Grouting Stabilization Project



Crews drill in a suspected subsidence location. They are looking for voids or empty spaces which indicate the presence of abandoned underground mine workings. Further test drilling will be used to determine size, depth and areal extent of the mine openings. This allows a determination of what surface features are threatened by potential subsidence.



Once a site is identified and boundaries defined, holes are bored at intervals on a grid pattern. Grout will be pumped through these pipes to fill the voids.





Indiana Department of Natural Resources, Division of Reclamation





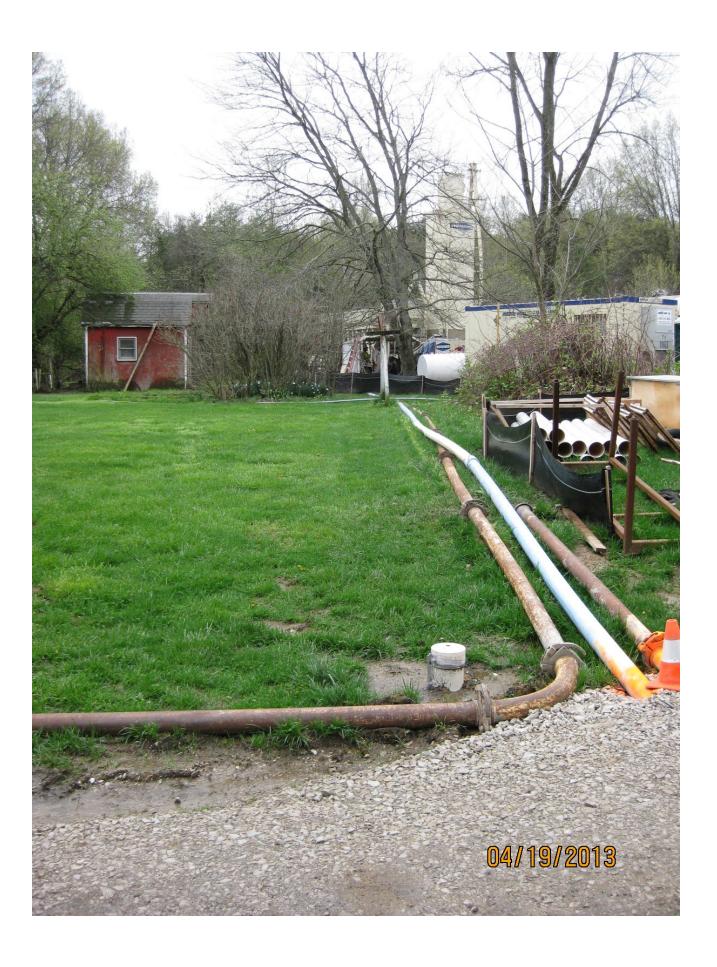
Once the holes are drilled a grout mixture is pumped into the void. This is a mixture similar to concrete. It will harden in place and improve stability of the area. If the site is accessible a "pumper truck" will drive right to the site and unload directly into the hole.

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Some areas are not accessible by heavy equipment. Instead of large machinery, "slicklines" or long hoses can be used to transport the grout. When a "slickline" crosses a driveway or other access point it is covered to reduce obstruction for homeowners and







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A "batch plant" is often built on or near a subsidence construction area. This plant is temporary and used to mix ingredients necessary for the grout. Material is brought in limited quantities and stored on site. It is mixed and then shipped out via pump trucks. Having material mixed on site saves time and money. Quantities are kept low to minimize its' impact on the neighborhood. Working hours are also limited to further reduce the intrusion of construction on surrounding homeowners, traffic and businesses.



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