PHASE 1 - EVALUATION OF TRAVILAH QUARRY FOR WATER SUPPLY STORAGE

Final Report

Prepared for:

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1. INTRODUCTION

1.1 Purpose

The purpose of this study is to evaluate the feasibility of and potential prerequisites for use of the Travilah Quarry (the "quarry") as a raw water supply storage facility, based on mining estimates provided by Aggregate Industries, the current quarry owner, for the next 5 to 70 years. This report will address the feasibility and reliability of use of the quarry for water storage from both water storage and water quality aspects. Through this study, the preliminary investigation of the quarry conducted for the Washington Suburban Sanitary Commission (WSSC) over a decade ago (O'Brien & Gere, 2002; the "OB&G Study") will be updated and expanded.

1.2 Scope

Phase 1 of the study consists of four tasks to focus on feasibility and reliability of use of the quarry for water supply storage. The identified purposes for the storage are to augment existing supplies during drought and to provide backup water supply during emergencies. Therefore, Phase 1 of the study is a discussion of factors that may affect storage of water for these purposes.

Task 1. Evaluation of Use of the Quarry for Water Supply Storage

This task supports the consideration of the quarry as a regional water storage asset for the Potomac River water suppliers following the termination of mining activities. The task updates the previous estimates of current total and usable quarry storage. The task includes an evaluation of existing quarry storage volume and projections for future quarry storage availability for the period from 2015 through ultimate excavation, including 10-year projections of quarry size, and total and usable water supply storage volumes based on available mining plans and information. Available mapping from Aggregate Industries, including projected topographic contours, is used as the basis for the storage calculations.

Task 2. Evaluation of Geotechnical Conditions in the Quarry

A geological and geotechnical site assessment was conducted to determine if there are observable existing geological features or geotechnical concerns associated with the quarry which could preclude its use as a reservoir for raw water supply especially during drought conditions. This assessment includes:

- Geologic mapping of rock mass within the quarry, including an abbreviated geological and joint/fracture survey with measurement of the typical joint orientation and fracture condition for evaluation of the slope stability and seepage potential of the walls.
- Identification/description of major geologic features, including observation of geological features presently exposed at the ground surface and in the immediate area around the quarry.
- Preliminary wall stability and seepage analysis, including an analysis of the quarry wall stability and seepage based on the information inferred from the geological characterization of the site.

Task 3. Evaluation of Groundwater Re-fill to the Quarry

This task includes a discussion of the groundwater flow patterns that impact the quarry and its use as a water supply source. The evaluation includes an examination of the groundwater flow estimates cited in previous reports and the components of this flow, as well as a determination of

artificial effects on the observed groundwater flow from anthropogenic activities. A discussion of the permeability of the quarry walls and the feasibility of refilling the quarry by groundwater, without the use of supplemental water sources under non-drought and drought conditions is presented. The overall water-tightness of the quarry is discussed.

Task 4. Water Quality Evaluation

This task includes an update to the water quality discussion provided in the 2002 Facility Plan. The evaluation considers water quality factors related to trophic state of the proposed reservoir and potential treatability issues. The potential for water quality changes in the quarry that could cause the water to become more acidic, the potential for release of asbestos and other minerals, and the potential impacts for the carbonic acid cycle to change water quality in the quarry over time are discussed.

The task includes an evaluation of potential sources of contamination from previous quarry operations and potential spills, including potential substances present in the quarry and its associated facilities related to quarry operation and maintenance.

1.3 Definitions

Definitions of geologic terms used in this report are provided to assist in the understanding of the report.

Antigorite – One of the crystalline structures of serpentine along with <u>chrysotile</u> and <u>lizardite</u>.

Foliation - The planar or layered characteristics of metamorphic rocks that are evidence of the pressures and/or temperatures to which the rock was exposed. These can be structural such as cleavage, textural such as mineral grain flattening or elongation, or compositional such as mineral segregation banding.

Gneiss – A medium to coarse grained rock produced by regional metamorphism. The grains within gneiss are composed of greater than 50 percent equal-dimensional minerals, such as quartz and feldspar.

Lithology - The description of rocks, including their mineral composition and texture.

Mylonite – A brecciated metamorphic rock frequently found in a fault zone. The fractured texture is thought to form by the crushing actions of fault movement.

Physiographic province - A geographic region with a specific characteristic <u>geomorphology</u> (relief and/or environment), and often specific subsurface rock type or structural elements.

Reverse Fault – A fault with vertical movement and an inclined fault plane. The block above the fault has moved upwards relative to the block below the fault. Reverse faults are the typical structural style of convergent plate boundaries and portions of the crust that are under compression.

Rodingite - Metamorphic rock generally found surrounding serpentinite bodies, and rich in hydrous calcium-aluminum silicates.

Schist - A fine to coarse grained rock produced by regional metamorphism. The grains within schist are composed of greater than 50 percent tabular or prismatic minerals such as mica and amphibole.

Serpentinite – Metamorphic rock containing greater than 50 percent serpentine.

Shear – Rock deformation involving movement past each other of adjacent parts of the rock and parallel to the plane separating them. Movement is by ductile shear, rather than brittle failure found in a fault.

Slickenslides - A polished and smoothly striated surface that results from friction along a fault plane.

Slip-plane – Rock movement that has occurred along a planar surface.

2. PREVIOUS STUDIES

A number of previous studies were prepared to assess the Travilah Quarry for various uses. These studies include but are not limited to the following:

- 1. O'Brien & Gere Engineers, Inc. Potomac WFP Facility Plan. September 13, 2002.
- 2. C.C. Johnson & Malhotra (CCJM), P.C. <u>Potomac WFP Reliability Travilah Quarry Raw Water Storage Feasibility Study Geologic Report</u>. September 19, 2001.
- 3. Woodward Clyde Consultants. <u>Montgomery County, MD Waste Management Study Phase II Report Vol. 9 Travilah Quarry Hydrogeologic Assessment Report</u>. June 1986.
- 4. Fugro Atlantic, Inc. <u>Phase II Quarry Balefill Feasibility Study (Montgomery County Office of Environmental Construction)</u>. December 1980.

3. EVALUATION OF QUARRY FOR WATER SUPPLY STORAGE

3.1 Available Quarry Data

To estimate the current and future reservoir storage capacity of Travilah Quarry, mining plans were requested by Black & Veatch from Aggregate Industries. Detailed mining plans were found to be unavailable from Aggregate Industries; however, they indicated that they were currently updating their plans. Mining plan data that was provided by Aggregate Industries for this report consisted of a mining and reclamation plan from 1983 and drawings that indicated the ultimate quarry boundaries and the storm water control plans. While the mining and reclamation plan provided was originally designed in 1983 it had been updated through 2006. However, the topographic information included in the plan was from the 1983 original. Therefore, additional informational sources were identified to obtain more recent quarry data. The most recent topographic survey of the Travilah Quarry area was provided by Montgomery County, Maryland. This topographic information was gathered from a LIDAR survey, which was performed in 2008 to 2009. This topographic information is shown in Figure 3-1 in plan view. A sectional view was cut through this plan view along the length of the quarry, which is shown in Figure 3-2.

Aggregate Industries, has indicated that on average two million tons of rock are removed from Travilah Quarry each year and that 1.5 tons of rock removed from the quarry is the equivalent of approximately 1 cubic yard of removed material. Therefore, about 1.33 million cubic yards of material are removed annually on average.

As observed during a site visit, Aggregate Industries is allowing soil removed from construction sites to be dumped in the southern corner of the quarry. The final disposition of this material may decrease the volume of storage available for the future reservoir; however, for this evaluation no attempt was made to quantify this activity due to the lack of available information.

3.2 Current and Projected Quarry Capacity

The current storage volume of the quarry was determined using the topographic information obtained from Montgomery County. This information was inputted into AutoCAD Civil 3D and analyzed. The maximum water level of the future reservoir was determined by reviewing the elevation contour lines adjacent to the rim of the quarry. The lowest elevation contours were along the rim on the south/southwestern perimeter of the quarry, the lowest of which was at elevation 359 feet above mean sea level (MSL). A thin cover of soil is present along this quarry highwall that appeared to be 5 to 6 feet thick. To contain the water volume within the rock strata, the maximum water level would need to be maintained below this level. In addition, another 3 feet of freeboard is necessary to address potential wave action in the reservoir during significant storms, including up to a Category 2 hurricane, to prevent water from coming in contact with and eroding the soil. Therefore, an elevation of 350 feet MSL was assumed for the maximum water level of the quarry. Using this maximum elevation, a fill volume was calculated using AutoCAD Civil 3D. The available storage volume up to elevation 350 feet MSL, at the time of the 2008-2009 LIDAR survey, is calculated as approximately 31.6 million cubic yards or 6.4 billion gallons (BG). As of 2014, assuming an average quarry production rate of 2 million tons per year, the storage volume up to maximum pool elevation of 350 feet MSL is estimated at approximately 36 million cubic yards, or 7.3 BG.

Future projections of reservoir storage volumes, with a pool elevation at 350 feet MSL, were calculated using AutoCAD Civil 3D. The following assumptions were used to represent the future quarry developed to its ultimate horizontal and vertical limits. The "Ultimate Quarry Limits" line shown on the 1983 mining and reclamation plan provided by Aggregate Industries was used to establish the ultimate perimeter rim of the quarry (shown on Figure 3-1). Constant slopes were drawn in the AutoCAD file from the current elevation of the rim down to elevation -100, which was indicated as the "Ultimate Bottom Level" elevation on the plans provided by Aggregate Industries. Because mining plans with bench heights and widths were not provided by Aggregate Industries, two possible conditions were used to represent reasonable development scenarios. Constant slide slopes of 1:1 and 1.25:1 were both evaluated as equivalents to bench heights and widths observed at the site. The 1:1 equivalent slope was the maximum observed steepness of the bench heights and widths based on the existing topographic data, and the 1.25:1 equivalent slope was the approximate average benched heights and widths shown for the existing benched excavations. An elevation of 350 feet MSL was assumed for the maximum water level and storage volumes were calculated using AutoCAD Civil 3D. The 1:1 equivalent slope excavation is shown in Figure 3-3, and the 1.25:1 equivalent slope excavation is shown in Figure 3-5. A section view was cut through each of the plan views; those are shown in Figure 3-4 and Figure 3-6, respectively.

The 1:1 slope model provided an ultimate storage volume (water storage to elevation 350 feet MSL) of approximately 98.9 million cubic yards or 20.0 BG; however, this model does not appear likely because the equivalent slopes were steeper than most of the existing benching in the quarry. The 1.25:1 slope model provided an ultimate storage volume of approximately 86.4 million cubic yards or 17.4 BG, with water storage to elevation 350 feet MSL. The 17.4 BG value appears to be a more realistic estimate of the maximum storage that may be available given the mining to-date and assuming that Aggregate Industries will conduct future mining to remove as much rock as possible. If future bench heights and widths mined by Aggregate Industries vary from this equivalent slope it may have a significant influence on the amount of storage available in the quarry. Given the average annual rock excavation rate and the remaining life of the quarry, the future storage volumes can be calculated. To complete this analysis the amount of rock excavation that remained to be performed above and below elevation 350 feet MSL was considered. Additional rock excavation below elevation 350 feet MSL is assumed to contribute additional water storage volume, but rock excavation above that elevation would not add storage volume.

The recent topographic information (2009) was compared to the 1.25:1 slope model developed in AutoCAD Civil 3D, to estimate the ultimate storage volume. Approximately 13.1 million cubic yards of rock remained to be excavated above elevation 350 feet MSL, and approximately 65.9 million cubic yards of rock remained to be excavated below elevation 350 feet MSL. Lacking detailed future mining plans for the Travilah Quarry, assumptions were made regarding the means and methods of future rock excavation within the quarry. For simplicity, this calculation assumes that as rock excavation progresses, the proportion of the rock remaining to be excavated above elevation 350 feet MSL relative to the rock remaining to be excavated below elevation 350 feet MSL remains constant. This calculation also assumes that all existing and future benched excavations would have benched heights and widths equivalent to a slope of 1.25:1. If future mining plans are developed with benched excavations that are different than a 1.25:1 slope and/or show an ultimate bottom quarry level other than at elevation -100 feet MSL, these conditions will have a significant influence on the storage volumes presented here.

Table 3-1 summarizes the estimated future storage volume for the period from 2015 to 2060 (quarry at ultimate limits). The calculation shows that the ultimate storage volume to elevation 350 feet MSL is approximately 86.4 cubic yards or 17.4 billion gallons that would occur around year 2060.

As shown in Table 3-1, development of additional storage capacity of 9.9 billion gallons over 45 years equals a rate of 220 MG per year. Maintaining the other assumptions, the effect of production rate is a linear relationship to volume and time. So, a 10 percent reduction in average production rate corresponds to a 10 percent reduction in volume gained (20 MG per year) and 10 percent increase in time to reach the ultimate storage limits – 4.5 years later. Conversely, a 10 percent increase in production would decrease the ultimate schedule by 4.5 years to about 2055.

Table 3-1 Estimated Remaining Quarry Life and Storage Volume

YEAR	ESTIMATED STORAGE VOLUME (CUBIC YARDS)	ESTIMATED STORAGE VOLUME (BILLION GALLONS)
2015	37,200,000	7.5
2025	48,300,000	9.8
2035	59,400,000	12.0
2045	70,500,000	14.2
2055	81,600,000	16.5
~2060	86,400,000	17.4

3.3 Conclusions and Recommendations

The current storage volume of the quarry is approximately 7.3 billion gallons based on the most recent topographic data available and Aggregate Industries average production rate. The maximum water level anticipated for the reservoir is elevation 350 feet MSL to maintain adequate freeboard at the quarry perimeter elevation low.

While Aggregate Industries did not have or provide detailed mining plans, it is estimated that the quarry mining would be completed around the Year 2060 given the current average production rate. If fully mined to the ultimate planned depth, the quarry would hold approximately 17.4 billion gallons of water. It is important to note that this volume estimate is sensitive to Aggregate Industries future mining plans and as such could vary significantly if the quarry is mined to other limits or bench heights and widths. In addition, the quarry volume available for water storage has been and will continue to be reduced by the soil dumping that is occurring in the southern corner of the quarry.

The following is recommended to refine the quarry storage volume estimates and to preserve available storage capacity:

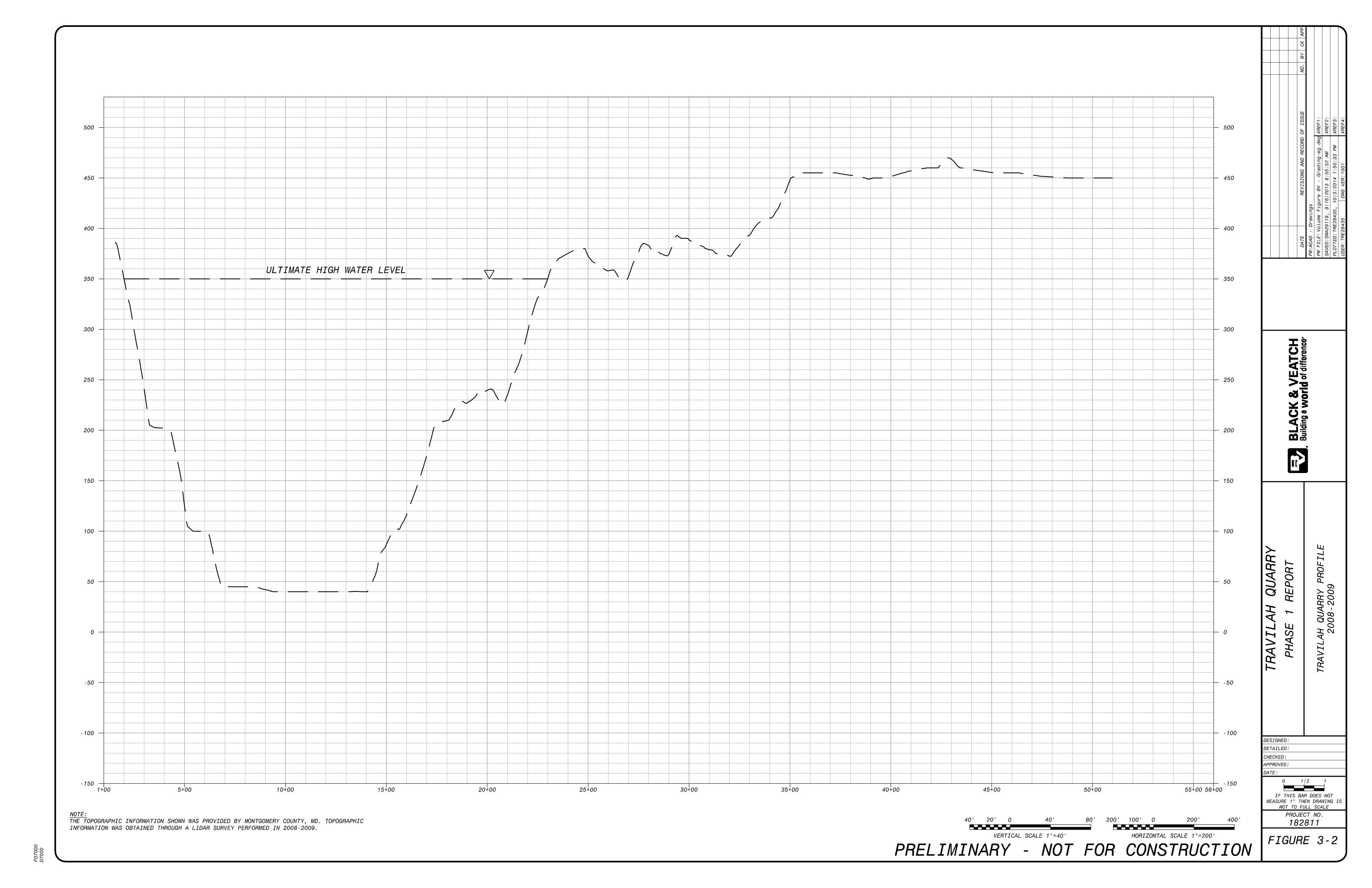
- Request future mining plans that are currently being prepared by Aggregate Industries.
- Discuss with Aggregate Industries a plan for terminating the dumping of soil in the south corner of the quarry.
- Obtain records from Aggregate Industries on the soil dumping occurring in the quarry to approximate the volume of material dumped and its characteristics.

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3. AERIAL PHOTOGRAPH WAS OBTAINED FROM GOOGLE EARTH AND IS DATED 10/12/2012.

PRELIMINARY - NOT FOR CONSTRUCTION



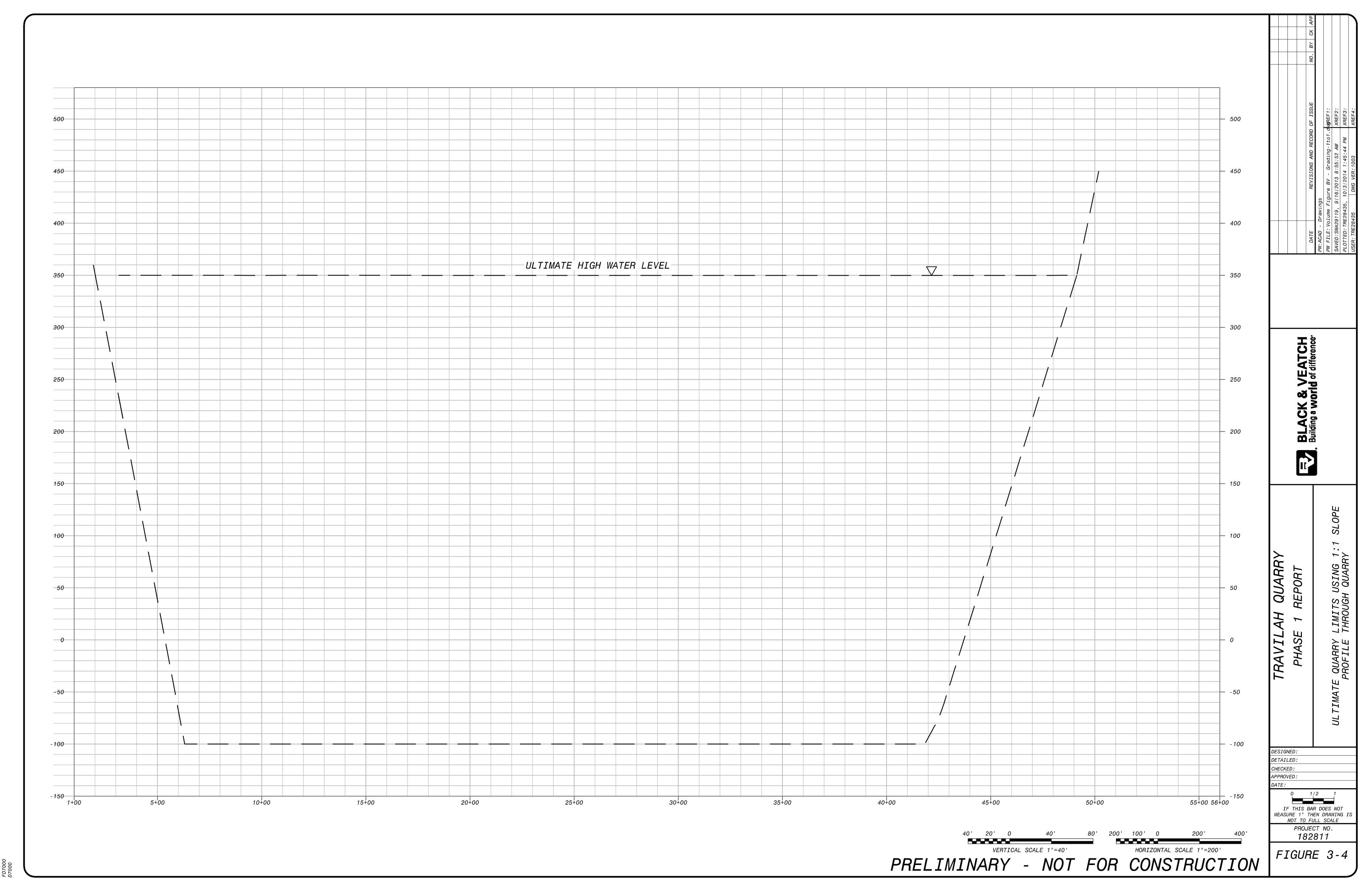


2. THE "ULTIMATE QUARRY LIMITS" PERIMETER LINE WAS OBTAINED FROM THE PREVIOUS MINING & RECLAMATION PLAN AS DEVELOPED BY RODGERS AND ASSOCIATES DATED 1982 TO 2006.

3. AERIAL PHOTOGRAPH WAS OBTAINED FROM GOOGLE EARTH AND IS DATED 10/12/2012.

4. CONTOUR ELEVATIONS ARE A HYPOTHETICAL SLOPE OF 1:1 WHICH IS EQUIVALENT TO 50 FT HIGH AND 50 FT WIDE BENCHES.

182811 FIGURE 3-3





2

2. THE "ULTIMATE QUARRY LIMITS" PERIMETER LINE WAS OBTAINED FROM THE PREVIOUS MINING & RECLAMATION PLAN AS DEVELOPED BY RODGERS AND ASSOCIATES DATED 1983 TO 2006.

3. AERIAL PHOTOGRAPH WAS OBTAINED FROM GOOGLE EARTH AND IS DATED 10/12/2012.

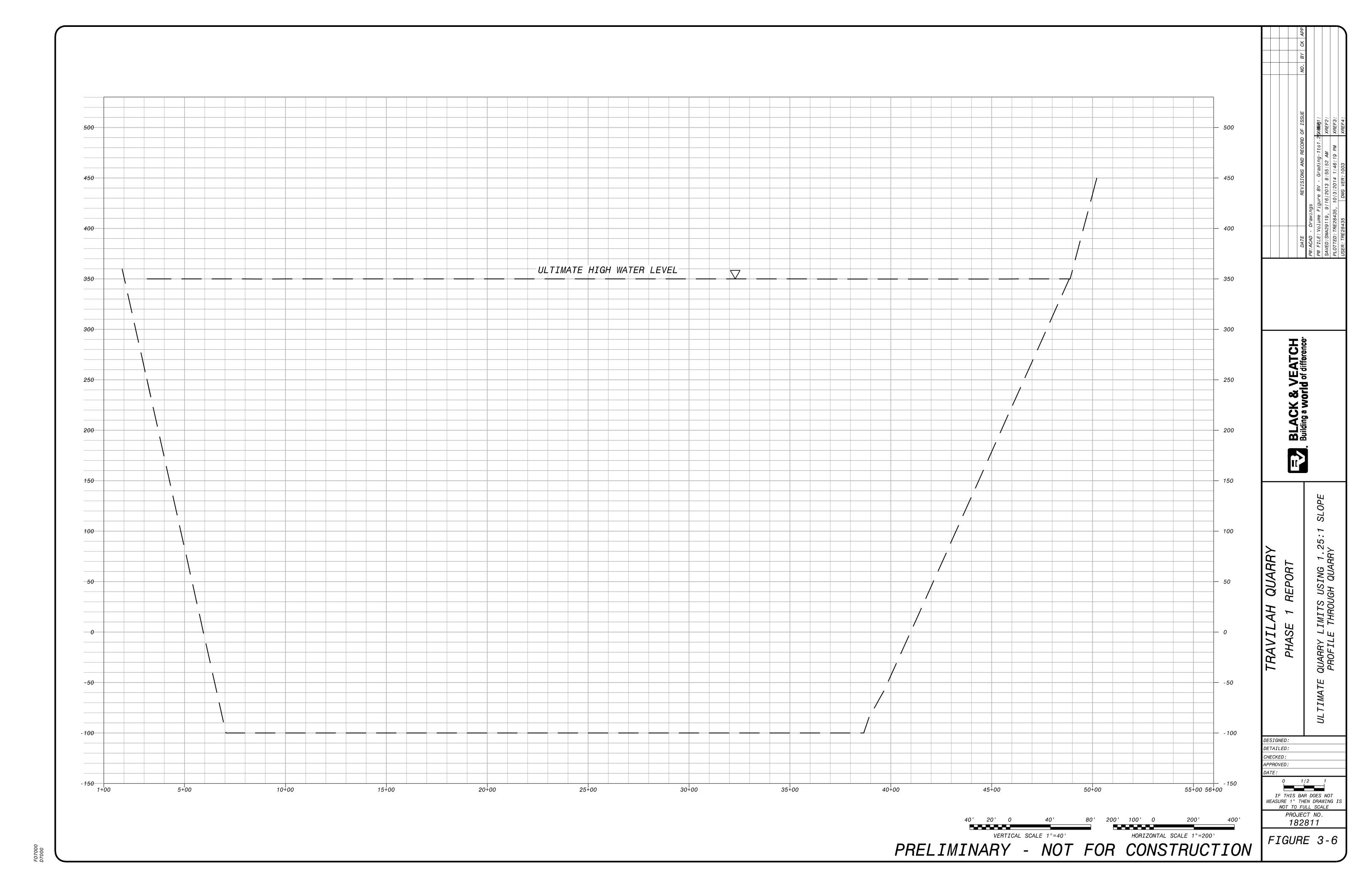
4. CONTOUR ELEVATIONS ARE A HYPOTHETICAL SLOPE OF 1.25:1 WHICH IS EQUIVALENT TO 50 FT HIGH AND 62.5 FT WIDE BENCHES.

200' 100' 0 200' 400'

PRELIMINARY - NOT FOR CONSTRUCTION

FIGURE 3-5

182811



4. EVALUATION OF GEOTECHNICAL CONDITIONS IN THE QUARRY

The Travilah Quarry is located within the Maryland Piedmont physiographic province northwest of the Fall Line which marks the contact between the older crystalline Piedmont rocks to the west and the younger Coastal Plain soils to the east. The Maryland Piedmont bedrock consists of metamorphosed lithologies - sedimentary, volcanic, and plutonic. The quarry area is at the southern end of the Baltimore-Washington Anticlinorium, a broad arch whose axis trends northeast-southwest and extends from southeastern Pennsylvania to Washington, DC.

Travilah Quarry is situated within the northeast-southwest trending Hunting Hill Pluton; a metamorphosed body of serpentine minerals consisting primarily of antigorite and rodingite lying within the schist and gneiss of the Mather Gorge Formation, refer to Figure 4-1. A pluton is by definition a deep-seated magmatic igneous intrusion rising up through layers of surrounding country-host rock. With successive repeated metamorphic cycles and rock mass crushing from regional faulting, plutonic rock types evolve into high-grade metamorphics such as antigorite and rodingite (suitable for construction), and low-grade metamorphics such as talc and gypsum (which are unsuitable construction materials). With the quantity of relatively high-grade metamorphic rock within the Hunting Hill Pluton, the Travilah Quarry appears to be sustainable within the pluton's limits. The material mined from the quarry since its inception in 1955 is used as aggregate.

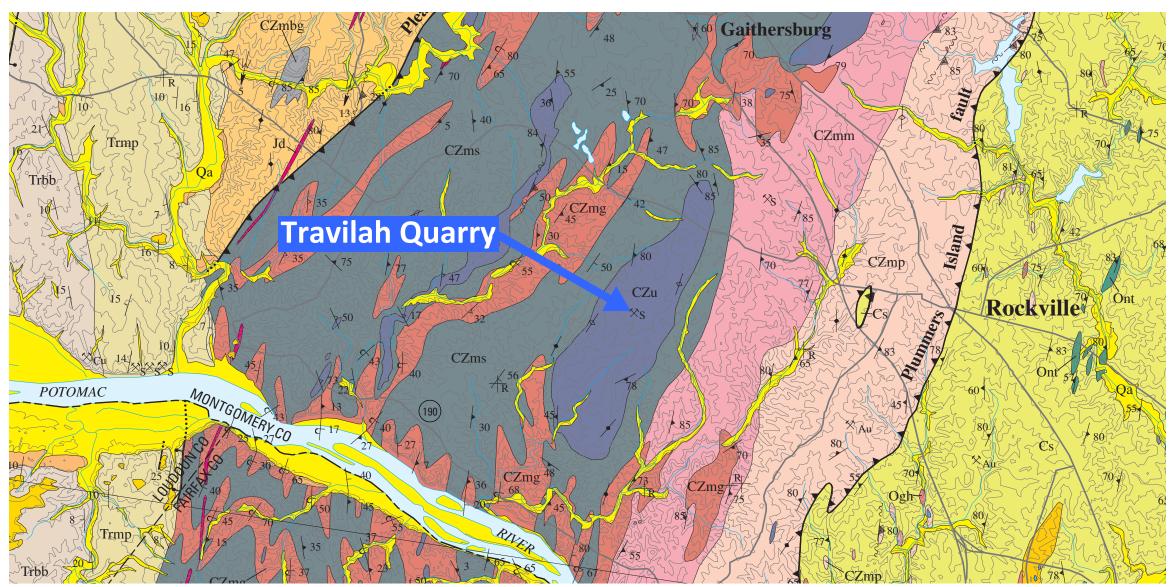
Generally, the groundwater flow direction in the quarry area is to the southwest towards the Potomac River. While the rock itself is relatively impermeable in the immediate vicinity of the quarry, groundwater inflow occurs via secondary porosity through joints, fractures, faults and other discontinuities towards the quarry. Locally, the groundwater regime has been depressed by the dewatering effects from the quarrying operations.

Given the apparent low transmissivity of the rock surrounding the quarry and the longevity of quarry operation (approximately 60 years), groundwater drawdown has reached equilibrium and water intrusion does not appear to be a significant issue for quarrying operations.

4.1 Geologic Rock Mapping

A site reconnaissance and abbreviated geologic mapping exercise was performed on May 7 and 8, 2014, to observe existing geological features within the quarry and identify typical joint patterns and fracture conditions of the highwalls. The reconnaissance was completed by a senior B&V engineering geologist accompanied by an Aggregate Industries employee. Due to safety concerns, Aggregate Industries limited the access for the B&V geologist to the interior quarry roads. Access to the highwalls for measurements and across the berms protecting the road from the upslope and downslope highwalls was also prohibited for safety purposes. Photographs of the quarry highwalls taken on this site visit are presented in Appendix A, which documents the current conditions of the quarry.

During the site visit, Aggregate Industries described how the varying rock types encountered during excavation presented challenges for material segregation. This was confirmed during the site reconnaissance, where numerous persistent intrusive dikes crossing the quarry were observed. Secondary mineralization at contacts consisting of calcite and mylonitic materials, typical of



DIGITAL GEOLOGIC MAP AND DATABASE OF THE FREDERICK 30' x 60' QUADRANGLE, MARYLAND, VIRGINIA, AND WEST VIRGINIA

By Scott Southworth,¹ David K. Brezinski,¹ Avery Ala Drake, Jr., William C. Burton,¹ Randall C. Orndorff,¹ and Albert J. Froelich²

Ultramafic rocks (Lower Cambrian and Neoproterozoic)--Greenish-gray blocks of serpentinite, soapstone, and talc schist



multiple metamorphic events and regional faulting, were noted. The general geologic trends appeared to be striking NE/SW.

During the reconnaissance, the quarry operator remarked the sump has not been dewatered for months and possibly years, and no signs of water inflow through the quarry walls were observed.

In the southern corner of the quarry, fill material is currently being dumped into the quarry at a rate of 50 to 75 trucks per day, per Aggregate Industries. The fill consists of soil from offsite locations that were not identified by the quarry operator. The approximate extent of the fill material is shown on Figure 4-2. This fill material will have a negative impact on the amount of total storage capacity and decrease the locations available in the quarry for water pipeline/pump station facilities to support the reservoir operation. Any fill materials from offsite locations could also pose a potential risk of contamination.

4.2 Major Geologic Features

Rock observed during the geologic mapping consisted primarily of serpentinite with some antigorite, rodingite, and quartz. Blast induced damage was observed on the majority of the quarry highwalls, as no drill casts were noted. This damage obscured a majority of the original jointing in the highwalls although some persistent joints, especially along the southwest highwall where the excavation is deepest were observed. Sheared contacts between rock types and convoluted foliation within dikes were seen to be common within the quarry excavation. No significant fault zones were observed during the site visit; however, structural anomalies such as "Feature G" noted in previous reports will require further investigation as the quarry is mined to its ultimate limit as to their effect upon highwall permeability and stability. Figure 4-2 shows the locations of the major geologic features and discontinuities present on the highwalls at the quarry perimeter.

Adverse jointing has led to some rock falls in the historic highwalls primarily on the northwest wall of the quarry (see Figure 4-3). This issue has been remediated by benching the excavation in recent years. During the site visit, two series of quarry operations were noted: the first, the historic quarry cut vertical highwalls estimated to be 75 ft to 125 ft high at the northwest quarry limits above the sump, and the second quarry excavation phase with benches estimated to be 50 to 75 ft high. There appear to have been a few fallouts of rock blocks at various locations and one large slip-plane area was mapped, approximately 35 by 50 ft wide (estimated from a distance) at the northern end of the old highwall area along the southwest wall (see Figure 4-3). As it was understood during the site reconnaissance, the old highwalls were excavated starting around 50 years ago and ending somewhere around 25 years ago before benching was initiated. Four major and persistent discontinuities were noted along the southwest quarry highwall; three striking roughly NE/SW dipping at angles estimated at 65, 50 and 80 degrees from horizontal, and one striking roughly E/W dipping at an estimated angle of 50 degrees to the north. The discontinuity/dike described as Feature "G" in the previous reports was observed in the southwest highwall cutting roughly NE-SW through the quarry (see Figure 4-3).

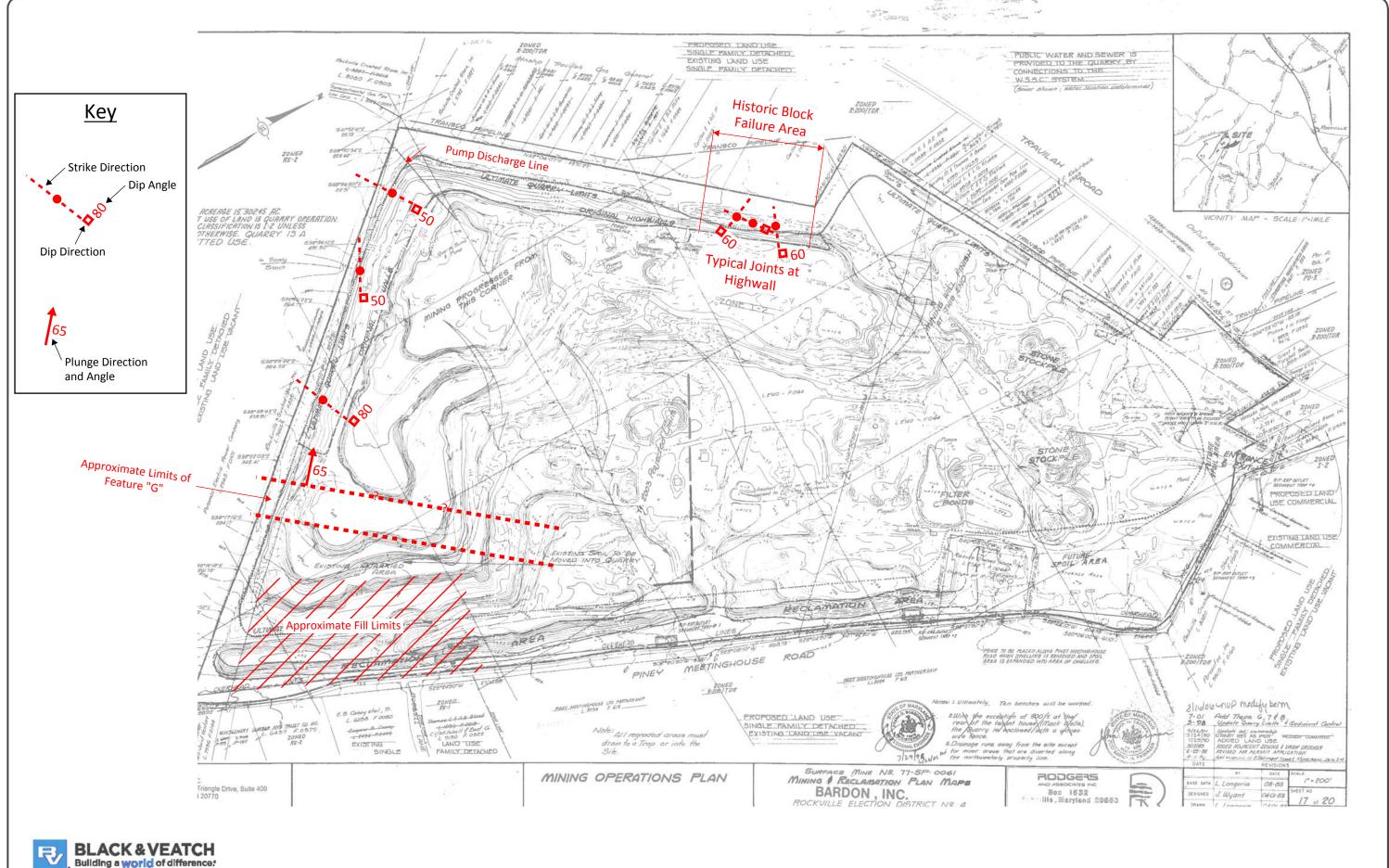
Table 4-1 Major Discontinuities in Travilah Quarry

	MAJOR DISCONTINUITIES			
PROPERTIES FEATURE G		VARIOUS JOINTS	SLIP PLANE	
STRIKE	NE/SW	Range from N, NE, W, NW	W	
DIP DIRECTION	NW	Range from N, SW, W, SE	N	
DIP ANGLE	65 degrees	50 to 90 degrees	50 degrees	
IMPACT TO QUARRY WALLS & permeability; joints RESERVOIR intersecting could produce localized instability		Intersecting joints at highwall can produce rock wedges that may have the potential to fail if not stabilized	Minimal impact unless slip plane is present along SW wall at deeper quarry depths	

4.3 Preliminary Wall Stability and Seepage Analysis

The historic highwall presents the main stability issues in the quarry. Historic planar failure has occurred in the past as evidenced by the relatively large slip surface striking N-NW dipping 50 into the excavation as observed in the quarry highwall (Figure 4-3). Wedge failure has also occurred, possibly even recently, along the historic highwall to the northeast by the Crusher Plant where the joint set striking N-NW with relatively high-angle joints dipping in opposite directions coincide with a steep backwall dipping into the excavation. The two opposite dipping joints form a rock wedge and over time allow the rock wedge without back restraint to fall or drop. Given the severe blast damage to the rock walls, and the relatively uncontrolled vertical height of the historic highwall, this degradation is to be expected and some continued raveling along the historic highwall exhibiting adverse joint patterns is to be expected over time without mitigating measures. The current bench excavation minimizes the effect of rock drop-outs. The general tendency appears to be rock toppling/sliding off the bench from joints dipping into the excavation, but this failure while filling one void, opens another, and is generally a movement towards stability much like soil reaching its angle of repose. Shear zones, mylonitic joint filling, talc, chlorite, and slickensides all contribute to instability and significantly reduce joint cohesion. Current highwalls that are at their limits do not indicate that a significant stability issue is present; however, additional mapping and evaluation is recommended as the quarry nears its ultimate excavation limit.

No significant water inflows through the quarry walls or boils in the quarry floor were observed. However, the effects of seepage or lack of seepage upon weak in-filled joints differ from the effects of submersion upon quarry wall stability. Some rock blocks currently in-the-dry may fail when infilling has been saturated and immersed, softening or washing out over time. As part of the recommended detailed geologic mapping, a more in-depth analysis of joint stability/instability due to wetting and drying should be completed for the quarry perimeter walls. This detailed mapping should be completed to determine if highwall stability measures are required. Stability measures could include the installation of rock bolts, welded wire fabric support, chain link mesh, or mine straps; drilling of weep holes to reduce hydrostatic buildup on the highwall surface; and applying shotcrete in localized areas.





Slip Plane on NW/SE Quarry Wall



Rock Block Fallouts Along NE Highwall



Feature G Observed Crossing Through Quarry



Rock Block Fallouts Along NE Highwall



4.4 Conclusions and Recommendations

Travilah Quarry is situated within the NE/SW trending Hunting Hill Pluton; a metamorphosed body of serpentine minerals consisting primarily of antigorite and rodingite. It was noticed during the site reconnaissance that quarry blast damage obscured a majority of the original jointing in the highwalls although some persistent joints, especially along the southwest highwall were present. Sheared contacts between rock types and convoluted foliation within dikes were seen to be common within the quarry excavation. No significant fault zones were observed during the site visit; however, structural anomalies were identified.

Adverse jointing has led to some rock falls in the historic highwalls and one large slip plane area was observed. Four major and persistent discontinuities were noted along the southwest quarry highwall. In addition, the discontinuity/dike described as Feature "G" in the previous reports was observed in the southwest highwall cutting roughly NE-SW through the quarry.

Given the severe blast damage to the rock walls, and the relatively uncontrolled vertical height of the historic highwall, rock wedge failures and some continued raveling of rock blocks along the historic highwall are to be expected over time without mitigating measures. These movements are not anticipated to be significant or have an adverse impact on the quarry conversion into a reservoir. In general, current highwalls that are at their limits do not indicate that a significant stability issue is present. It is anticipated that additional buffer at the perimeter of the quarry at its ultimate limit will not be necessary due to stability issues based on these current observations.

Regionally the general water flow direction in the quarry area is to the southwest towards the Potomac River. Locally, the groundwater regime has been depressed by the dewatering effects from the quarrying operations. No major groundwater inflow was observed during the site reconnaissance.

The following is recommended to analyze and further define the stability of the quarry highwalls as they approach or are at their ultimate limit:

- Additional detailed mapping of the perimeter highwalls and groundwater inflow seeps are recommended as the quarry nears its ultimate excavation limit and a majority of the perimeter highwalls are exposed and accessible. This detailed mapping should include a comprehensive mapping effort that is focused on all discontinuities in the rock, aperture openings, and characteristics of the infilling, if present, in the apertures.
- Following this mapping a stability evaluation should be conducted for the highwalls. Borings at the quarry perimeter are recommended to determine the extent, depth and width of the key discontinuity features; i.e., Feature G. The proposed borings are discussed in more detail in Section 5 of this report.

5. EVALUATION OF GROUNDWATER FILLING OF THE QUARRY AND INFLOW AND OUTFLOW DURING RESERVOIR OPERATIONS

5.1 Data Review

Geotechnical and hydrogeologic information presented in the previous documents listed in Section 2, groundwater data collected from the USGS and State of Maryland, seepage information collected during the geologic mapping, and conversations with Aggregate Industries staff provided the basis for this high level hydrogeological analysis for the quarry. Listed below is a summary of the data used.

- There were no sump pumping records or groundwater head measurements for the quarry available from Aggregate Industries. Metering of the sump pumping flows is expected to begin in 2014. This analysis relied upon the Woodward-Clyde 1986 solid waste management study hydrogeologic report (WC1986), the 2001 CC Johnson & Malhotra geologic report prepared as part of the WSSC Potomac WFP Facility Plan (CCJM2001), and some recommendations by Fugro in 1980 for the potential of using the quarry as a baled waste landfill site.
- The CCJM2001 report reported that an average permeability of the fractured metamorphic rock mass surrounding the quarry is on the order of 0.1 gpd/ft² (or 5x10-6 cm/sec). The WC1986 report states that the permeability of the rock is extremely variable, ranging from 1x10-8 to 1x10-2 cm/sec depending on fractures. A pumping test conducted near the sump indicated a permeability of 7x10-4 cm/sec. For this evaluation, an average permeability value for the rock mass of 5x10-6 cm/sec was selected. It is recommended that future studies include performing of sensitivity analyses for a range of bedrock permeabilities until future packer testing and pump testing can be performed to determine the variability in hydraulic conductivity of the bedrock mass around the site.
- CCJM2001 reported that Feature G has a permeability of 121 gpd/ft² (or 6x10-³ cm/sec). The WC1986 report discusses a pumping test near Feature G that appears to confirm the CCJM2001 report value. Therefore, a permeability value of 6x10-³ cm/sec was selected for this evaluation. In addition, Feature G was assumed to extend from the south quarry wall to the Potomac River, following the valley of Greenbrier Branch. It was not simulated under the quarry or to the north of the quarry. Simplifying assumptions were required for the width of Feature G to make it continuous from the quarry to the river for this evaluation. B&V recommends additional field investigations to determine the extent, depths, and widths of these lineaments followed by additional analyses of groundwater flow based on the findings from the field work.
- The WC1986 report discusses most of the groundwater flow occurs in the upper bedrock within hundreds of feet of ground surface. We have not seen any data for the permeability of the bedrock at shallower depths, higher up on the dry walls of the quarry. Obviously, no seepage would be seen through features currently above the piezometric surface. The presence of these features would need to be determined with future packer testing and additional field inspections.

- Previous reports describe the potential for vertical groundwater flow through the bedrock at the quarry site. Vertical flow was not part of this brief evaluation, but will need to be considered as more field data are collected in the future.
- Section 6.1 of the WC1986 report references 8 inches per year of recharge to the aquifer system from precipitation. This brief evaluation using an average bedrock mass permeability on the order of 1x10⁻³ cm/sec shows 8 in/yr (20% of avg annual precipitation) greatly exceeds the ability of the bedrock to transmit the water. This value seems too high, unless there are other areas in the surrounding region that we are currently unaware of where the aquifer receives and transmits large amounts of precipitation. The WC1986 report discusses significant fracturing at the contact between the serpentinite bedrock at the quarry and the Wissahickon Formation; so if 8 in/yr of recharge is correct; there must be locations where these contacts allow a significant amount of precipitation to enter the bedrock system. Additional research and evaluation of these complexities are needed.

5.2 Groundwater Interaction

Transient analyses using the storativity of the bedrock mass to determine the time for seepage to fill the quarry or the rate of change in water levels inside the quarry were not performed due to the lack of available information. To evaluate groundwater flow and the water balance for the quarry, a planning-level three dimensional (3D) groundwater model with the quarry at its expected ultimate limit was developed. The boundaries of the study area are approximately 6 miles by 4 miles around the quarry, extending southwest about 3 miles from the south wall of the quarry to the Potomac River, as shown in Figure 5-1.



Figure 5-1 Groundwater Model Study Area

USGS topographic mapping was used to set the elevations of the surrounding streams. For reference, the ground elevations surrounding the north, east, and west sides of the quarry range from elevation 400 feet MSL to 450 feet MSL. The invert of Greenbrier Branch to the south of the quarry is approximately elevation 360 feet MSL. The Potomac River normal pool water surface was assumed to be between elevation 155 and 160 feet MSL.

There are no recent quarry sump pumping records and piezometric head measurements in and around the quarry are not available to perform a detailed calibration. So, the simple 3D groundwater model was checked using Figure 5 of the CCJM 2001 report. The 2001 report shows an area of about 750 feet by 750 feet surrounding the quarry sump with an elevation of 200 feet MSL in the early 1980s. The reported bedrock mass permeability of 5x10-6 cm/sec (CCJM 2001) was adjusted slightly to 8x 10-6 cm/sec to provide a simulated seepage rate that is a compromise between the ranges of groundwater inflow rate ranges of 118 to 169 gpm (page 1-3 of the WC 1986 report) and 229 gpm (330,000 gpd given on page 7-3 of the Fugro 1980 report). Several different recharge rates were attempted, and it was determined that 2 inches per year (in/yr) of bedrock recharge provided the best match to the seepage inflow rates provided in these previous reports. An average annual net recharge to the quarry footprint 2 in/yr was also applied to the model, which is close to the average annual precipitation minus the average annual evaporation from surface water bodies for this region. The simple groundwater model provided a steady-state inflow rate of 199 gpm into the quarry when at its ultimate limit. This value compares favorably to the previous reports and is in line with the minimal to no infiltration reported by Aggregate Industries in the recent past.

5.3 Groundwater Filling of the Quarry and Reservoir Inflow and Outflow Estimates

Using the simple 3D model, additional simulations were performed to develop a rating curve of steady-state quarry inflow rates at various quarry water elevations ranging from -100 feet MSL to 350 feet MSL. Steady-state refers to long-term conditions that would develop assuming average climate conditions occurring for many years. The resulting rating curve was used along with the elevation-area-storage curve for ultimate (post mining) quarry conditions to perform a simple water balance evaluation. The water balance shows that it would take more than 200 years for the quarry to fill by groundwater seepage alone from elevation -100 feet MSL to its final equilibrium elevation.

The model shows that, during a year with 2 inches of aquifer recharge and 2 inches of net precipitation to the quarry, the ultimate quarry would achieve a steady-state water surface elevation of 330 feet MSL, considering the seepage through Feature G with a hydraulic conductivity of 1x10-3 cm/sec. In a wetter year, the steady state reservoir water elevation will likely be higher. With 2 inches of aquifer recharge and 2 inches of net precipitation to the quarry, the simple 3D model indicates that 85 gpm would be lost through Feature G when the quarry is at equilibrium (330 feet MSL). If the permeability of Feature G is reduced by grouting from 6x10-3 cm/sec to 1x10-5 cm/sec the amount of water lost from the reservoir through Feature G would decrease to 35 gpm, and the quarry's final equilibrium would be over the maximum pool elevation of 350 feet MSL. Therefore, water would need to be periodically removed from the reservoir in this scenario to maintain adequate freeboard. This simple groundwater model suggests that grouting of Feature G along the SW quarry rim would allow for the reservoir to be used and that the maximum elevation

of 350 ft MSL could be maintained with minimal exfiltration. Further refinement of the model is required as additional hydrogeological data is collected to validate this prediction.

In addition to modeling a normal year, a drought condition was modeled using a recharge rate of 0.5 in/yr. During an extended drought, the steady-state model shows the quarry would achieve a steady-state water surface elevation of 280 feet MSL, as shown by the resulting groundwater heads for this scenario illustrated on Figure 5-2. The steady-state water surface would increase to 323 feet MSL if Feature G is grouted to a permeability of 1×10^{-5} cm/sec. If water is added to the quarry to maintain the water surface at 350 feet MSL, the resulting groundwater heads are illustrated on Figure 5-3. These are order-of-magnitude estimates of flow rates and elevations for planning purposes at this time. More detailed groundwater modeling including transient analyses of climate conditions should be considered as this project moves forward.

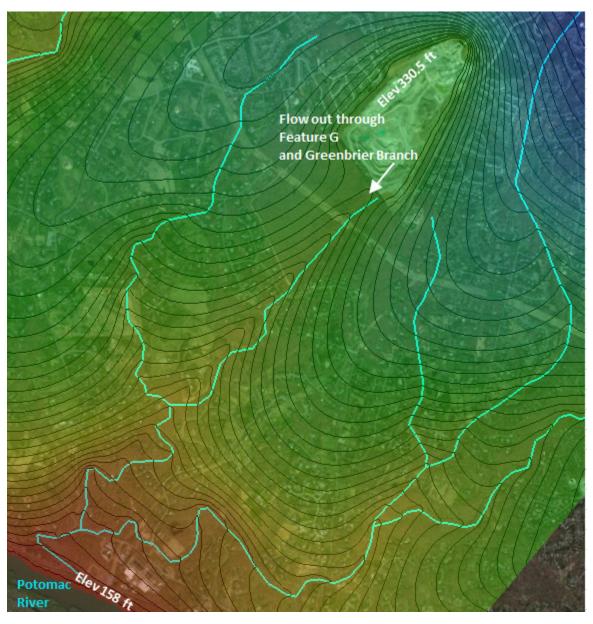


Figure 5-2 Simple Groundwater Flow Model Results (assuming a dry year)

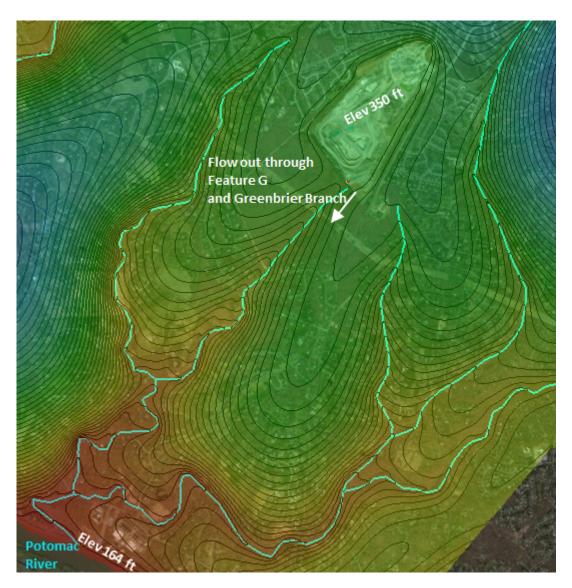


Figure 5-3 Simple Groundwater Flow Model Results, Adding Water to Quarry to Maintain Elevation 350 feet MSL

5.4 Conclusions and Recommendations

A high level analysis of the groundwater regime in the Travilah Quarry area was conducted to evaluate the potential for relying upon groundwater to fill the quarry and to estimate groundwater infiltration and reservoir exfiltration during reservoir operation. Using existing data it is estimated that the water level in the reservoir would reach equilibrium with the groundwater in the rock after 200 years of infiltration if only groundwater infiltration was considered to fill the quarry. However, it is anticipated this groundwater/reservoir equilibrium level (elevation 330 feet MSL) would be less than the maximum pool level of elevation 350 feet MSL. During dry periods groundwater inflow into the quarry is less and the estimated reservoir level is elevation 280 feet MSL when at equilibrium with the groundwater. To achieve the maximum water level of 350 feet MSL in the reservoir solely via groundwater infiltration, grouting would be required of the major

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discontinuities, specifically Feature G, to allow the reservoir to continue filling at a rate faster than exfiltration. While this analysis should only be considered an order of magnitude estimate for planning purposes it is clear that the quarry will not fill with groundwater in a reasonable amount of time to provide a functional reservoir and pipeline conveyance will be required.

The following is recommended to better understand the hydrogeologic setting at the quarry and the impact of groundwater infiltration on the reservoir and reservoir exfiltration on the groundwater regime:

- Aggregate Industries is planning on metering sump pump flows in 2014. This data should be requested and obtained.
- Additional testing of the rock surrounding and underlying the quarry is needed to understand the rock mass permeability, including areas with discontinuities. It is recommended that additional testing of the rock be completed in phases. The Phase 1 geotechnical investigation should include 6 to 8 deep borings at the quarry. All of the borings should be cored and geologically logged to a depth at least 50 feet below elevation -100 feet MSL. If storage space is available it is recommended that the rock core be boxed and kept for future reference. All of the holes should be packer tested from the bottom of the hole to the top of rock in 20 foot intervals, and the holes should be logged using a downhole televiewer. In four of the holes, piezometers should be installed to measure water levels and water quality over time. The piezometers should be located in one of the borings on each side of the quarry.

Two of the borings should be drilled at a 20 degree angle from vertical through Feature G along the perimeter rim of the SW quarry wall to characterize the location and thickness of the feature and to test the permeability of this feature. An additional vertical boring should be drilled along the SW wall closer to the location of the slip-plane failure present in the quarry. Two borings, one inclined at 20 degrees from vertical and the other vertical should be drilled along the perimeter of the northwest wall and two borings should be drilled along the southeast wall (one vertical and one inclined 20 degrees from vertical). The final boring is recommended at the north end of the quarry. This boring should be located in an attempt to intersect Feature G north of the quarry.

Rock samples are recommended to be tested for unconfined compressive strength and slake durability (erosion potential). Two to four samples from each hole would be sufficient for testing.

The Phase 1 geotechnical investigation that includes the 8 borings described herein would be anticipated to cost \$800,000 to \$900,000 to complete the field work and reporting.

Sensitivity analysis of the groundwater should be conducted with varying rock permeabilities to understand the impact each factor has on the estimate infiltration and exfiltration.

6. WATER QUALITY EVALUATION

The quality, treatability, and potential contamination sources of quarry-stored water are important factors in assessing the feasibility of the quarry to provide water supply storage. Based on the limited transmissivity of local groundwater, it is necessary to pump water from the Potomac River source to sustain the water storage volume. Therefore the discussion of water quality includes Potomac River source characteristics, as well as anticipated changes in water quality that are characteristic of water stored in lakes and reservoirs.

6.1 Evaluation of Water Treatability

The predominant external source of water for the Travilah quarry reservoir will be the Potomac River. Timing of withdrawals from the river will be affected by variations of water quality and availability of an adequate flow to meet minimum instream requirements. Monitoring and operational strategies for optimizing the withdrawals, and management strategies in the quarry and at the water treatment facilities are needed for future development of the design and operational practices.

Basic water quality parameters that affect treatability and suitability from a water quality perspective include the following:

- **Turbidity/suspended solids** Impacts coagulation, clarification, filtration processes, reservoir clarity/stratification dynamics, and rate of sediment accumulation.
- **Naturally occurring organic matter (TOC, DOC, UV254)** Affects coagulant demand, disinfection byproduct formation, and disinfection demand.
- **Nutrients** Affect algal activity in stored water. Potential adverse effects include increased coagulant demand, reduced filter runs, and taste and odor formation.
- Alkalinity/pH Affect reservoir chemistry and pH buffering in the quarry. Outcomes will influence dissolution of minerals, including possible release of asbestos, arsenic, and other constituents, particularly at lower pH levels. Conditions that can lead to undesirable reductions in pH include carbon dioxide accumulation in the hypolimnion if the stored water is stratified. Other causes of pH reduction include diurnal variations in pH due to shifts in algal activity in the night and algal uptake of carbon dioxide during the daytime.
- **Iron and manganese** Produces discoloration and some taste effects. Iron and manganese cycling in the stored water will be a potential consideration, especially if the quarry is stratified and an anoxic hypolimnion is formed. This condition can resolubilize accumulated deposits of iron and manganese.
- Contaminants under consideration for regulation and emerging contaminants Potential for future regulations that will affect treatment needs. The most significant contaminants within this category include hexavalent chromium, perchlorate, MTBE, carcinogenic VOCs, perfluorinated compounds, hormonally active compounds, flame retardants, and pharmaceutical and personal care products. A number of potential anthropogenic sources for these contaminants exist in the Potomac River watershed. However, because the river is an existing source for the drinking water supplies, storage in the quarry will not add to the

exposure from these sources, and may result in natural degradation of some contaminants, such as estrogen and similar hormonal steroids.

6.1.1 Existing Potomac River Water Quality

Raw water quality data was provided by the WSSC Potomac WFP for Potomac River Water for the period 2009 – 2014, for all parameters except phosphorus. Phosphorus data was obtained from the USGS Site 01646580 for the same period of time. These data are summarized in Table 6-1, and trend plots for the data are included in Appendix B.

Table 6-1 Summary of Raw Water Quality Data for the Potomac WFP

	MEDIAN	MAXIMUM	MINIMUM	95 TH PERCENTILE	5 TH PERCENTILE
Turbidity, NTU (2009-2014)	12	448	3	102	4
pH (2009-2014)	7.9	9.1	6.6	8.7	7.3
Alkalinity, mg/L as $CaCO_3$ (2009-2014)	83	121	31	108	59
Hardness, mg/L as CaCO ₃ (2010-2014)	112	170	36	154	80
Ammonia, mg/L as N (2010-2014)	<0.05	0.56	<0.05	<0.20	<0.05
Nitrate+Nitrite, mg/L as N (2010-2014)	1.73	3.00	0.05	2.57	0.77
Phosphorus, mg/L (2009-2014)	0.0515	0.708	0.011	0.3357	0.017
Manganese, mg/L (2009-2014)	0.038	0.567	0.005	0.180	0.015
Iron, mg/L (2009-2014)	0.50	8.79	0.20	1.92	0.26
Aluminum, mg/L (2009-2014)	0.10	11.50	0.02	1.08	0.02
Chloride, mg/L (2009-2014)	29.9	215.0	8.9	66.7	17.7

Trends indicated by these provide the following information on potential effects on water quality in the quarry:

■ Turbidity – Turbidity levels in the Potomac River typically range from medium to high, reflecting conditions that are associated with a run-of-the-river source. The median level that is recorded in the data base is 12 NTU, with a maximum level of 448 NTU. Lower levels can occur during low flow periods -- a minimum level of 3 NTU is recorded in the data base for the period of evaluation. Ninety percent of the data lie in a range from 4 to 102 NTU, as indicated by the 5th and 95th percentile levels in Table 6-1. The higher turbidity levels occur during rainy periods when the river level is high. Best water quality from a treatment perspective will occur when

turbidity levels are lowest. These periods tend to coincide with times when TOC and disinfection byproduct formation potentials are also low.

- pH Ninety percent of the pH data lie in a range from 7.3 to 8.7, as indicated by the levels for the 5th and 95th percentiles. The median level is 7.9, and maximum and minimum levels that are recorded in the data base are 9.9 and 6.6, respectively Based on these statistics, the predominant condition is a pH in the alkaline range with a few occurrences in the slightly acidic range. The data show a tendency for higher pH levels to occur in the summer, coincident with lower river flows.
- Alkalinity Ninety percent of the alkalinity data lie in a range from 59 to 108 mg/L as CaCO₃, as indicated by the boundaries for the 5th and 95th percentiles. The lower end of this range is a moderately buffered condition, while the higher end is relatively well buffered. Note that a high buffering capacity will tend to moderate the extent of pH change in the quarry. The median alkalinity within the data base is 83 mg/L as CaCO₃, which corresponds to a moderately buffered condition. Minimum and maximum recorded levels are 31 and 121 mg/L as CaCO₃, respectively. The lower level would correspond to a moderately low level of buffering.
- Hardness The hardness levels are significantly higher than the alkalinity levels. The median level of 112 mg/L as CaCO₃ reflects a moderately hard water condition.
- Nutrients (Ammonia, Nitrate plus Nitrite, Total Phosphorus) Although nitrate plus nitrite levels do not approach any drinking water limits, they are moderately high and represent a potential nutrient source for algal growth in the quarry. The median level of 1.73 mg/L as N is within a range that corresponds to concentrations found in eutrophic water bodies. Ammonia concentrations add somewhat to the total nitrogen concentration. Therefore, adequate nitrogen is available in the source water to support significant algal growth. At a median concentration of 0.0515 mg/l, the total phosphorus concentration falls within the range of 0.03 to 0.10 mg/L that is associated with eutrophic conditions in reservoirs
- Manganese Manganese occurs in the data base at a median level of 0.038 mg/L. While this is less than the secondary maximum contaminant level of 0.050 mg/L, consumer complaints from discoloration can occur at this level and at levels down to 0.020 mg/L or less. Ninety percent of the data lie in a range 0.015 mg/L to 0.180 mg/L. Treatment for manganese removal may be required if these levels occur in the quarry.
- Iron The median level for iron is 0.50 mg/L, a level that exceeds the secondary maximum contaminant level of 0.3 mg/L. Note that iron often occurs in a bound form in clays and gives them the brownish-red color that is commonly found in these types of soils. The extent to which treatment might be required to remove iron will depend on the degree to which it remains bound in the clay.
- Chloride Chloride is listed as a Secondary Maximum Contaminant at a level of 250 mg/L. Levels of occurrence within the data base tend to be well below this criterion. The median concentration is 29.9 mg/L and 90 percent of the data occur in a range from 17.7 to 66.7 mg/L as indicated by the boundaries of the 5th and 95th percentiles. Only the maximum concentration of 215 mg/L begins to approach this level of concern.
- Aluminum Aluminum levels often exceed the SMCL limit that is specified as a range from 0.05 to 0.20 mg/L. This is not unusual for a moderate to high turbidity source because of the clays

that are present have a basic aluminosilicate crystal structure. Aluminum in this form is readily removed by coagulation.

Treatment of the stored water could take place at either the WSSC Potomac WFP or the Washington Aqueduct Dalecarlia and/or MacMillan WFP's. All are conventional coagulation/ flocculation/ filtration treatment plants which take flow from the Potomac River. However, the Potomac WFP takes flow directly from the river while the Dalecarlia and MacMillan WTP's utilize a forebay and reservoir prior to the plant. Water from the Travilah Quarry may be difficult to treat with conventional coagulation-flocculation due to its low turbidity. If treated at the Potomac WFP, some blending with river water may increase floc density and maintain settling velocities. This should not be an issue with the Dalecarlia and MacMillan WTP's due to the blending that will naturally occur in the forebay and reservoirs. Consideration could also be given to the effect of inlet and outlet conditions and possible use of multi-level withdrawal ports in the reservoir to select water from depths that are of preferred quality. In-reservoir aeration and circulation options could be considered in combination with operational practices and the configuration of the reservoir withdrawal.

6.2 Stored Water Quality Considerations

6.2.1 Asbestos

Chrysotile asbestos is found in the serpentinite rock at the quarry; Fugro Atlantic (1980) identified it as a minor constituent, ranging from 0.5 to 2 percent of the rock. Chrysotile is a mineral that is comprised of magnesium, silica, and oxygen -- $Mg_3Si_2O_5(OH)_4$, and found in microscopic rods or fibers. Asbestos containing material is not generally considered to be harmful unless it is releasing dust or fibers into the air where they can be inhaled or ingested. While it is possible for chrysotile fibers to be released from the rock through natural erosion, the dust and fines associated with rock mining and crushing activities is the greater source of concern for inhalation and for potential presence in water stored in the quarry reservoir.

Several of the background studies report that historical testing for asbestos was performed on surface water and groundwater samples. However, due to the age of these reports, the source data that is reported is not available for review. The CCJM (2001) geologic report states that analytical tests for asbestos in the discharge from the quarry sump detected an average of 7.96×10^6 fibers/L for fibers longer than 10 micrometers of asbestos (1988 – 1990). This level compares to the standard established in 1990 for asbestos in drinking water of 7 million fibers per liter (56 FR 3528) for fibers longer than 10 micrometers.

In March 2014, Aggregate Industries reported that they do not test for asbestos in the ponded water sump or the sump discharge. The quarry holds an NPDES permit for the sump discharge, and sometimes the pH of the discharge must be reduced. Generally, the sump water is collected and used in plant operations, including for dust control and washing aggregate product. The quarry is a WSSC customer, and uses potable water to supplement available sump water when needed.

Chrysotile is relatively stable in water at pH levels greater than 7. Dissolution becomes more likely at lower pH levels. Current Potomac River water quality data show that the pH of the Potomac River water is slightly alkaline, indicating a condition that would be resistant to dissolution of chrysotile. Stratification of the water column in the quarry could result in conditions that result in a

degree of carbonic acid release due to microbial respiration in the hypolimnetic layer. This release can result in decreased pH of water in that layer. The extent of this decrease will depend on a number of factors, including algal growth in the photic zone and subsequent die-off, and the pH and alkalinity of source water entering the quarry. Even with some increase in chrysotile dissolution due to this form of acidification in the hypolimnion, release of fibers to the water column is not likely to be as extensive as releases that are associated with previous mining activities.

Some indication of the potential for natural release of asbestos is available from CCJM testing of samples from five wells surrounding the quarry. This testing detected an average of 1.5 million fibers/L, compared to a drinking water standard of 7 million fibers/L. The Fugro report (1980), determined that the local groundwater was not a significant source of asbestos, but recommended that additional water quality sampling be conducted for general chemistry and asbestos concentration to further define ambient asbestos levels in the representative rock units near the quarry site. Based on the collective observations, it can be concluded that water that has been exposed to quarrying operations has the greatest potential for elevated asbestos levels. Settling may result in some reduction of the concentration in the water column over time, but levels could remain high if a fresh water source does not displace the water that has been exposed to existing mining operations.

In spite of a potential concern for the presence of asbestos in the source water, it should be noted that a review of the effect of water treatment on removal of asbestos (Logsdon, 1979) indicated that conventional coagulation and filtration processes are highly effective at removing asbestos. These processes are applied in the Potomac River water treatment facilities that would potentially draw water from the quarry reservoir for treatment. Treatment would provide an effective treatment barrier to protect drinking water even if elevated levels of asbestos were present. Potential problems could arise when trying to dispose of waste solids from the treatment processes because asbestos becomes much more dangerous when it dries. This is an issue that should be assessed in relation to anticipated residuals disposal methods for the water treatment plants.

6.2.2 Reservoir Eutrophication Potential

Due to the level of available nutrients in Potomac River water, the potential for excessive growth of algae, particularly blue-green phytoplankton (cyanobacteria) in the quarry reservoir is an important consideration. Cyanobacteria are known to impart taste and odor to the water and represent a potential source of cyanotoxins. It is expected that the concentration of algae, and the proportion of blue-green algae, will be related to the nutrient loading of the water pumped from the Potomac River and the length of time the water is stored in the quarry.

In typical shallow reservoirs, greater surface area is exposed to sunlight, providing conditions for algae growth. It is anticipated that the algae and other organic matter produced in the upper layer of the lake (epilimnion) will cause a depletion of dissolved oxygen (DO) in the hypolimnion, as decomposing organic matter settle down through the water column. In eutrophic reservoirs, anoxic conditions may occur near the bottom of the hypolimnion. Low levels of dissolved oxygen allow nutrients, iron, and manganese to be released from the bottom sediments into the water. Due to seasonal mixing of the layers of the lake, nutrients eventually become available for algae growth, and the iron and manganese may interfere with water treatment. Decomposition of organic matter in the bottom sediments also produces carbon dioxide, which lowers the pH in the hypolmnion.

Deeper lakes usually have better water quality than shallow lakes of the same volume. At its ultimate bottom limit of El -100 feet MSL, the quarry volume is estimated at 17 billion gallons with a surface area of 200 acres. The maximum depth is 450 feet, assuming a maximum pool elevation of 350 feet MSL. The average depth is the quarry volume divided by the surface area. At maximum water surface and bottom limit, the average depth is computed as 268 feet or 82 meters.

The trophic status of a reservoir and the expected dissolved oxygen found in the hypoliminion are directly related to the mean depth. In a comparison of hydrologic and morphologic features associated with lakes ranging from 10 to 1600 feet deep, a transition point is demonstrated at a mean depth of 43 m. Mesotrophic and oligotrophic systems exist when mean depth is greater than 43 m, and systems begin to become eutrophic when mean depth is less than 43 m. The calculated mean depth of 82 m calculated for the Travilah quarry reservoir would be associated with a mesotrophic system, and with greater than 7 mg/L levels of dissolved oxygen in the hypolimnion, based on the lakes surveyed. (Singleton, 2013)

Singleton et al modeled a proposed quarry reservoir in the Atlanta, Georgia area. For comparison with Travilah, the proposed Bellwood Quarry Reservoir has a mean depth of 60 m, and is estimated to exhibit mesotrophic conditions. To optimize water quality within the reservoir, a numerical model was used to evaluate locations for the quarry inlet and outlet. The predicted thermal stratification was strongly influenced by the locations of the pumped inflow and outflow (top, middle, bottom) and the amount of flow through the quarry. The effects of limited flow-through and pump exercising were also simulated. Bottom inflows and withdrawals were found to hydraulically flush the hypolimnion and maintain dissolved oxygen in the deeper waters, improving water quality.

Based on this work and similar modeling performed for the Loudoun Water Quarry A reservoir, water quality in the Travilah quarry reservoir is expected to very good, and simulation of design conditions may allow even greater assurance of water quality. It is recommended that modeling be used as a design aid to evaluate a range of operating conditions – including reservoir pool elevation and amount of flow-through – as well as location of pumped inflow to the quarry and withdrawal from it. The effects of physical design changes on in-reservoir water quality are not obvious, and a water quality model such as CE QUAL-W2 appears a very cost-effective tool to examine the beneficial effects of design variations.

6.3 Survey of Potential Contamination Sources

A consideration for assessing water quality in the quarry reservoir arises from the potential for residual contaminants that may remain as a result of quarrying activities, related heavy equipment operation, and other industrial/commercial activities within the quarry. Such contaminants could include accumulations of fuel, lubricants, antifreeze, batteries, and other constituents associated with large scale truck traffic and equipment operation. In addition, the potential for remnant contamination from an asphalt plant that is currently operating will need to be assessed. The extent to which these factors will become an issue will depend on the level of cleanup and removal prior to conversion of the quarry to water storage.

The potential exists for contamination from current and historical activities outside the quarry, to reach groundwater that is eventually conveyed into the quarry. A search was conducted through

Environmental Data Review Inc., (EDR) to obtain available records associated with the Travilah Quarry property and the surrounding area that could be used to identify environmental conditions associated with current and prior activities. The EDR report includes a compilation of historic fire insurance maps (Sanborn), topographic maps, aerial photographs and known environmental sites within the vicinity of the quarry. The complete report is presented in Appendix C.

A summary of the potential environmental concerns associated with the presence of historical commercial activity in the area surrounding the quarry is provided in Table 6-2. The Travilah quarry operation at 13900 Piney Meetinghouse Road is noted in several databases. Several underground storage tanks (USTs) are still in use and several have been removed over the years. Several aboveground storage tanks (ASTs) are currently in use. Releases to the soil and groundwater are reported to have occurred, and residual soil and/or groundwater contamination may be present. Three additional addresses located on Travilah Road are associated with historical activities including an auto repair operation, a dry cleaner, and a convenience store.

The notable records of reportable activities, actions taken, and current status for the total of four (Travilah Quarry plus 3 others) reported environmental sites of concern are presented in Table 6-3.

Table 6-2 City Directory Review Findings

•				
STREET	YEARS	ADDRESSES OF POTENTIAL ENVIRONMENTAL CONCERN/DETAILS		
Travilah Road	2013, 2008, 2003, 1999, 1996, 1991, 1986, 1981, 1976	 2013 - Classic Cleaners listed at 14119 Travilah Road (possible dry cleaner). 2008 to 2003 - A One Autobody Inc. listed at 13773 Travilah Road (autobody repair shop). Classic Cleaners and a convenience store were listed at 14119 (petroleum storage tanks likely present at convenience store). 1999 - Unknown occupant listed at 13773. Convenience store listed at 14119. 1996 to 1981 - No addresses of note in regards to sites of potential environmental concern. 1976 - County Paving Co. listed at 13810 Travilah Road (possible oil tanks, asphalt residue may have been associated with this business). 		
Piney Meetinghouse Road	2013, 2008, 2003, 1999, 1996, 1991, 1986, 1981, 1976	 2013 to 2008 - Aggregate and bituminous companies are listed at 13900 Piney Meetinghouse Road. 2003 to 1999 - Crushed stone business listed at 13900 (no bituminous/asphalt plant). 1996 to 1991 - Crushed stone and bituminous businesses listed at 13900. 1986 - Construction, hauling, bituminous, and crushed stone businesses listed at 13900. 1981 - Crushed stone and bituminous businesses listed at 13900. 1976 - Crushed stone business listed at 13900 (no bituminous/asphalt plant). 		

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Table 6-3 EDR Report Environmental Databases Review Findings – Sites of Greatest Potential Environmental Concern on or within 1/4 Mile of the Travilah Quarry

DATABASE(S) - FINDINGS

Quarry operations – listed on several databases. Several underground storage tanks (USTs) are still in use and several have been removed over the years. There have been releases to the soil and groundwater. Several aboveground storage tanks (ASTs) are currently in use. Residual soil and/or groundwater contamination may be present.

Oil Control Program (OCP) site - residential heating oil spill resulted in some soil contamination. Status: closed.

Historical Cleaners (possible dry cleaner site). No records identified related to contamination or cleanup of the property.

OCP site - dumping activities reported. Status: closed.

UST – permanently out of use. No records identified related to spills or cleanups on the property. OCP cases – Status: closed. No other details provided.

Historical Cleaners (possible dry cleaner site). No records identified related to contamination or cleanup of the property.

UST – permanently out of use. No records identified related to spills or cleanups on the property.

OCP cases - Status: closed. No other details provided.

OCP cases – Status: closed. Residential motor/lube oil release resulted in some soil contamination.

OCP cases - Status: closed. No other details provided.

6.4 Recommendations and Conclusions

Based on the data for water from the Potomac River, it appears that nutrients are available to support algal growth. The morphometric characteristics of the quarry converted to a reservoir – total volume, surface area, and mean depth- indicate the ability to maintain a high quality source of water. A review of evaluations that have been performed at other locations for quarries that are used for water supply indicates that location of inlet and outlets can have a significant effect on blending of the water column to limit stratification and conditions that can exacerbate algal growth. Such options should be considered for the Travilah quarry. In-quarry aeration and hypolimnetic pumping strategies may offer additional alternatives for consideration.

Once filled to its maximum pool, water in the quarry will consist of some mix of remnant water that was exposed to quarrying operations and other local commercial/industrial activity, new water from the Potomac, and limited groundwater influx. The remnant water comes from groundwater recharge that flows across the site to the sump along the southern limit of the quarry. Based on available information, the primary concern for the remnant water derives from contaminants that may have accumulated as a result of the mining operations and local commercial/industrial activity – asbestos, fuels, lubricants, and residues associated with asphalt production.

The potential for presence of pollutants resulting from these cumulative influences could be assessed by acquisition and testing of water quality samples for a range of priority pollutants as well as key drinking water contaminants. The quarry sump discharge is an accessible location for sample collection. Additional discussions with Aggregate Industries would be beneficial to

understand their plans to meter water use and discharge and to coordinate on water sampling and testing, contributing to a better understanding of current water quality.

The extent to which these concerns will be manifested will depend on the effects of quarrying operations, weathering, and cleanup efforts that may take place in the intervening years before the quarry is converted to a water supply. Present conditions are an important gauge of the potential for contamination from the quarry and should be assessed. As such, specific information should be acquired to better understand potential effects of these conditions on drinking water. It is recommended that sampling and water quality testing be performed to determine basic water quality conditions (pH, alkalinity, hardness, turbidity, TOC); contaminants that would be associated with fuels, oils, greases and lubricants; a full suite of regulated and unregulated contaminants as specified by USEPA; iron and manganese; and nutrients. In addition, an environmental assessment of the soils on the site of the asphalt plant should be performed to determine the potential for contamination from this location once the quarry is filled.

7. CONCLUSIONS

Black & Veatch completed the Travilah Quarry Phase 1 Study to evaluate the feasibility and reliability of use of the quarry as a water supply storage facility. This Phase 1 study consisted of four tasks:

- Determining the existing and future available quarry volume for water storage.
 - The current storage volume of the quarry is approximately 7.3 billion gallons based on the most recent topographic data available and Aggregate Industries average production rate. The maximum water level anticipated for the reservoir is elevation 350 feet MSL, to maintain adequate freeboard at the quarry perimeter elevation low. It is estimated that the quarry mining would be completed around the Year 2060 using the current average production rate. At that time the quarry would hold approximately 17.4 billion gallons of water. It is important to note that this volume estimate is sensitive to Aggregate Industries future mining plans and as such could vary drastically if the quarry is mined to other limits or bench heights and widths. In addition, the quarry volume available for water storage has been and will continue to be reduced by the soil dumping that is occurring in the southern corner of the quarry.
- Evaluating the existing geotechnical conditions of the quarry and determining if potential stability concerns exist.
 - A two day site reconnaissance was completed at the quarry. During the survey, it was noted that adverse jointing has led to some rock falls in the historic highwalls, and one large slip plane area was observed. Four major and persistent discontinuities were noted along the southwest quarry highwall. In addition, the discontinuity/dike described as Feature "G" in the previous reports was observed in the southwest highwall cutting roughly NE-SW through the quarry.
- Given the severe blast damage to the rock walls, and the relatively uncontrolled vertical height of the historic highwall, rock wedge failures and some continued raveling of rock blocks along the historic highwall are to be expected over time without mitigating measures. These movements are not anticipated to be significant or have an adverse impact on the quarry conversion into a reservoir. In general, current highwalls that are at their limits do not indicate that a significant stability issue is present. It is anticipated that additional buffer at the

perimeter of the quarry at its ultimate limit will not be necessary due to stability issues based on these current observations. In addition, no major groundwater inflow was observed during the site reconnaissance. Evaluating the groundwater interaction with the quarry and future reservoir.

A high level analysis of the groundwater regime in the Travilah Quarry area was conducted to evaluate the potential for relying upon groundwater to fill the quarry and to estimate groundwater infiltration and reservoir exfiltration during reservoir operation. Using existing data it is estimated that the water level in the reservoir would reach equilibrium with the groundwater in the rock after 200 years of infiltration if only groundwater infiltration was considered to fill the quarry. However, it is anticipated this groundwater/reservoir equilibrium level (elevation 330 feet MSL) would be less than the maximum pool level of elevation 350 feet MSL. During dry periods groundwater inflow into the quarry is less, and the estimated reservoir level is elevation 280 feet MSL when at equilibrium with the groundwater. To achieve the maximum water level solely via groundwater infiltration, grouting would be required of the major discontinuities, specifically Feature G, to allow the reservoir to continue filling at a rate faster than exfiltration. It is clear that the quarry will not fill with groundwater in a reasonable amount of time to provide a functional reservoir, and pumped inflow will be required to sustain the quarry volume. A phased geotechnical investigation approach is recommended to further define the ground conditions and to refine the groundwater modeling.

Evaluating the future water quality of the reservoir.

Five years of Potomac River water quality data was evaluated (2009-2014). The presence of ample levels of nutrients and iron and manganese provide potential for stored water quality issues related to reservoir eutrophication. Based on morphometric characteristics of deep reservoirs including a mean depth greater than 43m, it is expected that a high quality supply of water can be maintained in a Travilah quarry reservoir. Water quality modeling can be used in the pre-design phase to evaluate pumped inflow and outflow locations and the effects of flow through the reservoir.

Potential environmental concerns associated with the presence of mining and related heavy equipment operation in the quarry and historical commercial activity in the area surrounding the quarry exist. The areas of concern include above and below ground storage tanks and unknown effects of a dry cleaning operation. Although the concerns are limited, they could be addressed through water quality testing in the quarry.

Potential issues related to naturally occurring asbestos that is present in dust and fines from the mining and crushing operations at the quarry need further investigation. Water sampling and testing from the quarry sump would provide a snapshot of the potential effects of current and historical activities on water quality after the quarry is filled with water. Additional discussions with Aggregate Industries would be beneficial to understand their plans to meter water use and discharge and to coordinate on water sampling and testing, contributing to a better understanding of current water quality.

Conventional coagulation / flocculation / filtration practices used at the Potomac River water treatment facilities would provide an effective treatment barrier to protect drinking water even if elevated levels of asbestos were present. Potential problems could arise when trying to dispose of waste solids from the treatment processes because asbestos is of greater concern

and becomes much more dangerous when it dries. Anticipated residuals handling and disposal methods for the water treatment plants should be examined.

8. REFERENCES

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Gary S. Logsdon. <u>Water Filtration For Asbestos Fiber Removal (Municipal Environmental Research Laboratory, U. S. EPA)</u>. December 1979.

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APPENDIX A Geologic Reconnaissance of Travilah Quarry - Site Photos



NW historic (no benching) highwall behind rock crusher and conveyor.



In the quarry looking north at NW highwall.



Looking west at NW highwall.



NW highwall with rock wedge (dogtooth) failures along joints in back wall.



NW highwall looking SW.



NW highwall with rock wedge failures visible.



NW highwall, minimal soil cover present above rock. Black staining from surface water flow.



NW highwall behind rock conveyor. Black staining from surface water flow.



Southern end of NW highwall. Minimal soil cover present above rock.



Southern end of NW historic highwall.



Southern end of NW highwall. Undefined rock benches with blast damage induced rock falls.



Quarry sump water truck used for dust control.



Typical blast damaged highwalls.



Blast damaged southern end of NW highwall.



Water tank holding quarry sump water for dust control use.



NW and SW highwall intersection corner.



West end of SW highwall. Slip plane is visible.



Benched SW highwall. Slide plane evident in bench. Mining actively occurring at base of wall.



Soil being dumped in south corner of quarry. Quarry sump in foreground.



Looking southeast at quarry sump and SE highwall of quarry.



Soil being dumped in south corner of quarry. Quarry sump on left. Mining active on SW highwall.



Soil being dumped in south corner of quarry. View of southern end of SE highwall.



View near sump looking west. Discharge line evident on highwall.



View from quarry sump of NW and SW highwalls.



View from quarry sump of SW highwall.



View near quarry sump of soil being dumped in south corner of quarry.



View near quarry sump of soil being dumped in south corner of quarry.



Feature G exposed along quarry ramp. Looking south at SE highwall. Convoluted foliation.



SE highwall. Feature G on left. Convoluted foliation.



SE highwall from quarry access ramp.



SE highwall from quarry access ramp.



Southern corner of quarry being fill with unclassified soil.



Benched SE highwall.



SE highwall.



View from near quarry sump of benched SE highwall.



Active mining of SW highwall adjacent to quarry sump. Quarry discharge line is evident.



View from near quarry sump of south corner of quarry where soil is being dumped as backfill.



NE highwall. Blast damage evident.



NE highwall.



Active mining. High angle joints present in adjacent bench wall.



Extent of soil backfilling in quarry.



View of quarry looking west from NE wall.



View of quarry looking south from NE wall.



Haul trucks dumping soil in quarry.



Haul trucks dumping soil in quarry.



View from northeast corner of quarry looking west.



View from northeast corner of quarry looking southwest.



View from west corner of quarry rim looking northeast. Quarry discharge pipe in foreground.



View from west corner of quarry rim looking east. Quarry discharge pipe in foreground.



View from west corner of the quarry rim looking southeast. Quarry discharge pipe in foreground.



Quarry sump discharge at the surface above west quarry rim.

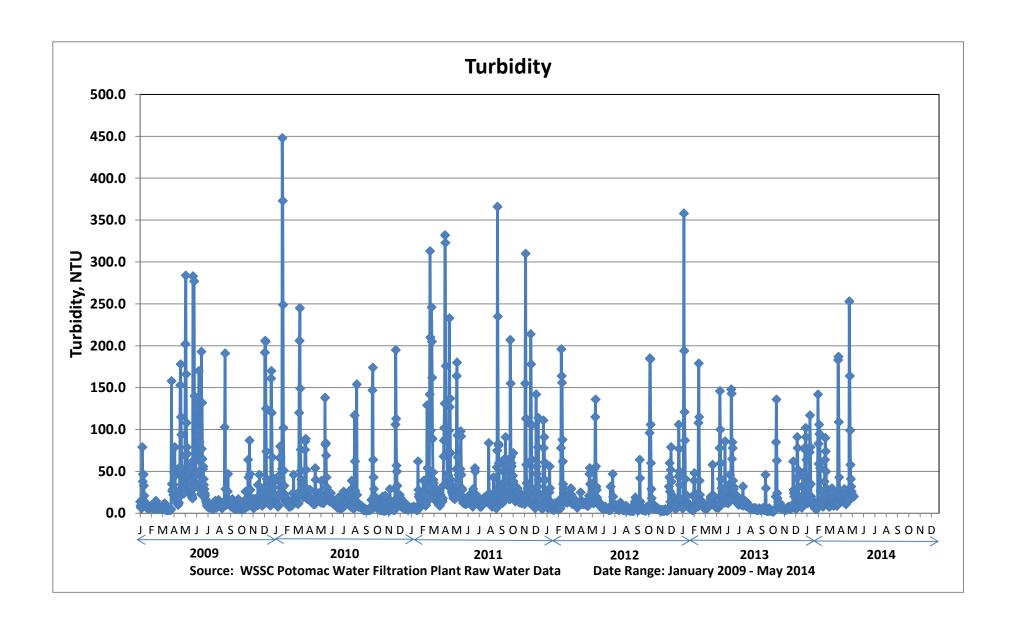


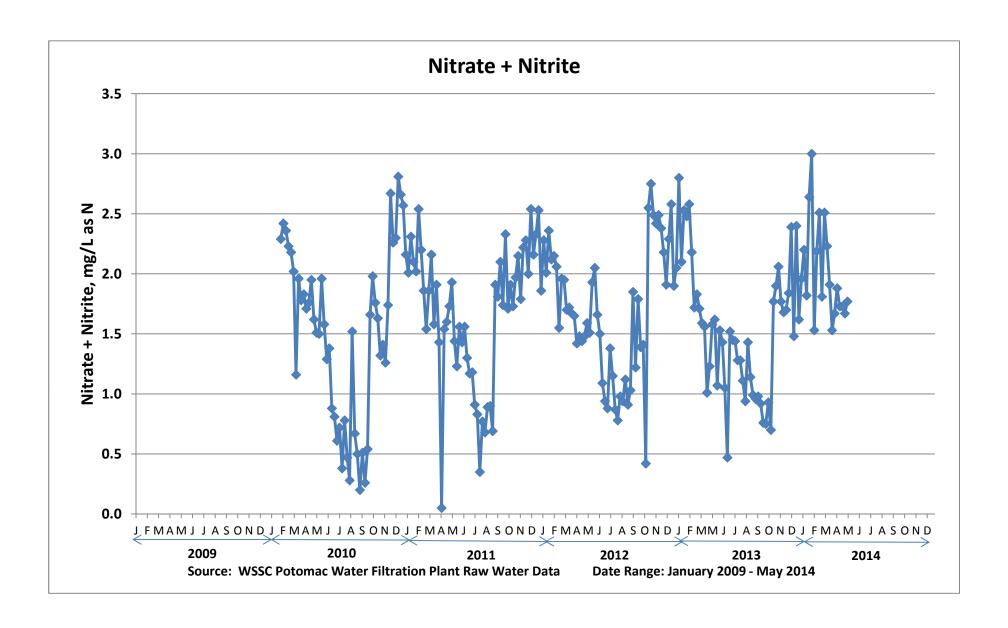
View from west corner of quarry rim looking southeast.

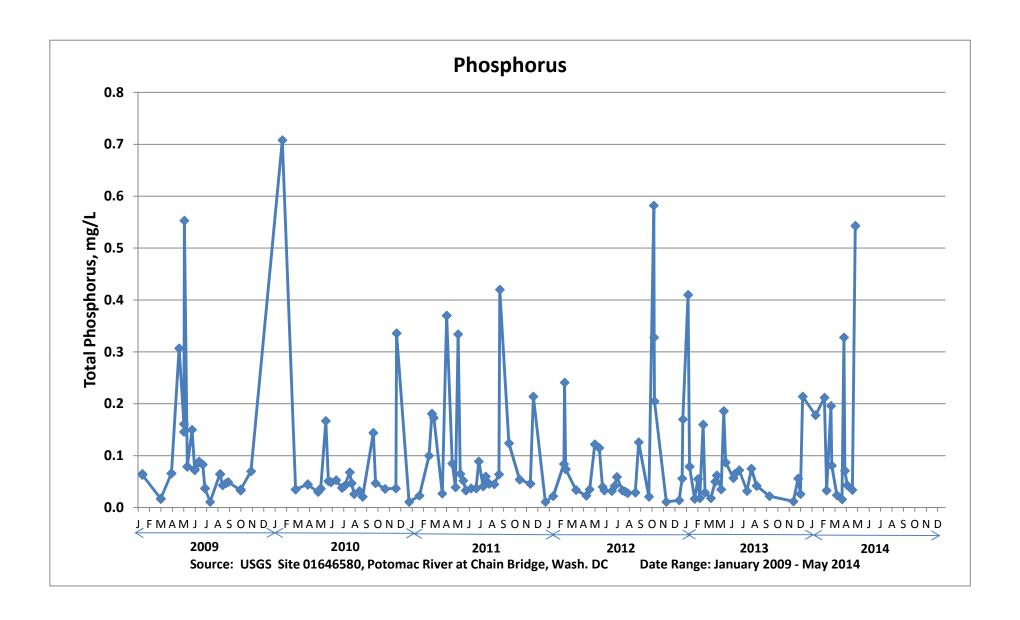


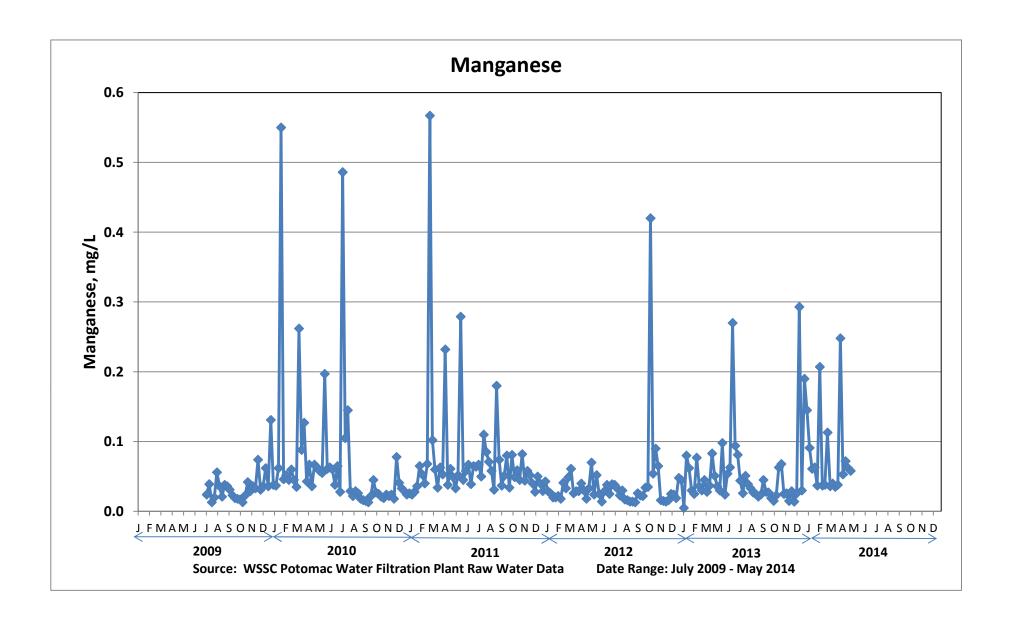
View from west corner of quarry rim looking at SW highwall.

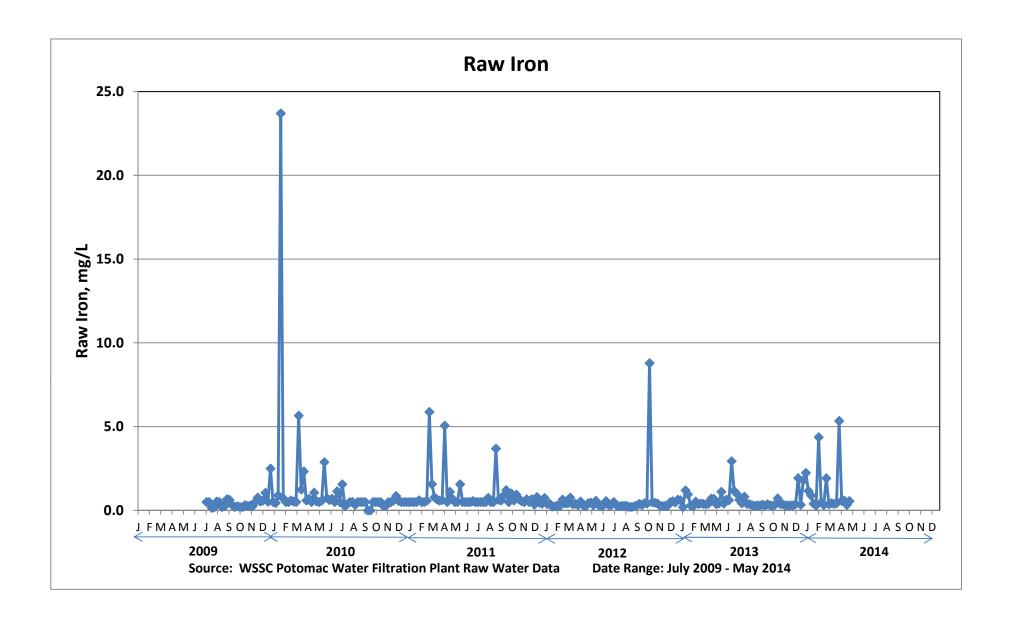
APPENDIX B Water Quality Data - Potomac River (2009 - 2014)

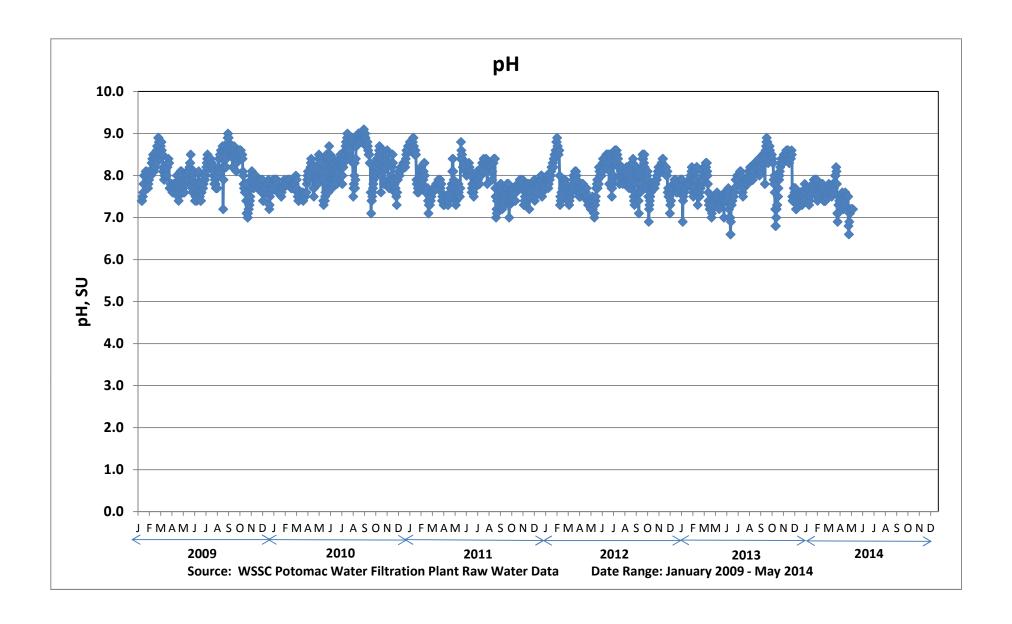


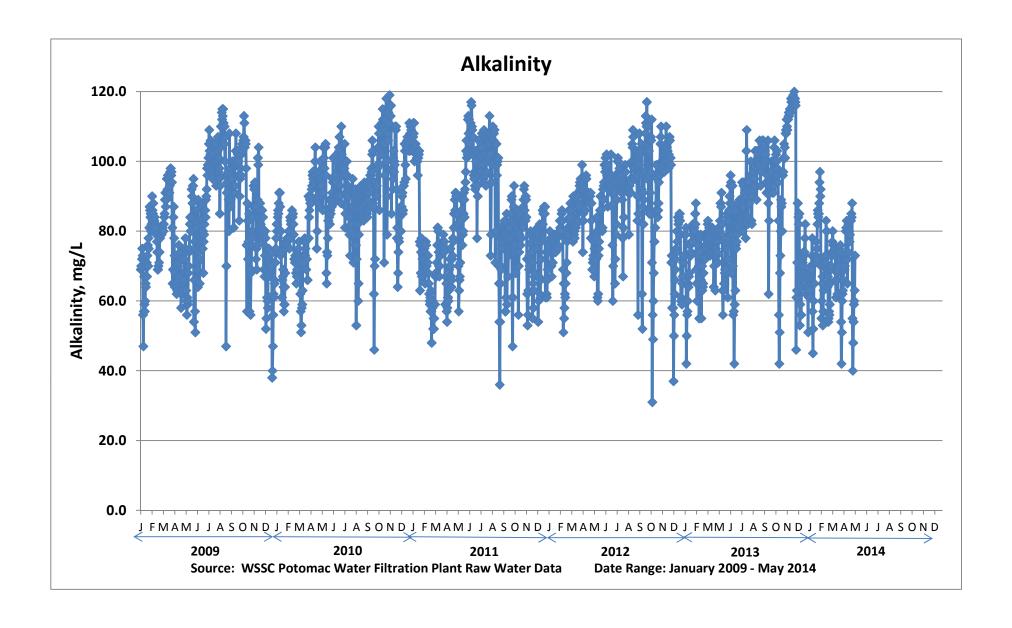


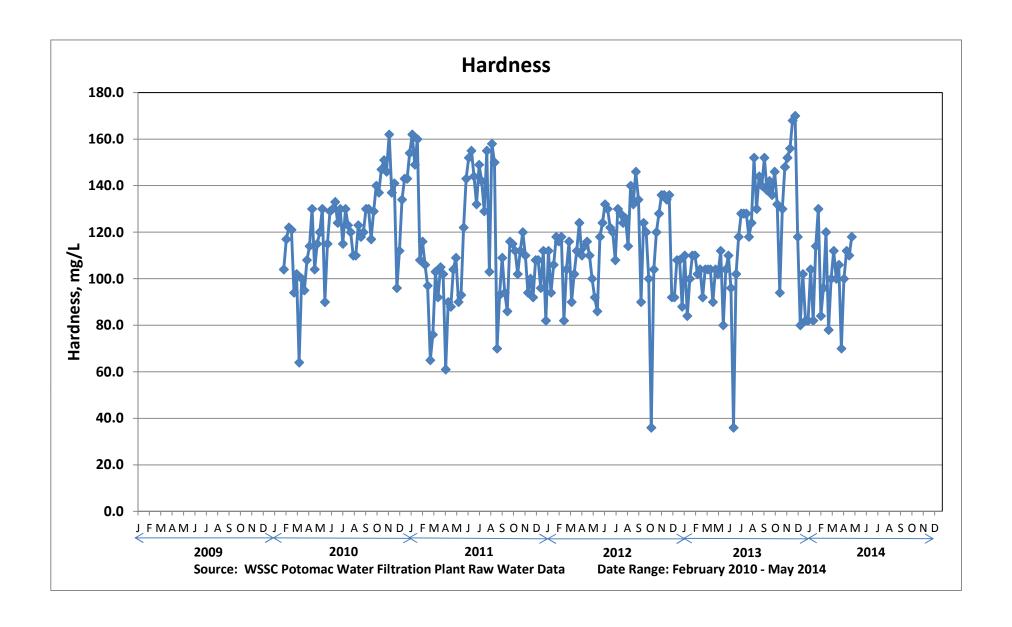


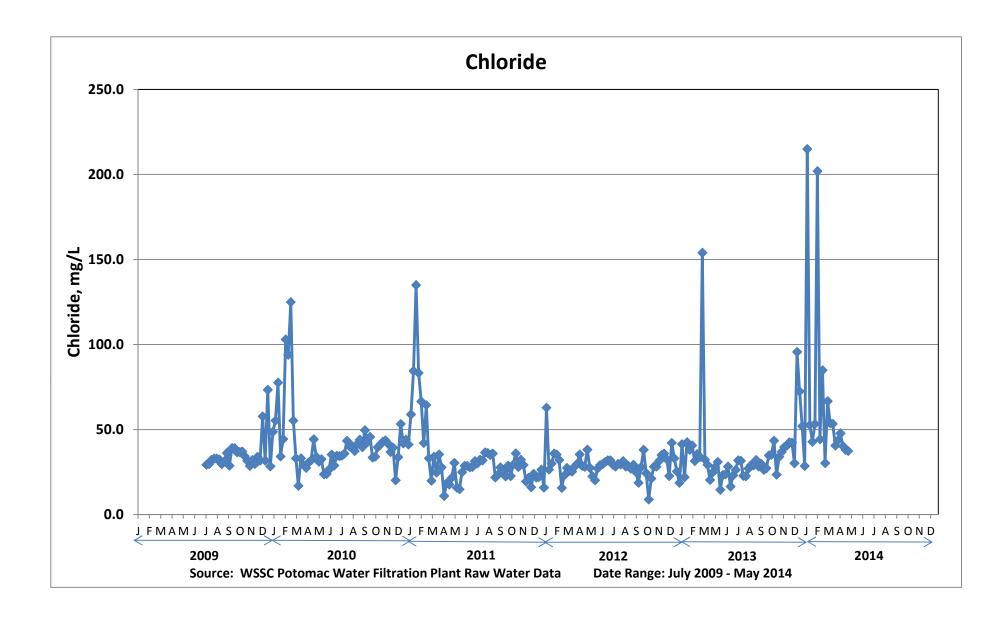


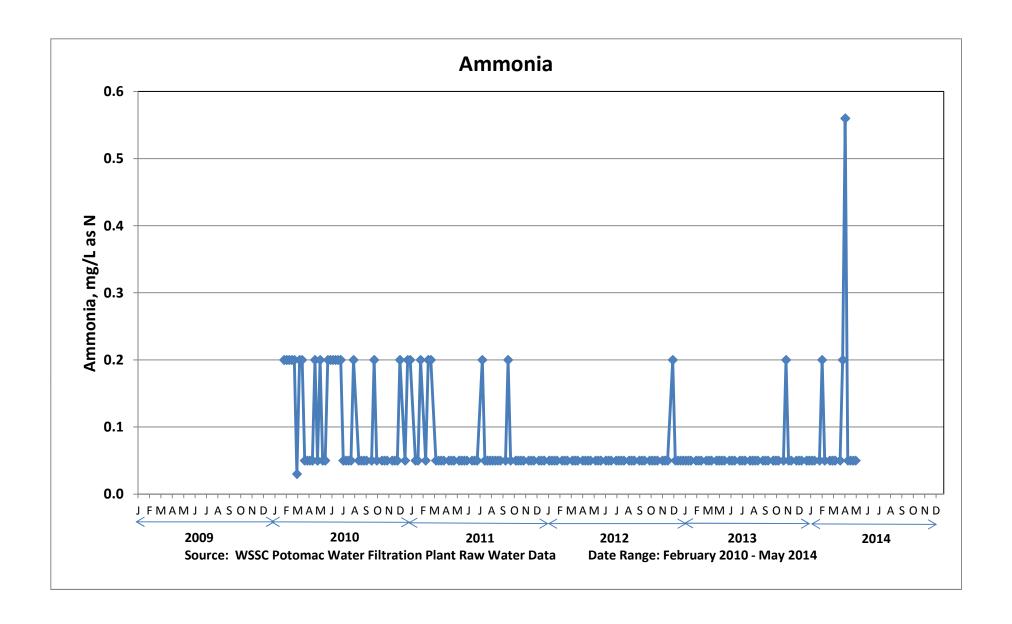


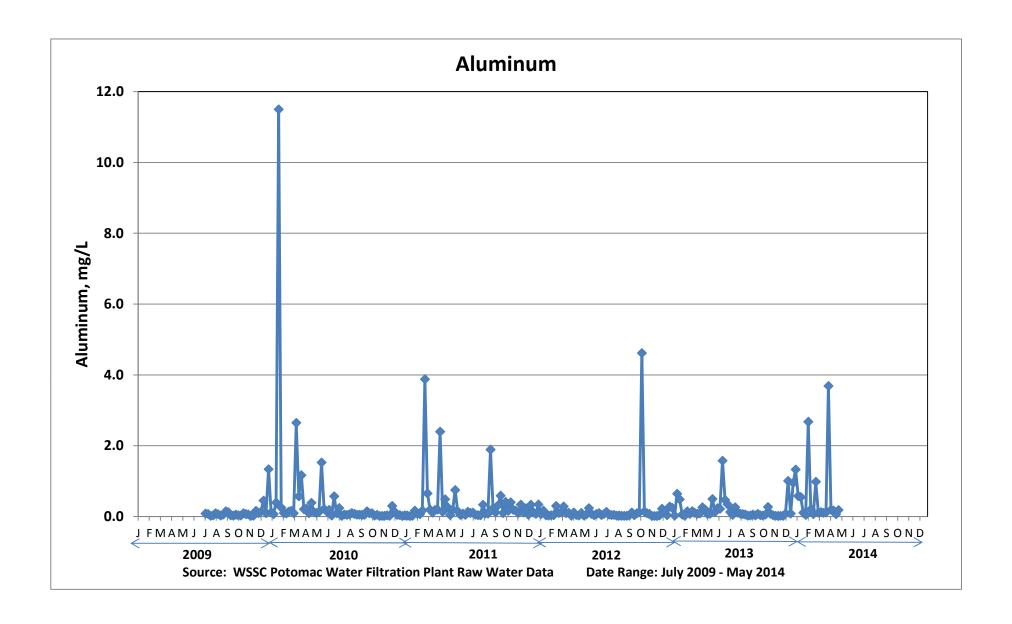












APPENDIX C Environmental Data Review Inc. (EDR) Report

Travilah Quarry – review of data obtained from Environmental Data Resources, Inc. (EDR)

The purpose of the EDR records review is to obtain and review records that can be used to help identify environmental conditions in connection with the property and adjoining properties.

A number of documents listing or showing the existing and historical properties of potential environmental concern and other features of the region and project area were reviewed. Documents reviewed included maps, photographs, reports, records, and other historical and environmental information pertinent to the area.

The following documents obtained from EDR were reviewed:

- Certified Sanborn® Map Report, Travilah Quarry, April 2, 2014.
- The EDR-City Directory Image Report, Travilah Quarry, April 4, 2014.
- EDR Historical Topographic Map Report, Travilah Quarry, April 3, 2014.
- The EDR Aerial Photo Decade Package, Travilah Quarry, April 7, 2014.
- The EDR Radius Map™ Report with Geocheck®, Travilah Quarry, April 3, 2014.

Sanborn Maps – Based on the information provided by EDR and verified using an online Sanborn map database, the quarry and surrounding area is unmapped, and no Sanborn maps are available. The EDR Sanborn map report is included as Attachment A.

City Street Directories – City street directories for Travilah Road and Piney Meetinghouse Road along and adjacent to the quarry site were obtained through EDR. The directories spanned the years from 1976 to 2013. The city directory image reports are included in Attachment B, and a summary of the sites with potential environmental concern identified through a review of the directories is provided in Table 1.

Table 1 City Directory Review Findings

Street	Years	Addresses of Potential Environmental Concern/Details		
	2013, 2008, 2003, 1999, 1996, 1991, 1986, 1981, 1976	2013 – Classic Cleaners listed at 14119 Travilah Road (possible dry cleaner).		
To a take Door d		2008 to 2003 – A One Autobody Inc. listed at 13773 Travilah Road (autobody repair shop). Classic Cleaners and a convenience store were listed at 14119 (petroleum storage tanks likely present at convenience store).		
Travilah Road		1999 - Unknown occupant listed at 13773. Convenience store listed at 14119.		
		1996 to 1981 - No addresses of note in regards to sites of potential environmental concern.		
		1976 – County Paving Co. listed at 13810 Travilah Road (possible oil tanks, asphalt residue may have been associated with this business).		
	2013, 2008, 2003, 1999, 1996, 1991, 1986, 1981, 1976	2013 to 2008 – Aggregate and bituminous companies are listed at 13900 Piney Meetinghouse Road.		
Pinev		2003 to 1999 - Crushed stone business listed at 13900 (no bituminous/asphalt plant).		
Meetinghouse		1996 to 1991 – Crushed stone and bituminous businesses listed at 13900.		
Road		1986 - Construction, hauling, bituminous, and crushed stone businesses listed at 13900.		
		1981 - Crushed stone and bituminous businesses listed at 13900.		
		1976 - Crushed stone business listed at 13900 (no bituminous/asphalt plant).		

- **USGS Topographic Maps** United States Geological Survey (USGS) topographic maps dated 1908, 1923, 1944, 1947, 1951, 1956, 1965, 1971, 1979, and 1984 were obtained from EDR and are included in Attachment C. The map review findings are presented in the following paragraphs:
- **1908** No quarry shown; limited developments shown around the quarry area. No evidence of sites with potential environmental concern was noted along or adjacent to the quarry area.
- **1923** No significant changes noted from the 1908 map. No evidence of sites with potential environmental concern was noted along or adjacent to the quarry area.
- **1944** An access road off of Piney Meetinghouse Road to the quarry site is shown along with a few structures in the quarry site. Not yet labeled as a quarry. No evidence of sites with potential environmental concern was noted along or adjacent to the quarry area.
- **1947** No significant changes noted from the 1944 map except that more development along Travilah Road is shown. No evidence of sites with potential environmental concern was noted along or adjacent to the quarry area.
- **1951** More development is shown along Travilah Road to the west and northwest of the quarry site. Additional structures are shown at the quarry site. No evidence of sites with potential environmental concern was noted along or adjacent to the quarry area.
- **1956** Six small bodies of water are observed on the map in the quarry site. Quarry site is identified as a quarry on the map. No evidence of sites with potential environmental concern was noted along or adjacent to the quarry area.
- **1965** Nine small bodies of water are observed on the map in the quarry area. Powerlines are shown along the south side of the quarry area. No evidence of sites with potential environmental concern was noted along or adjacent to the quarry area.
- **1971** The quarry area is expanded, with nine small bodies of water still shown. An unidentified pipeline is shown in place along the west side of the quarry. No evidence of sites with potential environmental concern was noted along or adjacent to the quarry area.
- **1979** Similar to the 1971 map except that only seven small bodies of water are shown at the quarry site. No evidence of sites with potential environmental concern was noted along or adjacent to the quarry area.
- **1984 –** No significant changes from the 1979 map. No evidence of sites with potential environmental concern was noted along or adjacent to the quarry area.
- **Aerial photography** Historical aerial photographs of the Travilah Quarry area was obtained through EDR for the years 1957, 1964, 1970, 1979, 1981, 1988, 1998, 2000, 2005, 2006, 2007, 2009, and 2011. The EDR aerial photographs are included in Attachment D, and a summary of the findings is presented in the following paragraphs:
- **1957** The aerial photographs from 1957 had poor image quality and not much detail could be seen. The limits of the quarry are shown with access roads along with some development along Travilah Road. Forest and farmland is primarily visible to the east and south of the quarry area. No evidence noted of any environmental concern on or around the quarry area.

- **1964** The quarry operations area is better defined than as presented on the 1957 photos. Several small ponds observed within the quarry area, and more development is visible along Travilah Road. No evidence noted of any environmental, concern on or around the quarry area.
- **1970** No significant changes observed from the 1964 photos.
- **1979** No significant changes observed from the 1964 photos.
- **1981** The 1981 photograph is in color and the limits of the quarry and locations of the quarry ponds are more clearly visible. No evidence noted of any environmental, concern on or around the quarry area.
- **1988 through 2005** No significant changes observed from the 1981 photos.
- **2006** Although photo has poor image quality and the photo does not show the entire quarry/surrounding area, there are no significant changes observed from the 1981 photos.
- **2007 through 2011** No significant changes observed from the 1981 photos.

Database records search - A search of available environmental records within a one-mile radius of the Travilah Quarry site was conducted by EDR. The search included the following databases:

- Federal National Priority List (NPL) site list
- Federal Delisted National Priority List (NPL) site list
- Federal Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) site list
- Federal Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) No Further Remedial Action Planned (NFRAP) site list
- Federal Resource Conservation and Recovery Act (RCRA) Information System Corrective Action Sites (CORRACTS) facilities list
- Federal (RCRA) non-CORRACTS TSDF facilities list (facilities that are or have been used for the treatment, storage, or disposal of hazardous waste)
- Federal Resource Conservation and Recovery Act (RCRA) generators list
- Federal institutional controls or engineering controls registries
- Federal Emergency Response Notification System (ERNS) list
- State or tribal equivalent of the Federal Comprehensive Environmental Response,
 Compensation and Liability Information System (CERCLIS)
- State or tribal landfill and/or solid waste disposal site lists
- State or tribal leaking storage tank lists
- State or tribal registered storage tank lists
- State or tribal institutional controls or engineering controls registries
- State or tribal voluntary cleanup sites
- State or tribal brownfields site lists

- Local brownfields sites
- Local lists of landfill or solid waste disposal sites
- Local lists of hazardous waste or contaminated sites
- Local land records
- Records of emergency release reports
- Manufactured gas plant sites
- Historic gas station sites
- Historic dry cleaner sites
- Recovered government archives
- Other miscellaneous ascertainable records

A copy of the EDR report and an overview map of the search area are included in Attachment E. The notable records of environmental sites of concern are presented in Table 2.

Table 2 EDR Report Environmental Databases Review Findings – Sites of Greatest Potential Environmental Concern on or within 1/4 Mile of the Travilah Quarry

EDR Map Designation	Database(s) - Findings
A	Quarry operations – listed on several databases. Several underground storage tanks (USTs) are still in use and several have been removed over the years. There have been releases to the soil and groundwater. Several aboveground storage tanks (ASTs) are currently in use. Residual soil and/or groundwater contamination may be present.
20	Oil Control Program (OCP) site – residential heating oil spill resulted in some soil contamination. Status: closed.
21	Historical Cleaners (possible dry cleaner site). No records identified related to contamination or cleanup of the property.
22	OCP site – dumping activities reported. Status: closed.
В	UST – permanently out of use. No records identified related to spills or cleanups on the property. OCP cases – Status: closed. No other details provided.
25	Historical Cleaners (possible dry cleaner site). No records identified related to contamination or cleanup of the property.
С	UST – permanently out of use. No records identified related to spills or cleanups on the property. OCP cases – Status: closed. No other details provided.
28	OCP cases – Status: closed. Residential motor/lube oil release resulted in some soil contamination.
29	OCP cases – Status: closed. No other details provided.

Attachment A – Sanborn Map Report

Travilah Quarry

13900 Piney Meetinghouse Road Rockville, MD 20850

Inquiry Number: 3900037.3

April 02, 2014

Certified Sanborn® Map Report



Certified Sanborn® Map Report

4/02/14

Site Name: Client Name:

Travilah Quarry 13900 Piney Meetinghouse Rockville, MD 20850

Black & Veatch Corporation 8400 Ward Parkway Kansas City, MO 64114

EDR Inquiry # 3900037.3 Contact: Gordon Abell



The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Black & Veatch Corporation were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Site Name: Travilah Quarry

Address: 13900 Piney Meetinghouse Road

City, State, Zip: Rockville, MD 20850

Cross Street:

P.O. # 182811.1000

Project: Travilah Quarry Project **Certification #** 953E-49D8-BA94

Santorn

Sanborn® Library search results Certification # 953E-49D8-BA94

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

Library of Congress

✓ University Publications of America

▼ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Black & Veatch Corporation (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

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Attachment B - City Street Directory Report

Travilah Quarry

13900 Piney Meetinghouse Road Rockville, MD 20850

Inquiry Number: 3900037.5

April 04, 2014

The EDR-City Directory Image Report



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Thank you for your business.Please contact EDR at 1-800-352-0050 with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

<u>Year</u>	Target Street	Cross Street	<u>Source</u>
2013	$\overline{\checkmark}$		Cole Information Services
2008	$\overline{\checkmark}$		Cole Information Services
2003	$\overline{\checkmark}$		Cole Information Services
1999	$\overline{\checkmark}$		Cole Information Services
1996	$\overline{\checkmark}$		Haines Criss-Cross Directory
1991	$\overline{\checkmark}$		Haines Criss-Cross Directory
1986	$\overline{\checkmark}$		Haines Criss-Cross Directory
1981	$\overline{\checkmark}$		Haines Criss-Cross Directory
1976	7	V	Haines Criss-Cross Directory

RECORD SOURCES

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FINDINGS

TARGET PROPERTY STREET

13900 Piney Meetinghouse Road Rockville, MD 20850

<u>Year</u>	<u>CD Image</u>	<u>Source</u>
-------------	-----------------	---------------

PINEY MEETINGHOUSE RD

2013	pg A1	Cole Information Services
2008	pg A4	Cole Information Services
2003	pg A8	Cole Information Services
1999	pg A12	Cole Information Services
1996	pg A16	Haines Criss-Cross Directory
1991	pg A18	Haines Criss-Cross Directory
1986	pg A20	Haines Criss-Cross Directory
1981	pg A22	Haines Criss-Cross Directory
1976	pg A25	Haines Criss-Cross Directory

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FINDINGS

CROSS STREETS

<u>Year</u>	<u>CD Image</u>	<u>Source</u>
-------------	-----------------	---------------

TRAVILAH RD

2013	pg. A2	Cole Information Services
2008	pg. A5	Cole Information Services
2003	pg. A9	Cole Information Services
1999	pg. A13	Cole Information Services
1996	pg. A17	Haines Criss-Cross Directory
1991	pg. A19	Haines Criss-Cross Directory
1986	pg. A21	Haines Criss-Cross Directory
1981	pg. A23	Haines Criss-Cross Directory
1981	pg. A24	Haines Criss-Cross Directory
1976	pg. A26	Haines Criss-Cross Directory

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<u>Target Street</u> <u>Cross Street</u> <u>Source</u>

✓ - Cole Information Services

PINEY MEETINGHOUSE RD 2013

13900 AGGREGATE INDUSTRIES F O DAY BITUMINOUS FO DAY TRAVILLAH STATE INSPECTORS OF **HOLCIM ROCKVILLE CRUSHED STONE INC** STONEGARDEN HARDSCAPES

10010	
13640	RUSTOM KAOVASIA
13646	SYED DL INC
40050	YAZDANI SYED
13650	OCCUPANT UNKNOWN
13700	WILLIAM LEE
	RAN MU
13704	NAHID ELYASSI HANNAH OH
	KART LANDSCAPE & LAWNS
	ROBERT FREDERICK
13717	OCCUPANT UNKNOWN
13717	OCCUPANT UNKNOWN
	RAGHUVEER SHARMA
13727	MARK FRANKFORD
	MARK SOKOLSKY
	ANNA KITTS
13731	SUBRAMANIA SRIPATHY
13751	JOHNSON HYDRO SEEDING CORP
13755	GRIFFITH TRUCKING
	MOOSE LOYAL ORDER OF ROCKVILLE LODGE
13757	FRANK YU
13759	BERA ENGINEERS INC
	PULAK BERA
13761	ATS POOL CONSTRUCTION
	FLORENCI VELASQUEZ
	MULCH & MORE
13763	OCCUPANT UNKNOWN
13765	AMARDEEP SAINI
13767	MEI TAI
13769	OCCUPANT UNKNOWN
13773	DALE BYNAKER
	XIANG YU
13801	ALBERT MCBRIDE
13810	OCCUPANT UNKNOWN
13814	NATIONAL SIKH CENTER
13816	OCCUPANT UNKNOWN
13866	SHARON LAYNI
13921	XINTAO CHEN
13923	KHANA SOLEIMANZADEH
13925	AMERICA WHEAT MISSION INC
14002	SHARON ROGERS
14004	REGINALD HOFFMAN
14008	YUN SHI
14010	MANMOHINI SODHI
14012	VASANTHA SRINIVASAN
14050	123 LOCKSMITH
	CHINA EAST PIZZA PALACE
	SALON SAMINA
14060	JAFARI SORAYA
17000	

Cole Information Services

(Cont'd)

TRAVILAH RD 2013

14060	SORAYA JAFARI D D S PC
	MARY DUNCAN
	VEENA VINAIK
14100	
	/
14110	
14119	
	CLASSIC CLEANERS
14120	GURU GROCERIES & CHAAT HOUSE WILLIAM WINNINGHAM
14126	
	OCCUPANT UNKNOWN PRIMARY MONTESSORI DAY SCHOOL
	ADRIAN GUERRA
14144	
14146	
14148	CINDY CROWN
14150	
	OCCUPANT UNKNOWN
	EUGENE RUNYON
	WILLIAM RECTOR
_	EUN CHANG
	PARVIZ MOKHTARI
	CHURCH OF GOD OF PROPHECY
14181	
4.4400	HYO LEE
14182	SHENG CHENG
14185	WENSHENG LIANG CRAIG BRODSKY
14190	OCCUPANT UNKNOWN
14191	
	LEV TOMASHEVESKY
	JIA FUJU ALI SARAKARZADEH
	VALAR GREENFELT
14196 14200	ROY CALLOWAY
14200	
14204	
14208	
14206	
14210	MINNIE HERSBERGER
14214 14216	YOUNG PARK MARGARET MOSSBURG
14219	
14316	
14318	ARIF MASOOD SAM CHEN
14320	
14330	TEMPLE BETH AMI

Target Street **Cross Street Source** Cole Information Services

PINEY MEETINGHOUSE RD 2008

13700 OCCUPANT UNKNOWN 13710 MITCHELL & BEST HOMES 13900 AGGREGATE INC FO DAY BITUMINOUS **ROCKVILLE CRUSHED STONE INC** STONEHENGE GARDENS

12700	
13700	BREAKERS SPORTS BAR
13702	WILLIAM LEE RAN MU
	NAHID GHIAS
13704	
13708	OCCUPANT UNKNOWN
13711	GUSTIN GARDENS TREE SERVICE IN
40740	KART LANDSCAPE & LAWNS INC
13716 13717	ROBERT FREDERICK MOHAMMAD PALIZKAR
13724 13726	MICHAEL LEHMAN RAGHUVEER SHARMA
13726	MICHAEL HARVEY
13728 13730	FELIX SOKOLSKY CECIL KITTS
13730	SUBRAMANIA SRIPATHY
13751	FASGRAS INTERNATIONAL LANDSCAPING
13/31	GEBAUT SAMEN DEVELOPMENT CORP
	JOHNSON HYDRO SEEDING INC
13753	DDT SERVICE INC
13755	MOOSE LOYAL ORDER
13733	ROCKVILLE MOOSE
13757	JAMES DWIGGINS
	BERA ENGINEERS INC
13733	PULAK BERA
13761	ARTISTIC GARDENS INC
13701	FLORENCI VELASQUEZ
	LAWN SYSTEMS INC
	MULCH & MORE INC
	R GRISIUS
	RAFAEL RODRIGUEZ
	SOUTHERN CABLE CONSTRUCTION INC
	WATERMARK POOL RENOVATIONS INC
13763	BRICKFARM LLC
	DOUGLAS STEWART
13765	GEORGE ROBERTS
13767	MEI TAI
13769	DALE CLINE
13773	A ONE AUTOBODY INC
	FRANKLIN BYNAKER
13779	JUNG LEE
13801	OCCUPANT UNKNOWN
13810	GURDARSHAN SINGH
13816	ROBIN HOWE
13854	BEN GARBER
13860	AYLI ENTERPRISES INC
13866	SHARON LAYNI
13923	STEVEN DELMARO
13925	AMERICAN WHEAT MISSION
14000	C SILVA
14002	SHARON ROGERS

2008

(Cont'd)

			-
14004	REGINALD HOFFMAN		
14008	H SINGH		
14010	ANGELO MASTEN		
14012	VASANTHA KUMAS		
14050	CHINA EAST		
	PIZZA PALACE		
	TRAVILAH PIZZA PALACE LLC		
14060	SORAYA JAFARI DDS PC		
	TRAVILAH DENTISTRY		
14065	CLARENCE MILLS		
14071	HECTOR PANTOJA		
14075	DEVRAJ VINAIK		
14100	OCCUPANT UNKNOWN		
	SUNRISE LAWNS & LANDSCAPE		
14110	JOHANNA SOLEIMANZADEH		
14119	CLASSIC CLEANERS		
	PINEY GROVE CONVENIENCE STORE		
14120	WILLIAM WINNINGHAM		
14126	RONALD BRIGHAM		
	STEPHEN HAINES		
14138	THE PRIMARY MONTESSORI		
	WILFREDO PELAEZ		
14144	ADRIANS LAWN CARE LLC		
	TONY GUERRA		
14146	NOEL GONZALEZ		
14148	DONALD CROWN		
14150	BO LI		
14156	ALI MOHAMMED		
14162 14170	EUGENE RUNYON WILLIAM RECTOR		
14176	OCCUPANT UNKNOWN		
14178	MITRA MOKHTARI		
14180	CHURCH OF GOD OF PROPHECY		
14181	HL DEVELOPMENT INC		
14101	HYO LEE		
14182	SHENG CHENG		
14183	WENSHENG LIANG		
14185	CRAIG BRODSKY		
14190	CENTRAL DRYWALL CO		
	LEO MILLER		
14191	TONY LAM		
14193	JIN SHIN		
14194	ALVIN DENOON GENERAL LANDSCAPING		
	DAVID LI		
14195	ALI SARAKARZADEH		
14196	VALARIE GREENFELD		
14200	ROY CALLOWAY		
14204	CRAIG BAUROTH		
14206	JERE STECKLEIN		
14210	JIAN WANG		

TRAVILAH RD 2008 (Cont'd)

<u>Target Street</u> <u>Cross Street</u> <u>Source</u>

✓ - Cole Information Services

PINEY MEETINGHOUSE RD 2003

13700 DAVID GROSS 13710 MITCHELL & BEST HOMES 13900 **BARDON INC** FO DAY TRAVILLAH STATE INSPCTR OCCUPANT UNKNOWN ROCKVILLE CRUSHED STONE INC

40700	FUCENELEE
	EUGENE LEE
	RAN ZHANG
	ABOL GHIAS
	EVA RISTL
13711	KART LANDSCAPE & LAWNS
40740	OCCUPANT UNKNOWN
	OCCUPANT UNKNOWN
	ROBERT FREDERICK
	RUSSELL DAVIS
13724	CHARLES LEHMAN
40700	OCCUPANT UNKNOWN
	RAGHUVEER SHARMA
13727	MICHAEL HARVEY
	FELIX SOKOLSKY
	CECIL KITTS
13731	FOROZAN ROSSOUKH
13741	D KENDALL
40754	THOMAS BLACKMAN
13751	FASGRAS INTERNATIONAL INC
	JOHNSON HYDRO SEEDING CORP
10755	MILTON JOHNSON
13755 13757	MOOSE LOYAL ORDER OF RCKVL LOD JAMES DWIGGINS
13/3/	JAY DWIGGINS EXCAVATING
	SNOW SERVICES
13759	THOMAS CARMODY
13739	TRIANGLE SHEET METAL INC
13761	ATS POOL CONSTRUCTION
13701	CARROLLS LOCKSMITHING
	GEBAUT SAMEN DEVELOPMENT CORP
	JEFFREY CARROLL
	LAWN SYSTEMS INC
	LEAK FINDERS
	SOUTHERN CABLE CONSTRUCTION
13763	DOUGLAS STEWART
13764	OCCUPANT UNKNOWN
	ROBERTS WILLIAM H FARMING
13767	MELTAL
13768	OCCUPANT UNKNOWN
13769	DALE CLINE
13773	A ONE AUTOBODY INC
	HAROLD BYNAKER
13779	DAVID JENKINS
13780	MARALEE MIMS
13801	GEORGE ROBERTS
13804	OCCUPANT UNKNOWN
13810	GURDARSHAN SINGH
13814	GGSF CHURCH
	OCCUPANT UNKNOWN
13816	AMERICAN EASTERN CORP

2003

(Cont'd)

13816	EDNA FLING	
13840	TED DOVE	
13850	BRIAN HEALY	
13854	DAVID GARBER	
13921	JOHN MASON	
13923	MARY TASKER	
13925	AMERICA WHEAT MISSION INC	
	OCCUPANT UNKNOWN	
14000	PIERCE WINGO	
14002	SHARON ROGERS	
14004	REGINALD HOFFMAN	
14010	ANGELO MASTEN	
14012	KUMAR SRINIVASAN	
14016	OCCUPANT UNKNOWN	
14021	OCCUPANT UNKNOWN	
14025	DANIEL STUBBS	
14026	DENNIS FLING	
14029	CELIA MATLOCK	
14031	JOSEPH HODGSON	
	LAWN DR INC	
14035	SHAWN SPENCER	
14039	RODNEY CASE	
14041	JOSEPH VANHOUTEN	
14050	MULCH & MORE INC	
14050	CHINA EAST CHINA EAST INC SEAN SHAHPARAST	
	TRAVILAH PIZZA PALACE LLC	
14060	DARRELL RADER	
14061	MICHAEL GRIMES	
14065	OCCUPANT UNKNOWN	
14069	CHESTER STELLO	
14071	NELSON GUACHAMIN	
14075	DEV VINAIK	
14100	AL RELUZCO	
	SUNRISE LAWNS & LANDSCAPES	
14110	DAVID SMITH	
14115	GILES WARRICK	
14119	CLASSIC CLEANERS	
	OCCUPANT UNKNOWN	
	PINEY GROVE CONVENIENCE STORE	
	TAMIZ INC	
	UTILITY SYSTEMS INC	
14120	WILLIAM WINNINGHAM	
14126	RONALD BRIGHAM	
14130	OCCUPANT UNKNOWN	
14142	RICHARD SWEENEY	
14144	ADRIAN S LAWN CARE LLC	
	TONY GUERRA	
14146	NOEL GONZALEZ	
14148	DONALD CROWN	

Target Street Cross Street Source
- Cole Information Services

TRAVILAH RD 2003 (Cont'd)

14150	HUNG WANG
14156	PARKIE JENKINS
14162	EUGENE RUNYON
14170	WILLIAM RECTOR
14176	GREG PAPPAS
14178	SHILA YAZDANI
14180	CHURCH OF GOD OF PROPHECY
	ROBIN BALRAM
14181	HYO LEE
14182	SHENG CHENG
14183	HO YI
14194	YEN WU
14196	MOHAMMED AYUB
14200	ROY CALLOWAY
14204	CRAIG BAUROTH
14206	JERE STECKLEIN
14208	OCCUPANT UNKNOWN
14210	OCCUPANT UNKNOWN
14212	MINNIE HERSBERGER
14214	JEFFREY LYONS
14215	ELBOWS INC
	T RICKMAN
	TRAVILAH RECOVERY
14216	GEORGE D MOSSBURG
	MARGARET MOSSBURG
_	PEDRO AMAYA
14330	IRENE PAPAMANOLIS

<u>Target Street</u> <u>Cross Street</u> <u>Source</u>

✓ - Cole Information Services

PINEY MEETINGHOUSE RD 1999

MITCHELL & BEST HOMES AT POTOMAC GLEN FO DAY TRAVILLAH STATE INSPECTORS OFFICE ROCKVILLE CRUSHED STONE INCORPORATED ROCKVILLE CRUSHED STONE INCORPORATED WAREHOUSE

13704	OCCUPANT UNKNOWN
13704	STEVEN WELTY
	•
13711	GUSTIN GARDENS TREE SERVICE INCORPORATED
13716	BOB FREDERICK
13717	DAVID DAVIS
13724	CHARLES LEHMAN
13726	OCCUPANT UNKNOWN
13727	MICHAEL HARVEY
13728	JOHN BARNES
13730	CECIL KITTS
13731	AMANDA ROSSOUKH
	PAMELA MCCABE
13741	DAVID HARTIS
	THOMAS BLACKMAN
13751	FAS GRAS INTERNATIONAL INCORPORATED
13/31	JOHNSON LAWN SYSTEMS
40750	OCCUPANT UNKNOWN
13753	POTOMAC SAND WORKS
13755	GRIFFITH TRUCKING
	MOOSE LOYAL ORDER OF ROCKVILLE LODGE 1540
	SORIANO TRANSPORT INCORPORATED
13757	GLADYS DWIGGINS
13759	OCCUPANT UNKNOWN
	TRIANGLE SHEET METAL INCORPORATED
13761	GEBAUT SAMEN DEVELOPMENT CORPORATION
	JEFFREY CARROLL
13763	OCCUPANT UNKNOWN
13764	ROBERTS WILLIAM H FARMNG
	WILLIAM ROBERTS
13765	OCCUPANT UNKNOWN
13767	MEI TAI
	PRESTON MILLS
13769	DONALD MILLS
	OCCUPANT UNKNOWN
13779	DAVID JENKINS
13780	KEVIN EPPS
13804	K IRANI
13810	G SINGH
13816	EDWIN MORELAND
13840	TED DOVE
13850	SANDY HEALY
13851	OCCUPANT UNKNOWN
13854	DAVID GARBER
13860	TOTAL QUALITY LANDSCAPE SERVICES
	VADOR VENTURES INCORPORATED
13861	OCCUPANT UNKNOWN
13866	EYAL SCHWARZENBERG
	OCCUPANT UNKNOWN
13901	
13903	OCCUPANT UNKNOWN
13907	OCCUPANT UNKNOWN

1999

(Cont'd)

	IKAV	ILAN KU	1999	(Cont a)	
	913 OCCUPANT UNKNOWN				
	915 OCCUPANT UNKNOWN				
	917 OCCUPANT UNKNOWN				
	919 OCCUPANT UNKNOWN				
139					
	923 OCCUPANT UNKNOWN				
139	925 AMERICA WHEAT MISSION	INCORPORATED			
	WON KANG				
	002 SHARON ROGERS				
	004 VIRGIL KIDWELL				
	007 OCCUPANT UNKNOWN				
	009 OCCUPANT UNKNOWN				
	010 OCCUPANT UNKNOWN				
	012 CHARLES CONSTANTINE				
	016 GLORIA DAVIDSON				
140					
	025 OCCUPANT UNKNOWN				
	026 DENNIS FLING				
	029 CELIA MATLOCK				
140					
	LAWN DOCTOR OF SOUTH	WEST MONTGOME	ERY COUNTY	•	
	OCCUPANT UNKNOWN				
	035 OCCUPANT UNKNOWN				
	039 RODNEY CASE				
140					
140	050 CHINA EAST				
	PIZZA MOVERS				
	060 DARRELL RADER				
140					
	065 C MILLS				
	069 CHESTER STELLO				
140	71 FRED BRIGGS				
	HOMEWOOD BUILDERS				
	075 JAMES WILKINSON				
	115 GILES WARRICK				
141	I 19 MICHAEL NIAKANI				
	PINEY GROVE CONVENIEN	CE STORE			
	120 WILLIAM WINNINGHAM				
	126 RONALD BRIGHAM				
	130 STEPHEN HAINES				
	142 RICHARD SWEENEY				
14′	144 DORA CHINCHILLA				
	JOSE GUERRA				
	146 NOEL GONZALEZ				
	148 DONALD CROWN				
	150 THOMAS LUNDREGAN				
	152 OCCUPANT UNKNOWN				
	156 JOYCE JENKINS				
	162 EUGENE RUNYON				
141	170 WILLIAM RECTOR				

<u>Target Street</u> <u>Cross Street</u> <u>Source</u>
- Cole Information Services

TRAVILAH RD 1999 (Cont'd)

14176	OCCUPANT UNKNOWN
14178	EDDIE HARDING
14180	CHURCH OF GOD OF PROPHECY
14182	SHENG CHENG
14194	ALVIN DENOON
14196	OCCUPANT UNKNOWN
14200	ROY CALLOWAY
14201	OCCUPANT UNKNOWN
14204	CRAIG BAUROTH
14206	JERE STECKLEIN
14210	T SEEN
14212	JAMES TAYLOR
	MINNIE HERSBERGER
14214	JEFF LYONS
14215	ELBOWS INCORPORATED
	T RICKMAN
14216	OCCUPANT UNKNOWN
14219	OCCUPANT UNKNOWN
14324	OCCUPANT UNKNOWN
14328	JACOB MOBLEY
14330	COLEMAN & WOOD INCORPORATED
	TEMPLE BETH AMI
14332	CAPITOL DESIGNS

Haines Criss-Cross Directory

PINEY MEETINGHOUSE RD 1996



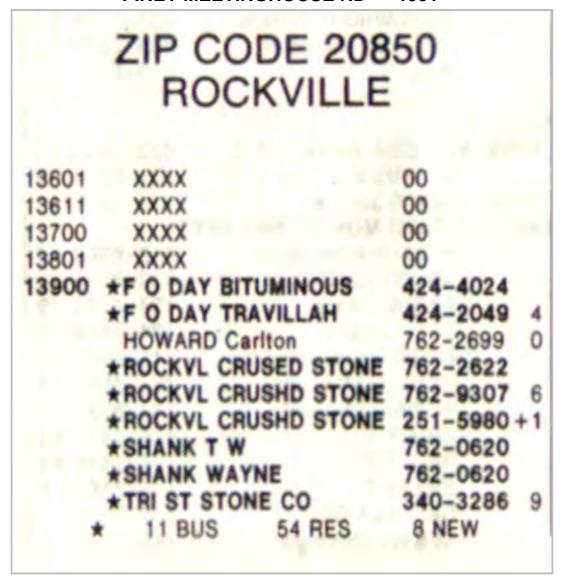
<u>Target Street</u> <u>Cross Street</u> <u>Source</u>
- Haines Criss-Cross Directory

	IRAVILATIRD IS	990
13801	XXXX	00
13804	EPPS Kevin D	279-7778 5
13809	XXXX	00
13810	SINGH Gurdarshan	309-9528 2
13814	XXXX	00
13816	MORELAND Edwin J	762-7274
	*RICHMARR POTMC OAKS	
13840	STEELE J	762-5192 4
13850	SCHWARTZBECK Geo B	762-3112
	XXXX	00
13860	*PINEGROVE LANDSCAPE	294-9482 0
	HOY Brian M	251-0256 +6
	XXXX	00
	XXXX	00
	VVVV	00
	LAMBERGER K	309-2937 +6
	BURRUS K	838-9233 +6
		838-9466 +6
		424-5357 9
	XXXX	00
	XXXX	00
	MASON John J	
	*POTOMAC KOREAN MET	
13930		00
14000		424-1173
	LLEWELLYN William	294-3060 +6
14004	KIDWELL Virgil V	279-5839 0
14007	KIDWELL Virgil V HORTON Jennifer M	309-2454 3
	CONSTANTINE Charles	
14016		424-3115 4
14021	MCNICKLE C	294-0567 7
	XXXX	00
	FLING Dennis W	340-1690
	• MATLOCK Wm C	762-4405
	*HOME SERVICES INC	294-7497 3
14001	*LAWN DOCTOR	762-4461 3
14035		00
14039	XXXX	00
14040		00
14041		340-1818 7
14041	VANHOUTEN Joseph	340-2267 7
14050	*LAKE WINDS FOOD MRT	
14060		340-9636 +6
14061		00
14065		762-4981
14069	XXXX	00
14009	BRIGGS Fred R Jr	340-1027
14071	*HOMEWOOD BUILDERS	424-0045
14075	DANIELS Roger	279-0640 +6
14013	DANIELS Hoger	213-0040 +0

<u>Target Street</u> <u>Cross Street</u> <u>Source</u>

✓ - Haines Criss-Cross Directory

PINEY MEETINGHOUSE RD 1991



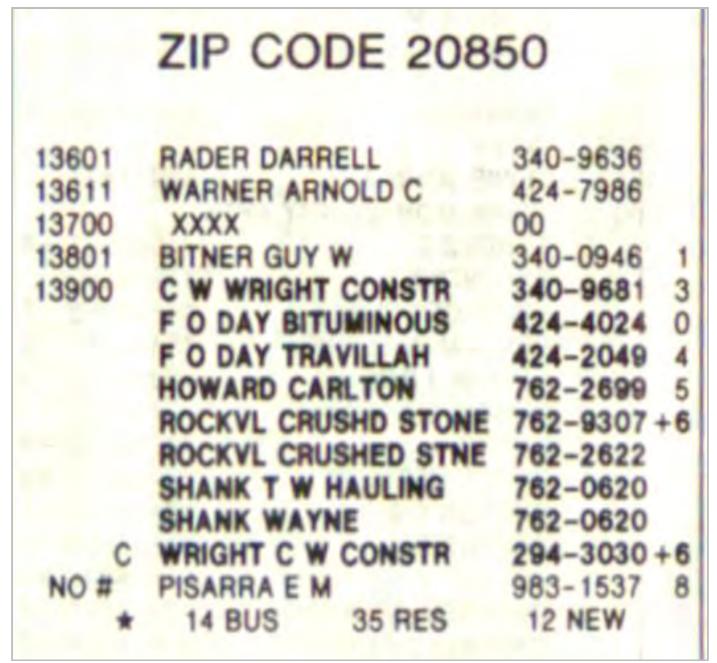
<u>Target Street</u> <u>Cross Street</u> <u>Source</u>
- Haines Criss-Cross Directory

	IKAVILAH KU I	99 I
13801	XXXX	00
13804	XXXX	00
13809	XXXX	00
13810	WARD Jerald	340-3258
13814	SAINI C	309-1951 +1
13816	MORELAND Edwin Jos	762-7274
13850	SCHWARTZBECK Geo B	762-3112
13854		
		762-0463 7
13860		
13861		762-4224
13866		00
13870		00
13901	7 10 10 10 10 10 10 10 10 10 10 10 10 10	00
13903		00
13905		294-1388 +1
13907	XXXX	00
13909		00
13913		279-7856
13915		
13917	and the same of th	424-5357 9
13919		T. T.
13921		294-3509 6
13921		251-6370 3
	MEHAILESCU Joseph	
12020	*PINES CMTY BIBLE CH	279-7303 0
13930		00
14000		424-1173
14002		294-8570 0
14004		279-0065 7
44007	KIDWELL Virgil V	279-5839 0
14007		424-2122 9
14012		
14021	MCNICKLE C	294-0567 7
14024		
14026		340-1690
		251-0463 9
14029		762-4405
14031	XXXX	00
14035	XXXX	00
14040	XXXX	00
14041	*MULCH&MORE	340-1818 7
	VANHOUTEN Joseph	340-2267 7
14050		279-0250 6
14060	RADER Darrell	340-9636 +1
14061	XXXX	00
14065	MILLS Clarence E	762-4981
14069	*COMPREHNSV TREE CRE	738-7970+1
14071		340-1027
	*HOMEWOOD BUILDERS	424-0045 6
14075		00

<u>Source</u>

Haines Criss-Cross Directory

PINEY MEETINGHOUSE RD 1986



<u>Target Street</u> <u>Cross Street</u> <u>Source</u>
- Haines Criss-Cross Directory

	IRAVILAH RD	1986
13801	XXXX	00
13804		00
13805	WATKINS M	340-1817 0
13809	MILLS FOREST A	762-9274
13810	WARD JERALD	340-3258 9
13814	ROBERSON SHIRLEY JO	
13816	MORELAND EDWIN JOS	762-7274
13821	XXXX	00
13823	BURDETTE CARL W	762-0472
13023	BURDETTE EDNA M	762-0472
13824	XXXX	00
13827		762-2218 5
13027	CHEA DANIETTE	
13829	SHEA DANETTE	762-7166 +6
13831	FETCO INC	762-1370+6
13833		762-3100
13836		00
	RUSS NANCY	424-2759 +6
13845	GARBER DAVID ELCTL	762-0463 5
13850	SCHWARTZBECK GEO B	762-3112
13854	DAVID M GARBER ELEC	762-0463 5
13860	BILLY KIDS B B Q	424-6465+6
13861		762-4224
13866	HAYNES CHUCK	279-6714 5
	MELBY ROBERT A	279-2757 8
13870	XXXX	00
13901	STITELY DALE	279-0147 +6
13903	DAVIS JAMES GREGORY	
10000	DAVIS MISSY	294-3224 +6
13905	VANHOOZER JOHN R	762-6198 +6
13905	VANHOOZER JORH R JR	
13907		
		00
13909		00
13913		279-7856 0
13915	7	00
13917		00
13919	MAYFIELD WILLIAM	294-3509 +6
13921	MASON JOHN J	251-6370 3
13930	BALSAM FRED S	762-3169
14000	WINGO PIERCE H	424-1173
14002	BREADY WM F MRS	762-3259
14004	KIDWELL VIRGIL V	279-5839 3
14007	DODSON NORMAN B	251-1794 4
14012	OSBORNE WILLIAM L	294-3347 +6
14024	XXXX	00
14026	FLING DENNIS W	340-1690 0
14029	MATLOCK WM C	762-4405
14031	CAP LANDSCAPE INC	762-5395+6
14035	XXXX	00
14040	XXXX	00
14041	EMERSON F A	762-3198
14050	JOES MARKET	279-0250+6
14060	BOYD L E	762-4354
14061	XXXX	00
14065	MILLS CLARENCE E	762-4981
14069	TSILIS F	251-1128 +6
14071	BRIGGS FRED R JR	340-1027 1
	HOMEWOOD BUILDERS	424-0045+6
14075	XXXX	00

<u>Target Street</u> <u>Cross Street</u> <u>Source</u>

✓ - Haines Criss-Cross Directory

PINEY MEETINGHOUSE RD 1981

13101	XXXX	00
13109	LUCAS JOHN W	762-4459
13117	ALLEN J	279-5460 +1
13601	RADER DARRELL	340-9636 4
13611	WARNER ARNOLD	C 424-7986 4
		762-7634 0
13801	BITNER GUY W	340-0946+1
13900	F O DAY BITMNS	424-4024 0
0.00		STONE 762-2622
	ROCKYL CRUSHD	STONE 762-9307
		NE 762-0620
NO #		983-1537 8
*		RES 5 NEW

Target Street

Cross Street

Source

Haines Criss-Cross Directory

13801	ROBERTS GEORGE L JR	340-2715 6
13804	XXXX	00
13805	WATKINS M	340-1817 0
13809	MILLS FOREST A	762-9274
13810	WARD JERALD	340-3258 9
13814	CONNELLY FORREST	340-8958 3
13816	MORELAND EDWIN J	762-7274 2
13821	POLLEN R JR	762-8909+1
13823	BURDETTE CARL W	762-0472
	BURDETTE EDNA M	762-0472
13824	XXXX	00
13827	FETCO INC	762-1370+1
	FLING HARVEY W	762-2218 5

<u>Target Street</u> <u>Cross Street</u> <u>Source</u>
- Haines Criss-Cross Directory

		20850 CONT
	XXXX	00
13831	SIMMONS JACK O	340-2631
	LANE ALICE J	
	LANE CLAUDE E	762-3100
13836	KOCH STANLEY E	
		424-9042
	SCHWARTZBECK DAVID	
	SCHWARTZBECK GEO B	
13860	XXXX	00
	MILLS CARLTON	762-4224
	MELBY ROBERT A	279-2757
10070	24242424	00
13901	ELLIS ROBERT W	279-2164
13903	ROUTH DOUGLAS L	
	CRAWFORD GARY LEE	
	AMER PRO CHIMNEY SV	
13909	ASHLOCK ALAN D RISSLER JOHN W	424-0088
13913	MILLER JUNIOR KEITH	279-7856
	XXXX	00
	TILLMAN RICHARD	424-8639 (
	THOMPSON JIM F	340-9805 +
13930	BALSAM FRED	762-3169
14000	WINGO PIERCE H	124-1173
14002	BREADY WM F MRS	762-3259
14004	KIDWELL VIRGIL V	762-4734 +
14007	KIDWELL VIRGIL V BILLECI S	424-2025
	XXXX	00
	XXXX	CO
14013	XXXX	00
14016		424-4099
14021	XXXX	00
14024		00
T. IT	FLING DENNIS W	340-1690 (
	MATLOCK WM C	762-4405
	GREEN VALLEY LWN SV	
14035		424-6723+1
14040	XXXX	00
	EMERSON F A	762-3198
	H&I SUPER MKT	762-9757
	BOYD ROBT L SR	
14061		
		279-0837 8
14065		762-4981
14069	XXXX	00
	BRIGGS FRED R JR	340-1027+1
14075	XXXX	00

<u>Target Street</u> <u>Cross Street</u> <u>Source</u>

✓ - Haines Criss-Cross Directory

PINEY MEETINGHOUSE RD 1976

13101	XXXX		00
13109	LUCAS	JOHN W	762-4459
13117	XXXX		00
13601	RADER	DARRELL	340-9636 4
13611	WARNER	ARNOLD C	424-7986 4
13700	WELLS	W MACK	762-9634
13801	FIELDS	LOIS J	762-0510+6
139004	ROCKVL	CRUSHD STONE	762-2622
*	ROCKVL	CRUSHD STONE	762-9307
*	SHANK	T WEWAYNE	762-0620
NO #	PISARR	AEM	299-9098 2
3	3 B	US 24 RES	3 NEW

	970
13801 ROBERTS GEORGE L J	R340-2715+6
13804 XXXX	00
13805 JOHNSON ROY G	762-2012
13809 MILLS FOREST A	762-9274 8
13810*COUNTY PAVING CO	424-3057+6
13814 CONNELLY FORREST	340-8958 3
13816 MORELAND EDWIN J	762-7274 2
13821 KIDWELL VIRGIL V	424-1377+6
13823 BURDETTE CARL W	762-0472
BURDETTE EDNA M	762-0472
13824 XXXX	00
13827 FLING DENNIS F	762-1370+6
FLING HARVEY W	762-2218 5
13829 XXXX	00
13831 SIMMONS JACK D	212 2222 1
	762-3100
13836 XXXX	00
13840 RUSS WILSON	
13850 SCHWARTZBECK DAVID	
SCHWARTZBECK GEO B	
13860 WALKER H D	762-3663 3
13861*MILLS CARLTON	762-4224
WATERS LYNN M	340-7112+6
	762-3277 0
13901 XXXX	00
13903 ROUTH DOUGLAS L	424-3492 1
13905 XXXX	00
13909 XXXX	00
13913 XXXX	00
13915 RUSS DENNIS M	
13917 DEHART ROGER W	
13919 SHIFFLETT ARTHUR S	
13921 SHELLY ALMOS E REV	
13930 BALSAM FRED S	
14000 WINGO PIERCE H	424-1173 2
14002 BREADY WM F MRS	762-3259
14004 CARLISLE CLIFTON O	
14009 SHIFLETT WILLIAM E	
14010 XXXX	00
14013 SHIFFLET THOMAS G	340-9808 4
14016 XXXX	00
14021 GRIMES J	762-4509 5
14024 MILLER HAROLD	424-1781+6
	762-4405
14029 MATLOCK WM C	00
14031 XXXX	
14035 XXXX	00
14040 XXXX	00
14041 EMERSON F A	762-3198
14050*H&I SUPER MKT	762-9757 8
14060 BOYD ROBT L SR	762-4354 5
14061 WILLIAMS L L	340-7064+6
14065 MILLS CLARENCE E	762-4981
14069 XXXX 14075 XXXX	00

Attachment C – USGS Topographic Map Report

Travilah Quarry

13900 Piney Meetinghouse Road Rockville, MD 20850

Inquiry Number: 3900037.4

April 03, 2014

EDR Historical Topographic Map Report



EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

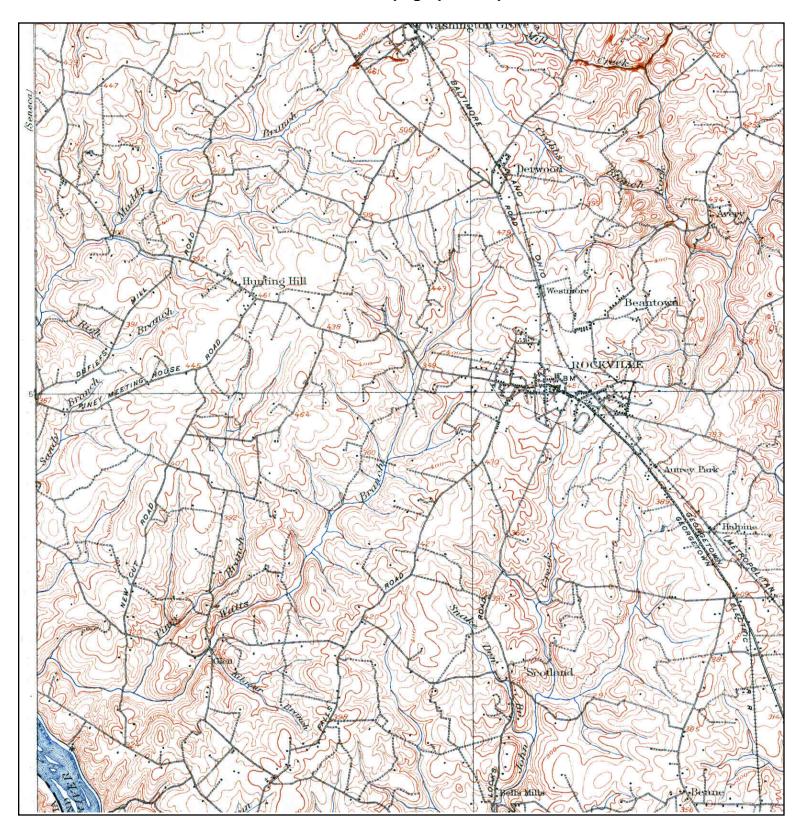
Thank you for your business.Please contact EDR at 1-800-352-0050 with any questions or comments.

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TARGET QUAD

NAME: ROCKVILLE

MAP YEAR: 1908

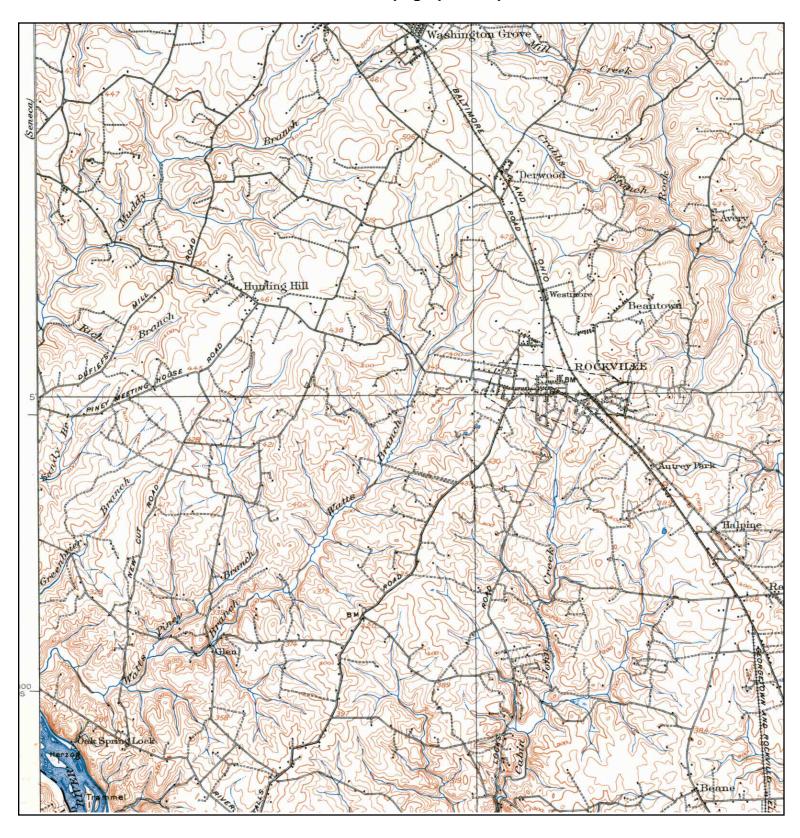
SERIES: 15 SCALE: 1:62500 SITE NAME: Travilah Quarry

ADDRESS: 13900 Piney Meetinghouse Road

Rockville, MD 20850

LAT/LONG: 39.0789 / -77.225

CLIENT: Black & Veatch Corporation





TARGET QUAD

NAME: ROCKVILLE MAP YEAR: 1923

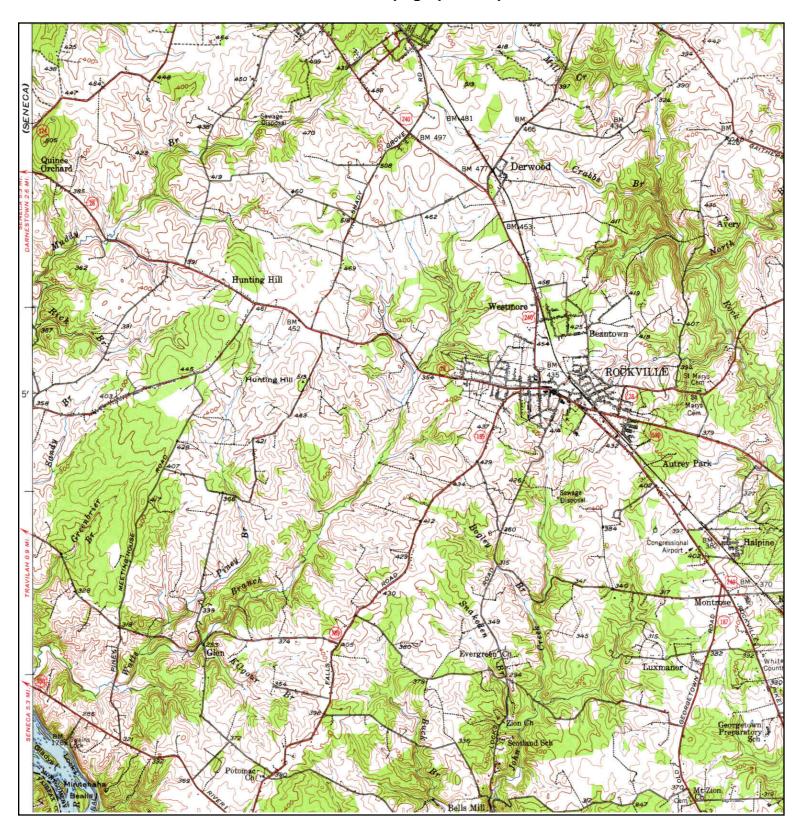
SERIES: 15 SCALE: 1:62500 SITE NAME: Travilah Quarry

ADDRESS: 13900 Piney Meetinghouse Road

Rockville, MD 20850

LAT/LONG: 39.0789 / -77.225

CLIENT: Black & Veatch Corporation





TARGET QUAD

NAME: ROCKVILLE MAP YEAR: 1944

IAI TEAN. 1944

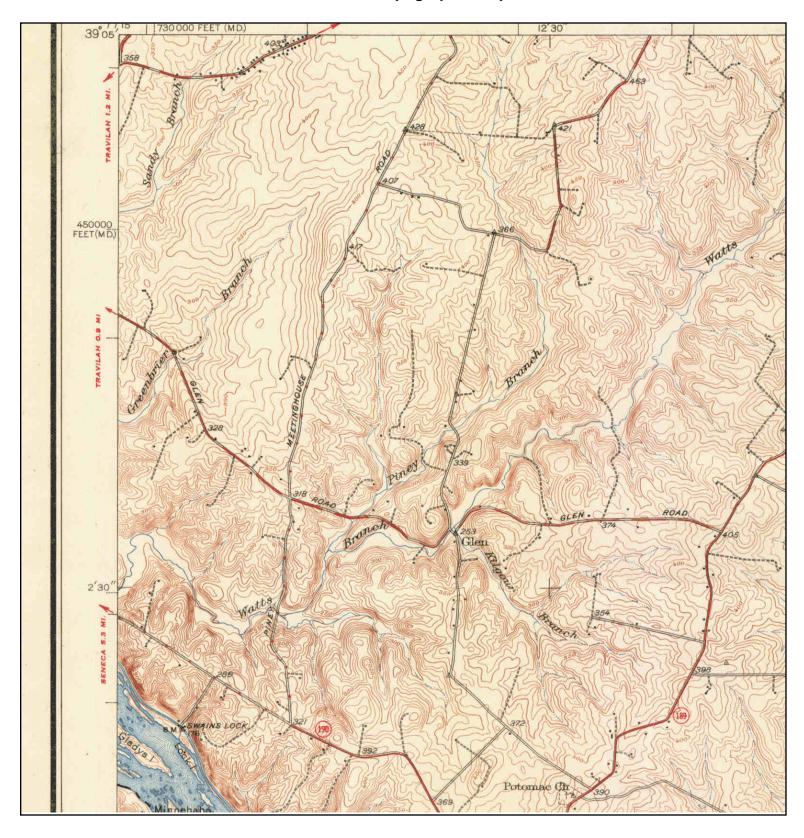
SERIES: 15 SCALE: 1:62500 SITE NAME: Travilah Quarry

ADDRESS: 13900 Piney Meetinghouse Road

Rockville, MD 20850

LAT/LONG: 39.0789 / -77.225

CLIENT: Black & Veatch Corporation





TARGET QUAD

NAME: Washington And Vicinity 1

Of 4

MAP YEAR: 1947

SERIES: 7.5 SCALE: 1:31680 SITE NAME: Travilah Quarry

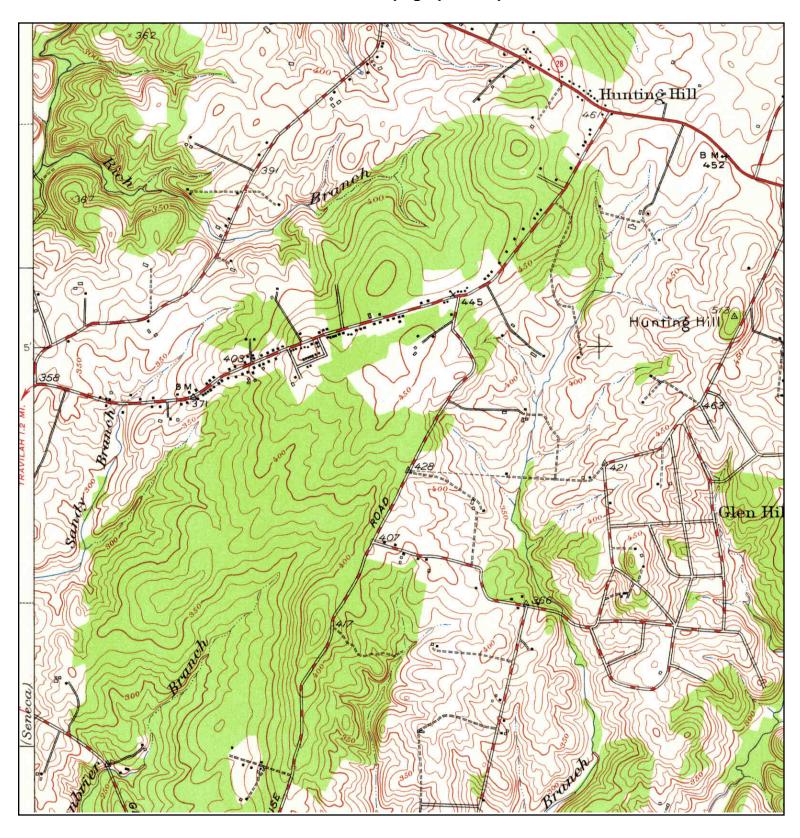
ADDRESS: 13900 Piney Meetinghouse Road

Rockville, MD 20850

LAT/LONG: 39.0789 / -77.225

CLIENT: Black & Veatch

Corporation





TARGET QUAD

NAME: ROCKVILLE MAP YEAR: 1951

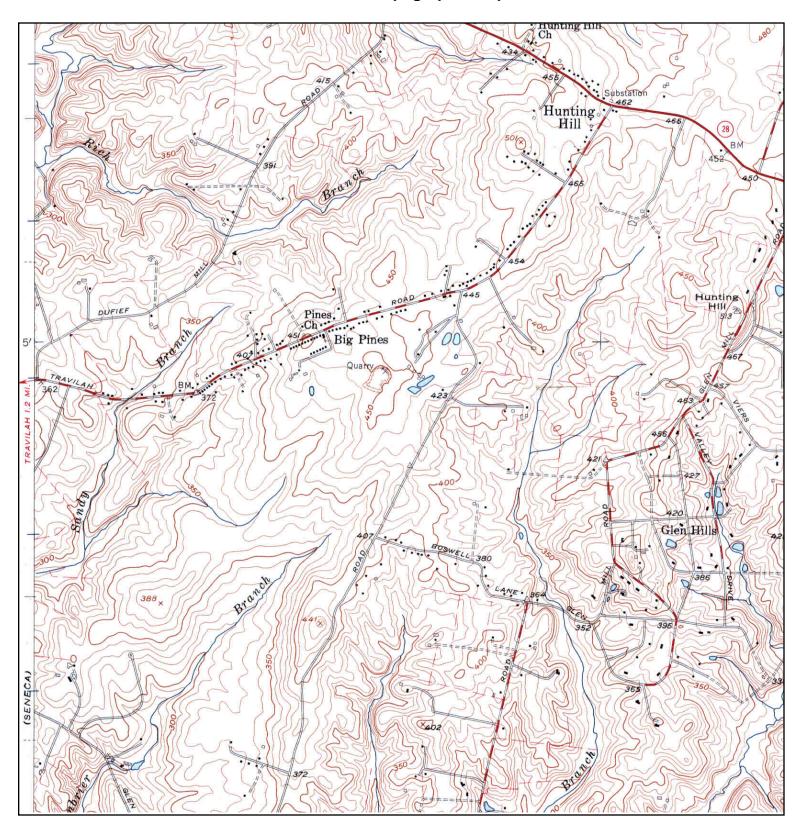
SERIES: 7.5 SCALE: 1:24000 SITE NAME: Travilah Quarry

ADDRESS: 13900 Piney Meetinghouse Road

Rockville, MD 20850

LAT/LONG: 39.0789 / -77.225

CLIENT: Black & Veatch Corporation





TARGET QUAD

NAME: ROCKVILLE MAP YEAR: 1956

IAI TEAN. 1990

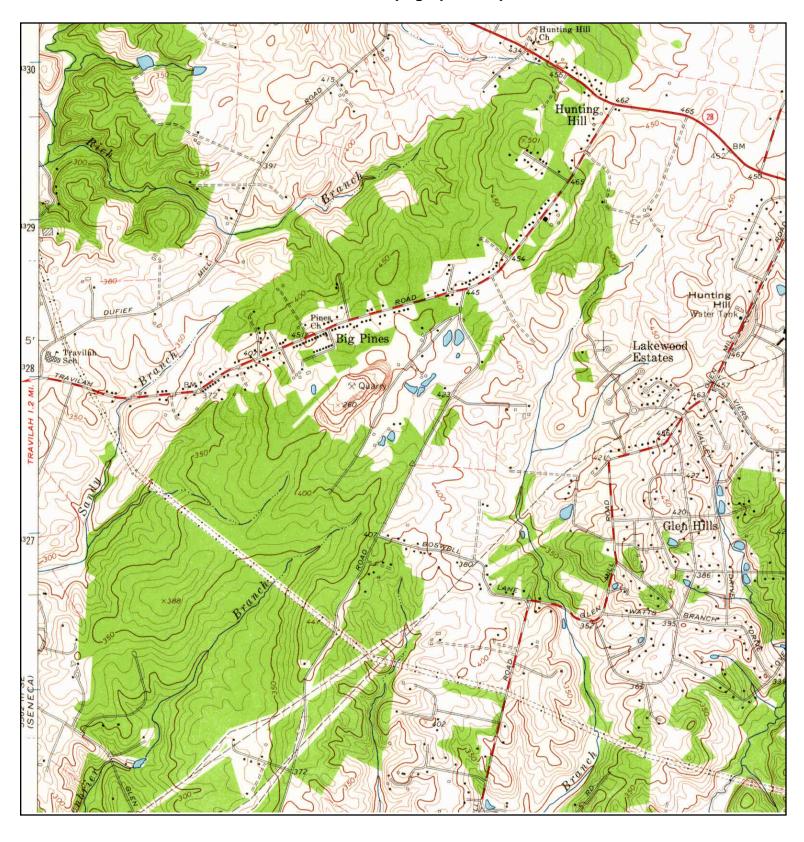
SERIES: 7.5 SCALE: 1:24000 SITE NAME: Travilah Quarry

ADDRESS: 13900 Piney Meetinghouse Road

Rockville, MD 20850

LAT/LONG: 39.0789 / -77.225

CLIENT: Black & Veatch Corporation





TARGET QUAD

NAME: ROCKVILLE MAP YEAR: 1965

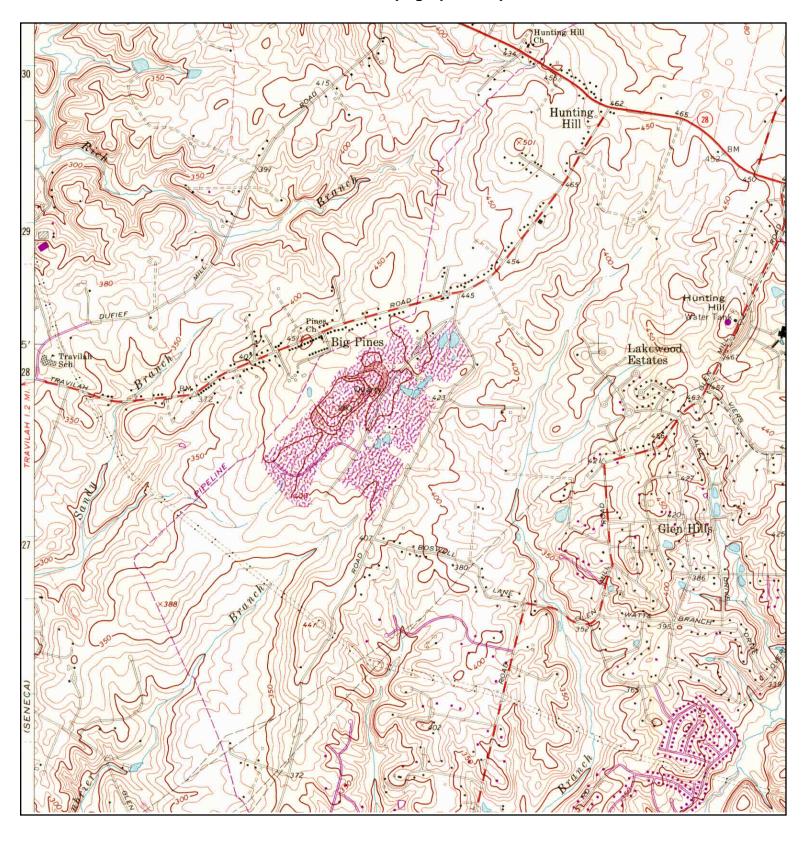
SERIES: 7.5 SCALE: 1:24000 SITE NAME: Travilah Quarry

ADDRESS: 13900 Piney Meetinghouse Road

Rockville, MD 20850

LAT/LONG: 39.0789 / -77.225

CLIENT: Black & Veatch Corporation





TARGET QUAD

NAME: ROCKVILLE

MAP YEAR: 1971

PHOTOREVISED FROM: 1965

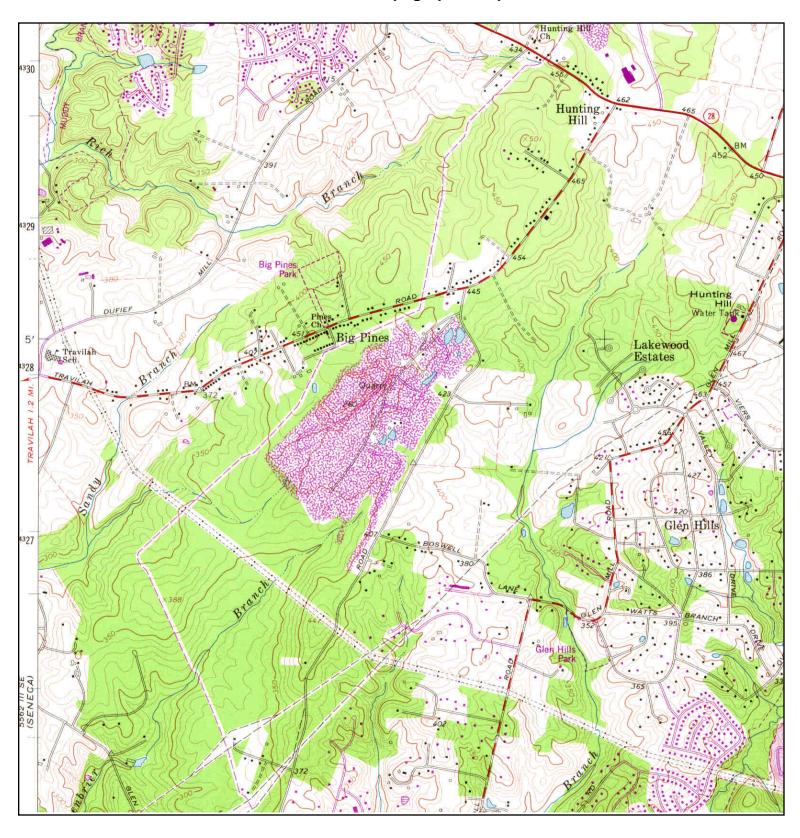
SERIES: 7.5 SCALE: 1:24000 SITE NAME: Travilah Quarry

ADDRESS: 13900 Piney Meetinghouse Road

Rockville, MD 20850

LAT/LONG: 39.0789 / -77.225

CLIENT: Black & Veatch Corporation





TARGET QUAD

NAME: ROCKVILLE

MAP YEAR: 1979

PHOTOREVISED FROM: 1965

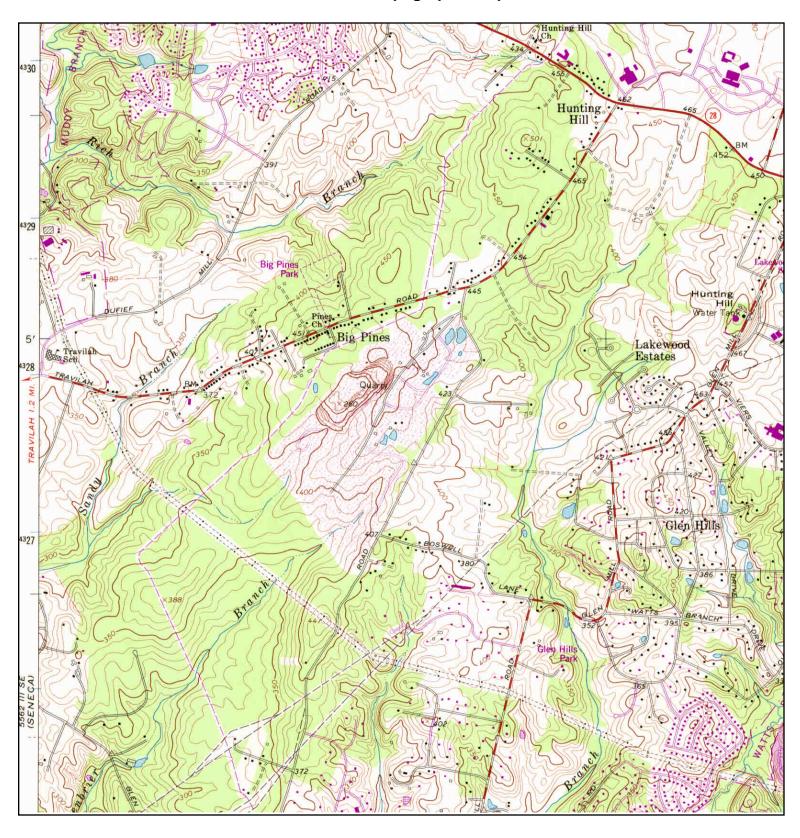
SERIES: 7.5 SCALE: 1:24000 SITE NAME: Travilah Quarry

ADDRESS: 13900 Piney Meetinghouse Road

Rockville, MD 20850

LAT/LONG: 39.0789 / -77.225

CLIENT: Black & Veatch Corporation





TARGET QUAD

NAME: ROCKVILLE

MAP YEAR: 1984 PHOTOREVISED FROM:1965

SERIES: 7.5 SCALE: 1:24000 SITE NAME: Travilah Quarry

ADDRESS: 13900 Piney Meetinghouse Road

Rockville, MD 20850

LAT/LONG: 39.0789 / -77.225

CLIENT: Black & Veatch Corporation

Attachment D – Historical Aerial Photographs Report

Travilah Quarry

13900 Piney Meetinghouse Road Rockville, MD 20850

Inquiry Number: 3900037.9

April 07, 2014

The EDR Aerial Photo Decade Package



EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

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with any questions or comments.

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Date EDR Searched Historical Sources:

Aerial Photography April 07, 2014

Target Property:

13900 Piney Meetinghouse Road Rockville, MD 20850

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
1957	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Date: April 30, 1957	EDR
1957	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Date: April 30, 1957	EDR
1964	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Date: April 17, 1964	EDR
1964	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Date: April 17, 1964	EDR
1970	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Date: July 17, 1970	EDR
1970	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Date: July 17, 1970	EDR
1979	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Date: July 08, 1979	EDR
1981	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Date: January 01, 1981	EDR
1988	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/DOQQ - acquisition dates: April 20, 1988	EDR
1988	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/DOQQ - acquisition dates: April 20, 1988	EDR
1988	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/DOQQ - acquisition dates: April 20, 1988	EDR
1988	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/DOQQ - acquisition dates: April 20, 1988	EDR
1998	Aerial Photograph. Scale: 1"=750'	Panel #: 39077-A2, Rockville, MD;/Flight Date: April 03, 1998	EDR
2000	Aerial Photograph. Scale: 1"=750'	Panel #: 39077-A2, Rockville, MD;/Flight Date: March 31, 2000	EDR
2005	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Year: 2005	EDR
2005	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Year: 2005	EDR
2005	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Year: 2005	EDR
2005	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Year: 2005	EDR
2006	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Year: 2006	EDR

Year 2007	Scale Aerial Photograph. Scale: 1"=500'	Details Panel #: 39077-A2, Rockville, MD;/Flight Year: 2007	Source EDR
2007	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Year: 2007	EDR
2007	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Year: 2007	EDR
2007	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Year: 2007	EDR
2009	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Year: 2009	EDR
2009	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Year: 2009	EDR
2009	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Year: 2009	EDR
2009	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Year: 2009	EDR
2011	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Year: 2011	EDR
2011	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Year: 2011	EDR
2011	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Year: 2011	EDR
2011	Aerial Photograph. Scale: 1"=500'	Panel #: 39077-A2, Rockville, MD;/Flight Year: 2011	EDR





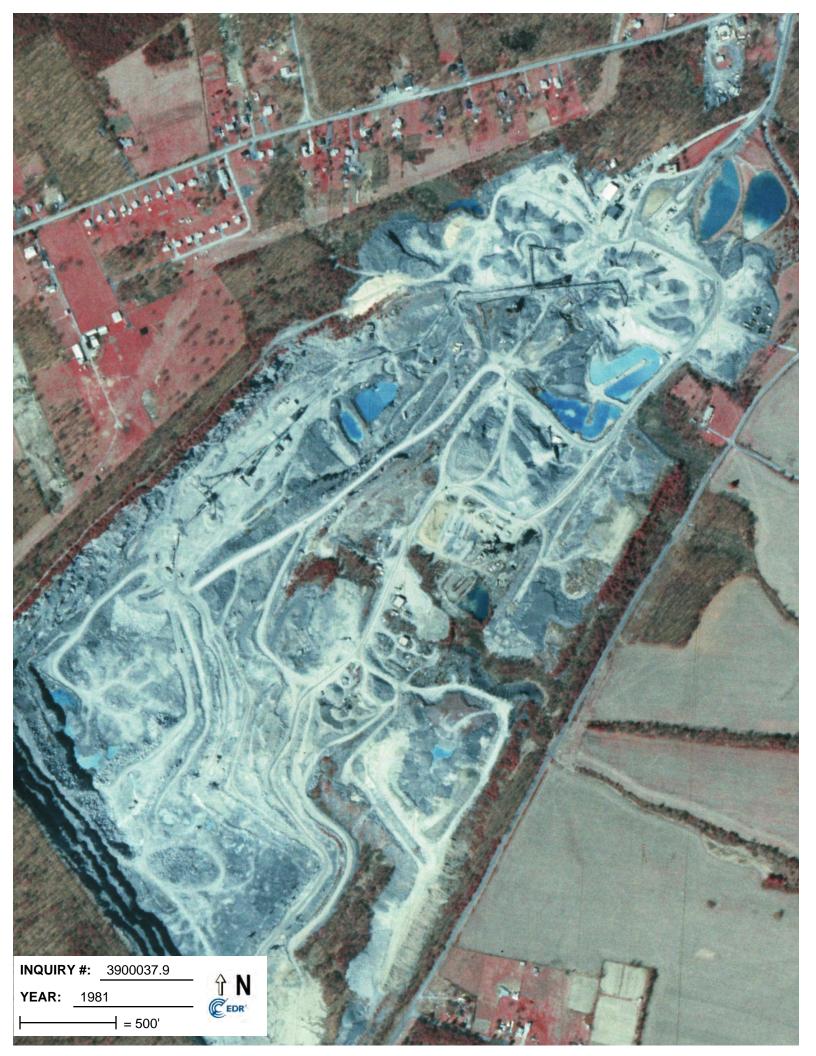
















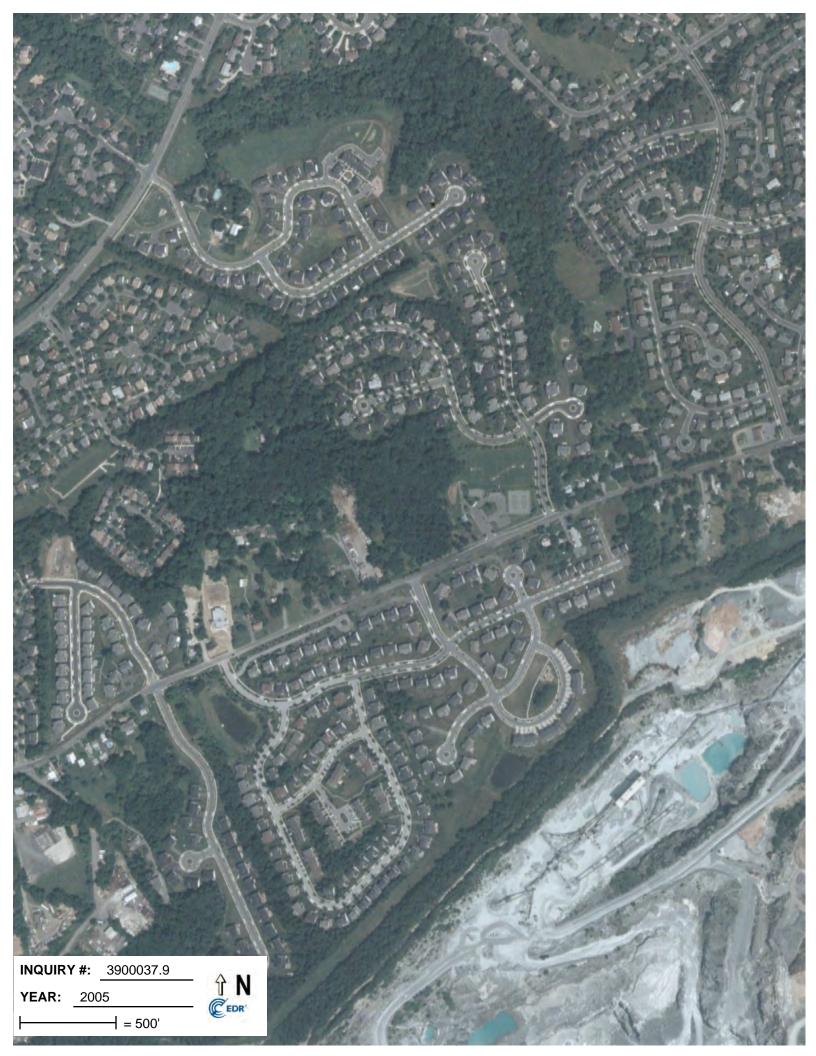


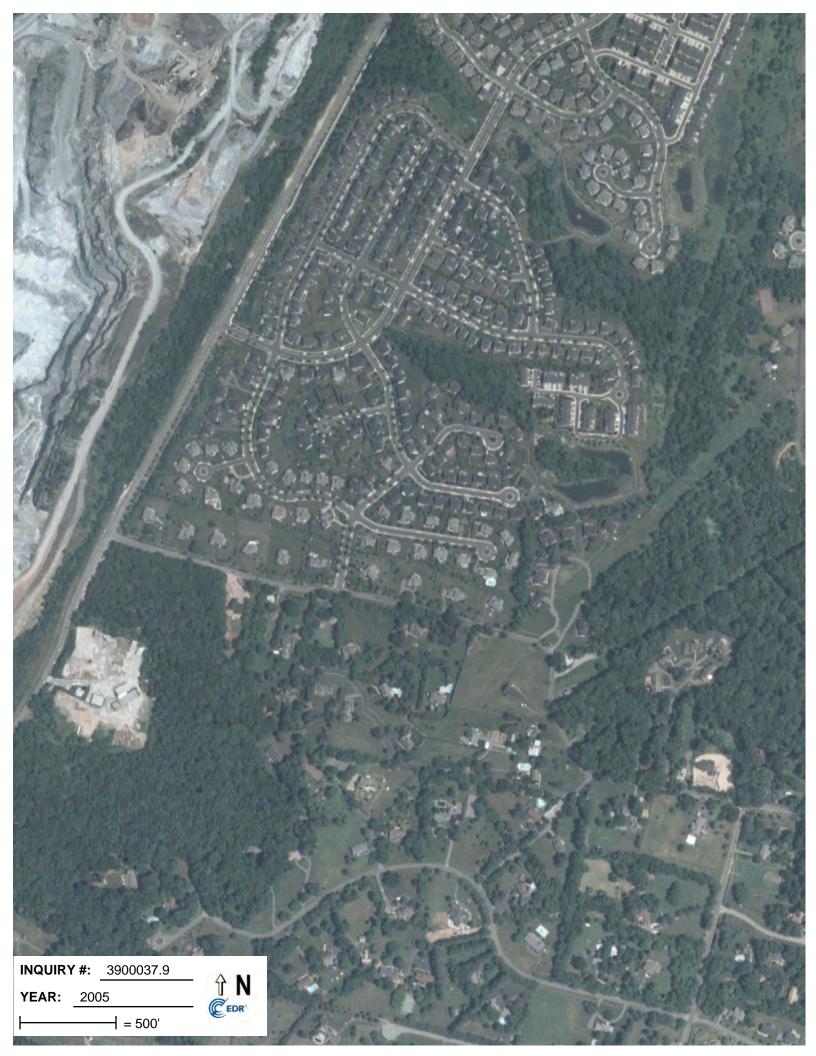


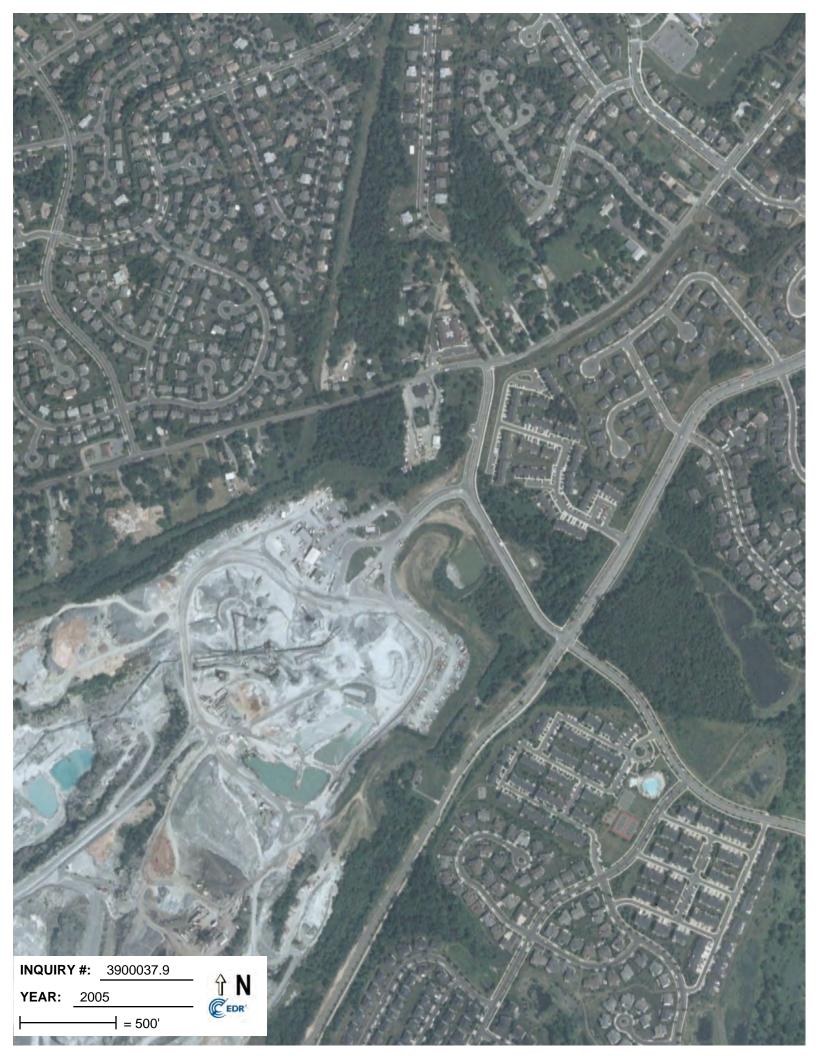


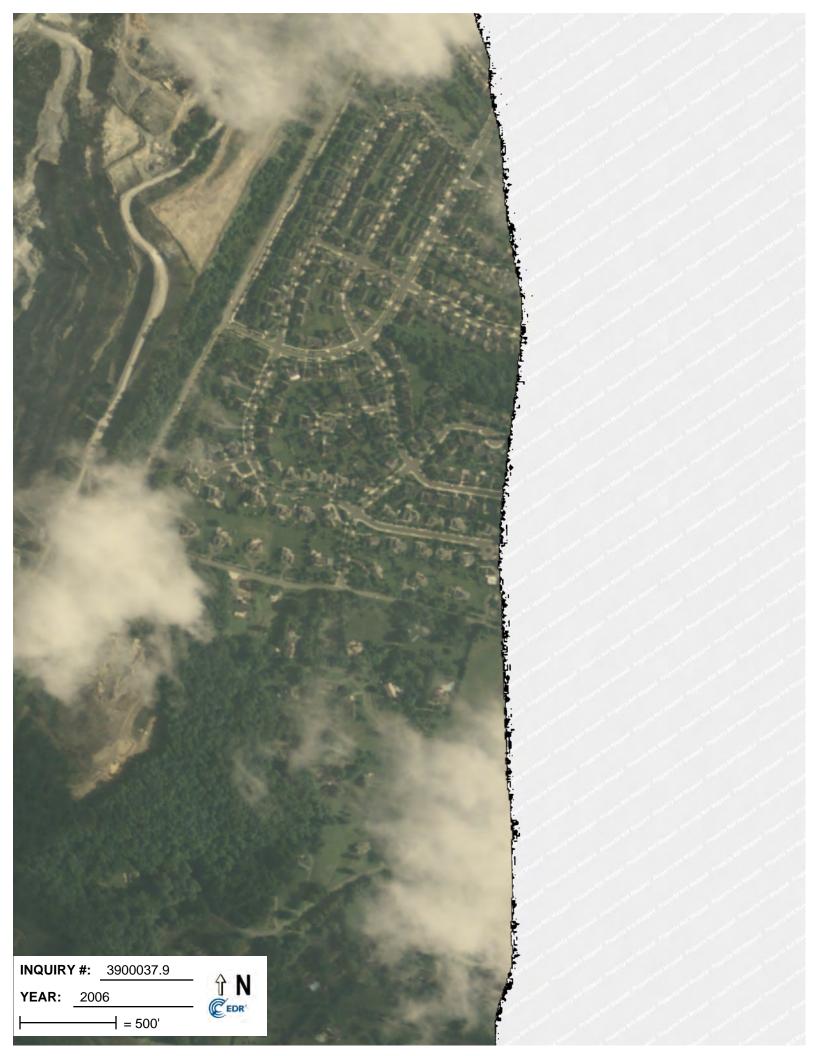




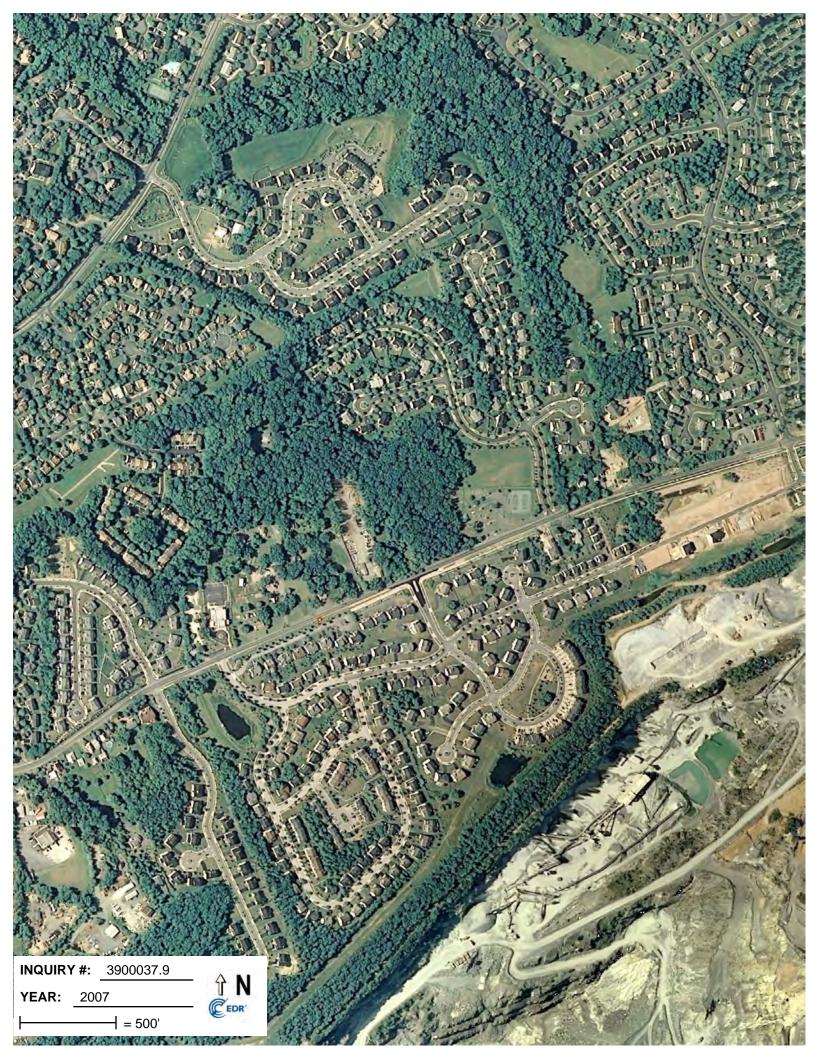


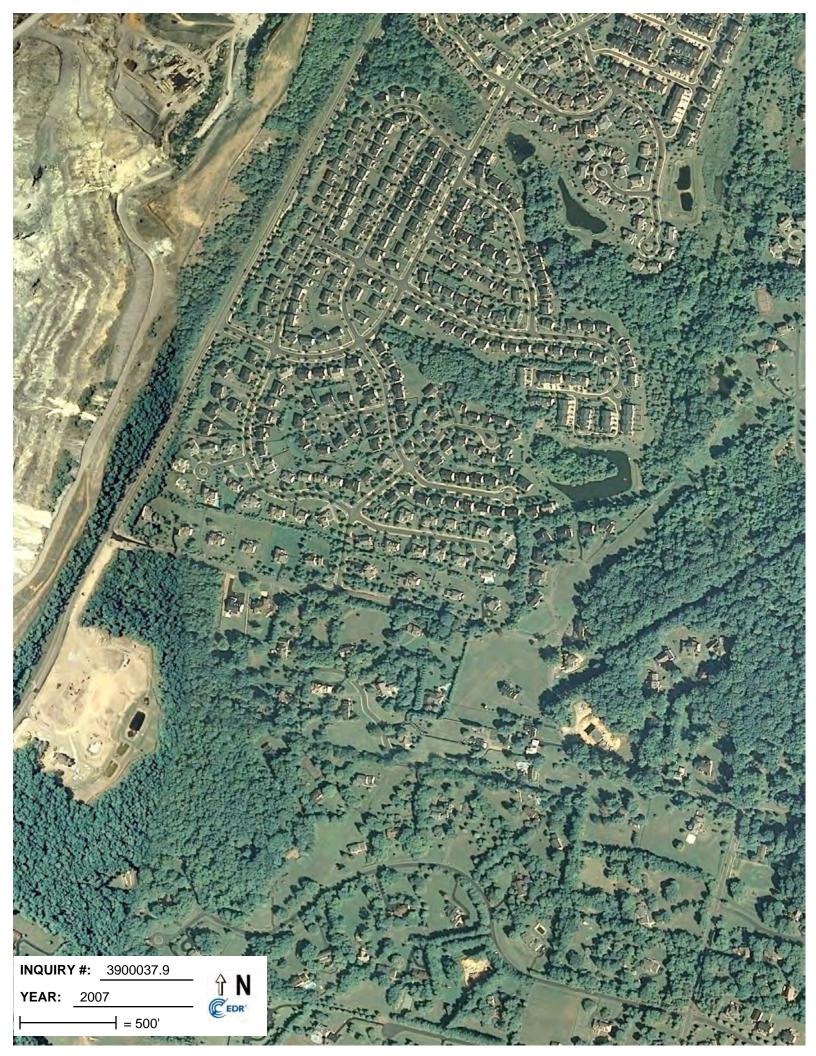


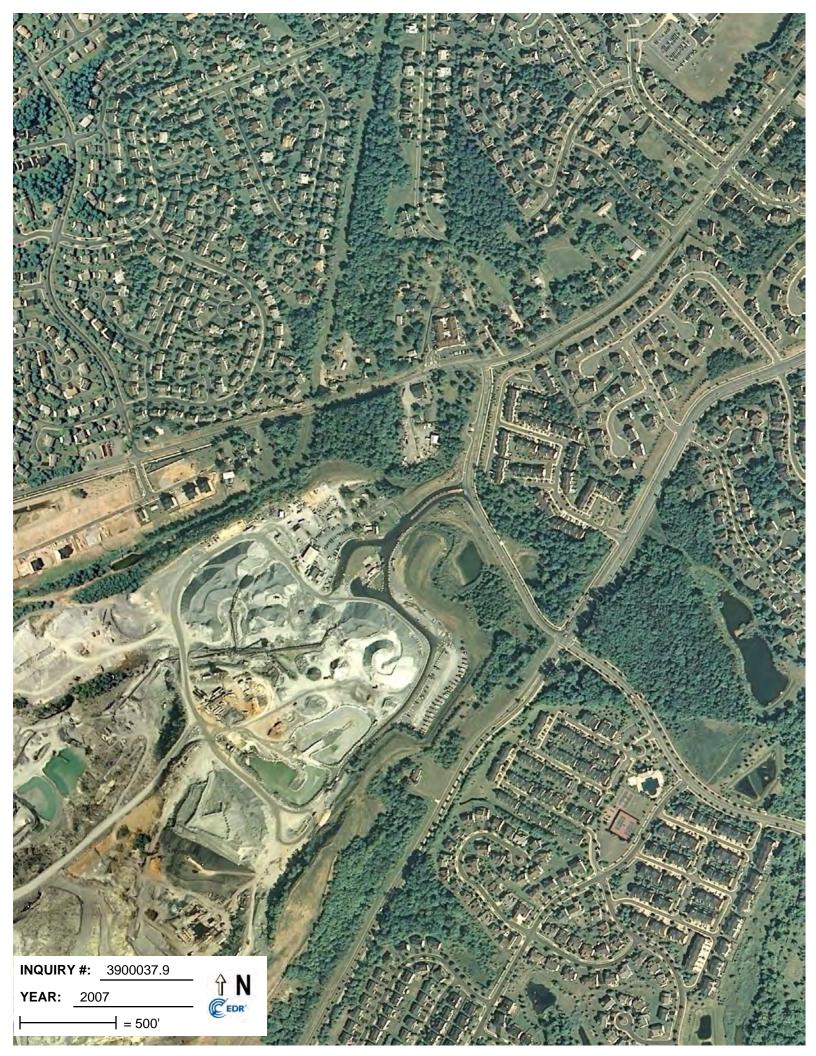








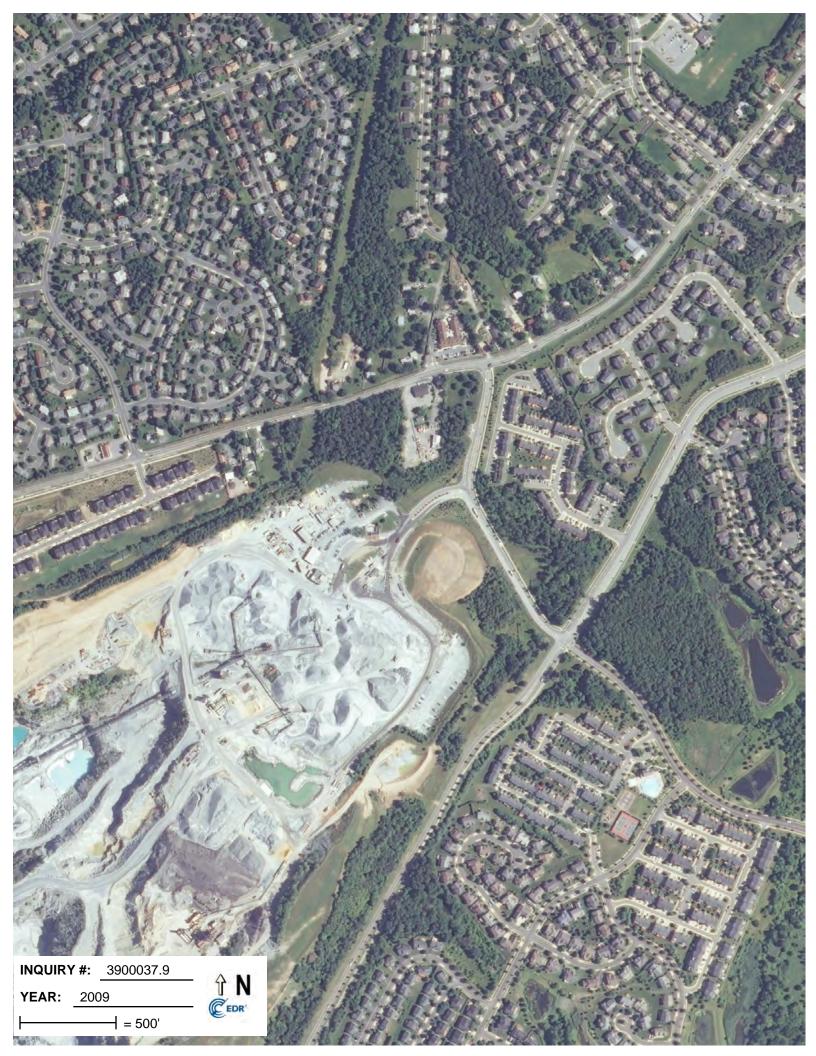




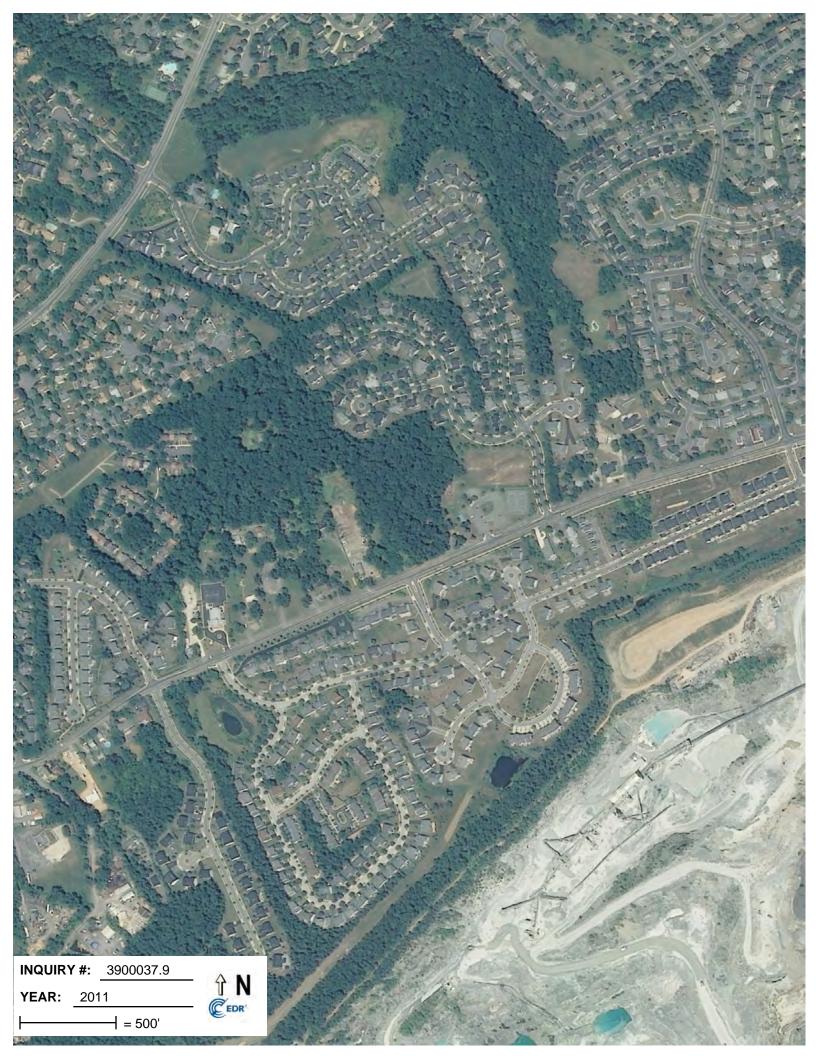


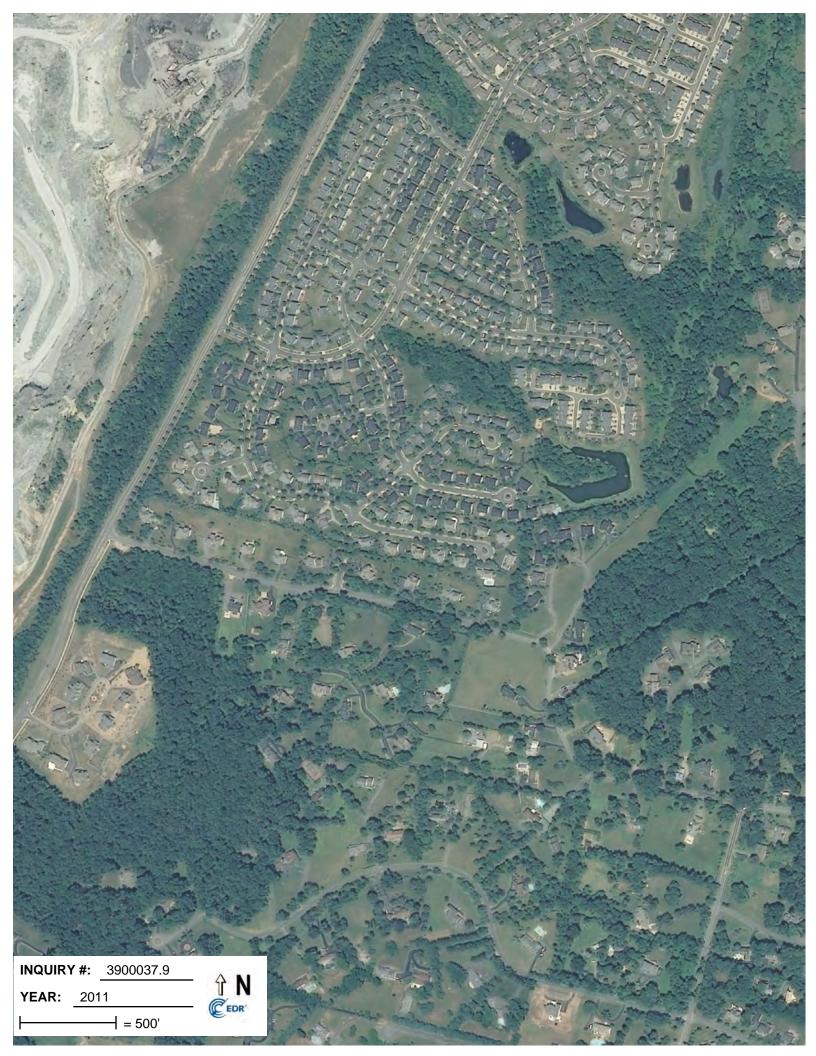


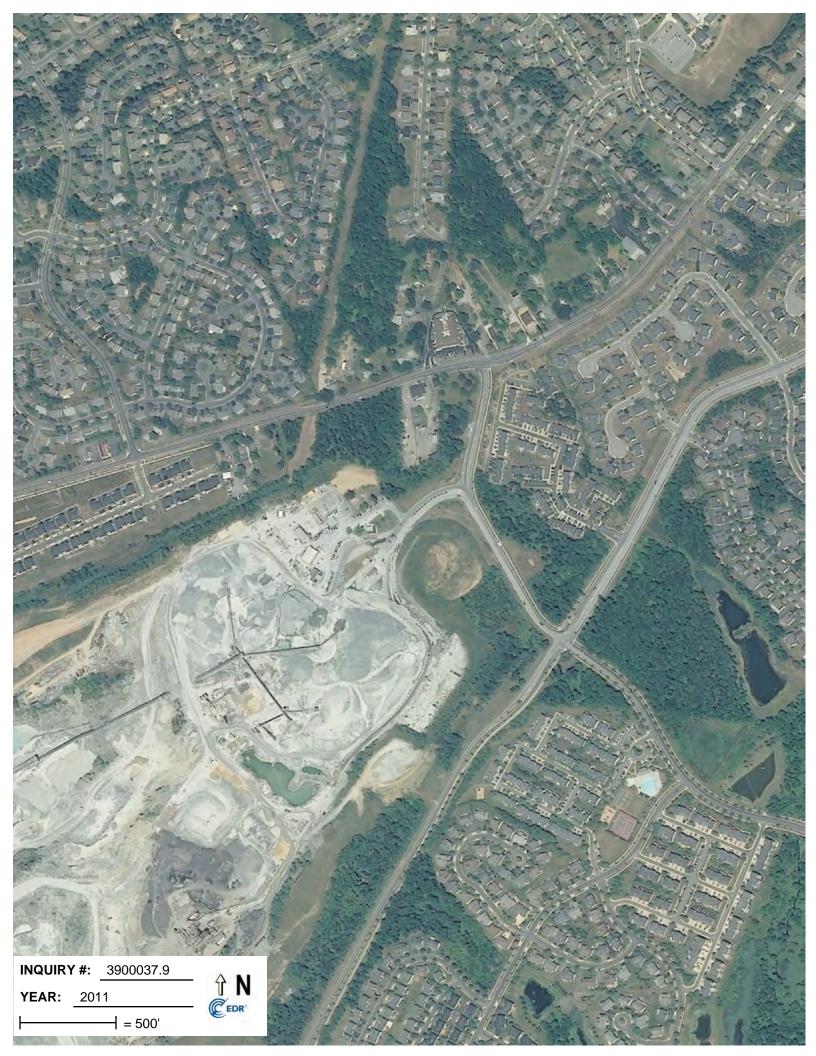












Attachment E - Regulatory Records Documentation

Travilah Quarry 13900 Piney Meetinghouse Road Rockville, MD 20850

Inquiry Number: 3900037.2s

April 03, 2014

The EDR Radius Map™ Report with GeoCheck®

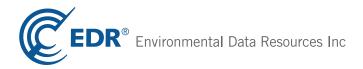


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Thank you for your business.Please contact EDR at 1-800-352-0050 with any questions or comments.

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A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

13900 PINEY MEETINGHOUSE ROAD ROCKVILLE, MD 20850

COORDINATES

Latitude (North): 39.0789000 - 39° 4' 44.04" Longitude (West): 77.2250000 - 77° 13' 30.00"

Universal Tranverse Mercator: Zone 18 UTM X (Meters): 307532.5 UTM Y (Meters): 4327680.5

Elevation: 452 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 39077-A2 ROCKVILLE, MD VA

Most Recent Revision: 1984

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 2011, 2012 Source: USDA

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 7 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
AGGREGATE INDUSTRIES DBA ROCKVILL 13900 PINEY MEETINGHOUSE RD ROCKVILLE, MD	RCRA NonGen / NLR FINDS	MDD981739550
DAY, F.O. BITUMINOUS - PINEY MTG 13900A PINEY MEETINGHOUSE ROAD ROCKVILLE, MD	FINDS	N/A
DAY, F.O. BITUMINOUS COMP. 13900 PINEY MEETINGHOUSE ROAD ROCK ROCKVILLE, MD 20850	ICIS KVILLE MD 20850	N/A
AGGREGRATE INDUSTRIES - ROCKVILLE 13900 PINEY MEETINGHOUSE ROAD MONTGOMERY, MD 20850	MD ENG CONTROLS	N/A

F.O. DAY BITUMINOUS CO PINEY M 13900 PINEY MEETING HOUSE RD. MONTGOMERY, MD 20850	MD ENG CONTROLS	N/A
F.O. DAY BITUMINOUS 13900 PINEY MEETING HOUSE ROAD ROCKVILLE, MD 20850	HIST FTTS	N/A
ROCKVILLE CRUSHED STONE/BARDON 13900 PINEY MEETINGHOUSE RD ROCKVILLE, MD 20850	MD OCPCASES Facility Status: CLOSED MD NPDES	N/A
ECO - ROK II - TEMPORARY PLANT 13900 PINEY MEETINGHOUSE ROAD ROCKVILLE, MD	FINDS US AIRS	N/A
ATLANTIC CONTRACTING - PINEY MEET 13900 PINEY MEETINGHOUSE ROAD ROCKVILLE, MD 20850	FINDS US AIRS	N/A
F.O. DAY BITUMINOUS 13900 PINEY MEETING HOUSE ROAD ROCKVILLE, MD 20850	FTTS	N/A
TRI STATE EXPLOSIVES 13900 PINEY MEETINGHOUSE RD ROCKVILLE, MD	FINDS	N/A
13900 PINEY MEETINGHOUSE ROAD 13900 PINEY MEETINGHOUSE ROAD ROCKVILLE, MD 20850	MD AIRS	N/A
F. O. DAY BITUMINOUS COMPANY 13900 PINEY MEETING HOUSE RD ROCKVILLE, MD	RCRA NonGen / NLR FINDS MD OCPCASES Facility Status: CLOSED	MDD009849779
	MD HIST UST MD NPDES US AIRS	
TRI STATE EXPLOSIVES 13900 PINEY MEETHOUSE ROAD ROCKVILLE, MD 20850	NY MANIFEST	N/A
F.O. DAY BITUMINOUS CO PINEY M 13900 PINEY MEETING HOUSE RD. ROCKVILLE, MD 20850	MD AST	N/A

ROCKVILLE READY MIX CONCRETE 13900 PINEY MEETINGHOUSE ROAD ROCKVILLE, MD

FINDS

N/A

ROCKVILLE QUARRY 13900 PINEY MEETINGHOUSE ROAD MD UST

N/A

ROCKVILLE, MD 20850

MD Financial Assurance

AGGREGATE INDUSTRIES 13900 PINE MEETING HOUSE RD MD OCPCASES

N/A

ROCKVILLE, MD 20859

Facility Status: CLOSED

F.O. DAY BITUMINOUS CO. 13900 PINEY MEETINGHOUSE ROAD ROCKVILLE, MD 20850

US AIRS

N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

..... National Priority List

Proposed NPL..... Proposed National Priority List Sites

NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

Federal CERCLIS NFRAP site List

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS...... Corrective Action Report

Federal RCRA non-CORRAC	CTS TSD facilities list
RCRA-TSDF	RCRA - Treatment, Storage and Disposal
Federal RCRA generators lis	st
RCRA-SQG	RCRA - Large Quantity Generators RCRA - Small Quantity Generators RCRA - Conditionally Exempt Small Quantity Generator
Federal institutional control	s / engineering controls registries
US INST CONTROL	Engineering Controls Sites List Sites with Institutional Controls Land Use Control Information System
Federal ERNS list	
ERNS	Emergency Response Notification System
State- and tribal - equivalent	t CERCLIS
MD SHWS	Notice of Potential Hazardous Waste Sites
State and tribal landfill and/o	or solid waste disposal site lists
MD SWF/LF	Permitted Solid Waste Disposal Facilities
State and tribal leaking store	age tank lists
INDIAN LUST	Leaking Underground Storage Tanks on Indian Land
State and tribal registered s	torage tank lists
INDIAN USTFEMA UST	Underground Storage Tanks on Indian Land Underground Storage Tank Listing
State and tribal institutional	control / engineering control registries
MD INST CONTROL	Voluntary Cleanup Program Applicants/Participants
State and tribal voluntary cle	eanup sites
INDIAN VCP	Voluntary Cleanup Priority Listing
State and tribal Brownfields	sites
MD BROWNFIELDS	Eligible Brownfields Properties
ADDITIONAL ENVIRONMENTAL	RECORDS
Local Brownfield lists	
US BROWNFIELDS	A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9...... Torres Martinez Reservation Illegal Dump Site Locations

INDIAN ODI...... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL..... Clandestine Drug Labs

US HIST CDL..... National Clandestine Laboratory Register

Local Land Records

LIENS 2..... CERCLA Lien Information

Records of Emergency Release Reports

HMIRS...... Hazardous Materials Information Reporting System

MD SPILLS 90 SPILLS 90 data from FirstSearch

Other Ascertainable Records

CONSENT..... Superfund (CERCLA) Consent Decrees

TRIS...... Toxic Chemical Release Inventory System

RAATS......RCRA Administrative Action Tracking System

RMP_____ Risk Management Plans

INDIAN RESERV...... Indian Reservations

SCRD DRYCLEANERS...... State Coalition for Remediation of Drycleaners Listing

MD COAL ASH..... Coal Ash Disposal Site Listing

EPA WATCH LIST..... EPA WATCH LIST

PCB TRANSFORMER...... PCB Transformer Registration Database

COAL ASH EPA...... Coal Combustion Residues Surface Impoundments List

LEAD SMELTERS.....Lead Smelter Sites

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP..... EDR Proprietary Manufactured Gas Plants

EDR US Hist Auto Stat..... EDR Exclusive Historic Gas Stations

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

MD RGA HWS	Recovered Government Archive State Hazardous Waste Facilities List
MD RGA LF	Recovered Government Archive Solid Waste Facilities List
MD RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in **bold italics** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

State and tribal leaking storage tank lists

MD OCPCASES: Cases monitored by the Oil Control Program.

A review of the MD OCPCASES list, as provided by EDR, and dated 06/30/2013 has revealed that there are 15 MD OCPCASES sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PETRO SPILL Facility Status: CLOSED	14194 TRAVILAH RD	NE 1/4 - 1/2 (0.380 mi.)	35	54
RICKMAN LLC Facility Status: CLOSED Facility Status: OPEN	14215 TRAVILAH RD	NE 1/4 - 1/2 (0.454 mi.)	F39	56
Lower Elevation	Address	Direction / Distance	Map ID	Page
BRICKMAN GROUP LTD. Facility Status: CLOSED	14119 A TRAVILAH RD.	NE 0 - 1/8 (0.012 mi.)	20	48
RYAN HOMES Facility Status: CLOSED	13709 VALLEY OAK RD.	W 0 - 1/8 (0.059 mi.)	22	49
FLING EXCAVATING CO Facility Status: CLOSED	13109 PINEY MTG.HOUSE R	S 0 - 1/8 (0.077 mi.)	B24	50
JOE'S MARKET/MINN-VU-HOANG/MIN Facility Status: CLOSED	14050 TRAVILAH RD	N 0 - 1/8 (0.102 mi.)	C26	50
VERGIL KIDWELL RESIDENCE Facility Status: CLOSED	14004 TRAVILAH RD	NNW 1/8 - 1/4 (0.155 mi.)	28	51

Lower Elevation	Address	Direction / Distance	Map ID	Page
BRENDA LEONE Facility Status: CLOSED	22 STANMOOR CT	N 1/8 - 1/4 (0.164 mi.)	29	52
PEPCO SPILL Facility Status: CLOSED	14330 CARTWRIGHT WAY	N 1/4 - 1/2 (0.290 mi.)	30	52
CLASSIC COMMUNITY CORP Facility Status: CLOSED	13800 TRIVALAH RD	WNW 1/4 - 1/2 (0.325 mi.)	31	52
PEPCO SPILL Facility Status: CLOSED	59 CALABASH CT	NE 1/4 - 1/2 (0.352 mi.)	32	53
GEBAUT SAMEN Facility Status: CLOSED	13761 TRAVILAH RD	W 1/4 - 1/2 (0.360 mi.)	D33	53
MILTON JOHNSON/PRIVATE RESIDEN Facility Status: CLOSED	13760 TRAVILAH RD	W 1/4 - 1/2 (0.365 mi.)	D34	53
GRIFFITH TRUCKING Facility Status: CLOSED	13753 TRAVILAH RD	W 1/4 - 1/2 (0.392 mi.)	E36	54
JOHNSON HYDRO SEEDING Facility Status: CLOSED	13751 TRAVILAH RD	W 1/4 - 1/2 (0.403 mi.)	E37	54

MD HIST LUST: In 1999, the Department of the Environment stopped adding new sites to its Recovery Sites Database. Current leaking underground storage tank information maybe found in underground storage tank information maybe found in the OCPCASES database.

A review of the MD HIST LUST list, as provided by EDR, and dated 03/01/1999 has revealed that there is 1 MD HIST LUST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RICKMAN LLC Open Or Closed: OPEN	14215 TRAVILAH RD	NE 1/4 - 1/2 (0.454 mi.)	F39	56

State and tribal registered storage tank lists

MD UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of the Environment's Listing of Underground Storage Tanks Reported in Maryland.

A review of the MD UST list, as provided by EDR, and dated 06/30/2013 has revealed that there are 2 MD UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
FLING EXCAVATING CO., INC.	13109 PINEY MEETING HOU	S 0 - 1/8 (0.069 mi.)	B23	49
SALON SAMINA	14050 TRAVILAH ROAD	N 0 - 1/8 (0.102 mi.)	C27	51

State and tribal voluntary cleanup sites

MD VCP: The Voluntary Cleanup Program, administrated by the Dept. of the Environment, streamlines the environmental cleanup process for sites, usually industrial or commercial properties that are contaminated, or perceived to be contaminated, by hazardous substances. Developers and lenders are provided with certain limitations on liability and participants in the program are provided certainty in the process by knowing exactly what will be required.

A review of the MD VCP list, as provided by EDR, and dated 02/01/2013 has revealed that there is 1 MD VCP site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TRAVILAH GROVE	14211-14219 TRAVILAH RO	NE 1/4 - 1/2 (0.442 mi.)	F38	55

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

MD LRP: A listing of Land Restoration Program sites. Site types included in the database are: Voluntary Cleanup Program, National Priority List, Brownfields, Site Assessment, Formerly Used Defense Site, State Master List, Non Master List, Groundwater Investigation and Federal Facility.

A review of the MD LRP list, as provided by EDR, and dated 07/08/2013 has revealed that there is 1 MD LRP site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TRAVILAH GROVE	14211-14219 TRAVILAH RO	NE 1/4 - 1/2 (0.442 mi.)	F38	55

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR US Hist Cleaners: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

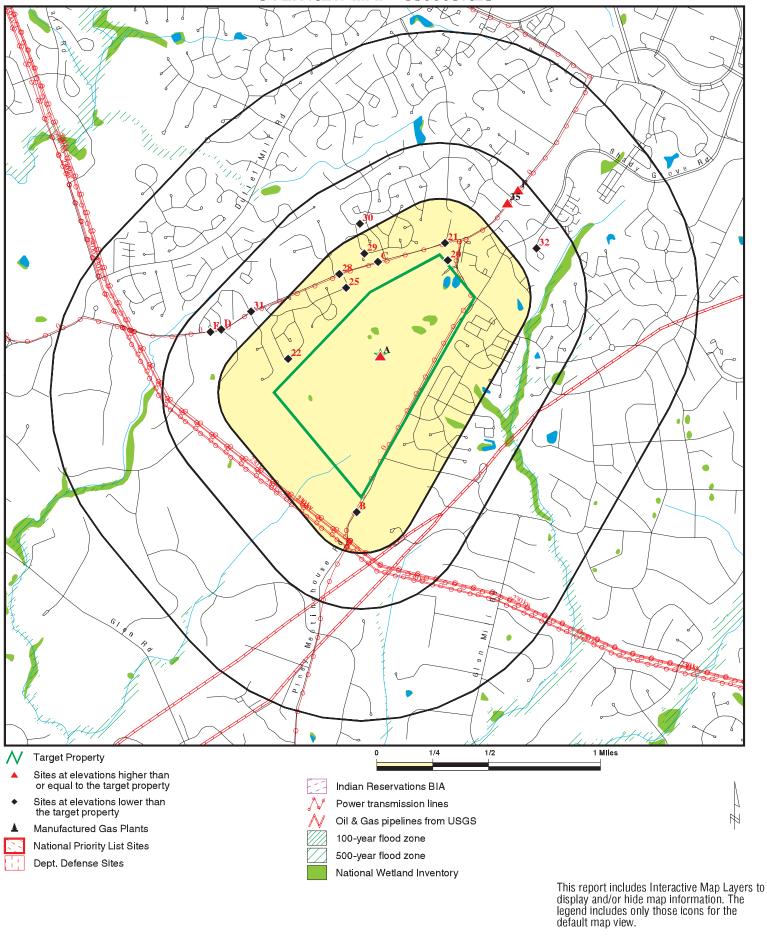
A review of the EDR US Hist Cleaners list, as provided by EDR, has revealed that there are 2 EDR US Hist Cleaners sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	14119 TRAVILAH RD	NNE 0 - 1/8 (0.057 mi.)	21	48
Not reported	11214 POTOMAC OAKS DR	NNW 0 - 1/8 (0.091 mi.)	25	50

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 3900037.2s



SITE NAME: Travilah Quarry

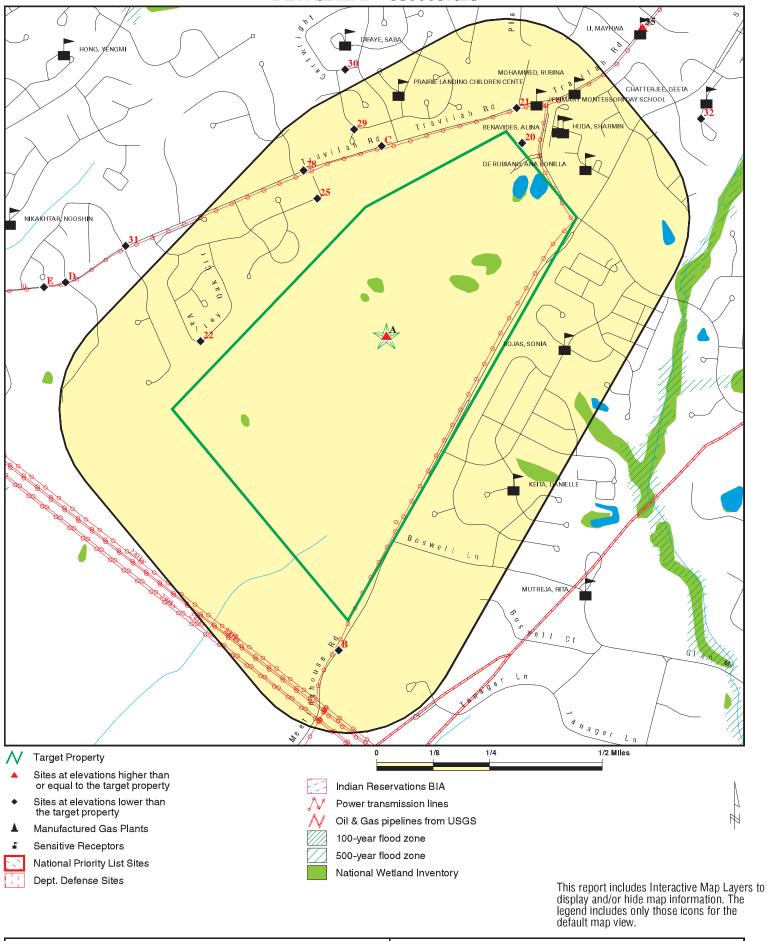
13900 Piney Meetinghouse Road Rockville MD 20850 ADDRESS:

LAT/LONG: 39.0789 / 77.225 CLIENT: CONTACT: Black & Veatch Corporation

Gordon Abell INQUIRY#: 3900037.2s

DATE: April 03, 2014 9:27 am

DETAIL MAP - 3900037.2s



SITE NAME: Travilah Quarry

13900 Piney Meetinghouse Road Rockville MD 20850 ADDRESS:

LAT/LONG: 39.0789 / 77.225 CLIENT: CONTACT: Black & Veatch Corporation

Gordon Abell INQUIRY #: 3900037.2s

DATE: April 03, 2014 9:28 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL Proposed NPL NPL LIENS	1.000 1.000 TP		0 0 NR	0 0 NR	0 0 NR	0 0 NR	NR NR NR	0 0 0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS FEDERAL FACILITY	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
Federal RCRA CORRAC	TS facilities li	st						
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generator	rs list							
RCRA-LQG RCRA-SQG RCRA-CESQG	0.250 0.250 0.250		0 0 0	0 0 0	NR NR NR	NR NR NR	NR NR NR	0 0 0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS US INST CONTROL LUCIS	0.500 0.500 0.500		0 0 0	0 0 0	0 0 0	NR NR NR	NR NR NR	0 0 0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
MD SHWS	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
MD SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
MD OCPCASES MD HIST LUST INDIAN LUST	0.500 0.500 0.500	3	4 0 0	2 0 0	9 1 0	NR NR NR	NR NR NR	18 1 0
State and tribal registered storage tank lists								
MD UST	0.250	1	2	0	NR	NR	NR	3

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted	
MD AST INDIAN UST FEMA UST	0.250 0.250 0.250	1	0 0 0	0 0 0	NR NR NR	NR NR NR	NR NR NR	1 0 0	
State and tribal institutional control / engineering control registries									
MD ENG CONTROLS MD INST CONTROL	0.500 0.500	2	0 0	0 0	0 0	NR NR	NR NR	2 0	
State and tribal voluntary	cleanup site	es							
MD VCP INDIAN VCP	0.500 0.500		0 0	0 0	1 0	NR NR	NR NR	1 0	
State and tribal Brownfie	lds sites								
MD BROWNFIELDS	0.500		0	0	0	NR	NR	0	
ADDITIONAL ENVIRONMENTAL RECORDS									
Local Brownfield lists									
US BROWNFIELDS	0.500		0	0	0	NR	NR	0	
Local Lists of Landfill / Solid Waste Disposal Sites									
DEBRIS REGION 9 ODI MD SWRCY INDIAN ODI	0.500 0.500 0.500 0.500		0 0 0 0	0 0 0 0	0 0 0 0	NR NR NR NR	NR NR NR NR	0 0 0 0	
Local Lists of Hazardous waste / Contaminated Sites									
US CDL US HIST CDL	TP TP		NR NR	NR NR	NR NR	NR NR	NR NR	0 0	
Local Lists of Registered Storage Tanks									
MD HIST UST	0.250	1	0	0	NR	NR	NR	1	
Local Land Records									
LIENS 2	TP		NR	NR	NR	NR	NR	0	
Records of Emergency Release Reports									
HMIRS MD SPILLS 90	TP TP		NR NR	NR NR	NR NR	NR NR	NR NR	0 0	
Other Ascertainable Records									
RCRA NonGen / NLR DOT OPS DOD FUDS CONSENT ROD	0.250 TP 1.000 1.000 1.000	2	0 NR 0 0 0	0 NR 0 0 0	NR NR 0 0 0	NR NR 0 0 0	NR NR NR NR NR	2 0 0 0 0	

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0 ND	NR	NR	NR	0
TRIS	TP TP		NR	NR	NR	NR	NR	0
TSCA FTTS	TP	1	NR NR	NR NR	NR NR	NR NR	NR NR	0 1
HIST FTTS	TP	1	NR	NR	NR	NR	NR	1
SSTS	TP	ı	NR	NR	NR	NR	NR	0
ICIS	TP	1	NR	NR	NR	NR	NR	1
PADS	TP	'	NR	NR	NR	NR	NR	Ö
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP	7	NR	NR	NR	NR	NR	7
RAATS	TP	•	NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	Ö
MD UIC	TP		NR	NR	NR	NR	NR	0
NY MANIFEST	0.250	1	0	0	NR	NR	NR	1
MD DRYCLEANERS	0.250		0	0	NR	NR	NR	0
MD NPDES	TP	2	NR	NR	NR	NR	NR	2
MD AIRS	TP	1	NR	NR	NR	NR	NR	1
MD LEAD	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
MD LRP	0.500		0	0	1	NR	NR	1
MD COAL ASH	0.500		0	0	0	NR	NR	0
MD Financial Assurance	TP	1	NR	NR	NR	NR	NR	1
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA US FIN ASSUR	0.500 TP		0 NR	0 NR	0 NR	NR NR	NR NR	0 0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
US AIRS	TP	4	NR	NR	NR	NR	NR	4
2020 COR ACTION	0.250	•	0	0	NR	NR	NR	Ö
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	Ő
EDR HIGH RISK HISTORICA	L RECORDS							
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		0	0	NR	NR	NR	0
EDR US Hist Cleaners	0.250		2	0	NR	NR	NR	2
EDR RECOVERED GOVERN	IMENT ARCHIV	/ES						
Exclusive Recovered Go	vt. Archives							
MD RGA HWS	TP		NR	NR	NR	NR	NR	0
MD RGA LF	TP		NR	NR	NR	NR	NR	0
MD RGA LUST	TP		NR	NR	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Direction Distance

Elevation Site Database(s) EPA ID Number

A1 AGGREGATE INDUSTRIES DBA ROCKVILLE CRUSHED STONE RCRA NonGen / NLR 1011488938
Target 13900 PINEY MEETINGHOUSE RD FINDS MDD981739550

Property ROCKVILLE, MD

Site 1 of 19 in cluster A

Actual: RCRA NonGen / NLR:

452 ft. Date form received by agency: 04/25/2013

Facility name: TRI STATE EXPLOSIVES

Facility address: 13900 PINEY MEETINGHOUSE RD

ROCKVILLE, MD 20850

EPA ID: MDD981739550

Mailing address: 6401 GOLDEN TRIANGLE DR; STE 4

GREENBELT, MD 20770

Contact: Not reported Contact address: Not reported

Not reported

Contact country: US

Contact telephone: Not reported
Contact email: Not reported
EPA Region: 03
Land type: Private
Classification: Non-Generator

Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: BARDON, INC.

Owner/operator address: 6401 GOLDEN TRIANGLE DR; STE 4

GREENBELT, MD 20770

Owner/operator country: US

Owner/operator telephone: 301-982-1400
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/16/1991
Owner/Op end date: Not reported

Owner/operator name: OPERNAME
Owner/operator address: OPERSTREET
OPERCITY, AK 99999

Owner/operator country: Not reported

Owner/operator telephone: (215) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No Mixed waste (haz. and radioactive): No Recycler of hazardous waste: No Transporter of hazardous waste: No Treater, storer or disposer of HW: No Underground injection activity: No On-site burner exemption: No Furnace exemption: No Used oil fuel burner: No Used oil processor: No User oil refiner: No **EDR ID Number**

Direction Distance

Elevation Site Database(s) EPA ID Number

AGGREGATE INDUSTRIES DBA ROCKVILLE CRUSHED STONE (Continued)

1011488938

EDR ID Number

Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:

Date form received by agency: 06/16/2000

Facility name: TRI STATE EXPLOSIVES
Classification: Not a generator, verified

Date form received by agency: 10/20/1987

Facility name: TRI STATE EXPLOSIVES
Classification: Large Quantity Generator

Hazardous Waste Summary:

Waste code: D001

Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF

LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT

WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: F003

Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL

ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

Waste code: F005

Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date: 05/28/2008

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation:

Date achieved compliance:

Evaluation lead agency:

Not reported
Not reported
State

Evaluation date: 06/16/2000

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Map ID Direction Distance Elevation MAP FINDINGS

Site EDR ID Number

Database(s) EPA ID Number

AGGREGATE INDUSTRIES DBA ROCKVILLE CRUSHED STONE (Continued)

1011488938

Area of violation:

Date achieved compliance:

Evaluation lead agency:

Not reported

Not reported

State

FINDS:

Registry ID: 110002341467

Environmental Interest/Information System

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

MD-EPSC (Maryland - Environmental Permit Service Center) promotes multi-media pollution prevention and provides permit assistance to business and industries. An online permit guide is available and lists all permits, licenses and approvals that are issued by MDE.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

SPCC

Registry ID: 110056015271

Environmental Interest/Information System

Direction Distance

Distance Elevation Site EDR ID Number

Database(s) EPA ID Number

A2 DAY, F.O. BITUMINOUS - PINEY MTG FINDS 1007825631
Target 13900A PINEY MEETINGHOUSE ROAD N/A

Property ROCKVILLE, MD

Site 2 of 19 in cluster A

Actual: 452 ft.

FINDS:

Registry ID: 110019883857

Environmental Interest/Information System

MD-PEMIS (Maryland - Permanent (Air) Emission) database houses data related to Air Emissions. Also known to the EPA as National Emissions

Inventory (NEI).

CRITERIA AND HAZARDOUS AIR POLLUTANT INVENTORY

A3 DAY, F.O. BITUMINOUS COMP. ICIS 1011560699

Target 13900 PINEY MEETINGHOUSE ROAD ROCKVILLE MD 20850 N/A

Property ROCKVILLE, MD 20850

Site 3 of 19 in cluster A

Actual: ICIS:

452 ft. Er

Enforcement Action ID: 03-1986-0138
FRS ID: 110002341467
Program ID: NEI NEIMD0311361

Action Name: DAY, F.O. BITUMINOUS COMP.

Facility Name: Not reported

Facility Address: 13900 PINEY MEETINGHOUSE ROAD ROCKVILLE MD 20850

ROCKVILLE, Maryland 20850 TSCA 16 Action For Penalty

Enforcement Action Type: TSCA 16 Action

Facility County: Montgomery

EPA Region #: 3

Enforcement Action ID: 03-1986-0138
FRS ID: 110002341467
Program ID: FRS 110002341467

Action Name: DAY, F.O. BITUMINOUS COMP.
Facility Name: F O DAY BITUMINOUS COMPANY

Facility Address: 13900 PINEY MEETINGHOUSE ROAD ROCKVILLE MD 20850

ROCKVILLE, Maryland 20850

Enforcement Action Type: TSCA 16 Action For Penalty

Facility County: Montgomery

EPA Region #: 3

Enforcement Action ID: 03-1986-0138
FRS ID: 110002341467
Program ID: AIRS/AFS 2403101361

Action Name: DAY, F.O. BITUMINOUS COMP. Facility Name: F.O. DAY-PINEY MEETINGHOUSE

Facility Address: 13900 PINEY MEETINGHOUSE ROAD ROCKVILLE MD 20850

ROCKVILLE, Maryland 20850

Enforcement Action Type: TSCA 16 Action For Penalty

Facility County: Montgomery

EPA Region #: 3

Enforcement Action ID: 03-1986-0138 FRS ID: 110002341467

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

DAY, F.O. BITUMINOUS COMP. (Continued)

1011560699

NCDB I03#19841003MD003 1 Program ID: Action Name: DAY, F.O. BITUMINOUS COMP.

Facility Name: F.O. DAY BITUMINOUS

Facility Address: 13900 PINEY MEETINGHOUSE ROAD ROCKVILLE MD 20850

ROCKVILLE, Maryland 20850

Enforcement Action Type: TSCA 16 Action For Penalty

Facility County: Montgomery

EPA Region #:

Enforcement Action ID: 03-1986-0138 FRS ID: 110002341467 Program ID: **MD-EPSC 2270**

Action Name: DAY, F.O. BITUMINOUS COMP.

Facility Name: F.O. DAY BITUMINOUS CO. - PINEY MEETING HOUSE RD. 13900 PINEY MEETINGHOUSE ROAD ROCKVILLE MD 20850 Facility Address:

ROCKVILLE, Maryland 20850

Enforcement Action Type: TSCA 16 Action For Penalty

Facility County: Montgomery

EPA Region #:

Enforcement Action ID: 03-1986-0138 FRS ID: 110002341467 Program ID: NCDB D03#131

Action Name: DAY, F.O. BITUMINOUS COMP.

Facility Name: F.O. DAY BITUMINOUS

13900 PINEY MEETINGHOUSE ROAD ROCKVILLE MD 20850 Facility Address:

> ROCKVILLE, Maryland 20850 TSCA 16 Action For Penalty

Enforcement Action Type: Facility County: Montgomery

EPA Region #: 3

Program ID: AIRS/AFS 2403101361

F O DAY BITUMINOUS COMPANY Facility Name: 13900 PINEY MEETINGHOUSE ROAD Address:

Tribal Indicator: Ν

Not reported Fed Facility: NAIC Code: Not reported SIC Code: 2951 39.085369 Latitude: Longitude: -77.218533

Program ID: FRS 110002341467

Facility Name: F O DAY BITUMINOUS COMPANY Address: 13900 PINEY MEETINGHOUSE ROAD

Tribal Indicator:

Fed Facility: Not reported NAIC Code: Not reported SIC Code: 2951 Latitude: 39.085369 Longitude: -77.218533

Program ID: **MD-EPSC 2270**

F O DAY BITUMINOUS COMPANY Facility Name: 13900 PINEY MEETINGHOUSE ROAD Address:

Tribal Indicator:

Fed Facility: Not reported

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

DAY, F.O. BITUMINOUS COMP. (Continued)

1011560699

NAIC Code: Not reported SIC Code: 2951 Latitude: 39.085369 Longitude: -77.218533

Program ID: NCDB D03#131

Facility Name: F O DAY BITUMINOUS COMPANY Address: 13900 PINEY MEETINGHOUSE ROAD

Tribal Indicator:

Fed Facility: Not reported NAIC Code: Not reported SIC Code: 2951 Latitude: 39.085369 Longitude: -77.218533

NCDB I03#19841003MD003 1 Program ID: F O DAY BITUMINOUS COMPANY Facility Name: Address: 13900 PINEY MEETINGHOUSE ROAD

Tribal Indicator:

Fed Facility: Not reported Not reported NAIC Code: SIC Code: 2951 Latitude: 39.085369 Longitude: -77.218533

NEI NEIMD0311361 Program ID:

Facility Name: F O DAY BITUMINOUS COMPANY Address: 13900 PINEY MEETINGHOUSE ROAD

Tribal Indicator:

Fed Facility: Not reported NAIC Code: Not reported SIC Code: 2951 Latitude: 39.085369 Longitude: -77.218533

AGGREGRATE INDUSTRIES - ROCKVILLE QUARRY Α4 13900 PINEY MEETINGHOUSE ROAD **Target**

MONTGOMERY, MD 20850 **Property**

Site 4 of 19 in cluster A

ENG CONTROLS: Actual:

Double Walled Material: 452 ft.

> Material: Steel

Material: No Containment S109325812

N/A

MD ENG CONTROLS

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

Α5 F.O. DAY BITUMINOUS CO. - PINEY MEETING HOUSE RD. MD ENG CONTROLS S109325811 N/A

Target 13900 PINEY MEETING HOUSE RD.

MONTGOMERY, MD 20850 **Property**

Site 5 of 19 in cluster A

ENG CONTROLS: Actual:

Poured Concrete Wall 452 ft. Material:

> Material: No Containment

F.O. DAY BITUMINOUS HIST FTTS 1008179721 Α6 N/A

13900 PINEY MEETING HOUSE ROAD **Target**

Property ROCKVILLE, MD 20850

Site 6 of 19 in cluster A

HIST FTTS: Actual:

Case Number: Not reported 452 ft.

> Docket Number: 131 10/21/1985 Complaint Issue Date: Abatement Amount: 0.0000 15000.0000 Proposed Penalty: Final Assessment: 5000.0000 Final Order Date: 12/17/1986

Close Date:

Violations(s): PCB, Storage

ROCKVILLE CRUSHED STONE/BARDON MD OCPCASES S104596894 Α7 **Target** 13900 PINEY MEETINGHOUSE RD **MD NPDES** N/A

Property ROCKVILLE, MD 20850

Site 7 of 19 in cluster A

OCP: Actual:

Facility ID: 99-2103MO1 452 ft.

Facility Status/Code: CLOSED/Tank Closure - Motor/Lube Oil

Date Open: 02/24/1999 Date Closed: 08/31/1999 Release: NO Cleanup: NO Registration Number: 10865

Facility ID: 00-0613MO1 CLOSED/Dumping Facility Status/Code: Date Open: 09/29/1999 Date Closed: 12/27/1999 YES Release: Cleanup: YES

Registration Number: 10865

Facility ID: 00-1912MO1

Facility Status/Code: CLOSED/Transfer Accident Motor/Lube Oil

Date Open: 05/18/2000 Date Closed: 03/13/2001 Release: YES YES Cleanup:

Direction Distance

Elevation Site Database(s) EPA ID Number

ROCKVILLE CRUSHED STONE/BARDON (Continued)

S104596894

EDR ID Number

Registration Number: 10865

Facility ID: 03-1879MO1
Facility Status/Code: CLOSED/Dumping
Date Open: 05/30/2003
Date Closed: 05/14/2004
Release: YES
Cleanup: YES
Registration Number: 10865

Facility ID: 04-1811MO1

Facility Status/Code: CLOSED/Transfer Accident Motor/Lube Oil

Date Open: 05/05/2004
Date Closed: 06/01/2004
Release: YES
Cleanup: YES
Registration Number: 10865

NPDES:

Not reported Facility Status: Bay Trib Number: Not reported Not reported Watershed: Permit Type: Not reported Not reported Description: Not reported Sic Number: Permit Number: Not reported Not reported Npdes Number: App Description: Not reported Latitude/Longitude: Not reported Last Issued: Not reported **Expiration Date:** Not reported Owner Name: Not reported Owner Address: Not reported Owner Address 2: Not reported Owner City: Not reported Owner State: Not reported Not reported Owner Zip: Received_July2013 Received:

Comments: Application received for Installation of one (1) 1.5 MMBtu Heatec

Boiler

A8 ECO - ROK II - TEMPORARY PLANT Target 13900 PINEY MEETINGHOUSE ROAD

Site 8 of 19 in cluster A

Property ROCKVILLE, MD

ROCKVILLE, WID

FINDS:

Actual: 452 ft.

Registry ID: 110001682340

Environmental Interest/Information System

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of

Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is

1004526540

N/A

FINDS

US AIRS

Direction Distance Elevation

ation Site Database(s) EPA ID Number

ECO - ROK II - TEMPORARY PLANT (Continued)

1004526540

EDR ID Number

used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

AIRS (AFS):

Airs Minor Details:

EPA plant ID: 110001682340

Plant name: ECO - ROK II - TEMPORARY PLANT
Plant address: 13900 PINEY MEETINGHOUSE ROAD

ROCKVILLE, MD 20850

County: MONTGOMERY

Region code: 03

Dunn & Bradst #: Not reported
Air quality cntrl region: 047
Sic code: 1429
Sic code desc: Not reported

North Am. industrial classf: 212319

NAIC code description: Other Crushed and Broken Stone Mining and Quarrying
Default compliance status: IN COMPLIANCE - SHUT DOWN

Default classification: POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR

Govt facility:

ALL OTHER FACILITIES NOT OWNED OR OPERATED BY A FEDERAL, STATE, OR

LOCAL GOVERNMENT

Current HPV: Not reported

Historical Compliance Minor Sources:

State compliance status: IN COMPLIANCE - SHUT DOWN

Hist compliance date: 1004
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - SHUT DOWN

Hist compliance date: 1102
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - SHUT DOWN Hist compliance date: 1201

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - SHUT DOWN

Hist compliance date: 1203

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - SHUT DOWN

Hist compliance date: 1301

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - SHUT DOWN

Hist compliance date: 1101

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - SHUT DOWN

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

ECO - ROK II - TEMPORARY PLANT (Continued)

1004526540

Hist compliance date: 1103

SIP SOURCE Air prog code hist file:

IN COMPLIANCE - SHUT DOWN State compliance status:

Hist compliance date: 1104

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - SHUT DOWN

Hist compliance date: 1202

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - SHUT DOWN

Hist compliance date: 1204

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - SHUT DOWN

Hist compliance date: 1302

SIP SOURCE Air prog code hist file:

IN COMPLIANCE - SHUT DOWN State compliance status:

Hist compliance date: 1303

Air prog code hist file: SIP SOURCE

Compliance & Violation Data by Minor Sources: Air program code: SIP SOURCE Plant air program pollutant: Not reported

Default pollutant classification: POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR

Def. poll. compliance status: IN COMPLIANCE - SHUT DOWN

Def. attainment/non attnmnt: ATTAINMENT AREA FOR GIVEN POLLUTANT

Repeat violator date: Not reported Turnover compliance: Not reported

ATLANTIC CONTRACTING - PINEY MEETING Α9 **Target**

Property ROCKVILLE, MD 20850

13900 PINEY MEETINGHOUSE ROAD **US AIRS**

Site 9 of 19 in cluster A

FINDS: Actual:

452 ft.

Registry ID: 110009242168

Environmental Interest/Information System

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V

of the Clean Air Act.

FINDS

1005603057

N/A

Direction Distance

Elevation Site Database(s) EPA ID Number

ATLANTIC CONTRACTING - PINEY MEETING (Continued)

1005603057

EDR ID Number

AIRS (AFS):

Airs Minor Details:

EPA plant ID: 110009242168

Plant name: ATLANTIC CONTRACTING - PINEY MEETING
Plant address: 13900 PINEY MEETINGHOUSE ROAD

ROCKVILLE, MD 20850

County: MONTGOMERY

Region code: 03

Dunn & Bradst #: Not reported
Air quality cntrl region: 047
Sic code: 3295

Sic code desc: MINERALS, GROUND OR TREATED

North Am. industrial classf: Not reported NAIC code description: Not reported

Default compliance status: IN COMPLIANCE - INSPECTION

Default classification: POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR

Govt facility: ALL OTHER FACILITIES NOT OWNED OR OPERATED BY A FEDERAL, STATE, OR

LOCAL GOVERNMENT

Current HPV: Not reported

Historical Compliance Minor Sources:

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1004

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1101

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1102
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1103

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1104

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1201

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1202

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1203

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

ATLANTIC CONTRACTING - PINEY MEETING (Continued)

1005603057

FTTS

1010003852

N/A

Hist compliance date: 1204

SIP SOURCE Air prog code hist file:

IN COMPLIANCE - INSPECTION State compliance status:

Hist compliance date: 1301

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1302

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1303

Air prog code hist file: SIP SOURCE

Compliance & Violation Data by Minor Sources: SIP SOURCE Air program code:

Plant air program pollutant: TOTAL PARTICULATE MATTER

Default pollutant classification: POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR

Def. poll. compliance status: IN COMPLIANCE - INSPECTION

Def. attainment/non attnmnt: ATTAINMENT AREA FOR GIVEN POLLUTANT

Repeat violator date: Not reported Turnover compliance: Not reported

A10 F.O. DAY BITUMINOUS

Target 13900 PINEY MEETING HOUSE ROAD

Property ROCKVILLE, MD 20850

Site 10 of 19 in cluster A

FTTS: Actual:

Case Number: 452 ft.

Not reported Docket Number: 131 10/21/85 Complaint Issue Date: 0.0000 Abatement Amount: Proposed Penalty: 15000.0000 Final Assessment: 5000.0000 Final Order Date: 12/17/86 Close Date: 11

PCB, Storage Violations(s):

A11 TRI STATE EXPLOSIVES **FINDS**

Target 13900 PINEY MEETINGHOUSE RD

Property ROCKVILLE, MD

Site 11 of 19 in cluster A

FINDS: Actual:

452 ft.

110037394940 Registry ID:

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport,

1011919923

N/A

Direction Distance

Elevation Site Database(s) EPA ID Number

TRI STATE EXPLOSIVES (Continued)

1011919923

EDR ID Number

and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

A12 MD AIRS S107768627
Target 13900 PINEY MEETINGHOUSE ROAD N/A

Property ROCKVILLE, MD 20850

Site 12 of 19 in cluster A

Actual: AIRS:

452 ft. Permit Number: 031-00528

Owner Name: ROCKVILLE CRUSHED STONE, INC.
Owner Address: 6401 GOLDEN TRIANGLE DRIVE

Owner Address 2: SUITE 400

Owner City, St, Zip: GREENBELT, MD 20770

 Issued Date:
 09/01/2012

 Expiration Date:
 08/31/2017

 Permit Type:
 5-YEAR P/O

Source Description: STONE CRUSHING & SCREENING PLANT

Nitorgen: 0
Volatile Organic Compound: 0
Sulfur Dioxide: 0
Particulate Matter: 2
Hazardous Air Pollutants: 0
Carbon Monoxide: 0
PM Condensable: 0

Permit Number: 031-01361

Owner Name: F.O. DAY-PINEY MEETING HOUSE

Owner Address: 850 EAST GUDE DRIVE

Owner Address 2: SUITE A

Owner City,St,Zip: ROCKVILLE, MD 20850

 Issued Date:
 10/01/2010

 Expiration Date:
 09/30/2015

 Permit Type:
 5-YEAR P/O

Source Description: DRUM MIX ASPHALT CONCRETE PLANT

Nitorgen: 4
Volatile Organic Compound: 4
Sulfur Dioxide: 0
Particulate Matter: 0
Hazardous Air Pollutants: 0
Carbon Monoxide: 18
PM Condensable: 0

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

A13 F. O. DAY BITUMINOUS COMPANY **Target** 13900 PINEY MEETING HOUSE RD **Property**

ROCKVILLE, MD

RCRA NonGen / NLR 1000273004 FINDS MDD009849779

MD OCPCASES **MD HIST UST MD NPDES US AIRS**

Site 13 of 19 in cluster A

Actual:

RCRA NonGen / NLR: 452 ft.

Date form received by agency: 02/08/2007

Facility name: ROCKVILLE CRUSHED STONE INC Facility address: 13900 PINEY MEETINGHOUSE RD

ROCKVILLE, MD 20850

EPA ID: MDD009849779

6401 GOLDEN TRIANGLE DR; STE 4 Mailing address:

GREENBELT, MD 20770

Contact: Not reported Contact address: Not reported Not reported

Not reported Contact country: Contact telephone: Not reported Contact email: Not reported EPA Region: 03

Land type: Private Classification: Non-Generator

Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: BARDON, INC.

Owner/operator address: 6401 GOLDEN TRIANGLE DR: STE 4

GREENBELT, MD 20770

Owner/operator country: US

301-982-1400 Owner/operator telephone: Legal status: Private Owner/Operator Type: Operator Owner/Op start date: 01/16/1991 Owner/Op end date: Not reported

OPERNAME Owner/operator name: Owner/operator address: **OPERSTREET**

OPERCITY, AK 99999

Owner/operator country: Not reported Owner/operator telephone: (215) 555-1212 Legal status: Private Owner/Operator Type: Operator Owner/Op start date: Not reported Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No Mixed waste (haz. and radioactive): No Recycler of hazardous waste: No Transporter of hazardous waste: No Treater, storer or disposer of HW: No Underground injection activity: No On-site burner exemption: No Furnace exemption: No Used oil fuel burner: No Used oil processor: No

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

F. O. DAY BITUMINOUS COMPANY (Continued)

1000273004

User oil refiner: No Used oil fuel marketer to burner: No Used oil Specification marketer: No Used oil transfer facility: No Used oil transporter: No

Historical Generators:

Date form received by agency: 03/03/1987

Facility name: ROCKVILLE CRUSHED STONE INC

Classification: Large Quantity Generator

Hazardous Waste Summary:

Waste code: D000 Waste name: Not Defined

Waste code: D000 Waste name: Not Defined

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date: 02/05/2007

COMPLIANCE EVALUATION INSPECTION ON-SITE Evaluation:

Area of violation: Not reported Date achieved compliance: Not reported Evaluation lead agency: State

06/10/1997 Evaluation date:

COMPLIANCE EVALUATION INSPECTION ON-SITE Evaluation:

Area of violation: Not reported Date achieved compliance: Not reported Evaluation lead agency: State

FINDS:

Registry ID: 110056017019

Environmental Interest/Information System

OCP:

Facility ID: 94-3613MO2

Facility Status/Code: CLOSED/Well/GW Contamination - Motor/Lube Oil

Date Open: 06/28/1994 Date Closed: 01/13/1997 Release: YES Cleanup: Not reported Registration Number: 10865

Facility ID: 94-3613MO2

Facility Status/Code: CLOSED/Well/GW Contamination - Motor/Lube Oil

Date Open: 06/28/1994 Date Closed: 01/13/1997 Release: YES Cleanup: Not reported Registration Number: 10865

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

F. O. DAY BITUMINOUS COMPANY (Continued)

1000273004

Facility ID: 97-1061MO1 Facility Status/Code: CLOSED/Dumping Date Open: 12/06/1996 Date Closed: 12/12/2001 Release: YES

Cleanup: YES Registration Number: 10865

Historical UST:

Facility ID: 3008694 Tank ID: 011 23 Age: Capacity: 4,000

Tank Status: Currently in use

Product: Other

Facility ID: 3008694 Tank ID: 012 Age: 23 3,000 Capacity:

Tank Status: Currently in use

Product: Other

3008694 Facility ID: Tank ID: 012X Age: 23 Capacity: 3,000

Tank Status: Currently in use

Product: Other

Facility ID: 3008694 Tank ID: 014 22 Age: 550 Capacity:

Tank Status: Currently in use Product: Hazardous

3008694 Facility ID: Tank ID: 015 Age: 35 Capacity: 3,000 Tank Status: Removed Product: Other

Facility ID: 3008694 Tank ID: 016 Age: 22 Capacity: 4,000 Tank Status: Removed Product: Gasoline

Facility ID: 3008694 Tank ID: 017 Age: 22 4,000 Capacity: Tank Status: Removed Product: Gasoline

Direction Distance Elevation

EDR ID Number Site Database(s) **EPA ID Number**

F. O. DAY BITUMINOUS COMPANY (Continued)

1000273004

Facility ID: 3008694 Tank ID: 018 Age: 38 Capacity: 4,000 Tank Status: Removed Product: Gasoline

Facility ID: 3008694 Tank ID: 019 Age: 38 4,000 Capacity: Tank Status: Removed Product: Diesel

3008694 Facility ID: Tank ID: 020 35 Age: Capacity: 4,000

Tank Status: Not Regulated

Product: Other

Facility ID: 3008694 Tank ID: 001 Age: 18 25,000 Capacity:

Tank Status: Currently in use

Product: Diesel

Facility ID: 3008694 Tank ID: 002 Age: 18 Capacity: 25,000

Tank Status: Currently in use

Product: Diesel

Facility ID: 3008694 Tank ID: 003 Age: 18 Capacity: 25,000

Tank Status: Currently in use

Product: Diesel

Facility ID: 3008694 004 Tank ID: Age: 18 Capacity: 25,000 Tank Status:

Currently in use

Product: Diesel

3008694 Facility ID: Tank ID: 005 Age: 22 Capacity: 10,000 Tank Status: Removed Product: Diesel

Facility ID: 3008694

Direction Distance Elevation

vation Site Database(s) EPA ID Number

F. O. DAY BITUMINOUS COMPANY (Continued)

1000273004

EDR ID Number

Tank ID: 006
Age: 22
Capacity: 10,000
Tank Status: Removed
Product: Diesel

 Facility ID:
 3008694

 Tank ID:
 007

 Age:
 22

 Capacity:
 10,000

 Tank Status:
 Removed

 Product:
 Diesel

 Facility ID:
 3008694

 Tank ID:
 008

 Age:
 22

 Capacity:
 10,000

 Tank Status:
 Removed

 Product:
 Diesel

 Facility ID:
 3008694

 Tank ID:
 009

 Age:
 22

 Capacity:
 10,000

 Tank Status:
 Removed

 Product:
 Diesel

Facility ID: 3008694
Tank ID: 010
Age: 22
Capacity: 4,000

Tank Status: Currently in use Product: Used Oil

NPDES:

Not reported Facility Status: Bay Trib Number: Not reported Watershed: Not reported Permit Type: Not reported Description: Not reported Sic Number: Not reported Permit Number: Not reported Npdes Number: Not reported Not reported App Description: Latitude/Longitude: Not reported Not reported Last Issued: **Expiration Date:** Not reported Not reported Owner Name: Owner Address: Not reported Not reported Owner Address 2: Owner City: Not reported Owner State: Not reported Owner Zip: Not reported Received_July2012 Received:

Comments: Application received for 2023 031-0528 Ren SPTO for (1) Stone crushing

& screening plant

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

F. O. DAY BITUMINOUS COMPANY (Continued)

1000273004

Facility Status: Not reported Not reported Bay Trib Number: Watershed: Not reported Permit Type: Not reported Description: Not reported Sic Number: Not reported Not reported Permit Number: Npdes Number: Not reported Not reported App Description: Latitude/Longitude: Not reported Last Issued: Not reported **Expiration Date:** Not reported Owner Name: Not reported Owner Address: Not reported Owner Address 2: Not reported Not reported Owner City: Not reported Owner State: Owner Zip: Not reported

Received: Received_September2013

Comments: Application received for GP for installation of one (1) Boiler < 10

MMBtu

AIRS (AFS):

Airs Minor Details:

EPA plant ID: 110005968355

Plant name: ROCKVILLE CRUSHED STONE INC Plant address: 13900 PINEY MEETING HOUSE ROAD

ROCKVILLE, MD 20850

MONTGOMERY County:

Region code: 03

Dunn & Bradst #: 009849779 Air quality cntrl region: 047 3295 Sic code:

MINERALS, GROUND OR TREATED Sic code desc:

North Am. industrial classf: 212312

NAIC code description: Crushed and Broken Limestone Mining and Quarrying

IN COMPLIANCE - INSPECTION Default compliance status:

POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR Default classification:

ALL OTHER FACILITIES NOT OWNED OR OPERATED BY A FEDERAL, STATE, OR Govt facility:

LOCAL GOVERNMENT

Current HPV: Not reported

Compliance and Enforcement Major Issues:

Air program: SIP SOURCE National action type: Not reported 00000 Date achieved: Penalty amount: Not reported

SIP SOURCE Air program: National action type: Not reported 00000 Date achieved: Penalty amount: Not reported

SIP SOURCE Air program:

Direction Distance Elevation

Site Database(s) EPA ID Number

F. O. DAY BITUMINOUS COMPANY (Continued)

1000273004

EDR ID Number

National action type: Not reported
Date achieved: 00000
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: Not reported
Date achieved: 00000
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: Not reported
Date achieved: 00000
Penalty amount: Not reported

Air program:
Not reported
National action type:
Not reported
Date achieved:
Penalty amount:
Not reported
Not reported

Air program:

Not reported

National action type:

Not reported

Not reported

Not reported

Penalty amount:

Not reported

Air program: Not reported National action type: Not reported Date achieved: Not reported Penalty amount: Not reported

Air program:
Not reported
National action type:
Not reported
Date achieved:
Not reported
Penalty amount:
Not reported

Air program:
Not reported
National action type:
Not reported
Date achieved:
Not reported
Penalty amount:
Not reported

Air program:
Not reported
National action type:
Not reported
Date achieved:
Not reported
Not reported
Not reported

Air program: Not reported National action type: Not reported Date achieved: Not reported Penalty amount: Not reported

Air program: Not reported National action type: Not reported Date achieved: Not reported Penalty amount: Not reported

Air program: Not reported National action type: Not reported Date achieved: Not reported

Map ID MAP FINDINGS
Direction

Distance Elevation

Site Database(s) EPA ID Number

F. O. DAY BITUMINOUS COMPANY (Continued)

1000273004

EDR ID Number

Penalty amount: Not reported

Air program:
Not reported
National action type:
Not reported
Date achieved:
Not reported
Penalty amount:
Not reported

Air program:
Not reported
National action type:
Not reported
Not reported
Penalty amount:
Not reported
Not reported

Air program: Not reported National action type: Not reported Date achieved: Not reported Penalty amount: Not reported

Air program:
Not reported
National action type:
Not reported
Date achieved:
Penalty amount:
Not reported
Not reported

Air program:
Not reported
National action type:
Not reported
Date achieved:
Not reported
Penalty amount:
Not reported

Air program:
Not reported
National action type:
Not reported
Date achieved:
Penalty amount:
Not reported
Not reported

Air program: Not reported National action type: Not reported Date achieved: Not reported Penalty amount: Not reported

Air program: Not reported National action type: Not reported Date achieved: Not reported Penalty amount: Not reported

Air program:
Not reported
National action type:
Not reported
Date achieved:
Penalty amount:
Not reported
Not reported

Historical Compliance Minor Sources:

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1004
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1101

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Direction Distance Elevation

tance EDR ID Number vation Site Database(s) EPA ID Number

F. O. DAY BITUMINOUS COMPANY (Continued)

1000273004

Hist compliance date: 1102

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1103

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1104

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1201

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1202

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1203

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1204

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1204 Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 130

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1301
Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1302

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1302 Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1303

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

Hist compliance date: 1303 Air prog code hist file: NSPS

Compliance & Violation Data by Minor Sources:

Air program code: NSPS

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

F. O. DAY BITUMINOUS COMPANY (Continued)

1000273004

TOTAL PARTICULATE MATTER Plant air program pollutant:

Default pollutant classification: POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR

Def. poll. compliance status: IN COMPLIANCE - INSPECTION

Def. attainment/non attnmnt: ATTAINMENT AREA FOR GIVEN POLLUTANT

Repeat violator date: Not reported Turnover compliance: Not reported

Air program code: SIP SOURCE

Plant air program pollutant: TOTAL PARTICULATE MATTER

Default pollutant classification: POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR

Def. poll. compliance status: IN COMPLIANCE - INSPECTION

Def. attainment/non attnmnt: ATTAINMENT AREA FOR GIVEN POLLUTANT

Repeat violator date: Not reported Turnover compliance: Not reported

A14 TRI STATE EXPLOSIVES 13900 PINEY MEETHOUSE ROAD **Target** ROCKVILLE, MD 20850 **Property**

NY MANIFEST 1000132360

N/A

Site 14 of 19 in cluster A

Actual: 452 ft.

NY MANIFEST:

MDD981739550 EPA ID:

USA Country:

Mailing Name: TRI STATE EXPLOSIVES Mailing Contact: TRI STATE EXPLOSIVES

Mailing Address: 13900 PINEY MEETHOUSE ROAD

Mailing Address 2: Not reported ROCKVILLE Mailing City: Mailing State: MD Mailing Zip: 20850 Mailing Zip4: Not reported Mailing Country: USA

Mailing Phone: 301-340-3286

Document ID: NYA9397157 Manifest Status: Completed copy Trans1 State ID: 42789A045 Trans2 State ID: Not reported Generator Ship Date: 890406 Trans1 Recv Date: 890406 Trans2 Recy Date: Not reported TSD Site Recv Date: 890411 Part A Recv Date: 890412 Part B Recv Date: 890421

MDD981739550 Generator EPA ID: ILD051060408 Trans1 EPA ID: Trans2 EPA ID: Not reported TSDF ID: NYD980753784 Waste Code: F003 - UNKNOWN

Quantity: 00036 P - Pounds Units: Number of Containers: 001

Container Type: DM - Metal drums, barrels

Handling Method: B Incineration, heat recovery, burning.

Specific Gravity: 100 Year: 89

Direction Distance

Elevation Site Database(s) EPA ID Number

TRI STATE EXPLOSIVES (Continued)

1000132360

EDR ID Number

Document ID: NYA9571689 Manifest Status: Completed copy Trans1 State ID: 00000000 Trans2 State ID: 00000000 Generator Ship Date: 890713 Trans1 Recv Date: 890713 Trans2 Recv Date: Not reported 890718 TSD Site Recy Date: Part A Recv Date: 890721 Part B Recv Date: 890725

 Generator EPA ID:
 MDD981739550

 Trans1 EPA ID:
 ILD051060408

 Trans2 EPA ID:
 Not reported

 TSDF ID:
 NYD980753784

 Waste Code:
 F003 - UNKNOWN

Quantity: 00027 Units: P - Pounds

Number of Containers: 001

Container Type: DM - Metal drums, barrels

Handling Method: R Material recovery of more than 75 percent of the total material.

Specific Gravity: 100 Year: 89

NYA9700312 Document ID: Manifest Status: Completed copy Trans1 State ID: 4289A2977 Trans2 State ID: Not reported 891023 Generator Ship Date: Trans1 Recv Date: 891023 Trans2 Recv Date: Not reported TSD Site Recy Date: 891031 Part A Recv Date: 891027 Part B Recv Date: 891110

 Generator EPA ID:
 MDD981739550

 Trans1 EPA ID:
 ILD051060408

 Trans2 EPA ID:
 Not reported

 TSDF ID:
 NYD980753784

 Waste Code:
 F003 - UNKNOWN

Quantity: 00027 Units: P - Pounds

Number of Containers: 001

Container Type: DM - Metal drums, barrels

Handling Method: R Material recovery of more than 75 percent of the total material.

Specific Gravity: 100 Year: 89

Document ID: NYA9275051 Manifest Status: Completed copy 42789A045 Trans1 State ID: Trans2 State ID: Not reported Generator Ship Date: 890104 890104 Trans1 Recv Date: Trans2 Recy Date: Not reported TSD Site Recy Date: 890111 Part A Recv Date: 890110

Direction Distance

Elevation Site Database(s) EPA ID Number

TRI STATE EXPLOSIVES (Continued)

1000132360

EDR ID Number

Part B Recv Date: 890117

 Generator EPA ID:
 MDD981739550

 Trans1 EPA ID:
 ILD051060408

 Trans2 EPA ID:
 Not reported

 TSDF ID:
 NYD980753784

 Waste Code:
 F003 - UNKNOWN

Quantity: 00036 Units: P - Pounds Number of Containers: 001

Container Type: DM - Metal drums, barrels

Handling Method: B Incineration, heat recovery, burning.

Specific Gravity: 100 Year: 89

Document ID: NYA9128024

Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC

Trans1 State ID: 42788A034 Trans2 State ID: PAAH0172P 881006 Generator Ship Date: Trans1 Recv Date: 881006 Trans2 Recv Date: 881007 TSD Site Recy Date: 881011 Part A Recv Date: 881125 Part B Recv Date: 881020

 Generator EPA ID:
 MDD981739550

 Trans1 EPA ID:
 ILD051060408

 Trans2 EPA ID:
 ILD051060408

 TSDF ID:
 NYD980753784

 Waste Code:
 F003 - UNKNOWN

Quantity: 00144
Units: P - Pounds
Number of Containers: 002

Container Type: DM - Metal drums, barrels

Handling Method: R Material recovery of more than 75 percent of the total material.

Specific Gravity: 100 Year: 88

Document ID: NYA9153189 Manifest Status: Completed copy Trans1 State ID: 42788A034 Trans2 State ID: Not reported Generator Ship Date: 881205 Trans1 Recv Date: 881205 Trans2 Recv Date: Not reported TSD Site Recv Date: 881213 Part A Recv Date: 881208 Part B Recv Date: 881219

 Generator EPA ID:
 MDD981739550

 Trans1 EPA ID:
 ILD051060408

 Trans2 EPA ID:
 Not reported

 TSDF ID:
 NYD980753784

 Waste Code:
 F003 - UNKNOWN

Quantity: 00036 Units: P - Pounds Number of Containers: 001

Direction Distance

Elevation Site Database(s) EPA ID Number

TRI STATE EXPLOSIVES (Continued)

1000132360

EDR ID Number

Container Type: DM - Metal drums, barrels

Handling Method: B Incineration, heat recovery, burning.

Specific Gravity: 100 Year: 88

Document ID: NYA9333911 Manifest Status: Completed copy Trans1 State ID: 42789A045 Trans2 State ID: Not reported 890302 Generator Ship Date: Trans1 Recv Date: 890302 Not reported Trans2 Recv Date: TSD Site Recv Date: 890307 Part A Recv Date: 890308 Part B Recv Date: 890315

 Generator EPA ID:
 MDD981739550

 Trans1 EPA ID:
 ILD051060408

 Trans2 EPA ID:
 Not reported

 TSDF ID:
 NYD980753784

 Waste Code:
 F003 - UNKNOWN

Quantity: 00036 Units: P - Pounds

Number of Containers: 001

Container Type: DM - Metal drums, barrels

Handling Method: B Incineration, heat recovery, burning.

Specific Gravity: 100 Year: 89

Document ID: NYA9448953 Completed copy Manifest Status: Trans1 State ID: 42789A297 Trans2 State ID: Not reported Generator Ship Date: 890516 Trans1 Recv Date: 890516 Trans2 Recv Date: Not reported TSD Site Recv Date: 890523 Part A Recv Date: 890525 Part B Recv Date: 890531

 Generator EPA ID:
 MDD981739550

 Trans1 EPA ID:
 ILD051060408

 Trans2 EPA ID:
 Not reported

 TSDF ID:
 NYD980753784

 Waste Code:
 F003 - UNKNOWN

Quantity: 00027 Units: P - Pounds Number of Containers: 001

Container Type: DM - Metal drums, barrels

Handling Method: R Material recovery of more than 75 percent of the total material.

Specific Gravity: 100 Year: 89

Direction Distance

Elevation Site Database(s) EPA ID Number

A15 F.O. DAY BITUMINOUS CO. - PINEY MEETING HOUSE RD.

MD AST A100129905 N/A

EDR ID Number

Target 13900 PINEY MEETING HOUSE RD. Property ROCKVILLE, MD 20850

Site 15 of 19 in cluster A

Actual:

452 ft. Facility Id: 2270

Bill Name: F.O. DAY BITUMINOUS CO.

Bill Addr: 13900 PINEY MEETINGHOUSE ROAD

Bill Addr2: Not reported

Bill City/State/Zip: ROCKVILLE, MD 20850

Bill Phone: 3014244024

Owner: F.O. DAY BITUMINOUS COMPANY
Owner Address: 850 EAST GUDE DRIVE, SUITE A

Owner City State Zip: ROCKVILLE, MD 20850

Tanks:

Tank ID: 1 Capacity: 15000

Product: ASPHALT EMULSION

Tank ID: 2 Capacity: 20000

Product: HEATING OIL - #2

Tank ID: 3

Capacity: 20000

Product: HEATING OIL - #4

Tank ID: 4

Capacity: 30000

Product: ASPHALT CEMENT

Tank ID: 5 Capacity: 30000

Product: ASPHALT CEMENT

Tank ID: 6 Capacity: 20000

Product: ASPHALT REJUVENATOR

Tank ID: 7
Capacity: 275

Product: HEATING OIL - #2

Direction Distance

Elevation Site Database(s)

FINDS

EDR ID Number EPA ID Number

1016116226

N/A

A16 **ROCKVILLE READY MIX CONCRETE Target** 13900 PINEY MEETINGHOUSE ROAD **Property**

ROCKVILLE, MD

Site 16 of 19 in cluster A

Actual: 452 ft.

FINDS:

Registry ID: 110005968355

Environmental Interest/Information System

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

MD-RCRA (Maryland - Resource Conservation And Recovery Act Information System) houses state information relating to the Resource Conservation and Recovery Act (RCRA).

MD-EPSC (Maryland - Environmental Permit Service Center) promotes multi-media pollution prevention and provides permit assistance to business and industries. An online permit guide is available and lists all permits, licenses and approvals that are issued by MDE.

US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

MD-PEMIS (Maryland - Permanent (Air) Emission) database houses data related to Air Emissions. Also known to the EPA as National Emissions Inventory (NEI).

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

PCS (Permit Compliance System) is a computerized management information system that contains data on National Pollutant Discharge

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

ROCKVILLE READY MIX CONCRETE (Continued)

1016116226

Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

A17 **ROCKVILLE QUARRY** MD UST U003733754 13900 PINEY MEETINGHOUSE ROAD **MD Financial Assurance Target** N/A

Property ROCKVILLE, MD 20850

Site 17 of 19 in cluster A

Actual: 452 ft.

UST:

Facility Id: 10865 Oper Name: Lisa Hunt Form Name: Donald P. Delano Form Title: Vice President Form Date: 11/30/2011 Owner Id: 9247

Owner:

Owner Name: Bardon, Inc. d/b/a Aggregate Industries - MAR

6401 Golden Triangle Drive Suite 400 Owner Address:

Owner City: Greenbelt Owner State: MD Owner Zip: 20770 Owner Phone: (301) 982-1400

Owner Contact: Lisa Hunt

Tanks:

Tank ID:

Tank Status: **Permanently Out of Use**

Tank Capacity: 25000 Substance Description: Diesel Tank Compartment: False Compartment Compartment: Α

Date Intalled: 01/01/1978

Tank Material Desc: Asphalt Coated or Bare Steel Pipe Material Desc: Bare or Galvanized Steel

Tank ID:

Tank Status: **Permanently Out of Use**

4000 Tank Capacity: Substance Description: Used Oil Tank Compartment: False

Direction Distance

Elevation Site Database(s) EPA ID Number

ROCKVILLE QUARRY (Continued)

Compartment Compartment: A

Date Intalled: 01/01/1974

Tank Material Desc: Asphalt Coated or Bare Steel
Pipe Material Desc: Bare or Galvanized Steel

Tank ID:

Tank Status: Permanently Out of Use

Tank Capacity: 4000
Substance Description: Other
Tank Compartment: False
Compartment Compartment: A

Date Intalled: 01/01/1973

Tank Material Desc: Asphalt Coated or Bare Steel
Pipe Material Desc: Bare or Galvanized Steel

Tank ID: 12

Tank Status: Permanently Out of Use

Tank Capacity: 3000
Substance Description: Other
Tank Compartment: False
Compartment Compartment: A

Date Intalled: 01/01/1973

Tank Material Desc: Asphalt Coated or Bare Steel Pipe Material Desc: Bare or Galvanized Steel

Tank ID: 13

Tank Status: Permanently Out of Use

Tank Capacity: 2000
Substance Description: Other
Tank Compartment: False
Compartment Compartment: A

Date Intalled: 01/01/1973

Tank Material Desc: Asphalt Coated or Bare Steel Pipe Material Desc: Bare or Galvanized Steel

Tank ID: 14

Tank Status: Permanently Out of Use

Tank Capacity: 550
Substance Description: Other
Tank Compartment: False
Compartment Compartment: A

Date Intalled: 01/01/1974

Tank Material Desc: Asphalt Coated or Bare Steel
Pipe Material Desc: Bare or Galvanized Steel

Tank ID: 15

Tank Status: Permanently Out of Use

Tank Capacity: 3000
Substance Description: Other
Tank Compartment: False
Compartment Compartment: A
Date Intalled: 01/01/1961

Tank Material Desc: Asphalt Coated or Bare Steel
Pipe Material Desc: Bare or Galvanized Steel

Tank ID: 16

Tank Status: Permanently Out of Use

EDR ID Number

U003733754

Direction Distance Elevation

tion Site Database(s) EPA ID Number

ROCKVILLE QUARRY (Continued)

U003733754

EDR ID Number

Tank Capacity: 4000
Substance Description: Gasoline
Tank Compartment: False
Compartment Compartment: A

Date Intalled: 01/01/1974

Tank Material Desc: Asphalt Coated or Bare Steel Pipe Material Desc: Bare or Galvanized Steel

Tank ID: 17

Tank Status: Permanently Out of Use

Tank Capacity: 4000
Substance Description: Gasoline
Tank Compartment: False
Compartment Compartment: A

Date Intalled: 01/01/1974

Tank Material Desc: Asphalt Coated or Bare Steel
Pipe Material Desc: Bare or Galvanized Steel

Tank ID: 18

Tank Status: Permanently Out of Use

Tank Capacity: 4000
Substance Description: Gasoline
Tank Compartment: False
Compartment Compartment: A

Date Intalled: 01/01/1958

Tank Material Desc: Asphalt Coated or Bare Steel
Pipe Material Desc: Bare or Galvanized Steel

Tank ID: 19

Tank Status: Permanently Out of Use

Tank Capacity:4000Substance Description:DieselTank Compartment:FalseCompartment Compartment:A

Date Intalled: 01/01/1958

Tank Material Desc: Asphalt Coated or Bare Steel
Pipe Material Desc: Bare or Galvanized Steel

Tank ID:

Tank Status: Permanently Out of Use

Tank Capacity: 25000
Substance Description: Diesel
Tank Compartment: False
Compartment Compartment: A

Date Intalled: 01/01/1978

Tank Material Desc: Asphalt Coated or Bare Steel
Pipe Material Desc: Bare or Galvanized Steel

Tank ID: 20

Tank Status:

Currently In Use
Tank Capacity:

Substance Description:

Tank Compartment:

Compartment Compartment:

A

Compartment Compartment:

A

Compartment Compartment:

A

Date Intalled: 08/01/1999

Tank Material Desc: Composite (Steel w/ FRP)

Pipe Material Desc: Flexible Plastic

Direction

Elevation Site Database(s) EPA ID Number

ROCKVILLE QUARRY (Continued)

Tank ID: 21

Tank Status:Currently In UseTank Capacity:Not reportedSubstance Description:DieselTank Compartment:FalseCompartment Compartment:A

Date Intalled: 08/01/1999

Tank Material Desc: Composite (Steel w/ FRP)

Pipe Material Desc: Flexible Plastic

Tank ID:

Tank Status: Permanently Out of Use

Tank Capacity: 25000
Substance Description: Diesel
Tank Compartment: False
Compartment Compartment: A

Date Intalled: 01/01/1978

Tank Material Desc: Asphalt Coated or Bare Steel
Pipe Material Desc: Bare or Galvanized Steel

Tank ID:

Tank Status: Permanently Out of Use

Tank Capacity: 25000
Substance Description: Diesel
Tank Compartment: False
Compartment Compartment: A

Date Intalled: 01/01/1978

Tank Material Desc: Asphalt Coated or Bare Steel
Pipe Material Desc: Bare or Galvanized Steel

Tank ID:

Tank Status: Permanently Out of Use

Tank Capacity: 10000
Substance Description: Diesel
Tank Compartment: False
Compartment Compartment: A

Date Intalled: 01/01/1974

Tank Material Desc: Asphalt Coated or Bare Steel
Pipe Material Desc: Bare or Galvanized Steel

Tank ID: 6

Tank Status: Permanently Out of Use

Tank Capacity: 10000
Substance Description: Diesel
Tank Compartment: False
Compartment Compartment: A

Date Intalled: 01/01/1974

Tank Material Desc: Asphalt Coated or Bare Steel
Pipe Material Desc: Bare or Galvanized Steel

Tank ID: 7

Tank Status: Permanently Out of Use

Tank Capacity: 10000
Substance Description: Diesel
Tank Compartment: False
Compartment Compartment: A

Date Intalled: 01/01/1974

EDR ID Number

U003733754

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

ROCKVILLE QUARRY (Continued)

U003733754

Tank Material Desc: Asphalt Coated or Bare Steel Bare or Galvanized Steel Pipe Material Desc:

Tank ID:

Permanently Out of Use Tank Status:

Tank Capacity: 10000 Diesel Substance Description: Tank Compartment: False Compartment Compartment: Α

Date Intalled: 01/01/1974

Tank Material Desc: Asphalt Coated or Bare Steel Pipe Material Desc: Bare or Galvanized Steel

Tank ID:

Tank Status: **Permanently Out of Use**

Tank Capacity: 10000 Substance Description: Diesel Tank Compartment: False Compartment Compartment: Α

01/01/1974 Date Intalled:

Tank Material Desc: Asphalt Coated or Bare Steel Pipe Material Desc: Bare or Galvanized Steel

MD Financial Assurance 2:

Region: 2 Facility ID: 10865 Self Insured: False Insurance: True Risk Retention Group: False Guarantee: False Surety Bonds: False Letter of Credit: False State Fund: False Other Finance: False

Finacnce Comments: G24666098 0034/23/11 - 4/23/12 (sd)

FR Not Listed: False

A18 **AGGREGATE INDUSTRIES**

Target 13900 PINE MEETING HOUSE RD **Property** ROCKVILLE, MD 20859

Site 18 of 19 in cluster A

OCP: Actual:

452 ft. Facility ID: 05-0443MO1

> Facility Status/Code: CLOSED/Transfer Accident Motor/Lube Oil

Date Open: 10/04/2004 Date Closed: 02/24/2005 Release: YES YES Cleanup: Registration Number: Not reported S106610621

N/A

MD OCPCASES

Direction Distance

Elevation Site Database(s) **EPA ID Number**

A19 F.O. DAY BITUMINOUS CO. **US AIRS** 1000138187 **Target**

13900 PINEY MEETINGHOUSE ROAD N/A

ROCKVILLE, MD 20850 Property

Site 19 of 19 in cluster A

AIRS (AFS): Actual:

452 ft. Compliance and Violation Data Major Sources:

EPA plant ID: 110002341467

Plant name: F.O. DAY BITUMINOUS CO.

Plant address: 13900 PINEY MEETINGHOUSE ROAD

ROCKVILLE, MD 20850

MONTGOMERY County:

Region code: 03

Dunn & Bradst #: Not reported Air quality cntrl region: 047 Sic code: 2951

Sic code desc: ASPHALT PAVING MIXTURES AND BLOCKS

North Am. industrial classf: 324121

NAIC code description: Asphalt Paving Mixture and Block Manufacturing

IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS Default compliance status:

POTENTIAL EMISSIONS ARE BELOW ALL APPLICABLE MAJOR SOURCE THRESHOLDS Default classification:

IF AND ONLY IF THE SOURCE COMPLIES WITH FEDERALLY ENFORCEABLE

REGULATIONS OR LIMITATIONS.

Govt facility: ALL OTHER FACILITIES NOT OWNED OR OPERATED BY A FEDERAL, STATE, OR

LOCAL GOVERNMENT

Current HPV: Not reported

Compliance and Enforcement Major Issues:

Air program: SIP SOURCE National action type: **NXXXXX** Date achieved: 000308 Penalty amount: 00000000

SIP SOURCE Air program:

National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST

Date achieved: 000802 Penalty amount: 00000000

NSPS Air program:

National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST

Date achieved: 000802 Penalty amount: 00000000

SIP SOURCE Air program:

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 000803 Penalty amount: 00000000

Air program: **NSPS**

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 000803 00000000 Penalty amount:

Air program: SIP SOURCE

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 011031 **EDR ID Number**

Direction Distance Elevation

evation Site Database(s) EPA ID Number

F.O. DAY BITUMINOUS CO. (Continued)

1000138187

EDR ID Number

Penalty amount: 000000000

Air program: NSPS

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 011031
Penalty amount: 000000000

Air program: NSPS

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 031030
Penalty amount: Not reported

Air program: SIP SOURCE

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 031030
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: NXXXXX
Date achieved: 041005
Penalty amount: Not reported

Air program: NSPS
National action type: NXXXXX
Date achieved: 041005
Penalty amount: Not reported

Air program: NSPS

National action type: SV RESOLVED Date achieved: 050207
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: SV RESOLVED
Date achieved: 050207
Penalty amount: Not reported

Air program: NSPS

National action type: STATE CONDUCTED PCE/ ON-SITE

Date achieved: 050630
Penalty amount: Not reported

Air program: SIP SOURCE

National action type: STATE CONDUCTED PCE/ ON-SITE

Date achieved: 050630
Penalty amount: Not reported

Air program: SIP SOURCE

National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST

Date achieved: 060804
Penalty amount: Not reported

Air program: NSPS

National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST

Date achieved: 060804
Penalty amount: Not reported

Direction Distance Elevation

tion Site Database(s) EPA ID Number

F.O. DAY BITUMINOUS CO. (Continued)

1000138187

EDR ID Number

Air program: SIP SOURCE
National action type: Not reported
Date achieved: 061003
Penalty amount: Not reported

Air program: NSPS
National action type: Not reported
Date achieved: 061003
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: PCE/OFF-SITE
Date achieved: 061120
Penalty amount: Not reported

Air program: NSPS

National action type: PCE/OFF-SITE
Date achieved: 061120
Penalty amount: Not reported

Air program: NSPS

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 080816
Penalty amount: 080816
Not reported

Air program: SIP SOURCE

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 080816
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: PCE/OFF-SITE
Date achieved: 090807
Penalty amount: Not reported

Air program: NSPS

National action type: PCE/OFF-SITE
Date achieved: 090807
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: PCE/OFF-SITE
Date achieved: 090908
Penalty amount: Not reported

Air program: NSPS

National action type: PCE/OFF-SITE
Date achieved: 090908
Penalty amount: Not reported

Air program: NSPS

National action type: PCE/OFF-SITE
Date achieved: 100726
Penalty amount: Not reported

Air program: SIP SOURCE National action type: PCE/OFF-SITE

Direction Distance Elevation

on Site Database(s) EPA ID Number

F.O. DAY BITUMINOUS CO. (Continued)

1000138187

EDR ID Number

Date achieved: 100726
Penalty amount: Not reported

Air program: NSPS

National action type: STATE CONDUCTED PCE/ ON-SITE

Date achieved: 110407
Penalty amount: Not reported

Air program: SIP SOURCE

National action type: STATE CONDUCTED PCE/ ON-SITE

Date achieved: 110407
Penalty amount: Not reported

Air program: SIP SOURCE

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 110516
Penalty amount: Not reported

Air program: NSPS

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 110516
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: PCE/OFF-SITE
Date achieved: 110607
Penalty amount: Not reported

Air program: NSPS

National action type: PCE/OFF-SITE
Date achieved: 110607
Penalty amount: Not reported

Air program: NSPS

National action type: PCE/OFF-SITE
Date achieved: 120501
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: PCE/OFF-SITE
Date achieved: 120501
Penalty amount: Not reported

Air program: SIP SOURCE

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 120723
Penalty amount: Not reported

Air program: NSPS

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 120723
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: PCE/OFF-SITE
Date achieved: 130607
Penalty amount: Not reported

Direction Distance

Elevation Site Database(s) EPA ID Number

F.O. DAY BITUMINOUS CO. (Continued)

Air program:

National action type: PCE/OFF-SITE
Date achieved: 130607
Penalty amount: Not reported

Air program: NSPS

National action type: STATE CONDUCTED FCE / ON-SITE

NSPS

Date achieved: 130731
Penalty amount: Not reported

Air program: SIP SOURCE

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 130731
Penalty amount: Not reported

Air program: SIP SOURCE

National action type: EPA CONDUCTED FCE / ON-SITE

Date achieved: 970513
Penalty amount: 000000000

Air program: SIP SOURCE

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 970513
Penalty amount: 000000000

Air program: NSPS

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 970528
Penalty amount: 000000000

Air program: SIP SOURCE

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 970528
Penalty amount: 000000000

Air program: SIP SOURCE

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 980609
Penalty amount: 000000000

Air program: NSPS

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 980609
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: NXXXXX
Date achieved: 980714
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: NXXXXX
Date achieved: 980716
Penalty amount: 000000000

Air program: SIP SOURCE National action type: NXXXXX

EDR ID Number

1000138187

Direction Distance Elevation

tance EDR ID Number vation Site Database(s) EPA ID Number

F.O. DAY BITUMINOUS CO. (Continued)

1000138187

Date achieved: 980724
Penalty amount: 000000000

Air program: SIP SOURCE

National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST

Date achieved: 980827
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: NXXXXX
Date achieved: 981005
Penalty amount: 000000000

Air program: SIP SOURCE

National action type: S/L REQ (O/O COND) STACK TEST/NOT OBSV BUT REVWD

Date achieved: 981005
Penalty amount: 000000000

Air program: NSPS

National action type: S/L REQ (O/O COND) STACK TEST/NOT OBSV BUT REVWD

Date achieved: 981005 Penalty amount: 000000000

Air program: SIP SOURCE
National action type: NXXXXX
Date achieved: 981030
Penalty amount: 000000000

Air program: NSPS

National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST

Date achieved: 990427
Penalty amount: 000000000

Air program: SIP SOURCE

National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST

Date achieved: 990427
Penalty amount: 000000000

Air program: NSPS

National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST

Date achieved: 990428
Penalty amount: 000000000

Air program: SIP SOURCE

National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST

Date achieved: 990428
Penalty amount: 000000000

Air program: SIP SOURCE

National action type: S/L REQ (O/O COND) STACK TEST/NOT OBSV BUT REVWD

Date achieved: 990715
Penalty amount: 000000000

Air program: NSPS

National action type: S/L REQ (O/O COND) STACK TEST/NOT OBSV BUT REVWD

Date achieved: 990715
Penalty amount: 000000000

Distance Elevation

vation Site Database(s) EPA ID Number

F.O. DAY BITUMINOUS CO. (Continued)

Air program: NSPS

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 990720
Penalty amount: 000000000

Air program: SIP SOURCE

National action type: STATE CONDUCTED FCE / ON-SITE

Date achieved: 990720
Penalty amount: 000000000

Historical Compliance Minor Sources:

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1004 Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1101

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1102

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1102 Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1103
Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1104

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1201
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1202

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1202 Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1203 Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1204

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1301

EDR ID Number

1000138187

Direction Distance Elevation

EDR ID Number Site Database(s) **EPA ID Number**

F.O. DAY BITUMINOUS CO. (Continued)

1000138187

Air prog code hist file: SIP SOURCE

IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS State compliance status:

Hist compliance date: 1301 Air prog code hist file: **NSPS**

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1302 Air prog code hist file: **NSPS**

IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS State compliance status:

Hist compliance date: 1303

SIP SOURCE Air prog code hist file:

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1004

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1101 Air prog code hist file: **NSPS**

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1103

SIP SOURCE Air prog code hist file:

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1104 **NSPS** Air prog code hist file:

IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS State compliance status:

Hist compliance date: 1201 Air prog code hist file: **NSPS**

IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS State compliance status:

Hist compliance date: 1203

Air prog code hist file: SIP SOURCE

IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS State compliance status:

Hist compliance date: 1204 **NSPS** Air prog code hist file:

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1302

Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

Hist compliance date: 1303 **NSPS** Air prog code hist file:

Direction Distance

Elevation Site Database(s) EPA ID Number

 20
 BRICKMAN GROUP LTD.
 MD OCPCASES
 \$104600686

 NE
 14119 A TRAVILAH RD.
 N/A

NE 14119 A TRAVILAH RD. < 1/8 ROCKVILLE, MD 20850

0.012 mi. 61 ft.

Relative: OCP:

Lower Facility ID: 97-0970MO2

Facility Status/Code: CLOSED/Soil Contamination - Residential Heating Oil

 Actual:
 Date Open:
 11/22/1996

 445 ft.
 Date Closed:
 01/30/1997

Release: YES
Cleanup: YES
Registration Number: Not reported

21 EDR US Hist Cleaners 1014992470
NNE 14119 TRAVILAH RD N/A

NNE 14119 TRAVILAH RD < 1/8 ROCKVILLE, MD 20850

0.057 mi. 302 ft.

Relative: EDR Historical Cleaners:

Lower Name: CLASSIC CLEANERS

Year: 2001

Actual: Address: 14119 TRAVILAH RD 436 ft.

Name: CLASSIC CLEANERS

Year: 2002

Address: 14119 TRAVILAH RD

Name: CLASSIC CLEANERS

Year: 2005

Address: 14119 TRAVILAH RD

Name: CLASSIC CLEANERS

Year: 2006

Address: 14119 TRAVILAH RD

Name: CLASSIC CLEANERS

Year: 2007

Address: 14119 TRAVILAH RD

Name: CLASSIC CLEANERS

Year: 2008

Address: 14119 TRAVILAH RD

Name: CLASSIC CLEANERS

Year: 2010

Address: 14119 TRAVILAH RD

Name: CLASSIC CLEANERS

Year: 2011

Address: 14119 TRAVILAH RD

Name: CLASSIC CLEANERS

Year: 2012

Address: 14119 TRAVILAH RD

EDR ID Number

Direction Distance

Elevation Site Database(s) EPA ID Number

22 RYAN HOMES MD OCPCASES \$104600875 West 13709 VALLEY OAK RD. N/A

West 13709 VALLEY OAK RD. < 1/8 POTOMAC, MD 20878

0.059 mi. 310 ft.

Relative: OCP:

Lower Facility ID: 97-1179MO2

Facility Status/Code: CLOSED/Dumping

 Actual:
 Date Open:
 12/23/1996

 401 ft.
 Date Closed:
 12/23/1996

 Release:
 NO

Cleanup: NO

Registration Number: Not reported

B23 FLING EXCAVATING CO., INC. MD UST U004011790

South 13109 PINEY MEETING HOUSE ROAD MD Financial Assurance N/A

< 1/8 ROCKVILLE, MD 20854

0.069 mi.

Actual:

405 ft.

365 ft. Site 1 of 2 in cluster B

Relative: UST:

Lower Facility Id: 1466

Oper Name: Dennis Fling
Form Name: Dennis Fling

Form Title: Vice President Operations

Form Date: 07/17/1997 Owner Id: 1041

Owner:

Owner Name: Fling Excavating Co. Inc.

Owner Address: 13109 Piney Meeting House Road

Owner City: Rockville
Owner State: MD
Owner Zip: 20854
Owner Phone: Not reported
Owner Contact: Dennis Fling

Tanks:

Tank ID:

Tank Status: Permanently Out of Use

Tank Capacity: 8000
Substance Description: Diesel
Tank Compartment: False
Compartment Compartment: A

Date Intalled: 01/01/1990

Tank Material Desc: Asphalt Coated or Bare Steel
Pipe Material Desc: Bare or Galvanized Steel

MD Financial Assurance 2:

2 Region: Facility ID: 1466 Self Insured: False Insurance: False Risk Retention Group: False Guarantee: False Surety Bonds: False Letter of Credit: False **EDR ID Number**

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

FLING EXCAVATING CO., INC. (Continued)

U004011790

N/A

State Fund: False Other Finance: False Not reported Finacnce Comments: FR Not Listed: False

B24 MD OCPCASES \$104599776 **FLING EXCAVATING CO**

South 13109 PINEY MTG.HOUSE RD < 1/8 ROCKVILLE, MD 20854

0.077 mi.

404 ft. Site 2 of 2 in cluster B

OCP: Relative:

Lower Facility ID: 96-2377MO2 Facility Status/Code: CLOSED/ Actual: Date Open: 06/18/1996 404 ft. Date Closed: 08/16/1996 Release: Not reported

Cleanup: Not reported Registration Number: Not reported

25 **EDR US Hist Cleaners** 1014976663

N/A

NNW 11214 POTOMAC OAKS DR ROCKVILLE, MD 20850 < 1/8

0.091 mi. 478 ft.

EDR Historical Cleaners: Relative:

SWASHINI FOODS INC Name: Lower

Year: 2006

Actual: Address: 11214 POTOMAC OAKS DR 439 ft.

C26 JOE'S MARKET/MINN-VU-HOANG/MINNBILT REALTY **MD OCPCASES** S104598293 N/A

North 14050 TRAVILAH RD ROCKVILLE, MD 20850 < 1/8

0.102 mi.

541 ft. Site 1 of 2 in cluster C

OCP: Relative:

Lower Facility ID: 9-1790MO2

Facility Status/Code: CLOSED/ Actual: Date Open: 05/12/1989 440 ft. Date Closed: 06/15/1989

Release: Not reported Cleanup: Not reported Registration Number: Not reported

Facility ID: 96-0618MO2 Facility Status/Code: CLOSED/ Date Open: 09/28/1995 Date Closed: 10/23/1996 Release: Not reported Cleanup: Not reported Registration Number: Not reported

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

C27 **SALON SAMINA** MD UST U004151339

North 14050 TRAVILAH ROAD **MD Financial Assurance** N/A

ROCKVILLE, MD 20850 < 1/8

0.102 mi.

541 ft. Site 2 of 2 in cluster C

Relative: Lower

440 ft.

UST: Facility Id: 19908

Oper Name: Not reported Actual: Form Name: Sean S. Form Title: Not reported Form Date: 01/27/2010

Owner:

Owner Id:

Owner Name: Parviz Tavakoli Owner Address: 14050 Travilah Road

13765

Owner City: Rockville Owner State: MD 20850 Owner Zip: Owner Phone: () -Owner Contact: Not reported

Tanks:

Tank ID:

Tank Status: **Permanently Out Of Use**

Tank Capacity: 3000 Substance Description: Diesel Tank Compartment: False Compartment Compartment: Α

Date Intalled: 01/27/1950

Tank Material Desc: Asphalt Coated or Bare Steel

Pipe Material Desc: Not Listed

MD Financial Assurance 2:

Region: Facility ID: 19908 Self Insured: False Insurance: False Risk Retention Group: False False Guarantee: Surety Bonds: False Letter of Credit: False State Fund: False Other Finance: False Finacnce Comments: Not reported FR Not Listed: False

VERGIL KIDWELL RESIDENCE MD OCPCASES S105508548 28 N/A

NNW 14004 TRAVILAH RD 1/8-1/4 ROCKVILLE, MD 20850

0.155 mi. 821 ft.

OCP: Relative:

Facility ID: 02-0499MO1 Lower

Facility Status/Code: CLOSED/Soil Contamination - Motor/Lube Oil

Actual: Date Open: 10/09/2001

434 ft.

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

VERGIL KIDWELL RESIDENCE (Continued)

S105508548

Date Closed: 05/08/2002 Release: YES Cleanup: YES Registration Number: Not reported

BRENDA LEONE MD OCPCASES \$104604799 29 N/A

North 22 STANMOOR CT 1/8-1/4 POTOMAC, MD 20854

0.164 mi. 864 ft.

OCP: Relative:

Lower Facility ID: 94-3452MO Facility Status/Code: CLOSED/ Actual: Date Open: 06/10/1994 429 ft. Date Closed: 08/25/1994

Release: Not reported Cleanup: Not reported Registration Number: Not reported

94-3452MO Facility ID: Facility Status/Code: CLOSED/ Date Open: 06/10/1994 Date Closed: 08/25/1994 Release: Not reported Cleanup: Not reported Registration Number: Not reported

30 **PEPCO SPILL** MD OCPCASES S104594768

14330 CARTWRIGHT WAY North 1/4-1/2 **GAITHERSBURG, MD**

0.290 mi. 1532 ft.

OCP: Relative:

Facility ID: Lower 98-2373MO2

Facility Status/Code: CLOSED/Other (Specify)

Actual: Date Open: 05/13/1998 411 ft. Date Closed: 06/08/1998

Release: YES YES Cleanup: Registration Number: Not reported

MD OCPCASES **CLASSIC COMMUNITY CORP** S105040524 31 N/A

WNW 13800 TRIVALAH RD 1/4-1/2 GAITHERSBURG, MD 20850

0.325 mi. 1714 ft.

OCP: Relative:

Facility ID: 01-1702MO1 Lower

Facility Status/Code: CLOSED/Tank Closure - Motor/Lube Oil

Actual: Date Open: 05/30/2001 388 ft. Date Closed: 06/25/2001 Release: YES

N/A

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

CLASSIC COMMUNITY CORP (Continued)

Cleanup: YES Registration Number: 12450

PEPCO SPILL MD OCPCASES \$105899248 32 ΝE

59 CALABASH CT N/A

1/4-1/2 ROCKVILLE, MD 20850

0.352 mi. 1859 ft.

400 ft.

OCP: Relative:

Facility ID: 03-1926MO1 Lower

Facility Status/Code: CLOSED/Surface Spill from UST - Commercial Heating Oil

Actual: Date Open: 06/05/2003

Date Closed: 07/23/2003 Release: YES YES Cleanup:

Registration Number: Not reported

D33 **GEBAUT SAMEN** MD OCPCASES S104607205

13761 TRAVILAH RD N/A

ROCKVILLE, MD 20850 1/4-1/2

0.360 mi.

West

1900 ft. Site 1 of 2 in cluster D

OCP: Relative:

Facility ID: 95-2651MO2 Lower Facility Status/Code: CLOSED/

Actual: Date Open: 06/09/1995 366 ft. Date Closed: 06/22/1995

> Release: Not reported Cleanup: Not reported Registration Number: Not reported

S105583919 D34 MILTON JOHNSON/PRIVATE RESIDENCE MD OCPCASES N/A

West 13760 TRAVILAH RD GAITHERSBURG, MD 20850 1/4-1/2

0.365 mi.

1927 ft. Site 2 of 2 in cluster D

OCP: Relative:

Facility ID: 90-1174MO Lower CLOSED/

Facility Status/Code: Actual: Date Open: 12/21/1989 365 ft.

Date Closed: 05/16/1990 Not reported Release: Cleanup: Not reported Registration Number: Not reported

S105040524

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

35 **PETRO SPILL** MD OCPCASES S105709263 NE 14194 TRAVILAH RD N/A

1/4-1/2 ROCKVILLE, MD 20854

0.380 mi. 2007 ft.

OCP: Relative:

Facility ID: Higher 03-0728MO1

Facility Status/Code: CLOSED/Transfer Accident - Residential Heating Oil

Actual: Date Open: 12/02/2002 456 ft. Date Closed: 07/23/2003 Release: YES

> Cleanup: YES Registration Number: Not reported

E36 **GRIFFITH TRUCKING** MD OCPCASES S104598853 West 13753 TRAVILAH RD N/A

1/4-1/2 **ROCKVILLE, MD 20850**

0.392 mi.

Site 1 of 2 in cluster E 2071 ft.

OCP: Relative:

Facility ID: 96-1319MO2 Lower

Facility Status/Code: CLOSED/ Actual: Date Open: 01/05/1996 355 ft. 08/09/1996 Date Closed:

Release: Not reported Not reported Cleanup: Registration Number: Not reported

E37 JOHNSON HYDRO SEEDING MD OCPCASES

West 13751 TRAVILAH RD 1/4-1/2 ROCKVILLE, MD 20850 0.403 mi.

2128 ft. Site 2 of 2 in cluster E

OCP: Relative:

Facility ID: 96-0221MO2 Lower

Facility Status/Code: CLOSED/ Actual: Date Open: 08/07/1995 351 ft. Date Closed: 08/15/1995 Release: Not reported

> Not reported Registration Number: 107

Historical UST:

Cleanup:

Facility ID: 3009025 Tank ID: 001 Age: 27 Capacity: 250 Tank Status: Removed Used Oil Product:

S104632663

N/A

MD HIST UST

Direction Distance

Elevation Site Database(s) **EPA ID Number**

F38 **TRAVILAH GROVE** MD VCP S111861901 MD LRP N/A

NE 14211-14219 TRAVILAH ROAD 1/4-1/2 ROCKVILLE, MD 20850

0.442 mi.

2336 ft. Site 1 of 2 in cluster F VCP:

Relative:

Higher

Applicants Name: Travilah Grove LLC

Applicants Address: 15215 Shady Grove Road' Suite 201'

Actual: Applicants City: Rockville 460 ft. Applicants Zip: 20850

> Party Status: Inculpable Person RAP accepted on: Not reported Sign posted on: Not reported Date withdrawn: Not reported Application submitted on: 05/04/2012 Application accepted on: Not reported Determination: Not reported Date issued: Not reported

MD LRP:

Factsheet URL: No Fact Sheet Available.

Voluntary Cleanup Program: Yes On State Master List: No **Brownfield Assesment Complete:** No NPL: No Federal Facility:

Alias: Rickman Property; Travilah Trading Company, Travilah Recovery

Industries, Inc.

No

No

Groundwater: No

MD Num: Not reported

Assessment On-Going: No Remediation On-Going: No Withdrawn: No Determination Issued: No **GW Chlorinated:** No GW Petroleum: No **GW Metals:** No **GW Pesticides:** No GW PCB: No **GW PAH:** No Soil Chlorinated: No Soil Metals: No Soil Pesticides: No Soil PCB: No Soil PAH: No Soil Petroleum: No Sediment Chlorinated: No Sediment Petroleum: No Sediment Metals: No Sediment Pesticides: No Sediment PCB: No Sediment PAH: No SW Chlorinated: No

SW Pesticides: No SW PCB: No SW PAH: No

SW Petroleum:

SW Metals:

EDR ID Number

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

TRAVILAH GROVE (Continued) S111861901

Site Assessment: No

158138.55040000001 Point X(GIS Field): Point Y(GIS Field): 381696.37569999998

95-1435MO1

F39 **RICKMAN LLC** MD OCPCASES S103169282 14215 TRAVILAH RD ΝE **MD HIST LUST** N/A **MD HIST UST**

1/4-1/2 ROCKVILLE, MD 20850

0.454 mi.

2396 ft. Site 2 of 2 in cluster F

OCP: Relative:

Facility ID: Higher

Facility Status/Code: CLOSED/Tank Closure - Motor/Lube Oil

Actual: Date Open: 12/16/1994 462 ft. Date Closed: 12/02/1999

Release: YES Cleanup: YES Registration Number: 10596

95-2137MO2 Facility ID: Facility Status/Code: CLOSED/ Date Open: 03/28/1995 Date Closed: 05/04/1995 Not reported Release: Cleanup: Not reported Registration Number: 10596

Facility ID: 12-0194MO

Facility Status/Code: OPEN/Soil Contamination - Motor/Lube Oil

Date Open: 09/26/2011 Date Closed: Not reported Release: YES

YES Cleanup: 10596 Registration Number:

Historical LUST:

Recover Type: Monitoring - No active remediation. Sampling of monitoring wells only

County: **MONTGOMERY** 95-1435MO Case Number: Open/Closed: **OPEN**

Historical UST:

Facility ID: 6008671 Tank ID: 001 Age: 10,000 Capacity: Removed Tank Status: Product: Diesel

Facility ID: 6008671 002 Tank ID: 16 Age: Capacity: 1,000 Tank Status: Removed Product: Diesel

Facility ID: 6008671 Map ID MAP FINDINGS Direction

Distance
Elevation Site Data

Database(s) EPA ID Number

RICKMAN LLC (Continued)

Tank ID: 003
Age: 16
Capacity: 1,000
Tank Status: Removed
Product: Diesel

Facility ID: 6008671
Tank ID: 010
Age: 5
Capacity: 10,000
Tank Status: Currently in use
Product: Gasoline

S103169282

EDR ID Number

Count: 0 records. ORPHAN SUMMARY

City EDR ID Site Name Site Address Zip Database(s)

NO SITES FOUND

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/25/2013 Source: EPA
Date Data Arrived at EDR: 11/11/2013 Telephone: N/A

Date Made Active in Reports: 01/28/2014 Last EDR Contact: 01/21/2014

Number of Days to Update: 78 Next Scheduled EDR Contact: 04/21/2014
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources

EPA's Environmental Photographic Interpretation Center (EPIC)

Telephone: 202-564-7333

EPA Region 1 EPA Region 6

Telephone 617-918-1143 Telephone: 214-655-6659

EPA Region 3 EPA Region 7

Telephone 215-814-5418 Telephone: 913-551-7247

EPA Region 4 EPA Region 8

Telephone 404-562-8033 Telephone: 303-312-6774

EPA Region 5 EPA Region 9

Telephone 312-886-6686 Telephone: 415-947-4246

EPA Region 10

Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/25/2013 Source: EPA
Date Data Arrived at EDR: 11/11/2013 Telephone: N/A

Number of Days to Update: 78 Next Scheduled EDR Contact: 04/21/2014
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991 Date Data Arrived at EDR: 02/02/1994 Date Made Active in Reports: 03/30/1994

Number of Days to Update: 56

Source: EPA Telephone: 202-564-4267 Last EDR Contact: 08/15/2011

Next Scheduled EDR Contact: 11/28/2011 Data Release Frequency: No Update Planned

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/25/2013 Date Data Arrived at EDR: 11/11/2013 Date Made Active in Reports: 01/28/2014

Number of Days to Update: 78

Source: EPA Telephone: N/A

Last EDR Contact: 01/09/2014

Next Scheduled EDR Contact: 04/21/2014 Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014

Number of Days to Update: 94

Source: EPA Telephone: 703-412-9810 Last EDR Contact: 02/28/2014

Next Scheduled EDR Contact: 06/09/2014 Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/31/2013 Date Data Arrived at EDR: 07/08/2013 Date Made Active in Reports: 12/06/2013

Number of Days to Update: 151

Source: Environmental Protection Agency

Telephone: 703-603-8704 Last EDR Contact: 01/10/2014

Next Scheduled EDR Contact: 04/21/2014 Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/25/2013 Date Data Arrived at EDR: 11/11/2013 Date Made Active in Reports: 02/13/2014

Number of Days to Update: 94

Source: EPA Telephone: 703-412-9810 Last EDR Contact: 02/28/2014

Next Scheduled EDR Contact: 06/09/2014 Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/10/2013 Date Data Arrived at EDR: 10/02/2013 Date Made Active in Reports: 12/16/2013

Number of Days to Update: 75

Source: EPA

Telephone: 800-424-9346 Last EDR Contact: 03/13/2014

Next Scheduled EDR Contact: 07/14/2014 Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 09/10/2013 Date Data Arrived at EDR: 10/02/2013 Date Made Active in Reports: 12/16/2013

Number of Days to Update: 75

Source: Environmental Protection Agency

Telephone: 800-438-2474 Last EDR Contact: 03/13/2014

Next Scheduled EDR Contact: 07/14/2014 Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/10/2013 Date Data Arrived at EDR: 10/02/2013 Date Made Active in Reports: 12/16/2013

Number of Days to Update: 75

Source: Environmental Protection Agency

Telephone: 800-438-2474 Last EDR Contact: 03/13/2014

Next Scheduled EDR Contact: 07/14/2014 Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 09/10/2013 Date Data Arrived at EDR: 10/02/2013 Date Made Active in Reports: 12/16/2013

Number of Days to Update: 75

Source: Environmental Protection Agency

Telephone: 800-438-2474 Last EDR Contact: 03/13/2014

Next Scheduled EDR Contact: 07/14/2014 Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/10/2013 Date Data Arrived at EDR: 10/02/2013 Date Made Active in Reports: 12/16/2013

Number of Days to Update: 75

Source: Environmental Protection Agency

Telephone: 800-438-2474 Last EDR Contact: 03/13/2014

Next Scheduled EDR Contact: 07/14/2014 Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 12/17/2013 Date Data Arrived at EDR: 01/14/2014 Date Made Active in Reports: 01/28/2014

Number of Days to Update: 14

Source: Environmental Protection Agency

Telephone: 703-603-0695 Last EDR Contact: 03/10/2014

Next Scheduled EDR Contact: 06/23/2014 Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 12/17/2013 Date Data Arrived at EDR: 01/14/2014 Date Made Active in Reports: 01/28/2014

Number of Days to Update: 14

Source: Environmental Protection Agency

Telephone: 703-603-0695 Last EDR Contact: 03/10/2014

Next Scheduled EDR Contact: 06/23/2014 Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 11/20/2013 Date Data Arrived at EDR: 11/21/2013 Date Made Active in Reports: 02/24/2014

Number of Days to Update: 95

Source: Department of the Navy Telephone: 843-820-7326 Last EDR Contact: 02/14/2014

Next Scheduled EDR Contact: 06/02/2014 Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/30/2013 Date Data Arrived at EDR: 10/01/2013 Date Made Active in Reports: 12/06/2013

Number of Days to Update: 66

Source: National Response Center, United States Coast Guard

Telephone: 202-267-2180 Last EDR Contact: 02/07/2014

Next Scheduled EDR Contact: 04/14/2014 Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: Notice of Potential Hazardous Waste Sites

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 10/01/2009 Date Data Arrived at EDR: 12/11/2009 Date Made Active in Reports: 12/14/2009

Number of Days to Update: 3

Source: Department of the Environment

Telephone: 410-537-3000 Last EDR Contact: 03/11/2014

Next Scheduled EDR Contact: 05/26/2014 Data Release Frequency: Semi-Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Permitted Solid Waste Disposal Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 12/31/2013 Date Data Arrived at EDR: 02/06/2014 Date Made Active in Reports: 03/14/2014

Number of Days to Update: 36

Source: Department of the Environment

Telephone: 410-537-3375 Last EDR Contact: 11/04/2013

Next Scheduled EDR Contact: 02/17/2014 Data Release Frequency: Annually

State and tribal leaking storage tank lists

OCPCASES: Oil Control Program Cases

Cases monitored by the Oil Control Program. these cases can be leaking underground storage tanks and other belowground releases, leaking aboveground storage tanks, spills and inspections.

Date of Government Version: 06/30/2013 Date Data Arrived at EDR: 07/12/2013 Date Made Active in Reports: 08/26/2013

Number of Days to Update: 45

Source: Department of Environment Telephone: 410-537-3433 Last EDR Contact: 01/03/2014

Next Scheduled EDR Contact: 04/21/2014 Data Release Frequency: Semi-Annually

HIST LUST: Recovery Sites

In 1999, the Department of the Environment stopped adding new sites to its Recovery Sites Database. Current leaking underground storage tank information maybe found in the OCPCASES database.

Date of Government Version: 03/01/1999 Date Data Arrived at EDR: 03/22/1999 Date Made Active in Reports: 04/16/1999

Number of Days to Update: 25

Source: Department of the Environment

Telephone: 410-537-3433 Last EDR Contact: 02/19/2001 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 03/01/2013 Date Data Arrived at EDR: 03/01/2013 Date Made Active in Reports: 04/12/2013

Number of Days to Update: 42

Source: Environmental Protection Agency

Telephone: 415-972-3372 Last EDR Contact: 01/27/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 08/27/2013 Date Data Arrived at EDR: 08/27/2013 Date Made Active in Reports: 11/01/2013

Number of Days to Update: 66

Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 01/27/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/06/2013 Date Data Arrived at EDR: 11/07/2013 Date Made Active in Reports: 12/06/2013

Number of Days to Update: 29

Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 01/27/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/27/2012 Date Data Arrived at EDR: 08/28/2012 Date Made Active in Reports: 10/16/2012

Number of Days to Update: 49

Source: EPA Region 8 Telephone: 303-312-6271 Last EDR Contact: 01/27/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 02/13/2014 Date Data Arrived at EDR: 02/14/2014 Date Made Active in Reports: 02/24/2014

Number of Days to Update: 10

Source: EPA, Region 5 Telephone: 312-886-7439 Last EDR Contact: 01/27/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/01/2013 Date Data Arrived at EDR: 05/01/2013 Date Made Active in Reports: 11/01/2013

Number of Days to Update: 184

Source: EPA Region 1 Telephone: 617-918-1313 Last EDR Contact: 01/30/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 11/21/2013 Date Data Arrived at EDR: 11/26/2013 Date Made Active in Reports: 02/24/2014

Number of Days to Update: 90

Source: EPA Region 4 Telephone: 404-562-8677 Last EDR Contact: 01/27/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Semi-Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/12/2011 Date Data Arrived at EDR: 09/13/2011 Date Made Active in Reports: 11/11/2011

Number of Days to Update: 59

Source: EPA Region 6 Telephone: 214-665-6597 Last EDR Contact: 02/21/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Varies

State and tribal registered storage tank lists

UST: Registered Underground Storage Tank List

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 06/30/2013 Date Data Arrived at EDR: 07/12/2013 Date Made Active in Reports: 08/26/2013

Number of Days to Update: 45

Source: Department of the Environment Telephone: 410-537-3433 Last EDR Contact: 02/27/2014

Next Scheduled EDR Contact: 04/28/2014 Data Release Frequency: Varies

AST: Permitted Aboveground Storage Tanks Registered Aboveground Storage Tanks.

Date of Government Version: 08/23/2013 Date Data Arrived at EDR: 08/27/2013 Date Made Active in Reports: 10/01/2013

Number of Days to Update: 35

Source: Department of The Environment

Telephone: 410-537-3000 Last EDR Contact: 01/13/2014

Next Scheduled EDR Contact: 04/28/2014 Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/01/2013 Date Data Arrived at EDR: 05/01/2013 Date Made Active in Reports: 01/27/2014

Number of Days to Update: 271

Source: EPA, Region 1 Telephone: 617-918-1313 Last EDR Contact: 01/30/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 11/21/2013 Date Data Arrived at EDR: 11/26/2013 Date Made Active in Reports: 02/24/2014

Number of Days to Update: 90

Source: EPA Region 4 Telephone: 404-562-9424 Last EDR Contact: 01/27/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 02/13/2014 Date Data Arrived at EDR: 02/14/2014 Date Made Active in Reports: 02/24/2014

Number of Days to Update: 10

Source: EPA Region 5 Telephone: 312-886-6136 Last EDR Contact: 01/27/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 01/29/2014 Date Data Arrived at EDR: 01/29/2014 Date Made Active in Reports: 03/12/2014

Number of Days to Update: 42

Source: EPA Region 6 Telephone: 214-665-7591 Last EDR Contact: 01/27/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 12/31/2012 Date Data Arrived at EDR: 02/28/2013 Date Made Active in Reports: 04/12/2013

Number of Days to Update: 43

Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 01/27/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 07/29/2013 Date Data Arrived at EDR: 08/01/2013 Date Made Active in Reports: 11/01/2013

Number of Days to Update: 92

Source: EPA Region 8 Telephone: 303-312-6137 Last EDR Contact: 01/27/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 07/29/2013 Date Data Arrived at EDR: 07/30/2013 Date Made Active in Reports: 12/06/2013

Number of Days to Update: 129

Source: EPA Region 9 Telephone: 415-972-3368 Last EDR Contact: 01/27/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 02/05/2013 Date Data Arrived at EDR: 02/06/2013 Date Made Active in Reports: 04/12/2013

Number of Days to Update: 65

Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 01/27/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Quarterly

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010 Date Data Arrived at EDR: 02/16/2010 Date Made Active in Reports: 04/12/2010

Number of Days to Update: 55

Source: FEMA

Telephone: 202-646-5797 Last EDR Contact: 01/13/2014

Next Scheduled EDR Contact: 04/28/2014 Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Controls Site listing

Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 11/10/2008 Date Data Arrived at EDR: 11/21/2008 Date Made Active in Reports: 12/17/2008

Number of Days to Update: 26

Source: Department of the Environment

Telephone: 410-537-3422 Last EDR Contact: 03/17/2014

Next Scheduled EDR Contact: 06/30/2014 Data Release Frequency: Varies

INST CONTROL: Voluntary Cleanup Program Applicants/Participants

Sites included in the Voluntary Cleanup Program Applicants/Participants listing that have Deed Restrictions.

Date of Government Version: 02/21/2013 Date Data Arrived at EDR: 03/28/2013 Date Made Active in Reports: 04/29/2013

Number of Days to Update: 32

Source: Department of the Environment

Telephone: 410-537-3493 Last EDR Contact: 03/21/2014

Next Scheduled EDR Contact: 06/30/2014 Data Release Frequency: Semi-Annually

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Program Applicants/Participants

The Voluntary Cleanup Program, administrated by the Dept. of the Environment, streamlines the environmental cleanup process for sites, usually industrial or commercial properties, that are contaminated, or perceived to be contaminated, by hazardous substances. Developers and lenders are provided with certain limitations on liability and participants in the program are provided certainty in the process by knowing exactly what will be required.

Date of Government Version: 02/01/2013 Date Data Arrived at EDR: 03/28/2013 Date Made Active in Reports: 04/29/2013

Number of Days to Update: 32

Source: Dept. of the Environment Telephone: 410-537-3000 Last EDR Contact: 03/21/2014

Next Scheduled EDR Contact: 06/30/2014 Data Release Frequency: Semi-Annually

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 09/17/2013 Date Data Arrived at EDR: 10/01/2013 Date Made Active in Reports: 12/06/2013

Number of Days to Update: 66

Source: EPA, Region 1 Telephone: 617-918-1102 Last EDR Contact: 04/01/2014

Next Scheduled EDR Contact: 07/14/2014 Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008 Date Data Arrived at EDR: 04/22/2008 Date Made Active in Reports: 05/19/2008

Number of Days to Update: 27

Source: EPA, Region 7 Telephone: 913-551-7365 Last EDR Contact: 04/20/2009

Next Scheduled EDR Contact: 07/20/2009 Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Eligible Brownfields Properties

The Site Assessment Section of the State Superfund Division is responsible for conducting federally funded assessments of eligible brownfields properties. These assessments are undertaken to determine whether there are environmental cleanup requirements at these sites.

Date of Government Version: 07/08/2013 Date Data Arrived at EDR: 09/11/2013 Date Made Active in Reports: 09/25/2013

Number of Days to Update: 14

Source: Department of Environment Telephone: 410-537-3000 Last EDR Contact: 03/14/2014

Next Scheduled EDR Contact: 06/23/2014 Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 09/24/2013 Date Data Arrived at EDR: 09/24/2013 Date Made Active in Reports: 12/06/2013

Number of Days to Update: 73

Source: Environmental Protection Agency Telephone: 202-566-2777 Last EDR Contact: 03/20/2014

Next Scheduled EDR Contact: 07/07/2014 Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009 Date Data Arrived at EDR: 05/07/2009 Date Made Active in Reports: 09/21/2009

Number of Days to Update: 137

Source: EPA, Region 9 Telephone: 415-947-4219 Last EDR Contact: 01/27/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985 Date Data Arrived at EDR: 08/09/2004 Date Made Active in Reports: 09/17/2004

Number of Days to Update: 39

Source: Environmental Protection Agency

Telephone: 800-424-9346 Last EDR Contact: 06/09/2004 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

SWRCY: Recycling Directory
A listing of recycling facilities.

Date of Government Version: 12/19/2013 Date Data Arrived at EDR: 12/24/2013 Date Made Active in Reports: 02/14/2014

Number of Days to Update: 52

Source: Department of the Environment

Telephone: 410-631-3314 Last EDR Contact: 03/24/2014

Next Scheduled EDR Contact: 07/07/2014 Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998 Date Data Arrived at EDR: 12/03/2007 Date Made Active in Reports: 01/24/2008

Number of Days to Update: 52

Source: Environmental Protection Agency

Telephone: 703-308-8245 Last EDR Contact: 11/04/2013

Next Scheduled EDR Contact: 02/17/2014 Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 12/04/2013 Date Data Arrived at EDR: 12/10/2013 Date Made Active in Reports: 02/13/2014

Number of Days to Update: 65

Source: Drug Enforcement Administration

Telephone: 202-307-1000 Last EDR Contact: 03/04/2014

Next Scheduled EDR Contact: 06/16/2014 Data Release Frequency: Quarterly

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007 Date Data Arrived at EDR: 11/19/2008 Date Made Active in Reports: 03/30/2009

Number of Days to Update: 131

Source: Drug Enforcement Administration

Telephone: 202-307-1000 Last EDR Contact: 03/04/2014

Next Scheduled EDR Contact: 06/16/2014 Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

Historical UST: Historical UST Registered Database

In 1997 the Department of the Environment sent out registration forms to all the owner's listed in the UST database. Once they got the registration forms back they entered the information into a new UST database. we call this database UST. Because not all owners returned their forms, we kept the old UST database and labeled it HIST UST so that we would not be missing any past UST records. This listing is no longer updated or maintained by the agency. It is current through November 1996.

Date of Government Version: 11/21/1996 Date Data Arrived at EDR: 09/10/1997 Date Made Active in Reports: 10/22/1997

Number of Days to Update: 42

Source: Department of Environment

Telephone: 410-537-3433 Last EDR Contact: 05/15/2000 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/06/2013 Date Data Arrived at EDR: 04/25/2013 Date Made Active in Reports: 05/10/2013

Number of Days to Update: 15

Source: Environmental Protection Agency

Telephone: 202-564-6023 Last EDR Contact: 01/27/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2013 Date Data Arrived at EDR: 01/03/2014 Date Made Active in Reports: 02/24/2014

Number of Days to Update: 52

Source: U.S. Department of Transportation

Telephone: 202-366-4555 Last EDR Contact: 04/01/2014

Next Scheduled EDR Contact: 07/14/2014 Data Release Frequency: Annually

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 07/15/2012 Date Data Arrived at EDR: 01/03/2013 Date Made Active in Reports: 03/06/2013

Number of Days to Update: 62

Source: FirstSearch Telephone: N/A

Last EDR Contact: 01/03/2013 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 09/10/2013 Date Data Arrived at EDR: 10/02/2013 Date Made Active in Reports: 12/16/2013

Number of Days to Update: 75

Source: Environmental Protection Agency

Telephone: 800-438-2474 Last EDR Contact: 03/13/2014

Next Scheduled EDR Contact: 07/14/2014 Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012 Date Data Arrived at EDR: 08/07/2012 Date Made Active in Reports: 09/18/2012

Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety

Telephone: 202-366-4595 Last EDR Contact: 02/06/2014

Next Scheduled EDR Contact: 05/19/2014

Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 11/10/2006 Date Made Active in Reports: 01/11/2007

Number of Days to Update: 62

Source: USGS Telephone: 888-275-8747

Last EDR Contact: 01/15/2014

Next Scheduled EDR Contact: 04/28/2014 Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2011 Date Data Arrived at EDR: 02/26/2013 Date Made Active in Reports: 03/13/2013

Number of Days to Update: 15

Source: U.S. Army Corps of Engineers

Telephone: 202-528-4285 Last EDR Contact: 03/10/2014

Next Scheduled EDR Contact: 06/23/2014 Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2013 Date Data Arrived at EDR: 01/24/2014 Date Made Active in Reports: 02/24/2014

Number of Days to Update: 31

Source: Department of Justice, Consent Decree Library

Telephone: Varies

Last EDR Contact: 03/27/2014

Next Scheduled EDR Contact: 07/14/2014 Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013 Date Data Arrived at EDR: 12/12/2013 Date Made Active in Reports: 02/24/2014

Number of Days to Update: 74

Source: EPA

Telephone: 703-416-0223 Last EDR Contact: 03/11/2014

Next Scheduled EDR Contact: 06/23/2014 Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010 Date Data Arrived at EDR: 10/07/2011 Date Made Active in Reports: 03/01/2012

Number of Days to Update: 146

Source: Department of Energy Telephone: 505-845-0011 Last EDR Contact: 02/25/2014

Next Scheduled EDR Contact: 06/09/2014 Data Release Frequency: Varies

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/01/2013 Date Data Arrived at EDR: 09/05/2013 Date Made Active in Reports: 10/03/2013

Number of Days to Update: 28

Source: Department of Labor, Mine Safety and Health Administration

Telephone: 303-231-5959 Last EDR Contact: 03/05/2014

Next Scheduled EDR Contact: 06/16/2014 Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2011 Date Data Arrived at EDR: 07/31/2013 Date Made Active in Reports: 09/13/2013

Number of Days to Update: 44

Source: EPA

Telephone: 202-566-0250 Last EDR Contact: 02/26/2014

Next Scheduled EDR Contact: 06/09/2014 Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site

Date of Government Version: 12/31/2006 Date Data Arrived at EDR: 09/29/2010 Date Made Active in Reports: 12/02/2010

Number of Days to Update: 64

Source: EPA

Telephone: 202-260-5521 Last EDR Contact: 03/28/2014

Next Scheduled EDR Contact: 07/07/2014 Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA,

TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009

Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances

Telephone: 202-566-1667 Last EDR Contact: 02/24/2014

Next Scheduled EDR Contact: 06/09/2014 Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009

Number of Days to Update: 25

Source: EPA Telephone: 202-566-1667

Last EDR Contact: 02/24/2014

Next Scheduled EDR Contact: 06/09/2014 Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 03/01/2007 Date Made Active in Reports: 04/10/2007

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 12/17/2007

Next Scheduled EDR Contact: 03/17/2008 Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 03/01/2007 Date Made Active in Reports: 04/10/2007

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 12/17/2008

Next Scheduled EDR Contact: 03/17/2008 Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009 Date Data Arrived at EDR: 12/10/2010 Date Made Active in Reports: 02/25/2011

Number of Days to Update: 77

Source: EPA

Telephone: 202-564-4203 Last EDR Contact: 01/28/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/20/2011 Date Data Arrived at EDR: 11/10/2011 Date Made Active in Reports: 01/10/2012

Number of Days to Update: 61

Source: Environmental Protection Agency

Telephone: 202-564-5088 Last EDR Contact: 10/09/2014

Next Scheduled EDR Contact: 04/28/2014 Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2013 Date Data Arrived at EDR: 07/17/2013 Date Made Active in Reports: 11/01/2013

Number of Days to Update: 107

Source: EPA

Telephone: 202-566-0500 Last EDR Contact: 01/28/2014

Next Scheduled EDR Contact: 04/28/2014 Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/22/2013 Date Data Arrived at EDR: 08/02/2013 Date Made Active in Reports: 11/01/2013

Number of Days to Update: 91

Source: Nuclear Regulatory Commission

Telephone: 301-415-7169 Last EDR Contact: 03/10/2014

Next Scheduled EDR Contact: 06/23/2014 Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/09/2014 Date Data Arrived at EDR: 01/10/2014 Date Made Active in Reports: 03/12/2014

Number of Days to Update: 61

Source: Environmental Protection Agency

Telephone: 202-343-9775 Last EDR Contact: 01/10/2014

Next Scheduled EDR Contact: 04/21/2014 Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/18/2013 Date Data Arrived at EDR: 02/27/2014 Date Made Active in Reports: 03/12/2014

Number of Days to Update: 13

Source: EPA

Telephone: (215) 814-5000 Last EDR Contact: 03/14/2014

Next Scheduled EDR Contact: 06/23/2014 Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995 Date Data Arrived at EDR: 07/03/1995 Date Made Active in Reports: 08/07/1995

Number of Days to Update: 35

Source: EPA

Telephone: 202-564-4104 Last EDR Contact: 06/02/2008

Next Scheduled EDR Contact: 09/01/2008 Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/01/2013 Date Data Arrived at EDR: 12/12/2013 Date Made Active in Reports: 02/13/2014

Number of Days to Update: 63

Source: Environmental Protection Agency

Telephone: 202-564-8600 Last EDR Contact: 01/27/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011 Date Data Arrived at EDR: 02/26/2013 Date Made Active in Reports: 04/19/2013

Number of Days to Update: 52

Source: EPA/NTIS Telephone: 800-424-9346 Last EDR Contact: 02/28/2014

Next Scheduled EDR Contact: 06/09/2014 Data Release Frequency: Biennially

UIC: Underground Injection Wells Database

A listing of underground injection well locations. The UIC Program is responsible for regulating the construction, operation, permitting, and closure of injection wells that place fluids underground for storage or disposal.

Date of Government Version: 06/14/2013 Date Data Arrived at EDR: 07/30/2013 Date Made Active in Reports: 08/27/2013

Number of Days to Update: 28

Source: Department of the Environment

Telephone: 410-537-3507 Last EDR Contact: 02/10/2014

Next Scheduled EDR Contact: 05/12/2014 Data Release Frequency: Varies

DRYCLEANERS: Registered Drycleaning Facilities A listing of registered drycleaning facilities.

Date of Government Version: 10/10/2013 Date Data Arrived at EDR: 10/15/2013 Date Made Active in Reports: 11/21/2013

Number of Days to Update: 37

Source: Department of the Environmental

Telephone: 410-537-3220 Last EDR Contact: 01/13/2014

Next Scheduled EDR Contact: 04/28/2014 Data Release Frequency: Varies

NPDES: Wastewater Permit Listing

A listing of wastewater permit locations.

Date of Government Version: 10/31/2013 Date Data Arrived at EDR: 12/11/2013 Date Made Active in Reports: 12/18/2013

Number of Days to Update: 7

Source: Department of the Environment

Telephone: 410-537-3507 Last EDR Contact: 03/11/2014

Next Scheduled EDR Contact: 06/23/2014 Data Release Frequency: Varies

AIRS: Permit and Facility Information Listing

A listing of permitted facilities and emissions information.

Date of Government Version: 12/31/2012 Date Data Arrived at EDR: 12/05/2013 Date Made Active in Reports: 01/08/2014

Number of Days to Update: 34

Source: Department of the Environment

Telephone: 410-537-3220 Last EDR Contact: 01/13/2014

Next Scheduled EDR Contact: 04/28/2014 Data Release Frequency: Varies

LEAD: Lead Inspection Database

The Childhood Lead Poisoning Prevention Program data of lead inspection for the state.

Date of Government Version: 01/13/2014 Date Data Arrived at EDR: 01/14/2014 Date Made Active in Reports: 02/14/2014

Number of Days to Update: 31

Source: Department of Environment, Lead Poisoning Prevention Program

Telephone: 410-537-3000 Last EDR Contact: 03/27/2014

Next Scheduled EDR Contact: 07/14/2014 Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater

than 640 acres.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 12/08/2006 Date Made Active in Reports: 01/11/2007

Number of Days to Update: 34

Source: USGS

Telephone: 202-208-3710 Last EDR Contact: 01/15/2014

Next Scheduled EDR Contact: 04/28/2014 Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas,

Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011 Date Data Arrived at EDR: 03/09/2011 Date Made Active in Reports: 05/02/2011

Number of Days to Update: 54

Source: Environmental Protection Agency

Telephone: 615-532-8599 Last EDR Contact: 01/20/2014

Next Scheduled EDR Contact: 05/05/2014 Data Release Frequency: Varies

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 11/11/2011 Date Data Arrived at EDR: 05/18/2012 Date Made Active in Reports: 05/25/2012

Number of Days to Update: 7

Source: Environmental Protection Agency

Telephone: 703-308-4044 Last EDR Contact: 02/14/2014

Next Scheduled EDR Contact: 05/26/2014 Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001 Date Data Arrived at EDR: 10/27/2010 Date Made Active in Reports: 12/02/2010

Number of Days to Update: 36

Source: American Journal of Public Health

Telephone: 703-305-6451 Last EDR Contact: 12/02/2009 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/29/2013 Date Data Arrived at EDR: 02/14/2013 Date Made Active in Reports: 02/27/2013

Number of Days to Update: 13

Source: Environmental Protection Agency

Telephone: 703-603-8787 Last EDR Contact: 01/03/2014

Next Scheduled EDR Contact: 04/21/2014 Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information.

Date of Government Version: 05/01/2013 Date Data Arrived at EDR: 05/22/2013 Date Made Active in Reports: 06/27/2013

Number of Days to Update: 36

Source: Department of the Environment

Telephone: 410-537-3345 Last EDR Contact: 11/04/2013

Next Scheduled EDR Contact: 02/17/2014 Data Release Frequency: Varies

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 06/30/2013 Date Data Arrived at EDR: 08/13/2013 Date Made Active in Reports: 09/13/2013

Number of Days to Update: 31

Source: Environmental Protection Agency

Telephone: 617-520-3000 Last EDR Contact: 02/10/2014

Next Scheduled EDR Contact: 05/26/2014 Data Release Frequency: Quarterly

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for storage tank sites.

Date of Government Version: 06/30/2013 Date Data Arrived at EDR: 07/12/2013 Date Made Active in Reports: 08/26/2013

Number of Days to Update: 45

Source: Department of the Environment

Telephone: 410-537-3461 Last EDR Contact: 02/27/2014

Next Scheduled EDR Contact: 04/28/2014 Data Release Frequency: Quarterly

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011 Date Data Arrived at EDR: 10/19/2011 Date Made Active in Reports: 01/10/2012

Number of Days to Update: 83

Source: Environmental Protection Agency

Telephone: 202-566-0517 Last EDR Contact: 01/30/2014

Next Scheduled EDR Contact: 05/12/2014

Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 08/17/2010 Date Data Arrived at EDR: 01/03/2011 Date Made Active in Reports: 03/21/2011

Number of Days to Update: 77

Source: Environmental Protection Agency

Telephone: N/A

Last EDR Contact: 03/11/2014

Next Scheduled EDR Contact: 06/23/2014 Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 11/20/2013 Date Data Arrived at EDR: 12/03/2013 Date Made Active in Reports: 02/13/2014

Number of Days to Update: 72

Source: Environmental Protection Agency

Telephone: 202-566-1917 Last EDR Contact: 02/14/2014

Next Scheduled EDR Contact: 06/02/2014 Data Release Frequency: Quarterly

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 08/07/2009 Date Made Active in Reports: 10/22/2009

Number of Days to Update: 76

Source: Department of Energy Telephone: 202-586-8719 Last EDR Contact: 01/13/2014

Next Scheduled EDR Contact: 04/28/2014 Data Release Frequency: Varies

COAL ASH: Coal Ash Disposal Site Listing Coal combustion byproduct site locations.

Date of Government Version: 08/13/2010 Date Data Arrived at EDR: 01/05/2011 Date Made Active in Reports: 01/31/2011

Number of Days to Update: 26

Source: Department of the Environment

Telephone: 410-537-3507 Last EDR Contact: 03/28/2014

Next Scheduled EDR Contact: 07/07/2014 Data Release Frequency: Varies

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 04/15/2013 Date Data Arrived at EDR: 07/03/2013 Date Made Active in Reports: 09/13/2013

Number of Days to Update: 72

Source: EPA

Telephone: 202-564-6023 Last EDR Contact: 01/02/2014

Next Scheduled EDR Contact: 04/14/2014 Data Release Frequency: Quarterly

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 02/06/2006 Date Made Active in Reports: 01/11/2007

Number of Days to Update: 339

Source: U.S. Geological Survey Telephone: 888-275-8747 Last EDR Contact: 01/15/2014

Next Scheduled EDR Contact: 04/28/2014

Data Release Frequency: N/A

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/23/2013 Date Data Arrived at EDR: 11/06/2013 Date Made Active in Reports: 12/06/2013

Number of Days to Update: 30

Source: EPA

Telephone: 202-564-5962 Last EDR Contact: 03/31/2014

Next Scheduled EDR Contact: 07/14/2014 Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data A listing of minor source facilities.

Date of Government Version: 10/23/2013 Date Data Arrived at EDR: 11/06/2013 Date Made Active in Reports: 12/06/2013

Number of Days to Update: 30

Source: EPA

Telephone: 202-564-5962 Last EDR Contact: 03/31/2014

Next Scheduled EDR Contact: 07/14/2014 Data Release Frequency: Annually

LRP: Land Restoration Program

A listing of Land Restoration Program sites. Site types included in the database are: Voluntary Cleanup Program, National Priority List, Brownfields, Site Assessment, Formerly Used Defense Site, State Master List, Non Master List, Groundwater Investigation and Federal Facility.

Date of Government Version: 07/08/2013 Date Data Arrived at EDR: 09/11/2013 Date Made Active in Reports: 09/25/2013

Number of Days to Update: 14

Source: Department of the Environment

Telephone: 410-537-3000 Last EDR Contact: 03/14/2014

Next Scheduled EDR Contact: 06/23/2014 Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A

Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR C

Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A

Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

EDR US Hist Auto Stat: EDR Proprietary Historic Gas Stations - Cole

Date of Government Version: N/A Source: N/A Date Data Arrived at EDR: N/A Telephone: N/A Date Made Active in Reports: N/A Last EDR Contact: N/A

Number of Days to Update: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Proprietary Historic Dry Cleaners - Cole

Date of Government Version: N/A Source: N/A Date Data Arrived at EDR: N/A Telephone: N/A Date Made Active in Reports: N/A Last EDR Contact: N/A

Number of Days to Update: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of the Environment in Maryland from 1995-1999...

Date of Government Version: N/A Date Data Arrived at EDR: 07/01/2013 Date Made Active in Reports: 01/03/2014

Number of Days to Update: 186

Source: Department of the Environment

Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of the Environment in Maryland.

Date of Government Version: N/A Date Data Arrived at EDR: 07/01/2013 Date Made Active in Reports: 01/03/2014

Number of Days to Update: 186

Source: Department of the Environment

Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of the Environment in Maryland.

Date of Government Version: N/A Date Data Arrived at EDR: 07/01/2013 Date Made Active in Reports: 01/16/2014 Number of Days to Update: 199

Source: Department of the Environment

Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013 Date Data Arrived at EDR: 08/19/2013 Date Made Active in Reports: 10/03/2013

Number of Days to Update: 45

Source: Department of Energy & Environmental Protection

Telephone: 860-424-3375 Last EDR Contact: 02/21/2014

Next Scheduled EDR Contact: 06/02/2014 Data Release Frequency: Annually

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2011 Date Data Arrived at EDR: 07/19/2012 Date Made Active in Reports: 08/28/2012

Number of Days to Update: 40

Source: Department of Environmental Protection

Telephone: N/A

Last EDR Contact: 01/17/2014

Next Scheduled EDR Contact: 04/28/2014 Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD

facility

Date of Government Version: 12/31/2013 Date Data Arrived at EDR: 02/07/2014 Date Made Active in Reports: 03/31/2014

Number of Days to Update: 52

Source: Department of Environmental Conservation

Telephone: 518-402-8651 Last EDR Contact: 03/12/2014

Next Scheduled EDR Contact: 05/19/2014 Data Release Frequency: Annually

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2012 Date Data Arrived at EDR: 07/24/2013 Date Made Active in Reports: 08/19/2013

Number of Days to Update: 26

Source: Department of Environmental Protection

Telephone: 717-783-8990 Last EDR Contact: 01/20/2014

Next Scheduled EDR Contact: 05/05/2014 Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2012 Date Data Arrived at EDR: 06/21/2013 Date Made Active in Reports: 08/05/2013

Number of Days to Update: 45

Source: Department of Environmental Management

Telephone: 401-222-2797 Last EDR Contact: 02/24/2014

Next Scheduled EDR Contact: 06/09/2014 Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2012 Date Data Arrived at EDR: 08/09/2013 Date Made Active in Reports: 09/27/2013

Number of Days to Update: 49

Telephone: N/A Last EDR Contact: 03/17/2014

Next Scheduled EDR Contact: 06/30/2014 Data Release Frequency: Annually

Source: Department of Natural Resources

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data

Source: Rextag Strategies Corp. Telephone: (281) 769-2247

U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services,

a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary

and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Providers
Source: Department of Human Resources

Telephone: 410-767-7805

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK®-PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

TRAVILAH QUARRY 13900 PINEY MEETINGHOUSE ROAD ROCKVILLE, MD 20850

TARGET PROPERTY COORDINATES

Latitude (North): 39.0789 - 39° 4' 44.04" Longitude (West): 77.225 - 77° 13' 30.00"

Universal Tranverse Mercator: Zone 18 UTM X (Meters): 307532.5 UTM Y (Meters): 4327680.5

Elevation: 452 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map: 39077-A2 ROCKVILLE, MD VA

Most Recent Revision: 1984

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

- 1. Groundwater flow direction, and
- 2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

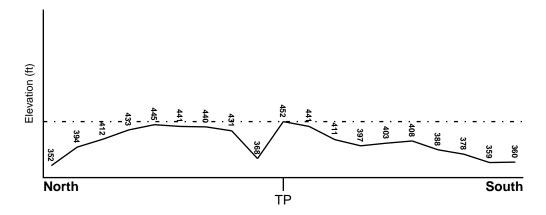
TOPOGRAPHIC INFORMATION

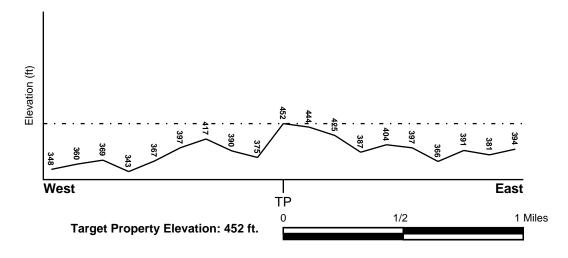
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General South

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

FEMA Flood

Target Property County MONTGOMERY, MD Electronic Data
YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property:

24031C - FEMA DFIRM Flood data

Additional Panels in search area:

Not Reported

NATIONAL WETLAND INVENTORY

NWI Electronic

NWI Quad at Target Property

Data Coverage

ROCKVILLE

YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID Not Reported LOCATION FROM TP

GENERAL DIRECTION GROUNDWATER FLOW

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

GEOLOGIC AGE IDENTIFICATION

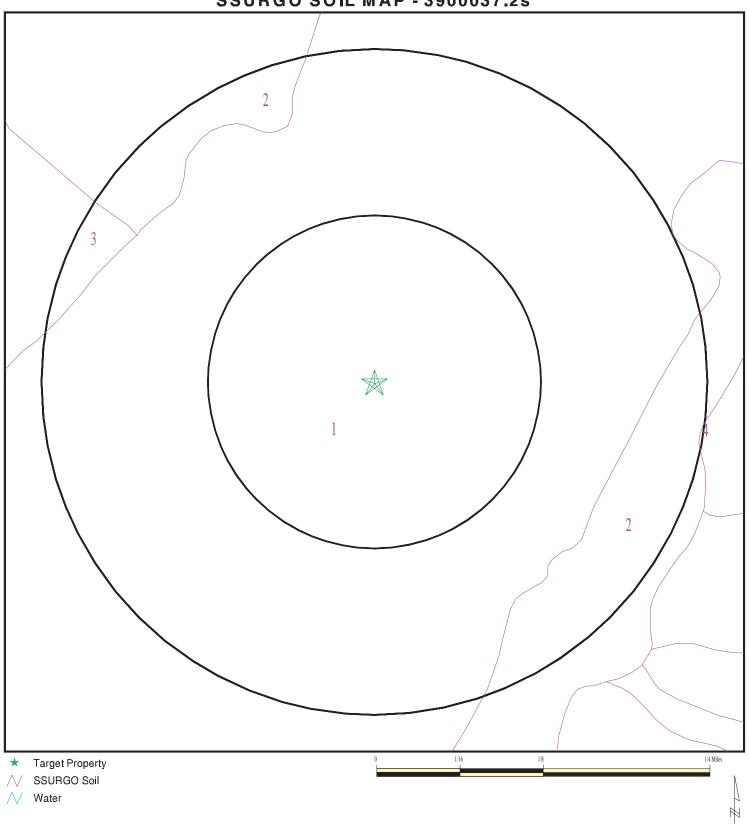
Era: Paleozoic Category: Eugeosynclinal Deposits

System: Cambrian Series: Cambrian

Code: Ce (decoded above as Era, System & Series)

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 3900037.2s



SITE NAME: Travilah Quarry
ADDRESS: 13900 Piney Meetinghouse Road
Rockville MD 20850
LAT/LONG: 39.0789 / 77.225

CLIENT: Black & Veatch Corporation CONTACT: Gordon Abell INQUIRY #: 3900037.2s

DATE: April 03, 2014 9:28 am

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Pits, quarry

Soil Surface Texture:

Hydrologic Group: Not reported

Soil Drainage Class: Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Boundary			Classification		Saturated hydraulic		
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		Soil Reaction (pH)
1	40 inches	0 inches		Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 2

Soil Component Name: Travilah
Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward

movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 76 inches

Depth to Watertable Min: > 46 inches

Soil Layer Information							
Boundary				Classification		Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	
1	0 inches	9 inches	silt loam	Not reported	Not reported	Max: 14 Min: 4	Max: 7.8 Min: 5.6
2	9 inches	33 inches		Not reported	Not reported	Max: 4 Min: 1.4	Max: 7.8 Min: 5.6
3	33 inches	37 inches		Not reported	Not reported	Max: 0 Min: 0	Max: Min:

Soil Map ID: 3

Soil Surface Texture:

Soil Component Name: Chrome

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward

silt loam

movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 76 inches

Depth to Watertable Min: > 54 inches

	Soil Layer Information						
	Bou	ndary		Classification		Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	
1	0 inches	9 inches	silt loam	Not reported	Not reported	Max: 14 Min: 4	Max: 7.3 Min: 6.1
2	9 inches	22 inches		Not reported	Not reported	Max: 14 Min: 4	Max: 7.3 Min: 6.1
3	22 inches	26 inches		Not reported	Not reported	Max: 14 Min: 0.42	Max: Min:

Soil Map ID: 4

Soil Component Name: Chrome

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward

movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 76 inches

Depth to Watertable Min: > 0 inches

	Soil Layer Information						
Boundary				Classification		Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	
1	0 inches	9 inches	silt loam	Not reported	Not reported	Max: 14 Min: 4	Max: 7.3 Min: 6.1
2	9 inches	22 inches		Not reported	Not reported	Max: 14 Min: 4	Max: 7.3 Min: 6.1
3	22 inches	26 inches		Not reported	Not reported	Max: 14 Min: 0.42	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE SEARCH DISTANCE (miles)

Federal USGS 1.000

Federal FRDS PWS Nearest PWS within 1 mile

State Database 1.000

FEDERAL USGS WELL INFORMATION

MAP ID WELL ID LOCATION FROM TP

1 USGS40000434265 0 - 1/8 Mile South

GEOCHECK[®] - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
3	USGS40000434279	1/8 - 1/4 Mile West
A4	USGS40000434278	1/8 - 1/4 Mile East
B5	USGS40000434322	1/8 - 1/4 Mile NE
A6	USGS40000434288	1/8 - 1/4 Mile ENE
B11	USGS40000434331	1/8 - 1/4 Mile NE
B12	USGS40000434330	1/8 - 1/4 Mile NE
13	USGS40000434314	1/4 - 1/2 Mile ENE
D14	USGS40000434351	1/4 - 1/2 Mile NNW
22	USGS40000434358	1/4 - 1/2 Mile NW
26	USGS40000434321	1/4 - 1/2 Mile ENE
F28	USGS40000434343	1/4 - 1/2 Mile ENE
29	USGS40000434165	1/2 - 1 Mile South
M60	USGS40000434418	1/2 - 1 Mile NW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

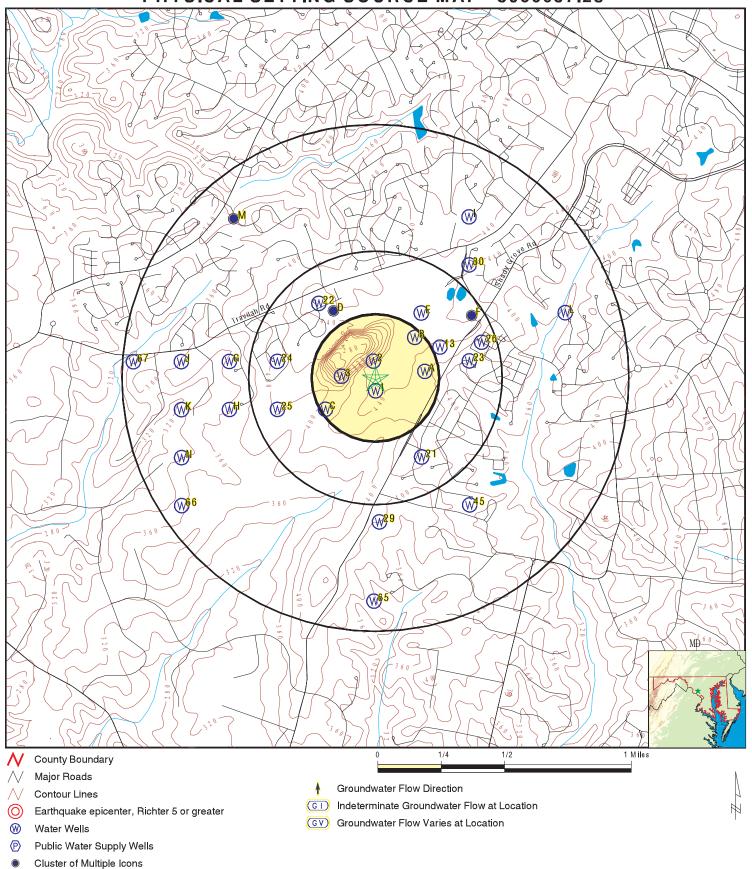
MAP ID	WELL ID	LOCATION FROM TP
WAP ID	WELL ID	FROM IP
2	MD6000000243442	0 - 1/8 Mile North
C7	MD6000000246606	1/8 - 1/4 Mile WSW
C8	MD6000000246605	1/8 - 1/4 Mile WSW
C9	MD6000000246608	1/8 - 1/4 Mile WSW
C10	MD6000000246607	1/8 - 1/4 Mile WSW
E15	MD6000000245796	1/4 - 1/2 Mile NE
E16	MD6000000245795	1/4 - 1/2 Mile NE
E17	MD6000000245797	1/4 - 1/2 Mile NE
E18	MD6000000245799	1/4 - 1/2 Mile NE
E19	MD6000000245798	1/4 - 1/2 Mile NE
D20	MD6000000337274	1/4 - 1/2 Mile NW
21	MD6000000245051	1/4 - 1/2 Mile SSE
23	MD6000000245056	1/4 - 1/2 Mile East
24	MD6000000245055	1/4 - 1/2 Mile West
25	MD6000000245054	1/4 - 1/2 Mile WSW
F27	MD6000000247699	1/4 - 1/2 Mile NE
30	MD6000000245058	1/2 - 1 Mile NE
G31	MD6000000245922	1/2 - 1 Mile West
G32	MD6000000247138	1/2 - 1 Mile West
H33	MD6000000364490	1/2 - 1 Mile WSW
H34	MD6000000364491	1/2 - 1 Mile WSW
H35	MD6000000247523	1/2 - 1 Mile WSW
H36	MD6000000247524	1/2 - 1 Mile WSW
H37	MD6000000247522	1/2 - 1 Mile WSW

GEOCHECK[®] - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
H38	MD6000000245822	1/2 - 1 Mile WSW
H39	MD600000245824	1/2 - 1 Mile WSW
H40	MD600000364487	1/2 - 1 Mile WSW
H41	MD600000364488	1/2 - 1 Mile WSW
H42	MD600000364486	1/2 - 1 Mile WSW
H43	MD6000000247525	1/2 - 1 Mile WSW
H44	MD6000000247526	1/2 - 1 Mile WSW
45	MD6000000245057	1/2 - 1 Mile SE
146	MD6000000245059	1/2 - 1 Mile NNE
147	MD6000000245060	1/2 - 1 Mile NNE
J48	MD6000000245437	1/2 - 1 Mile West
J49	MD6000000242839	1/2 - 1 Mile West
J50	MD6000000245757	1/2 - 1 Mile West
J51	MD6000000246143	1/2 - 1 Mile West
J52	MD6000000245794	1/2 - 1 Mile West
K53	MD6000000245889	1/2 - 1 Mile West
K54	MD6000000245888	1/2 - 1 Mile West
K55	MD600000400155	1/2 - 1 Mile West
K56	MD6000000245890	1/2 - 1 Mile West
L57	MD6000000238591	1/2 - 1 Mile ENE
L58	MD6000000240813	1/2 - 1 Mile ENE
L59	MD6000000241315	1/2 - 1 Mile ENE
N61	MD6000000247824	1/2 - 1 Mile WSW
N62	MD6000000401398	1/2 - 1 Mile WSW
M63	MD6000000245050	1/2 - 1 Mile NW
M64	MD6000000444526	1/2 - 1 Mile NW
65	MD6000000245048	1/2 - 1 Mile South
66	MD6000000245053	1/2 - 1 Mile WSW
67	MD6000000444807	1/2 - 1 Mile West

PHYSICAL SETTING SOURCE MAP - 3900037.2s



SITE NAME: Travilah Quarry
ADDRESS: 13900 Piney Meetinghouse Road
Rockville MD 20850

LAT/LONG: 39.0789 / 77.225 CLIENT: Black & Veator CONTACT: Gordon Abell Black & Veatch Corporation

INQUIRY #: 3900037.2s

DATE: April 03, 2014 9:28 am

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Map ID Direction Distance

Elevation Database EDR ID Number

South FED USGS USGS40000434265

0 - 1/8 Mile Lower

Org. Identifier: USGS-MD

Formal name: USGS Maryland Water Science Center

Monloc Identifier: USGS-390441077133101

Monloc name: MO Ee 40 Well

Monloc desc: Not Reported

02070008 Drainagearea value: Not Reported Huc code: Contrib drainagearea: Not Reported Drainagearea Units: Not Reported 39.078164 Contrib drainagearea units: Not Reported Latitude: Longitude: -77.2249814 Sourcemap scale: 24000 Horiz Acc measure: Horiz Acc measure units: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: 450.00 Vert measure units: feet Vertacc measure val: 10

Vert accmeasure units: feet

Vertcollection method: Interpolated from topographic map

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Piedmont and Blue Ridge crystalline-rock aquifers Formation type: Upper Pelitic Schist of Wissahickon Formation

Aquifer type: Not Reported

Construction date: 19610315 Welldepth: 200 Welldepth units: ft Wellholedepth: 200

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 1

Feet below Feet to
Date Surface Sealevel

1961-03-15 20.00

Lower

2 North MD WELLS MD600000243442 0 - 1/8 Mile

Objectid: 243441 County let: MO
Permit: MO811229 Mgs id: Not Reported

B1 seq: Not Reported B1 recd: 14-AUG-85

City: POTOMAC State: MD

Zip: 20854 Driller na: GARVER, AUSTIN N.

Driller id: MWD0144 Est gpm pr: 2.0E+000

 Use for wa:
 DW

 Approx dep:
 4.0E+002
 Drill meth:
 AIR-PER

 Replacemen:
 N
 Replace pe:
 Not Reported

Wapid: Not Reported Subdivisio: PINEY GLENPARK Section: B Lot: 4

Nearest to: POTOMAC Town dista: 4.3 MI Road name: 11004 HOMEPLACE LA Road side: S

Road dista: 50 FT Tax map: Not Reported Not Reported Block: Not Reported Parcel: N grid27: 454000.00 E grid27: 736000.00 N grid83: 156896.00 E grid83: 380519.00 Lat dec de: 39.08 Lon dec de: 77.23 31-JUL-85 Issue date: Special fl: Not Reported C1 seq: Not Reported C1 recd: 18-SEP-85

22-AUG-85 Completion: Total dept: 4.0E+002 Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: CM 0 Grout top: Grout bott: 4.1E+001 Casing typ: ST Casing dia: 6.0E+000 4.3E+001 Casing dep: Casing hei: +02 Screen typ: НО Top screen: 4.1E+001 Bottom scr: 4.0E+002 Screen t 1: Not Reported Top scre 1: 0 Bottom s 1: 0 Screen t 2: Not Reported 0 Top scre 2: Bottom s 2: Screen dia: 0 Not Reported Telescopin: Not Reported Flowing we:

Log type: Not Reported Hrs pumped: 3.0E+000 Pumping ra: 1.0E+000 Level befo: 5.2E+001 3.9E+002 Level duri: Test pump: Α Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported
Abandoned: Not Reported Abandon da: Not Reported

West 1/8 - 1/4 Mile Lower

Org. Identifier: USGS-MD

Formal name: USGS Maryland Water Science Center

Monloc Identifier: USGS-390444077134001

Monloc name: MO Ee 39
Monloc type: Well
Monloc desc: Not Reported
Huc code: 02070008

Drainagearea value: Not Reported Not Reported Not Reported Drainagearea Units: Contrib drainagearea: Contrib drainagearea units: Not Reported Latitude: 39.0789973 Longitude: -77.2274814 Sourcemap scale: 24000 Horiz Acc measure: Horiz Acc measure units: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: 430.00 Vert measure units: feet Vertacc measure val: 10 Vert accmeasure units: feet

Vertcollection method: Interpolated from topographic map

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Piedmont and Blue Ridge crystalline-rock aquifers Formation type: Upper Pelitic Schist of Wissahickon Formation

Aquifer type: Not Reported

Construction date: 19600430 Welldepth: 230 Welldepth units: ft Wellholedepth: 230

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 1

Feet below Feet to
Date Surface Sealevel

1960-04-30 40.00

FED USGS

USGS40000434279

Map ID Direction Distance

Elevation Database EDR ID Number

East FED USGS USGS40000434278

1/8 - 1/4 Mile Lower

Org. Identifier: USGS-MD

Formal name: USGS Maryland Water Science Center

Monloc Identifier: USGS-390444077131801

Monloc name: MO Ee 37 Monloc type: Well

Monloc desc: Not Reported

02070008 Drainagearea value: Not Reported Huc code: Contrib drainagearea: Not Reported Drainagearea Units: Not Reported 39.0789973 Contrib drainagearea units: Not Reported Latitude: Longitude: -77.2213702 Sourcemap scale: 24000 Horiz Acc measure: Horiz Acc measure units: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: 430.00 Vert measure units: feet Vertacc measure val: 10

Vert accmeasure units: feet

Vertcollection method: Interpolated from topographic map

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Piedmont and Blue Ridge crystalline-rock aquifers Formation type: Upper Pelitic Schist of Wissahickon Formation

Aquifer type: Not Reported

Construction date: 19600224 Welldepth: 200 Welldepth units: ft Wellholedepth: 200

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 1

Feet below Feet to
Date Surface Sealevel

1960-02-24 40.00

1/8 - 1/4 Mile Lower

Org. Identifier: USGS-MD

Formal name: USGS Maryland Water Science Center

Monloc Identifier: USGS-390451077132201

Monloc name: MO Ee 34
Monloc type: Well
Monloc desc: Not Reported

Huc code: 02070008 Drainagearea value: Not Reported Drainagearea Units: Not Reported Contrib drainagearea: Not Reported Contrib drainagearea units: Not Reported Latitude: 39.0809417 Longitude: -77.2224813 Sourcemap scale: 24000 Horiz Acc measure units: Horiz Acc measure: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: 450.00 Vert measure units: feet Vertacc measure val: 10

Vert accmeasure units: feet

Vertcollection method: Interpolated from topographic map

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Piedmont and Blue Ridge crystalline-rock aquifers Formation type: Upper Pelitic Schist of Wissahickon Formation

Aquifer type: Not Reported

Construction date: 19580430 Welldepth: 220 Welldepth units: ft Wellholedepth: 220

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 1

Feet below Feet to
Date Surface Sealevel

1958-04-30 30.00

A6 ENE FED USGS USGS40000434288 1/8 - 1/4 Mile

1/8 - 1/4 Mille Lower

Org. Identifier: USGS-MD

Formal name: USGS Maryland Water Science Center

Monloc Identifier: USGS-390446077131801

Monloc name: MO Ee 38
Monloc type: Well
Monloc desc: Not Reported
Huc code: 02070008

Drainagearea value: Not Reported Drainagearea Units: Not Reported Contrib drainagearea: Not Reported Contrib drainagearea units: Not Reported Latitude: 39.0795528 Longitude: -77.2213702 Sourcemap scale: 24000 Horiz Acc measure: Horiz Acc measure units: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: 430.00 Vert measure units: feet Vertacc measure val: 10

Vert accmeasure units: feet

Vertcollection method: Interpolated from topographic map

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Piedmont and Blue Ridge crystalline-rock aquifers Formation type: Upper Pelitic Schist of Wissahickon Formation

Aquifer type: Not Reported

Construction date: 19600122 Welldepth: 200 Welldepth units: ft Wellholedepth: 200

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 1

Feet below Feet to
Date Surface Sealevel

Date Guilace Gealevel

1960-01-22 40.00

C7
WSW
MD WELLS MD600000246606

1/8 - 1/4 Mile Lower

Objectid: 246605 County let: MO

 Permit:
 MO881733
 Mgs id:
 Not Reported

 B1 seq:
 Not Reported
 B1 recd:
 11-DEC-90

 City:
 ROCKVILLE
 State:
 MD

Zip: 20854 Driller na: JOHN B NELSON

Use for wa:

Approx dep:3.5E+002Drill meth:AIR-PERReplacemen:NReplace pe:Not ReportedWapid:Not ReportedSubdivisio:Not Reported

Section: Not Reported Lot: Not Reported Nearest to: Not Reported Town dista: Not Reported Road name: PINEY MEETING HOUSE Road side: W Road dista: 5575FT Tax map: Not Reported Block: Not Reported Parcel: Not Reported N grid27: 453000.00 E grid27: 735000.00 N grid83: 156591.00 E grid83: 380214.00 Lat dec de: 39.08 Lon dec de: 77.23 14-DEC-90 Special fl: Not Reported Issue date: Not Reported C1 recd: 06-MAR-91 C1 seq: Completion: 07-JAN-91 Total dept: 3.5E+002 Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: CM Grout top: 0 Grout bott: 2.0E+001 ST 6.0E+000 Casing typ: Casing dia: 2.0E+001 Casing dep: Casing hei: +01 2.0E+001 Screen typ: HO Top screen: Not Reported Bottom scr: 3.5E+002 Screen t 1: Top scre 1: 0 Bottom s 1: Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: 0 Flowing we: Not Reported Telescopin: Not Reported Log type: Not Reported Hrs pumped: Pumping ra: 0 Level befo: 0 Level duri: 0 0 Test pump:

Install pu:

Pump hp:

Abandon da:

County let:

Mgs id:

State:

B1 recd:

Closed:

C8 WSW 1/8 - 1/4 Mile Lower

Wapid:

Section:

Pump insta:

Column len:

Abandoned:

Capacity:

JOHN B NELSON

Not Reported

11-DEC-90

AIR-PER

Not Reported

Not Reported

MO

MD

MD WELLS

Not Reported

Not Reported

Not Reported

MD6000000246605

246604 Objectid: Permit: MO881732 B1 seq: Not Reported City: **ROCKVILLE** Zip: 20850 Driller id: MWD0000 Use for wa: Т Approx dep: 3.5E+002 Replacemen:

Not Reported

Not Reported

Not Reported

Not Reported

Not Reported Nearest to: PINEY MEETING HOUSE Road name: Road dista: 6000FT Block: Not Reported 453000.00 N grid27: N grid83: 156591.00 Lat dec de: 39.08 Issue date: 14-DEC-90 C1 seq: Not Reported

Driller na:
Est gpm pr:

Drill meth:
Replace pe:
Subdivisio:
Lot:
Town dista:
Road side:
Tax map:
Parcel:

E grid27:

E grid83:

Special fl:

C1 recd:

Lon dec de:

Not Reported Not Reported W Not Reported 735000.00 380214.00 77.23 Not Reported 06-MAR-91

29-JAN-91 Total dept: Completion: 2.9E+002 Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: CM 0 2.0E+001 Grout top: Grout bott: Casing typ: ST Casing dia: 6.0E+000 Casing dep: 2.0E+001 Casing hei: +01 Screen typ: HO Top screen: 2.0E+001 Bottom scr: 2.9E+002 Screen t 1: Not Reported Top scre 1: Bottom s 1: 0 0 Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: 0 Not Reported Telescopin: Not Reported Flowing we:

Log type: Not Reported Hrs pumped: 0
Pumping ra: 0 Level befo: 0
Level duri: 0 Test pump: 0

Level duri: 0 Test pump : O
Pump insta: Not Reported Install pu: Not Reported
Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

C9 WSW 1/8 - 1/4 Mile Lower

MD WELLS MD600000246608

MO Objectid: 246607 County let: MO881735 Mgs id: Not Reported Permit: 11-DEC-90 B1 seq: Not Reported B1 recd: **ROCKVILLE** City: State: MD

Zip: 20850 Driller na: JOHN B NELSON

Driller id: MWD0000 Est gpm pr: 0

Use for wa:

3.5E+002 AIR-PER Approx dep: Drill meth: Replacemen: Ν Replace pe: Not Reported Wapid: Not Reported Subdivisio: Not Reported Not Reported Section: Not Reported Lot: Nearest to: Not Reported Town dista: Not Reported

PINEY MEETING HOUSE Road name: Road side: W Tax map: Road dista: 1650FT Not Reported Block: Not Reported Parcel: Not Reported N grid27: 735000.00 453000.00 E grid27: N grid83: E grid83: 156591.00 380214.00 39.08 Lat dec de: Lon dec de: 77.23 Issue date: 14-DEC-90 Special fl: Not Reported C1 seq: Not Reported C1 recd: 06-MAR-91 Completion: 14-JAN-91 Total dept: 5.5E+002 0 Not Reported Num unsucc: Hydrofract:

Grouted: Υ Grout type: CM Grout top: 0 Grout bott: 2.0E+001 6.0E+000 Casing typ: ST Casing dia: 2.0E+001 Casing dep: Casing hei: +01 2.0E+001 Screen typ: НО Top screen: 3.5E+002 Screen t 1: Not Reported Bottom scr:

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

Bottom s 2: 0 Screen dia: 0

Flowing we: Not Reported Telescopin: Not Reported

Log type:Not ReportedHrs pumped:0Pumping ra:0Level befo:0Level duri:0Test pump:O

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

C10 WSW 1/8 - 1/4 Mile Lower

Screen typ:

MD WELLS MD600000246607

Objectid: 246606 County let: MO MO881734 Not Reported Permit: Mgs id: B1 seq: Not Reported B1 recd: 11-DEC-90 ROCKVILLE City: State: MD

Zip: 20850 Driller na: JOHN B NELSON

Driller id: MWD0000 Est gpm pr: 0

Use for wa:

AIR-PER Approx dep: 3.5E+002 Drill meth: Replacemen: Replace pe: Not Reported Ν Wapid: Not Reported Subdivisio: Not Reported Section: Not Reported Lot: Not Reported Not Reported Town dista: Not Reported Nearest to:

Road name: PINEY MEETING HOUSE Road side: W

Road dista: 3950FT Tax map: Not Reported Not Reported Parcel: Not Reported Block: N grid27: 453000.00 E grid27: 735000.00 N grid83: 156591.00 E grid83: 380214.00 Lat dec de: Lon dec de: 39.08 77.23 Issue date: 14-DEC-90 Special fl: Not Reported C1 seq: Not Reported C1 recd: 06-MAR-91 Total dept: Completion: 17-JAN-91 3.5E+002 Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: СМ Grout top: 0 Grout bott: 2.0E+001 Casing typ: ST Casing dia: 6.0E+000 2.0E+001 Casing hei: Casing dep: +01

Top screen:

 Bottom scr:
 3.5E+002
 Screen t 1:
 Not Reported

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

HO

Bottom s 2: 0 Screen dia: 0

Flowing we: Not Reported Telescopin: Not Reported Log type: Not Reported Hrs pumped: 0
Pumping ra: 0 Level befo: 0
Level duri: 0 Test pump: O

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

2.0E+001

Map ID Direction Distance

Elevation Database EDR ID Number

B11 FED USGS USGS40000434331

1/8 - 1/4 Mile Lower

Org. Identifier: USGS-MD

Formal name: USGS Maryland Water Science Center

Monloc Identifier: USGS-390453077132101

Monloc name: MO Ee 35 Monloc type: Well

Monloc desc: Not Reported

02070008 Drainagearea value: Not Reported Huc code: Contrib drainagearea: Not Reported Drainagearea Units: Not Reported 39.0814972 Contrib drainagearea units: Not Reported Latitude: Longitude: -77.2222036 Sourcemap scale: 24000 Horiz Acc measure: Horiz Acc measure units: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: 450.00 Vert measure units: feet Vertacc measure val: 10

Vert accmeasure units: feet

Vertcollection method: Interpolated from topographic map

Vert coord refsys: NGVD29 Countrycode:

Aquifername: Piedmont and Blue Ridge crystalline-rock aquifers Formation type: Upper Pelitic Schist of Wissahickon Formation

Aquifer type: Not Reported

Construction date: 19600118 Welldepth: 200 Welldepth units: ft Wellholedepth: 200

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 1

Feet below Feet to
Date Surface Sealevel

1960-01-18 40.00

B12 FED USGS USGS40000434330

1/8 - 1/4 Mile Lower

Org. Identifier: USGS-MD

Formal name: USGS Maryland Water Science Center

Monloc Identifier: USGS-390452077131901

Monloc name: MO Ee 36
Monloc type: Well
Monloc desc: Not Reported

Huc code: 02070008 Drainagearea value: Not Reported Drainagearea Units: Not Reported Contrib drainagearea: Not Reported Contrib drainagearea units: Not Reported Latitude: 39.0812195 Longitude: -77.221648 Sourcemap scale: 24000 Horiz Acc measure units: Horiz Acc measure: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: 450.00 Vert measure units: feet Vertacc measure val: 10

Vert accmeasure units: feet

Vertcollection method: Interpolated from topographic map

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Piedmont and Blue Ridge crystalline-rock aquifers Formation type: Upper Pelitic Schist of Wissahickon Formation

US

Aquifer type: Not Reported

Construction date: 19600120 Welldepth: 180 Welldepth units: ft Wellholedepth: 180

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 1

Feet below Feet to
Date Surface Sealevel

1960-01-20 30.00

1/4 - 1/2 Mile Lower

Org. Identifier: USGS-MD

Formal name: USGS Maryland Water Science Center

Monloc Identifier: USGS-390450077131401

Monloc name: MO Ee 14
Monloc type: Well
Monloc desc: Not Reported

Huc code: 02070008 Drainagearea value: Not Reported Drainagearea Units: Not Reported Contrib drainagearea: Not Reported Contrib drainagearea units: Not Reported 39.0806639 Latitude: Longitude: -77.220259 Sourcemap scale: 24000 Horiz Acc measure: Horiz Acc measure units: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: 420.00 Vert measure units: feet Vertacc measure val: 10

Vert accmeasure units: feet

Vertcollection method: Interpolated from topographic map

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Piedmont and Blue Ridge crystalline-rock aquifers Formation type: Upper Pelitic Schist of Wissahickon Formation

Aquifer type: Not Reported

Construction date: 1952 Welldepth: 103 Welldepth units: ft Wellholedepth: 103

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 1

Feet below Feet to
Date Surface Sealevel

1952-01-01 20.00

1/4 - 1/2 Mile Lower

Org. Identifier: USGS-MD

Formal name: USGS Maryland Water Science Center

Monloc Identifier: USGS-390458077134001

Monloc name: MO Ee 26
Monloc type: Well
Monloc desc: Not Reported
Huc code: 02070008

Huc code:02070008Drainagearea value:Not ReportedDrainagearea Units:Not ReportedContrib drainagearea:Not ReportedContrib drainagearea units:Not ReportedLatitude:39.0828861Longitude:-77.2274815Sourcemap scale:24000

Horiz Acc measure: 1 Horiz Acc measure units: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: 440.00 Vert measure units: Vertacc measure val: 10

Vert accmeasure units: feet

Vertcollection method: Interpolated from topographic map

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Piedmont and Blue Ridge crystalline-rock aquifers Formation type: Upper Pelitic Schist of Wissahickon Formation

Aquifer type: Not Reported

Construction date: 1900 Welldepth: Not Reported Welldepth units: Not Reported Wellholedepth: Not Reported

Wellholedepth units: Not Reported

Ground-water levels, Number of Measurements: 0

E15
NE MD WELLS MD600000245796

1/4 - 1/2 Mile Higher

> Objectid: 245795 County let: MO MO880597 Permit: Mgs id: Not Reported B1 seq: B1 recd: 25-JAN-89 Not Reported **ROCKVILLE** MD City: State:

 Zip:
 20850
 Driller na:
 HILTON, WM. C.

 Driller id:
 MWD0111
 Est gpm pr:
 5.0E+000

Use for wa: DW

Approx dep:2.0E+002Drill meth:AIR-PERReplacemen:NReplace pe:Not ReportedWapid:Not ReportedSubdivisio:POTOMAC FIELDS

 Section:
 1
 Lot:
 10

 Nearest to:
 TRAVILAH
 Town dista:
 2.2 MI

 Road name:
 13520 POTOMAC RIDING LA
 Road side:
 W

 Road dista:
 14 FT
 Tax map:
 Not Reported

Block: Not Reported Parcel: Not Reported 737000.00 N grid27: 455000.00 E grid27: N grid83: 157200.00 E grid83: 380824.00 Lat dec de: 39.08 Lon dec de: 77.22 02-FEB-89 Special fl: Issue date: Not Reported C1 seq: Not Reported C1 recd: 15-MAY-89 Completion: 07-APR-89 Total dept: 1.5E+002

Num unsucc: Hydrofract: Not Reported 0 Grouted: Υ Grout type: CM Grout top: 0 Grout bott: 2.5E+001 Casing typ: ST Casing dia: 6.0E+000 Casing dep: 3.0E+001 Casing hei: +023.0E+001 Screen typ: HO Top screen: Bottom scr: 1.5E+002 Screen t 1: Not Reported

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

 Bottom s 2:
 0
 Screen dia:
 0

Flowing we: Not Reported Telescopin: Not Reported Log type: Not Reported Hrs pumped: 3.0E+000 Pumping ra: 5.0E+000 Level befo: 2.5E+001 Level duri: Test pump: S

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

Мар	ID
Direc	ction
Dista	ince

 Elevation
 Database
 EDR ID Number

 E16
 MD WELLS
 MD6000000245795

AIR-PER

1/4 - 1/2 Mile Higher

Objectid: 245794 County let: MO

Permit: MO880596 Mgs id: Not Reported B1 seq: Not Reported B1 recd: 25-JAN-89 City: **ROCKVILLE** State: MD Zip: 20850 Driller na: HILTON, WM. C. 5.0E+000

Driller id: MWD0111 Est gpm pr:
Use for wa: DW
Approx dep: 2.0E+002 Drill meth:

Replacemen: N Replace pe: Not Reported Wapid: Subdivisio: POTOMAC FIELDS

Section: 1 Lot: 5
Nearest to: TRAVILAH Town dista: 2.2 MI
Road name: 13540 POTOMAC RIDING LA Road side: W

Road dista: 500 FT Not Reported Tax map: Block: Not Reported Parcel: Not Reported 737000.00 N grid27: 455000.00 E grid27: E grid83: N grid83: 380824.00 157200.00 Lat dec de: 39.08 Lon dec de: 77.22 Issue date: 23-FEB-89 Special fl: Not Reported C1 seq: Not Reported C1 recd: 23-OCT-89 Completion: 06-OCT-89 Total dept: 1.3E+002 Not Reported Num unsucc: 0 Hydrofract:

Υ Grouted: Grout type: CM Grout top: 0 Grout bott: 6.5E+001 Casing typ: ST Casing dia: 6.0E+000 7.5E+001 Casing dep: Casing hei: +02 Top screen: 7.5E+001 Screen typ: НО Bottom scr: 1.3E+002 Screen t 1: Not Reported

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

 Bottom s 2:
 0
 Screen dia:
 0

Flowing we: Not Reported Telescopin: Not Reported Log type: Not Reported Hrs pumped: 3.0E+000

Pumping ra: 9.0E+000 Level befo: 3.8E+001

Level duri: 1.2E+002 Test pump: A

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported
Abandoned: Not Reported Abandon da: Not Reported

E17 NE 1/4 - 1/2 Mile

MD WELLS MD600000245797

1/4 - 1/2 Mile Higher

Objectid: 245796 County let: MO Permit: MO880598 Mgs id: Not Reported 25-JAN-89 B1 seq: Not Reported B1 recd: **ROCKVILLE** MD City: State:

 Zip:
 20850
 Driller na:
 HILTON, WM. C.

 Driller id:
 MWD0111
 Est gpm pr:
 5.0E+000

Use for wa: DW

Approx dep:2.0E+002Drill meth:AIR-PERReplacemen:NReplace pe:Not ReportedWapid:Not ReportedSubdivisio:POTOMAC FIELDS

Lot:

16

Nearest to: **TRAVILAH** Town dista: 2.2 MI Road name: 13501 POTOMAC RIDING LA Road side: W 450 FT Not Reported Road dista: Tax map: Block: Not Reported Parcel: Not Reported N grid27: 455000.00 E grid27: 737000.00 N grid83: 157200.00 E grid83: 380824.00 Lat dec de: 39.08 Lon dec de: 77.22 02-FEB-89 Special fl: Not Reported Issue date: Not Reported C1 recd: 15-MAY-89 C1 seq: 13-APR-89 Completion: Total dept: 1.1E+002 Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: CM Grout top: 0 Grout bott: 4.0E+001 ST 6.0E+000 Casing typ: Casing dia: 4.5E+001 Casing dep: Casing hei: +02 4.5E+001 Screen typ: HO Top screen:

 Bottom scr:
 1.1E+002
 Screen t 1:
 Not Reported

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

 Bottom s 2:
 0
 Screen dia:
 0

Flowing we: Not Reported Telescopin: Not Reported Not Reported 3.0E+000 Log type: Hrs pumped: 2.5E+001 3.0E+001 Pumping ra: Level befo: Level duri: 1.0E+002 Test pump: Α

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

E18 NE 1/4 - 1/2 Mile Higher

Section:

 Objectid:
 245798
 County let:
 MO

 Permit:
 MO880600
 Mgs id:
 Not Reported

 B1 seq:
 Not Reported
 B1 recd:
 25-JAN-89

 City:
 ROCKVILLE
 State:
 MD

 Zip:
 20850
 Driller na:
 HILTON, WM. C.

 Driller id:
 MWD0111
 Est gpm pr:
 5.0E+000

 Use for wa:
 DW

 Approx dep:
 2.0E+002
 Drill meth:
 AIR-PER

 Replacemen:
 N
 Replace pe:
 Not Reported

Wapid: Not Reported Subdivisio: POTOMAC FIELDS

Section:1Lot:13Nearest to:TRAVILAHTown dista:2.2 MIRoad name:13508 POTOMAC RDG LARoad side:W

Road dista: 20 FT Tax map: Not Reported Not Reported Not Reported Block: Parcel: 455000.00 737000.00 N grid27: E grid27: N grid83: E grid83: 157200.00 380824.00 Lat dec de: 39.08 Lon dec de: 77.22 Issue date: 02-FEB-89 Special fl: Not Reported C1 seq: Not Reported C1 recd: 17-APR-89

MD WELLS

MD6000000245799

27-MAR-89 Total dept: 9.0E+001 Completion: Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: CM 0 2.5E+001 Grout top: Grout bott: 6.0E+000 Casing typ: ST Casing dia: Casing dep: 3.5E+001 Casing hei: +02 Screen typ: HO Top screen: 3.5E+001 Bottom scr: 9.0E+001 Screen t 1: Not Reported Top scre 1: Bottom s 1: 0 0 Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: 0 Flowing we: Not Reported Telescopin: Not Reported Log type: Not Reported Hrs pumped: 3.0E+000 Pumping ra: 3.0E+001 Level befo: 2.5E+001 8.5E+001 Level duri: Test pump: S Pump insta: Not Reported Install pu: Not Reported Capacity: Pump hp: Column len: Not Reported 0 Closed: Abandoned: Not Reported Abandon da: Not Reported

E19 NE 1/4 - 1/2 Mile Higher

Screen t 2:

MO Objectid: 245797 County let: MO880599 Mgs id: Not Reported Permit: B1 seq: Not Reported B1 recd: 25-JAN-89 **ROCKVILLE** City: State: MD 20850 Driller na: HILTON, WM. C. Zip:

Driller id: MWD0111 Est gpm pr: 5.0E+000
Use for wa: DW

Approx dep: 2.0E+002 Drill meth: AIR-PER
Replacemen: N Replace pe: Not Reported
Wanid: POTOMAC FIELDS

Wapid: Not Reported Subdivisio: POTOMAC FIELDS
Section: 1 Lot: 15
Nearest to: TRAVILAH Town dista: 2.2 MI

13500 POTOMAC RDG LA Road name: Road side: S Tax map: Road dista: 400 FT Not Reported Block: Not Reported Parcel: Not Reported N grid27: 737000.00 455000.00 E grid27: N grid83: E grid83: 157200.00 380824.00 Lat dec de: 39.08 Lon dec de: 77.22 Issue date: 02-FEB-89 Special fl: Not Reported C1 seq: Not Reported C1 recd: 13-MAY-89 Completion: 13-APR-89 Total dept: 1.5E+002 0 Not Reported Num unsucc: Hydrofract: Grouted:

Υ Grout type: CM Grout top: 0 Grout bott: 5.0E+001 ST 6.0E+000 Casing typ: Casing dia: 6.0E+001 Casing dep: Casing hei: +02 6.0E+001 Screen typ: НО Top screen: 1.5E+002 Screen t 1: Not Reported Bottom scr: Top scre 1: Bottom s 1:

Top scre 2:

Not Reported

TC3900037.2s Page A-24

0

MD WELLS

MD6000000245798

Bottom s 2: Screen dia:

Flowing we: Not Reported Telescopin: Not Reported Log type: Not Reported Hrs pumped: 3.0E+000 1.0E+001 2.2E+001 Pumping ra: Level befo: Level duri: 1.4E+002 Test pump: S

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp:

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

D20 1/4 - 1/2 Mile Lower

MD WELLS MD6000000337274

Objectid: 337273 County let: MO MO930745 Mgs id: Not Reported Permit: B1 seq: B1 recd: 06-DEC-95 6697 City: **ROCKVILLE** State: MD

20850 Driller na: MICHAEL P. WILLEY Zip:

Driller id: MGD0047 Est gpm pr: 0

Use for wa: Т AIR-ROT Approx dep: 6.0E+001 Drill meth: Replacemen: Replace pe: Not Reported Ν Wapid: Not Reported Subdivisio: Not Reported Section: Not Reported Lot: Not Reported

ROCKVILLE Town dista: Nearest to: 0 Road name: PINEY MEETINGHOUSE R Road side: S

Road dista: 1 MI Tax map: Not Reported Not Reported Parcel: Not Reported Block: N grid27: 455000.00 E grid27: 735000.00 N grid83: 157200.00 E grid83: 380214.00 Lat dec de: Lon dec de: 39.08 77.23

Issue date: 08-DEC-95 Special fl:

C1 seq: 5292 C1 recd: 24-JAN-96 Total dept: Completion: 14-DEC-95 6.5E+001 Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: СМ Grout top: 0 Grout bott: 4.2E+001

Casing typ: PL Casing dia: 4.0E+000 4.5E+001 Casing hei: Casing dep: -00 Screen typ: 4.5E+001 Top screen: PL Bottom scr: 6.5E+001 Screen t 1: Not Reported

Top scre 1: Bottom s 1:

Screen t 2: Not Reported Top scre 2: 0

4.0E+000 Bottom s 2: Screen dia: Not Reported Not Reported Flowing we: Telescopin: 1.0E+000 Log type: Not Reported Hrs pumped: Pumping ra: 1.0E+000 Level befo: 1.0E+000

1.0E+000 Level duri: Test pump: 0

Pump insta: Ν Install pu: Not Reported

Capacity: 0 Pump hp:

Column len: Not Reported 0 Closed: Abandoned: Not Reported Abandon da: Not Reported

Map ID Direction Distance

Elevation Database EDR ID Number

21 SSE 1/4 - 1/2 Mile

MD WELLS MD600000245051

1/4 - 1/2 Mile Lower

 Objectid:
 245050
 County let:
 MO

 Permit:
 MO812850
 Mas id:
 Not

 Permit:
 MO812850
 Mgs id:
 Not Reported

 B1 seq:
 Not Reported
 B1 recd:
 16-OCT-87

 City:
 ROCKVILLE
 State:
 MD

Zip: 20850 Driller na: EICHELBERGER, C. H.

Driller id: MWD0332 Est gpm pr: 0

Use for wa:

5.0E+001 AIR-ROT Approx dep: Drill meth: Replacemen: Replace pe: Not Reported Ν Wapid: Not Reported Subdivisio: TRAVILAH QUARRY Section: Not Reported Not Reported Lot:

Nearest to: ROCKVILLE Town dista: 3 MI Road name: PINEY MEETINGHSE RD Road side: E

Road dista: 15 FT Not Reported Tax map: Block: Not Reported Parcel: Not Reported N grid27: 452000.00 E grid27: 737000.00 E grid83: N grid83: 156286.00 380824.00 Lat dec de: 39.07 Lon dec de: 77.22 Issue date: 22-OCT-87 Special fl: Not Reported C1 seq: Not Reported C1 recd: 12-DEC-90 Completion: 17-OCT-85 Total dept: 5.0E+001 Not Reported Num unsucc: 0 Hydrofract:

Grouted: Υ Grout type: BC 5.0E+000 Grout bott: 8.0E+000 Grout top: Casing typ: ST Casing dia: 6.0E+000 3.0E+000 Casing dep: Casing hei: +02 Top screen: 4.5E+001 Screen typ: ы Bottom scr: 5.0E+001 Screen t 1: Not Reported

Top scre 1: Bottom s 1: 0 Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: 2.0E+000 Flowing we: Not Reported Telescopin: Not Reported Log type: Hrs pumped: 1.0E+000 Pumping ra: 2.0E+000 Level befo: 1.0E+000

Level duri: 1.0E+000 Test pump: A

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported
Abandoned: Not Reported Abandon da: Not Reported

22 NW FED USGS

1/4 - 1/2 Mile Lower

Org. Identifier: USGS-MD

Formal name: USGS Maryland Water Science Center

Monloc Identifier: USGS-390459077134601

Monloc name: MO Ee 25
Monloc type: Well
Monloc desc: Not Reporter

Monloc desc: Not Reported Huc code: 02070008

Huc code:02070008Drainagearea value:Not ReportedDrainagearea Units:Not ReportedContrib drainagearea:Not ReportedContrib drainagearea units:Not ReportedLatitude:39.0831639Longitude:-77.2291482Sourcemap scale:24000

USGS40000434358

Horiz Acc measure: 1 Horiz Acc measure units: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: 450.00 Vert measure units: feet Vertacc measure val: 10

Vert accmeasure units: feet

Vertcollection method: Interpolated from topographic map

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Piedmont and Blue Ridge crystalline-rock aquifers Formation type: Upper Pelitic Schist of Wissahickon Formation

Aquifer type: Not Reported

Construction date: 1900 Welldepth: Not Reported Welldepth units: Not Reported Wellholedepth: Not Reported

Wellholedepth units: Not Reported

Ground-water levels, Number of Measurements: 0

23 East MD WELLS MD600000245056

1/4 - 1/2 Mile Lower

> Objectid: 245055 County let: MO MO812855 Permit: Mgs id: Not Reported B1 seq: B1 recd: 16-OCT-87 Not Reported **ROCKVILLE** MD City: State:

Zip: 20850 Driller na: EICHELBERGER, C. H.

Driller id: MWD0332 Est gpm pr: 0

Use for wa:

Approx dep: 7.0E+001 Drill meth: AIR-ROT Replacemen: Ν Replace pe: Not Reported Wapid: Not Reported Subdivisio: TRAVILAH QUARRY Section: Not Reported Lot: Not Reported

Nearest to:ROCKVILLETown dista:3MIRoad name:PINEY MEETINGHSE RDRoad side:E

Road dista: 12 FT Tax map: Not Reported Block: Not Reported Parcel: Not Reported 454000.00 738000.00 N grid27: E grid27: N grid83: 156896.00 E grid83: 381129.00 Lat dec de: 39.08 Lon dec de: 77.22 Special fl: Issue date: 22-OCT-87 Not Reported C1 seq: Not Reported C1 recd: 12-DEC-90 Completion: 07-NOV-85 Total dept: 7.0E+001 Not Reported Num unsucc: Hydrofract: 0

Grouted: Υ Grout type: BC Grout top: 5.0E+000 Grout bott: 8.0E+000 Casing typ: ST Casing dia: 6.0E+000 Casing dep: 1.0E+000 Casing hei: +04 6.5E+001 PLScreen typ: Top screen: Bottom scr: 7.0E+001 Screen t 1: Not Reported

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

Bottom s 2: 0 Screen dia: 2.0E+000

 Flowing we:
 Not Reported
 Telescopin:
 T

 Log type:
 Not Reported
 Hrs pumped:
 1.0E+000

 Pumping ra:
 1.0E+000
 Level befo:
 1.0E+000

 Level duri:
 1.0E+000
 Test pump:
 A

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported
Abandoned: Not Reported Abandon da: Not Reported

Map ID Direction Distance

Elevation Database EDR ID Number

24 West 1/4 - 1/2 Mile Lower

MD WELLS MD6000000245055

Objectid: 245054 County let: MO Permit: MO812854 Mgs id:

Not Reported 16-OCT-87 B1 seq: Not Reported B1 recd: City: **ROCKVILLE** State: MD

Zip: 20850 Driller na: EICHELBERGER, C. H.

Driller id: MWD0332 Est gpm pr: 0

Use for wa: Т 7.0E+001 Approx dep:

Drill meth: AIR-ROT Replacemen: Replace pe: Not Reported Ν Wapid: Not Reported Subdivisio: TRAVILAH QUARRY Section: Not Reported Not Reported Lot:

ROCKVILLE Nearest to: Town dista: 3 MI TRAVILAH RD Road name: Road side: S

Road dista: 500 FT Tax map: Not Reported Block: Not Reported Parcel: Not Reported 454000.00 734000.00 N grid27: E grid27: E grid83: N grid83: 156896.00 379909.00 Lat dec de: 39.08 Lon dec de: 77.23 Issue date: 22-OCT-87 Special fl: Not Reported C1 seq: Not Reported C1 recd: 12-DEC-90 Completion: 07-NOV-85 Total dept: 7.0E+001

Not Reported Num unsucc: 0 Hydrofract: Grouted: Υ Grout type: BC Grout top: 5.0E+000 Grout bott: 8.0E+000 Casing typ: ST Casing dia: 6.0E+000

2.0E+000 Casing dep: Casing hei: +03 PLTop screen: 6.5E+001 Screen typ: Bottom scr: 7.0E+001 Screen t 1: Not Reported 0 Bottom s 1: 0

Top scre 1: Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: 2.0E+000 Flowing we: Not Reported Telescopin: Not Reported Log type: Hrs pumped: 1.0E+000 Pumping ra: 1.0E+000 Level befo: 1.0E+000

Level duri: 1.0E+000 Test pump: Α

Pump insta: Not Reported Install pu: Not Reported Capacity: 0 Pump hp:

Column len: Closed: Not Reported

Abandoned: Not Reported Abandon da: Not Reported

wsw 1/4 - 1/2 Mile Lower

MD WELLS MD6000000245054

Objectid: 245053 County let: MO Permit: MO812853 Mgs id: Not Reported B1 seq: Not Reported B1 recd: 16-OCT-87 **ROCKVILLE** MD City: State:

Zip: 20850 Driller na: EICHELBERGER, C. H.

Driller id: MWD0332 Est gpm pr:

Use for wa: Т

Approx dep: 6.0E+001 Drill meth: AIR-ROT Replacemen: Replace pe: Not Reported N Wapid: Not Reported Subdivisio: TRAVILAH QUARRY

Section: Not Reported Lot: Not Reported Nearest to: **ROCKVILLE** Town dista: 3 MI Road name: TRAVILAH RD Road side: S

1500FT Road dista: Tax map: Not Reported Block: Not Reported Parcel: Not Reported N grid27: 453000.00 E grid27: 734000.00 N grid83: 156591.00 E grid83: 379909.00 Lat dec de: 39.08 Lon dec de: 77.23 22-OCT-87 Special fl: Not Reported Issue date: Not Reported C1 recd: 12-DEC-90 C1 seq: Completion: 17-OCT-85 Total dept: 6.0E+001 Num unsucc: Hydrofract: Not Reported

Grouted: Υ Grout type: BC Grout top: 5.0E+000 Grout bott: 8.0E+000 6.0E+000 Casing typ: ST Casing dia: Casing dep: 2.0E+000 Casing hei: +03 Screen typ: PL Top screen: 6.5E+001 7.0E+001 Not Reported Bottom scr: Screen t 1:

Top scre 1: n Bottom s 1: Screen t 2: Not Reported Top scre 2: 0

Bottom s 2: Screen dia: 2.0E+000

Flowing we: Not Reported Telescopin:

1.0E+000 Log type: Not Reported Hrs pumped: 2.0E+000 1.0E+000 Pumping ra: Level befo: Level duri: 1.0E+000 Test pump:

Pump insta: Not Reported Install pu: Not Reported

Capacity: Pump hp:

Not Reported Column len: Closed: Abandoned: Not Reported Abandon da: Not Reported

26 ENE

1/4 - 1/2 Mile Lower

> Org. Identifier: **USGS-MD**

Formal name: **USGS Maryland Water Science Center**

Monloc Identifier: USGS-390451077130301

Monloc name: MO Ee 32 Monloc type: Well Not Reported Monloc desc:

02070008 Not Reported Huc code: Drainagearea value: Drainagearea Units: Not Reported Contrib drainagearea: Not Reported Contrib drainagearea units: Not Reported 39.0809417 Latitude: Longitude: -77.2172034 Sourcemap scale: 24000 Horiz Acc measure: Horiz Acc measure units: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: 440.00 Vert measure units: feet Vertacc measure val: 10

Vert accmeasure units: feet

Vertcollection method: Interpolated from topographic map

US Vert coord refsys: NGVD29 Countrycode:

Piedmont and Blue Ridge crystalline-rock aquifers Aquifername: Formation type: Upper Pelitic Schist of Wissahickon Formation

FED USGS

USGS40000434321

Aquifer type: Not Reported

Construction date: 19560215 Welldepth: 370 Welldepth units: ft Wellholedepth: 370

Ground-water levels, Number of Measurements: 1

ft

Feet below Feet to Date Surface Sealevel

1956-02-15 30.00

Wellholedepth units:

MD WELLS MD6000000247699

Tax map:

1/4 - 1/2 Mile Lower

> Objectid: 247698 County let: MO Not Reported Permit: MO920650 Mgs id: B1 seq: B1 recd: 12-JUL-93 0108 **ROCKVILLE** City: State: MD 20850 Driller na: JOHN B NELSON Zip: Est gpm pr: 1.0E+001

Driller id: MWD415

Use for wa: Approx dep:

3.5E+002 Replacemen: Ν Wapid: MO1956G001

Section: Not Reported **ROCKVILLE** Nearest to:

Road name: PINEY MEETING HOUSE

Road dista: 2200FT Block: Not Reported N grid27: 455000.00 N grid83: 157200.00 Lat dec de: 39.08 Issue date: 23-SEP-93 C1 seq: 7484 Completion: 04-OCT-93 Num unsucc: 0 Grouted: Υ Grout top: 0 Casing typ: ST Casing dep: 3.5E+001 Screen typ: HO Bottom scr: 4.75E+002

Top scre 1: Screen t 2: Not Reported

Bottom s 2: Not Reported Flowing we: Log type: Not Reported Pumping ra: 1.5E+001 4.75E+002 Level duri:

Pump insta: Ν Capacity: 0

Column len:

Abandoned: Not Reported

0

Drill meth: AIR-ROT Replace pe: Not Reported Subdivisio: Not Reported Lot: Not Reported Town dista: 6 MI Road side: Ε

Not Reported

Parcel: Not Reported E grid27: 738000.00 E grid83: 381129.00 Lon dec de: 77.22 Special fl: Not Reported C1 recd: 10-MAR-94 4.75E+002 Total dept: Hydrofract: Not Reported Grout type: СМ

3.5E+001 Grout bott: Casing dia: 6.0E+000 Casing hei: +01 3.5E+001 Top screen: Screen t 1: Not Reported

Bottom s 1: 0 Top scre 2: 0 Screen dia: 0

Not Reported Telescopin: 2.0E+000 Hrs pumped: Level befo: 2.0E+001 Test pump: Α

Install pu: Not Reported

Pump hp:

Not Reported Closed: Abandon da: Not Reported

Map ID Direction Distance

Elevation Database EDR ID Number

1/4 - 1/2 Mile Lower

Org. Identifier: USGS-MD

Formal name: USGS Maryland Water Science Center

Monloc Identifier: USGS-390456077130501

Monloc name: MO Ee 33 Monloc type: Well

Monloc desc: Not Reported

02070008 Drainagearea value: Not Reported Huc code: Contrib drainagearea: Not Reported Drainagearea Units: Not Reported 39.0823306 Contrib drainagearea units: Not Reported Latitude: Longitude: -77.217759 Sourcemap scale: 24000 Horiz Acc measure: Horiz Acc measure units: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: 440.00 Vert measure units: feet Vertacc measure val: 10

Vert accmeasure units: feet

Vertcollection method: Interpolated from topographic map

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Piedmont and Blue Ridge crystalline-rock aquifers Formation type: Upper Pelitic Schist of Wissahickon Formation

Aquifer type: Not Reported

Construction date: 19560319 Welldepth: 168 Welldepth units: ft Wellholedepth: 168

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 1

Feet below Feet to
Date Surface Sealevel

1956-03-19 30.00

29 South FED USGS USGS40000434165

1/2 - 1 Mile Lower

Org. Identifier: USGS-MD

Formal name: USGS Maryland Water Science Center

Monloc Identifier: USGS-390414077133001

Monloc name: MO Ee 15
Monloc type: Well
Monloc desc: Not Reported
Huc code: 02070008

Drainagearea value: Not Reported Drainagearea Units: Not Reported Contrib drainagearea: Not Reported Contrib drainagearea units: Not Reported Latitude: 39.0706641 Longitude: -77.2247035 Sourcemap scale: 24000 Horiz Acc measure units: Horiz Acc measure: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: 400.00 Vert measure units: feet Vertacc measure val: 10

Vert accmeasure units: feet

Vertcollection method: Interpolated from topographic map

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Piedmont and Blue Ridge crystalline-rock aquifers Formation type: Upper Pelitic Schist of Wissahickon Formation

Aquifer type: Not Reported

Construction date: 1952 Welldepth: 35 Welldepth units: ft Wellholedepth: 35

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 1

Feet below Feet to Date Surface Sealevel

1952-11-01 14.00

MD WELLS MD6000000245058

1/2 - 1 Mile Lower

> Objectid: 245057 County let: MO MO812857 Not Reported Permit: Mgs id: B1 seq: B1 recd: 16-OCT-87 Not Reported City: **ROCKVILLE** State: MD

20850 Driller na: EICHELBERGER, C. H. Zip:

Driller id: MWD0332 Est gpm pr: Т

Use for wa: Approx dep: 5.0E+001 Drill meth: AIR-ROT

Replacemen: Replace pe: Not Reported Ν Wapid: Not Reported Subdivisio: TRAVILAH QUARRY

Section: Not Reported Lot: Not Reported

ROCKVILLE Town dista: 3 MI Nearest to: Road name: TRAVILAH RD Road side: S Road dista: 70 FT

Tax map: Not Reported Block: Not Reported Parcel: Not Reported N grid27: 456000.00 E grid27: 738000.00 N grid83: 157505.00 E grid83: 381129.00 Lat dec de: Lon dec de: 39.09 77.22 Issue date: 22-OCT-87 Special fl: Not Reported

C1 seq: Not Reported C1 recd: 12-DEC-90 Total dept: Completion: 16-OCT-85 5.0E+001 Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: BC Grout top: 0 Grout bott: 8.0E+000

Casing typ: ST Casing dia: 6.0E+000 2.0E+000 Casing hei: Casing dep: +03 Screen typ: Top screen: 4.5E+001 PL 5.0E+001 Bottom scr: Screen t 1: Not Reported

Top scre 1: Bottom s 1: Screen t 2: Not Reported Top scre 2: 0

Bottom s 2: Screen dia: 2.0E+000

Not Reported Flowing we: Telescopin: 1.0E+000 Log type: Not Reported Hrs pumped: Pumping ra: 1.0E+000 Level befo: 1.0E+000 Level duri: 1.0E+000 Test pump: Α

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp:

Column len: Not Reported 0 Closed: Abandoned: Not Reported Abandon da: Not Reported

Мар	ID
Direc	tion
Dista	nce

Database EDR ID Number Elevation G31 **MD WELLS** MD6000000245922 West

AIR-PER

1/2 - 1 Mile Lower

> Objectid: 245921 County let: MO Permit: MO880796 Mgs id: Not Reported

25-APR-89 B1 seq: Not Reported B1 recd: City: **ROCKVILLE** State: Zip: 20850 Driller na: HILTON, WM. C. Driller id: MWD0111 Est gpm pr: 5.0E+000

Use for wa: DW 2.0E+002 Drill meth: Approx dep:

Replacemen: Replace pe: Not Reported Ν Wapid: Not Reported Subdivisio: POTOMA FIELDS

Section: Lot: 8 Nearest to: Town dista: **TRAVILAH** 1 MI 13528 POTOMAC RIDING LA Road name: Road side: W

Road dista: 400 FT Not Reported Tax map: Block: Not Reported Parcel: Not Reported 733000.00 N grid27: 454000.00 E grid27: E grid83: N grid83: 156896.00 379605.00 Lat dec de: 39.08 Lon dec de: 77.24 Issue date: 27-APR-89 Special fl: Not Reported C1 seq: Not Reported C1 recd: 02-DEC-89 Completion: 27-OCT-89 Total dept: 9.0E+001 Not Reported Num unsucc: 0 Hydrofract:

Υ Grouted: Grout type: CM Grout top: 0 Grout bott: 6.5E+001 Casing typ: ST Casing dia: 6.0E+000 8.0E+001 Casing dep: Casing hei: +02 Top screen: 8.0E+001 Screen typ: HO Bottom scr: 9.0E+001 Screen t 1: Not Reported

Top scre 1: 0 Bottom s 1: 0 Screen t 2: 0 Not Reported Top scre 2: Bottom s 2: Screen dia:

Flowing we: Not Reported Telescopin: Not Reported Not Reported 3.0E+000 Log type: Hrs pumped: Pumping ra: 6.0E+001 Level befo: 2.0E+001

Level duri: 7.5E+001 Test pump: Α Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp:

Column len: Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

G32 West 1/2 - 1 Mile Lower

> Objectid: 247137 County let: MO

Permit: MO882420 Mgs id: Not Reported 08-MAY-92 B1 seq: Not Reported B1 recd: MITCHELLVILLE MD City: State: Zip: 20716 Driller na: W C HILTON

Driller id: **MWD 111** Use for wa: DW

Approx dep: 2.0E+002 Drill meth: AIR-PER Replacemen: N Replace pe: Not Reported Wapid: Not Reported Subdivisio: POTOMAC FIELDS

Est gpm pr:

TC3900037.2s Page A-33

MD WELLS

5.0E+000

MD6000000247138

Lot:

7

Nearest to: **TRAVILAH** Town dista: 2 Road name: 13532 POTOMAC RIDGE Road side: W 60 FT Not Reported Road dista: Tax map: Block: Not Reported Parcel: Not Reported N grid27: 454000.00 E grid27: 733000.00 N grid83: 156896.00 E grid83: 379605.00 Lat dec de: 39.08 Lon dec de: 77.24 11-MAY-92 Special fl: Not Reported Issue date: Not Reported 10-JUN-92 C1 recd: C1 seq: 04-JUN-92 Completion: Total dept: 1.1E+002 Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: CM Grout top: 0 Grout bott: 4.2E+001 ST 6.0E+000 Casing typ: Casing dia: 4.8E+001 Casing dep: Casing hei: +02 4.8E+001 Screen typ: НО Top screen: Not Reported Bottom scr: 1.1E+002 Screen t 1: Top scre 1: 0 Bottom s 1: 0 Screen t 2: Not Reported Top scre 2: 0

Bottom s 2: Screen dia:

Flowing we: Not Reported Telescopin: Not Reported Not Reported 3.0E+000 Log type: Hrs pumped: 2.5E+001 5.0E+000 Pumping ra: Level befo: Level duri: 1.0E+002 Test pump:

Pump insta: Ν Install pu: Not Reported

0 Capacity: Pump hp:

Column len: Not Reported Closed: Abandoned: Not Reported Abandon da: Not Reported

H33 WSW 1/2 - 1 Mile Lower

Section:

MD WELLS MD6000000364490

County let: MO Objectid: 364489 Permit: MO920418 Not Reported Mgs id: B1 recd: 24-FEB-93 B1 seq: 1760 City: **CHANTILLY** State:

Zip: 22021 Driller na: JOHN C VAN HOY Driller id: MWD0390 1.0E+001 Est gpm pr:

Use for wa: DW Approx dep: 3.0E+002 Drill meth: AIR-PER Replacemen: Replace pe: Not Reported

Wapid: Not Reported Subdivisio: **HUNTING HILL FARM**

Section: Lot: 11 **GAITHERSBURG** Town dista: 10 Nearest to: 13500 HUNTING HILL W Road name: Road side: S

Road dista: 50 FT Tax map: Not Reported Not Reported Not Reported Block: Parcel: 733000.00 453000.00 N grid27: E grid27: N grid83: E grid83: 156591.00 379605.00 Lat dec de: 39.08 Lon dec de: 77.24 Issue date: 22-FEB-93 Special fl: Not Reported C1 seq: Not Reported C1 recd: Not Reported

Total dept: Completion: Not Reported Num unsucc: Hydrofract: Not Reported Grouted: Not Reported Grout type: Not Reported Grout top: 0 Grout bott: Casing typ: Not Reported Casing dia: 0 Casing dep: Casing hei: Not Reported 0 Screen typ: Not Reported Top screen: Bottom scr: Screen t 1: Not Reported Top scre 1: Bottom s 1: 0 0 Screen t 2: 0 Not Reported Top scre 2: Bottom s 2: Screen dia: 0 Not Reported Telescopin: Not Reported Flowing we: Log type: Not Reported Hrs pumped: Pumping ra: 0 Level befo: 0 0 Not Reported Level duri: Test pump: Pump insta: Not Reported Install pu: Not Reported Capacity: Pump hp:

H34 **WSW** 1/2 - 1 Mile Lower

Column len:

Abandoned:

0

Not Reported

MD WELLS MD6000000364491

Closed:

Abandon da:

MO Objectid: 364490 County let: MO920419 Mgs id: Not Reported Permit: B1 seq: 1761 B1 recd: 22-FEB-93 **CHANTILLY** City: State:

Driller na: JOHN C VAN HOY Zip: 22021

Driller id: MWD0390 Est gpm pr: 1.0E+001

Use for wa: DW

AIR-PER Approx dep: 3.0E+002 Drill meth: Replacemen: Ν Replace pe: Not Reported

HUNTING HILL FARM Wapid: Not Reported Subdivisio:

Section: Lot: 12 **GAITHERSBURG** Town dista: Nearest to: 10 Road name: 13501 HUNTING HILL W Road side: S

Tax map: Road dista: 50 FT Not Reported Block: Not Reported Parcel: Not Reported N grid27: 453000.00 E grid27: 733000.00 N grid83: E grid83: 156591.00 379605.00 39.08 Lat dec de: Lon dec de: 77.24 Issue date: 22-FEB-93 Special fl: Not Reported C1 seq: Not Reported C1 recd: Not Reported

Completion: Not Reported Total dept:

Not Reported Num unsucc: Hydrofract: Grouted: Not Reported Grout type: Not Reported

Grout top: Grout bott: Casing typ: Not Reported Casing dia: 0

0

Casing dep: Casing hei: Not Reported Screen typ: Not Reported Top screen:

0 Screen t 1: Not Reported Bottom scr:

Top scre 1: Bottom s 1:

Screen t 2: Not Reported Top scre 2: 0

Not Reported

Not Reported

Bottom s 2: 0 Screen dia: 0

Flowing we: Not Reported Telescopin: Not Reported

Log type:Not ReportedHrs pumped:0Pumping ra:0Level befo:0

Level duri:0Test pump :Not ReportedPump insta:Not ReportedInstall pu:Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

H35 WSW 1/2 - 1 Mile

Lower

Objectid: 247522 County let: MO MO920423 Mgs id: Not Reported Permit: 24-FEB-93 B1 seq: B1 recd: 1757 City: **CHANTILLY** State: VA

Zip: 22021 Driller na: JOHN C VAN HOY

Driller id: MWD0390 Est gpm pr: 1.0E+001

Use for wa: DW

Approx dep:3.0E+002Drill meth:AIR-PERReplacemen:NReplace pe:Not Reported

Wapid: Not Reported Subdivisio: HUNTING HILL FARM

Section:2Lot:16Nearest to:GAITHERSBURGTown dista:10 MI

Road name: 13509 HUNTING HILL WAY Road side: S Not Reported Road dista: 50 FT Tax map: Block: Not Reported Parcel: Not Reported N grid27: 453000.00 E grid27: 733000.00

N grid83: 156591.00 E grid83: 379605.00 Lat dec de: Lon dec de: 39.08 77.24 Issue date: 22-FEB-93 Special fl: Not Reported C1 seq: 7449 C1 recd: 27-APR-93 Completion: Total dept: 2.05E+002 08-APR-93 0 Hydrofract:

Num unsucc: Not Reported Grouted: Υ Grout type: СМ Grout top: 0 Grout bott: 3.2E+001 Casing typ: ST Casing dia: 6.0E+000 9.0E+001 Casing hei: Casing dep: +01 Screen typ: 9.0E+001 Top screen: HO Bottom scr: 2.05E+002 Screen t 1: Not Reported

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

 Bottom s 2:
 0
 Screen dia:
 0

Not Reported Not Reported Flowing we: Telescopin: 3.0E+000 Log type: Not Reported Hrs pumped: Pumping ra: 1.0E+001 Level befo: 3.0E+001 1.45E+002 Level duri: Test pump: Α

Pump insta: N Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

MD WELLS

MD6000000247523

Map ID Direction Distance

Elevation Database EDR ID Number

H36 WSW 1/2 - 1 Mile Lower

MD WELLS MD600000247524

Objectid: 247523 County let: MO

 Permit:
 MO920424
 Mgs id:
 Not Reported

 B1 seq:
 1763
 B1 recd:
 22-FEB-93

 City:
 CHANTILLY
 State:
 VA

Zip: 22021 Driller na: JOHN C. VAN HOY

Driller id: MWD390 Est gpm pr: 1.0E+001

Use for wa: DW Approx dep: 3.0E+002

Approx dep:3.0E+002Drill meth:AIR-PERReplacemen:NReplace pe:Not Reported

Wapid: Not Reported Subdivisio: HUNTING HILL FARM Section: 2 Lot: 19

Nearest to: GAITHERSBURG Town dista: 10
Road name: 13519 HUNTINGHILL WAY Road side: S

Road dista: 50 FT Tax map: Not Reported Block: Not Reported Parcel: Not Reported 453000.00 733000.00 N grid27: E grid27: E grid83: N grid83: 156591.00 379605.00 Lat dec de: 39.08 Lon dec de: 77.24 Issue date: 22-FEB-93 Special fl:

C1 seq: 7450 C1 recd: 27-APR-93 14-APR-93 Completion: Total dept: 2.45E+002 Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: CM

Grout top: 0 Grout bott: 0
Casing typ: ST Casing dia: 6.0E+000
Casing dep: 8.1E+001 Casing hei: +1

Casing dep: 8.1E+001 Casing nei: +1
Screen typ: Not Reported Top screen: 0
Bottom scr: 0 Screen t 1: Not Reported

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

 Bottom s 2:
 0
 Screen dia:
 0

 Flowing we:
 Not Reported
 Telescopin:
 T

Log type:Not ReportedHrs pumped:3.0E+000Pumping ra:1.0E+001Level befo:3.0E+001

Level duri: 2.05E+002 Test pump: A
Pump insta: Y Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

H37 WSW 1/2 - 1 Mile Lower

MD WELLS MD600000247522

 Objectid:
 247521
 County let:
 MO

 Permit:
 MO920422
 Mgs id:
 Not Reported

 B1 seq:
 Not Reported
 B1 recd:
 22-FEB-93

City: CHANTILLY State: VA

Zip: 22021 Driller na: JOHN C VAN HOY

Driller id: MWD0390 Est gpm pr: 1.0E+001

Use for wa: DW
Approximate: 3.0E+003 Prill math: AIR REP

Approx dep: 3.0E+002 Drill meth: AIR-PER
Replacemen: N Replace pe: Not Reported

Wasid: Not Reported HUNTING HILLS

Wapid: Not Reported Subdivisio: HUNTING HILL FARM

Section: Lot: Nearest to: **GAITHERSBURG** Town dista: 10 MI Road name: 13508 HUNTING HILL Road side: S 50 FT Road dista: Tax map:

Not Reported Block: Not Reported Parcel: Not Reported N grid27: 453000.00 E grid27: 733000.00 N grid83: 156591.00 E grid83: 379605.00 Lat dec de: 39.08 Lon dec de: 77.24 22-FEB-93 Special fl: Not Reported Issue date: 27-APR-93 7448 C1 recd: C1 seq: 07-APR-93 Completion: Total dept: 1.45E+002 Num unsucc: 0 Hydrofract:

Not Reported Grouted: Υ Grout type: CM Grout top: 0 Grout bott: 5.0E+001 ST 6.0E+000 Casing typ: Casing dia: Casing dep: 6.8E+001 Casing hei: +01 6.8E+001 Screen typ: HO Top screen: 1.45E+002 Not Reported Bottom scr: Screen t 1: Top scre 1: 0 Bottom s 1: 0

Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia:

Flowing we: Not Reported Telescopin: Not Reported Not Reported 3.0E+000 Log type: Hrs pumped: 4.0E+001 4.5E+001 Pumping ra: Level befo: Level duri: 6.0E+001 Test pump: Α

Pump insta: Υ Install pu: Not Reported

0 Capacity: Pump hp:

Column len: Not Reported Closed: Abandoned: Not Reported Abandon da: Not Reported

H38 WSW 1/2 - 1 Mile Lower

MD WELLS MD6000000245822

County let: MO Objectid: 245821 Permit: MO880628 Not Reported Mgs id: 31-JAN-89 B1 seq: Not Reported B1 recd: City: **ROCKVILLE** State:

Zip: 20850 Driller na: HILTON, WM. C. Driller id: MWD0111 5.0E+000 Est gpm pr:

Use for wa: DW Approx dep: 2.5E+002 Drill meth: AIR-PER Replacemen: Replace pe: Not Reported

Wapid: Not Reported Subdivisio: POTOMAC FIELDS

Section: Lot: 17 **TRAVILAH** Town dista: 2 MI Nearest to:

13505 POTOMAC RDWY Road name: Road side: Ε

Road dista: 85 FT Tax map: Not Reported Not Reported Not Reported Block: Parcel: 453000.00 733000.00 N grid27: E grid27: N grid83: E grid83: 156591.00 379605.00 Lat dec de: 39.08 Lon dec de: 77.24 Issue date: 08-FEB-89 Special fl: Not Reported C1 seq: Not Reported C1 recd: 17-APR-89

24-MAR-89 Total dept: Completion: 9.0E+001 Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: CM 0 2.5E+001 Grout top: Grout bott: 6.0E+000 Casing typ: ST Casing dia: Casing dep: 3.5E+001 Casing hei: +02 Screen typ: HO Top screen: 3.5E+001 Bottom scr: 9.0E+001 Screen t 1: Not Reported Top scre 1: Bottom s 1: 0 0 Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: 0 Flowing we: Not Reported Telescopin: Not Reported Log type: Not Reported Hrs pumped: 3.0E+000 Pumping ra: 2.5E+001 Level befo: 2.4E+001 8.5E+001 Level duri: Test pump: S Pump insta: Not Reported Install pu: Not Reported Capacity: Pump hp: Column len: Not Reported 0 Closed:

Not Reported

H39 WSW 1/2 - 1 Mile Lower

Abandoned:

VSW MD WELLS MD6000000245824

Abandon da:

Not Reported

MO Objectid: 245823 County let: MO880630 Mgs id: Not Reported Permit: B1 seq: Not Reported B1 recd: 31-JAN-89 **ROCKVILLE** City: State: MD 20850 Driller na:

 Zip:
 20850
 Driller na:
 HILTON, WM. C.

 Driller id:
 MWD0111
 Est gpm pr:
 5.0E+000

 Use for wa:
 DW

Approx dep: 2.0E+002 Drill meth: AIR-PER
Replacemen: N Replace pe: Not Reported

World: Poported Subdivision POTOMAC FIELD

Wapid: Not Reported Subdivisio: POTOMAC FIELDS Section: 1 Lot: 19

TRAVILAH 2 MI Nearest to: Town dista: 13541 POTOMAC RIDEY Road name: Road side: Е Tax map: Road dista: 200 FT Not Reported Block: Not Reported Parcel: Not Reported N grid27: 733000.00 453000.00 E grid27: N grid83: E grid83: 156591.00 379605.00 39.08 Lat dec de: Lon dec de: 77.24 Issue date: 08-FEB-89 Special fl: Not Reported

C1 seq: Not Reported C1 recd: 15-MAY-89 Completion: 08-APR-89 Total dept: 1.1E+002 Not Reported Num unsucc: 0 Hydrofract: Grouted: Υ Grout type: CM Grout top: 0 Grout bott: 4.9E+001 6.0E+000 Casing typ: ST Casing dia: 7.0E+001 Casing dep: Casing hei: +02 7.0E+001 Screen typ: НО Top screen: 1.1E+002 Screen t 1: Not Reported Bottom scr:

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

Bottom s 2: Screen dia:

Flowing we: Not Reported Telescopin: Not Reported Log type: Not Reported Hrs pumped: 3.0E+000 1.2E+001 3.5E+001 Pumping ra: Level befo: Level duri: 1.0E+002 Test pump: S

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp:

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

WSW 1/2 - 1 Mile Lower

MD WELLS MD6000000364487

Objectid: 364486 County let: MO MO920421 Not Reported Permit: Mgs id: 22-FEB-93 B1 seq: B1 recd: 1756 City: **CHANTILLY** State: VA

22021 Driller na: JOHN C VAN HOY Zip:

Driller id: MWD0390 Est gpm pr: 1.0E+001

Use for wa: DW

AIR-PER Approx dep: 3.0E+002 Drill meth: Replacemen: Replace pe: Not Reported Ν

Wapid: Not Reported Subdivisio: **HUNTING HILL FARM**

Section: Lot: **GAITHERSBURG** Town dista: 10 Nearest to: Road name: 13505 HUNTING HILL W Road side: S

Road dista: 50 FT Tax map: Not Reported Not Reported Parcel: Not Reported Block: N grid27: 453000.00 E grid27: 733000.00 N grid83: 156591.00 E grid83: 379605.00 Lat dec de: Lon dec de: 39.08 77.24 Issue date: 22-FEB-93 Special fl: Not Reported

C1 seq: Not Reported C1 recd: Not Reported

Total dept: Completion: Not Reported

Num unsucc: 0 Hydrofract: Not Reported Grouted: Not Reported Grout type: Not Reported

Grout top: 0 Grout bott:

Casing typ: Not Reported Casing dia:

Casing hei: Casing dep: 0 Not Reported

Top screen: Screen typ: Not Reported Bottom scr: 0 Screen t 1: Not Reported

Top scre 1: 0 Bottom s 1: 0

Screen t 2: Not Reported Top scre 2: 0

Bottom s 2: Screen dia:

Not Reported Flowing we: Telescopin: Not Reported

Log type: Not Reported Hrs pumped: 0 Pumping ra: Level befo:

Not Reported Level duri: 0 Test pump: Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp:

Column len: Not Reported 0 Closed: Abandoned: Not Reported Abandon da: Not Reported

Map ID Direction Distance

Elevation Database EDR ID Number

H41 WSW 1/2 - 1 Mile

MD WELLS MD600000364488

Lower

Objectid: 364487 County let: MO

 Permit:
 MO920426
 Mgs id:
 Not Reported

 B1 seq:
 1799
 B1 recd:
 22-FEB-93

 City:
 CHANTILLY
 State:
 VA

Zip: 22021 Driller na: JOHN C VAN HOY

 Driller id:
 MWD0390
 Est gpm pr:
 1.0E+001

Use for wa: DW Approx dep: 3.0E+002

Approx dep:3.0E+002Drill meth:AIR-PERReplacemen:NReplace pe:Not Reported

Wapid: Not Reported Subdivisio: HUNTING HILL FARM

Section:2Lot:17Nearest to:GAITHERSBURGTown dista:10Road name:HUNTING HILL WAYRoad side:S

Road dista: 50 FT Tax map: Not Reported Block: Not Reported Parcel: Not Reported N grid27: 453000.00 E grid27: 733000.00 E grid83: N grid83: 156591.00 379605.00 Lat dec de: 39.08 Lon dec de: 77.24 Issue date: 22-FEB-93 Special fl: Not Reported C1 seq: Not Reported C1 recd: Not Reported

Completion: Not Reported Total dept: 0

Num unsucc: 0 Hydrofract: Not Reported

Grouted: Not Reported Grout type: Not Reported Grout top: 0 Grout bott: 0

Casing typ: Not Reported Casing dia: 0

Casing dep: 0 Casing hei: Not Reported

Screen typ: Not Reported Top screen: 0
Bottom scr: 0 Screen t 1: Not Reported

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

 Bottom s 2:
 0
 Screen dia:
 0

Flowing we: Not Reported Telescopin: Not Reported

Log type: Not Reported Hrs pumped: 0
Pumping ra: 0 Level befo: 0

Level duri: 0 Test pump: Not Reported

Pump insta:

Not Reported

Install pu:

Not Reported

Capacity:

0

Pump hp:

0

Column len: 0 Closed: Not Reported

Abandoned: Not Reported Abandon da: Not Reported

H42 WSW 1/2 - 1 Mile Lower

MD WELLS MD600000364486

 Objectid:
 364485
 County let:
 MO

 Permit:
 MO920420
 Mgs id:
 Not Reported

 B1 seq:
 1755
 B1 recd:
 22-FEB-93

City: CHANTILLY State: VA

Zip: 22021 Driller na: JOHN C VAN HOY

Driller id: MWD0390 Est gpm pr: 1.0E+001

Use for wa:

DW

Approx dep:3.0E+002Drill meth:AIR-PERReplacemen:NReplace pe:Not ReportedWapid:Not ReportedSubdivisio:Not Reported

13 Section: Lot: Nearest to: **GAITHERSBURG** Town dista: 10 Road name: 13503 HUNTING HILL W Road side: S Road dista: 50 FT Tax map:

Not Reported Block: Not Reported Parcel: Not Reported N grid27: 453000.00 E grid27: 733000.00 N grid83: 156591.00 E grid83: 379605.00 Lat dec de: 39.08 Lon dec de: 77.24 22-FEB-93 Special fl: Not Reported Issue date: Not Reported C1 recd: Not Reported C1 seq:

Completion: Not Reported Total dept:

Num unsucc: Hydrofract: Not Reported Grouted: Not Reported Grout type: Not Reported

Grout top: 0 Grout bott: 0 0 Casing typ: Not Reported Casing dia:

Casing dep: Casing hei: Not Reported 0

Screen typ: Not Reported Top screen: Not Reported Bottom scr: 0 Screen t 1:

Top scre 1: 0 Bottom s 1: Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia:

Flowing we: Not Reported Telescopin: Not Reported

Log type: Not Reported Hrs pumped: Pumping ra: 0 Level befo: 0

Level duri: 0 Not Reported Test pump: Pump insta: Not Reported Install pu: Not Reported

Capacity: Pump hp:

Column len: Not Reported Closed:

Abandoned: Not Reported Abandon da: Not Reported

H43 WSW 1/2 - 1 Mile Lower

MD WELLS MD6000000247525

County let: MO Objectid: 247524 Permit: MO920425 Not Reported Mgs id: 22-FEB-93 B1 seq: 1752 B1 recd: **CHANTILLY** City: State:

Zip: 22021 Driller na: JOHN C VAN HOY

Driller id: MWD0390 1.0E+001 Est gpm pr: Use for wa: DW Approx dep: 3.0E+002 Drill meth: AIR-PER

Replacemen: Replace pe: Not Reported Ν

Wapid: Not Reported Subdivisio: **HUNTING HILL FARM**

Section: Lot: 8 **GAITHERSBURG** Town dista: 10 MI Nearest to: 13512 HUNTING HILL WAY Road name: Road side: S

Road dista: 50 FT Tax map: Not Reported Not Reported Not Reported Block: Parcel: 733000.00 453000.00 N grid27: E grid27: N grid83: 156591.00 E grid83: 379605.00 Lat dec de: 39.08 Lon dec de: 77.24 Issue date: 22-FEB-93 Special fl: Not Reported C1 seq: 7451 C1 recd: 27-APR-93

06-APR-93 Total dept: 2.65E+002 Completion: Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: CM 0 6.0E+001 Grout top: Grout bott: 6.0E+000 Casing typ: ST Casing dia: Casing dep: 1.14E+002 Casing hei: +01 Screen typ: HO Top screen: 1.14E+002 Bottom scr: 2.65E+002 Screen t 1: Not Reported Top scre 1: Bottom s 1: 0 0 Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: 0 Flowing we: Not Reported Telescopin: Not Reported Log type: Not Reported Hrs pumped: 3.0E+000 6.0E+000 Pumping ra: Level befo: 9.0E+000 5.0E+001 Level duri: Test pump: Α Pump insta: Υ Install pu: Not Reported Capacity: 0 Pump hp: Column len: Not Reported 0 Closed: Abandoned: Not Reported Abandon da: Not Reported

H44 WSW 1/2 - 1 Mile Lower

W MD WELLS MD600000247526 - 1 Mile

MO Objectid: 247525 County let: MO920427 Mgs id: Not Reported Permit: B1 seq: 1800 B1 recd: 22-FEB-93 **CHANTILLY** City: State: 22021 Driller na:

 Zip:
 22021
 Driller na:
 JOHN C VAN HOY

 Driller id:
 MWD0390
 Est gpm pr:
 1.0E+001

Use for wa:

DW

1.02+00

Approx dep: 3.0E+002 Drill meth: AIR-PER

Replacemen: N Replace pe: Not Reported

Wapid: Not Reported Subdivisio: HUNTING HILL FARM Section: 2 Lot: 18

Section: 2 Lot: 18

Nearest to: GAITHERSBURG Town dista: 10 MI

Road name: HUNTING HILL WAY Road side: S

Tax map: Not Reported Road dista: 50 FT Block: Not Reported Parcel: Not Reported N grid27: 453000.00 733000.00 E grid27: N grid83: E grid83: 156591.00 379605.00 Lat dec de: 39.08 Lon dec de: 77.24 Issue date: 22-FEB-93 Special fl: Not Reported C1 seq: 7453 C1 recd: 27-APR-93 08-APR-93 Completion: Total dept: 1.45E+002 Not Reported Num unsucc: 0 Hydrofract:

Grouted: Υ Grout type: CM Grout top: 0 Grout bott: 4.5E+001 6.0E+000 Casing typ: ST Casing dia: 7.5E+001 Casing dep: Casing hei: +01 Screen typ: 7.5E+001 НО Top screen: 1.45E+002 Screen t 1: Not Reported Bottom scr:

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

Bottom s 2: Screen dia:

Flowing we: Not Reported Telescopin: Not Reported Log type: Not Reported Hrs pumped: 3.0E+000 2.0E+001 4.0E+001 Pumping ra: Level befo: Level duri: 1.0E+002 Test pump:

Pump insta: Υ Install pu: Not Reported

Capacity: 0 Pump hp:

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

1/2 - 1 Mile Lower

MD WELLS MD6000000245057

Objectid: 245056 County let: MO MO812856 Mgs id: Not Reported Permit: B1 seq: B1 recd: 16-OCT-87 Not Reported ROCKVILLE City: State: MD

20850 Driller na: EICHELBERGER, C. H. Zip:

Driller id: MWD0332 Est gpm pr:

Use for wa: Т

Approx dep: 5.0E+001 Drill meth: AIR-ROT Replacemen: Replace pe: Not Reported Ν

Wapid: Not Reported Subdivisio: TRAVILAH QUARRY Section: Not Reported Lot: Not Reported

ROCKVILLE Town dista: 3 MI Nearest to: Road name: **BOSWELL LA** Road side: Ν

Road dista: 10 FT Tax map: Not Reported Not Reported Parcel: Not Reported Block: N grid27: 451000.00 E grid27: 738000.00 N grid83: 155981.00 E grid83: 381129.00 Lat dec de: Lon dec de: 39.07 77.22 Issue date: 22-OCT-87 Special fl: Not Reported C1 seq: Not Reported C1 recd: 12-DEC-90 Completion: Total dept: 14-NOV-85 5.0E+001 0

Num unsucc: Hydrofract: Not Reported Grouted: Υ Grout type: BC Grout top: 5.0E+000 Grout bott: 8.0E+000 Casing typ: ST Casing dia: 6.0E+000 4.0E+000 Casing dep: Casing hei: +01 Screen typ: PL4.5E+001 Top screen:

Bottom scr: 5.0E+001 Screen t 1: Not Reported Top scre 1: Bottom s 1:

Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: 2.0E+000

Not Reported Flowing we: Telescopin: 1.0E+000 Log type: Not Reported Hrs pumped: Pumping ra: 2.0E+000 Level befo: 1.0E+000 Level duri: 1.0E+000 Test pump: Α

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp:

Column len: Not Reported 0 Closed:

Abandoned: Not Reported Abandon da: Not Reported

Map ID Direction Distance

Database EDR ID Number Elevation

146 NNE 1/2 - 1 Mile Lower

MD WELLS MD6000000245059

Objectid: 245058 County let: MO Permit: MO812858 Mgs id: Not Reported B1 seq: Not Reported B1 recd: 16-OCT-87 City: **ROCKVILLE** State: MD

Zip: 20850 Driller na: EICHELBERGER, C. H.

Driller id: MWD0332 Est gpm pr: 0

Use for wa: Т

5.0E+001 Drill meth: AIR-ROT Approx dep: Replacemen: Replace pe: Not Reported Ν Wapid: Not Reported Subdivisio: TRAVILAH QUARRY Section: Not Reported Not Reported Lot:

ROCKVILLE Nearest to: Town dista: 3 MI TRAVILAH RD Road name: Road side: Ν Road dista: 1600FT Tax map: Not Reported

Block: Not Reported Parcel: Not Reported 457000.00 738000.00 N grid27: E grid27: E grid83: N grid83: 157810.00 381129.00 Lat dec de: 39.09 Lon dec de: 77.22 Issue date: 22-OCT-87 Special fl: Not Reported 12-DEC-90 C1 seq: Not Reported C1 recd: Completion: 16-OCT-85 Total dept: 5.0E+001 Not Reported Num unsucc: 0 Hydrofract:

Grouted: Υ Grout type: BC Grout top: 5.0E+000 Grout bott: 8.0E+000 Casing typ: ST Casing dia: 6.0E+000 2.0E+000 Casing dep: Casing hei: +03

PLTop screen: 4.5E+001 Screen typ: Bottom scr: 5.0E+001 Screen t 1: Not Reported Top scre 1: Bottom s 1: 0 Screen t 2: Not Reported Top scre 2: 0

Bottom s 2: Screen dia: 2.0E+000 Flowing we: Not Reported Telescopin: Not Reported Log type: Hrs pumped: 1.0E+000 Pumping ra: 4.0E+000 Level befo: 1.0E+000 Level duri: 1.0E+000 Test pump: Α

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp:

Column len: Closed: Not Reported

Abandoned: Not Reported Abandon da: Not Reported

1/2 - 1 Mile Lower

> Objectid: 245059 County let: MO Permit: MO812859 Mgs id: Not Reported B1 seq: Not Reported B1 recd: 16-OCT-87 **ROCKVILLE** MD City: State:

Zip: 20850 Driller na: EICHELBERGER, C. H.

Driller id: MWD0332 Est gpm pr:

Use for wa: Т

Approx dep: 5.0E+001 Drill meth: AIR-ROT Replacemen: Replace pe: Not Reported N Wapid: Not Reported Subdivisio: TRAVILAH QUARRY

TC3900037.2s Page A-45

MD WELLS

MD6000000245060

Lot:

Nearest to: **ROCKVILLE** Town dista: 3 MI Road name: TRAVILAH RD Road side: Ν 1000FT Road dista: Tax map: Not Reported Block: Not Reported Parcel: Not Reported N grid27: 457000.00 E grid27: 738000.00 N grid83: 157810.00 E grid83: 381129.00 Lat dec de: 39.09 Lon dec de: 77.22 22-OCT-87 Special fl: Not Reported Issue date: Not Reported C1 recd: 12-DEC-90 C1 seq: Completion: 17-OCT-85 Total dept: 5.0E+001 Num unsucc: Hydrofract: Not Reported Grouted: Υ Grout type: BC Grout top: 5.0E+000 Grout bott: 8.0E+000 6.0E+000 Casing typ: ST Casing dia: Casing dep: 2.0E+000 Casing hei: +03 Screen typ: PL Top screen: 4.5E+001 5.0E+001 Not Reported Bottom scr: Screen t 1: Top scre 1: n Bottom s 1: Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: 2.0E+000

Not Reported

Bottom s 2: 0 Screen dia: 2.0E+000
Flowing we: Not Reported Telescopin: T

Log type: Not Reported Hrs pumped: 1.0E+000
Pumping ra: 1.0E+001 Level befo: 1.0E+000

 Pumping ra:
 1.0E+001
 Level befo:
 1.0E+000

 Level duri:
 1.0E+000
 Test pump:
 A

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

...

J48 West 1/2 - 1 Mile Lower

Section:

MD WELLS MD600000245437

Not Reported

County let: MO Objectid: 245436 Permit: MO880146 Not Reported Mgs id: 11-MAY-88 B1 seq: Not Reported B1 recd: City: **ROCKVILLE** State: MD W.C. HILTON Zip: 20854 Driller na: Driller id: **MWD 111** 5.0E+000 Est gpm pr: Use for wa: DW

Approx dep:2.0E+002Drill meth:AIR-PERReplacemen:NReplace pe:Not ReportedWapid:Not ReportedSubdivisio:POTOMAC FIELDS

Section:ILot:6Nearest to:TRAVILAHTown dista:1Road name:13536 POTOMAC RIDING LARoad side:W

Road dista: 18 FT Tax map: Not Reported Not Reported Not Reported Block: Parcel: 732000.00 454000.00 N grid27: E grid27: N grid83: 156896.00 E grid83: 379300.00 Lat dec de: 39.08 Lon dec de: 77.24 Issue date: 17-MAY-88 Special fl: Not Reported C1 seq: Not Reported C1 recd: 05-SEP-88

05-AUG-88 Total dept: 8.5E+001 Completion: Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: CM 0 3.0E+001 Grout top: Grout bott: 6.0E+000 Casing typ: ST Casing dia: Casing dep: 3.5E+001 Casing hei: +02 Screen typ: HO Top screen: 3.5E+001 Bottom scr: 8.5E+001 Screen t 1: Not Reported Top scre 1: Bottom s 1: 0 0 Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: 0 Flowing we: Not Reported Telescopin: Not Reported Log type: Not Reported Hrs pumped: 3.0E+000 2.0E+001 Pumping ra: Level befo: 3.0E+001 8.0E+001 Level duri: Test pump: S Pump insta: Ν Install pu: Not Reported Capacity: 0 Pump hp: Column len: Not Reported 0 Closed: Not Reported Abandoned: Abandon da: Not Reported

J49 West 1/2 - 1 Mile Lower

MD WELLS MD6000000242839 Mile

MO Objectid: 242838 County let: MO810627 Mgs id: Not Reported Permit: B1 seq: Not Reported B1 recd: 02-NOV-83 WASHINGTON City: State: DC 20036 Driller na:

 Zip:
 20036
 Driller na:
 HILTON, WM. C.

 Driller id:
 MWD0111
 Est gpm pr:
 5.0E+000

 Use for wa:
 DW

Approx dep:2.0E+002Drill meth:AIR-PERReplacemen:NReplace pe:Not ReportedWapid:Not ReportedSubdivisio:WINDMILL FARMSection:Not ReportedLot:12

Section :Not ReportedLot:12Nearest to:TRAVILAHTown dista:1.5 MIRoad name:13705 TURKEY FOOT RDRoad side:ERoad dista:40 FTTax map:Not Re

Not Reported Block: Not Reported Parcel: Not Reported N grid27: 454000.00 732000.00 E grid27: N grid83: E grid83: 379300.00 156896.00 Lat dec de: 39.08 Lon dec de: 77.24 Issue date: 02-NOV-83 Special fl: Not Reported C1 seq: Not Reported C1 recd: 27-JAN-84 1.1E+002 Completion: 03-NOV-84 Total dept: Hydrofract: Not Reported Num unsucc: 0 Grouted: Υ Grout type: CM

Grout top: 0 Grout bott: 3.0E+001 ST 6.0E+000 Casing typ: Casing dia: 3.5E+001 Casing dep: Casing hei: +02 Screen typ: 3.5E+001 НО Top screen: Bottom scr: 1.1E+002 Screen t 1: Not Reported

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

Bottom s 2: 0 Screen dia: 0

Flowing we: Not Reported Telescopin: Not Reported Log type: Not Reported Hrs pumped: 3.0E+000 4.0E+001 2.8E+001 Pumping ra: Level befo: Level duri: 6.5E+001 Test pump: S

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

J50 West 1/2 - 1 Mile Lower

est MD WELLS MD600000245757

Objectid: 245756 County let: MO MO880543 Mgs id: Not Reported Permit: B1 seq: B1 recd: 12-DEC-88 Not Reported ROCKVILLE City: State: MD

Zip: 20850 Driller na: HILTON, WM. C.

Driller id: MWD0111 Est gpm pr: 5.0E+000 Use for wa: 5.0E+000

Approx dep: 2.0E+002 Drill meth: AIR-PER
Replacemen: N Replace pe: Not Reported
Wapid: Not Reported Subdivisio: POTOMAC FIELDS

Section: 1 Lot: 20
Nearest to: TRAVILAN Town dista: 2 MI

Road name: 13549 POTOMAC RIDING LA Road side: E

Road dista: 25 FT Tax map: Not Reported Block: Not Reported Parcel: Not Reported N grid27: 454000.00 E grid27: 732000.00 N grid83: 156896.00 E grid83: 379300.00 Lat dec de: Lon dec de: 39.08 77.24 Issue date: 05-JAN-89 Special fl: Not Reported C1 seq: Not Reported C1 recd: 02-MAR-89 07-FEB-89 Total dept: 1.3E+002 0 Hydrofract: Not Reported

Completion: Num unsucc: Grouted: Υ Grout type: СМ Grout top: 0 Grout bott: 5.0E+001 Casing typ: ST Casing dia: 6.0E+000 6.5E+001 Casing dep: Casing hei: +02 Screen typ: 6.5E+001 Top screen: HO Bottom scr: 1.3E+002 Screen t 1: Not Reported

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

 Bottom s 2:
 0
 Screen dia:
 0

Not Reported Not Reported Flowing we: Telescopin: 3.0E+000 Log type: Not Reported Hrs pumped: Pumping ra: 4.0E+001 Level befo: 2.5E+001 Level duri: 1.0E+002 Test pump: S

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

Map ID Direction Distance

Elevation Database EDR ID Number

J51

West 1/2 - 1 Mile Lower

Lower

MD WELLS MD600000246143

Objectid: 246142 County let: MO Permit: MO881062 Mgs id: Not Reported 01-AUG-89 B1 seq: Not Reported B1 recd: City: **HERDON** State: Zip: 22070 Driller na: HILTON, WM. C. Driller id: MWD0111 Est gpm pr: 5.0E+000 DW

 Use for wa:
 DW

 Approx dep:
 2.0E+002
 Drill meth:
 AIR-PER

 Replacemen:
 N
 Replace pe:
 Not Reported

 Wapid:
 Not Reported
 Subdivisio:
 POTOMAC FIELDS

 Section :
 1
 Lot:
 18

 Nearest to:
 TRAVILAH
 Town dista:
 1.5 MI

 Road name:
 13531 POTOMAC RIDING
 Road side:
 E

Road dista: 200 FT Tax map: Not Reported Block: Not Reported Parcel: Not Reported 454000.00 N grid27: E grid27: 732000.00 E grid83: N grid83: 156896.00 379300.00 Lat dec de: 39.08 Lon dec de: 77.24 Issue date: 02-AUG-89 Special fl: Not Reported C1 seq: Not Reported C1 recd: 19-SEP-89 Completion: 18-AUG-89 Total dept: 9.0E+001 Not Reported Num unsucc: 0 Hydrofract:

Grouted: Υ Grout type: CM Grout top: 0 Grout bott: 3.0E+001 Casing typ: ST Casing dia: 6.0E+000 3.5E+001 Casing dep: Casing hei: +02 Top screen: 3.5E+001 Screen typ: HO Bottom scr: 9.0E+001 Screen t 1: Not Reported

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

 Bottom s 2:
 0
 Screen dia:
 0

Flowing we: Not Reported Telescopin: Not Reported Not Reported 3.0E+000 Log type: Hrs pumped: Pumping ra: 3.0E+001 Level befo: 1.0E+001 Level duri: 8.0E+001 Test pump: Α

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported
Abandoned: Not Reported Abandon da: Not Reported

J52 West MD WELLS 1/2 - 1 Mile

Objectid: 245793 County let: MO

 Objectid:
 245793
 County let:
 MO

 Permit:
 MO880595
 Mgs id:
 Not Reported

 B1 seq:
 Not Reported
 B1 recd:
 25-JAN-89

 City:
 ROCKVILLE
 State:
 MD

 Zip:
 20850
 Driller na:
 HILTON, WM. C.

 Driller id:
 MWD0111
 Est gpm pr:
 5.0E+000

 Use for wa:
 DW

 Approx dep:
 2.0E+002
 Drill meth:
 AIR-PER

 Replacemen:
 N
 Replace pe:
 Not Reported

Replacemen: N Replace pe: Not Reported
Wapid: Not Reported Subdivisio: POTOMAC FIELDS

MD6000000245794

Section: Lot: 2 Nearest to: **TRAVILAH** Town dista: 2 MI Road name: 13550 POTOMAC RIDING LA Road side: W 300 FT Not Reported Road dista: Tax map: Block: Not Reported Parcel: Not Reported N grid27: 454000.00 E grid27: 732000.00 N grid83: 156896.00 E grid83: 379300.00 Lat dec de: 39.08 Lon dec de: 77.24 02-FEB-89 Special fl: Not Reported Issue date: C1 recd: 02-DEC-89 C1 seq: 4125 25-OCT-89 Completion: Total dept: 1.2E+002 Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: CM Grout top: 0 Grout bott: 4.1E+001 ST 6.0E+000 Casing typ: Casing dia: 5.8E+001 Casing dep: Casing hei: 2 5.8E+001 Screen typ: НО Top screen: 1.2E+002 Not Reported Bottom scr: Screen t 1: Top scre 1: 0 Bottom s 1: Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: Flowing we: Not Reported Telescopin: Not Reported Not Reported 3.0E+000 Log type: Hrs pumped: 1.0E+001 3.0E+001 Pumping ra: Level befo: Level duri: 1.1E+002 Test pump: Α Pump insta: Ν Install pu: Not Reported Capacity: 0 Pump hp: Column len: Not Reported

Closed:

Abandon da:

K53 West 1/2 - 1 Mile Lower

Block:

N grid27:

N grid83:

Lat dec de:

Issue date:

C1 seq:

Abandoned:

Not Reported

HILTON, WM. C.

30-MAR-89

5.0E+000

AIR-PER

9

2 MI

Not Reported

POTOMAC FIELDS

MO

MD WELLS

Not Reported

MD6000000245889

245888 County let: Objectid: Permit: MO880757 Mgs id: B1 seq: Not Reported B1 recd: City: **ROCKVILLE** State: Zip: 20850 Driller na: Driller id: MWD0111 Est gpm pr: Use for wa: DW Approx dep: 2.0E+002 Drill meth: Replacemen: Replace pe: Wapid: Not Reported Subdivisio: Section: Lot: **TRAVILAH** Town dista: Nearest to: 13524 POTOMAC RIDGE Road name: Road side: Road dista: 255 FT

Not Reported

Not Reported

453000.00

156591.00

39.08

03-APR-89

Not Reported

W Tax map: Not Reported Not Reported Parcel: 732000.00 E grid27: E grid83: 379300.00 Lon dec de: 77.24 Special fl: Not Reported C1 recd: 15-MAY-89

14-APR-89 Total dept: Completion: 1.3E+002 Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: CM 0 4.8E+001 Grout top: Grout bott: 6.0E+000 Casing typ: ST Casing dia: Casing dep: 5.5E+001 Casing hei: +02 Screen typ: HO Top screen: 5.5E+001 Bottom scr: 1.3E+002 Screen t 1: Not Reported Top scre 1: 0 Bottom s 1: 0 Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: 0 Flowing we: Not Reported Telescopin: Not Reported Log type: Not Reported Hrs pumped: 3.0E+000 Pumping ra: 8.0E+000 Level befo: 2.5E+001 1.2E+002 Level duri: Test pump: S Pump insta: Not Reported Install pu: Not Reported Capacity: Pump hp: Column len: Not Reported 0 Closed: Abandoned: Not Reported Abandon da: Not Reported

K54 West 1/2 - 1 Mile Lower

Nest MD WELLS MD600000245888

MO Objectid: 245887 County let: MO880756 Mgs id: Not Reported Permit: B1 seq: Not Reported B1 recd: 30-MAR-89 **ROCKVILLE** City: State: MD

 Zip:
 20850
 Driller na:
 HILTON, WM. C.

 Driller id:
 MWD0111
 Est gpm pr:
 5.0E+000

 Use for wa:
 DW

Approx dep:2.0E+002Drill meth:AIR-PERReplacemen:NReplace pe:Not ReportedWapid:Not ReportedSubdivisio:POTOMAC FIELDS

Section: 1 Lot: 4
Nearest to: TRAVILAH Town dista: 2 MI

13544 POTOMAC RIDGE Road name: Road side: W Tax map: Road dista: 500 FT Not Reported Block: Not Reported Parcel: Not Reported N grid27: 732000.00 453000.00 E grid27: N grid83: E grid83: 379300.00 156591.00 39.08 Lat dec de: Lon dec de: 77.24 Issue date: 03-APR-89 Special fl: Not Reported C1 seq: Not Reported C1 recd: 23-OCT-89 Completion: 07-OCT-89 Total dept: 2.0E+002 Not Reported Num unsucc: 0 Hydrofract: Grouted: Υ Grout type: CM

Grout top: 0 Grout bott: 6.0E+001 6.0E+000 Casing typ: ST Casing dia: 6.8E+001 Casing dep: Casing hei: +02 6.8E+001 Screen typ: НО Top screen: 2.0E+002 Screen t 1: Not Reported Bottom scr:

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

Bottom s 2: 0 Screen dia: 0

Flowing we: Not Reported Telescopin: Not Reported Log type: Not Reported Hrs pumped: 3.0E+000 6.0E+000 4.9E+001 Pumping ra: Level befo: Level duri: 1.9E+002 Test pump: S

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

K55 West 1/2 - 1 Mile Lower

MD WELLS MD600000400155

 Objectid:
 400154
 County let:
 MO

 Permit:
 MO941290
 Mgs id:
 Not Reported

 B1 seq:
 4784
 B1 recd:
 12-OCT-99

 City:
 GAITHERSBURG
 State:
 MD

City: GAITHERSBURG State: MD Zip: 20877 Driller na: GEC

 Zip:
 20877
 Driller na:
 GEORGE F EASTERDAY

 Driller id:
 MWD 40
 Est gpm pr:
 5.0E+000

Use for wa:

| DW | Est gpm pr: 5.0E+000

Approx dep: 3.0E+002 Drill meth: AIR-ROT
Replacemen: N Replace pe: Not Reported
Wapid: Not Reported Subdivisio: POTOMAC FIELDS

Section:Not ReportedLot:Not ReportedNearest to:TRAVILAHTown dista:1Road name:13548 POTOMAC RIDINGRoad side:W

Road dista: 450 FT Tax map: Not Reported Block: Not Reported Parcel: Not Reported N grid27: 453000.00 E grid27: 732000.00 N grid83: 156591.00 E grid83: 379300.00 Lat dec de: Lon dec de: 39.08 77.24 Issue date: 13-OCT-99 Special fl: Not Reported C1 seq: 0931 C1 recd: 17-DEC-99 22-NOV-99 Completion: Total dept: 4.0E+002 Hydrofract: Num unsucc: 0 Ν Grouted: Υ Grout type: CM Grout top: 0 Grout bott: 3.6E+001 Casing typ: ST Casing dia: 6.0E+000 4.0E+001 Casing dep: Casing hei: +2 Screen typ: 3.8E+001 НО Top screen: 4.0E+002 Screen t 1: Not Reported

 Bottom scr:
 4.0E+002
 Screen t 1:
 Not I

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

 Bottom s 2:
 0
 Screen dia:
 0

Not Reported Not Reported Flowing we: Telescopin: Not Reported 3.0E+000 Log type: Hrs pumped: Pumping ra: 5.0E+000 Level befo: 4.0E+001 1.19E+002 Level duri: Test pump: S

Pump insta: N Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

Map ID Direction Distance

Database EDR ID Number Elevation K56

Subdivisio:

Town dista:

Grout type:

Grout bott:

Casing dia:

Casing hei:

Top screen:

Screen t 1:

Bottom s 1:

Top scre 2:

Est gpm pr:

Lot:

West 1/2 - 1 Mile Lower

MD WELLS MD6000000245890

Objectid: 245889 County let: MO Permit: MO880758 Mgs id: Not Reported 30-MAR-89 B1 seq: Not Reported B1 recd: City: **ROCKVILLE** State: MD Zip: 20850 Driller na: Driller id: MWD0111 Est gpm pr: 5.0E+000

Use for wa: DW 1.5E+002 Drill meth: Approx dep: Replacemen: Replace pe: Ν

Wapid: Not Reported Section:

Nearest to: **TRAVILAH** 13516 POTOMAC RIDGE Road name:

Υ

Road dista: 20 FT Block: Not Reported N grid27: 453000.00 N grid83: 156591.00 Lat dec de: 39.08 Issue date: 03-APR-89 C1 seq: Not Reported Completion: 13-APR-89 Num unsucc: 0

Grout top: 0 Casing typ: ST 5.8E+001 Casing dep: Screen typ: НО Bottom scr: 1.7E+002 Top scre 1: 0

Screen t 2: Not Reported Bottom s 2: Flowing we: Not Reported Not Reported Log type: Pumping ra: 5.0E+000 Level duri: 1.6E+002 Pump insta: Not Reported

Capacity: 0 Column len:

Abandoned: Not Reported HILTON, WM. C.

AIR-PER Not Reported POTOMAC FIELDS

11 2 MI W

Road side: Tax map: Not Reported Parcel: Not Reported E grid27: 732000.00 E grid83: 379300.00 Lon dec de: 77.24 Special fl: Not Reported C1 recd: 13-MAY-89 Total dept: 1.7E+002 Hydrofract:

Not Reported CM 5.0E+001 6.0E+000 +02 5.8E+001 Not Reported

0 0

Screen dia: Telescopin: Not Reported Hrs pumped: 3.0E+000 Level befo: 2.0E+001 Test pump: S

Install pu: Not Reported

Pump hp:

Closed: Not Reported Abandon da: Not Reported

1/2 - 1 Mile Lower

Grouted:

MD WELLS MD6000000238591

Objectid: 238590 County let: MO Permit: MO710138 Mgs id: Not Reported B1 seq: Not Reported B1 recd: 23-MAR-71 **ROCKVILLE** City: State:

BROWN, RAYMOND DEWEY Zip: Not Reported Driller na:

Driller id: MWD0163 Use for wa: DW

1.0E+002 Drill meth: **CABLE** Approx dep: Replacemen: N Replace pe: Not Reported Wapid: Not Reported Subdivisio: Not Reported

4.0E+000

Section: Not Reported Lot: Not Reported Nearest to: **ROCKVILLE** Town dista: 3 MI 10721 RED BARN LANE Road name: Road side: W Road dista: 50 FT Tax map: Not Reported Block: Not Reported Parcel: Not Reported N grid27: 455000.00 E grid27: 740000.00 N grid83: 157200.00 E grid83: 381738.00 Lat dec de: 39.08 Lon dec de: 77.21 17-FEB-71 Special fl: Not Reported Issue date: Not Reported C1 recd: 17-MAY-71 C1 seq: 23-APR-71 Completion: Total dept: 5.2E+001 Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: CM Grout top: 0 Grout bott: 1.6E+001 ST 6.0E+000 Casing typ: Casing dia: 1.8E+001 Casing dep: Casing hei: +02 Screen typ: НО Top screen: 1.8E+001 Not Reported Bottom scr: 5.2E+001 Screen t 1: Top scre 1: n Bottom s 1: 0 Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: Flowing we: Not Reported Telescopin: Not Reported Not Reported 1.0E+000 Log type: Hrs pumped:

1.2E+001 3.5E+001 Pumping ra: Level befo: Level duri: 4.0E+001 Test pump: 0

Pump insta: Not Reported Install pu: Not Reported

Capacity: Pump hp:

Column len: Not Reported Closed: Abandoned: Not Reported Abandon da: Not Reported

L58 ENE 1/2 - 1 Mile Lower

MD WELLS MD6000000240813

240812 County let: MO Objectid: Permit: Not Reported MO731892 Mgs id: 05-JAN-78 B1 seq: Not Reported B1 recd: City: **GERMANTOWN** State:

Zip: Not Reported Driller na: HILTON'S WELL DRLG

Driller id: MWD0111 5.0E+000 Est gpm pr: DW Use for wa:

Approx dep: 1.5E+002 Drill meth: AIR-PER Replacemen: Replace pe: Not Reported

Wapid: Not Reported Subdivisio: **HIWOOD ESTS** Section: Not Reported Lot: 9 ROCKVILLE Town dista: 0 MI Nearest to:

HIWOOD RD Road name: Road side: S Road dista: 10 FT Tax map: Not Reported Not Reported Block: Not Reported Parcel: 455000.00 740000.00 N grid27: E grid27: N grid83: E grid83: 157200.00 381738.00 Lat dec de: 39.08 Lon dec de: 77.21 Issue date: 23-SEP-77 Special fl: Not Reported C1 seq: Not Reported C1 recd: Not Reported

Total dept: Completion: Not Reported Num unsucc: Hydrofract: Not Reported Grouted: Not Reported Grout type: Not Reported Grout top: 0 Grout bott: Casing typ: Not Reported Casing dia: 0 Casing dep: Casing hei: +00 0 Screen typ: Not Reported Top screen: 0 Bottom scr: Screen t 1: Not Reported Top scre 1: 0 Bottom s 1: 0 Screen t 2: Top scre 2: 0 Not Reported Bottom s 2: Screen dia: 0 Flowing we: Not Reported Telescopin: Not Reported Log type: Not Reported Hrs pumped: Pumping ra: 0 Level befo: 0 0 Not Reported Level duri: Test pump:

Pump insta: Not Reported Install pu: Not Reported Capacity: 0 Pump hp: 0

Column len: 0 Closed: C

Abandoned: Not Reported Abandon da: Not Reported

ENE 1/2 - 1 Mile Lower

MD WELLS MD600000241315

 Objectid:
 241314
 County let:
 MO

 Permit:
 MO732394
 Mgs id:
 Not Reported

 B1 seq:
 Not Reported
 B1 recd:
 29-AUG-78

 City:
 GERMANTOWN
 State:
 MD

Zip: Not Reported Driller na: HILTON'S WELL DRLG

 Driller id:
 MWD0111
 Est gpm pr:
 5.0E+000

Use for wa: DW

Approx dep:1.5E+002Drill meth:AIR-PERReplacemen:NReplace pe:Not ReportedWapid:Not ReportedSubdivisio:H WOOD ESTS

Wapid:Not ReportedSubdivisio:H WOOD ESTSSection:Not ReportedLot:9Nearest to:ROCKVILLETown dista:0 MIRoad name:H WOOD RDRoad side:N

Tax map: Not Reported Road dista: 10 FT Block: Not Reported Parcel: Not Reported 740000.00 N grid27: 455000.00 E grid27: N grid83: E grid83: 157200.00 381738.00 Lat dec de: 39.08 Lon dec de: 77.21 Issue date: 23-SEP-77 Special fl: Not Reported C1 seq: Not Reported C1 recd: 24-OCT-78 Completion: 20-OCT-78 Total dept: 9.7E+001 Not Reported Num unsucc: 0 Hydrofract:

Grouted: Υ Grout type: CM Grout top: 0 Grout bott: 2.0E+001 6.0E+000 Casing typ: ST Casing dia: 3.5E+001 Casing dep: Casing hei: +02 3.5E+001 Screen typ: НО Top screen: 9.7E+001 Screen t 1: Not Reported Bottom scr:

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

Bottom s 2: 0 Screen dia: 0

Flowing we: Not Reported Telescopin: Not Reported Log type: Not Reported Hrs pumped: 5.0E+000 Pumping ra: 1.0E+001 Level befo: 4.8E+001 Level duri: 8.1E+001 Test pump: A

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp: 0

Column len: 0 Closed: Not Reported
Abandoned: Not Reported Abandon da: Not Reported

M60

1/2 - 1 Mile Lower

Org. Identifier: USGS-MD

Formal name: USGS Maryland Water Science Center

Monloc Identifier: USGS-390516077140601

Monloc name: MO De 19
Monloc type: Well
Monloc desc: Not Reported
Huc code: 02070008

Drainagearea value: Not Reported Drainagearea Units: Not Reported Contrib drainagearea: Not Reported Contrib drainagearea units: Not Reported Latitude: 39.087886 Longitude: -77.2347039 Sourcemap scale: 24000 Horiz Acc measure: Horiz Acc measure units: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: 310.00 Vert measure units: feet Vertacc measure val: 10

Vert accmeasure units: feet

Vertcollection method: Interpolated from topographic map

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Piedmont and Blue Ridge crystalline-rock aquifers Formation type: Upper Pelitic Schist of Wissahickon Formation

Aquifer type: Not Reported

Construction date: 19510420 Welldepth: 70 Welldepth units: ft Wellholedepth: 70

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 1

Feet below Feet to
Date Surface Sealevel

1951-04-20 35.00

N61
WSW
MD WELLS MD600000247824

1/2 - 1 Mile Lower

Objectid: 247823 County let: MO

 Permit:
 MO920800
 Mgs id:
 Not Reported

 B1 seq:
 Not Reported
 B1 recd:
 28-SEP-92

 City:
 ROCKVILLE
 State:
 MD

Zip: 20850 Driller na: GEORGE F EASTERDAY

Driller id: MWD0000 Est gpm pr: 5.0E+000

Use for wa: DW

Approx dep:2.0E+002Drill meth:AIR-ROTReplacemen:NReplace pe:Not ReportedWapid:Not ReportedSubdivisio:Not Reported

FED USGS

USGS40000434418

Section: Not Reported Lot: Not Reported Nearest to: Not Reported Town dista: Not Reported 13512 POTOMAC RIDING Road name: Road side: W Road dista: 50 FT Tax map: Not Reported Block: Not Reported Parcel: Not Reported N grid27: 452000.00 E grid27: 732000.00 N grid83: 156286.00 E grid83: 379300.00 Lat dec de: 39.07 Lon dec de: 77.24 28-SEP-93 Special fl: Not Reported Issue date: 03-NOV-93 Not Reported C1 recd: C1 seq: Completion: 15-OCT-93 Total dept: 2.0E+002 Num unsucc: 0 Hydrofract: Not Reported Grouted: Υ Grout type: CM Grout top: 0 Grout bott: 3.0E+001 ST 6.0E+000 Casing typ: Casing dia: 3.3E+001 Casing dep: Casing hei: +02 Screen typ: НО Top screen: 3.1E+001 Not Reported Bottom scr: 2.0E+002 Screen t 1: Top scre 1: 0 Bottom s 1: Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: 0 Flowing we: Not Reported Telescopin: Not Reported Not Reported

Pump insta: Not Reported Install pu: Not Reported

Hrs pumped:

Level befo:

Test pump:

0

S

Capacity: Pump hp:

0

0

Column len: Not Reported Closed:

Abandoned: Not Reported Abandon da: Not Reported

N62 WSW 1/2 - 1 Mile Lower

Log type:

Pumping ra:

Level duri:

MD WELLS MD6000000401398

County let: MO Objectid: 401397 Permit: MO941404 Not Reported Mgs id: 18-JAN-00 B1 seq: 9614 B1 recd: SILVER SPRING City: State:

Zip: 20904 Driller na: GEORGE F EASTERDAY

Driller id: MWD 40 5.0E+000 Est gpm pr:

Use for wa: DW Approx dep: 3.0E+002 Drill meth: AIR-ROT Replacemen: Replace pe: Not Reported Wapid: Not Reported Subdivisio: POTOMAC FIELDS

Section: Lot: 14 **TRAVILAH** Town dista: Nearest to: 1

13504 POTOMAC RIDING Road name: Road side: W

Road dista: 100 FT Tax map: Not Reported Not Reported Not Reported Block: Parcel: 732000.00 452000.00 N grid27: E grid27: N grid83: E grid83: 156286.00 379300.00 Lat dec de: 39.07 Lon dec de: 77.24 Issue date: 19-JAN-00 Special fl: Not Reported C1 seq: 1090 C1 recd: 21-APR-00

25-FEB-00 Total dept: 2.0E+002 Completion: Num unsucc: 0 Hydrofract: Ν Grouted: Υ Grout type: CM 0 5.7E+001 Grout top: Grout bott: 6.0E+000 Casing typ: ST Casing dia: Casing dep: 6.6E+001 Casing hei: +2 Screen typ: HO Top screen: 6.4E+001 Bottom scr: 2.0E+002 Screen t 1: Not Reported Top scre 1: Bottom s 1: 0 0 Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: 0 Not Reported Telescopin: Not Reported Flowing we: Log type: Not Reported Hrs pumped: 3.0E+000 1.2E+001 Pumping ra: Level befo: 2.6E+001 7.3E+001 Level duri: Test pump: S Pump insta: Ν Install pu: Not Reported Capacity: 0 Pump hp: Not Reported Column len: 0 Closed: Abandoned: Not Reported Abandon da: Not Reported

M63 NW 1/2 - 1 Mile Lower

MO Objectid: 245049 County let: MO812849 Mgs id: Not Reported Permit: B1 seq: Not Reported B1 recd: 16-OCT-87 **ROCKVILLE** City: State: MD 20850 Driller na: EICHELBERGER, C. H. Zip: Driller id: MWD0332 Est gpm pr: 0 Use for wa: Т

5.0E+001 AIR-ROT Approx dep: Drill meth: Replacemen: Ν Replace pe: Not Reported Wapid: Not Reported Subdivisio: TRAVILAH QUARRY Not Reported Section: Not Reported Lot: ROCKVILLE 3 MI Nearest to: Town dista: GREY COH DR Road name: Road side: S Tax map: Road dista: 60 FT Not Reported Block: Not Reported Parcel: Not Reported N grid27: 457000.00 733000.00 E grid27: N grid83: E grid83: 157810.00 379605.00 Lat dec de: 39.09 Lon dec de: 77.24 Issue date: 22-OCT-87 Special fl: Not Reported C1 seq: Not Reported C1 recd: 12-DEC-90

Completion: 14-NOV-85 Total dept: 5.0E+001 0 Not Reported Num unsucc: Hydrofract: Grouted: Υ Grout type: BC Grout top: 5.0E+000 Grout bott: 8.0E+000 6.0E+000 Casing typ: ST Casing dia: 1.0E+000 Casing dep: Casing hei: +04

 Screen typ:
 PL
 Top screen:
 4.5E+001

 Bottom scr:
 5.0E+001
 Screen t 1:
 Not Reported

 Top scre 1:
 0
 Bottom s 1:
 0

 Screen t 2:
 Not Reported
 Top scre 2:
 0

MD WELLS

MD6000000245050

2.0E+000 Bottom s 2: Screen dia: Flowing we: Not Reported Telescopin: Log type: Not Reported Hrs pumped: 1.0E+000 5.0E+000 1.0E+000 Pumping ra: Level befo: Level duri: 1.0E+000 Test pump:

Pump insta: Not Reported Install pu: Not Reported

Capacity: 0 Pump hp:

Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

M64 NW 1/2 - 1 Mile Lower

MD WELLS MD6000000444526

Objectid: 444525 County let: MO Mgs id: Not Reported Permit: MO942109 01-NOV-01 B1 seq: B1 recd: 5096 GAITHERSBURG City: State: MD

20878 Driller na: GEORGE F EASTERDAY Zip:

Driller id: MWD 40 Est gpm pr: 5.0E+000

Use for wa: DW 3.0E+002 AIR-ROT Approx dep: Drill meth: Replacemen: Replace pe: Not Reported Ν

Wapid: Not Reported Subdivisio: Not Reported Section: Not Reported Lot: 19

TRAVILAH Town dista: Nearest to: 2 Road name: 11642 PARTRIDGE RUN Road side:

Not Reported Road dista: 20 FT Tax map: Not Reported Not Reported Parcel: Not Reported Block: N grid27: 457000.00 E grid27: 733000.00 N grid83: 157810.00 E grid83: 379605.00 Lat dec de: Lon dec de: 39.09 77.24 Issue date: 01-NOV-01 Special fl: Not Reported C1 seq: 3307 C1 recd: 15-FEB-02 14-DEC-01 Completion: Total dept: 4.0E+002 Num unsucc: 0 Hydrofract: Ν Grouted: Υ Grout type: CM Grout top: 0 Grout bott: 5.9E+001 Casing typ: ST Casing dia: 6.0E+000 6.0E+001 Casing dep: Casing hei: +2 Screen typ: 5.8E+001 Top screen: HO

Bottom scr: Not Reported Top scre 1: Bottom s 1: 0 Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: 0

4.0E+002

Not Reported Not Reported Flowing we: Telescopin: Not Reported 3.0E+000 Log type: Hrs pumped: Pumping ra: 5.0E+000 Level befo: 2.9E+001 2.69E+002 Level duri: Test pump: S

Screen t 1:

Pump insta: Ν Install pu: Not Reported

Capacity: 0 Pump hp:

Column len: Not Reported 0 Closed: Abandoned: Not Reported Abandon da: Not Reported

Map ID Direction Distance

Elevation Database EDR ID Number

South 1/2 - 1 Mile Lower

65

MD WELLS MD6000000245048

Objectid: 245047 County let: MO Permit: MO812847 Mgs id: Not Reported B1 seq: Not Reported B1 recd: 16-OCT-87 City: **ROCKVILLE** State: MD

Zip: 20850 Driller na: EICHELBERGER, C. H.

Driller id: MWD0332 Est gpm pr: 0

Use for wa: Т 5.0E+001 Approx dep:

Drill meth: AIR-ROT Replacemen: Replace pe: Not Reported Ν Wapid: Not Reported Subdivisio: TRAVILAH QUARRY Section: Not Reported Not Reported Lot:

ROCKVILLE Nearest to: Town dista: 3 MI TANAGER LA Road name: Road side: Е

Road dista: 0 FT Tax map: Not Reported Block: Not Reported Parcel: Not Reported 736000.00 N grid27: 449000.00 E grid27: E grid83: N grid83: 380519.00 155372.00 Lat dec de: 39.07 Lon dec de: 77.23 Issue date: 22-OCT-87 Special fl: Not Reported C1 seq: Not Reported C1 recd: Not Reported

Completion: Not Reported Total dept:

Num unsucc: Hydrofract: Not Reported Not Reported Grouted:

Not Reported Grout type: Grout top: Grout bott: Casing typ: Not Reported Casing dia: 0 Casing dep: 0 Casing hei: +00

Top screen: Screen typ: Not Reported 0 Bottom scr: 0 Screen t 1: Not Reported

Top scre 1: 0 Bottom s 1: 0 Screen t 2: 0 Not Reported Top scre 2: Bottom s 2: Screen dia: 0

Flowing we: Not Reported Telescopin: Not Reported

Log type: Not Reported Hrs pumped: Pumping ra: 0 Level befo:

0 Level duri: Test pump: Not Reported Pump insta: Not Reported Not Reported Install pu:

Capacity: Pump hp:

Column len: Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

WSW 1/2 - 1 Mile Lower

MD WELLS MD6000000245053

Objectid: 245052 County let: MO Permit: MO812852 Mgs id: Not Reported B1 seq: Not Reported B1 recd: 16-OCT-87 **ROCKVILLE** MD City: State:

Zip: 20850 Driller na: EICHELBERGER, C. H.

Driller id: MWD0332 Est gpm pr:

Use for wa: Т Approx dep: 7.0E+001 Drill meth: AIR-ROT Replacemen: Replace pe: N

Not Reported Wapid: Not Reported Subdivisio: TRAVILAH QUARRY

Lot:

Nearest to: **ROCKVILLE** Town dista: 3 MI Road name: **TRAVILAH** Road side: S 2400FT Road dista: Tax map: Not Reported Block: Not Reported Parcel: Not Reported N grid27: 451000.00 E grid27: 732000.00 N grid83: 155981.00 E grid83: 379300.00 Lat dec de: 39.07 Lon dec de: 77.24 22-OCT-87 Special fl: Not Reported Issue date: Not Reported C1 recd: 12-DEC-90 C1 seq: Completion: 17-OCT-85 Total dept: 7.0E+001 Num unsucc: Hydrofract: Not Reported Grouted: Υ Grout type: BC Grout top: 5.0E+000 Grout bott: 8.0E+000 6.0E+000 Casing typ: ST Casing dia: Casing dep: 2.0E+000 Casing hei: +03 Screen typ: PL Top screen: 5.0E+001 6.0E+001 Not Reported Bottom scr: Screen t 1: Top scre 1: 0 Bottom s 1:

Screen t 2: Not Reported Top scre 2: 0

Not Reported

Bottom s 2: Screen dia: 2.0E+000

Flowing we: Not Reported Telescopin:

Not Reported 1.0E+000 Log type: Hrs pumped: 1.0E+000 1.0E+000 Pumping ra: Level befo: Level duri: 1.0E+000 Test pump: Α

Pump insta: Not Reported Install pu: Not Reported

Capacity: Pump hp:

Column len: Not Reported Closed: Abandoned: Not Reported Abandon da: Not Reported

67 West 1/2 - 1 Mile Lower

Section:

MD WELLS MD6000000444807

Not Reported

County let: MO Objectid: 444806 Permit: MO941796 Not Reported Mgs id: 26-JAN-01 B1 seq: 1571 B1 recd: City: **ROCKVILLE** State:

Zip: 20852 Driller na: GEORGE F EASTERDAY

Driller id: MWD 40 5.0E+000 Est gpm pr:

Use for wa: DW Approx dep: 3.0E+002 Drill meth: AIR-ROT Replacemen: Replace pe: Not Reported Wapid: Not Reported Subdivisio:

Not Reported Section: Not Reported Lot: Not Reported

GAITHERSBURG Town dista: 75 Nearest to: Road name: 13725 TRAVILAH RD Road side: S

Road dista: 75 FT Tax map: Not Reported Not Reported Not Reported Block: Parcel: 731000.00 454000.00 N grid27: E grid27: N grid83: E grid83: 156896.00 378995.00 Lat dec de: 39.08 Lon dec de: 77.24 Issue date: 29-JAN-01 Special fl: Not Reported C1 seq: 4691 C1 recd: 16-APR-01

Completion: 28-FEB-01 Total dept: 4.0E+002 Hydrofract: Num unsucc: 0 Ν Υ Grout type: Grouted: CM 0 4.9E+001 Grout top: Grout bott: Casing typ: ST Casing dia: 6.0E+000 Casing dep: 5.6E+001 Casing hei: +2 Screen typ: HO Top screen: 5.4E+001 Bottom scr: 4.0E+002 Screen t 1: Not Reported Top scre 1: 0 Bottom s 1: 0 Screen t 2: Not Reported Top scre 2: 0 Bottom s 2: Screen dia: 0 Not Reported Not Reported Flowing we: Telescopin: Log type: Not Reported Hrs pumped: 3.0E+000 7.0E+000 3.2E+001 Pumping ra: Level befo: 7.6E+001 Level duri: Test pump: S Pump insta: Ν Install pu: Not Reported Pump hp: Capacity: 0 Column len: 0 Closed: Not Reported Abandoned: Not Reported Abandon da: Not Reported

AREA RADON INFORMATION

EPA Region 3 Statistical Summary Readings for Zip Code: 20850

Number of sites tested: 1114.

Maximum Radon Level: 136.0 pCi/L.

Minimum Radon Level: 1.0 pCi/L.

pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L
<4	4-10	10-20	20-50	50-100	>100
763 (68.49%)	255 (22.89%)	66 (5.92%)	23 (2.06%)	6 (0.54%)	1 (0.09%)

Federal EPA Radon Zone for MONTGOMERY County: 1

Note: Zone 1 indoor average level > 4 pCi/L.

: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.

: Zone 3 indoor average level < 2 pCi/L.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map. USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Maryland Public Supply Wells Database Source: Department of the Environment

Telephone: 410-537-3702

Water use types included are farm (livestock watering and agricultural irrigation), geo-thermal, industrial-commercial-state and federal government, municipal, test-observation-monitoring.

OTHER STATE DATABASE INFORMATION

RADON

Area Radon Information Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency

(USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor

radon levels.

EPA Region 3 Statistical Summary Readings

Source: Region 3 EPA Telephone: 215-814-2082

Radon readings for Delaware, D.C., Maryland, Pennsylvania, Virginia and West Virginia.

OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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Project	ICPRB Co-Op Water Supply Evaluation	FAIRFAX WATER
Title	Phase 1 - Evaluation of Travilah Quarry for Water Supply Storage	COMMENT TRACKING FORM
Date	Responses to Comments on Review Draft - July 18, 2014	

		Reference (Sheet or Spec		Response (Include initials of responder, either
Comment	Reviewer			PM or Consultant)
			Provide a Definitions section up-front to clarify the meaning of certain geologic and geotechnical terms	·
			that may not be obvious to the general reader (some examples: "mylonitic", "reverse key", and	
		Table of	"slickenslides"). Final report should be clearly readable for a range of utility staff, including those with	
1	GJP	Contents	limited geotechnical knowledge.	Agree. Definitions will be added.
				A summary table will be added describing the
2	GJP	P.14	information about them, including significance on the wall stability.	discontinuities observed.
3	GJP	Figure 4-2	Provide dip direction (0-360 deg) along with dip angle at each of the discontinuities in the Figure and more clearly label and identify each of these in the Figure.	General dip directions are represented by the lines shown on the figure. Actual directions could not be measured with accuracy given the access restrictions. Each discontinuity will be called out more clearly.
		p.18, section		The initial simple model provides an average condition for planning purposes. It is recommended that, if this project moves forward, additional packer testing be performed around the site to better assess bedrock permeabilities, and then expand the
4	GJP	5.1, bullet #2	given the variability and uncertainty associated with the rock mass?	groundwater evaluation using this information.
4	GJP	5.1, bullet #2	Is the groundwater model estimated inflow rate of 199 gpm into the quarry at the current quarry	groundwater evaluation using this information.
5	GJP	n 21 section 5.2	perimeter or at full build-out?	The estimate is at full build-out.
6	GJP	Section 5 - general	Would measure of the aperture of the joints provide valuable information regarding hydraulic conductivity? Provide specific recommendations for further geotechnical testing.	There are a number of rock characteristics that could be mapped in the future if access to the rock walls is granted and safe. Aperture size and infilling of joints are examples. This will be noted in the text. Access to the slip plane was not provided for safety reasons and as such greater details are
/	GJP	p.32	Better describe the large slip-plane that was observed in the historic highwall.	not available.
8	GJP	p.33	There is limited discussion of on-site environmental concerns relative to off-site. Were EDR reports checked with records of MDE and Montgomery County? I am surprised there are not more on-site spills, etc. Please verify and/or further discuss.	The EDR report searched Federal, State (MDE) and Local databases to identify environmental concerns. Montgomery County will be contacted to attempt to validate the results.

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		Reference		
		(Sheet or Spec		Response (Include initials of responder, either
Comment	Reviewer		Comment	PM or Consultant)
			Provide more site specific recommendations and details for the additional testing of the	
			discontinuities, including Feature "G". An example of this would be a recommendation on where we	
			would want to conduct Packer testing. Overall, the recommendations in this report need to serve as a	Additional details will be added regarding
			roadmap for additional investigative work if it is decided to be pursued in the future. Ideally, not only	future geotechnical investigation to further
			would this report provide specific recommendations on geological investigations and next steps but	define rock characteristics including the
		Section 4.4, p.	would we would include a (high-level) order of magnitude cost for conducting these tests.	permeability of the discontinuities. Order of
9	GJP	17-18, also p. 22		magnitude costs will be included.
			The high level analysis of the groundwater regime and model indicate that groundwater flows from	
			east to west across/around the site. Assuming the walls of the quarry pit to be shown to be stable,	
			could any comments be made on the possibility of only grouting/repairing the west wall to make it	
			, , , , , , , , , , , , , , , , , , , ,	A brief discussion will be added to address this
10	GJP	Figure 5-2	elevation . For group discussion with the consultant - should the discussion of the fate of the quarry and the	issue.
			storage volumes as a function of year include some opinion on when might be strategic decision point	
			relative to the relocation of the rock crushing facilities? Yes, the pit configuration may ultimately	Noted. Agree that this is a strategic discussion
				for the team. More information from
				Aggregaite Industries is needed to understand
11	GJP	Section 3.2	which will have time constraints.	timing of critical decision points.
11	GJP		Provide some evaluation of the adequacy of the buffer surrounding the pit as it relates to structural	Further mapping would be necessary to make
			stability of the quarry highwalls and the potential for damage to adjacent property owners in the event	
12	GJP		of rock toppling and wall failure.	text.
12	031	General	Elevation 350 and -100 should be noted as "feet MSL" or otherwise labeled. Add labels throughout	text.
13	NS	p.4	· · · · · · · · · · · · · · · · · · ·	Agree. Changes will be made.
13		p. 1	Which referencing elevations.	Agree. Granges will be made.
			The text references "ultimate" storage volume. What would be the effective storage volume available	The ultimate storage volume is the same as the
			during the time frame? Based on the explanation above, the effective storage volume takes into	effective storage volume when the quarry is at
		p.4 and p. 14	consideration only the volume below El. 350 ft, while the "ultimate" storage volume takes into	its ultimate limit. We will try to revise the
14	NS	(Table 3-1)	consideration the volume both above and below El. 350 ft. Please clarify.	wording to make it less confusing.
			·	Records of the soil backfilling where requested.
				Aggregate Industries indicated they had none.
		p.17 - Section		At this time no additional information is
15	NS	4.1	Do they have any records? Has fill been tested to show it's non-hazardous?	available.

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Comment	Reviewer	Reference (Sheet or Spec Section)		Response (Include initials of responder, either PM or Consultant)
16	NS	Section 5.1, p.19, 3rd bullet	The mass permeability differs from the hydraulic conductivity assumptions elsewhere. These appear to be different measures (different areas?), but if not - does this need to be made consistent with other values of permeability? If they are, please clarify the differences.	The third bullet of Section 5.1 discusses the linear feature in the southeast corner of the quarry which was assigned a higher permeability than the surrounding bedrock.
17	NS		filled? Does it assume that the steady state is reached in 200 yrs with 2 inches/year of aquifer recharge and 2 inches/year of net precipitation?	Yes, steady-state refers to long-term conditions that would develop assuming average climate conditions occur for many years.
18	NG	p 17 - Section 4.1	Is grouting a potential solution if testing of rock blocks indicates that failure or slippage is likely to occur? Are there other solutions for this?	Rock bolting, rockfall netting, shotcrete applications and weep hole drilling are common solutions to address rock mass failures.
19	ВВ		WSSC's raw water ammonia data may not have been reported or interpreted correctly. We went back to the original lab data, which shows that ~80% of sample results were less than the method detection limit (MDL) of 0.05 mg/L as N, and thus should be considered non-detect (or perhaps <0.05 mg/L as N). ~20% of results were greater than the MDL of 0.05 mg/L as N, but less than the reporting detection limit (RDL) of 0.2 mg/L as N, and thus cannot be quantified except to say ammonia was present and <0.2 mg/L as N. One of ~190 results since January 1, 2010 was greater than the 0.2 mg/L RDL (0.56 mg/L as N on April 8, 2014). So considering the lab test detection limits, would be better to say that minimum, 5th percentile, and median ammonia results were all <0.05 mg/L as N, 95th percentile ammonia was <0.2 mg/L as N, and maximum was 0.56 mg/L as N	Agree, changes will be made.
		p 25 and Table 6-		Agree, 0.0515 is correct. The change will be
20	ВВ	1	falls within the range of 0.03 to 0.10 mg/L that is associated with eutrophic conditions in reservoirs.	made. For consistency the document will be changed
21	JP	19, 21	, ,, ,	so Feature G will be referred to only as Feature G.

Pro	oject	ICPRB Co-Op Water Supply Evaluation	FAIRFAX WATER
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		Reference		
Comment	Baylawar	(Sheet or Spec Section)	Commont	Response (Include initials of responder, either PM or Consultant)
Comment	Keviewer	Section)	Comment	Pivi or Consultant)
22	JP	22	Figure 5-2 caption has highlights and possibly extra text.	Extra text and highlighting will be removed.
23	JP	32	First bullet, "determining is potential" should be determining if potential".	Agree, this typographical error will be fixed.
24	JP	33	Second paragraph, "Potential issues related to from naturally", delete the "to".	The word "from" will be deleted.
25	JP	Quarry volume	If the quarry volumes are based on assumptions from Al's previous average production what is the range of uncertainty in quarry volumes resulting from, say +/- 10% variations in their annual production amount?	A statement will be added to the text indicating the impact to available quarry volume from mining uncertainties.
26	JР	Groundwater level	Are there any potential negative impacts to returning the groundwater level in the vicinity to a level of 350 msl, such as other deep excavations, sumps, etc? Is there potential liability for causing flooding or infiltration?	A detailed study of surrounding properties, ownership, land use, features, etc. would be required to understand the sensitive areas of potential concern, followed by a more in-depth groundwater evaluation of both the current and potential future conditions to compare before and after effects. Potential liability issues may depend on what came first in the area.
27	JP	Stream Flow	Can you make an estimated water table map similar to Figure 5-2 with the reservoir level at 350 ft msl to show the effects in surrounding area?	This scenario can be simulated and a map can be generated. Initial simple modeling suggests this requires adding water to the quarry from another source other than relying solely on seepage and/or the grouting of feature G.
		Groundwater	(In reference to Fig 5-2) Were the streams shown included in the model? What was the impact on stream flow in these streams? What model code was used to create the simple 3D groundwater model? If this is a public code such	Streams were simulated only as simple drains in order to prevent unrealistically high water levels surrounding the quarry. More complex streamflow-groundwater modeling would be required to attempt to answer questions about the effect on streamflows in the area. MODFLOW was used. The input files can be
		Groundwater	what model? If this is a public code such	INIODELOW was used. The input files can be