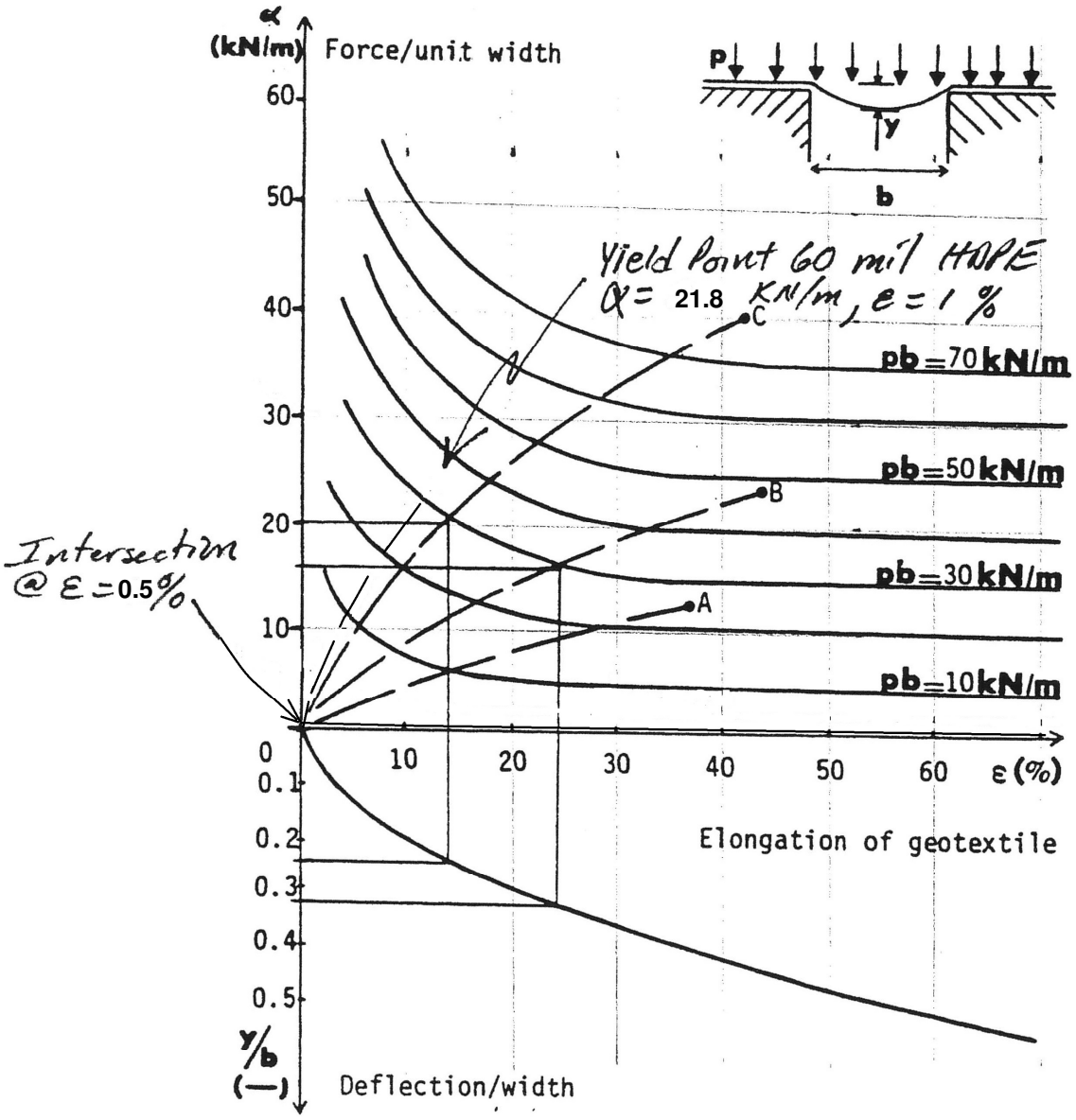


Fig. 7 Chart for the design of a geotextile bridging a crack.

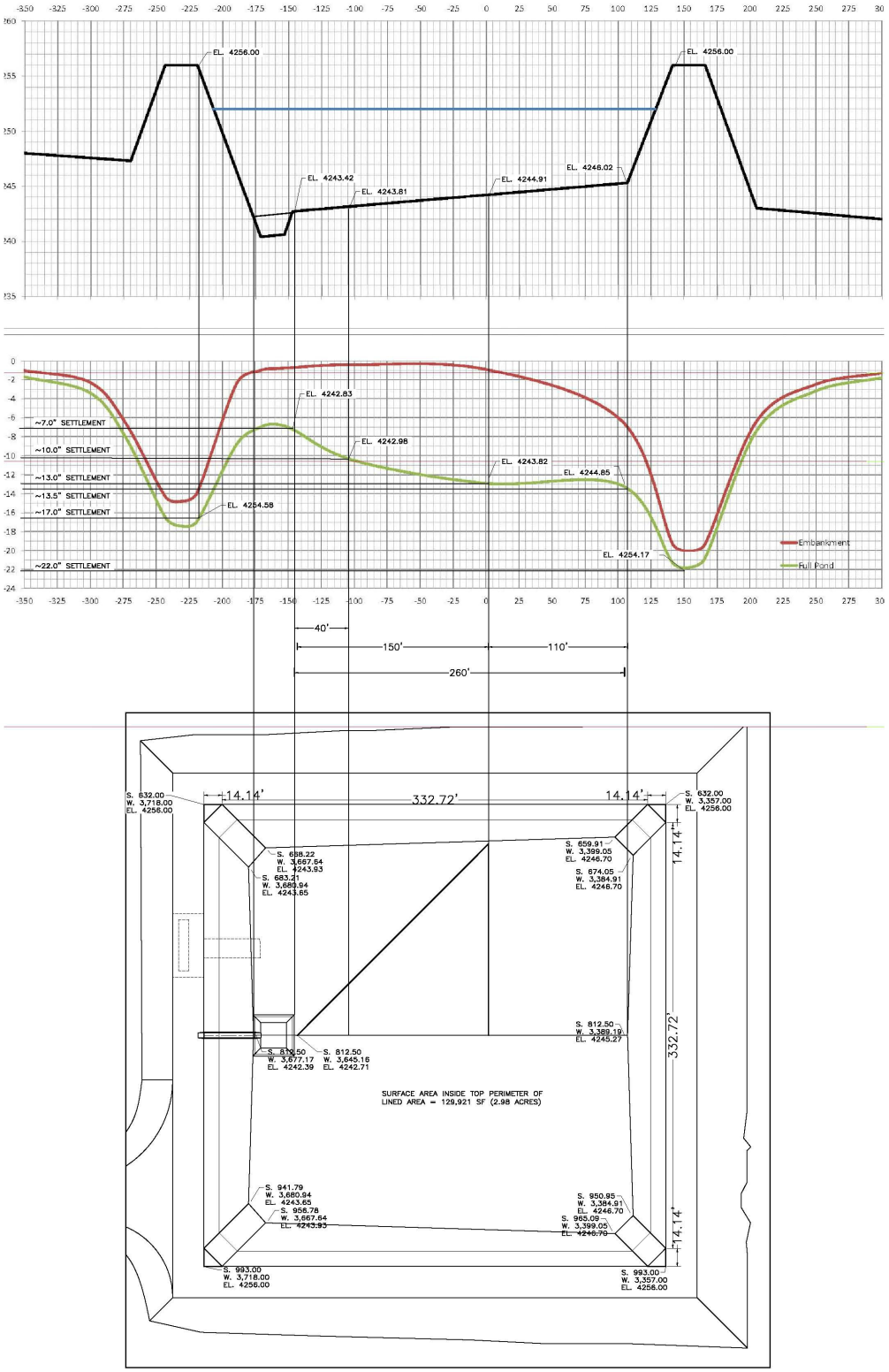
II. Settlement Analysis

As the surface impoundment is constructed and filled with liquid differential settlement occurs. As differential settlement occurs between the floor and the top of the embankments the slope will lengthen or become shorter. The slope lengthens if settlement on the floor is greater than settlement on the embankments and the slope becomes shorter if settlement on the floor is less than settlement on the embnakments. Longer slope lengths cause the geomembrane to elongate resulting in tensile stresses than can potentially damage the geomembrane. The attached figure provides settlement projections from Applied Geotechnical Engineering Consultants based their subsurface investigations and on the design elevations, dimensions, and slopes of the surface impoundment. According to the settlement projections provided the settlement of the floor area is less than the embankments. Therefore, the slope lengths will become shorter and no added stresses will occur in the geomembrane as a result of settlement.

The lowest design elevation on the bottom geomembrane liner is 4241.1 which is prior to projected settlement. Estimated settlement projections show the sump area to settle as much as 7 inches from loading conditions and less than 1.5 inches from liquefaction under seismic loading. Under seismic conditions, the projected total settlement at the sumps is 8.5 inches (about 0.7 foot).

The estimated historic high groundwater elevation in the vicinity of Surface Impoundment B is between 4232 and 4232.5 which occurred in the spring of 1986 Assuming a historic high groundwater elevation of 4232.5 results in a separation between ground water and the lowest point of the secondary geomembrane after settlement of 7.9 feet.

With a projected separation of 7.9 feet between the historic high ground water elevation and the low point on the secondary geomembrane, there should be no hydrogeologic pressures on the geomembrane liners within the surface impoundment resulting from groundwater.


EL. 4256.00
EL. 4256.00
EL. 4243.42
EL. 4243.81
EL. 4244.91
EL. 4246.02
EL. 4242.83
EL. 4242.98
EL. 4243.82
EL. 4244.85
EL. 4254.58
EL. 4254.17
~7.0" SETTLEMENT
~10.0" SETTLEMENT
~13.0" SETTLEMENT
~13.5" SETTLEMENT
~17.0" SETTLEMENT
~22.0" SETTLEMENT
Embankment
Full Pond
40'
150'
110'
260'
14.14'
332.72'
14.14'
332.72'
SURFACE AREA INSIDE TOP PERIMETER OF LINED AREA = 129,921 SF (2.98 ACRES)

APPENDIX D

Leak Detection System and Action Leakage Rate ALR) Calculations

I. CO 40CFR 264.221(c)(2)-(4) and UAC R315-264-221(c)(2)-(4) provides the following minimum design requirements for the leak detection system (leachate collection and removal system):

A. Capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner system through the active life, and post closure care as applicable) of the surface impoundment.

B. Constructed with a minimum bottom slope of one percent.

C. Constructed with a minimum of 1-foot thickness of granular drainage materials with a minimum hydraulic conductivity of 1 x 10^{-1} $\frac{cm}{sec}$ or with a synthetic or geonet drainage material with a minimum transmissivity of 3 x 10^{-4} $\frac{m^2}{sec}$.

D. Constructed of materials chemically resistant to the waste managed in the surface impoundment and leachate expected to be generated.

E. Constructed of materials of sufficient strength and thickness to prevent collapse under the pressures exerted from overlying waste and equipment used in the surface impoundment.

F. Designed and operated to minimize clogging during the active life and post-closure care.

G. Constructed with sumps and liquid removal methods of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up in the drainage layer.

H. Designed with a removal system with a method of measuring and recording the volume of liquids present in the sump and of liquids removed.

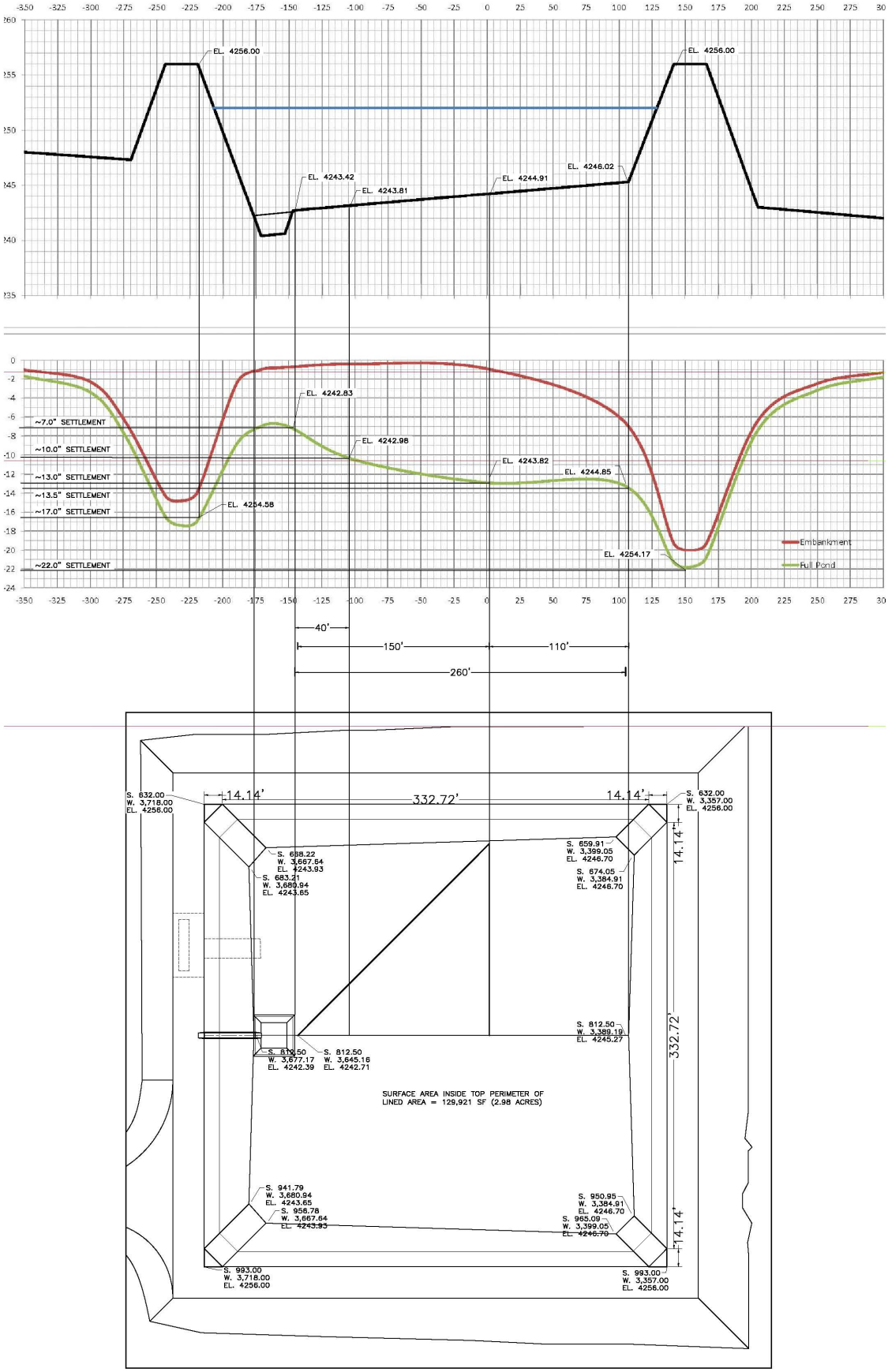
I. Operated to minimize head on the bottom liner system (ALR states 1-foot of head maximum for the ALR).

II. The attached figure provides the design dimensions, elevations, and slopes that the surface impoundment will be constructed to and the project elevations and slopes after settlement of the fully loaded surface impoundment.

III. As stated in 40CFR 264.221(c)(2)(ii) and UAC R315-264-221(c)(2)(ii), the minimum hydraulic transmissivity for a geonet in the leak detection system is $3x10^{-4}\frac{m^2}{sec}$. Paragraph V.G.1 of the Grassy Mountain Facility Part B Permit provides an action leakage rate (ALR) of 100 gallons per acre per day $\left(100\frac{gallons}{ac-day}\right)$ for the surface impoundments at the facility. This is the leakage limit through the top liner system at which daily monitoring must begin and at which notification to the director is required within 72 hours.

IV. Determine the required transmissivity of the geonet to meet the stated action leakage rate of 100 gallons per acre per day $\left(100\frac{gallons}{ac-day}\right)$ as provided for in Module V-Surface Impoundments of the Part B permit for the Grassy Mountain Facility.

$$\left(100\frac{gallons}{ac-day}\right)\left(\frac{1\ day}{1440\ min}\right) = 0.07\frac{gallons}{ac-min}$$


EL. 4256.00
EL. 4256.00
EL. 4243.42
EL. 4243.81
EL. 4244.91
EL. 4246.02
EL. 4242.83
EL. 4242.98
EL. 4243.82
EL. 4244.85
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~10.0" SETTLEMENT
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~13.5" SETTLEMENT
~17.0" SETTLEMENT
~22.0" SETTLEMENT
Embankment
Full Pond
40'
150'
110'
260'
14.14'
332.72'
14.14'
S. 632.00
W. 3,718.00
EL. 4256.00
S. 632.00
W. 3,357.00
EL. 4256.00
S. 638.22
W. 3,667.64
EL. 4243.93
S. 683.31
W. 3,680.94
EL. 4243.65
S. 659.91
W. 3,399.05
EL. 4246.70
S. 674.05
W. 3,384.91
EL. 4246.70
S. 812.50
W. 3,389.19
EL. 4245.27
S. 812.50
W. 3,677.17
EL. 4242.39
S. 812.50
W. 3,645.16
EL. 4242.71
SURFACE AREA INSIDE TOP PERIMETER OF
LINED AREA = 129,921 SF (2.98 ACRES)
S. 941.79
W. 3,680.94
EL. 4243.65
S. 956.78
W. 3,667.64
EL. 4243.93
S. 950.95
W. 3,384.91
EL. 4246.70
S. 965.09
W. 3,399.05
EL. 4246.70
S. 993.00
W. 3,718.00
EL. 4256.00
S. 993.00
W. 3,357.00
EL. 4256.00

A. The inside top perimeter of the lined surface impoundment is 2.98 acres, use 3.0 acres. Therefore, the geonet must be designed for:

$$\left(0.07\frac{gallons}{ac-min}\right)(3.0\ ac) = 0.21\ gpm\ or\ (0.21\ gpm)\left(\frac{1ft^3}{7.48\ gallons}\right) = 0.028\frac{ft^3}{min}$$

B. The minimum required transmissivity of the geonet based on regulatory requirements is:

$$\left(3x10^{-4}\frac{m^2}{sec}\right)\left(10.76\frac{ft^2}{m^2}\right)\left(60\frac{sec}{min}\right) = 0.194\frac{ft^2}{min}$$

The equation that governs flow in the geonet is (based on Darcy's formula, "Designing with Geosynthetics, 2nd Edition, Robert M. Koerner):

$$(\theta)(i) = \frac{Q}{w}$$

Where: θ = Transmissivity of the geonet
i = Gradient of the geonet
Q = Flow rate through the net, and
w = Width perpendicular to the flow in the geonet

Therefore, the width required for the geonet to convey the concentrated flow of the action leakage rate (ALR) to the leak detection sump is:

$$\left(0.194\frac{ft^2}{min}\right)\left(0.01\frac{ft}{ft}\right) = \frac{0.028\frac{ft^3}{min}}{w}\ ,and\ w = 14.3\ ft$$

If a safety factor of 2 is assumed for biological and chemical clogging that may occur, the flow width will be 28.6 feet (14.3 feet onto the floor on each side of the valley flow line) at the design slope of 1%. This will result in a head of 0.14 foot, which is acceptable.

The above calculation is for the minimum design slope of 1.0% for the valley where leachate in the leak detection system may concentrate to be conveyed to the leak detection sum for removal. The 1% slope will be provided during construction, however, as shown on the figure, differential settlement is expected to occur resulting in different slopes along the valley flow line. The average slope after projected settlement of the valley flow line is about 0.8%. The westernmost 40 feet of the valley after settlement is about 0.4%. All areas of the floor will continue to provide positive drainage to the sump after projected settlement occurs.

Typical transmissivity values of geonet provided by various suppliers are provided in the following table. Included with the transmissivity values are the resulting widths within the geonet that will be required for conveyance of the ALR for the different slope conditions. Typically a safety factor of 2 should be applied to account for biological and chemical clogging of the geonet that may occur over time. Since the loading is minimal and the boundary conditions consist of HDPE geomembrane above and below the geonet, there will be no anticipated intrusion into the geonet from the adjacent materials nor is any compression or layover of the geonet ribs anticipated.

After applying a safety factor of 2 to the results of presented in the table, a minimum geonet transmissivity of $3x10^{-3}\frac{m^2}{sec}$ Is recommended. The recommended transmissivity will result in a flow width of 2.8 feet under design and final construction conditions of a 1.0% slope. The resulting flow width for the minimum slope of 0.4% after settlement is 7.2 feet and the flow width

for the average minimum slope of 0.8% is 3.6 feet. All conditions will result in less than 0.1 foot of head on the bottom liner system after applying a safety factor of 2.

Supplier	Product	Transmissivity, θ		Flow Width, B		
		m^2/sec	ft^2/min	(0.38% slope) ft	(0.78% slope) ft	(1.0% slope) ft
GSE	Hypernet 175-mil	1×10^{-3}	0.65	11.3	5.5	4.3
GSE	Hypernet 200-mil	2×10^{-3}	1.29	5.7	2.8	2.2
GSE	Hypernet 225-mil	2.5×10^{-3}	1.61	4.6	2.2	1.7
GSE	Hypernet 250-mil	3×10^{-3}	1.94	3.8	1.9	1.4
GSE	Hypernet 275-mil	6×10^{-3}	3.87	1.9	0.9	0.7
GSE	Hypernet 300-mil	8×10^{-3}	5.16	1.4	0.7	0.5
Agru America	200-mil	2×10^{-3}	1.29	5.7	2.8	2.2
Agru America	250-mil	3×10^{-3}	1.94	3.8	1.9	1.4
Agru America	275-mil	6×10^{-3}	3.87	1.9	0.9	0.7
Agru America	300-mil	8×10^{-3}	5.16	1.4	0.7	0.5
Skaps	TN-250	3×10^{-3}	1.94	3.8	1.9	1.4
Skaps	TN-270	3×10^{-3}	1.94	3.8	1.9	1.4
Skaps	TN-300	6×10^{-3}	3.87	1.9	0.9	0.7
Skaps	TN-350	8×10^{-3}	5.16	1.4	0.7	0.5

V. Module V (Paragraphs V.G.2 through 3) of the Grassy Mountain Facility Part B Permit also states that there is a limit of 200 gallons per acre per day $\left(200 \frac{gallons}{ac-day}\right)$ at which a written action plan for locating and repairing the leaks must be provided to the Director. At this leakage rate no additional liquid can be added to the surface impoundment until leaks are repaired and written approval is provided from the Director to place the surface impoundment back in to service. A leakage rate of 200 gallons per acre per day is double the ALR which will also double the flow width within the geonet for conveying the leachate into the sump for removal. At double the flow path width, and after applying a safety factor of 2) there will still be less than 0.2 foot of head on the bottom liner system.

VI. In order to remove a leakage rate of 200 gallons per acre per day the pump for leachate removal must be capable of removing 600 gallons per day based on an area of 3 acres. Assuming a pump operating time of 4 hours per day, a minimum capacity 2.5 gallons per minute must be provided for the pump. A pump capacity of 2.5 gallons per minute will also meet the pumping requirements for the action leakage rate.

VII. 3/4" rounded washed rock will be placed as fill material in the leak detection sump. Gravel typically has porosity values between 25% and 40% depending on gradation and coarseness of the material. Porosity ranges were obtained from two different sources and are provided in the following tables. For purposes of calculations for the leak detection sump, the gravel (3/4-inch rounded washed rock) is assumed to have a porosity of 30%. This porosity is near the low end of the range to be conservative and to include some safety factor for fines entering the system.

Table 2-1. Porosity of Aquifer Materials
(Adapted from Morris & Johnson, 1967)

Aquifer Material	No. of Analyses	Range	Arithmetic Mean
Igneous Rocks			
Weathered granite	8	0.34-0.57	0.45
Weathered gabbro	4	0.42-0.45	0.43
Basalt	94	0.03-0.35	0.17
Sedimentary Materials			
Sandstone	65	0.14-0.49	0.34
Siltstone	7	0.21-0.41	0.35
Sand (fine)	243	0.26-0.53	0.43
Sand (coarse)	26	0.31-0.46	0.39
Gravel (fine)	38	0.25-0.38	0.34
Gravel (coarse)	15	0.24-0.36	0.28
Silt	281	0.34-0.61	0.46
Clay	74	0.34-0.57	0.42
Limestone	74	0.07-0.56	0.30
Metamorphic Rocks			
Schist	18	0.04-0.49	0.38

Groundwater Hydrology and Hydraulics, Pg. 18, D. McWhorter and D.K. Sunada, 1977, Water Resources Publication

Table 2.4 Range of Values of Porosity

	n(%)
Unconsolidated deposits	
Gravel	25–40
Sand	25–50
Silt	35–50
Clay	40–70
Rocks	
Fractured basalt	5–50
Karst limestone	5–50
Sandstone	5–30
Limestone, dolomite	0–20
Shale	0–10
Fractured crystalline rock	0–10
Dense crystalline rock	0–5

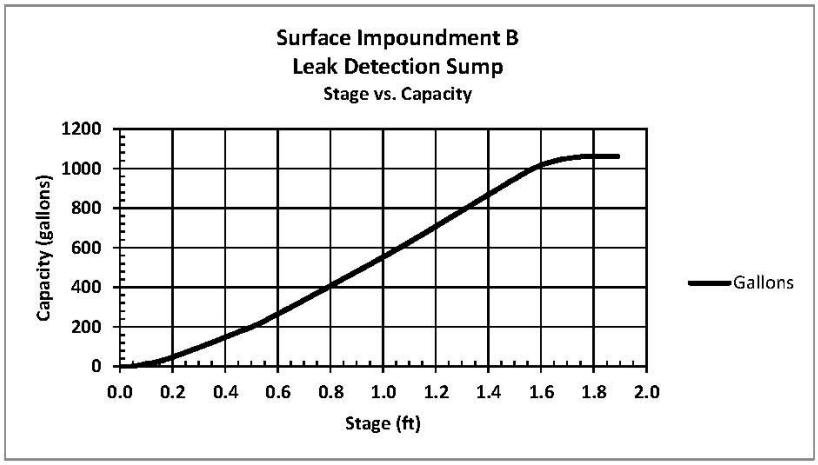
Groundwater, Pg. 37, R. Allan Freeze and John A. Cherry, 1979, Prentice Hall, Inc.

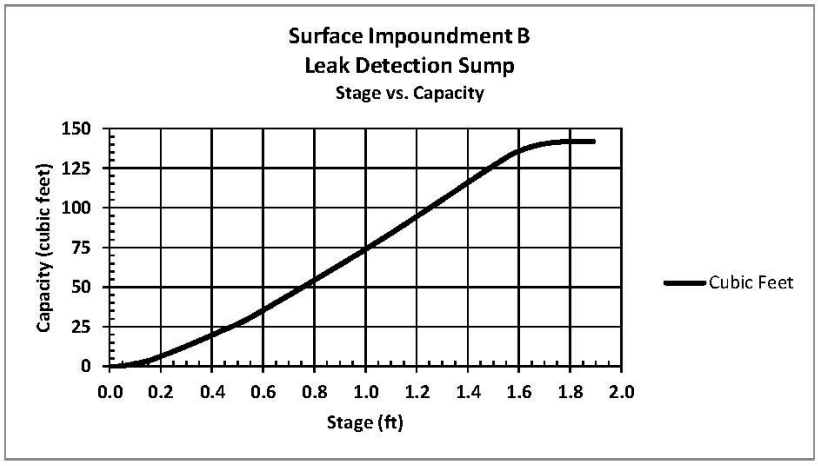
VIII. The total capacity within the rock voids in the leak detection sump is 1060 gallons. Therefore, the sump has sufficient capacity to contain the action leakage rate of 300 gallons (3 acres at 100 gallons per acre per day) and 600 gallons, or the leakage rate at which a written action plan for locating and repairing leaks must be submitted and at which no additional liquids will be added to the surface impoundment.

Client: Clean Harbors - Grassy Mountain Facility
Project: Surface Impoundment B
Feature: Leak Detection Sump Capacity
Date: November 2016

Rock Porosity = 30.0%

Elevation	Stage	Area	Volume	Volume Totals (Without Rock)		Volume Totals (With Rock)	
(ft)	(ft)	(ft^2)	(ft^3)	(ft^3)	(gallons)	(ft^3)	(gallons)
4240.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4240.50	0.05	28.52	0.71	0.71	5.33	0.21	1.60
4240.60	0.15	213.75	10.69	11.40	85.28	3.42	25.58
4240.70	0.25	400.34	20.02	31.42	235.00	9.43	70.50
4240.80	0.35	447.10	22.36	53.77	402.22	16.13	120.67
4240.90	0.45	472.75	23.64	77.41	579.03	23.22	173.71
4241.00	0.55	499.12	24.96	102.37	765.70	30.71	229.71
4241.50	1.05	641.69	160.42	262.79	1965.66	78.84	589.70
4242.00	1.55	705.47	176.37	439.16	3284.89	131.75	985.47
4242.10	1.65	460.28	23.01	462.17	3457.03	138.65	1037.11
4242.20	1.75	187.33	9.37	471.54	3527.09	141.46	1058.13
4242.30	1.85	19.20	0.96	472.50	3534.27	141.75	1060.28
4242.34	1.89	0.00	0.00	472.50	3534.27	141.75	1060.28





APPENDIX E

Freeboard Evaluations

I. Calculate the adequacy of the 3 feet of freeboard provided with the surface impoundment to prevent overtopping of the surface impoundment from normal and abnormal operations; overfilling; wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms and other equipment; and human error.

A. A physical (visual) method of liquid level detection will be provided with markings on the slope of the primary liner system, a gaging pole, or by some other method to provide verification that normal and abnormal operation of the surface impoundment is not exceeding the high liquid level.

B. Wind and wave action primarily consists of: 1) wind setup resulting from tilting, or sloping, or the water surface caused by the movement of surface water toward the leeward shore under the action of sustained wind, 2) from wave height above the tilted water surface and 3) wave run-up onto the side slope of the surface impoundment. The following procedures to determine wind setup and wave height are presented in "Water Resources Engineering" 2nd Edition, by R.K. Lindsay and J.B. Franzini (McGraw-Hill).

1. Wind setup (Z_s) may be estimated from the following equation:

$$Z_s = \frac{V_w{}^2 F}{1400d}$$

Where: Z_s = Rise in water surface in feet above the still-water level.
V_w = Wind speed in miles per hour (mph)
F = Fetch or length of water surface in miles
d = average depth of the water in feet

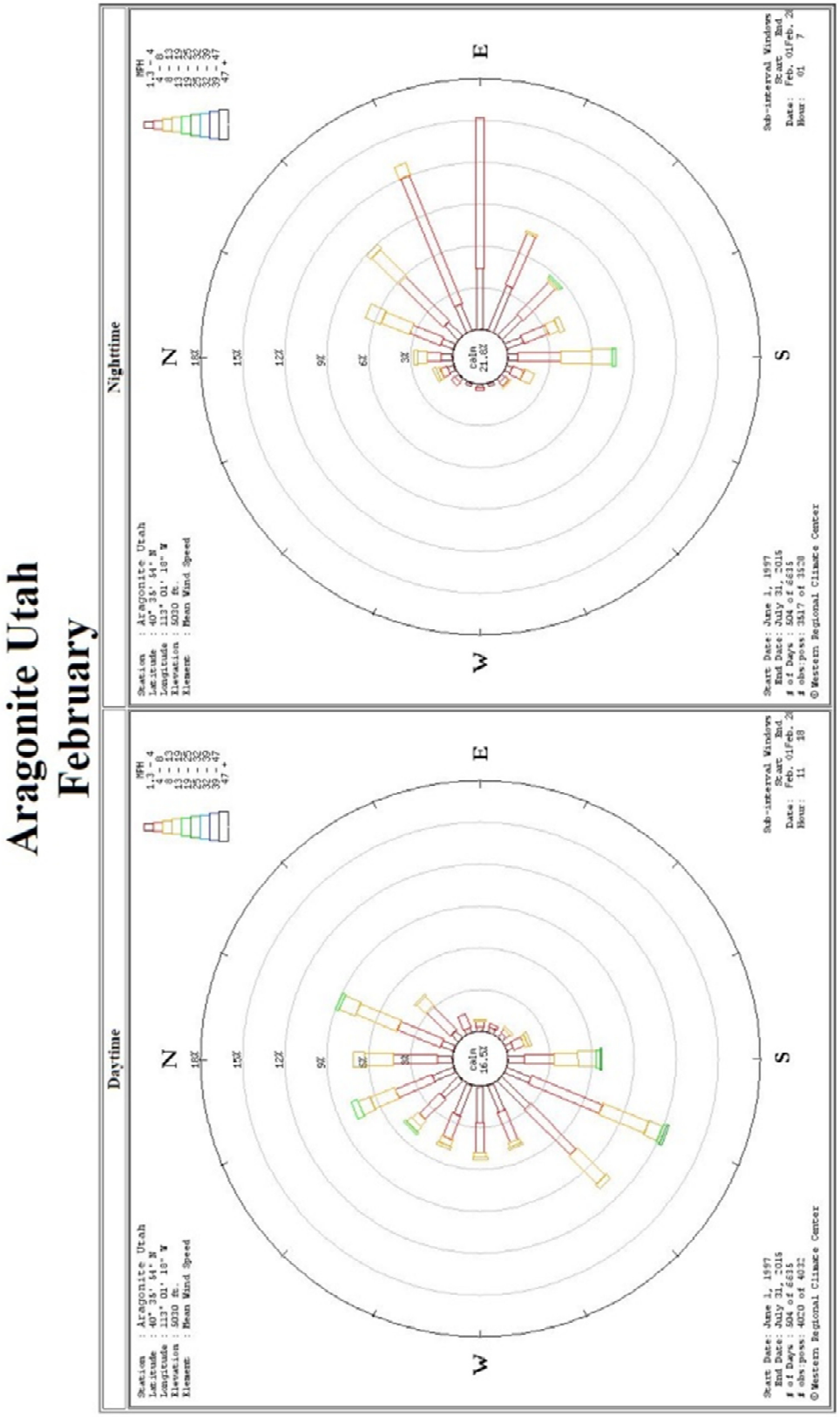
Wind velocity records at Aragonite (nearest the facility) from 1997 to 2015 indicate that the average wind velocity is highest during daytime hours in the months of February, March, April, and June. The wind direction is predominately from the south to southwest direction at between 25 to 32 mph. To be conservative 32 mph wind will be used for in the calculations.

Fetch from the south to north is 337 feet at the high liquid level, and on the diagonal from the southwest to the northeast corner is 477 feet (0.09 mile) feet which is the top design elevation of the surface impoundment embankments. The average floor elevation based on the four corners and the center line of the floor is:

$$Avg.\ Floor\ Elev. = \frac{\left(\frac{4244.38 + 4244.66}{2}\right)(2) + (4247.48)(2) + 4246.02 + 4243.10}{6}$$

$$Avg.\ Floor\ Elev. = 4245.52\ use\ 4245.5$$
$$High\ Liquid\ Elev. = 4252$$
$$Avg.\ Liquid\ Depth = Top\ Elevation - Avg.\ Floor\ Elev. = 4252 - 4245.5 = 6.5ft$$

$$Z_s = \frac{32^2(0.09)}{1400(6.5)} = 0.01\ ft$$


Aragonite Utah
February
Daytime
Nighttime
N
E
S
W
calm
16.5%
calm
21.6%
MPH
1.7 - 4
4 - 8
8 - 13
13 - 19
19 - 25
25 - 32
32 - 39
39 - 47
47 +
Station : Aragonite Utah
Latitude : 40° 25' 44" N
Longitude : 113° 01' 10" W
Elevation : 5030 ft.
Element : Mean Wind Speed
Start Date: June 1, 1997
End Date: July 31, 2015
# of Days : 504 of 6815
obs:poss: 4010 of 4032
Sub-interval Windows
Start End
Date: Feb. 01Feb. 28
Hour: 11 10
Start Date: June 1, 1997
End Date: July 31, 2015
# of Days : 504 of 6815
obs:poss: 3517 of 3528
Sub-interval Windows
Start End
Date: Feb. 01Feb. 28
Hour: 01 7
© Western Regional Climate Center

2. Wave Height (Z_w) may be estimated from the following equation:

$$Z_w = 0.034 {V_w}^{1.06} F^{0.47}$$

Where: Z_w = Wave height in feet above the water surface.
V_w = Wind speed in miles per hour (mph)
F = Fetch or length of water surface in miles

$$Z_w = 0.034(32^{1.06})(0.09^{0.47}) = 0.43\ ft$$

3. Wave run-up (Z_r) may be estimated from the following figure:

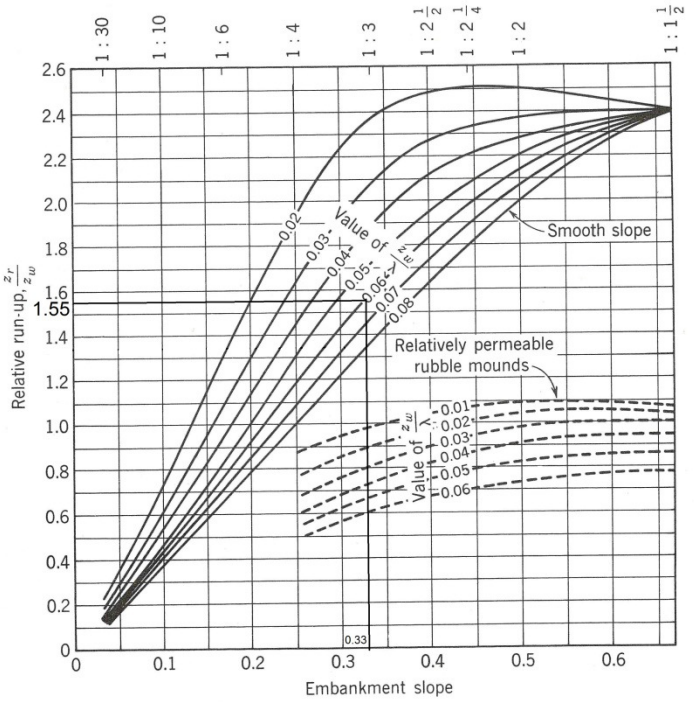


FIG. 7-13 Wave run-up ratios vs. wave steepness and embankment slopes. (From Saville, McClendon, and Cochran)

Where: $\lambda = 5.12 {t_w}^2$

Where: λ = wavelength

t_w = wave period $= 0.46 {V_w}^{0.44} F^{0.28}$

V_w = Wind speed in miles per hour (mph)

F = Fetch or length of water surface in miles

Therefore: $t_w = 0.46(32^{0.44})(0.09^{0.28}) = 1.08$

And $\lambda = 5.12(1.08^2) = 5.97$

Given that: $\frac{Z_w}{\lambda} = \frac{0.38}{5.97} = 0.06$

Using a smooth embankment slope of 3H:1V or 33%, from the above figure:

$$\frac{Z_r}{Z_w} = 1.55$$

Therefore: $Z_r = 0.06 Z_w = 1.55(0.43) = 0.67\ ft$

4. The combined increase in water surface elevation from wind and wave action is:

$$H = 0.01 + \frac{0.43}{2}(average\ between\ ridge\ and\ valley) + 0.67 = 0.90\ ft$$

C. Rainfall results in direct precipitation into the surface impoundment. No additional water from run-on is expected since the surface impoundment is constructed of raised embankments. There may be some precipitation water from the top of the embankments that will run into the interior portion of the surface impoundment. Therefore, use the area of the outside top of the surface impoundment to determine depth of precipitation storage needed within the freeboard provided.

The top outside dimensions of the surface impoundment are about 410 ft x 410 ft for an area of 168,100 ft^2. The top inside dimensions are 361 ft x 361 ft for an area of 130,321 ft^2. The geomembrane liners extend 5 ft from the top inside of the embankments to the anchor trench. Therefore, the impermeable surface dimensions area 371 ft x 371 ft for an impermeable surface area of 137,641 ft^2 with an SCS Cirve Number of 100. The permeable gravel surface area on top of the embankments is therefore 30,459 ft^2 with an SCS Curve Number of about 83. The weighted curve number is:

$$CN = \frac{[(137{,}641)(100) + (30{,}459)(83)]}{168{,}100} = 96.9, \qquad use\ 97$$

According to the NOAA atlas, the 100-year, 24-hour precipitation depth at the facility is 2.4 inches. Using the SCS Curve Number methodology, an estimate of runoff depth (Q) into the surface impoundment may be obtained as follows:

$$Q = \frac{(P - 0.2S)^2}{(P + 0.8S)} - 10$$

Where: $S = \frac{1000}{CN} - 10$

S = Potential Infiltration
CN = SCS Curve Number
Q = Direct Runoff in inches
P = Rainfall Depth in inches

$$S = \frac{1000}{97} - 10 = 0.31$$

$$Q = \frac{[2.4 - 0.2(0.31)]^2}{[2.4 + 0.8(0.31)]} = 2.06\ inches$$

The volume of precipitation that will enter the surface impoundment is:

$$V = \left(\frac{2.06}{12}\right)(168{,}100) = 28{,}857\ ft^3$$

The dimensions of the high liquid elevation are 337 ft x 337 ft resulting in an area of 113,569 ft^2. The added depth (D_p) precipitation will add within the freeboard of a full surface impoundment is:

$$D_p = \frac{28{,}857}{113{,}569} = 0.25\ ft$$

D. Total freeboard required for wind set-up, wave height, wave run-up, and precipitation combined is:

$0.90 + 0.25 = 1.15\ ft$, which still leaves 1.85 feet of freeboard out of the 3 feet provided.

E. Run-on includes storm water from outside the surface impoundment area that might have the potential of flowing into the surface impoundment from surrounding areas. Since the embankments are raised above the surrounding areas there is no potential of precipitation run-on entering the surface impoundment.

F. There is always the potential of malfunctions associated with level controllers, alarms, and other equipment that provide warning of overfilling of the surface impoundment. The main protection against overtopping the surface impoundment causing discharges of liquids contained therein onto surrounding areas is from the 3 feet of freeboard provided between the high liquid elevation and the top of the surface impoundment embankments. Assuming a 100-year, 24-hour precipitation event, wind setup, wave action, and wave run-up, the total height of encroachment into the freeboard provided is 1.15 ft. The surface area at the high liquid level of 4252 is 113,169 ft^2. This area provides 1,132 ft^3 (8,467 gallons) of liquid storage per 0.01 foot of depth. Therefore, only about 0.02 foot of liquid would be added to the impoundment should any alarms or overfilling safety controls fail with the delivery of a tanker truck consisting of about 9,000 gallons of liquid (1,203 ft^3). The remaining freeboard will still be 1.83 feet when added to precipitation and to the temporary effects of wind and wave action. Removing the temporary effects of wind and wave action will leave 2.73 feet of freeboard.

The pond will also be provided with physical (visual) means of verifying that liquids are levels are not exceeding the operational high liquid level that provides 3 feet of freeboard. This verification will be provided by markings on the slope of the primary liner system, a gaging pole, or some other appropriate method.

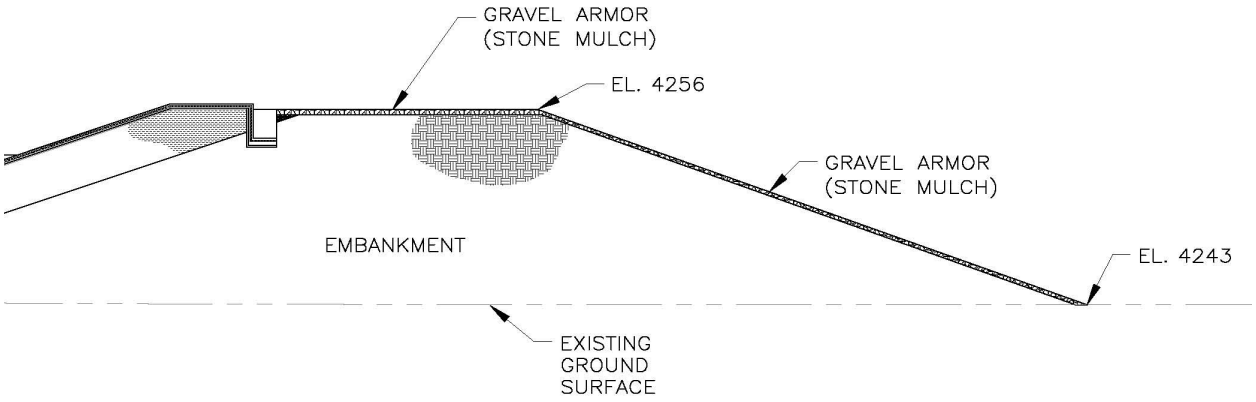
G. The potential for human error resulting in overtopping of the surface impoundment will be minimized by proper training of site operations personnel. This training will include the importance of not exceeding the operational high level for the surface impoundment by use of physical (visual) verification using markings on the slope of the primary liner system, a gaging pole, electronic pressure sensing devices, or some other method to determine that the facility is operated correctly.

APPENDIX F

Embankment Erosion Protection

I. Purpose and Procedure.

Gravel armor plating will be placed on the top and on exterior slopes of the surface impoundment embankments to control erosion. The procedure used to determine the gravel armor plating thickness is taken from the publications: 1) "Erosion Control During Highway construction - Manual on Principles and Practices", National Cooperative Highway Research Program Report 221, Transportation Research Board, National Research Council, 1980; and 2) "Erosion and Sedimentation in Utah - A Guide for Control", Utah Water Research Laboratory, February 1984. The second publication is specific to Utah and is a result of the research done for the first publication. The figure below shows the configuration of the area contributing runoff to the exterior embankment slopes which will be used in the gravel armor plating calculations. The width of the gravel portion across the top of the embankment is 17.5 feet, the exterior slope is 3 horizontal to 1 vertical (3H:1V) with a slope length of 41.1 feet.



II. The procedure from the above publications uses the Universal Soil Loss Equation (in modified form to represent Utah's climatic and topographic conditions) to estimate the soil erosion potential of the embankment soils with no applied erosion control measures. Erosion control measures to be implemented are based on the soil erosion potential calculated. In this case, vegetative measures are not practical so a stone mulch (or gravel armor plating) will be used. The results of the design procedures for the stone mulch will (according to the literature referenced above) limit soil loss, resulting from erosion, to one ton per acre per year.

The universal soil loss equation used to calculate soil erosion potential is:

$$A = (R)(K)(LS)$$

where; A = Computed amount of soil loss per unit area for the time interval represented by factor R, generally in tons per acre per year.

R = Rainfall (precipitation) factor.

K = Soil erodibility factor in tons per acre per year per unit of R.

LS = Topographic factor (length and steepness of slope).

Calculated erosion after applying erosion control measures is determined by applying and erosion control factor (VM) to the universal soil loss equation. The erosion control factor is dependent upon the type and extent to which the erosion control measure is used (ie. vegetative - type and density, mulches - type and thickness, chemical - type and application amount, mechanical - compactive effort, smoothness of surface, etc.).

A. The rainfall (precipitation) factor (R) is obtained from mean annual iso-erodent (R) value maps. The R-value for the facility as obtained from the Tooele area map is: $R = 6$

Since R = 6 is based on an annual recurrence interval, a correction factor is obtained from the figure below for the 100-yr recurrence interval.

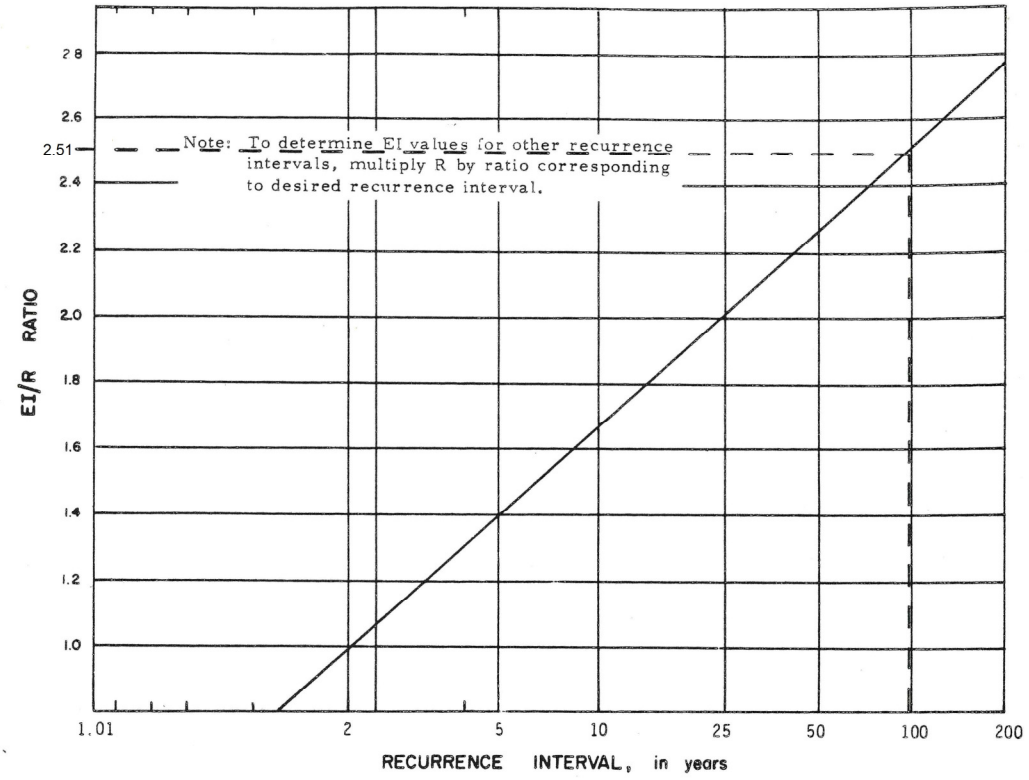


Figure 9. The relationship between the EI/R ratio and recurrence interval.

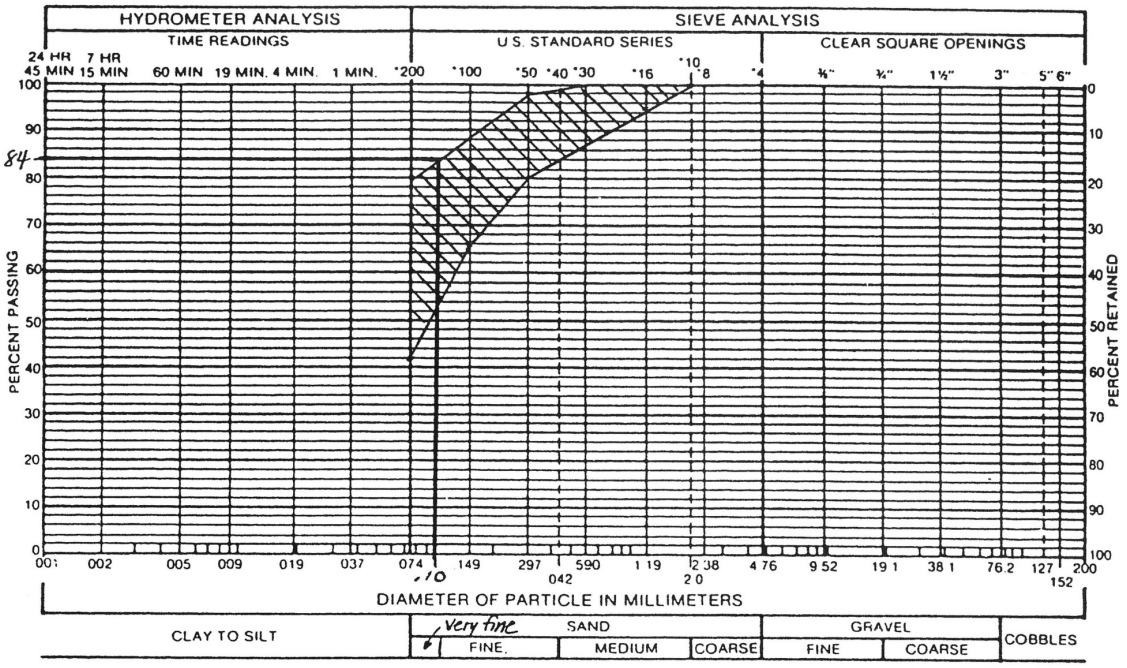
For the 100-yr recurrence interval: $R = 6(2.51) = 15.06$

B. Soil erodibility factor (K) is determined using the following figures. The gradation test results shown represent a typical gradation envelope for many soil samples from the embankment borrow sources at the facility.

The worst case condition is represented by the soils whose gradation is on the fine side of the soil gradation envelope. Parameters obtained from the gradation envelope and parameters assumed for use with the nomographs to determine K are:

84 % silt and very fine sand, and
16 % sand were obtained from the gradation envelope.
0 % organic material and a very slow permeability were assumed parameters.

Applying the above parameters to the nomographs on the following figure gives a soil erodibility factor (K) equal to 0.72.



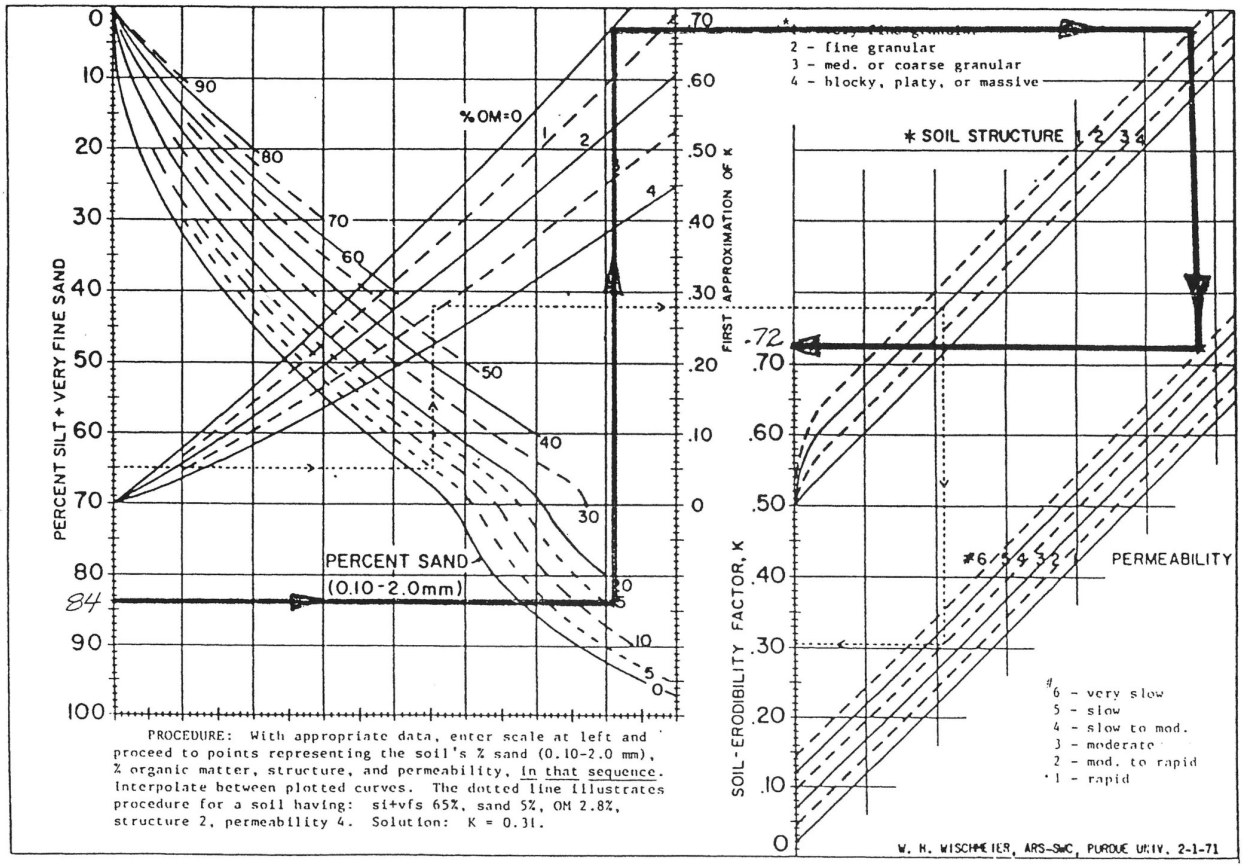


Figure 2-2. Nomograph for determining soil erodibility factor K.

C. The topographic factor (LS) can be determined using a method for single slopes or multiple slopes. The figure on Sheet 1 shows the top of the embankments to be level at elevation 4256 and the exterior slopes at 33.3% (3 horizontal to 1 vertical). For erosion protection purposes, assume there will be areas on top of the embankments that will have some cross slope to them. Assume about a 2% cross slope. Therefore, two slopes are represented: 1) the top of the embankment (17.5 feet of 2% slope), and 2) the exterior embankment slope (about 42 feet at 33.3% slope) from the top to the toe of the east embankment where the slope length is the greatest. The equation used to determine LS for each slope segment is:

$$LS = \left(\frac{(65.41)s^2}{s^2 + 10{,}000} + \frac{(4.56)s}{\sqrt{s^2 + 10{,}000}} + 0.065\right)\left(\frac{l}{72.6}\right)^m$$

where; LS = topographic factor for slope segment n.
l = length of slope segment n.
s = slope gradient of segment n in percent.
l = slope length
m = slope gradient factor

For compound slopes:

$$(LS)_n = \frac{\left(L_{\lambda_n} S_{s_n}\right)\lambda_n - \left(L_{\lambda_{n-1}} S_{s_n}\right)\lambda_{n-1}}{ln}$$

where; $(LS)_n$ = topographic factor for slope segment n.
l_n = length of slope segment n.
s_n = slope gradient of segment n in percent.
λ_n = the sum of the slope segment length from the top of the slope to the bottom of slope segment n.
S_n = slope factor for slope segment n.
L_n = length factor for slope segment n.

Although slope segment 1 is designed to be flat, it is likely that will have some slope due to construction grading tolerances or deliberate grading to promote drainage away from the interior of the surface impoundment. Therefore the "flat" segments were assumed to have a slope of 2%.

The values of LS, l, λ, and s for the two slope segments are tabulated below with potential erosion rates from the soil loss equation above.

Client: Clean Harbors
Project: Surface Imoundment B
Feature: Erosion Protection
Date: 11/8/16

$R_{(annual)}$ = 6 (Annual Rainfall "Precipitation" Factor)
$^{EI}/_{R}$ Ratio = 2.51 (Factor for recurrance interval desires, Fig. 9)
$R_{(modified)}$ = 15.06
K Factor = 0.72 (~0.1 to slightly over 0.7, Figure 2

Slope Segment	l(n) (ft)	λ(n) (ft)	s(n) %	m	s^2(n) %	LS (Topographic Factor) λ(n)s(n)	λ(n-1)s(n)	LS(n)	A (Tons/acre)
0		0				0.00			
1	17.5	17.5	2	0.3	4	0.12	0.00	0.12	1.29
2	41.1	58.6	8	0.5	64	0.76	0.41	0.91	9.82

D. Potential Erosion Rates (without erosion protection)

Segment 1: A = 1.29 tons/acre/year

Segment 2: A = 9.82 tons/acre/year

III. Required Gravel Armor Plating

The amount of gravel armor plating material required to limit soil loss to one ton per acre per year is determined from the following figure. The figure shows the amount of stone mulch required to reduce the erosion potential from as much as 130 tons per acre per year to one ton per acre per year. The curve may be extrapolated to show the required amount of stone mulch required for the potential erosion rates higher than 130 tons per acre per year. Dr. Joel E. Fletcher, one of the researchers and authors of the publications from which this procedure was taken, was contacted regarding the extrapolation of the curve. According to Dr. Fletcher, test results were obtained beyond the limits of the curve presented in the publications to verify the accuracy of the curves and extrapolation would still be accurate.

The stone mulch (gravel armor) thicknesses required on the slopes are as follows:

Segment 1: No gravel is technically required due to the flat slope. However, segment 1 will also provide a driving surface for vehicle access around the top of the surface impoundment and construction techniques don't produce a perfect product. Therefore, place 4 inches of stone mulch on this segment.

Segment 2: Approximately 55 tons per acre of gravel is required. The required thickness of gravel armor plating is:

$$t = \frac{(required\ tons\ per\ acre\ from\ Fig. 6)\left(2000\frac{lbs}{ton}\right)\left(12\frac{in}{ft}\right)}{\left(43560\frac{sf}{acre}\right)\left(gravel\ density\frac{lbs}{ft^3}\right)}$$

Assuming a density of 110 lbs/ft^3 results in:

$$t = \frac{(55\ tons)\left(2000\frac{lbs}{ton}\right)\left(12\frac{in}{ft}\right)}{\left(43560\frac{sf}{acre}\right)\left(110\frac{lbs}{ft^3}\right)} = 0.3\ inches$$

Applying 3 inches of thickness to the slopes is sufficient.

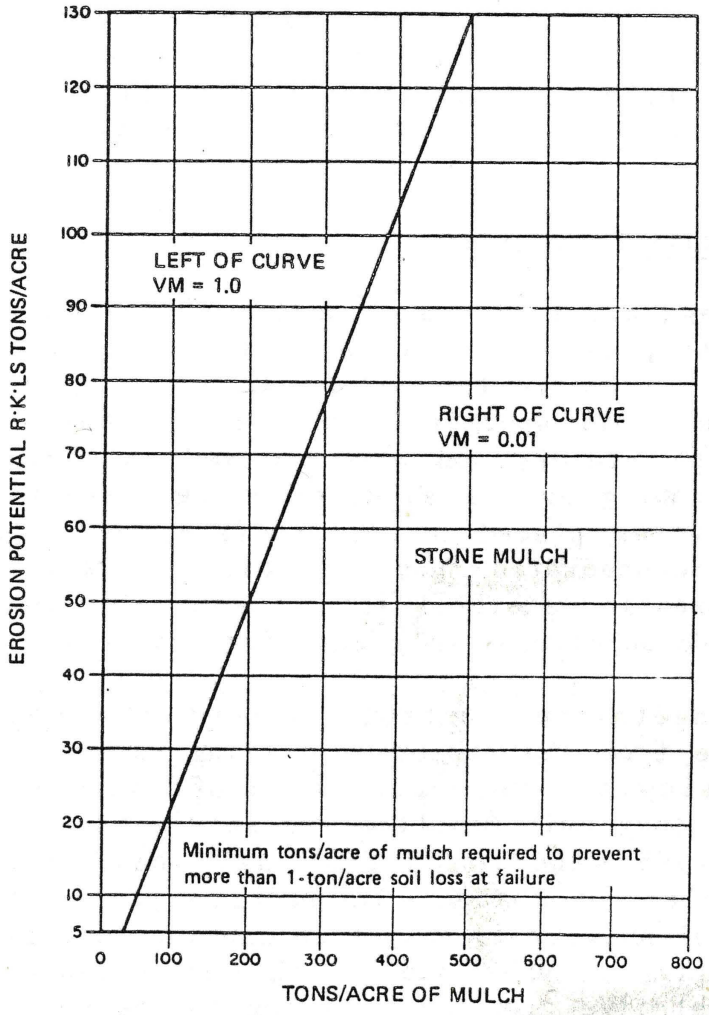


Figure 6. Stone mulch vs. R·K·LS.

APPENDIX G

Surface Impoundment Evaporation

I. The facility plans to allow the liquids to evaporate from the surface impoundment prior to closure rather than removing the liquids. Determine the time required for evaporation to occur if they begin with a liquid level at the design high operational liquid level. The depth of liquid is 9.4 feet above the lowest point on the top liner system.

II. Annual lake evaporation of 38.89 inches for Wendover, Utah is from "Consumptive Use of Irrigated Crops in Utah, Research Report 145", October 1994, Utah Agricultural Experiment Station, Utah State University, Logan, Utah.

III. Average Annual Precipitation of 7.88 inches is for Knolls, Utah is from the Western Regional Climate Center – Desert Research Institute – Reno, Nevada.

IV. The wettest year of record of 15.07 inches for Dugway and occurred in 1985. This is the station nearest the facility. Also recorded that same year was 11.8 inches at the Fish Springs Refuge.

Client: Clean Harbors Grassy Mountain Facility
Project: Surface Impoundment B
Feature: Evaporation
Date: November 2016

Beginning Depth =	9.4	feet =	112.8	inches
Average Annual Evaporation =		38.89	inches	For Wendover, Utah
Average Annual Precipitation =		7.88	inches	For Knolls, Utah
Highest Record Precipitation =		15.07	inches	For Dugway, Utah

	Depth	
Year	Average Annual Precip. (in)	Annual High Precip (in)
0	112.8	112.8
1	81.79	88.98
2	50.78	65.16
3	19.77	41.34
4	-11.24	17.52
5		-6.30
6		-30.12

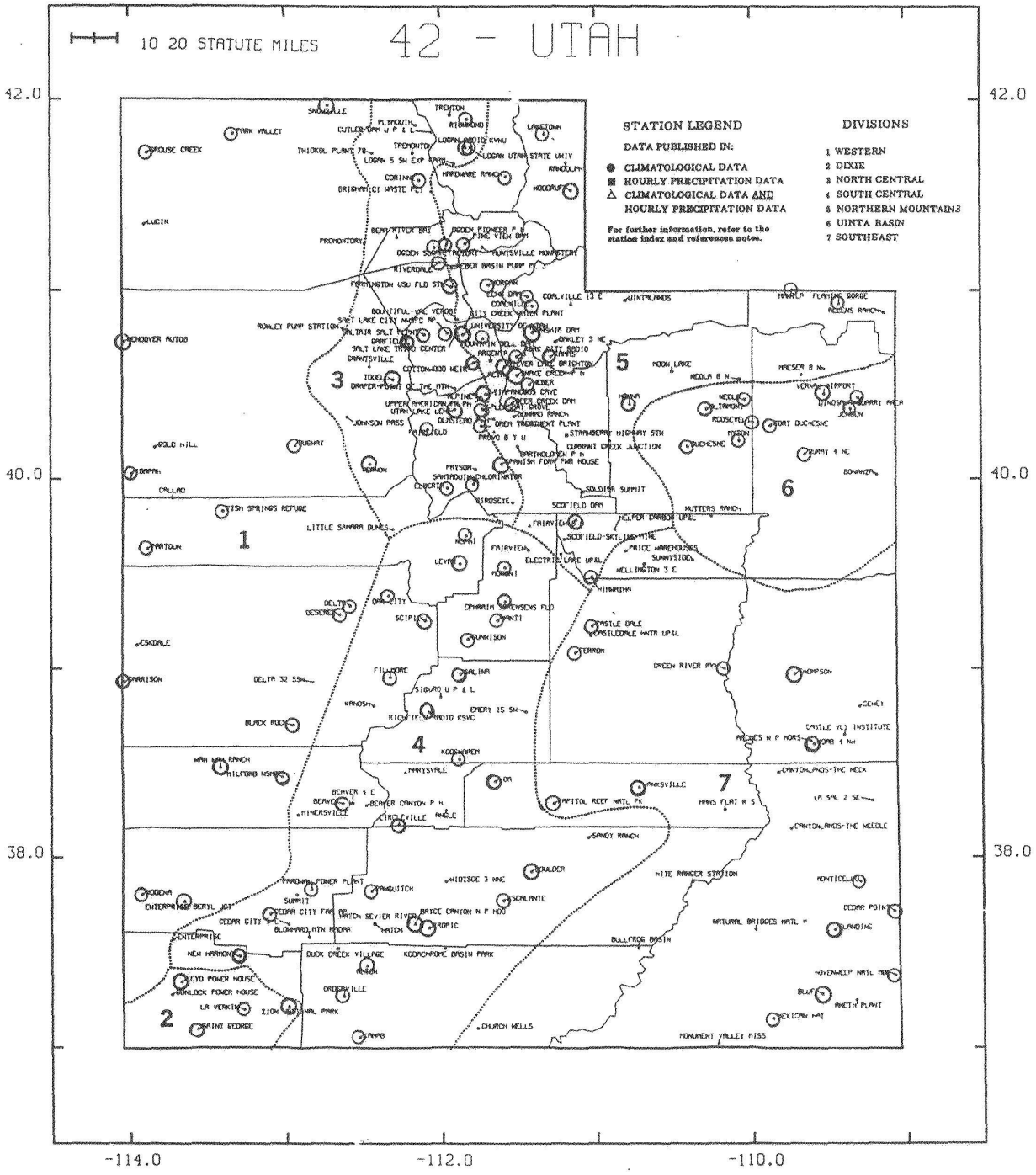


Figure 18. Locations of National Weather Service Sites Used in This Study (indicated by circled site).

Table 25.(Continued) Estimated Consumptive Use for the NWS Station at WENDOVER AUTOB
From a Calibrated SCS Blaney-Criddle Equation using data from GRANTSVILLE 10-31-1994
Years of Data Available; NWS: 1961-1990 GRANTSVILLE: 1989-1990 Elev. 4240 ft., Lat. 40.73

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
% Day Light	6.67	6.65	8.27	8.96	10.09	10.18	10.34	9.63	8.40	7.70	6.65	6.47	100.00
Avg Temp F	26.81	33.71	42.19	50.67	60.75	70.63	79.79	76.62	65.59	52.01	38.50	27.72	52.08
Std Dev Temp	4.53	4.35	3.24	3.87	2.98	3.58	1.79	2.49	3.06	2.82	2.27	3.70	1.10
Avg Prec in.	0.22	0.32	0.42	0.56	0.90	0.65	0.29	0.45	0.38	0.54	0.39	0.28	5.39
Std Dev Prec	0.18	0.30	0.39	0.47	0.87	0.69	0.24	0.48	0.61	0.58	0.35	0.24	1.62
SCS-BC f in.	0.54	0.71	1.47	2.57	4.53	6.55	8.80	7.47	4.53	2.36	0.91	0.54	40.98
Std Dev f	0.09	0.16	0.31	0.50	0.54	0.78	0.45	0.56	0.50	0.33	0.15	0.07	1.74
ALFALFA													
Cal SCS-BC k			0.40	1.41	1.40	1.23	0.86	0.91	1.05	0.86			
Cal SCS-BC Et			0.59	3.63	6.33	8.05	7.53	6.83	4.78	2.02			39.77
Std Dev Et			0.13	0.70	0.76	0.96	0.39	0.51	0.52	0.28			2.00
Net Irr in.			0.25	3.18	5.61	7.53	7.30	6.47	4.48	1.60			36.43
OTHR HAY													
Cal SCS-BC k			0.19	1.10	1.64	1.43	0.90	0.42	0.30				
Cal SCS-BC Et			0.29	2.84	7.44	9.36	7.92	3.14	1.37				32.36
Std Dev Et			0.06	0.55	0.89	1.12	0.41	0.23	0.15				1.91
Net Irr in.				2.40	6.72	8.84	7.69	2.78	1.07				29.50
PASTURE													
Cal SCS-BC k			0.39	0.93	1.06	0.89	0.74	0.74	0.74	0.85			
Cal SCS-BC Et			0.57	2.41	4.81	5.82	6.50	5.50	3.37	1.99			30.97
Std Dev Et			0.12	0.47	0.57	0.70	0.33	0.41	0.37	0.28			1.47
Net Irr in.			0.23	1.96	4.10	5.30	6.27	5.14	3.06	1.57			27.64
SP GRAIN													
Cal SCS-BC k			0.17	0.76	1.59	1.29	0.29						
Cal SCS-BC Et			0.25	1.96	7.20	8.45	2.52						20.38
Std Dev Et			0.05	0.38	0.86	1.01	0.13						1.61
Net Irr in.				1.52	6.48	7.93	2.29						18.22

All Values are 30 Year Averages. Effective Precipitation is 80 Percent of Total During Growing Season

Table 25.(Continued) Estimated Consumptive Use for the NWS Station at WENDOVER AUTOB
From a Calibrated SCS Blaney-Criddle Equation using data from GRANTSVILLE 10-31-1994
Years of Data Available; NWS: 1961-1990 GRANTSVILLE: 1989-1990 Elev. 4240 ft., Lat. 40.73

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
TURF													
Cal SCS-BC k			0.55	0.88	0.92	0.77	0.64	0.63	0.64	0.84			
Cal SCS-BC Et			0.80	2.26	4.15	5.02	5.61	4.74	2.90	1.97			27.46
Std Dev Et			0.17	0.44	0.50	0.60	0.29	0.35	0.32	0.27			1.32
Net Irr in.			0.47	1.82	3.43	4.50	5.38	4.38	2.60	1.55			24.12
E-LAKE													
Cal SCS-BC k	1.97	2.00	1.62	1.39	1.29	0.98	0.79	0.86	0.95	1.40	1.74	1.73	
Cal SCS-BC Evap	1.06	1.42	2.37	3.58	5.85	6.43	6.99	6.45	4.32	3.29	1.59	0.93	44.28
Std Dev Evap	0.18	0.31	0.51	0.70	0.70	0.77	0.36	0.48	0.47	0.46	0.26	0.13	2.03
Net Loss in.	0.84	1.10	1.95	3.03	4.95	5.78	6.70	6.00	3.93	2.76	1.20	0.65	38.89
ET Ref													
Cal SCS-BC k	2.18	2.29	1.80	1.57	1.64	1.37	1.14	1.13	1.14	1.58	1.94	1.92	
Estimated Etr	1.17	1.63	2.63	4.04	7.41	8.95	10.00	8.46	5.18	3.71	1.76	1.03	56.00
Std Dev Et	0.20	0.36	0.56	0.78	0.88	1.07	0.51	0.63	0.57	0.51	0.28	0.14	2.51

All Values are 30 Year Averages. Effective Precipitation is 80 Percent of Total During Growing Season
Blank values (if any) of ET Ref in early and late months denotes only seasonal calibration data

UTAH

A N N U A L P R E C I P I T A T I O N S U M M A R Y (INCHES)

		PRECIPITATION						SNOWFALL			NUMBER OF DAYS			
	PERIOD OF RECORD	MEAN	MAX YEAR	YR	MIN YEAR	YR	MAX DAY YEARMODY	MEAN	MAX YEAR	YR	>= .01	>= .10	>= .50	>= 1.0
ALLEN'S RANCH	1962-2001	8.97	12.98	83	4.96	76	1.86 19941003	17.6	61.5	83	63	29	3	0
ALPINE	1948-2010	17.72	30.88	83	8.19	50	2.00 19680523	46.0	111.6	109	82	50	9	1
ALTA	1948-2010	54.06	108.54	83	27.04	88	5.59 19551116	512.3	899.5	83	122	94	39	14
ALTAMONT	1953-2010	9.14	15.13	97	3.96	58	2.01 19661227	37.9	73.1	83	56	31	3	0
ALTON	1928-2010	16.34	25.82	69	5.48	56	3.55 19380303	83.6	177.8	93	65	41	9	2
ALUNITE	1948-1953	9.24	11.03	51	8.38	50	1.40 19501119	35.8	20.0	50	35	29	5	1
AMALGA	1951-1953	17.05	**********9999.00****				1.30 19510804	89.7**********			73	49	9	3
ANETH PLANT	1959-2008	7.99	12.98	78	4.39	106	1.60 19980821	2.3	1.4	89	35	23	4	1
ANGLE	1981-2010	8.87	12.51	83	5.38	89	1.64 20050603	20.6	35.3	83	67	28	3	0
ANTELOPE ISLAND	1952-1972	15.48	21.72	70	10.60	58	3.35 19710829	10.4	24.5	53	59	42	9	2
ANTIMONY	1948-1975	5.33	9.00	72	1.61	70	3.30 19670922	14.4**********			41	15	2	0
A S R RESEARCH LAB	1950-1966	9.80	17.35	64	4.73	60	2.47 19570423	20.5	38.0	64	56	30	4	1
ARCHES NATL PARK HQ	1980-2010	8.64	13.41	106	4.19	89	1.62 20020908	6.5	20.1	89	58	26	4	0
BARTHOLOMEW POWERHOUSE	1956-1994	26.41	55.81	83	14.03	76	2.43 19820928	103.8	198.0	64	95	62	17	4
BAUER	1948-1959	12.48	17.08	51	7.56	53	1.99 19570423	54.6	67.0	55	63	36	6	1
BEAR LAKE STATE PARK	1989-2010	14.10	18.55	91	11.89	100	1.94 20101025	41.7	71.0	91	86	43	6	1
BEAR RIVER BAY	1969-1996	13.17	22.61	83	7.54	88	3.43 19820728	11.2	3.1	81	82	38	6	1
BEAR RIVER REFUGE	1948-1984	12.65	26.74	83	5.70	58	2.99 19820926	21.4	52.5	49	74	36	6	1
BEAVER	1889-1990	11.33	20.78	36	5.82	56	2.17 19110930	34.0	71.8	44	62	35	5	1
BEAVER CANYON P H	1948-2010	19.86	32.84	83	11.09	102	2.94 19770719	129.9	188.1	79	76	53	12	2
BENMORE	1948-1953	13.58	17.21	51	10.76	50	2.28 19511230	60.9**********			64	34	7	2
BIG WATER	1986-2010	6.77	9.00	93	3.22	89	2.10 20061006	2.5	19.5	89	46	20	3	0
BINGHAM CANYON	1948-1974	21.44	28.68	64	15.43	58	2.35 19641223	97.3	152.8	52	105	60	11	2
BINGHAM CANYON 2 NE	1974-1985	21.03	31.00	83	13.04	76	2.07 19820926	40.2**********			108	61	10	2
BIRDSEYE	1948-1992	13.80	19.08	69	7.85	58	1.93 19690125	69.2	105.0	52	69	45	5	0
BIRDSEYE NEBO CREEK	1979-1983	18.51	23.07	82	14.06	80	1.49 19820929	63.0	96.0	82	93	56	10	1
BLACK ROCK	1951-2010	8.86	13.41	98	4.23	89	3.16 19690729	23.4	79.4	88	52	27	3	1
BLANDING	1904-2010	13.34	24.42	9	4.93	56	4.48 19680801	38.5	121.0	9	62	36	7	1
BLOWHARD MTN RADAR	1964-2006	29.53	47.24	65	16.90	89	3.60 19670125	245.0	368.8	82	87	64	19	6
BLUE CREEK	1948-1952	16.17	**********9999.00****				1.20 19500508	45.9**********			68	46	9	1
BLUFF	1928-2010	7.72	15.69	57	3.00	55	3.60 19660729	8.3	25.0	79	43	24	3	0
BONANZA	1948-1993	8.87	13.23	57	4.14	58	1.88 19700611	24.5	38.7	51	48	28	4	0
BONANZA PUMPING STN	1960-1966	7.94	12.74	65	4.35	62	0.94 19610909	15.6	34.8	64	50	26	3	0
BOUNTIFUL-VAL VERDA	1981-2010	23.39	34.73	83	14.90	88	2.39 20000831	59.6	105.7	84	91	55	15	3
BOTHWELL	1948-1959	12.97	17.93	49	8.85	56	1.64 19570519	33.9	62.5	55	66	40	5	1
BOULDER	1954-2010	10.91	20.01	57	5.64	56	2.88 20061006	33.5	82.0	108	56	30	6	1
BRIAN HEAD	1991-2009	33.59	44.36	105	19.51	102	4.78 20041020	355.9	484.0	98	113	74	22	7
BRIGHAM CITY	1948-1974	19.41	27.06	71	12.84	66	2.32 19491110	63.9	102.6	55	74	49	12	3
BRIGHAM CITY WASTE PLT	1974-2010	17.16	33.93	83	8.10	103	2.93 19820926	34.7	63.1	82	77	45	10	2
BRYCE CANYON FAA AIRPOR	1948-1983	12.08	21.10	78	5.52	53	2.16 19630918	66.6	158.2	78	67	33	5	1

BRYCE CANYON NAT'L PRK	1971-1978	15.24	21.69	78	10.97	77	2.20	19781102	93.2	157.5	78	69	37	8	3
BRYCE CANYON NAT'L PRK	1948-1959	14.55	23.15	57	7.25	50	3.42	19530909	105.6	206.0	52	71	39	7	1
BRYCE CANYON NATL PK HD	1959-2010	15.58	25.06	93	8.34	102	3.26	20050112	87.5	173.4	65	73	39	9	2
BULLFROG BASIN	1967-2010	5.95	11.46	78	2.17	68	1.74	19690719	4.6	25.3	79	41	18	2	0
BULLFROG 8 N	1999-2001	4.11	**********9999.00****				0.78	20001030	4.8**********			46	15	0	0
CALLAO	1948-2010	5.79	10.59	97	0.94	53	2.12	19820927	8.5	60.5	49	46	18	2	0
CALLISTER RANCH	1967-1984	12.83	16.55	82	7.63	74	2.17	19710829	33.5	62.0	78	64	38	6	1
CANYON BREEZE RANCH	2007-2009	17.52	**********9999.00****				3.00	20081213	58.5**********			50	41	11	4
CANYONLANDS THE NECK	1965-2010	9.03	13.66	84	4.63	89	1.76	19780409	23.5	47.4	75	59	28	3	0
CANYONLANDS THE NEEDLE	1965-2010	8.46	11.19	69	4.25	89	1.56	19990917	14.8	39.3	75	56	26	3	0
CAPITOL REEF NATL PARK	1967-2010	7.59	11.52	97	3.72	73	1.78	20061006	15.2	48.2	79	53	22	3	0
CASTLE DALE	1928-2010	7.66	14.28	65	3.29	34	2.15	20070828	16.1	52.8	83	48	24	3	0
CASTLEDALE HUNTER UP&L	1980-2006	8.12	13.20	97	4.83	90	2.00	19970831	11.6	44.5	93	46	25	4	1
CASTLE ROCK	1956-1961	11.67	14.56	57	6.80	58	1.00	19570423	47.3	35.6	57	50	43	4	1
CASTLETON	1963-1978	13.93	24.74	65	9.40	74	2.21	19651016	44.4	93.9	75	53	38	8	1
CASTLE VALLEY INST	1978-2009	10.58	14.84	93	5.07	89	1.88	20061007	15.7	50.9	79	55	31	5	1
CEDAR CITY	2000-2010	12.16	14.75	105	9.39	109	1.56	20050603	59.7	91.0	101	63	33	6	1
CEDAR CITY 5 E	1983-2010	15.96	22.09	84	11.92	91	3.83	20060731	60.9	92.5	84	61	40	10	2
CEDAR CITY FAA AIRPORT	1948-2010	10.62	16.94	67	5.20	59	2.10	19670924	45.1	87.7	73	67	31	4	1
CEDAR CITY POWERHOUSE	1928-1961	10.56	18.76	41	4.95	59	1.58	19320605	48.5	194.5	44	55	31	5	1
CEDAR CITY STEAM PLANT	1961-1983	13.65	19.58	80	8.61	76	2.04	19670924	28.0	21.3	74	62	37	7	1
CEDAR POINT	1957-2010	14.86	29.96	57	6.29	89	3.75	19700905	66.1	155.0	79	64	40	8	1
CHURCH WELLS	1975-1986	7.74	11.70	78	4.17	76	3.70	19830725	3.7	18.1	82	37	21	4	1
CIRCLEVILLE	1948-2010	8.61	15.42	97	4.45	76	2.61	19670923	18.8	65.2	97	61	27	3	0
CISCO	1952-1967	7.11	13.99	57	3.08	56	1.43	19651016	11.0	30.1	55	35	24	3	0
CITY CREEK WATER PLANT	1955-2010	28.02	43.75	83	16.34	79	2.65	19640502	105.7	160.3	106	100	62	19	4
CLEAR CREEK	1948-1967	23.05	32.89	57	15.65	59	2.50	19511229	235.8	437.0	64	102	62	13	2
CLEAR LAKE REFUGE	1963-1984	8.91	14.50	82	3.75	76	1.49	19680801	26.5	47.6	75	65	28	3	0
COALVILLE	1948-2010	15.97	26.72	83	9.92	79	2.60	19860821	71.7	153.0	83	93	48	6	1
COALVILLE 13 E	1974-2010	14.90	24.66	83	9.19	79	2.00	19980617	84.0	145.9	75	84	45	6	1
COLLEGE WARD UTAH STATE	1968-1969	19.59	19.08	68	19.08	68	1.26	19681015	54.4	50.8	68	94	56	9	1
CONRAD RANCH	1963-1989	22.84	37.22	83	10.09	74	4.00	19791020	64.0	99.4	67	82	53	14	4
CORINNE	1871-2006	15.38	32.40	83	6.86	28	2.52	19770818	30.8	73.3	32	59	41	9	2
COTTONWOOD WEIR	1948-2010	24.05	39.43	83	13.86	102	4.65	19820926	87.0	178.0	96	90	55	16	3
COVE FORT	1948-1980	12.99	17.17	61	7.16	56	3.10	19530209	48.0	144.1	71	60	38	7	1
CURRANT CREEK JUNCTION	1985-1996	15.08	12.89	92	11.98	94	2.10	19911030	77.9	92.8	93	89	45	6	1
CUTLER DAM UTAH P&L CO	1980-2010	17.58	36.32	83	9.92	88	3.18	20050428	39.2	83.0	85	93	48	9	1
DEER CREEK DAM	1948-2010	22.15	35.95	82	11.04	76	5.08	19630201	78.6	206.0	49	91	53	12	3
DELTA	1938-2010	7.89	13.44	98	3.32	50	2.59	19461028	25.0	49.5	88	61	26	2	0
DELTA 32 SSW	1985-1987	5.74	**********9999.00****				1.62	19850328	23.6**********			38	19	4	1
DESERET	1891-2010	7.78	15.88	81	3.40	34	2.00	19150211	18.4	39.8	49	44	25	3	0
DESERT EXP RANGE	1950-1984	6.22	10.68	80	2.40	50	1.64	19780915	10.2	28.6	64	47	19	2	0
DEWEY	1967-2004	8.95	16.74	93	4.08	102	1.46	19690624	10.0	26.5	74	33	27	5	0
DINOSAUR NATIONAL MONUM	1948-1958	8.59	12.24	49	6.07	56	1.61	19491220	26.2	55.7	49	54	27	3	0
DINOSAUR NM QUARRY AREA	1958-2010	8.38	12.29	65	3.73	89	1.90	20010709	19.8	53.4	78	59	26	3	0
DRAPER	1963-1968	20.75	19.24	67	15.16	66	2.44	19651230	29.5**********			80	50	12	4
DRAPER POINT OF THE MTN	1985-2008	15.61	22.89	98	6.79	88	1.56	19960131	33.7	67.7	93	79	43	8	1
DUCHESNE AIRPORT	1974-1980	7.57	8.85	75	6.15	76	1.15	19800910	18.0	31.6	75	48	25	3	0
DUCHESNE	1906-2010	9.46	17.99	97	4.60	42	2.00	19370101	26.2	68.2	97	63	30	3	0

DUGWAY	1950-2010	7.72	15.07	82	3.35	66	1.46	19880806	15.5	31.3	52	58	25	3	0
EAST CANYON	1952-1971	19.60	24.75	68	12.97	58	1.91	19641223	113.9	136.0	53	102	58	9	1
ECHO DAM	1948-2010	14.47	23.06	83	7.43	58	2.00	19570616	68.7	137.0	83	93	44	6	1
ELBERTA	1928-1992	10.59	19.34	83	4.77	76	1.97	19580816	24.8	46.2	49	74	34	4	0
ELECTRIC LAKE U P & L	1980-2009	24.45	37.33	83	18.43	102	1.80	19820105	0.0**********			111	73	12	1
ELKHORN ASHLEY RNGR STN	1920-1956	13.90	21.51	41	6.53	24	2.96	19390906	62.4	88.8	44	57	37	7	2
EMERY	1901-1978	7.33	16.84	41	0.94	2	2.60	19280516	20.9	52.0	6	30	22	4	1
EMERY 15 SW	1979-1986	14.67	17.01	81	13.68	82	1.71	19810909	81.6	105.2	83	80	47	5	1
ENTERPRISE	1954-2010	14.10	28.61	78	5.08	102	2.64	19610917	31.3	97.5	62	49	33	9	2
ENTERPRISE BERYL JCT	1948-2008	9.86	16.41	78	5.65	66	2.50	19820618	28.4	53.3	73	57	28	4	1
EPHRAIM SORENSENS FLD	1949-2010	11.67	19.89	83	5.21	76	2.21	19661206	12.0	50.0	106	82	38	4	0
ESCALANTE	1901-2010	10.93	21.70	27	4.79	102	4.40	19210831	26.0	65.3	79	45	27	6	1
ESCALANTE RIVER MOUTH	1951-1953	7.89	**********9999.00****				1.10	19530714	5.4**********			36	19	5	2
ESKDALE	1966-2010	6.29	12.57	98	3.18	92	2.61	19910531	13.0	35.9	82	43	19	2	0
EUREKA	1948-1984	17.02	29.14	78	9.24	53	2.51	19680722	120.3	193.5	52	88	48	8	1
FAIRFIELD	1950-2010	11.73	24.07	83	6.03	76	2.00	19910515	35.4	80.0	83	80	37	4	1
FAIRFIELD AIRPORT	1948-1950	9.56	11.14	49	11.14	49	0.93	19490520	47.2	49.6	49	80	29	3	0
FAIRVIEW	1985-1997	15.15	19.00	93	12.41	88	1.54	19860213	82.5	118.0	94	99	48	6	1
FAIRVIEW 8 N	1975-2010	17.00	25.95	83	10.77	76	2.38	19820929	107.8	224.9	83	56	46	9	1
FARMINGTON	1948-1965	19.28	25.04	57	14.75	56	2.60	19530114	62.1	140.6	52	77	49	11	2
FARMINGTON USU FLD STN	1948-2010	22.04	41.75	83	12.37	102	3.14	20000831	50.0	95.9	96	83	52	14	3
FERRON	1948-2010	8.38	13.82	57	4.92	102	2.10	20050603	27.5	71.9	78	55	25	3	0
FILLMORE	1928-2010	14.92	25.33	83	6.72	34	2.32	19400311	73.6	163.5	75	69	41	8	1
FISH SPRINGS REFUGE	1960-2010	7.84	12.64	86	3.89	72	1.87	19690415	12.9	40.4	73	54	24	3	0
FLAMING GORGE	1957-2010	12.10	17.75	97	6.94	58	3.37	19611008	52.4	109.6	73	73	36	5	1
FORT DUCHESNE	1894-2010	6.41	13.67	65	2.29	99	4.06	19050929	11.2	39.0	64	45	20	2	0
FREMONT INDIAN S P	1988-2010	11.52	16.66	106	7.64	102	2.50	20061007	48.6	82.6	98	68	35	5	1
FRUITA	1948-1967	6.85	13.78	57	3.91	50	2.03	19520603	14.5	46.5	49	33	19	3	1
FRUITLAND	1948-1966	12.44	**********9999.00****				1.52	19630831	-99.0**********			64	39	6	1
FRUITLAND 1 ENE	1987-1990	9.67	10.43	88	8.77	89	0.85	19880803	49.9	36.0	89	50	30	4	1
GARFIELD	1950-2010	17.20	28.01	82	9.40	79	3.17	19820927	23.4	57.6	51	81	44	10	2
GARLAND 1 NE	1948-1979	14.69	22.08	71	8.73	56	2.87	19770819	31.5	68.3	55	76	43	7	1
GARRISON	1951-1990	7.61	14.69	80	4.59	68	1.90	19900601	27.3	52.2	64	38	22	4	1
GENEVA STEEL	1953-1960	8.98	12.28	59	4.68	56	1.65	19580407	11.4	21.0	59	56	28	3	1
GENEVA STEEL 2	1960-1982	13.01	21.88	80	6.34	76	2.04	19791020	23.9	42.5	71	67	38	6	1
GLEN CANYON CITY	1962-1974	6.33	9.99	65	4.26	70	1.30	19680726	6.4	19.3	67	39	20	2	1
GOBLIN VALLEY SP	2005-2010	6.65	4.38	109	3.92	107	2.02	20061007	5.2	6.0	108	34	17	3	1
GOLD HILL	1966-1990	11.11	22.08	83	5.29	76	3.50	19820926	38.5	65.3	84	57	33	6	1
GOVERNMENT CREEK	1948-1950	13.45	**********9999.00****				1.84	19490324	82.3**********			59	33	7	1
GRANTSVILLE	1956-2010	11.57	20.78	83	6.31	66	1.89	19820926	29.9	61.0	72	76	35	4	0
GRANTSVILLE POWERHOUSE	1948-1956	13.23	16.80	51	8.30	53	1.14	19540125	66.9	104.0	49	77	40	6	1
GREEN RIVER RNG GWC	1948-1953	5.41	6.58	51	6.58	51	1.02	19491019	5.5**********			37	17	2	0
GREEN RIVER AVIATION	1893-2009	6.45	11.93	57	2.33	56	2.82	19990715	7.7	29.5	78	41	20	2	0
GROUSE CREEK	1959-2010	11.25	17.94	83	7.26	88	2.15	19600902	35.1	100.0	83	72	37	4	0
GUNLOCK POWERHOUSE	1948-2010	12.31	22.45	83	5.00	50	2.35	19830818	5.9	40.0	49	46	30	7	1
GUNNISON	1956-1990	8.93	18.37	83	5.07	58	1.33	19661206	15.4	48.5	61	59	30	3	0
HANS FLAT RANGER STN	1980-2010	9.87	13.20	84	5.61	103	1.80	20081226	38.7	64.1	93	63	30	4	0
HANKSVILLE	1948-2010	5.62	9.76	57	1.34	56	3.07	20061006	6.1	19.3	67	45	17	2	0
HANNA	1952-1994	11.83	18.85	87	6.02	79	1.75	19570805	46.3	97.5	69	65	35	6	1

HARDWARE RANCH	1956-1991	17.07	36.81	83	10.77	76	1.96	19791020	63.8	144.5	83	72	50	8	1
HARLEY DOME	1959-1963	9.20	12.37	61	6.85	60	1.30	19610909	15.8	25.1	60	53	28	4	1
HATCH	1948-2010	11.65	17.64	104	4.76	56	2.57	20101005	46.6	106.9	49	61	33	6	1
HEBER	1892-2010	15.85	27.92	9	9.11	88	3.00	18980503	70.1	177.5	16	83	48	8	1
HELPER CARBON U P & L	1980-2003	14.40	20.53	83	10.13	88	1.90	19821130	20.4	53.4	83	73	40	7	1
HENRIEVILLE	1963-1979	10.40	17.16	78	6.04	64	1.94	19781111	29.9	46.5	78	53	31	5	1
HERRIMAN	1963-1965	14.46	**********9999.00****				1.21	19650905	16.5**********			55	42	9	2
HIAWATHA	1921-1992	13.79	24.96	65	5.97	56	2.16	19410425	62.8	137.0	69	69	39	6	1
HIGH LINE CITY CREEK	1948-1956	26.65	31.86	51	20.03	54	3.52	19550403	143.1	158.9	49	80	57	18	5
HITE	1949-1962	5.67	12.12	57	1.73	56	1.18	19510829	3.1	10.5	52	29	16	3	0
HITE MARINA	1968-1978	5.31	7.30	75	2.63	77	1.43	19690718	4.6	13.7	74	34	15	2	0
HITE RANGER STN	1978-2010	7.50	11.44	105	4.17	88	1.73	20061006	4.0	22.0	109	44	21	4	1
HOVENWEEP NM	1957-2010	10.88	18.75	65	5.17	89	2.76	20030910	18.1	37.1	79	61	31	5	1
HUNTINGTON FARM UP&L	1980-1983	12.78	12.00	81	12.00	81	1.17	19810910	43.5	25.1	81	67	39	7	1
HUNTSVILLE MONASTERY	1976-2010	21.76	36.61	83	15.45	87	2.80	20000831	70.7	177.0	108	94	57	12	2
IBAPAH	1948-2010	9.79	16.41	98	3.20	53	3.11	19820927	30.0	73.5	75	45	28	5	1
INDIAN CREEK	1951-1954	10.08	13.12	52	6.57	53	1.34	19530429	44.7	15.5	53	46	31	6	1
IOSEPA SOUTH RANCH	1951-1958	9.64	12.38	54	6.28	52	1.30	19541204	17.1	30.7	52	41	29	6	1
JARVIE RCH	2002-2010	8.35	11.06	109	6.59	108	1.28	20041021	20.9	29.6	109	54	27	2	0
JENSEN	1948-2010	8.07	12.40	97	3.80	89	1.60	19690226	21.8	55.9	78	57	26	3	0
JOHNSON PASS	1972-2010	16.73	29.59	83	9.81	108	1.81	19740410	69.0	131.6	83	88	46	8	1
KAMAS 3 NW	1948-2010	17.17	24.88	83	8.80	76	4.12	19660227	90.0	163.5	96	85	51	8	1
KANAB	1899-2010	13.43	26.61	97	5.43	56	2.81	19970911	22.5	74.5	101	59	34	8	2
KANOSH	1928-2010	14.91	22.67	83	7.65	34	3.55	19530209	71.4	113.5	84	68	39	8	2
KNOLLS	1948-1951	7.21	8.46	49	8.46	49	0.65	19500509	-99.0**********			51	25	3	0
KNOLLS 10 NE	1986-2004	7.88	18.11	95	3.78	100	2.08	19950525	0.5	0.0	90	50	21	3	1
KODACHROME BASIN PARK	1979-2010	11.73	17.49	98	5.09	102	2.10	19800908	24.0	62.8	108	58	33	6	1
KOOSHAREM	1948-2009	9.52	15.03	57	5.21	89	1.60	20050603	35.0	67.1	93	73	31	3	0
LAKESIDE	1951-1968	6.24	8.88	55	5.57	54	0.77	19550531	19.8	40.1	55	49	21	2	0
LAKETOWN	1910-2010	11.75	21.22	98	0.48	33	2.47	19770818	53.5	143.0	96	69	37	5	1
LA POINT	1948-1961	8.25	12.73	49	4.97	58	1.89	19491020	26.4	59.1	49	69	25	2	1
LA SAL	1901-1978	12.83	24.77	41	6.50	56	2.04	19651016	44.5	87.4	60	56	35	7	1
LA SAL 1 SW	1978-2010	13.38	20.13	87	6.52	89	1.94	20061006	47.7	67.4	83	61	40	6	1
LA VERKIN	1950-2010	10.90	19.94	80	4.39	56	2.07	19951101	3.3	17.5	74	47	28	6	1
LEVAN	1895-2010	14.32	22.60	83	6.34	76	2.85	18950430	57.5	129.5	41	73	43	6	1
LEWISTON	1928-1976	17.33	26.03	45	9.53	66	2.22	19640607	55.7	106.6	55	88	50	8	1
LITTLE SAHARA DUNES	1979-2010	11.29	18.73	82	4.74	102	2.20	20090502	27.1	52.0	93	55	33	5	1
LOA	1948-2010	7.45	11.22	69	3.39	55	1.55	19880826	24.5	45.6	83	55	25	2	0
LOGAN RADIO KVNU	1956-2010	16.44	32.76	83	6.34	66	2.48	19770819	33.5	60.0	103	92	47	8	1
LOGAN UTAH STATE UNIV	1893-2010	17.72	35.85	83	10.58	66	2.02	19640607	58.9	120.6	67	87	49	9	1
LOGAN USU EXP STN	1950-1978	16.55	22.58	71	10.17	66	3.20	19770818	20.7	17.0	53	87	47	7	1
LOGAN 5 SW EXP FARM	1969-2010	18.29	30.36	83	10.80	92	2.66	19860218	52.0	95.9	82	92	52	8	1
LOWER AMERICAN FORK POW	1928-1957	16.25	27.76	41	7.53	33	2.38	19570422	44.0	93.0	52	79	45	8	1
LOWER MILL CREEK POWERH	1948-1953	20.29	21.42	51	16.80	50	2.66	19530114	96.0	110.3	49	84	50	12	3
LUCIN	1948-1990	7.63	10.17	87	4.43	54	1.80	19520728	18.6	56.5	83	44	27	3	0
LUND	1950-1967	7.29	10.88	51	3.24	56	1.45	19511026	3.5	17.0	57	36	24	3	0
LYTLE RANCH	1988-2010	10.47	16.12	95	3.96	89	2.02	19961122	1.1	4.0	97	29	24	8	1
MAESER 9 NW	1983-2009	14.05	20.42	97	8.67	89	2.05	19941003	61.3	99.5	108	79	41	6	1
MAGNA ASARCO FARM	1951-1957	11.96	13.69	51	9.50	53	1.57	19570423	30.6	18.5	53	36	31	7	1

MANILA	1952-2010	8.93	14.70	83	3.85	58	2.84	19611008	37.0	115.3	83	51	27	4	0
MANTI	1928-2010	12.81	21.55	83	7.08	34	1.67	19661206	54.0	95.0	83	82	40	5	0
MARYSVALE	1948-2010	8.00	15.48	57	4.02	76	2.00	20100517	22.4	72.6	57	65	27	2	0
MEXICAN HAT	1948-2010	6.37	9.93	72	2.63	55	2.10	20050812	3.1	17.5	49	48	20	2	0
MIDLAKE	1968-1981	8.74	11.40	78	4.63	69	1.81	19770524	3.4	2.2	70	55	24	4	1
MIDVALE	1948-1971	14.33	18.64	68	9.54	66	2.60	19631220	45.3	82.0	51	80	42	6	1
MILFORD	1906-2010	9.06	15.21	104	4.48	50	3.00	20041021	34.1	78.3	49	62	28	4	0
MINERSVILLE	1948-2010	11.33	21.13	83	4.00	56	2.20	19710821	17.4	68.0	84	55	35	5	1
MOAB	1889-2010	9.02	16.42	83	4.32	-2	3.99	18960923	10.1	66.5	15	55	27	4	1
MODENA	1901-2004	10.26	19.07	6	4.17	50	2.06	19430817	28.9	101.0	49	57	29	5	1
MONTEZUMA CREEK	1948-1956	12.80	18.10	49	6.28	56	1.93	19531023	58.5	87.4	49	55	34	7	1
MONTICELLO	1948-2010	15.12	23.07	57	6.56	50	3.38	19680801	60.2	154.0	79	73	39	8	2
MONUMENT VALLEY GOULDIN	1956-1960	6.39	11.54	57	4.31	58	1.15	19560520	10.2	8.5	58	43	23	1	0
MONUMENT VLY MISSION	1961-1989	7.40	13.34	87	3.77	63	1.60	19740719	13.2	25.4	83	46	22	3	0
MOON LAKE	1948-1969	16.76	22.70	49	22.70	49	3.60	19490127	29.3**********			44	35	10	4
MORGAN	1948-2010	17.82	28.94	83	11.13	52	2.40	20101026	58.8	145.0	83	88	51	9	1
MORONI	1948-2010	9.68	16.67	100	3.50	76	2.09	19661206	43.2	91.3	79	56	30	3	0
MOUNTAIN DELL DAM	1948-2010	23.88	38.51	83	14.86	76	2.41	19780918	103.8	203.8	55	102	59	15	3
MOUNT EMMONS	1948-1953	8.17	11.27	49	5.37	50	1.23	19511230	41.5	73.9	49	47	26	4	0
MURDOCK POWERHOUSE	1949-1958	16.79	21.09	51	12.26	56	1.75	19551114	96.7	144.0	52	78	50	8	1
MYTON	1928-2010	6.65	13.71	41	1.34	74	2.00	19641114	14.3	50.7	49	39	21	3	0
NATURAL BRIDGES NATL MO	1965-2010	12.47	19.83	69	6.50	102	3.10	20030910	40.4	108.6	79	66	35	6	1
NAVAJO MOUNTAIN	1956-1975	9.18	15.68	65	5.38	64	1.80	19601014	27.9	61.1	62	33	24	5	1
NEOLA	1956-2010	8.88	15.44	57	4.24	74	1.73	19941003	24.7	51.0	108	49	29	3	0
NEPHI	1941-2010	14.38	26.52	83	7.24	76	1.85	19430721	44.6	101.0	88	83	44	6	1
NEW HARMONY	1948-2010	17.43	36.66	78	7.43	102	4.71	19780210	39.9	138.5	49	54	37	11	4
NUTTERS RANCH	1963-1986	11.57	24.82	65	6.40	74	2.03	19670125	45.6	101.7	65	73	35	5	1
OAK CITY	1928-2010	12.97	21.72	105	6.59	34	2.88	19750520	42.9	100.5	88	62	38	6	1
OGDEN PIONEER P H	1902-2010	20.64	42.73	83	11.66	28	3.19	19910908	41.2	109.5	49	81	51	13	2
OGDEN SUGAR FACTORY	1924-2009	17.07	34.31	83	8.25	66	2.59	19610918	26.6	85.0	29	70	44	10	2
OGDEN WBO	1948-1952	19.33	22.32	49	15.50	50	3.36	19510804	77.8	94.5	49	95	49	11	2
OLMSTEAD POWERHOUSE	1977-2003	20.31	33.75	83	12.53	89	2.10	19820910	33.7	59.5	96	88	53	11	2
ORDERVILLE	1928-2010	15.08	24.85	78	6.50	56	4.44	19661206	38.0	121.5	49	53	36	9	2
OREM TREATMENT PLANT	1982-2010	12.87	20.76	83	8.15	88	1.50	20051028	29.0	55.9	93	76	38	6	1
OTTER CREEK DAM	1975-1981	7.07	**********9999.00****				0.83	19801012	8.0**********			41	21	4	0
OURAY 4 NE	1955-2010	6.82	12.17	65	3.01	58	1.52	19911027	15.5	31.0	84	46	21	2	0
PANGUITCH	1904-2010	9.76	17.06	67	5.44	42	2.47	19121027	24.5	52.0	52	58	29	4	1
PARIA RANGER STATION	1999-2010	7.42	9.10	101	8.92	100	2.36	20060329	3.0	13.0	108	50	20	4	0
PARK CITY FIRE STATION 31	1992-2007	20.62	24.41	105	18.03	101	2.35	20041020	125.1	130.3	101	97	58	12	2
PARK CITY RADIO	1948-1991	21.44	37.77	83	18.04	86	2.10	19820926	138.1	264.9	83	85	56	13	2
PARK CITY NORANDA MINE	1980-1982	24.00	25.35	81	25.35	81	2.02	19811011	191.9	170.8	81	78	60	15	4
PARK CITY SUMMIT HOUSE	1969-1977	26.98	36.74	69	10.75	76	1.90	19700905	316.3	386.6	70	79	70	16	3
PARK VALLEY	1948-1990	11.15	20.76	83	5.08	66	2.84	19840817	35.0	73.8	83	68	35	4	0
PARK VALLEY MUDDY RANCH	1969-1982	9.67	14.08	71	6.29	76	1.54	19730714	36.7	76.0	75	59	30	4	1
PAROWAN POWER PLANT	1890-2010	12.18	20.20	41	6.92	60	3.31	19110930	57.9	116.0	82	57	34	6	1
PARTOUN	1950-2010	6.68	12.21	82	2.03	53	1.98	19820925	9.5	31.5	52	40	21	3	0
PAYSON	1948-1999	15.67	20.61	93	10.27	60	1.65	19930504	53.1	104.6	51	74	44	8	1
PAYSON 1 SE	1968-1984	19.92	32.74	83	9.86	76	2.83	19750520	63.8	102.5	83	92	54	9	2
PINE VIEW DAM	1948-2010	30.71	53.45	83	20.24	69	3.98	19750507	119.9	245.0	83	101	67	20	5

PIUTE DAM	1948-1971	8.25	14.73	57	4.72	56	1.80	19670922	16.6	55.4	52	57	27	3	0
PLEASANT CREEK POWERHOU	1956-1967	21.20	30.24	57	13.82	58	2.34	19661206	146.1	218.5	64	99	56	12	2
PLEASANT GROVE	1948-2010	16.71	28.56	83	8.86	76	1.80	19850510	43.1	74.5	108	90	47	8	1
PLYMOUTH	1948-2010	14.51	24.97	105	8.37	92	2.64	19880518	14.3	24.7	92	71	40	8	2
PRICE GAME FARM	1948-1968	9.75	15.43	49	4.33	56	1.97	19571103	28.6	61.0	49	55	28	4	1
PRICE WAREHOUSES	1968-2010	9.25	17.46	80	5.83	74	1.99	19970805	18.4	38.0	83	50	26	5	1
PROMONTORY	1981-1994	11.29	18.43	83	6.75	89	2.40	19820926	2.8**********			69	34	4	1
PROVO AIRPORT	1948-1953	13.15	16.50	51	10.04	53	1.10	19510430	58.6	79.0	52	84	40	5	0
PROVO BYU	1980-2010	19.58	36.97	83	10.65	102	1.66	19860309	56.0	118.9	83	102	55	11	2
PROVO RADIO KAYK	1952-1977	11.92	19.15	68	6.10	56	2.00	19750520	14.3	21.3	60	65	34	6	1
RANDOLPH	1982-2010	13.51	23.42	98	5.00	88	1.81	19970424	60.0	93.4	105	92	42	5	1
REDDEN RANCH	1968-1970	7.27	7.76	69	7.76	69	1.25	19690415	-99.0**********			37	25	4	1
RICHFIELD RADIO KSVC	1893-2010	8.04	13.00	36	4.16	109	2.00	18990324	20.1	52.0	48	64	25	2	0
RICHMOND	1928-2010	19.02	38.99	83	11.41	66	3.26	19770818	67.9	137.0	83	98	54	9	1
RIVERDALE	1928-1991	18.40	28.88	80	10.07	66	2.47	19300812	35.5	89.7	29	79	47	11	2
RIVERTON	1965-1968	13.11	13.09	67	8.82	66	1.24	19651230	24.1**********			86	40	4	1
ROOSEVELT RADIO	1948-2010	7.27	13.09	65	2.79	74	1.88	19550825	20.4	53.6	78	58	23	2	0
ROSETTE	1990-2010	11.75	19.47	98	7.40	107	1.28	20041209	4.1	0.0	99	81	37	4	0
ROWLEY PUMP STN	1985-1986	13.46	10.81	85	10.81	85	1.16	19860402	-99.0**********			75	39	7	1
ST GEORGE CAA AIRPORT	1948-1954	6.51	9.09	54	2.82	53	1.31	19480916	3.5	12.2	49	40	19	2	0
ST GEORGE	1862-2010	8.20	16.75	9	3.55	-6	2.40	19090831	3.1	19.0	-2	43	24	4	1
SALINA	1928-2010	10.04	16.73	57	4.52	34	2.10	19430601	23.8	52.0	44	56	34	4	0
SALINA 24 E	1986-2010	13.32	20.48	98	7.59	107	2.38	20050603	63.4	89.5	108	89	42	5	0
SALTAIR SALT PLANT	1956-1991	13.15	22.16	86	6.82	66	2.25	19820927	23.6	43.2	71	75	37	6	1
SALT LAKE CITY NWSFO	1948-2010	15.64	24.26	83	8.70	79	2.28	19620713	59.9	108.3	96	92	44	7	1
SALT LAKE CITY	1928-1954	15.29	21.03	41	10.68	39	2.39	19530114	56.3	102.2	52	90	44	7	1
SALT LAKE TRIAD CENTER	1985-2010	17.22	28.66	98	11.91	90	1.82	19930504	49.6	71.1	93	89	47	9	1
ASTR RESEARCH LAB	1966-1978	15.10	19.47	70	9.50	76	1.80	19780918	25.4	45.5	74	78	45	7	1
SALT LAKE CITY ZOO	1990-2005	22.87	28.29	93	16.35	102	2.31	20011123	76.7	135.9	96	95	56	14	3
SANDY RANCH	1963-1988	7.61	11.96	65	5.31	66	1.92	19721019	21.0	32.9	67	44	24	3	0
SANTAQUIN CHLORINATOR	1948-2010	18.51	30.08	83	10.08	89	2.92	19820927	67.6	137.8	55	77	47	11	2
SCIPIO	1928-2010	12.99	26.03	83	6.80	42	2.62	19661206	35.4	90.9	49	65	40	6	1
SCOFIELD	1969-1984	17.22	24.91	83	10.67	76	1.60	19750520	159.6	260.9	83	115	52	7	1
SCOFIELD DAM	1948-1991	14.56	32.03	57	6.77	74	2.04	19620120	115.8	186.5	83	79	42	7	1
SCOFIELD-SKYLAND MINE	1984-2010	25.49	32.47	96	17.24	89	2.43	19860217	234.7	342.9	96	115	70	14	2
SEVERE RANCH	1949-1951	5.81	**********9999.00****				0.65	19500911	-99.0**********			27	22	2	0
SEVIER DRY LAKE	1987-1993	6.96	8.62	88	4.45	89	1.47	19880802	20.8	51.5	88	37	21	3	0
SHIFTING SANDS RANCH	1988-1992	6.89	7.86	90	3.57	89	1.50	19900720	20.3	26.3	90	52	19	3	1
SIGURD U P & L	1980-1995	9.77	12.07	83	5.51	89	1.42	19800907	26.1	40.4	88	73	31	3	0
SILVER LAKE BRIGHTON	1948-2010	43.08	65.44	83	30.04	79	3.70	19690225	409.8	645.5	83	124	90	30	8
SNAKE CREEK POWERHOUSE	1928-2008	21.84	31.25	96	10.42	76	3.01	19691018	118.5	264.3	52	97	59	12	2
SNOW BASIN	1981-1984	56.62	64.69	82	64.69	82	3.28	19820121	388.1**********			126	96	39	15
SNOWVILLE	1948-1991	12.08	23.79	83	6.98	89	2.10	19830710	21.2	38.6	65	68	38	5	1
SNYDERVILLE	1993-2010	22.50	27.79	96	21.67	94	2.65	20101024	170.8	253.0	96	96	65	11	1
SOLDIER CREEK	1968-1973	14.56	16.10	69	13.15	70	1.22	19700905	90.6	122.0	69	72	46	6	1
SOLDIER SUMMIT	1948-2002	14.55	24.68	55	6.08	77	2.52	19740721	88.1	181.0	49	69	48	6	1
SPANISH FORK 1 S	1950-1959	13.16	18.29	57	8.60	56	1.65	19511229	35.6	76.7	55	75	39	6	1
SPANISH FORK PWR HOUSE	1928-2010	19.17	37.16	83	10.12	76	2.87	19740716	53.2	104.6	29	88	51	11	2
STRAWBERRY HIWAY STN	1962-1968	16.47	18.54	64	12.12	66	1.61	19630201	-99.0**********			83	47	9	1

| | | |

APPENDIX H

Closure and Post-Closure Care Cost Estimates

Client: Clean Harbors - Grassy Mountain Facility
Project: Surface Impoundment B
Feature: Closure and Post-Closure Care Cost Estimate
Date: November 2016

CLOSURE

SOLIDS MANAGEMENT			
a.	Estimated thickness of solids remaining in surface mpoundment at time of closure	1.5	feet
b.	Floor surface area of surface impoundment	86,420	square feet
c.	Total estimated volume of solids for disposal	4,801	cubic yards
d.	Unit cost for removal and direct landfill disposal	$14.19	/cubic yard
e.	**TOTAL ESTIMATED COST FOR ON-SITE MANAGEMENT OF SOLIDS**	$68,106.16	
DECONTAMINATION OF GEOSYNTHETIC MATERIALS			square feet
a.	Area of top geomembrane liner to be decontaminated	145,113	square feet
b.	Area of geonet to be decontaminated (20% of total area)	29,023	square feet
c.	Area of bottom geomembrane liner to be decontaminated (20% of total area)	29,167	square feet
d.	Total wash-down decontamination area	203,303	square feet
e.	Unit cost for initial decontamination wash-down	$1.55	/square foot
f.	**TOTAL ESTIMATED COST FOR INITIAL WASH-DOWN DECONTAMINATION**	$315,932.24	
REMOVAL OF GEOSYNTHETICS MATERIALS			
a.	Area of geomembrane liner and geonet media to be removed	436,061	square feet
b.	Conversion from square feet to cubic yards (from Clean Harbors estimate)	0.0149	
c.	Volume of geomembrane liner and geonet media to be removed	6,501	cubic yards
d.	Unit cost for geosynthetics components removal	$8.91	/cubic yard
e.	**TOTAL ESTIMATED COST FOR GEOSYNTHETICS REMOVAL**	$57,955.16	
DISPOSAL OF GEOSYNTHETICS MATERIALS			
a.	Volume of geomembrane liner and geonet media to be disposed	6,501	cubic yards
b.	Unit cost for geosynthetics components removal	$14.19	/cubic yard
c.	**TOTAL ESTIMATED COST FOR GEOSYNTHETICS REMOVAL**	$92,223.10	
REMOVAL AND DISPOSAL OF ROCK IN LEAK DETECTION SUMP			
a.	Quantity of rock to be removed	18	cubic yards
b.	Unit Cost for Removal and Disposal	$14.19	/cubic yard
c.	**TOTAL ESTIMATED COST FOR GEOSYNTHETICS REMOVAL**	$248.25	
REMOVAL AND STOCKPILING OF CLAY LINER MATERIAL			
a.	Quantity of clay liner material to be removed	15,569	cubic yards
b.	Unit cost for clay liner removal and stockpiling	$1.23	/cubic yard
c.	**TOTAL ESTIMATED COST FOR CLAY LINER REMOVAL AND STOCKPILING**	$19,126.15	
DISPOSAL OF CONTAMINATED CLAY LINER MATERIAL			
a.	Quantity of clay liner material to be removed (assume 20% of total)	3,114	cubic yards
b.	Unit cost for clay liner disposal	$14.19	/cubic yard
c.	**TOTAL ESTIMATED COST FOR CLAY LINER REMOVAL AND STOCKPILING**	$44,169.97	
CLAY LINER SOIL SAMPLING AND TESTING			
a.	Quantity of samples to be collected and tested	35	each sample
b.	Unit cost for clay liner sampling and testing	$682.50	
c.	**TOTAL ESTIMATED COST FOR CLAY LINER REMOVAL AND STOCKPILING**	$23,887.50	
REGRADE AREA			
a.	Embankment and gravel armor quantity	36957	cubic yards
b.	Unit cost for regrading	$1.29	/cubic yard
c.	**TOTAL ESTIMATED COST FOR CLAY LINER REMOVAL AND STOCKPILING**	$47,729.97	
AQUEOUS RESIDUALS FROM WASH DOWN TO BE TREATED			
a.	Generation rate of aqueous residuals from initial wash down	1.5	gallons/square foot
b.	Quantity of aqueous residuals to be treated	304,954	gallons
c.	Unit cost of off-site transportation and management at treatment facility with NPDES permit	$1.91	/gallon
d.	**TOTAL ESTIMATED COST ASSOCIATED WITH AQUEOUS RESIDUAL WASH DOWN**	$582,766.90	

CLOSURE OBSERVATION AND PROFESSIONAL ENGINEER CERTIFICATION			
a.	Percent of total closure cost.	3.5%	
c.	**TOTAL ESTIMATED COST ASSOCIATED WITH AQUEOUS RESIDUAL WASH DOWN**	$43,825.09	
RINSE WATER SAMPLING AND TESTING			
a.	Quantity of samples to be collected and tested	20	each sample
b.	Unit cost for clay liner sampling and testing	$682.50	
c.	**TOTAL ESTIMATED COST FOR CLAY LINER REMOVAL AND STOCKPILING**	$13,650.00	
RESIDUALS SAMPLING AND TESTING			
a.	Quantity of samples to be collected and tested	10	each sample
b.	Unit cost for clay liner sampling and testing	$682.50	
c.	**TOTAL ESTIMATED COST FOR CLAY LINER REMOVAL AND STOCKPILING**	$6,825.00	
TOTAL CLOSURE COST		$1,316,445.48	

Client: Clean Harbors - Grassy Mountain Facility
Project: Surface Impoundment B
Feature: Closure and Post-Closure Care Cost Estimate
Date: November 2016

POST-CLOSURE CARE

GROUNDWATER MONITORING			
a.	Assumed number of monitoring wells (each)	2	each
c.	Unit cost to obtain samples, to obtain analyticals, and to complete statistical analysis ($/well/year)	$2,500.00	/well/year
d.	**TOTAL ESTIMATED COST FOR GROUNDWATER MONITORING**	$5,000.00	
MONITORING WELL REMOVAL			
a.	Assumed number of monitoring wells	2	each
c.	Unit cost for removal of monitoring wells and plugging well holes ($/well)	$5,000.00	/well
d.	**TOTAL ESTIMATED COST ASSOCIATED WITH AQUEOUS RESIDUAL WASH DOWN**	$10,000.00	
TOTAL POST-CLOSURE CARE COST		$15,000.00	
TOTAL CLOSURE AND POST-CLOSURE CARE COST		$1,331,445.48	

QUANTITIES

Top	129921	sf area	1411	ft perimeter
SW Corner Slope	1065	sf area	147	ft perimeter
W Slope	12064	sf area	700	ft perimeter
NW Corner Slope	1065	sf area	147	ft perimeter
N Slope	10179	sf area	695	ft perimeter
NE Corner Slope	811	sf area	121	ft perimeter
E Slope	9592	sf area	691	ft perimeter
SE Corner Slope	811	sf area	121	ft perimeter
S Slope	10179	sf area	695	ft perimeter
Top Inside to Anchor Trench	7137	sf area	1444	ft perimeter
Top Inside to Clay Subgrade	14059	sf area	1487	ft perimeter
Anchor Trench Side (Pri. HDPE)	2888	sf area	1444	ft perimeter
Anchor Trench Side (Geonet)	2888	sf area	1444	ft perimeter
Anchor Trench Side (Sec. HDPE)	3610	sf area	1444	ft perimeter
Anchor Trench Bottom (Pri. HDPE)	2902	sf area	1457	ft perimeter
Anchor Trench Bottom (geonet)	2902	sf area	1457	ft perimeter
Anchor Trench Bottom (Sec. HDPE)	2902	sf area	1457	ft perimeter
Floor Area	86420	sf area	1154	ft perimeter
Sump Area	1052	sf area	123	ft perimeter
Trench Area				

Clay Liner Floor	9602.2222	cy volume
Clay Slopes	5085.1111	cy volume
Clay Around Top	807.09074	cy volume
Added Clay at Sump	9.7407407	cy volume
Added Clay at Toe of Slope	64.538519	cy volume
Total Clay Liner	15568.703	cy volume

							Totals	
Primary Liner	145113	sf area	area contaminated =		100%		145,113	sf area
Geonet	145113	sf area	area contaminated =		20%		29,023	sf area
Secondary Liner	145835	sf area	area contaminated =		20%		29,167	sf area
Total Geosynthetics	436061	sf area	area contaminated =		20%		203,303	sf area
conversion of square feet to cubic yards	760	/	50976	=	0.0149			

Regrading Area	6.8133609	acres area

Sump rock	472.5	cf =	17.5	cy

UNIT COSTS

Clean Harbors (September 28, 2012) Costs from Permit Documents			Revised Unit Costs Assuming	
(Most of the unit costs date back to 2001)			5.0%	increase
Landfill Disposal Costs				
Unit Landfill Disposal Cost (bulk)	$13.51	/cubic yard	$14.19	/cubic yard
Protective Clothing (Basic Level B)				
Long Term				
Chemical Resistant Boots	$50.00	each	$52.50	each
Goggles	$10.00	each	$10.50	each
Full-Face Respirator and Cartridge	$200.00	each	$210.00	each
Hard Hat	$6.00	each	$6.30	each
Daily Disposable				
Splash Suit	$10.00	/person/day	$10.50	/person/day
Nitrile Gloves	$2.00	/person/day	$2.10	/person/day
Cartridges	$5.00	/person/day	$5.25	/person/day
Total with 30% Surcharge	$22.10	/person/day	$23.21	/person/day
Decontamination Wash				
Initial Wash				
Cleaning production estimate	1,200	ft^2/shift		
Hours of activity per shift	6.5	hrs/shift		
Production	3	ft^2/min		
Spray unit residual generation	5	gpm		
Residual generation rate	1.6	gal/ft^2		
Residual generation rate	1,950	gal/day		
Final Wash/Rinse				
Cleaning production estimate	2,000	ft^2/shift		
Hours of activity per shift	6.5	hrs/shift		
Production	5	ft^2/min		
Spray unit residual generation	5	gpm		
Residual generation rate	1	gal/ft^2		
Residual generation rate	1,950	gal/day		
Crew/Equipment Overview	$1,368.00	/day	$1,436.40	/day
(one labor forman, four laborers, one compressor, tools, accessories, and hoses, portable centrifugal pump surfactant/chemicals)				
High Pressure Washing				
Production rate	1,200	ft^2/shift		
Surcharges to travel, etc.	0.3	fraction		
Unit cost	$1.48	/ft^2	$1.55	/ft^2
High Pressure Rinsing				
Production rate	2,000	ft^2/shift		
Surcharges to travel, etc.	0.3	fraction		
Unit cost	$0.89	/ft^2	$0.93	/ft^2
Wash Water Supply				
Tanker truck and driver	$720.00	/day	$756.00	/day
Water volume per truck	10,000	gallons/load		
Water cost	$0.072	/gallon	$0.076	/gallon
Water cost with transportation	$0.077	/gallon	$0.081	/gallon
Water cost	$150.15	/day	$157.66	/day
Wash water cost	$0.1251	/ft^2	$0.1314	/ft^2
Rinse water cost	$0.0751	/ft^2	$0.0789	/ft^2
Temporary storage of decontamination residue				
One tanker truck with driver (5,000 gallons)	$600.00	/day		
Aqueous Residuals Treatment				
Shipped off-site to Clean Harbors San Jose facility	$1.82	/gallon	$1.91	/gallon
Facility treatment costs	$1.25	/gallon	$1.31	/gallon
Transportation	$2,872.32	/load	$3,015.94	/load
	5000	gallons/load		
	$0.57	/gallon	$0.60	/gallon
Geosynthetics Removal Costs	$8.49	/yd^3	$8.91	/yd^3
Clay Liner Removal and Stockpile	$1.17	/yd^3	$1.23	/yd^3
Site Regrading	$1.23	/yd^3	$1.29	/yd^3
Sampling and Testing of Rinse Water	$650.00	/sample	$682.50	/sample
Sampling and Testing of Residuals	$650.00	/sample	$682.50	/sample
Sampling and Testing of Clay Liner	$650.00	/sample	$682.50	/sample