

forms of scarification. Rocks discovered during scarification on prime farmland will be removed. Bench 1 is scarified to decrease compaction, increase aeration and water movement, and increase plant rooting depths. Increased water movement may, to some degree, allow more downward leaching of carbonates. Therefore, although the greatest benefits of scarifying are related to the physical topsoil properties (density, porosity), a lesser geochemical benefit (increased rate of carbonate leaching due to increased water movement) may result.

## 6. Bench 1 Monitoring Program

In order to provide a feedback system to check the reliability of the Bench 1, a sampling and analysis program is utilized. This sampling program will ensure that the redistributed Bench 1 is chemically and physically suitable for the intended post mine land use. Please see Table 2.05.4(2)(d)-1 for the Bench 1 sampling criteria.

**Table 2.05.4(2)(d)-1 Bench 1 Sampling Criteria**

<u>Parameter</u>	<u>Unit</u>	<u>Thresholds</u>
pH	Standard Units	>6.1 but < 8.4
Electrical Conductivity (EC)	mmho/cm	<8
Boron	ppm	<5
Sample Grid	Arce	1 sample per 5 acres
Sample Thickness	Feet	1 – 2 ft. increments

## 7. Unsuitable Bench 1 Mitigation Plan

In the event that any one sample result exceeds the limits listed in Table 2.05.4(2)(d)-1, the Unsuitable Bench 1 Mitigation Plan listed below will be implemented.

If one or more parameters fall within the unsuitable range at a given grid point, a three-part mitigation plan will be implemented.

1. The area around a suspect hole will be sampled on a closer spacing interval in order to better define the lateral extent and variability of the unsuitable material. This sampling will be called the 2<sup>nd</sup> Phase sampling and the interval is one hole per 50 feet distance around the bad point in all directions for Prime Farmland (Zones 3 & 8), and one hole per 100 feet distance around the bad point in all directions for non-prime farmland.
2. If 2<sup>nd</sup> phase sampling shows an exceedance, follow-up sampling will take place to delineate the area of exceedance. Delineated areas of exceedance that are larger than 0.1 acres for prime farmland, 0.25 acres for irrigated pasture or 0.50 acres for dryland pasture will be remediated.