

## **Soybean Cyst Nematode (SCN) Mitigation and Environmental Sensitivities Summary**

The following is a brief summary of our proposed SCN mitigation protocols/procedures and environmental sensitivities to be used by geotechnical drilling crews.

### **All Boring Locations**

- Typical PPE
- Rubber boots that can be easily cleaned. Alternately disposable boot covers may be considered.
- Minimize spread of soil. Soil to remain on site (except for the test samples).

### **Wetlands**

- All work must comply with Nationwide Permit 6 (survey activities in jurisdictional wetlands)
- No permanent fill allowed – all tailings must be put into hole or removed
- No access roads – matting only or frozen ground
- Only 1/10 acre for temporary work pad
- Wetlands will not be flagged or staked – you will have to rely on maps

### **Cultural**

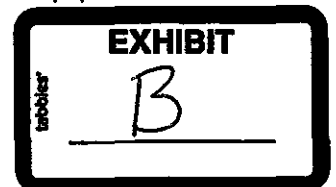
- Cultural sites will be staked
- Please review and be aware of the ND Discovery Plan if a cultural artifact and/or human remains are found. South Dakota's is being finalized yet
- Some areas may require a monitor specific to cultural, HDR will communicate as needed
- Avoid these areas. No exceptions.

### **SCN Positive Fields**

- Each crew to have a dedicated 5-foot long 8-inch diameter casing auger to minimize contamination of the other drilling equipment. The casing will need to be extended at least 2 to 4 feet below grade to get below the upper 10 inch zone where the SCN is located. The casing will be cleaned on site. Alternately, a 12-inch diameter solid stem auger will drill to a depth of 2 to 4 feet and a 10-inch diameter PVC casing will be installed. The casings/auger/PVC will not be used on non-contaminated fields. All contaminated soil to remain on site.

### **Moving From Contaminated Field to Non-Contaminated Field**

- Clean auger as necessary when moving to a non-contaminated field from a contaminated field.
- The crews will remove soil from the rig and equipment (in particular the 10-inch casing) by manually cleaning and/or compressed air cleaning after brushing, or pressure washing. The cleaning will be performed within the contaminated field.
- During wet conditions and where the rig gets muddy, the rig will be cleaned at the edge of the field, field approach, or road ditch adjacent to the contaminated field. This will require pressure washing. Water and spoil will be left on the contaminated field.
- After on-site cleaning attempts, if the equipment is too difficult to clean on site, the equipment may be taken off-site for cleaning at a car wash or other wash facility.



- Overall, use professional judgment. If there's a quick and easy method that appears to be working well, opt for that. Intent is to avoid transporting contaminated soil

#### **Moving From Contaminated Field to Contaminated Field**

- No cleaning (other than typical as for all borings) is required when the drill rig moves from a contaminated field into an adjacent contaminated field.
- When the rig is to be transported between contaminated fields with a lowboy, soil will be removed from the rig on site, the rig loaded onto the lowboy and transported to the where it is to unload the rig for the next boring location.
- When the rig moves from a contaminated field across a road to an adjacent contaminated field, the path across the road will be swept back to the contaminated field. Paved (bituminous or concrete) road surfaces can be swept directly. Where gravel roads are crossed, plywood, fabric or plastic will initially be placed over the road surface and subsequently swept back to the side the rig started from. The intent is to leave the road surface free of soil.

Call the drilling coordinator if there are questions. If complex issues arise, KLJ, OTP and Power Engineers should be consulted prior to incurring long delays.