

## ENVIRONMENTAL WORK

### 1.1 INTRODUCTION

ALTHOUGH THE FORMER WILLOUGHBY SOLID WASTE LANDFILL (FORMER WSL) WAS PRIMARILY USED FOR THE DISPOSAL OF RESIDENTIAL SOLID WASTE, INSPECTION RECORDS REVIEWED AS PART OF THE RULE 13 APPLICATION PROCESS REVEALED RECORDS OF UNCONTROLLED DUMPING IN ADDITION TO REFERENCES OF COMMERCIAL AND INDUSTRIAL WASTE AT THE FACILITY. ALL EXCAVATIONS WITHIN THE AFOREMENTIONED LIMITS SHALL BE PAID FOR UNDER THE ORIGINAL PLAN BID ITEMS.

DUE TO THE UNKNOWN NATURE OF THE MATERIALS PLACED INTO THE FORMER WSL, THE CONTRACTOR SHALL MANAGE THIS MATERIAL ACCORDING TO THE FOLLOWING NOTES. THE ESTIMATED QUANTITIES FOR HANDLING MATERIALS HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS WORK IN ACCORDANCE WITH SECTION 1.9, BASIS OF PAYMENT.

### 1.2 SITE SPECIFIC HEALTH AND SAFETY PLAN (SSHSP)

THE CONTRACTOR SHALL PREPARE A SSHSP TO ADDRESS IDENTIFIED CONTAMINANTS IN ACCORDANCE WITH 29 CFR PART 1910.120. ENVIRONMENTAL STUDIES INFORMATION IS AVAILABLE FOR EXAMINATION AT ODOT DISTRICT 12, PLANNING DEPT., 5500 TRANSPORTATION BLVD., GARFIELD HEIGHTS, OH 44125.

### 1.3 MATERIAL HANDLING

ALL MATERIAL EXCAVATED BY THE CONTRACTOR BETWEEN WORK LIMITS MAY BE STOCKPILED IN AN AREA PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. STOCKPILED MATERIAL WILL REMAIN IN THE APPROVED AREA FOR A TIME PERIOD LASTING NO LONGER THAN FOUR (4) WEEKS. AT WHICH TIME, STOCKPILED MATERIAL WILL BE DISPOSED OF OFF-SITE AT AN APPROPRIATE WASTE FACILITY FOLLOWING CHARACTERIZATION.

THE ENGINEER MAY PERMIT TEMPORARY STORAGE OF THE REGULATED MATERIALS ON AN IMPERMEABLE MEMBRANE. THE IMPERMEABLE MEMBRANE SHALL BE SURROUNDED BY BALES OF STRAW TO PREVENT THE SUSPECTED MATERIALS FROM COMING IN CONTACT WITH THE ORIGINAL SOILS. AN IMPERMEABLE MEMBRANE SHALL BE PLACED OVER THE STOCKPILE TO PREVENT CONTACT WITH PRECIPITATION AND/OR SURFACE RUN-OFF. IMPERMEABLE MEMBRANE MATERIALS WILL CONSIST OF MOVABLE GEOTEXTILES CURRENTLY APPROVED BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY. THE FOLLOWING IS A LIST OF APPROVED GEOTEXTILES:

FABRENE INC. - PRODUCT G168  
BELTECH, INC. - BELTECH 113  
FABRENE TYPE - L257  
GSE - HIGH DENSITY POLYETHYLENE GEOMEMBRANE  
GRIFFOLYN T - 55  
CORMIER TEXTILE PRODUCTS, INC. - WOVEN  
COATED POLYETHYLENE (WP - 1440SB)  
LORETEX WOVEN REINFORCED HIGH DENSITY  
POLYETHYLENE FABRIC  
GEOTEX 315ST  
MIRAFI FILTERWEAVE 402  
MIRAFI FILTERWEAVE 370  
C.H. HANSON COMPANY - VWPFR - 12  
INTEGRA PLASTIC - INTEGRA 12FR  
AMOCO 2002, 4506

FOR FURTHER INFORMATION REGARDING CONTACTS FOR THESE MATERIALS PLEASE CONTACT MR. ERNIE STALL WITH THE OHIO ENVIRONMENTAL PROTECTION AGENCY (COLUMBUS) 614-644-2621. SAMPLING AND DISPOSAL OF EXCAVATED MATERIALS IS ADDRESSED IN SECTION 1.4.

AS AN ALTERNATIVE, THE ENGINEER MAY PERMIT THE CONTRACTOR TO DIRECT LOAD THE EXCAVATED REGULATED MATERIALS (LOCATED WITHIN THE AFOREMENTIONED LIMITS) INTO TRUCKS AND/OR LEAKPROOF COVERED CONTAINER PROVIDED BY THE CONTRACTOR. SAMPLING AND DISPOSAL OF EXCAVATED MATERIALS IS ADDRESSED IN SECTION 1.4.

WASTE MATERIAL EXPOSED WITHIN THE AFOREMENTIONED LIMITS BY THE CONTRACTOR, AS A RESULT OF GRADING AND/OR EXCAVATION, THAT WILL REMAIN IN PLACE WILL ALSO BE COVERED BY MOVABLE GEOTEXTILES (SEE ATTACHMENT 1) UNTIL A FINAL CAP SYSTEM OR ENGINEERED COMPONENT EQUIVALENT TO A FINAL CAP SYSTEM IS CONSTRUCTED. THE IMPERMEABLE MEMBRANE SHALL BE SECURED IN A FASHION TO PREVENT CONTACT WITH PRECIPITATION AND/OR SURFACE RUN-OFF AND LIMIT THE POTENTIAL FOR DISTURBANCE BY WIND. IN-PLACE WASTE MATERIALS WILL REMAIN COVERED WITH AN IMPERMEABLE MEMBRANE FOR A TIME PERIOD LASTING NO LONGER THAN FOUR (4) WEEKS.

### 1.4 MATERIAL SAMPLING AND DISPOSAL

THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH FIVE (5) DAYS NOTICE PRIOR TO ANY EXCAVATIONS WITHIN THE AFOREMENTIONED LIMITS TO PERMIT ARRANGING FOR THE NECESSARY TESTING SERVICES. ALL MATERIAL EXCAVATED BY THE CONTRACTOR BETWEEN THESE LIMITS SHALL BE SUBJECT TO TESTING BY AN INSPECTOR PROVIDED BY THE ENGINEER. CALCULATED QUANTITY OF 268.7 CUBIC METERS WILL BE EXCAVATED BETWEEN THESE LIMITS. THE INSPECTOR WILL SAMPLE SUSPECT MATERIALS FOR EVERY 50.0 CUBIC METERS UNEARTHED AS PART OF EXCAVATION ACTIVITIES. SAMPLES WILL BE TESTED BY THE FOLLOWING USEPA TEST METHODS:

1. VOLATILE ORGANIC COMPOUNDS BY SW846-8260A
2. SEMI-VOLATILE ORGANIC COMPOUNDS BY SW846-8270B
3. TOTAL RESOURCE CONSERVATION AND RECOVERY ACT METALS
4. TOTAL CYANIDE
5. HEXAVALENT CHROMIUM
6. POLYCHLORINATED BIPHENYLS BY SW846-8081
7. FLASH POINT - IGNITABILITY BY SW846-1010

PRIOR TO DISPOSAL OF ANY WASTE AND/OR CONTAMINATED SOILS, THE ENGINEER WILL PROVIDE THE DIRECTOR WITH A COPY OF A LETTER OF ACCEPTANCE FROM AN APPROPRIATE DISPOSAL FACILITY. THE CONTRACTOR SHALL PROPERLY TRANSPORT AND DISPOSE OF THE EXCAVATED MATERIAL THAT IS CONSIDERED SURPLUS OR UNSUITABLE MATERIAL IN A LICENSED (BY THE LOCAL HEALTH DEPARTMENT) AND PERMITTED (BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY) SOLID WASTE FACILITY. SHOULD ANALYTICAL TEST RESULTS FOR DISPOSAL INDICATE THE EXCAVATED MATERIAL IS A HAZARDOUS AND/OR TSCA WASTE THE CONTRACTOR SHALL PROVIDE AND/OR COORDINATE PROPER TRANSPORTATION AND DISPOSAL TO AN APPROPRIATE LICENSED FACILITY. IF REQUIRED BY THE WASTE FACILITY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING ANY ADDITIONAL SAMPLING AND ANALYSIS OF THE EXCAVATED MATERIAL.

IN THE EVENT THE ANALYTICAL TEST RESULTS FOR DISPOSAL INDICATE THE EXCAVATED MATERIAL IS A HAZARDOUS AND/OR TSCA WASTE, DISPOSAL SHALL BE PAID FOR BY CONTRACT OWNER.

### 1.5 BACKFILL OF EXCAVATED AREAS

ALL EXCAVATED AREAS SHALL BE BACKFILLED WITH SUITABLE MATERIAL IN ACCORDANCE WITH THE PROJECT PLANS OR AS DIRECTED BY THE ENGINEER. SUITABLE MATERIAL MAY CONSIST OF REGULATED MATERIAL AS LONG AS IT IS PLACED BACK WITHIN THE BOUNDARIES OF THE LANDFILL. FINAL COVER OF BACKFILLED EXCAVATIONS WILL BE SEEDED WITH GRASS OR OTHER VEGETATION AS NECESSARY TO FORM A COMPLETE AND DENSE COVER. ALL SURPLUS OR UNSUITABLE MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH SECTION 1.4, ABOVE.

### 1.6 POTENTIAL DEWATERING OF EXCAVATED AREAS

IF EXCAVATIONS WITHIN THE AFOREMENTIONED LIMITS REQUIRE DEWATERING FOR CONSTRUCTION PURPOSES, THE CONTRACTOR SHALL DEWATER AND SUBSEQUENTLY DISPOSE OF WATERS BY METHODS APPROVED BY THE ENGINEER AND IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) DEVELOPED IN ACCORDANCE WITH ODOT'S LOCATION AND DESIGN MANUAL. BY DEFINITION, ANY WATER THAT HAS COME INTO CONTACT WITH WASTE(S) IS A LEACHATE. ALL WATER (LEACHATE) CONTAINERIZED BY THE CONTRACTOR BETWEEN THESE LIMITS SHALL BE SUBJECT TO TESTING BY AN INSPECTOR PROVIDED BY THE ENGINEER. SAMPLES WILL BE TESTED BY THE FOLLOWING USEPA TEST METHODS:

1. VOLATILE ORGANIC COMPOUNDS BY SW846-8260A
2. SEMI-VOLATILE ORGANIC COMPOUNDS BY SW846-8270B
3. TOTAL RESOURCE CONSERVATION AND RECOVERY ACT METALS
4. TOTAL CYANIDE
5. HEXAVALENT CHROMIUM
6. POLYCHLORINATED BIPHENYLS BY SW846-8081
7. FLASH POINT - IGNITABILITY BY SW846-1010

THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS AND/OR AUTHORIZATIONS NEEDED TO STORE, TRANSPORT AND DISPOSE OF THE WATER (LEACHATE) IN ACCORDANCE WITH ORC 6111 AND/OR APPLICABLE LOCAL, STATE OR FEDERAL REGULATIONS.

THE ENGINEER WILL CLASSIFY THE WATER REMOVED FROM THE EXCAVATION INTO ONE OF THE TWO FOLLOWING CATEGORIES.

- I. ITEM SPECIAL - WORK INVOLVING WATER.

THE ENGINEER WILL DETERMINE IF THE WATER IS NON-REGULATED. THE METHOD FOR DISPOSING OF THE NON-REGULATED WATER SHALL BE APPROVED BY THE ENGINEER. WORK INVOLVED WITH THIS ITEM SPECIAL INCLUDES OBTAINING PERMITS AND AUTHORIZATIONS AND THE HANDLING, STORAGE, AND DISPOSAL OF THE NON-REGULATED WATER.

### 2. ITEM SPECIAL - WORK INVOLVING REGULATED WATER

THE CONTRACTOR SHALL COLLECT ALL WATER IN THE REMOVAL AREA. THIS SHALL INCLUDE STORM WATER, WATER FROM VEHICLE DECONTAMINATION OPERATIONS, GROUNDWATER ENCOUNTERED WITHIN THE LIMITS OF WASTE OR ANY OTHER INCIDENTAL WATER. THE CONTRACTOR SHALL PROPERLY STORE VIA ON-SITE HOLDING TANKS, TRANSPORT VIA LICENSED HAULER, AND DISPOSE OF ALL SUCH WATER AT A LICENSED DISPOSAL FACILITY. THE CONTRACTOR WILL IMPLEMENT MEASURES APPROVED BY THE ENGINEER TO CONTROL SURFACE WATER IN THE REMOVAL AREA, WHICH MAY INCLUDE TEMPORARY DAMS AND/OR DIKING. ANY COSTS AS REQUIRED BY THE FACILITY, INCLUDING COSTS FOR PROFILE/CHARACTERIZATION SHALL BE PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER A COMPLETED COPY OF ALL MANIFESTS OR RECEIPTS. ODOT SHALL ASSUME THE GENERATOR STATUS.

### 1.7 AIR EMISSIONS

THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS AND/OR AUTHORIZATIONS NEEDED TO ADDRESS AIR EMISSIONS FROM MATERIAL HANDLING OF WASTES ANTICIPATED TO BE EXCAVATED AND/OR STOCKPILED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE OR FEDERAL REGULATIONS. IN ACCORDANCE WITH ODOT'S CONSTRUCTION MANUAL; ITEM 616, DUST EMISSIONS WILL BE CONTROLLED DURING EXCAVATION ACTIVITIES ON SITE. ADDITIONALLY, METHANE AND CARBON DIOXIDE WILL BE MONITORED DURING EXCAVATION ACTIVITIES BY THE CONTRACTOR USING DEVICES TO MEASURE THE PERCENT OF METHANE, CARBON DIOXIDE AND LOWER EXPLOSIVE LIMIT FROM THE BREATHING AIR WITHIN THE WORKSPACE.

### 1.8 GENERAL NOTES

ALL TRANSPORT VEHICLES USED FOR THE MOVEMENT OF REGULATED MATERIALS SHALL MEET APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS. THE CONTRACTOR SHALL MAINTAIN RECORDS (SUCH AS MANIFESTS, LANDFILL TICKETS, DAILY LOGS, ETC.) TO DOCUMENT THE SOURCE, MOVEMENT, AND DESTINATION OF EACH TRUCKLOAD OF CONTAMINATED SOIL. ONE COPY OF EACH OF THESE RECORDS SHALL BE SUBMITTED TO THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE DIRECTOR OF THE OHIO EPA WITH A LETTER OF ACCEPTANCE FROM THE APPROPRIATE DISPOSAL FACILITY PRIOR TO THE REMOVAL OF WASTES OR CONTAMINATED MATERIALS FROM THE PROPERTY.

### 1.9 BASIS OF PAYMENT

THE CONTRACTOR SHALL FURNISH ALL THE LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PROPERLY HANDLE, STORE, TEST, TRANSPORT, AND DISPOSE OF REGULATED MATERIALS, INCLUDING ANY REQUIRED PERMITS, APPROVALS, OR FEES WITHIN THE LIMITS IDENTIFIED ABOVE. PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT PRICE BID PER METRIC TON AND/OR CUBIC METER. THE BASIS FOR CONVERSION FROM CUBIC METER TO METRIC TON IS 2 METRIC TON/CUBIC METER.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ENVIRONMENTAL WORK NOTED ABOVE:

|   |                |
|---|----------------|
| ITEM SPECIAL - WORK INVOLVING HAZARDOUS WASTE | 537 METRIC TON |
| ITEM SPECIAL - WORK INVOLVING WATER           | 5 CUBIC METER  |
| ITEM SPECIAL - WORK INVOLVING REGULATED WATER | 5 CUBIC METER  |

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GENERAL NOTES

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