

## **Data 3 Analytical Method**



## **1. Sample pre-treatment**

### **(1) Soil, dam tailings, boring core samples**

Soil samples are dried in the air, or in an oven at a temperature not exceeding 40°C. If necessary, the soil samples are crushed while still damp and friable and again after drying. The soil is sieved and a fraction smaller than 2mm is divided into portions mechanically or by hand for analysis. The necessary procedures are the following.

#### **a. Mixing**

A series of 5 samples taken from 1 grid, coded as -C, -N, -E, -W, -S, are mixed well and measured in order to represent the grid.

#### **b. Drying**

Samples are dried completely in air or in a ventilated drying oven from which the moist air has been removed. They are dried until the loss in mass of the soil sample is not greater than 5% per 24h. To accelerate the drying process, the size of the larger clods are break down (greater than 15mm) during the process. When samples are dried in air, they are crushed lightly by hand using a wooden hammer or a mortar and pestle. When samples are dried in an oven, they are removed temporarily from the oven and treated in the same way. This procedure also makes it easier to separate particles greater than 2mm.

#### **c. Crushing and removal of coarse materials**

If soil samples have dried into clods, crushing is necessary. Before crushing, stones, fragments of glass and rubbish etc, which are larger than 2 mm are removed by sieving and hand picking. Care is taken to minimize the amount of fine material adhering to the separated stones, etc. The dried soil is crushed into particles no larger than 2 mm using suitable apparatus.

#### **d. Sieving**

Sieve the dried and crushed sample by hand or using a mechanical shaker. Remove stones and fresh plant fragments, glass, etc. from the fraction remaining on the sieve. Crush any clods left behind on the sieve separately and return them to the sample.

#### **e. Crop samples**

Samples mass of at least 200g are prepared. Part which are not intending for eating is discarded from the crops. Additionally gross surface contamination like soil, rotten parts of plants or leaves

are removed. Sufficiently homogeneous samples are prepared in a way as usual for the preparation of foodstuffs in the normal household. Contamination with the elements to be determined is avoided to the greatest possible extent.

## **2. Content analysis for soil, sediments, dam tailings and boring core samples**

### **(1) Sample digestion**

This section specifies sample digestion for the content analysis. Regarding the elution analysis, see the next section.

#### **a. For Cd, Pb, Zn, Total-Cr, Cu, Co, Ni, Mn and As**

This sample digestion method is selected based on ISO 14869 and applicable to Cd, Pb, Zn, Total-Cr, Cu, Co, Ni, Mn and As.

- **Principle**

The dried and ground samples are pre-treated to destroy organic matter, and then digested with a mixture of hydrofluoric and perchloric acids. After evaporation to near dryness, the residue is dissolved in dilute hydrochloric or nitric acid. Hydrofluoric acid decomposes silicates by the reaction of F with Si to form volatile SiF<sub>4</sub>. As it evaporates last, perchloric acid forms readily-soluble perchlorate salts. To minimize the danger of acid ejection due to violent oxidation of organic matter by perchloric acid, pretreatment with nitric acid procedure has been adopted to destroy organic matter prior to digestion.

- **Pretreatment for digestion**

The milled sample (approx. 0.5g) is weighed, then transferred to an evaporating dish and 5ml of nitric acid is added. The dish is placed on the hot plate at 150°C and evaporated until approximately 1ml of nitric acid remains. Note that several successive additions of nitric acid may be necessary until the emission of nitrous vapours ceases to remove all the organic matter. In such cases, the dish is removed from the hot plate and cooled to room temperature before adding the next portion of nitric acid.

- **Digestion**

5ml of hydrofluoric acid and 1.5ml of perchloric acid are added to the pre-treated test portion in the PTFE beaker or the platinum crucible. The mixture is heated on the hot plate until the dense fumes of perchloric acid and silicon tetrafluoride cease. The mixture cannot be allowed to evaporate

completely. The beaker is removed from the hot plate, allowed to cool, then 1ml of hydrochloric acid or 1 ml of nitric acid and approximately 5ml of water are added to dissolve the residue. The beaker is warmed briefly on the hot plate to assist dissolution. Transfer this solution to the 50ml volumetric flask, fill to the mark and mix well. A solid phase remaining in the resultant solution indicates incomplete dissolution.

## **b. For Hg**

This sample extraction method is selected based on ISO 16772 and applicable to only Hg

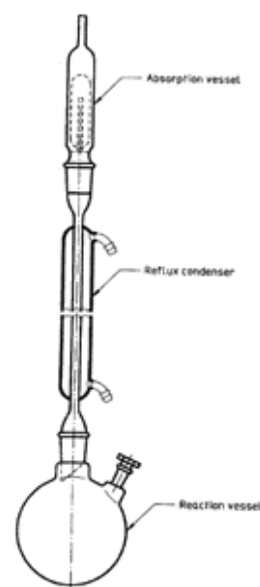
### **• Principle**

The dried sample is extracted with a hydrochloric/nitric acid mixture by standing for 16h at room temperature, followed by boiling under reflux for 2h. The extract is then clarified and made up to volume with nitric acid. The trace metal content of the extract can be determined with an atomic absorption spectrophotometer.

### **• Extraction**

Approximately 3g, to the nearest 0.001g, of the sub-sample is weighed into the 250ml reaction vessel. It is moistened with about 0.5 ml to 1.0 ml of water and while mixing, 21ml of hydrochloric acid followed by 7ml of nitric acid is added, drop by drop if necessary, to reduce foaming. 15ml of nitric acid is added to the absorption vessel. The absorption vessel and condenser are connected to the reaction vessel, and allowed to stand for 16h at room temperature to allow for slow oxidation of the organic matter in the soil. The first reactions with the aqua regia are allowed to subside. Then an extra 1ml of nitric acid only is added to every 0.1g of organic carbon above 0.5g. More than 10ml of nitric acid is not added at any time, and any reactions are allowed to subside before proceeding further.

The temperature of the reaction mixture is raised slowly until reflux conditions are reached and maintained for 2h, ensuring that the condensation zone is lower than 1/3 of the height of the condenser, then allowed to cool. The contents of the absorption vessel are added to the reaction vessel, via the condenser, rinsing both the absorption vessel and condenser with a further 10ml of nitric acid. The reaction vessel is allowed to stand so that most of any insoluble residue settles out of suspension. The relatively sediment-free supernatant is decanted carefully onto a filter paper, collecting the filtrate in a 100ml volumetric flask. All the initial filtrate is allowed to pass through the filter paper, then the insoluble residue is washed onto the filter paper with a minimum of nitric acid. This filtrate is collected with the first.



The prepared extract is for the determination of trace elements, by atomic absorption spectrometry method.

## **(2) Determination**

### **a. Scope**

The Inductively Coupled Plasma (ICP) method is selected and Electrothermal Atomic Absorption Spectrometric (EAAS) is applicable to Cd, Pb, Zn, Cr, Mn, Cu, Co, Ni and As. The Hydride Generation-Inductively Coupled Plasma (HGICP) or the Hydride Generation-Atomic Absorption Spectrometric (HGAAS) methods are applicable to As when interferences are present. The Cold-Vapor Atomic Absorption Spectrometric (CVAAS) method is applicable for Hg.

### **b. For Cd, Pb, Zn, Total-Cr, Cu, Co, Ni, Mn and As**

- **ICP method**

The following ICP method is selected based on ISO 11885.

An ICP source consists of a flowing stream of argon gas ionized by an applied radio frequency field typically oscillating at 27.1MHz. This field is inductively coupled to the ionized gas by a water-cooled coil surrounding a quartz “torch” that supports and confines the plasma. A sample aerosol is generated in an appropriate nebulizer and spray chamber and is carried into the plasma through an injector tube located within the torch. The sample aerosol is injected directly into the ICP, subjecting the constituent atoms to temperatures of about 6,000 to 8,000°K. As the results in almost complete dissociation of molecules, significant reduction in chemical interferences is achieved. The high temperature of the plasma efficiently excites atomic emission. Ionization of a high percentage of atoms produces ionic emission spectra.

The ICP provides an optically “thin” source that is not subject to self-absorption except at very high concentrations. Thus linear dynamic ranges of four to six orders of magnitude are observed for many elements. The efficient excitation provided by the ICP results in low detection limits for many elements. This, coupled with the extended dynamic range, permits effective multi-element determination of metals. The light emitted from the ICP is focused onto the entrance slit of either a monochromator or a polychromator that effects dispersion. A precisely aligned exit slit is used to isolate a portion of the emission spectrum for intensity measurement using a photomultiplier tube. The monochromator uses a single exit slit/photomultiplier and may use a computer-controlled scanning mechanism to examine emission wavelengths sequentially. The polychromator uses multiple fixed exit slits and corresponding photomultiplier tubes; it simultaneously monitors all

configured wavelengths using a computer-controlled readout system. The sequential approach provides greater wavelength selection while the simultaneous approach can provide greater sample throughput.

- HGAAS method

This method is applicable to the determination of arsenic by conversion to its hydrides by sodium borohydride reagent and transport into an atomic absorption atomizer. Arsenous acid and selenous acid and the As (III) oxidation states of arsenic, respectively, are instantaneously converted by sodium borohydride reagent in acid solution to their volatile hydrides. The hydrides are purged continuously by argon or nitrogen into a quartz cell heated electrically or by the flame of an atomic absorption spectrometer and converted to the gas-phase atoms. The sodium borohydride reducing agent, by rapid generation of the elemental hydrides in an appropriate reaction cell, minimizes dilution of the hydrides by the carrier gas and provides rapid, sensitive determinations of arsenic. At room temperature and solution pH values of 1 or less, arsenic acid, the As (V) oxidation state of arsenic, is reduced relatively slowly by sodium borohydride to As (III), which is then instantaneously converted to arsine. The arsine atomic absorption peaks are commonly decreased by one-fourth to one-third for As (V) when compared to As (III). Determination of total arsenic requires that all inorganic arsenic compounds be in the As (III) state. Organic and inorganic forms of arsenic are first oxidized to As (V) by acid digestion. The As (V) is then quantitatively reduced to As(III) with sodium or potassium iodide before reaction with sodium borohydride.

**c. For Hg**

- CVAAS Method

As for Hg, CVAAS Method is selected based on ISO 16772. In atomic absorption spectrometry, a sample is sent to the reaction vessel of the mercury analysis unit and the mercury is reduced with divalent tin or sodium borohydride and flushed into the cuvette of the AAS instrument using a carrier gas stream. A light beam is directed through the cuvette, into a monochromator, and onto a detector that measures the amount of light absorbed by the atomized Hg in the cuvette.

### **3. Content analysis for crop sample**

#### **(1) Sample digestion**

This section specifies sample digestion for the content analysis in crops.

##### **a. For Cd, Pb, Zn, Total-Cr, Cu, Co, Ni, Mn and As**

This sample digestion method is selected based on EN 14084 and applicable to Cd, Pb, Zn, Total-Cr, Cu, Co, Ni, Mn and As.

An amount of sample equivalent to 0.2g to 0.5g dry matter is weighed into the digestion vessel. 5ml of nitric acid and 2 ml of hydrogen peroxide are added. The microwave oven is used for the sample digestion. After the digestion program is completed, the digestion vessels are removed from the microwave oven and allowed cooling thoroughly before attempting to open them. Vessels are opened and rinsed down the lid and the walls with water into the container. A definite volume is made up to 25ml with water into a plastic bottle. The blank is treated the same way.

##### **b. For Hg**

This sample digestion method is selected and applicable to only Hg.

An amount of sample equivalent to 0.5g to 1.0g dry matter is weighed into the digestion vessel. 3ml of nitric acid and 2ml of hydrogen peroxide are added. The microwave oven is used for the sample digestion. After the digestion program is completed, the digestion vessels are removed from the microwave oven and allowed cooling thoroughly before attempting to open them. The vessels are opened and rinsed down the lid and the walls with water into the container. The samples are stabilized with 1ml stabilization mixture (0.5% m/v  $K_2Cr_2O_7$ –50% v/v  $HNO_3$ ). A definite volume is made up to 50ml with water into a plastic bottle. The blank is treated the same way.

#### **(2) Determination**

##### **a. For Cd, Pb, Zn, Total-Cr, Cu, Co, Ni, Mn and As**

The method to be used-flame or graphite furnace technique is selected by the concentration of the metal to be analysed. Cd, Pb, Total-Cr, Cu, Co, Ni, Mn and As in crops require graphite furnace AAS, Zn can be analyzed by flame AAS. Background correction should always be used.

- **Graphite furnace method**



This technique is used for determination of Cd, Pb, Total-Cr, Cu, Co, Ni, Mn and As.

In graphite furnace method, samples are dispensed into a graphite tube, which can be heated to over 2,800°C very rapidly and in a controlled manner. By increasing the temperature stepwise, the processes of drying, thermal decomposition of the matrix and thermal dissociation into free atoms occur. The signal-peak produced is, under optimum conditions, sharp and symmetrical, and of narrow half-width. The height of the peak is, for most elements, proportional to the concentration of the element in solution, although for certain elements it is preferable to work from peak area.

An auto sampler to deliver a sample volume to the graphite furnace, which gives a background absorbance of not more than about 0.5 absorbance units, is programmed. To enhance the absorbance at very low concentrations, multiple injections may be employed. Matrix modifiers are also used.

- **Flame AAS method**

This technique is used for determination of Zn.

In flame AAS method, a sample is aspirated into a flame and atomized. A light beam is directed through the flame, into a monochromator, and onto a detector that measures the amount of light absorbed by the atomized element in the flame. The amount of energy at the characteristic wavelength absorbed in the flame is proportional to the concentration of the element in the sample over a limited concentration range.

- b. For Hg**

Following determination, Cold-Vapor Atomic Absorption Spectrometric (CVAAS) method, is used for Hg.

- **CVAAS method**

In CVAAS method, a sample is sent to the reaction vessel of the mercury analysis unit and the mercury is reduced with divalent tin or sodium borohydride and flushed into the cuvette of the AAS instrument using a carrier gas stream. A light beam is directed through the cuvette, into a monochromator, and onto a detector that measures the amount of light absorbed by the atomized Hg in the cuvette. To devise a test schedule, first the apparatus is adjusted, then optimize the settings, paying particular attention to gas flow times and amounts of tin (II) chloride or sodium borohydride introduced. The zero of the instrument is adjusted using the zero member compensation when necessary. The appropriate calibration solutions are used to obtain the acceptable sample analysis results. When carrying out prolonged series of measurements, the zero

and the calibration are checked at intervals.

#### **4. Elution analysis for Soil, dam tailings, boring core samples**

##### **(1) Elution procedure**

This section specifies sample elution for the elution analysis. It is based on the Japanese Standard Ministry of Environment's 18<sup>th</sup> announcement dated March 6<sup>th</sup> 2003. This sample extraction method is used for Cd, Pb, Zn, Mn, Cr, Cu, Co, Ni, As and Hg.

The sample and solvent (prepared by pure water and HCl, adjusted to within the range of pH 5.8 to 6.3) are mixed at 10% of weight-volume ratio, and the liquid mixture must be more than 500mL.

The elution process is conducted at room temperature and atmospheric pressure by shaker (set at a shaking frequency of 200 times/min and shaking amplitude of between 4 to 5cm in horizontal or vertical direction) for 6 continuous hours.

After standing still for 10 to 30 minutes, the samples are placed in a centrifugal separator for 20 minutes at a speed of 3,000rpm, then the supernatant is filtered with a membrane filter of 0.45µm pore size.

##### **(2) Determination**

###### **a. For Cd, Pb, Zn, Total-Cr, Cu, Co, Ni, Mn and As**

###### **• ICP method**

ICP method is used for Cd, Pb, Zn, Total-Cr, Cu, Co, Ni, Mn and As.

See in the section "Content analysis for soil, sediments, dam tailings and boring core samples"

###### **b. For Hg**

CVAAS method is used for Hg.

See in the section "Content analysis for soil, sediments, dam tailings and boring core samples"

## **5. Chemical analysis for surface and groundwater quality**

### **(1) Determination**

#### **a. For Cd, Pb, Zn, Total-Cr, Cu, Co, Ni , Mn and As**

- **ICP method**

ICP method is used for Cd, Pb, Zn, Total-Cr, Cu, Co, Ni , Mn and As.

See in the section “Content analysis for soil, sediments, dam tailings and boring core samples”

#### **b. For Hg**

CVAAS method is used for Hg.

See in the section “Content analysis for soil, sediments, dam tailings and boring core samples”



## **DATA 4**

### **Results of Chemical analysis**

- 4-1 Soil Content 400m, 200m, 100m, 50m grids**
- 4-2 Soil Elution 400m, 200m, 100m, 50m grids**
- 4-3 Analytical Results of Tailings Dam**
- 4-4 Analytical Results of Drilling Survey of Soil**
- 4-5 Analytical Results of River Bottom Sediments**
- 4-6 Analytical Results of Surface Water**
- 4-7 Chemical Composition of Core Samples of  
the Monitoring Borehole**
- 4-8 Groundwater of the Monitoring Well**
- 4-9 Water of the Tailings Dam**
- 4-10 Analytical Results of Groundwater and Surface  
Water**
- 4-11 Analytical Results of Crop Samples**
- 4-12 Analytical Results of Wheat and Soil Samples of  
the Additional survey**



## **Explanation of the Table**

**Num: Serial Number**

**Grid: Grid Name (400m, 200m, 100m and 50m)**

**Sample No: Sample Number**

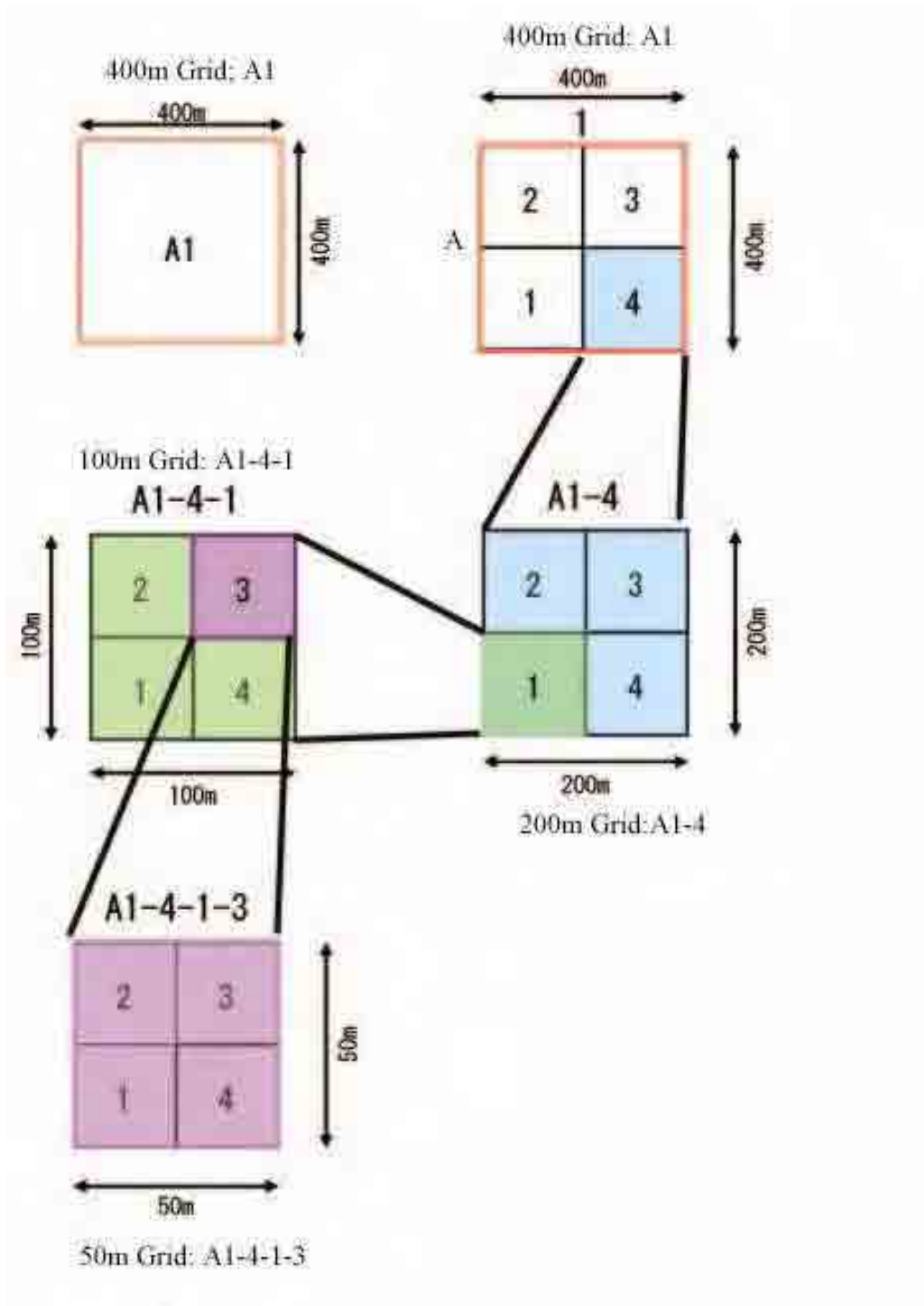
**Numbering scheme of 400m, 200m, 100m 50m Grid samples are shown in the figure of next page.**

**SS: Surface Soil**

**A13: Name of 400m Grid System**

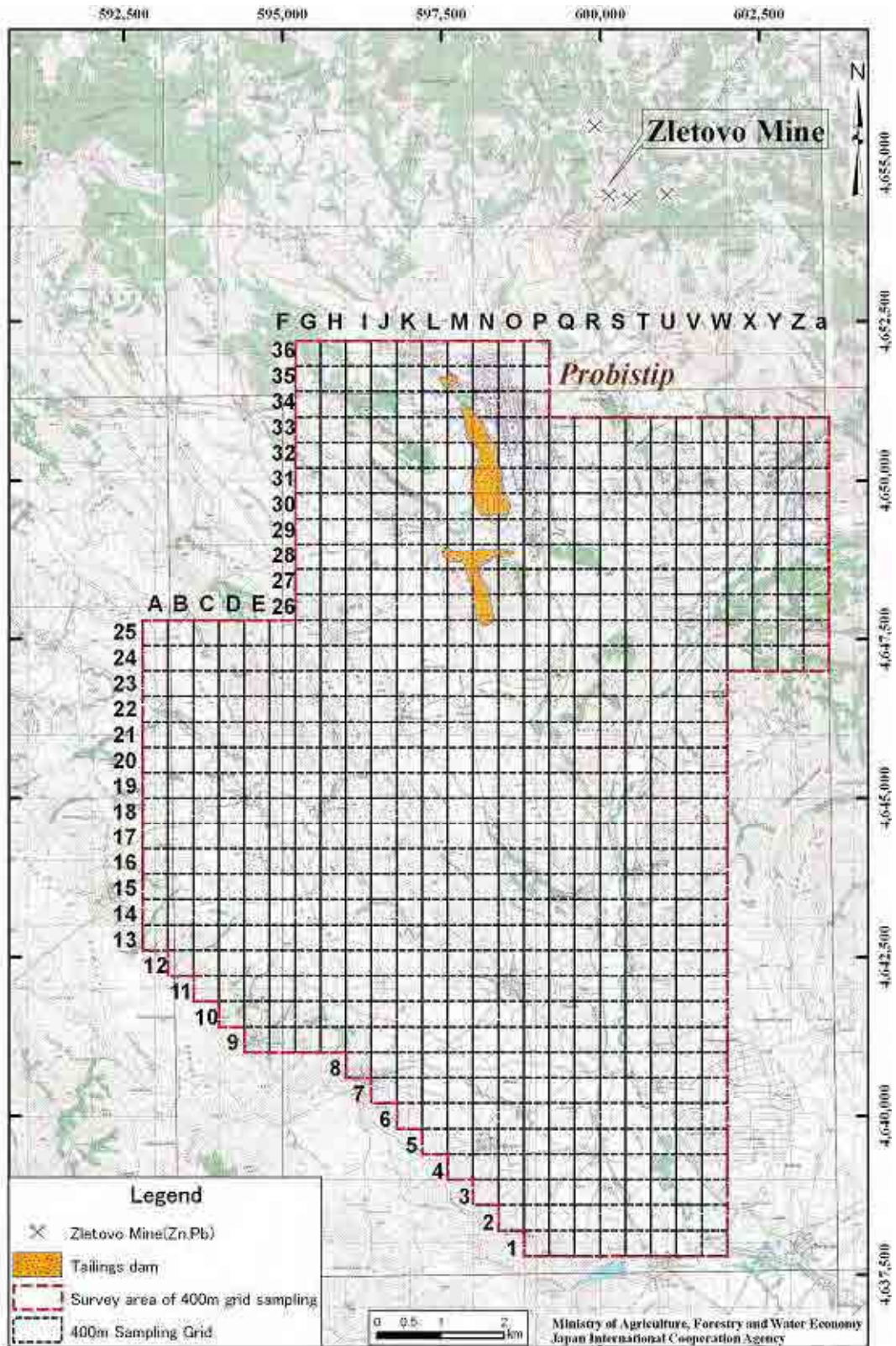
**E(X), N(Y): UTM Cordinates**

**Color : Based on the USGS color chart**



Numbering of 400m, 200m, 100m and 50m Grid Soil Samples





400m Grid System



## **4-1 Soil Content 400m, 200m, 100m, 50m grids**



**Data 4-1(1) Soil Samples of 400m Grid Content Analysis**

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
1	400	SSA13	593000	4642800	18	<0.1	22	110	17	<0.10	20	52	86	1200	7.21	5Y2/1
2	400	SSA14	593000	4643200	18	1	20	29	17	<0.10	23	46	90	1000	7.25	2.5Y2/1
3	400	SSA15	593000	4643600	14	1	21	23	13	<0.10	30	47	80	1000	7.21	2.5Y2/1
4	400	SSA16	593000	4644000	12	1	20	20	17	<0.10	17	64	78	1300	7.05	2.5Y2/1
5	400	SSA17	593000	4644400	11	<0.1	19	21	15	<0.10	21	52	94	1000	6.98	2.5Y2/1
6	400	SSA18	593000	4644800	16	1	23	72	26	<0.10	86	46	110	940	7.24	2.5Y2/1
7	400	SSA19	593000	4645200	10	1	21	83	23	<0.10	83	40	70	710	6.99	10Y4/3
8	400	SSA20	593000	4645600	15	0.3	17	41	19	<0.10	64	34	61	650	7.27	5Y2/1
9	400	SSA21	593000	4646000	12	<0.1	17	25	16	<0.10	37	50	65	780	6.90	5Y2/1
10	400	SSA22	593000	4646400	16	<0.1	18	35	16	<0.10	31	45	95	890	7.31	5Y3/2
11	400	SSA23	593000	4646800	8	<0.1	17	48	17	<0.10	49	38	72	590	7.38	5Y3/2
12	400	SSA24	593000	4647200	8	<0.1	19	62	35	<0.10	58	67	120	860	7.18	2.5Y2/1
13	400	SSA25	593000	4647600	10	1	23	44	30	<0.10	60	62	100	770	7.17	10Y4/3
14	400	SSB12	593400	4642400	35	<0.1	21	32	23	<0.10	18	55	84	730	7.02	7.5YR4/3
15	400	SSB13	593400	4642800	38	<0.1	19	28	21	<0.10	11	59	100	840	6.37	5Y2/1
16	400	SSB14	593400	4643200	20	<0.1	21	54	15	<0.10	16	50	89	960	8.00	5Y3/2
17	400	SSB15	593400	4643600	11	<0.1	21	43	18	<0.10	32	50	110	960	7.28	5Y3/2
18	400	SSB16	593400	4644000	10	<0.1	17	53	22	<0.10	40	38	71	930	7.37	2.5Y2/1
19	400	SSB17	593400	4644400	4.9	0.53	19	62	20	<0.10	52	57	84	980	6.70	10Y4/3
20	400	SSB18	593400	4644800	12	<0.1	25	130	27	<0.10	130	43	83	850	7.18	2.5YR2/1
21	400	SSB19	593400	4645200	15	<0.1	24	100	27	<0.10	92	48	84	1100	7.19	2.5Y3/1
22	400	SSB20	593400	4645600	10	<0.1	20	85	22	<0.10	84	42	93	850	7.60	5Y2/1
23	400	SSB21	593400	4646000	12	<0.1	19	47	16	<0.10	42	48	69	870	6.97	5Y2/1
24	400	SSB22	593400	4646400	15	<0.1	22	96	26	<0.10	87	38	83	1000	7.57	7.5YR2/1
25	400	SSB23	593400	4646800	12	<0.1	21	44	22	<0.10	59	48	75	770	7.45	2.5Y3/1
26	400	SSB24	593400	4647200	9	<0.1	14	62	15	<0.10	39	38	77	440	7.13	7.5YR1.7/1
27	400	SSB25	593400	4647600	11	<0.1	14	61	19	<0.10	40	43	69	550	6.98	2.5Y2/1
28	400	SSC11	593800	4642000	10	1	22	24	17	<0.10	19	62	71	1100	7.18	5Y2/1
29	400	SSC12	593800	4642400	20	<0.1	24	26	19	<0.10	18	52	84	1200	7.21	5Y2/1
30	400	SSC13	593800	4642800	14	1	21	27	13	<0.10	24	49	84	980	6.91	7.5YR2/1
31	400	SSC14	593800	4643200	8	<0.1	20	36	14	<0.10	33	50	140	1000	8.23	2.5Y2/1
32	400	SSC15	593800	4643600	19	0.2	22	68	22	<0.10	64	51	120	940	7.91	2.5YR2/1
33	400	SSC16	593800	4644000	12	<0.1	20	33	14	<0.10	24	51	110	990	6.07	2.5Y2/1
34	400	SSC17	593800	4644400	13	<0.1	26	78	23	<0.10	67	50	90	1000	7.39	2.5Y2/1
35	400	SSC18	593800	4644800	15	<0.1	23	72	21	<0.10	69	58	91	960	7.46	5Y2/1
36	400	SSC19	593800	4645200	12	<0.1	27	130	29	<0.10	120	51	78	980	7.26	7.5YR2/1
37	400	SSC20	593800	4645600	8	<0.1	26	85	31	<0.10	78	61	110	950	8.38	2.5Y3/1
38	400	SSC21	593800	4646000	26	<0.1	23	89	19	<0.10	55	44	93	1100	7.17	2.5YR2/1
39	400	SSC22	593800	4646400	19	1	20	54	19	<0.10	36	46	81	830	6.90	2.5Y2/1
40	400	SSC23	593800	4646800	4	<0.1	6	22	6	<0.10	14	16	28	220	6.58	2.5Y2/1
41	400	SSC24	593800	4647200	4	<0.1	17	33	14	<0.10	28	38	81	520	7.65	7.5Y2/1
42	400	SSC25	593800	4647600	9	<0.1	18	17	13	<0.10	15	41	86	1100	6.48	7.5YR2/1
43	400	SSD10	594200	4641600	15	<0.1	21	21	16	<0.10	16	57	88	940	7.01	5Y2/1
44	400	SSD11	594200	4642000	32	<0.1	20	22	14	<0.10	13	52	66	730	6.95	7.5YR2/2
45	400	SSD12	594200	4642400	13	<0.1	19	35	15	<0.10	27	45	78	880	7.03	5YR1.7/1
46	400	SSD13	594200	4642800	15	<0.1	18	50	16	<0.10	33	48	77	800	7.40	2.5Y2/1
47	400	SSD14	594200	4643200	11	<0.1	20	75	18	<0.10	70	52	92	860	7.42	2.5Y2/1
48	400	SSD15	594200	4643600	10	<0.1	21	36	16	<0.10	24	57	91	1000	6.95	5YR2/1
49	400	SSD16	594200	4644000	18	<0.1	21	48	14	<0.10	36	51	83	970	7.27	5Y2/1
50	400	SSD17	594200	4644400	8	<0.1	26	89	24	<0.10	85	47	110	1200	7.37	7.5YR2/2
51	400	SSD18	594200	4644800	13	<0.1	24	97	23	<0.10	83	43	78	1100	7.06	2.5Y3/1
52	400	SSD19	594200	4645200	11	<0.1	22	66	24	<0.10	75	59	100	930	7.16	2.5Y2/1
53	400	SSD20	594200	4645600	9	<0.1	17	37	22	<0.10	38	36	77	820	7.33	2.5Y2/1
54	400	SSD21	594200	4646000	11	0.68	16	42	17	<0.10	40	33	69	770	8.06	2.5Y3/1
55	400	SSD22	594200	4646400	13	<0.1	23	14	33	<0.10	13	38	86	1200	7.41	5Y2/1
56	400	SSD23	594200	4646800	30	<0.1	19	26	10	<0.10	18	53	66	790	7.36	7.5YR2/2
57	400	SSD24	594200	4647200	55	<0.1	22	44	16	<0.10	21	70	69	1000	7.21	5Y2/1
58	400	SSD25	594200	4647600	42	<0.1	24	28	14	<0.10	14	58	78	1100	6.31	2.5Y2/1
59	400	SSE9	594600	4641200	9	<0.1	21	57	18	<0.10	34	40	88	1100	7.49	10YR5/2
60	400	SSE10	594600	4641600	34	<0.1	12	28	16	<0.10	8	81	44	270	7.03	5YR4/2

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
61	400	SSE11	594600	4642000	10	<0.1	25	65	13	<0.10	38	80	98	940	7.06	7.5Y1.7/1
62	400	SSE12	594600	4642400	19	<0.1	25	110	17	<0.10	95	45	77	870	7.26	7.5YR1.7/1
63	400	SSE13	594600	4642800	52	<0.1	24	28	15	<0.10	16	75	82	1100	7.56	5Y2/1
64	400	SSE14	594600	4643200	19	0.42	29	130	30	<0.10	120	48	87	1200	7.22	2.5Y2/1
65	400	SSE15	594600	4643600	8	<0.1	26	100	23	<0.10	96	40	90	1200	7.23	2.5Y2/1
66	400	SSE16	594600	4644000	8	<0.1	20	76	19	<0.10	75	23	64	810	7.29	10YR5/2
67	400	SSE17	594600	4644400	9	<0.1	21	81	16	<0.10	73	32	58	900	7.28	7.5Y1.7/1
68	400	SSE18	594600	4644800	13	<0.1	26	95	32	<0.10	94	54	87	1000	6.92	5Y2/1
69	400	SSE19	594600	4645200	22	<0.1	22	73	31	<0.10	73	44	110	1100	8.03	5Y2/1
70	400	SSE20	594600	4645600	12	<0.1	20	45	23	<0.10	30	45	99	1000	7.85	2.5Y2/1
71	400	SSE21	594600	4646000	14	<0.1	18	31	9	<0.10	13	46	78	1000	6.60	10YR4/2
72	400	SSE22	594600	4646400	23	<0.1	23	33	17	<0.10	18	61	85	1200	7.05	10YR5/2
73	400	SSE23	594600	4646800	46	<0.1	24	40	15	<0.10	17	76	91	1200	6.56	5Y2/1
74	400	SSE24	594600	4647200	130	<0.1	17	36	24	<0.10	12	80	78	510	6.46	5Y2/1
75	400	SSE25	594600	4647600	24	<0.1	26	36	19	<0.10	15	47	110	1100	7.01	5Y2/1
76	400	SSF9	595000	4641200	26	<0.1	18	110	16	<0.10	41	51	72	510	6.86	10Y3/3
77	400	SSF10	595000	4641600	13	<0.1	19	60	15	<0.10	45	35	73	1000	7.23	5YR3/1
78	400	SSF11	595000	4642000	11	<0.1	24	130	20	<0.10	120	37	82	840	7.51	7.5YR2/1
79	400	SSF12	595000	4642400	14	<0.1	25	130	27	<0.10	130	46	86	1100	7.16	7.5YR1.7/1
80	400	SSF13	595000	4642800	13	<0.1	25	110	27	<0.10	100	45	77	1100	7.28	2.5Y3/3
81	400	SSF14	595000	4643200	8	<0.1	22	96	20	<0.10	85	29	67	1100	7.24	5Y2/1
82	400	SSF15	595000	4643600	12	0.64	27	86	28	<0.10	98	38	77	1400	7.44	5Y2/1
83	400	SSF16	595000	4644000	9	<0.1	22	60	20	<0.10	86	28	63	980	7.05	5YR3/1
84	400	SSF17	595000	4644400	9	<0.1	26	68	31	<0.10	110	63	80	1100	7.38	7.5YR2/1
85	400	SSF18	595000	4644800	16	<0.1	26	110	32	<0.10	130	45	86	1300	7.17	2.5YR2/1
86	400	SSF19	595000	4645200	15	<0.1	20	20	17	<0.10	17	50	84	1000	7.08	2.5Y3/3
87	400	SSF20	595000	4645600	17	<0.1	21	27	15	<0.10	13	55	120	1100	6.98	5Y2/1
88	400	SSF21	595000	4646000	48	<0.1	18	18	10	<0.10	18	58	88	790	6.32	5Y2/1
89	400	SSF22	595000	4646400	220	<0.1	17	40	15	<0.10	19	110	69	430	6.38	5YR3/1
90	400	SSF23	595000	4646800	20	<0.1	24	33	15	<0.10	16	54	140	950	6.34	7.5YR2/1
91	400	SSF24	595000	4647200	13	<0.1	24	28	13	<0.10	23	42	84	920	6.91	2.5YR2/1
92	400	SSF25	595000	4647600	18	<0.1	25	49	27	<0.10	27	47	79	1000	6.30	2.5Y2/1
93	400	SSG9	595400	4641200	23	<0.1	23	30	18	<0.10	19	67	84	1400	6.83	10YR3/3
94	400	SSG10	595400	4641600	14	<0.1	20	69	15	<0.10	75	38	75	820	6.98	5Y1.7/1
95	400	SSG11	595400	4642000	18	<0.1	27	120	37	<0.10	130	43	85	1300	6.95	5YR3/1
96	400	SSG12	595400	4642400	10	<0.1	25	100	26	<0.10	110	43	74	1100	7.20	10YR2/1
97	400	SSG13	595400	4642800	10	<0.1	24	99	35	<0.10	110	28	110	1200	7.08	10YR2/1
98	400	SSG14	595400	4643200	12	<0.1	24	67	21	<0.10	70	40	78	1100	7.09	2.5Y2/1
99	400	SSG15	595400	4643600	10	<0.1	26	90	25	<0.10	110	45	75	1300	7.14	10YR3/3
100	400	SSG16	595400	4644000	11	<0.1	23	79	24	<0.10	94	37	68	1000	6.97	5Y1.7/1
101	400	SSG17	595400	4644400	11	<0.1	23	72	21	<0.10	82	37	68	990	7.03	5YR3/1
102	400	SSG18	595400	4644800	31	<0.1	25	26	21	<0.10	27	44	91	1000	7.05	10YR2/1
103	400	SSG19	595400	4645200	52	<0.1	18	27	13	<0.10	16	70	100	610	7.28	10YR2/1
104	400	SSG20	595400	4645600	65	<0.1	22	21	14	<0.10	13	82	84	1000	7.06	2.5Y2/1
105	400	SSG21	595400	4646000	92	<0.1	20	50	16	<0.10	18	73	98	710	7.25	5Y2/1
106	400	SSG22	595400	4646400	16	<0.1	26	23	24	<0.10	14	47	91	1100	6.98	5Y1.7/1
107	400	SSG23	595400	4646800	4	<0.1	26	19	22	<0.10	10	41	110	1200	7.12	5YR3/1
108	400	SSG24	595400	4647200	9	<0.1	23	19	29	<0.10	12	52	92	830	6.88	10YR2/1
109	400	SSG25	595400	4647600	11	<0.1	19	19	27	<0.10	12	45	100	490	7.04	2.5Y2/1
110	400	SSG26	595400	4648000	17	<0.1	20	20	24	<0.10	25	48	82	750	5.61	2.5Y2/1
111	400	SSG27	595400	4648400	29	<0.1	23	22	47	<0.10	20	44	83	820	6.96	2.5Y3/1
112	400	SSG28	595400	4648800	31	1	18	76	31	<0.10	50	51	75	1200	7.18	2.5Y3/1
113	400	SSG29	595400	4649200	31	1	21	70	34	<0.10	56	51	73	1500	6.73	5Y2/1
114	400	SSG30	595400	4649600	23	0.18	18	76	24	<0.10	62	51	87	1100	7.22	7.5YR5/4
115	400	SSG31	595400	4650000	33	1	19	130	37	<0.10	34	58	70	860	6.64	7.5YR2/1
116	400	SSG32	595400	4650400	38	<0.1	21	25	66	<0.10	16	90	89	670	6.85	10YR2/1
117	400	SSG33	595400	4650800	32	1	21	72	65	<0.10	15	67	78	640	6.74	10YR4/3
118	400	SSG34	595400	4651200	26	<0.1	19	35	42	<0.10	17	110	63	900	6.76	2.5Y3/1
119	400	SSG35	595400	4651600	20	<0.1	18	47	19	<0.10	19	110	48	500	6.77	2.5Y4/2
120	400	SSG36	595400	4652000	32	<0.1	19	34	38	<0.10	20	96	67	900	6.72	7.5YR2/2
121	400	SSH9	595800	4641200	9	<0.1	23	30	14	<0.10	22	54	76	1000	6.85	5YR2/1
122	400	SSH10	595800	4641600	18	<0.1	23	91	25	<0.10	98	45	84	950	7.01	10YR2/1

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
123	400	SSH11	595800	4642000	8	<0.1	26	130	31	<0.10	130	38	72	1300	7.01	7.5YR3/1
124	400	SSH12	595800	4642400	9	<0.1	26	89	26	<0.10	120	35	75	1300	6.87	7.5Y3/1
125	400	SSH13	595800	4642800	11	0.45	30	110	30	<0.10	110	39	86	1500	7.27	2.5Y3/1
126	400	SSH14	595800	4643200	11	<0.1	23	82	21	<0.10	83	32	70	1100	6.91	10YR3/3
127	400	SSH15	595800	4643600	17	<0.1	28	120	35	<0.10	140	48	84	1300	7.01	10YR1.7/1
128	400	SSH16	595800	4644000	12	<0.1	18	37	18	<0.10	29	43	85	890	6.99	10YR2/1
129	400	SSH17	595800	4644400	14	<0.1	21	37	17	<0.10	20	50	94	1000	7.48	2.5Y2/1
130	400	SSH18	595800	4644800	11	<0.1	21	21	12	<0.10	14	52	91	960	6.96	7.5Y3/1
131	400	SSH19	595800	4645200	10	<0.1	21	21	12	<0.10	14	51	150	940	5.38	2.5Y3/1
132	400	SSH20	595800	4645600	51	<0.1	21	28	12	<0.10	15	68	83	960	6.96	10YR2/2
133	400	SSH21	595800	4646000	19	<0.1	26	57	26	<0.10	15	57	120	920	5.93	10YR1.7/1
134	400	SSH22	595800	4646400	17	<0.1	25	20	30	<0.10	27	51	120	980	7.05	10YR2/1
135	400	SSH23	595800	4646800	14	<0.1	26	130	23	<0.10	140	39	83	960	7.15	2.5Y2/1
136	400	SSH24	595800	4647200	8	<0.1	20	12	22	<0.10	7	60	95	1000	7.06	7.5Y3/1
137	400	SSH25	595800	4647600	6	<0.1	17	15	33	<0.10	10	57	140	1000	7.31	2.5Y3/1
138	400	SSH26	595800	4648000	15	<0.1	19	17	45	<0.10	16	51	86	960	6.59	10YR2/2
139	400	SSH27	595800	4648400	12	<0.1	18	48	24	<0.10	21	51	75	800	6.55	7.5YR2/1
140	400	SSH28	595800	4648800	31	1	19	73	26	<0.10	49	53	64	1300	6.70	2.5Y2/1
141	400	SSH29	595800	4649200	35	<0.1	18	49	25	<0.10	40	51	60	1000	6.58	7.5YR2/1
142	400	SSH30	595800	4649600	31	1	18	38	25	<0.10	37	50	75	880	6.67	10YR2/1
143	400	SSH31	595800	4650000	40	1	20	15	61	<0.10	16	72	84	770	6.83	7.5YR2/1
144	400	SSH32	595800	4650400	26	<0.1	24	10	80	<0.10	12	63	160	1300	6.81	10YR4/4
145	400	SSH33	595800	4650800	16	1	22	13	100	<0.10	15	59	96	1000	7.08	10YR3/1
146	400	SSH34	595800	4651200	51	<0.1	18	14	42	<0.10	16	86	89	840	6.84	5Y2/3
147	400	SSH35	595800	4651600	26	<0.1	18	50	25	<0.10	44	60	73	840	6.43	7.5YR3/1
148	400	SSH36	595800	4652000	23	<0.1	24	110	25	<0.10	110	60	83	1100	6.80	7.5YR1.7/1
149	400	SSI8	596200	4640800	23	<0.1	16	37	16	<0.10	30	70	73	530	7.27	10YR3/3
150	400	SSI9	596200	4641200	24	<0.1	20	73	20	<0.10	63	44	76	630	7.33	10YR4/2
151	400	SSI10	596200	4641600	13	<0.1	26	130	30	<0.10	130	44	76	1300	7.48	7.5YR4/1
152	400	SSI11	596200	4642000	10	<0.1	25	120	28	<0.10	110	30	78	1300	7.45	2.5Y6/4
153	400	SSI12	596200	4642400	14	<0.1	28	120	32	<0.10	110	40	89	1600	7.49	7.5YR3/1
154	400	SSI13	596200	4642800	12	<0.1	27	130	28	<0.10	110	33	76	1400	7.50	7.5YR1.7/1
155	400	SSI14	596200	4643200	12	<0.1	23	69	16	<0.10	58	39	81	1200	7.42	10YR3/3
156	400	SSI15	596200	4643600	9	<0.1	17	30	16	<0.10	32	58	67	970	7.28	10YR4/2
157	400	SSI16	596200	4644000	11	1	22	40	14	<0.10	21	45	90	1000	7.34	5Y4/1
158	400	SSI17	596200	4644400	9	1	24	42	18	<0.10	22	54	91	1100	6.96	2.5Y6/4
159	400	SSI18	596200	4644800	4	<0.1	27	31	13	<0.10	17	53	99	1200	7.08	2.5Y2/1
160	400	SSI19	596200	4645200	12	<0.1	27	40	12	<0.10	13	46	89	1100	7.02	7.5YR1.7/1
161	400	SSI20	596200	4645600	8	<0.1	28	24	32	<0.10	21	50	150	1100	6.40	10YR3/3
162	400	SSI21	596200	4646000	6	<0.1	25	19	29	<0.10	20	56	97	1100	6.33	2.5Y2/1
163	400	SSI22	596200	4646400	7	<0.1	22	23	14	<0.10	82	50	89	1100	6.26	5Y4/1
164	400	SSI23	596200	4646800	6	<0.1	19	18	20	<0.10	8	49	89	920	7.25	2.5Y3/4
165	400	SSI24	596200	4647200	4	<0.1	18	10	17	<0.10	6	37	74	920	7.10	2.5Y2/1
166	400	SSI25	596200	4647600	10	<0.1	26	15	65	<0.10	11	45	110	1000	7.45	7.5YR1.7/1
167	400	SSI26	596200	4648000	11	<0.1	21	21	74	<0.10	17	52	97	1100	7.21	7.5YR4/3
168	400	SSI27	596200	4648400	29	<0.1	19	45	26	<0.10	43	50	72	1500	7.15	5Y3/2
169	400	SSI28	596200	4648800	27	<0.1	20	49	25	<0.10	55	59	76	1300	6.97	5Y2/1
170	400	SSI29	596200	4649200	24	0.7	18	36	26	<0.10	40	80	65	1300	7.45	2.5Y2/1
171	400	SSI30	596200	4649600	33	<0.1	19	25	35	<0.10	25	63	90	1000	7.20	10YR2/1
172	400	SSI31	596200	4650000	17	<0.1	16	19	34	<0.10	15	120	98	1100	7.04	10YR1.7/1
173	400	SSI32	596200	4650400	7	1	36	12	200	<0.10	16	40	330	270	7.16	5YR5/3
174	400	SSI33	596200	4650800	24	1	20	17	58	<0.10	21	76	110	1000	7.36	7.5YR2/2
175	400	SSI34	596200	4651200	14	<0.1	16	22	33	<0.10	19	57	73	760	7.01	5Y2/1
176	400	SSI35	596200	4651600	13	<0.1	18	91	12	<0.10	78	56	91	980	7.54	10YR4/4
177	400	SSI36	596200	4652000	18	<0.1	21	140	20	<0.10	110	60	77	990	7.39	7.5YR2/2
178	400	SSJ7	596600	4640400	6	1	25	100	30	<0.10	25	58	89	1000	6.93	7.5YR3/1
179	400	SSJ8	596600	4640800	6	<0.1	16	56	30	<0.10	39	43	83	970	7.28	7.5YR1.7/1
180	400	SSJ9	596600	4641200	15	1	28	160	34	<0.10	180	40	88	1300	7.38	7.5YR2/1
181	400	SSJ10	596600	4641600	11	0.53	26	150	44	<0.10	110	38	75	1400	7.32	10YR3/3
182	400	SSJ11	596600	4642000	13	<0.1	27	110	39	<0.10	140	40	76	1500	7.34	2.5Y2/1
183	400	SSJ12	596600	4642400	13	<0.1	27	130	31	<0.10	120	39	78	1500	7.17	2.5Y2/1
184	400	SSJ13	596600	4642800	16	<0.1	19	79	23	<0.10	63	39	65	980	7.36	10Y4/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
185	400	SSJ14	596600	4643200	8	<0.1	15	33	11	<0.10	16	55	69	1000	7.02	5Y2/1
186	400	SSJ15	596600	4643600	7	1	18	39	11	<0.10	13	48	80	880	7.17	5Y2/1
187	400	SSJ16	596600	4644000	10	<0.1	18	30	11	<0.10	16	50	73	950	7.26	5Y3/2
188	400	SSJ17	596600	4644400	4	1	25	100	16	<0.10	16	42	86	1100	7.13	5Y3/2
189	400	SSJ18	596600	4644800	1.5	<0.1	16	19	20	<0.10	11	39	67	1300	7.40	2.5Y2/1
190	400	SSJ19	596600	4645200	12	<0.1	25	82	28	<0.10	19	53	83	1600	6.43	10Y2/3
191	400	SSJ20	596600	4645600	5	0.53	21	34	21	<0.10	14	53	90	1100	7.10	7.5YR4/3
192	400	SSJ21	596600	4646000	10	1	18	23	21	<0.10	15	51	85	990	7.09	10YR1.7/1
193	400	SSJ22	596600	4646400	6	<0.1	17	140	36	<0.10	15	38	89	1000	7.34	5Y3/2
194	400	SSJ23	596600	4646800	5	<0.1	16	28	24	<0.10	11	36	66	830	7.09	7.5YR3/2
195	400	SSJ24	596600	4647200	7	<0.1	16	38	26	<0.10	12	43	75	1100	7.08	10YR2/1
196	400	SSJ25	596600	4647600	11	1	16	52	35	<0.10	15	58	82	960	7.57	10YR2/1
197	400	SSJ26	596600	4648000	18	1	17	62	28	<0.10	38	51	76	950	7.45	7.5YR4/3
198	400	SSJ27	596600	4648400	31	<0.1	16	48	25	<0.10	36	53	57	1000	7.18	2.5Y2/1
199	400	SSJ28	596600	4648800	15	1	17	38	32	<0.10	39	71	88	1500	7.12	5Y2/1
200	400	SSJ29	596600	4649200	19	1	18	52	32	<0.10	22	62	94	1000	7.34	7.5Y4/1
201	400	SSJ30	596600	4649600	14	<0.1	14	18	36	<0.10	9	75	98	1100	7.42	5Y2/2
202	400	SSJ31	596600	4650000	100	<0.1	15	34	41	<0.10	12	1000	74	550	6.99	2.5YR3/1
203	400	SSJ32	596600	4650400	16	1	18	14	48	<0.10	19	74	94	1200	7.44	5Y5/3
204	400	SSJ33	596600	4650800	15	<0.1	17	18	37	<0.10	13	60	98	1100	7.32	10YR2/1
205	400	SSJ34	596600	4651200	19	<0.1	22	120	20	<0.10	110	59	80	860	7.27	10YR4/4
206	400	SSJ35	596600	4651600	20	<0.1	19	110	15	<0.10	81	62	81	860	7.24	7.5Y3/2
207	400	SSJ36	596600	4652000	16	1	21	150	20	<0.10	93	60	89	980	7.45	2.5YR4/3
208	400	SSK6	597000	4640000	7.8	<0.1	18	25	19	<0.10	16	34	70	970	7.10	2.5Y3/1
209	400	SSK7	597000	4640400	6.3	<0.1	17	30	13	<0.10	15	43	63	990	7.15	2.5Y3/1
210	400	SSK8	597000	4640800	13	<0.1	18	130	23	<0.10	110	34	130	1100	7.15	5Y3/1
211	400	SSK9	597000	4641200	2.2	<0.1	22	140	24	<0.10	130	36	120	1300	7.34	10YR3/1
212	400	SSK10	597000	4641600	2.7	<0.1	26	120	30	<0.10	130	35	86	1700	7.26	10YR3/1
213	400	SSK11	597000	4642000	6	<0.1	24	120	29	<0.10	140	30	83	1600	7.26	2.5YR3/2
214	400	SSK12	597000	4642400	5.8	<0.1	19	20	22	<0.10	78	39	120	1300	7.28	10YR2/1
215	400	SSK13	597000	4642800	14	0.55	15	15	8.5	<0.10	9.4	34	82	1200	7.13	7.5YR5/1
216	400	SSK14	597000	4643200	6.1	<0.1	17	19	15	<0.10	9.7	36	86	1100	7.20	10YR3/2
217	400	SSK15	597000	4643600	2.3	0.12	17	20	13	<0.10	11	30	87	1000	7.32	5YR3/1
218	400	SSK16	597000	4644000	<1	0.67	13	21	54	<0.10	52	88	130	770	7.23	2.5Y2/1.7
219	400	SSK17	597000	4644400	5.3	<0.1	15	17	22	<0.10	11	41	90	1200	7.42	2.5Y2/1.7
220	400	SSK18	597000	4644800	23	0.26	13	18	55	<0.10	11	54	130	1000	7.12	2.5YR2/1.7
221	400	SSK19	597000	4645200	2.7	<0.1	19	25	18	<0.10	12	35	78	990	7.19	10YR4/2
222	400	SSK20	597000	4645600	2.4	0.36	16	18	22	<0.10	9.3	33	75	900	7.17	5YR1.7/2
223	400	SSK21	597000	4646000	4.6	<0.1	13	15	20	<0.10	4.3	27	64	960	7.16	10YR2/2
224	400	SSK22	597000	4646400	2.3	<0.1	15	20	45	<0.10	9.7	49	60	510	7.32	2.5Y2/1
225	400	SSK23	597000	4646800	3.5	<0.1	15	15	43	<0.10	8.2	49	78	1300	7.33	2.5Y2/1
226	400	SSK24	597000	4647200	7.2	<0.1	15	25	34	<0.10	15	43	76	1100	7.18	10YR2/1
227	400	SSK25	597000	4647600	7.9	<0.1	16	31	26	<0.10	20	46	73	1200	7.24	10YR2/1
228	400	SSK26	597000	4648000	18	0.66	19	42	28	<0.10	33	43	69	1100	7.18	7.5YR2/2
229	400	SSK27	597000	4648400	16	0.42	17	28	26	<0.10	28	50	72	1300	7.30	7.5YR2/2
230	400	SSK28	597000	4648800	23	0.79	17	26	31	<0.10	13	46	78	1200	7.34	2.5Y2/1
231	400	SSK29	597000	4649200	24	1.1	14	15	39	<0.10	8	51	84	1100	7.22	7.5YR2/2
232	400	SSK30	597000	4649600	160	0.16	21	18	16	<0.10	8	43	87	1100	7.12	10YR3/2
233	400	SSK31	597000	4650000	11	0.96	22	35	74	<0.10	47	70	84	1800	7.17	7.5YR3/2
234	400	SSK32	597000	4650400	13	0.73	17	14	29	<0.10	16	40	100	1400	7.15	5YR3/2
235	400	SSK33	597000	4650800	12	0.87	20	69	26	<0.10	99	46	70	1100	7.35	10Y2/1
236	400	SSK34	597000	4651200	12	0.82	18	79	44	<0.10	91	94	90	1400	6.99	7.5YR2/1
237	400	SSK35	597000	4651600	9.4	0.56	14	86	40	<0.10	130	44	110	1400	7.32	2.5YR4/3
238	400	SSK36	597000	4652000	7.8	1.6	14	28	110	<0.10	28	180	240	1400	7.20	7.5YR2/2
239	400	SSL5	597400	4639600	6.3	0.25	24	31	26	<0.10	24	40	75	1900	7.17	10YR3/2
240	400	SSL6	597400	4640000	<1	0.24	23	29	19	<0.10	25	40	69	1500	7.04	7.5YR2/1
241	400	SSL7	597400	4640400	7.6	0.94	16	34	28	<0.10	31	61	89	1600	7.17	2.5Y3/1
242	400	SSL8	597400	4640800	5.9	0.95	29	130	35	<0.10	130	35	75	1500	7.19	2.5Y3/1
243	400	SSL9	597400	4641200	11	0.32	29	150	46	<0.10	130	23	85	1400	7.08	2.5Y5/1
244	400	SSL10	597400	4641600	<1	0.48	31	130	35	<0.10	130	32	82	1600	7.33	2.5Y5/1
245	400	SSL11	597400	4642000	10	0.13	19	83	28	<0.10	67	30	75	890	7.26	2.5Y4/1
246	400	SSL12	597400	4642400	5.2	0.25	19	36	22	<0.10	26	42	89	1200	7.25	2.5Y3/1



Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
247	400	SSL13	597400	4642800	4	0.23	19	59	20	<0.10	14	35	78	830	7.18	7.5YR5/1
248	400	SSL14	597400	4643200	1.6	0.19	24	32	22	<0.10	15	37	90	960	7.23	10YR3/1
249	400	SSL15	597400	4643600	12	0.31	23	33	20	<0.10	11	39	88	880	7.21	5YR4/1
250	400	SSL16	597400	4644000	2.1	0.43	15	14	22	<0.10	7.2	30	65	820	7.22	5YR3/1
251	400	SSL17	597400	4644400	8.3	1.3	20	21	39	<0.10	8.8	42	71	760	7.23	5Y3/1
252	400	SSL18	597400	4644800	3.8	0.27	20	18	23	<0.10	12	44	78	1100	7.16	10YR4/2
253	400	SSL19	597400	4645200	5.1	0.83	18	11	23	<0.10	6.9	39	72	780	7.00	2.5Y2/1
254	400	SSL20	597400	4645600	2	<0.1	18	17	47	<0.10	8.8	50	92	1000	7.18	10Y10/1
255	400	SSL21	597400	4646000	5.6	<0.1	16	31	32	<0.10	16	170	64	740	7.22	2.5Y4/1
256	400	SSL22	597400	4646400	7.4	<0.1	19	28	43	<0.10	16	46	80	1100	7.10	10YR2/1
257	400	SSL23	597400	4646800	11	<0.1	18	19	35	<0.10	9.9	48	70	1100	7.29	10YR2/1
258	400	SSL24	597400	4647200	7.4	<0.1	20	35	27	<0.10	21	48	70	1100	7.25	10YR2/1
259	400	SSL25	597400	4647600	9.2	<0.1	19	39	27	<0.10	26	51	70	1200	7.42	10YR2/1
260	400	SSL26	597400	4648000	24	<0.1	17	36	28	<0.10	23	63	68	960	7.22	7.5YR2/1
261	400	SSL27	597400	4648400	13	<0.1	18	30	37	<0.10	18	74	87	1200	7.30	7.5YR2/1
262	400	SSL28	597400	4648800	12	<0.1	15	15	25	<0.10	10	57	87	1200	7.28	7.5YR3/2
263	400	SSL29	597400	4649200	60	<0.1	16	14	93	<0.10	6.1	720	480	4300	7.22	2.5YR3/2
264	400	SSL30	597400	4649600	7	<0.1	21	12	78	<0.10	8.3	49	100	1000	7.29	2.5YR3/2
265	400	SSL31	597400	4650000	14	<0.1	19	65	33	<0.10	54	110	85	1100	7.28	7.5YR2/2
266	400	SSL32	597400	4650400	4.9	<0.1	17	44	28	<0.10	29	62	81	930	7.27	7.5YR2/2
267	400	SSL33	597400	4650800	15	<0.1	16	44	27	<0.10	26	71	79	720	7.27	10YR3/1
268	400	SSL34	597400	4651200	11	<0.1	15	52	48	<0.10	36	64	90	1300	7.24	10.5YR3/3
269	400	SSL35	597400	4651600	6.8	4.2	13	26	61	<0.10	19	590	480	2200	7.25	2.5Y4/4
270	400	SSL36	597400	4652000	3.9	1.1	11	21	40	<0.10	11	110	130	630	7.38	7.5Y3/4
271	400	SSM4	597800	4639200	7.6	0.22	15	29	17	<0.10	8.6	42	68	890	7.08	7.5YR2/1
272	400	SSM5	597800	4639600	5.5	0.35	17	30	22	<0.10	15	43	76	940	7.24	7.5YR2/1
273	400	SSM6	597800	4640000	15	0.77	17	36	22	<0.10	15	52	97	810	7.11	7.5YR2/1
274	400	SSM7	597800	4640400	5.8	0.37	15	30	16	<0.10	20	55	92	1100	7.43	7.5YR2/1
275	400	SSM8	597800	4640800	7.3	0.44	24	180	30	<0.10	160	31	81	1400	7.22	7.5YR2/1
276	400	SSM9	597800	4641200	5.8	0.57	24	240	30	<0.10	170	30	89	1300	7.37	7.5YR3/1
277	400	SSM10	597800	4641600	16	0.21	23	93	29	<0.10	76	35	75	1400	7.49	7.5YR2/1
278	400	SSM11	597800	4642000	3.9	0.37	16	20	16	<0.10	13	36	88	1100	7.26	10Y5/1
279	400	SSM12	597800	4642400	13.1	<0.1	39.7	10.3	23.9	<0.1	8.2	42.2	91.7	1300	7.29	7.5YR5/1
280	400	SSM13	597800	4642800	4	0.3	17	31	25	<0.10	23	43	93	1100	7.25	7.5YR5/1
281	400	SSM14	597800	4643200	2.9	0.36	18	25	22	<0.10	12	47	93	1000	7.33	10YR5/1
282	400	SSM15	597800	4643600	4.2	0.58	15	31	19	<0.10	9.5	41	90	880	7.19	10YR5/1
283	400	SSM16	597800	4644000	6	0.076	19	38	22	<0.10	16	32	83	1200	7.20	10YR3/1
284	400	SSM17	597800	4644400	4.1	0.21	13	18	20	<0.10	8.4	34	79	770	7.17	10YR3/1
285	400	SSM18	597800	4644800	6.1	0.53	16	17	23	<0.10	11	43	91	1200	7.19	7.5YR2/1
286	400	SSM19	597800	4645200	4.5	0.57	15	17	24	<0.10	10	33	75	1000	7.09	10YR6/1
287	400	SSM20	597800	4645600	11	0.13	15	22	21	<0.10	9.3	35	69	870	7.23	5Y2/3
288	400	SSM21	597800	4646000	12	0.29	14	19	63	<0.10	12	45	92	1000	7.56	10YR2/2
289	400	SSM22	597800	4646400	10	0.0094	13	23	44	<0.10	16	56	82	830	7.55	7.5YR2/1
290	400	SSM23	597800	4646800	18	0.25	15	20	31	<0.10	17	38	64	960	7.27	7.5Y2/2
291	400	SSM24	597800	4647200	11	0.027	15	38	28	<0.10	25	46	70	670	7.58	10YR2/1
292	400	SSM25	597800	4647600	31	0.21	13	19	33	<0.10	12	96	150	1900	7.05	7.5YR2/2
293	400	SSM26	597800	4648000	21	0.31	10	13	18	<0.10	10	41	74	1300	7.28	2.5Y4/2
294	400	SSM27	597800	4648400	17	0.31	14	20	26	<0.10	16	54	160	2000	7.25	10YR4/2
295	400	SSM28	597800	4648800	57	0.44	16	16	59	<0.10	6.5	500	230	2100	7.06	10YR3/4
296	400	SSM29	597800	4649200	28	4.2	18	22	100	<0.10	13	690	750	5400	6.81	7.5YR2/3
297	400	SSM30	597800	4649600	2.8	0.13	15	19	18	<0.10	8.4	46	98	1000	7.45	2.5Y4/2
298	400	SSM31	597800	4650000	24	0.52	17	39	27	<0.10	31	120	80	1100	7.28	7.5YR2/1
299	400	SSM32	597800	4650400	23	0.47	15	42	34	<0.10	28	180	130	1100	7.50	7.5YR2/1
300	400	SSM33	597800	4650800	23	2.9	16	33	78	<0.10	21	450	590	2800	7.30	7.5YR2/1
301	400	SSM34	597800	4651200	120	28	17	25	200	<0.10	19	5400	6100	25000	7.44	10YR2/1
302	400	SSM35	597800	4651600	30	46	16	23	670	<0.10	14	21000	10000	9100	7.29	10Y4/3
303	400	SSM36	597800	4652000	1	0.34	16	10	25	<0.10	5.8	110	140	1400	7.13	10Y3/3
304	400	SSN3	598200	4638800	24	1.5	14	24	19	<0.10	12	58	70	610	7.01	7.5YR3/2
305	400	SSN4	598200	4639200	62	1.2	13	20	15	<0.10	5.6	72	72	680	7.11	5YR4/3
306	400	SSN5	598200	4639600	2.8	1.1	13	27	32	<0.10	19	51	150	990	7.40	7.5YR2/1
307	400	SSN6	598200	4640000	2	1.2	17	43	19	<0.10	25	53	84	1000	7.36	7.5Y2/1
308	400	SSN7	598200	4640400	9.5	1.3	16	93	19	<0.10	77	38	73	1000	7.14	7.5Y4/1

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
309	400	SSN8	598200	4640800	10	0.86	23	170	30	<0.10	150	38	85	1500	6.84	5Y3/1
310	400	SSN9	598200	4641200	8	0.78	22	120	30	<0.10	120	55	74	1700	7.46	10YR3/1
311	400	SSN10	598200	4641600	5.5	0.47	14	52	19	<0.10	34	41	73	1100	7.20	7.5YR2/1
312	400	SSN11	598200	4642000	2.1	0.79	14	24	15	<0.10	8.1	49	99	1200	7.12	7.5YR2/1
313	400	SSN12	598200	4642400	3.4	0.82	17	23	20	<0.10	4.7	51	92	1100	7.24	10YR3/1
314	400	SSN13	598200	4642800	4.5	1.2	13	24	21	<0.10	5.6	59	77	950	6.91	10YR5/1
315	400	SSN14	598200	4643200	1.5	0.95	18	21	21	<0.10	9	41	90	1000	6.99	7.5YR5/1
316	400	SSN15	598200	4643600	3.9	<0.1	18	31	16	<0.10	12	33	86	950	7.12	7.5YR2/1
317	400	SSN16	598200	4644000	4.8	0.97	17	15	18	<0.10	6.5	42	85	1000	7.14	7.5YR5/1
318	400	SSN17	598200	4644400	13	0.86	19	25	33	<0.10	6.8	66	110	1400	7.04	7.5YR5/1
319	400	SSN18	598200	4644800	5.5	1.1	19	28	36	<0.10	11	55	120	1700	7.03	7.5YR5/1
320	400	SSN19	598200	4645200	6.3	1	18	21	30	<0.10	8.1	56	86	1200	6.82	7.5YR3/2
321	400	SSN20	598200	4645600	31	0.98	19	20	95	<0.10	6.5	67	92	1800	7.06	10YR2/2
322	400	SSN21	598200	4646000	13	1.2	21	47	56	<0.10	25	72	120	1400	7.13	7.5YR2/1
323	400	SSN22	598200	4646400	12	1.4	19	34	55	<0.10	19	87	130	1600	7.04	7.5YR2/2
324	400	SSN23	598200	4646800	14	2.6	19	47	180	<0.10	33	270	350	1900	7.42	7.5YR2/2
325	400	SSN24	598200	4647200	58	6.6	24	41	170	<0.10	15	1700	1400	5800	7.07	5YR3/2
326	400	SSN25	598200	4647600	180	0.91	16	27	280	<0.10	15	1800	590	4800	7.17	2.5YR2/4
327	400	SSN26	598200	4648000	180	25	22	37	130	<0.10	9.8	3400	5600	58000	7.40	2.5Y5/1
328	400	SSN27	598200	4648400	330	5.5	28	43	260	<0.10	22	4800	2500	29000	6.75	7.5YR4/1
329	400	SSN28	598200	4648800	230	15	17	21	120	<0.10	<1	3000	3200	34000	7.30	2.5YR5/3
330	400	SSN29	598200	4649200	17	0.92	18	26	70	<0.10	16	140	160	2100	7.45	5YR2/3
331	400	SSN30	598200	4649600	290	10	16	19	240	<0.10	2.7	4000	3500	39000	7.16	2.5Y4/
332	400	SSN31	598200	4650000	330	20	25	16	350	<0.10	8.8	4600	5100	33000	7.21	10YR2/1
333	400	SSN32	598200	4650400	280	6.3	15	26	240	<0.10	9.3	7000	3200	22000	7.36	10YR3/3
334	400	SSN33	598200	4650800	100	14	18	38	280	<0.10	12	5300	3300	21000	6.00	5YR2/2
335	400	SSN34	598200	4651200	6.7	1.8	15	43	41	<0.10	21	690	500	1400	7.39	7.5YR3/2
336	400	SSN35	598200	4651600	39	10	14	24	150	<0.10	10	3100	2500	9400	7.30	7.5YR2/3
337	400	SSN36	598200	4652000	3.8	0.71	15	9.9	43	<0.10	1.5	240	200	1500	7.46	7.5YR3/2
338	400	SSO2	598600	4638400	28	<0.1	19	27	20	<0.10	19	110	79	580	7.23	10YR2/2
339	400	SSO3	598600	4638800	34	<0.1	22	22	73	<0.10	6	110	110	1300	7.17	5YR2/1
340	400	SSO4	598600	4639200	8.6	<0.1	21	23	17	<0.10	14	58	82	1200	7.32	10YR2/1
341	400	SSO5	598600	4639600	9	<0.1	21	43	27	<0.10	24	62	91	1200	6.94	5Y2/1
342	400	SSO6	598600	4640000	3.5	<0.1	16	52	24	<0.10	35	53	75	920	7.56	7.5YR2/1
343	400	SSO7	598600	4640400	16	<0.1	23	60	26	<0.10	45	71	53	1200	7.04	10YR3/1
344	400	SSO8	598600	4640800	14	<0.1	28	150	33	<0.10	130	49	90	1400	7.33	10YR5/1
345	400	SSO9	598600	4641200	28	<0.1	20	90	31	<0.10	74	47	87	1000	7.37	7.5YR4/3
346	400	SSO10	598600	4641600	8.4	<0.1	27	100	30	<0.10	84	49	110	1600	7.39	7.5YR2/1
347	400	SSO11	598600	4642000	2.1	<0.1	21	38	52	<0.10	24	140	290	1600	7.27	7.5YR5/1
348	400	SSO12	598600	4642400	1.3	<0.1	25	31	25	<0.10	18	51	150	1200	7.12	5YR3/1
349	400	SSO13	598600	4642800	3	<0.1	24	27	23	<0.10	15	61	100	1200	7.17	7.5YR2/1
350	400	SSO14	598600	4643200	2	<0.1	25	28	25	<0.10	11	54	100	950	7.22	7.5YR2/1
351	400	SSO15	598600	4643600	4.9	<0.1	20	20	24	<0.10	11	91	110	930	7.12	10YR3/2
352	400	SSO16	598600	4644000	8.7	<0.1	19	20	25	<0.10	14	84	88	1200	7.16	7.5YR2/1
353	400	SSO17	598600	4644400	7.5	<0.1	19	24	26	<0.10	14	80	90	1200	6.84	10YR3/2
354	400	SSO18	598600	4644800	15	<0.1	19	21	32	<0.10	15	97	98	1100	7.02	10YR4/4
355	400	SSO19	598600	4645200	27	<0.1	20	18	47	<0.10	18	140	120	1300	7.32	7.5YR2/1
356	400	SSO20	598600	4645600	19	<0.1	21	29	49	<0.10	21	81	98	1300	7.45	7.5YR2/1
357	400	SSO21	598600	4646000	8.6	<0.1	15	15	72	<0.10	9.6	100	140	940	7.21	10YR3/2
358	400	SSO22	598600	4646400	41	0.43	21	30	50	<0.10	22	93	100	1300	7.22	7.5YR2/2
359	400	SSO23	598600	4646800	79	<0.1	12	10	26	<0.10	9.1	58	100	630	7.38	10YR5/2
360	400	SSO24	598600	4647200	79	<0.1	17	29	36	<0.10	17	76	96	870	7.14	5YR3/2
361	400	SSO25	598600	4647600	80	<0.1	23	36	39	<0.10	19	100	110	1400	7.24	5YR3/3
362	400	SSO26	598600	4648000	260	<0.1	17	34	28	<0.10	15	140	95	940	6.90	5YR4/6
363	400	SSO27	598600	4648400	190	<0.1	11	20	52	<0.10	9.4	410	140	730	7.18	5YR4/4
364	400	SSO28	598600	4648800	180	15	19	23	160	<0.10	11	2100	3400	15000	7.20	7.5YR3/2
365	400	SSO29	598600	4649200	23	36	16	26	310	<0.10	13	6000	7700	24000	7.28	10YR2/2
366	400	SSO30	598600	4649600	440	11	17	23	200	<0.10	11	3500	2600	24000	7.38	5YR2/1
367	400	SSO31	598600	4650000	11	1.4	14	31	33	<0.10	15	160	170	1200	7.31	2.5Y3/3
368	400	SSO32	598600	4650400	19	<0.1	16	30	24	<0.10	12	100	120	1000	7.44	7.5YR2/2
369	400	SSO33	598600	4650800	36	0.17	16	37	29	<0.10	20	150	180	1200	7.33	10YR3/2
370	400	SSO34	598600	4651200	16	0.47	14	28	75	<0.10	15	670	300	1200	7.50	10YR2/2

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
371	400	SSO35	598600	4651600	21	0.2	14	12	48	<0.10	5.6	86	140	1500	7.09	10YR4/2
372	400	SSO36	598600	4652000	6.8	0.16	19	7	70	<0.10	2.7	75	130	1500	7.30	5Y2/3
373	400	SSP1	599000	4638000	7.6	0.16	17	30	18	<0.10	25	53	100	1200	7.11	5YR2/1
374	400	SSP2	599000	4638400	12	0.46	14	19	15	<0.10	7	58	97	910	7.22	7.5YR2/1
375	400	SSP3	599000	4638800	4.2	0.42	15	23	17	<0.10	14	46	110	1000	7.17	10YR3/1
376	400	SSP4	599000	4639200	14	0.24	14	47	22	<0.10	27	44	84	980	7.45	5Y2/1
377	400	SSP5	599000	4639600	6.7	<0.1	15	44	18	<0.10	34	41	84	940	7.30	10YR2/2
378	400	SSP6	599000	4640000	10	0.17	17	73	25	<0.10	57	47	100	1200	7.24	7.5YR2/1
379	400	SSP7	599000	4640400	8.7	0.84	17	52	22	<0.10	35	57	100	1200	6.88	5YR2/1
380	400	SSP8	599000	4640800	21	0.27	11	55	23	<0.10	40	47	91	800	7.44	2.5Y7/3
381	400	SSP9	599000	4641200	2.2	0.28	15	17	14	<0.10	4.7	45	110	1200	7.10	7.5YR3/1
382	400	SSP10	599000	4641600	3.8	1.1	17	32	22	<0.10	14	45	120	1200	7.31	7.5Y2/2
383	400	SSP11	599000	4642000	2.8	0.23	16	19	16	<0.10	6	34	120	1000	7.25	2.5Y4/1
384	400	SSP12	599000	4642400	2.2	0.44	19	23	19	<0.10	9.8	44	110	1100	7.11	7.5YR2/2
385	400	SSP13	599000	4642800	4.4	0.54	18	34	19	<0.10	14	46	95	990	7.20	5YR2/1
386	400	SSP14	599000	4643200	35	0.15	15	27	36	<0.10	15	150	120	1500	7.02	5YR2/1
387	400	SSP15	599000	4643600	7.5	0.29	14	20	22	<0.10	10	60	93	840	7.22	7.5YR2/1
388	400	SSP16	599000	4644000	7	0.1	13	19	23	<0.10	9.5	57	91	1100	7.17	5YR3/1
389	400	SSP17	599000	4644400	31	<0.1	17	42	41	<0.10	24	120	110	1400	7.10	7.5YR2/1
390	400	SSP18	599000	4644800	24	0.13	17	51	37	<0.10	31	110	120	1200	7.11	7.5YR2/1
391	400	SSP19	599000	4645200	25	0.11	16	26	56	<0.10	14	120	110	1700	7.19	7.5YR2/1
392	400	SSP20	599000	4645600	13	0.35	14	13	35	<0.10	7.9	50	110	740	7.03	7.5YR4/3
393	400	SSP21	599000	4646000	170	6.1	15	16	280	<0.10	9.5	3700	2000	13000	6.32	7.5Y3/2
394	400	SSP22	599000	4646400	19	1.5	16	16	66	<0.10	10	98	130	1600	7.21	10YR2/2
395	400	SSP23	599000	4646800	29	<0.1	19	31	78	<0.10	21	65	120	1500	7.42	5YR2/1
396	400	SSP24	599000	4647200	19	0.41	19	28	85	<0.10	16	55	110	1300	7.27	7.5YR 2/1
397	400	SSP25	599000	4647600	50	0.15	17	14	100	<0.10	12	79	110	1200	7.28	7.5YR3/3
398	400	SSP26	599000	4648000	120	0.39	16	38	54	<0.10	23	89	120	1100	7.26	10YR2/1
399	400	SSP27	599000	4648400	83	0.13	19	25	85	<0.10	16	170	120	1800	7.08	10YR2/1
400	400	SSP28	599000	4648800	36	0.3	15	14	83	<0.10	4.5	870	170	1900	7.45	10YR3/3
401	400	SSP29	599000	4649200	27	0.68	14	28	45	<0.10	15	1500	250	1400	7.52	10YR5/4
402	400	SSP30	599000	4649600	39	<0.1	16	42	27	<0.10	25	170	130	1200	7.44	7.5Y3/1
403	400	SSP31	599000	4650000	37	<0.1	17	40	28	<0.10	19	100	96	1000	7.36	2.5Y3/2
404	400	SSP32	599000	4650400	110	<0.1	19	84	32	<0.10	18	130	100	1400	7.42	7.5YR2/2
405	400	SSP33	599000	4650800	11	0.64	14	21	46	<0.10	12	170	210	1400	7.38	7.5YR2/2
406	400	SSP34	599000	4651200	<1	0.25	14	7.8	36	<0.10	2.7	59	100	1400	7.25	7.5YR3/2
407	400	SSP35	599000	4651600	18	<0.1	12	10	22	<0.10	3.5	58	100	1300	7.20	7.5YR3/2
408	400	SSP36	599000	4652000	4.3	<0.1	14	7.6	40	<0.10	6.9	69	110	1500	7.35	7.5YR2/1
409	400	SSQ1	599400	4638000	13	0.35	18	23	19	<0.10	12	64	100	1000	7.17	7.5YR2/2
410	400	SSQ2	599400	4638400	6.3	0.33	18	20	15	<0.10	7.4	56	110	1400	6.92	10YR2/1
411	400	SSQ3	599400	4638800	6.9	0.35	19	44	18	<0.10	22	52	120	1200	7.10	7.5YR2/2
412	400	SSQ4	599400	4639200	6.1	0.45	20	28	16	<0.10	16	49	87	1100	6.99	5YR3/1
413	400	SSQ5	599400	4639600	6.7	0.22	23	81	23	<0.10	68	42	77	1100	7.06	10YR2/1
414	400	SSQ6	599400	4640000	14	0.13	19	29	19	<0.10	20	42	80	1200	7.08	7.5YR2/2
415	400	SSQ7	599400	4640400	11	0.24	22	49	20	<0.10	34	46	75	1100	7.20	5YR2/1
416	400	SSQ8	599400	4640800	11	0.1	20	24	16	<0.10	17	42	83	1100	7.15	5YR3/1
417	400	SSQ9	599400	4641200	8.9	0.12	22	37	25	<0.10	25	42	88	1200	7.50	10YR5/1
418	400	SSQ10	599400	4641600	2.4	0.21	22	22	27	<0.10	15	43	89	910	6.99	5YR3/2
419	400	SSQ11	599400	4642000	3.9	0.53	19	23	17	<0.10	10	51	88	1000	7.18	7.5YR2/1
420	400	SSQ12	599400	4642400	<1	0.48	23	21	17	<0.10	13	33	79	1200	7.22	10YR2/2
421	400	SSQ13	599400	4642800	2.2	0.42	25	23	19	<0.10	11	55	89	1200	7.11	7.5YR2/1
422	400	SSQ14	599400	4643200	17	0.55	23	28	27	<0.10	16	110	110	1300	7.07	7.5YR2/1
423	400	SSQ15	599400	4643600	10	0.68	19	33	40	<0.10	17	58	90	970	6.96	7.5YR2/2
424	400	SSQ16	599400	4644000	24	0.16	22	34	32	<0.10	17	93	110	1500	6.83	10YR3/2
425	400	SSQ17	599400	4644400	25	0.52	26	56	33	<0.10	32	130	100	1700	7.06	10YR2/2
426	400	SSQ18	599400	4644800	23	0.4	22	34	27	<0.10	22	110	95	1100	6.97	7.5YR2/2
427	400	SSQ19	599400	4645200	15	0.49	19	24	35	<0.10	15	83	100	1200	7.15	10YR3/4
428	400	SSQ20	599400	4645600	80	1.4	18	13	100	<0.10	6.4	1500	750	3600	7.32	10YR4/3
429	400	SSQ21	599400	4646000	39	0.48	25	22	23	<0.10	11	91	120	1100	7.13	7.5YR2/3
430	400	SSQ22	599400	4646400	71	0.11	23	22	38	<0.10	13	80	120	1200	7.12	7.5YR3/2
431	400	SSQ23	599400	4646800	29	1.1	18	11	48	<0.10	8	200	180	1200	7.20	10YR3/3
432	400	SSQ24	599400	4647200	37	0.34	21	26	58	<0.10	18	270	150	1300	6.77	7.5YR2/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
433	400	SSQ25	599400	4647600	30	0.21	24	21	47	<0.10	16	160	120	1300	7.31	10YR2/1
434	400	SSQ26	599400	4648000	31	0.27	22	10	40	<0.10	8.3	110	130	1300	7.06	10YR2/3
435	400	SSQ27	599400	4648400	130	0.31	25	15	110	<0.10	13	96	110	1300	7.15	10YR2/1
436	400	SSQ28	599400	4648800	36	<0.1	13	8.6	55	<0.10	5.5	100	130	1600	7.15	7.5Y3/3
437	400	SSQ29	599400	4649200	18	1	18	25	51	<0.10	14	130	140	1300	7.23	10YR3/3
438	400	SSQ30	599400	4649600	17	0.83	20	22	64	<0.10	13	94	160	1500	7.24	7.5YR3/2
439	400	SSQ31	599400	4650000	15	0.82	20	19	67	<0.10	12	92	160	1500	7.19	7.5YR3/2
440	400	SSQ32	599400	4650400	7.1	0.52	19	17	64	<0.10	12	84	140	1200	7.22	10YR5/2
441	400	SSQ33	599400	4650800	4.6	0.87	17	13	28	<0.10	8.4	55	100	960	7.26	10YR2/2
442	400	SSR1	599800	4638000	5.5	0.21	23	20	15	<0.10	8.7	54	90	1200	7.18	5YR2/1
443	400	SSR2	599800	4638400	4.8	0.57	23	25	17	<0.10	20	51	80	1300	7.40	10YR2/1
444	400	SSR3	599800	4638800	7	0.17	23	35	19	<0.10	18	63	100	1100	7.10	5YR3/1
445	400	SSR4	599800	4639200	6.6	0.4	22	37	21	<0.10	18	72	120	1200	7.07	5YR3/1
446	400	SSR5	599800	4639600	7.5	0.29	22	34	22	<0.10	23	72	120	1200	7.03	5YR3/1
447	400	SSR6	599800	4640000	14	0.3	18	37	19	<0.10	16	62	90	1300	7.18	2.5YR2/1
448	400	SSR7	599800	4640400	9.3	0.61	23	50	27	<0.10	33	65	100	1200	7.57	10YR3/2
449	400	SSR8	599800	4640800	9.8	0.46	25	48	29	<0.10	29	59	100	1200	7.24	2.5Y3/3
450	400	SSR9	599800	4641200	2.8	0.77	25	29	23	<0.10	13	58	110	1300	7.28	7.5YR3/1
451	400	SSR10	599800	4641600	4.2	0.68	23	21	25	<0.10	10	51	110	1100	7.33	10YR3/1
452	400	SSR11	599800	4642000	3	0.71	25	29	19	<0.10	14	62	100	1400	7.18	10YR3/1
453	400	SSR12	599800	4642400	1.6	0.29	21	59	27	<0.10	13	46	88	790	7.37	5YR2/2
454	400	SSR13	599800	4642800	1.7	0.57	27	28	22	<0.10	12	74	100	1300	7.62	10YR2/1
455	400	SSR14	599800	4643200	2.2	4.1	26	42	88	<0.10	19	940	770	4000	7.18	10YR2/1
456	400	SSR15	599800	4643600	5.9	12	19	33	190	<0.10	13	3000	2500	15000	7.22	7.5YR2/1
457	400	SSR16	599800	4644000	2.1	5.6	24	46	110	<0.10	16	1300	1200	7100	6.99	7.5YR3/2
458	400	SSR17	599800	4644400	14	0.64	19	22	36	<0.10	8.8	150	130	1300	7.26	7.5YR3/2
459	400	SSR18	599800	4644800	14	1.5	24	40	52	<0.10	24	300	11	1500	7.05	7.5YR3/2
460	400	SSR19	599800	4645200	13	0.46	26	22	21	<0.10	11	110	130	1200	7.20	7.5YR2/2
461	400	SSR20	599800	4645600	23	0.42	26	51	39	<0.10	22	110	200	1700	7.16	7.5YR3/4
462	400	SSR21	599800	4646000	23	0.35	26	69	30	<0.10	39	86	130	1300	7.08	7.5YR2/2
463	400	SSR22	599800	4646400	35	0.41	26	3.1	33	<0.10	28	140	190	1900	6.94	10YR2/3
464	400	SSR23	599800	4646800	38	0.47	22	18	45	<0.10	9.7	87	120	1300	7.26	7.5YR3/2
465	400	SSR24	599800	4647200	50	0.25	17	10	49	<0.10	4.5	58	110	1200	7.27	10YR4/4
466	400	SSR25	599800	4647600	560	2.8	25	18	37	<0.10	9.6	80	110	1400	7.15	7.5YR3/4
467	400	SSR26	599800	4648000	160	1	20	16	31	<0.10	9.6	77	88	1400	7.12	7.5YR3/3
468	400	SSR27	599800	4648400	110	0.55	18	13	75	<0.10	10	66	120	1200	6.74	7.5YR3/2
469	400	SSR28	599800	4648800	47	0.74	14	19	32	<0.10	12	97	130	1300	7.13	7.5YR2/2
470	400	SSR29	599800	4649200	24	0.66	14	32	17	<0.10	15	63	97	860	7.08	10YR4/2
471	400	SSR30	599800	4649600	30	0.64	14	28	16	<0.10	14	81	84	980	7.18	7.5YR3/1
472	400	SSR31	599800	4650000	8.5	0.72	14	20	33	<0.10	9.5	70	130	1200	7.40	7.5YR3/2
473	400	SSR32	599800	4650400	7.3	0.78	17	15	39	<0.10	8.2	110	130	1200	7.15	5YR3/3
474	400	SSR33	599800	4650800	7.4	0.34	15	16	26	<0.10	7.7	60	94	1200	7.35	7.5YR3/2
475	400	SSS1	600200	4638000	10	0.69	19	45	18	<0.10	26	43	75	1000	7.37	7.5YR5/1
476	400	SSS2	600200	4638400	4.6	0.95	17	41	18	<0.10	29	48	74	890	7.36	2.5Y3/1
477	400	SSS3	600200	4638800	6.3	0.95	16	19	14	<0.10	8.7	47	95	1100	7.40	5Y4/2
478	400	SSS4	600200	4639200	4.9	0.84	22	57	28	<0.10	41	150	130	1300	7.43	7.5YR2/1
479	400	SSS5	600200	4639600	7.3	2	22	51	47	<0.10	38	210	310	2100	7.21	10YR2/1
480	400	SSS6	600200	4640000	11	3.7	23	50	62	<0.10	29	460	640	3400	7.14	10YR2/2
481	400	SSS7	600200	4640400	13	5.3	21	44	100	<0.10	28	950	990	4100	7.05	7.5YR3/1
482	400	SSS8	600200	4640800	12	3	24	48	83	<0.10	31	390	500	2700	7.16	10YR2/2
483	400	SSS9	600200	4641200	28	9	22	36	150	<0.10	19	1600	1500	6800	6.98	7.5YR3/2
484	400	SSS10	600200	4641600	38	8.2	20	32	150	<0.10	14	2100	1800	9600	7.19	7.5YR3/1
485	400	SSS11	600200	4642000	21	9.2	23	34	130	<0.10	20	1400	1600	7400	7.06	10YR2/2
486	400	SSS12	600200	4642400	31	7.9	23	39	190	<0.10	19	1500	1500	8300	6.77	10YR2/1
487	400	SSS13	600200	4642800	69	7	19	35	160	<0.10	16	1800	1500	9800	6.31	10YR2/1
488	400	SSS14	600200	4643200	24	4	24	38	86	<0.10	19	820	740	4000	7.26	7.5Y3/3
489	400	SSS15	600200	4643600	89	11	18	31	190	<0.10	13	2700	2500	15000	6.30	10YR2/3
490	400	SSS16	600200	4644000	41	5.4	22	42	100	<0.10	16	1100	1200	7000	7.25	7.5YR2/3
491	400	SSS17	600200	4644400	87	7.1	19	28	170	<0.10	11	2300	1600	13000	5.82	7.5YR2/4
492	400	SSS18	600200	4644800	16	2.9	26	55	62	<0.10	23	550	510	2000	6.93	7.5Y3/2
493	400	SSS19	600200	4645200	13	0.75	26	34	24	<0.10	14	72	110	1500	7.00	7.5YR2/2
494	400	SSS20	600200	4645600	17	<0.1	25	51	21	<0.10	29	81	110	1700	7.14	7.5YR2/2

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
495	400	SSS21	600200	4646000	54	0.8	24	22	17	<0.10	4.5	37	110	1100	7.15	7.5YR4/3
496	400	SSS22	600200	4646400	58	0.72	22	54	28	<0.10	21	81	150	1400	7.18	10YR4/3
497	400	SSS23	600200	4646800	740	2.3	21	20	28	<0.10	13	57	110	1100	7.01	7.5Y3/2
498	400	SSS24	600200	4647200	140	0.74	21	23	27	<0.10	11	70	99	1500	6.99	10YR3/3
499	400	SSS25	600200	4647600	140	0.78	26	31	31	<0.10	21	68	150	1600	7.11	10YR2/2
500	400	SSS26	600200	4648000	160	0.94	23	14	29	<0.10	8.6	43	95	1300	6.86	10YR3/3
501	400	SSS27	600200	4648400	130	0.85	19	12	56	<0.10	6.6	64	130	3000	6.96	7.5YR4/3
502	400	SSS28	600200	4648800	13	1	16	42	25	<0.10	23	71	120	930	7.33	10YR2/2
503	400	SSS29	600200	4649200	5.9	0.75	16	23	18	<0.10	26	61	88	1300	7.07	2.5Y5/2
504	400	SSS30	600200	4649600	12	1.1	14	30	42	<0.10	18	170	170	1700	7.25	10YR3/2
505	400	SSS31	600200	4650000	14	1.1	14	53	57	<0.10	11	250	180	1600	7.22	10YR5/3
506	400	SSS32	600200	4650400	7.9	0.32	16	14	57	<0.10	6.4	75	150	1700	7.21	10YR5/3
507	400	SSS33	600200	4650800	20	1.2	18	15	41	<0.10	7.2	78	150	2100	7.06	7.5YR3/3
508	400	SST1	600600	4638000	9	1.1	18	47	21	<0.10	27	74	130	1100	7.43	2.5Y4/1
509	400	SST2	600600	4638400	7	1	19	56	25	<0.10	41	89	140	1200	7.37	7.5YR2/1
510	400	SST3	600600	4638800	4.5	1.2	20	61	28	<0.10	47	94	180	1500	7.54	5YR3/1
511	400	SST4	600600	4639200	5.6	1.1	19	59	29	<0.10	43	100	190	1400	7.43	7.5YR2/2
512	400	SST5	600600	4639600	25	10	18	39	120	<0.10	29	1600	1800	11000	7.32	5YR2/2
513	400	SST6	600600	4640000	29	6.1	16	30	85	<0.10	17	980	1100	8100	7.55	2.5Y3/3
514	400	SST7	600600	4640400	24	5.6	16	36	77	<0.10	14	730	950	6900	7.27	10YR4/2
515	400	SST8	600600	4640800	27	3.8	14	30	71	<0.10	9	800	710	3600	7.05	7.5YR4/3
516	400	SST9	600600	4641200	57	9.5	14	27	160	<0.10	11	1800	1800	8500	7.11	7.5YR3/2
517	400	SST10	600600	4641600	16	8.5	15	32	130	<0.10	13	1400	1500	7300	6.94	7.5YR2/2
518	400	SST11	600600	4642000	22	2.6	19	62	83	<0.10	21	510	520	3300	7.30	10YR3/3
519	400	SST12	600600	4642400	14	0.14	16	26	18	<0.10	11	54	110	900	7.43	7.5YR2/2
520	400	SST13	600600	4642800	11	0.1	15	20	23	<0.10	9.3	50	110	970	7.22	10YR4/2
521	400	SST14	600600	4643200	23	0.1	13	16	22	<0.10	9.4	45	100	1200	7.05	10YR3/3
522	400	SST15	600600	4643600	2.1	0.16	9.4	21	19	<0.10	7.9	32	86	600	7.36	2.5YR3/2
523	400	SST16	600600	4644000	5	0.47	15	24	25	<0.10	8.7	57	140	1100	7.27	10YR2/2
524	400	SST17	600600	4644400	9.2	0.31	17	15	17	<0.10	4.6	43	110	1300	7.21	10YR3/3
525	400	SST18	600600	4644800	24	0.1	17	25	21	<0.10	9.4	56	110	1100	7.12	7.5YR2/2
526	400	SST19	600600	4645200	15	1.5	14	29	47	<0.10	11	370	310	1600	7.51	7.5Y3/2
527	400	SST20	600600	4645600	17	1.3	14	33	37	<0.10	12	380	290	1500	7.31	7.5YR3/2
528	400	SST21	600600	4646000	57	0.98	15	41	44	<0.10	14	360	350	1300	7.29	7.5YR3/2
529	400	SST22	600600	4646400	110	0.1	14	26	19	<0.10	9.5	35	86	950	7.12	7.5YR3/3
530	400	SST23	600600	4646800	340	0.77	12	23	11	<0.10	6.9	32	78	560	7.17	10YR6/8
531	400	SST24	600600	4647200	670	2.2	24	33	15	<0.10	16	53	110	600	6.99	10YR4/3
532	400	SST25	600600	4647600	27	<0.1	13	16	28	<0.10	11	41	110	1100	7.22	7.5YR4/6
533	400	SST26	600600	4648000	60	<0.1	9.8	6.9	42	<0.10	6.3	33	84	1000	7.29	7.5YR2/3
534	400	SST27	600600	4648400	33	<0.1	16	17	48	<0.10	12	72	130	1500	7.37	7.5YR3/3
535	400	SST28	600600	4648800	9.3	<0.1	14	28	19	<0.10	32	42	86	560	7.04	10YR2/2
536	400	SST29	600600	4649200	11	0.14	13	24	29	<0.10	22	53	86	910	7.10	7.5YR3/2
537	400	SST30	600600	4649600	12	0.18	13	19	42	<0.10	15	65	110	1000	7.13	7.5YR2/2
538	400	SST31	600600	4650000	12	<0.1	13	13	40	<0.10	8.2	66	120	1400	7.02	10YR3/3
539	400	SST32	600600	4650400	32	4.1	15	13	64	<0.10	6.3	820	980	3900	7.04	5YR3/2
540	400	SST33	600600	4650800	84	<0.1	15	7	59	<0.10	4.1	63	140	980	6.85	5YR2/4
541	400	SSU1	601000	4638000	2.8	0.32	14	29	26	<0.10	17	79	110	910	6.90	10YR3/1
542	400	SSU2	601000	4638400	7.7	2.4	13	38	43	<0.10	28	360	470	3100	7.15	2.5YR2/1
543	400	SSU3	601000	4638800	11	3	14	35	50	<0.10	24	440	570	3700	7.33	7.5YR2/1
544	400	SSU4	601000	4639200	16	3.3	14	38	59	<0.10	17	460	720	4100	7.46	10YR4/2
545	400	SSU5	601000	4639600	14	4.2	15	36	61	<0.10	19	600	820	4700	7.17	10YR3/3
546	400	SSU6	601000	4640000	3.1	0.68	15	31	34	<0.10	11	93	160	990	6.92	7.5YR2/1
547	400	SSU7	601000	4640400	15	0.38	13	36	26	<0.10	16	68	180	1500	7.04	10YR2/2
548	400	SSU8	601000	4640800	11	0.18	13	26	17	<0.10	15	38	74	770	7.25	10YR2/2
549	400	SSU9	601000	4641200	27	<0.1	20	51	27	<0.10	20	57	150	1100	6.81	10YR4/3
550	400	SSU10	601000	4641600	40	<0.1	18	42	29	<0.10	17	76	160	1200	6.84	10YR3/3
551	400	SSU11	601000	4642000	32	<0.1	18	38	31	<0.10	16	71	160	1100	7.00	10YR3/3
552	400	SSU12	601000	4642400	12	1.1	23	30	22	<0.10	16	69	98	1100	6.98	5YR2/1
553	400	SSU13	601000	4642800	8.3	0.99	19	23	35	<0.10	12	100	140	1200	7.16	10YR5/3
554	400	SSU14	601000	4643200	9.1	0.75	18	21	35	<0.10	9.5	130	120	1200	7.02	10YR3/2
555	400	SSU15	601000	4643600	7.5	1.1	16	15	30	<0.10	9.4	110	79	870	7.19	10YR3/2
556	400	SSU16	601000	4644000	4	1.1	16	15	30	<0.10	9.4	110	79	870	7.17	2.5Y3/2

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
557	400	SSU17	601000	4644400	6.7	0.66	10	9.3	19	<0.10	5.8	66	49	540	7.20	10YR3/2
558	400	SSU18	601000	4644800	15	1.1	16	15	30	<0.10	9.3	100	78	860	7.12	7.5YR3/2
559	400	SSU19	601000	4645200	11	1.1	16	15	30	<0.10	9.3	100	78	860	7.04	10YR2/2
560	400	SSU20	601000	4645600	7.3	0.2	20	37	17	<0.10	8.7	42	100	1200	7.19	10YR2/3
561	400	SSU21	601000	4646000	43	0.17	22	34	25	<0.10	10	45	120	1400	7.05	7.5YR3/2
562	400	SSU22	601000	4646400	18	1.4	22	48	48	<0.10	22	440	370	1700	7.23	7.5Y3/3
563	400	SSU23	601000	4646800	65	2.1	20	31	49	<0.10	8.1	560	420	1800	7.22	10YR3/3
564	400	SSU24	601000	4647200	190	0.31	20	26	24	<0.10	10	63	140	1000	7.37	10YR3/3
565	400	SSU25	601000	4647600	71	<0.1	12	13	32	<0.10	7.3	32	62	790	7.13	7.5YR3/2
566	400	SSU26	601000	4648000	110	<0.1	10	5.1	25	<0.10	4.8	30	60	630	7.53	10YR4/6
567	400	SSU27	601000	4648400	710	0.94	11	12	51	<0.10	6.6	41	62	1400	7.06	5YR3/3
568	400	SSU28	601000	4648800	12	0.91	13	96	77	<0.10	20	360	180	1200	7.25	7.5Y3/3
569	400	SSU29	601000	4649200	18	<0.1	13	26	48	<0.10	20	80	100	1100	7.13	7.5YR2/2
570	400	SSU30	601000	4649600	43	4.4	15	10	68	<0.10	9.7	1600	990	4300	7.26	7.5YR3/3
571	400	SSU31	601000	4650000	94	<0.1	15	6.4	38	<0.10	4.2	46	130	3000	7.15	10YR4/3
572	400	SSU32	601000	4650400	110	<0.1	11	4	34	<0.10	6.8	39	110	950	7.25	7.5YR3/3
573	400	SSU33	601000	4650800	79	<0.1	17	6	81	<0.10	9.4	54	99	1400	7.41	5YR2/3
574	400	SSV1	601400	4638000	14	2.1	16	29	55	<0.10	17	450	470	2700	7.30	10YR3/3
575	400	SSV2	601400	4638400	21	3.5	17	42	62	<0.10	21	600	990	4800	7.01	10YR3/1
576	400	SSV3	601400	4638800	22	3.1	16	32	69	<0.10	18	530	740	2900	7.26	7.5YR2/3
577	400	SSV4	601400	4639200	22	4.5	21	36	73	<0.10	16	690	920	5200	7.22	7.5YR2/2
578	400	SSV5	601400	4639600	28	0.21	19	51	28	<0.10	26	67	240	1100	7.01	10YR3/4
579	400	SSV6	601400	4640000	17	<0.1	21	56	25	<0.10	29	59	140	1100	6.93	7.5Y2/3
580	400	SSV7	601400	4640400	40	<0.1	19	41	31	<0.10	19	56	160	1100	7.26	10YR4/3
581	400	SSV8	601400	4640800	22	<0.1	22	40	25	<0.10	18	58	100	1100	6.83	5YR2/3
582	400	SSV9	601400	4641200	23	<0.1	22	38	27	<0.10	19	50	110	1200	6.90	7.5YR2/2
583	400	SSV10	601400	4641600	24	<0.1	23	59	32	<0.10	24	48	160	1100	6.99	7.5Y4/3
584	400	SSV11	601400	4642000	7.3	<0.1	23	22	24	<0.10	6	43	89	1200	7.07	7.5YR2/2
585	400	SSV12	601400	4642400	12	<0.1	22	24	23	<0.10	5	43	84	1000	7.02	7.5YR3/2
586	400	SSV13	601400	4642800	6.7	<0.1	21	27	25	<0.10	5.9	52	76	960	7.16	7.5YR4/2
587	400	SSV14	601400	4643200	11	<0.1	22	32	19	<0.10	6.9	34	92	960	7.13	7.5YR2/1
588	400	SSV15	601400	4643600	3.8	<0.1	18	14	14	<0.10	9	18	78	1000	7.30	10YR7/3
589	400	SSV16	601400	4644000	17	<0.1	24	8.9	30	<0.10	2.1	65	64	900	6.82	10Y5/3
590	400	SSV17	601400	4644400	7.5	<0.1	24	63	22	<0.10	33	43	91	1100	6.98	10YR3/3
591	400	SSV18	601400	4644800	6.8	<0.1	27	29	19	<0.10	15	54	110	1600	6.77	10YR3/4
592	400	SSV19	601400	4645200	2	<0.1	21	28	18	<0.10	6.9	31	100	1200	7.18	2.5Y3/3
593	400	SSV20	601400	4645600	7.5	<0.1	22	33	18	<0.10	12	36	99	960	7.05	7.5YR3/2
594	400	SSV21	601400	4646000	29	<0.1	24	35	19	<0.10	7.8	37	95	1300	7.12	7.5YR3/2
595	400	SSV22	601400	4646400	6.2	<0.1	25	36	22	<0.10	8.9	36	100	1300	7.11	7.5YR2/2
596	400	SSV23	601400	4646800	10	<0.1	19	28	19	<0.10	12	61	110	1300	6.98	7.5YR3/3
597	400	SSV24	601400	4647200	19	2	17	28	47	<0.10	13	770	490	2600	7.17	10YR3/3
598	400	SSV25	601400	4647600	34	1	17	13	59	<0.10	11	320	280	2100	7.23	7.5YR3/2
599	400	SSV26	601400	4648000	94	<0.1	13	22	41	<0.10	12	150	160	1400	7.29	7.5YR3/2
600	400	SSV27	601400	4648400	88	<0.1	15	12	51	<0.10	6.6	62	82	1400	7.27	7.5YR3/3
601	400	SSV28	601400	4648800	37	1.8	15	15	50	<0.10	12	810	550	3200	7.40	7.5YR3/3
602	400	SSV29	601400	4649200	110	0.12	14	8.5	58	<0.10	11	45	140	1700	7.35	7.5Y3/2
603	400	SSV30	601400	4649600	45	<0.1	13	70	35	<0.10	63	62	110	990	7.28	10YR4/3
604	400	SSV31	601400	4650000	71	<0.1	14	22	29	<0.10	30	50	120	1300	7.26	10YR3/3
605	400	SSV32	601400	4650400	67	<0.1	14	5	52	<0.10	8.7	68	97	1200	7.17	5YR4/3
606	400	SSV33	601400	4650800	18	<0.1	16	11	71	<0.10	12	50	95	1100	7.38	5YR2/3
607	400	SSW1	601800	4638000	37	7.2	21	40	87	<0.10	14	1200	1200	9900	7.27	7.5YR3/2
608	400	SSW2	601800	4638400	35	7.4	19	36	100	<0.10	17	1300	1400	6800	7.07	10YR2/2
609	400	SSW3	601800	4638800	22	<0.1	19	35	25	<0.10	19	55	110	1100	7.02	10YR3/2
610	400	SSW4	601800	4639200	32	<0.1	20	47	26	<0.10	22	64	96	1200	7.04	7.5YR3/2
611	400	SSW5	601800	4639600	34	<0.1	21	51	32	<0.10	22	65	160	1300	7.13	5YR2/3
612	400	SSW6	601800	4640000	28	0.26	21	50	28	<0.10	25	70	130	1300	7.28	7.5YR2/3
613	400	SSW7	601800	4640400	33	<0.1	20	48	31	<0.10	25	67	160	1200	7.24	7.5Y2/3
614	400	SSW8	601800	4640800	32	<0.1	23	47	32	<0.10	25	67	160	1400	7.13	7.5YR4/3
615	400	SSW9	601800	4641200	52	<0.1	13	4.9	55	<0.10	2.9	38	67	570	7.18	7.5YR2/1
616	400	SSW10	601800	4641600	6.3	<0.1	20	33	20	<0.10	18	31	78	1000	7.42	7.5YR2/1
617	400	SSW11	601800	4642000	4.2	<0.1	22	30	19	<0.10	16	34	74	1100	7.38	7.5YR2/1
618	400	SSW12	601800	4642400	13	<0.1	16	8.8	57	<0.10	12	39	64	850	7.11	7.5YR2/2

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
619	400	SSW13	601800	4642800	13	0.19	24	30	23	<0.10	12	47	69	980	7.14	10YR3/1
620	400	SSW14	601800	4643200	5.5	0.26	18	20	12	<0.10	10	38	73	820	6.88	10YR2/1
621	400	SSW15	601800	4643600	9.1	<0.1	21	25	11	<0.10	11	24	69	1000	7.13	10YR2/1
622	400	SSW16	601800	4644000	1.8	<0.1	20	22	12	<0.10	10	21	72	1100	6.98	10YR3/2
623	400	SSW17	601800	4644400	3.4	<0.1	23	34	14	<0.10	13	42	69	1100	7.11	10YR3/2
624	400	SSW18	601800	4644800	7.3	0.11	20	23	11	<0.10	8.3	35	68	1400	7.14	10YR3/2
625	400	SSW19	601800	4645200	22	<0.1	27	43	20	<0.10	17	35	80	1600	7.16	10YR2/2
626	400	SSW20	601800	4645600	24	<0.1	24	29	17	<0.10	10	28	86	1300	7.29	10YR2/2
627	400	SSW21	601800	4646000	7.3	<0.1	24	33	21	<0.10	13	38	84	1200	7.13	10YR3/2
628	400	SSW22	601800	4646400	7.6	0.18	30	32	24	<0.10	15	43	120	1200	7.16	10YR2/2
629	400	SSW23	601800	4646800	17	<0.1	22	23	21	<0.10	10	40	130	1100	7.10	7.5YR3/2
630	400	SSW24	601800	4647200	21	<0.1	22	20	19	<0.10	11	39	110	1100	7.16	10YR4/2
631	400	SSW25	601800	4647600	71	<0.1	19	57	28	<0.10	18	97	180	1300	6.91	7.5YR3/4
632	400	SSW26	601800	4648000	17	0.58	19	61	34	<0.10	26	130	210	1200	7.16	10YR3/3
633	400	SSW27	601800	4648400	94	<0.1	17	47	40	<0.10	33	300	460	1600	7.27	7.5YR2/2
634	400	SSW28	601800	4648800	410	0.45	14	46	61	<0.10	34	52	93	1000	7.12	5YR2/4
635	400	SSW29	601800	4649200	190	<0.1	25	420	30	<0.10	280	89	160	830	7.06	10YR5/3
636	400	SSW30	601800	4649600	250	<0.1	21	260	31	<0.10	100	66	150	780	7.22	7.5YR4/3
637	400	SSW31	601800	4650000	54	<0.1	18	120	38	<0.10	83	53	120	1300	7.15	10YR4/3
638	400	SSW32	601800	4650400	50	<0.1	18	17	60	<0.10	11	71	170	1700	7.03	5YR3/2
639	400	SSW33	601800	4650800	68	<0.1	14	21	37	<0.10	13	74	160	1600	7.44	7.5YR3/3
640	400	SSX24	602200	4647200	15	<0.1	23	22	23	<0.10	9.4	40	100	1100	7.23	7.5YR3/2
641	400	SSX25	602200	4647600	97	<0.1	25	39	32	<0.10	24	49	120	1200	7.35	10YR2/2
642	400	SSX26	602200	4648000	39	<0.1	15	8.6	23	<0.10	4.5	26	70	750	7.49	10YR4/4
643	400	SSX27	602200	4648400	15	0.18	23	72	36	<0.10	29	130	230	1100	6.91	10YR3/3
644	400	SSX28	602200	4648800	99	1	25	260	31	<0.10	140	62	89	900	7.56	7.5YR3/2
645	400	SSX29	602200	4649200	130	0.37	20	88	49	<0.10	62	54	82	980	7.33	7.5YR3/2
646	400	SSX30	602200	4649600	94	<0.1	21	52	39	<0.10	34	59	84	1100	6.90	10YR4/3
647	400	SSX31	602200	4650000	60	<0.1	20	15	94	<0.10	9.9	53	80	1200	7.26	10YR3/3
648	400	SSX32	602200	4650400	8.2	0.49	22	36	23	<0.10	18	47	80	1100	7.34	10YR5/6
649	400	SSX33	602200	4650800	43	<0.1	11	9.6	22	<0.10	5.9	52	70	910	7.41	10YR4/3
650	400	SSY24	602600	4647200	110	<0.1	20	26	25	<0.10	12	46	180	870	7.41	10YR4/3
651	400	SSY25	602600	4647600	220	0.29	17	18	24	<0.10	10	44	130	770	7.21	10YR3/2
652	400	SSY26	602600	4648000	100	0.2	19	24	22	<0.10	12	63	92	980	7.02	10YR3/3
653	400	SSY27	602600	4648400	59	0.46	17	21	25	<0.10	10	53	99	950	7.38	10YR3/4
654	400	SSY28	602600	4648800	47	<0.1	22	49	35	<0.10	20	140	200	730	6.94	10YR3/3
655	400	SSY29	602600	4649200	42	0.35	22	42	38	<0.10	21	130	250	1600	7.18	7.5YR3/2
656	400	SSY30	602600	4649600	48	0.31	18	20	67	<0.10	15	93	170	1500	7.17	10YR2/3
657	400	SSY31	602600	4650000	33	1.2	17	21	40	<0.10	12	120	430	2000	7.31	10YR3/3
658	400	SSY32	602600	4650400	19	1.8	20	34	150	<0.10	20	230	610	1800	7.18	7.5YR4/3
659	400	SSY33	602600	4650800	15	1.8	18	23	21	<0.10	13	140	580	1300	7.03	7.5YR5/3
660	400	SSZ24	603000	4647200	140	<0.1	17	23	22	<0.10	15	93	300	1100	7.56	10YR3/3
661	400	SSZ25	603000	4647600	360	<0.1	16	19	25	0.11	6.2	290	160	1000	7.15	10YR3/3
662	400	SSZ26	603000	4648000	150	0.11	17	32	25	0.23	13	210	330	900	7.13	7.5YR4/3
663	400	SSZ27	603000	4648400	64	<0.1	19	20	23	<0.10	12	69	110	1100	7.07	10YR3/3
664	400	SSZ28	603000	4648800	37	7.7	15	14	26	<0.10	10	160	460	1100	7.01	10YR3/3
665	400	SSZ29	603000	4649200	50	1.3	18	39	35	<0.10	20	120	200	1200	7.27	10YR3/3
666	400	SSZ30	603000	4649600	7.8	1.5	23	55	34	<0.10	7.7	190	660	650	7.37	10YR3/3
667	400	SSZ31	603000	4650000	<1	1.6	13	17	34	<0.10	7.6	110	280	1100	7.11	10YR3/3
668	400	SSZ32	603000	4650400	10	1.5	23	55	34	<0.10	17	190	660	650	7.50	7.5YR4/3
669	400	SSZ33	603000	4650800	9.7	1.3	18	18	29	<0.10	8.8	120	650	2400	7.10	7.5YR3/3
670	400	SSa24	603400	4647200	140	0.17	14	37	17	<0.10	13	160	220	690	7.44	10YR3/2
671	400	SSa25	603400	4647600	150	0.19	13	40	18	<0.10	6.8	1300	100	750	6.94	7.5YR3/2
672	400	SSa26	603400	4648000	28	1.3	21	34	24	<0.10	20	250	480	1600	6.93	7.5YR3/3
673	400	SSa27	603400	4648400	59	<0.1	17	23	22	<0.10	8.5	42	98	810	7.54	10YR3/3
674	400	SSa28	603400	4648800	42	12	15	11	24	<0.10	8.7	320	980	1300	7.62	10YR3/3
675	400	SSa29	603400	4649200	15	2	20	39	44	<0.10	23	190	310	1400	7.01	7.5YR3/3
676	400	SSa30	603400	4649600	19	4.2	20	13	33	<0.10	4.3	440	790	1700	7.15	10YR4/4
677	400	SSa31	603400	4650000	3.5	2.4	23	23	29	<0.10	9.5	200	690	2200	7.15	10YR3/4
678	400	SSa32	603400	4650400	2.2	0.58	23	64	46	<0.10	24	140	230	1400	7.09	10YR4/2
679	400	SSa33	603400	4650800	6.3	0.52	20	22	26	<0.10	13	83	490	2100	7.24	10YR3/3

**Data 4-1(2) Soil Samples of 200m Grid Content Analysis**

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
1	200	SSG27-1	595300	4648300	34	<0.1	24	13	38	<0.1	11	22	110	800	7.17	10 YR 4/4
2	200	SSG27-2	595300	4648500	24	<0.1	19	24	41	<0.1	13	35	81	1100	7.25	10 YR 2/2
3	200	SSG27-3	595500	4648500	20	0.14	19	38	44	<0.1	25	35	79	1000	7.30	10 YR 2/2
4	200	SSG27-4	595500	4648300	18	0.57	17	20	33	<0.1	8.1	43	84	670	7.36	7.5 YR 3/2
5	200	SSG28-1	595300	4648700	28	<0.1	17	51	29	0.1	36	74	65	1000	7.06	10 YR 2/3
6	200	SSG28-2	595300	4648900	32	<0.1	17	51	31	<0.1	43	41	72	1100	7.37	10 YR 3/3
7	200	SSG28-3	595500	4648900	27	<0.1	22	56	29	<0.1	24	43	72	1600	7.23	10 YR 3/2
8	200	SSG28-4	595500	4648700	25	<0.1	22	61	28	<0.1	49	46	100	1600	7.30	10 YR 3/2
9	200	SSG29-1	595300	4649100	26	<0.1	22	56	30	<0.1	50	47	71	1600	7.07	10 YR 3/3
10	200	SSG29-2	595300	4649300	21	<0.1	23	60	30	<0.1	51	50	90	1900	7.03	10 YR 2/2
11	200	SSG29-3	595500	4649300	34	0.15	18	52	30	0.1	44	40	86	1600	7.10	10 YR 3/2
12	200	SSG29-4	595500	4649100	29	<0.1	23	56	30	<0.1	45	49	71	1600	7.15	10 YR 3/2
13	200	SSG31-1	595300	4649900	28	<0.1	20	62	29	<0.1	59	52	99	1500	7.21	10 YR 3/2
14	200	SSG31-2	595300	4650100	33	<0.1	26	33	37	<0.1	22	58	77	1400	7.31	10 YR 2/3
15	200	SSG31-3	595500	4650100	32	<0.1	13	21	39	<0.1	8	55	130	330	5.76	10 YR 6/4
16	200	SSG31-4	595500	4649900	8.2	<0.1	17	40	27	0.1	21	34	99	920	7.38	10 YR 6/3
17	200	SSG32-1	595300	4650300	33	<0.1	18	26	51	<0.1	19	59	110	840	7.33	10 YR 2/2
18	200	SSG32-2	595300	4650500	40	<0.1	19	19	69	<0.1	12	100	86	840	7.51	7.5 YR 2/2
19	200	SSG32-3	595500	4650500	31	<0.1	20	14	68	<0.1	9.9	71	110	620	7.35	7.5 YR 3/2
20	200	SSG32-4	595500	4650300	32	<0.1	20	19	69	<0.1	13	95	120	660	7.42	10 YR 2/2
21	200	SSH28-1	595700	4648700	27	<0.1	22	61	30	<0.1	50	44	100	1500	7.14	10 YR 3/2
22	200	SSH28-2	595700	4648900	27	<0.1	22	54	29	<0.1	44	49	97	1600	7.28	10 YR 3/2
23	200	SSH28-3	595900	4648900	23	<0.1	21	49	33	<0.1	40	46	81	1400	7.18	10 YR 3/2
24	200	SSH28-4	595900	4648700	27	<0.1	19	55	32	<0.1	44	45	96	1400	7.44	10 YR 3/3
25	200	SSH29-1	595700	4649100	30	<0.1	21	56	31	<0.1	37	45	93	1400	7.17	10 YR 3/2
26	200	SSH29-2	595700	4649300	27	<0.1	21	48	28	<0.1	37	48	89	1300	7.22	10 YR 3/2
27	200	SSH29-3	595900	4649300	29	<0.1	20	58	30	<0.1	46	48	81	1200	7.31	10 YR 3/2
28	200	SSH29-4	595900	4649100	25	<0.1	15	44	31	<0.1	33	37	100	1200	7.27	10 YR 3/2
29	200	SSH30-1	595700	4649500	35	<0.1	16	43	33	<0.1	33	34	85	800	7.25	10 YR 4/2
30	200	SSH30-2	595700	4649700	26	<0.1	19	38	25	<0.1	22	42	93	800	7.09	10 YR 3/2
31	200	SSH30-3	595900	4649700	28	<0.1	16	34	17	<0.1	22	48	100	920	7.23	10 YR 3/3
32	200	SSH30-4	595900	4649500	26	<0.1	19	41	32	<0.1	28	42	130	990	7.29	10 YR 3/2
33	200	SSH31-1	595700	4649900	33	<0.1	18	25	48	<0.1	14	54	130	690	7.08	10 YR 3/2
34	200	SSH31-2	595700	4650100	40	<0.1	22	19	62	<0.1	31	79	110	980	7.20	7.5 YR 2/2
35	200	SSH31-3	595900	4650100	29	<0.1	24	21	52	<0.1	13	51	140	1600	7.16	7.5 YR 2/2
36	200	SSH31-4	595900	4649900	31	<0.1	25	23	60	<0.1	14	60	130	1400	7.17	7.5 YR 2/2
37	200	SSH32-1	595700	4650300	39	<0.1	27	14	72	<0.1	9	69	110	990	7.27	7.5 YR 3/2
38	200	SSH32-2	595700	4650500	30	<0.1	39	15	79	<0.1	9.8	58	130	1700	7.12	7.5 YR 3/3
39	200	SSH32-3	595900	4650500	20	<0.1	22	22	58	<0.1	14	90	120	1100	7.21	7.5 YR 2/3
40	200	SSH32-4	595900	4650300	19	<0.1	24	16	71	0.1	13	70	160	2000	7.16	10 YR 3/3
41	200	SSI27-1	596100	4648300	14	0.29	17	29	37	<0.1	20	50	71	1000	7.17	10 YR 3/3
42	200	SSI27-2	596100	4648500	17	<0.1	19	60	32	<0.1	50	47	77	1300	7.28	10 YR 4/4
43	200	SSI27-3	596300	4648500	30	<0.1	16	41	34	<0.1	29	50	59	1000	7.07	10 YR 2/3
44	200	SSI27-4	596300	4648300	27	<0.1	18	55	31	<0.1	44	51	68	1400	7.32	10 YR 3/3
45	200	SSI28-1	596100	4648700	25	<0.1	21	59	34	<0.1	49	50	95	1800	7.03	10 YR 3/2
46	200	SSI28-2	596100	4648900	19	<0.1	18	59	25	<0.1	51	45	100	1200	7.31	10 YR 2/2
47	200	SSI28-3	596300	4648900	14	0.25	17	53	45	0.1	41	63	150	1400	7.31	10 YR 3/3
48	200	SSI28-4	596300	4648700	18	<0.1	19	66	29	<0.1	56	64	110	1200	7.31	10 YR 3/3
49	200	SSI30-1	596100	4649500	22	0.22	19	43	28	<0.1	32	53	63	1300	7.08	10 YR 3/2
50	200	SSI30-2	596100	4649700	29	<0.1	18	20	57	<0.1	12	65	100	1000	7.24	10 YR 3/4
51	200	SSI30-3	596300	4649700	21	0.38	16	23	56	<0.1	15	74	110	1200	7.20	7.5 YR 2/1
52	200	SSI30-4	596300	4649500	32	<0.1	19	23	53	<0.1	0.11	64	110	8.5	6.86	10 YR 2/1
53	200	SSJ27-1	596500	4648300	25	<0.1	16	40	28	<0.1	25	51	64	1000	7.16	10 YR 2/2
54	200	SSJ27-2	596500	4648500	27	<0.1	19	49	38	<0.1	38	54	68	1500	7.27	10 YR 3/2
55	200	SSJ27-3	596700	4648500	26	<0.1	17	39	26	<0.1	21	43	58	2300	7.29	10 YR 2/3
56	200	SSJ27-4	596700	4648300	28	<0.1	18	36	30	<0.1	26	49	67	1900	7.29	10 YR 2/3
57	200	SSL29-1	597300	4649100	11	0.2	18	13	46	<0.1	10	51	110	1700	7.20	10 YR 4/3
58	200	SSL29-2	597300	4649300	57	<0.1	17	24	53	<0.1	11	87	110	970	7.34	7.5 YR 3/3
59	200	SSL29-3	597500	4649300	57	<0.1	20	34	56	<0.1	19	130	140	1600	7.26	7.5 YR 3/2
60	200	SSL29-4	597500	4649100	74	3.4	19	24	110	<0.1	13	770	4100	6400	7.24	5 YR 3/4



Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
61	200	SSM25-1	597700	4647500	18	<0.1	17	31	40	<0.1	15	90	87	1100	7.29	7.5 YR 2/1
62	200	SSM25-2	597700	4647700	19	0.23	17	31	49	<0.1	15	64	92	1200	7.36	10 YR 3/3
63	200	SSM25-3	597900	4647700	22	<0.1	18	21	35	<0.1	13	70	76	1700	7.28	10 YR 5/3
64	200	SSM25-4	597900	4647500	12	0.13	17	26	52	<0.1	12	130	200	2200	7.15	10 YR 3/3
65	200	SSN20-1	598100	4645500	8.5	0.42	14	15	20	0.1	11	58	81	1200	7.13	10 YR 4/2
66	200	SSN20-2	598100	4645700	9.5	<0.1	16	29	36	<0.1	16	44	83	960	7.20	10 YR 3/3
67	200	SSN20-3	598300	4645700	26	<0.1	16	20	65	<0.1	11	66	93	1300	7.14	7.5 YR 3/2
68	200	SSN20-4	598300	4645500	26	<0.1	16	19	70	<0.1	9.9	62	100	1400	7.14	7.5 YR 4/2
69	200	SSN23-1	598100	4646700	12	0.78	19	33	92	<0.1	20	95	160	1300	7.35	10 YR 2/2
70	200	SSN23-2	598100	4646900	11	0.23	18	39	34	0.11	24	62	88	1300	7.33	10 YR 2/1
71	200	SSN23-3	598300	4646900	30	5	20	33	160	<0.1	18	840	990	7900	7.30	10 YR 2/3
72	200	SSN23-4	598300	4646700	6.1	2	20	36	110	<0.1	25	86	260	1400	7.36	10 YR 2/2
73	200	SSN24-1	598100	4647100	11	0.24	18	38	40	<0.1	22	110	120	1200	7.33	10 YR 2/2
74	200	SSN24-2	598100	4647300	18	1.6	14	21	87	<0.1	13	270	340	2800	7.04	7.5 YR 3/2
75	200	SSN24-3	598300	4647300	76	<0.1	27	45	34	<0.1	19	130	100	1900	7.10	7.5 YR 3/3
76	200	SSN24-4	598300	4647100	76	7.7	11	15	290	0.14	7.6	5500	4500	12000	6.63	10 YR 3/4
77	200	SSN25-1	598100	4647500	18	0.5	17	20	41	<0.1	13	90	120	2600	7.19	7.5 YR 3/2
78	200	SSN25-2	598100	4647700	390	4.1	12	16	240	<0.1	7.3	4300	2400	8000	6.73	10 YR 3/4
79	200	SSN25-3	598300	4647700	230	<0.1	21	48	64	<0.1	21	860	630	9600	6.78	7.5 YR 4/4
80	200	SSN25-4	598300	4647500	99	<0.1	26	57	37	<0.1	30	210	200	4100	7.03	7.5 YR 2/3
81	200	SSO19-1	598500	4645100	13	0.27	14	13	28	<0.1	9.1	91	110	970	7.20	7.5 YR 3/2
82	200	SSO19-2	598500	4645300	20	0.14	16	18	30	<0.1	13	69	120	940	7.16	10 YR 3/2
83	200	SSO19-3	598700	4645300	37	0.15	18	23	55	<0.1	14	120	160	1400	7.32	7.5 YR 2/1
84	200	SSO19-4	598700	4645100	40	0.23	17	39	40	<0.1	21	94	150	1100	7.03	10 YR 2/2
85	200	SSO20-1	598500	4645500	25	0.21	20	33	51	<0.1	21	150	140	1700	7.28	7.5 YR 2/1
86	200	SSO20-2	598500	4645700	11	0.39	14	15	31	<0.1	9.2	45	130	1200	7.18	7.5 YR 3/2
87	200	SSO20-3	598700	4645700	3.7	0.12	6.9	7.6	15	<0.1	3.9	73	59	530	7.17	7.5 YR 3/3
88	200	SSO20-4	598700	4645500	1.3	<0.1	8.8	11	30	<0.1	8.8	24	54	640	7.32	7.5 YR 2/1
89	200	SSO21-1	598500	4645900	2.1	0.91	11	15	58	<0.1	22	94	140	680	7.30	10 YR 3/2
90	200	SSO21-2	598500	4646100	3.3	0.99	18	19	99	<0.1	11	100	180	1300	7.35	7.5 YR 4/2
91	200	SSO21-3	598700	4646100	16	0.48	12	20	71	<0.1	12	71	130	1200	7.31	7.5 YR 3/2
92	200	SSO21-4	598700	4645900	3	0.22	15	14	38	<0.1	6.7	59	120	830	7.27	7.5 YR 3/2
93	200	SSO22-1	598500	4646300	3.5	0.52	18	27	47	<0.1	16	52	140	1300	7.24	7.5 YR 2/2
94	200	SSO22-2	598500	4646500	3.4	<0.1	20	25	39	<0.1	14	69	79	1500	7.29	10 YR 3/2
95	200	SSO22-3	598700	4646500	91	4.7	21	19	230	<0.1	12	4000	1200	10000	7.10	10 YR 3/3
96	200	SSO22-4	598700	4646300	49	3.2	18	26	110	<0.1	12	820	880	5700	6.76	10 YR 3/3
97	200	SSO23-1	598500	4646700	12	1.9	17	33	96	<0.1	29	240	420	3300	7.41	7.5 YR 3/2
98	200	SSO23-2	598500	4646900	71	3.6	14	20	83	<0.1	11	1100	900	5900	7.44	7.5 YR 3/2
99	200	SSO23-3	598700	4646900	66	<0.1	21	29	50	<0.1	16	71	160	1200	7.42	7.5 YR 2/2
100	200	SSO23-4	598700	4646700	75	<0.1	26	19	60	<0.1	12	99	190	1100	7.22	7.5 YR 2/3
101	200	SSO27-3	598700	4648500	73	<0.1	24	28	85	<0.1	15	92	160	1700	7.34	7.5 YR 2/2
102	200	SSO27-4	598700	4648300	290	<0.1	14	23	50	<0.1	11	490	180	810	7.22	5 YR 4/4
103	200	SSO28-1	598500	4648700	270	<0.1	12	23	57	<0.1	9.7	880	200	830	7.23	7.5 YR 3/2
104	200	SSO28-2	598500	4648900	190	<0.1	13	33	45	<0.1	16	130	140	1000	7.35	7.5 YR 3/2
105	200	SSO28-3	598700	4648900	110	0.1	14	20	40	<0.1	11	170	140	1300	7.31	7.5 YR 4/2
106	200	SSO28-4	598700	4648700	130	<0.1	15	20	52	<0.1	12	95	150	810	7.28	7.5 YR 3/2
107	200	SSP19-1	598900	4645100	19	0.22	19	45	47	<0.1	26	220	150	1300	7.30	10 YR 2/2
108	200	SSP19-2	598900	4645300	13	0.6	18	28	45	<0.1	14	98	130	770	7.27	7.5 YR 3/1
109	200	SSP19-3	599100	4645300	14	0.11	17	18	40	<0.1	11	59	110	1100	7.37	10 YR 2/2
110	200	SSP19-4	599100	4645100	14	<0.1	17	24	64	0.1	15	63	130	1200	7.11	10 YR 2/2
111	200	SSP20-1	598900	4645500	16	0.11	14	14	30	<0.1	12	61	100	880	7.27	7.5 YR 2/1
112	200	SSP20-2	598900	4645700	14	0.12	14	16	28	<0.1	16	45	110	970	7.30	7.5 YR 4/2
113	200	SSP20-3	599100	4645700	9.2	0.48	17	8.2	42	<0.1	4.6	44	160	890	7.42	7.5 YR 5/4
114	200	SSP20-4	599100	4645500	19	0.14	15	14	29	<0.1	10	46	67	910	7.28	7.5 YR 2/2
115	200	SSP21-1	598900	4645900	4.8	0.26	13	11	32	<0.1	7	43	88	970	7.38	7.5 YR 5/3
116	200	SSP21-2	598900	4646100	28	0.63	16	17	65	<0.1	11	480	330	2400	7.29	7.5 YR 4/2
117	200	SSP21-3	599100	4646100	25	<0.1	20	15	34	<0.1	11	79	91	1100	7.06	7.5 YR 4/3
118	200	SSP21-4	599100	4645900	48	2.9	17	16	73	<0.1	8.9	760	660	6100	6.64	7.5 YR 3/2
119	200	SSP22-1	598900	4646300	24	0.18	17	17	55	<0.1	13	94	130	1600	7.23	10 YR 3/2
120	200	SSP22-2	598900	4646500	57	<0.1	19	15	79	<0.1	9.5	72	81	1800	7.26	10 YR 3/3
121	200	SSP22-3	599100	4646500	37	<0.1	19	14	60	<0.1	11	77	79	1300	7.32	10 YR 2/3
122	200	SSP22-4	599100	4646300	48	<0.1	16	10	75	<0.1	12	77	78	1200	7.08	10 YR 3/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
123	200	SSP23-1	598900	4646700	7.9	<0.1	20	13	56	<0.1	9.3	19	71	1700	7.26	10 YR 3/2
124	200	SSP23-2	598900	4646900	41	0.19	32	25	66	<0.1	17	73	120	1500	7.28	7.5 YR 2/2
125	200	SSP23-3	599100	4646900	23	0.27	21	31	61	<0.1	17	75	100	1300	7.31	7.5 YR 2/2
126	200	SSP23-4	599100	4646700	47	<0.1	19	31	66	<0.1	16	170	97	1200	7.27	7.5 YR 3/2
127	200	SSP24-1	598900	4647100	39	<0.1	24	21	78	<0.1	13	69	130	1100	7.35	7.5 YR 2/2
128	200	SSP24-2	598900	4647300	1.8	<0.1	22	16	86	<0.1	11	73	89	1200	7.29	10 YR 2/2
129	200	SSP24-3	599100	4647300	92	<0.1	25	16	83	<0.1	13	69	63	1800	7.08	10 YR 2/3
130	200	SSP24-4	599100	4647100	58	0.63	19	21	76	<0.1	11	130	160	1400	7.29	10 YR 3/3
131	200	SSP25-1	598900	4647500	58	<0.1	24	24	56	<0.1	17	74	70	1700	7.29	7.5 YR 2/2
132	200	SSP25-2	598900	4647700	70	<0.1	22	30	62	<0.1	15	66	83	1300	7.04	7.5 YR 2/2
133	200	SSP25-3	599100	4647700	73	<0.1	20	25	74	<0.1	16	62	75	1200	7.27	10 YR 2/2
134	200	SSP25-4	599100	4647500	100	<0.1	24	17	95	<0.1	11	46	84	1600	7.29	10 YR 3/3
135	200	SSP26-1	598900	4647900	45	0.27	20	23	75	<0.1	13	43	84	1200	7.37	7.5 YR 2/2
136	200	SSP26-2	598900	4648100	200	0.13	24	30	49	<0.1	13	82	78	1400	7.12	7.5 YR 2/2
137	200	SSP26-3	599100	4648100	99	<0.1	22	46	43	<0.1	21	69	82	1200	7.28	7.5 YR 2/1
138	200	SSP26-4	599100	4647900	79	0.19	24	38	60	<0.1	20	62	85	1500	7.35	7.5 YR 2/1
139	200	SSP27-1	598900	4648300	220	<0.1	19	31	50	<0.1	14	58	79	1100	7.06	7.5 YR 2/3
140	200	SSP27-2	598900	4648500	84	0.15	21	21	85	<0.1	14	70	84	2000	7.15	10 YR 3/3
141	200	SSP27-3	599100	4648500	140	0.35	20	15	100	<0.1	7.9	220	90	1500	7.04	10 YR 3/2
142	200	SSP27-4	599100	4648300	69	0.29	26	16	95	<0.1	10	300	120	1700	7.25	10 YR 3/3
143	200	SSP28-1	598900	4648700	100	<0.1	21	27	76	<0.1	9.5	9500	140	1900	7.28	7.5 YR 3/2
144	200	SSP28-4	599100	4648700	57	0.34	19	15	83	<0.1	9	280	130	2500	7.44	10 YR 4/4
145	200	SSP30-3	599100	4649700	18	<0.1	13	33	45	<0.1	15	130	140	1000	7.56	10 YR 3/2
146	200	SSP30-4	599100	4649500	21	0.33	19	34	34	<0.1	15	220	110	1300	7.38	7.5 YR 2/2
147	200	SSQ17-3	599500	4644500	17	0.6	16	37	29	<0.1	22	94	110	1200	7.13	7.5 YR 3/2
148	200	SSQ17-4	599500	4644300	25	0.38	26	49	41	<0.1	27	180	140	1700	7.26	7.5 YR 3/2
149	200	SSQ19-1	599300	4645100	40	<0.1	22	35	49	<0.1	19	160	120	1700	7.25	7.5 YR 2/1
150	200	SSQ19-2	599300	4645300	13	0.18	22	30	37	<0.1	16	82	90	1600	7.24	7.5 YR 2/1
151	200	SSQ19-3	599500	4645300	8.9	0.5	19	30	45	<0.1	17	69	120	1300	7.23	7.5 YR 3/2
152	200	SSQ19-4	599500	4645100	17	<0.1	19	31	23	<0.1	16	72	78	1100	7.18	7.5 YR 4/2
153	200	SSQ20-1	599300	4645500	13	<0.1	19	27	37	<0.1	15	55	99	1200	7.30	7.5 YR 3/3
154	200	SSQ20-2	599300	4645700	22	0.65	19	15	30	<0.1	7.6	130	190	1600	7.31	7.5 YR 3/2
155	200	SSQ20-3	599500	4645700	22	0.55	20	17	35	<0.1	9	180	160	1200	7.26	7.5 YR 4/2
156	200	SSQ20-4	599500	4645500	19	1.2	19	18	51	<0.1	7.9	780	350	2100	7.23	10 YR 5/3
157	200	SSQ21-1	599300	4645900	39	1	21	27	26	<0.1	22	270	230	1200	7.34	7.5 YR 3/2
158	200	SSQ21-2	599300	4646100	100	<0.1	23	19	26	<0.1	10	120	130	1100	7.24	7.5 YR 3/2
159	200	SSQ22-1	599300	4646300	72	<0.1	17	16	93	<0.1	10	100	100	1000	7.34	10 YR 4/4
160	200	SSQ22-2	599300	4646500	57	0.18	22	23	54	<0.1	16	250	140	1400	7.26	10 YR 2/3
161	200	SSQ22-3	599500	4646500	81	<0.1	22	30	30	<0.1	17	84	110	1300	7.30	10 YR 3/3
162	200	SSQ22-4	599500	4646300	140	<0.1	23	28	24	0.1	15	72	110	1600	7.29	10 YR 2/2
163	200	SSQ23-1	599300	4646700	48	<0.1	19	18	51	<0.1	12	110	120	1400	7.28	10 YR 3/3
164	200	SSQ23-2	599300	4646900	36	<0.1	18	13	68	<0.1	9.3	72	96	1100	7.42	10 YR 3/3
165	200	SSQ23-3	599500	4646900	37	0.24	16	8.1	43	<0.1	5.6	180	150	1100	7.36	10 YR 3/4
166	200	SSQ23-4	599500	4646700	50	<0.1	16	17	40	<0.1	11	110	93	1200	7.36	10 YR 4/3
167	200	SSQ24-1	599300	4647100	43	<0.1	18	15	82	<0.1	12	78	100	1100	7.34	10 YR 3/3
168	200	SSQ24-2	599300	4647300	44	<0.1	23	39	56	<0.1	25	63	84	1300	7.32	10 YR 3/3
169	200	SSQ24-3	599500	4647300	76	<0.1	18	15	43	<0.1	10	110	100	1200	7.38	10 YR 3/3
170	200	SSQ24-4	599500	4647100	57	<0.1	16	12	39	<0.1	8.2	200	120	1200	7.40	10 YR 3/3
171	200	SSQ25-1	599300	4647500	46	<0.1	20	39	55	<0.1	23	59	75	1100	7.43	10 YR 2/2
172	200	SSQ25-2	599300	4647700	54	<0.1	22	35	45	<0.1	22	59	65	1200	7.24	7.5 YR 2/1
173	200	SSQ25-3	599500	4647700	35	0.63	19	15	41	<0.1	10	210	140	1300	7.35	10 YR 3/3
174	200	SSQ25-4	599500	4647500	47	<0.1	19	11	25	<0.1	8.5	180	110	1300	7.19	10 YR 3/2
175	200	SSQ26-1	599300	4647900	57	<0.1	24	19	56	<0.1	13	160	110	1600	7.16	10 YR 2/3
176	200	SSQ26-2	599300	4648100	65	<0.1	24	18	84	<0.1	13	150	99	1500	7.11	10 YR 3/3
177	200	SSQ26-3	599500	4648100	71	<0.1	20	15	45	<0.1	10	77	100	1300	7.15	10 YR 3/3
178	200	SSQ26-4	599500	4647900	45	<0.1	20	15	41	<0.1	9.8	64	91	1200	7.33	10 YR 3/4
179	200	SSQ27-1	599300	4648300	71	<0.1	20	9.2	100	<0.1	10	76	86	1100	7.25	10 YR 2/3
180	200	SSQ27-2	599300	4648500	220	<0.1	24	16	100	<0.1	8.7	83	73	1400	6.89	10 YR 3/3
181	200	SSQ27-3	599500	4648500	150	<0.1	24	17	100	<0.1	11	74	64	1600	7.15	10 YR 2/2
182	200	SSQ27-4	599500	4648300	96	<0.1	25	22	82	<0.1	15	72	84	1600	6.91	10 YR 2/2
183	200	SSQ28-1	599300	4648700	71	<0.1	21	17	56	<0.1	10	110	95	2300	7.19	7.5 YR 3/2
184	200	SSQ28-2	599300	4648900	37	<0.1	16	9.4	44	<0.1	5.6	130	120	1300	7.24	10 YR 4/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
185	200	SSQ28-3	599500	4648900	24	<0.1	15	16	39	<0.1	7.7	110	110	1200	7.18	7.5 YR 3/2
186	200	SSQ28-4	599500	4648700	63	0.19	19	18	59	<0.1	8.8	85	100	3200	7.11	7.5 YR 3/3
187	200	SSQ30-1	599300	4649500	19	0.31	22	15	76	<0.1	10	130	170	1600	7.38	7.5 YR 3/3
188	200	SSQ30-2	599300	4649700	23	0.38	23	18	69	<0.1	12	94	140	1600	7.37	7.5 YR 2/3
189	200	SSQ30-3	599500	4649700	9.7	0.55	16	52	30	<0.1	140	74	96	850	7.33	10 YR 3/2
190	200	SSQ30-4	599500	4649500	13	<0.1	15	33	23	<0.1	14	56	71	570	7.37	10 YR 3/2
191	200	SSQ31-1	599300	4649900	27	0.23	21	11	67	<0.1	7.6	100	140	1500	7.53	7.5 YR 3/3
192	200	SSQ31-2	599300	4650100	23	0.22	19	20	52	<0.1	11	81	120	1300	7.40	7.5 YR 3/3
193	200	SSQ31-3	599500	4650100	15	0.4	15	20	33	<0.1	11	64	94	860	7.32	10 YR 3/4
194	200	SSQ31-4	599500	4649900	9.1	0.44	17	28	25	<0.1	11	64	83	1000	7.44	10 YR 3/2
195	200	SSQ32-1	599300	4650300	23	0.3	19	17	47	<0.1	11	80	130	1300	7.30	10 YR 2/3
196	200	SSQ32-2	599300	4650500	13	0.2	18	12	47	<0.1	8.2	72	130	1400	7.40	10 YR 3/3
197	200	SSQ32-3	599500	4650500	4.1	0.45	13	10	39	<0.1	7.2	60	100	1100	7.16	10 YR 4/4
198	200	SSQ32-4	599500	4650300	5.9	0.55	15	12	81	<0.1	8.9	66	100	1000	7.36	10 YR 2/3
199	200	SSR14-1	599700	4643100	3.7	0.77	29	30	31	<0.1	16	97	160	1600	7.17	7.5 YR 2/1
200	200	SSR14-2	599700	4643300	7.7	0.92	17	27	31	<0.1	12	90	180	1300	7.16	7.5 YR 2/2
201	200	SSR14-3	599900	4643300	1.7	1	19	28	31	<0.1	16	140	180	1400	7.33	10 YR 2/2
202	200	SSR14-4	599900	4643100	1.1	0.76	26	29	28	<0.1	14	82	150	1200	7.06	7.5 YR 3/2
203	200	SSR15-1	599700	4643500	13	4.9	30	54	100	<0.1	37	1200	790	3500	7.37	7.5 YR 3/2
204	200	SSR15-2	599700	4643700	2.8	0.62	18	18	29	<0.1	11	67	120	1200	7.25	10 YR 3/3
205	200	SSR15-3	599900	4643700	3.8	35	18	28	110	0.13	16	1900	6500	2000	7.27	7.5 YR 3/2
206	200	SSR15-4	599900	4643500	3.6	1.9	21	34	49	<0.1	19	320	340	1700	7.36	10 YR 3/2
207	200	SSR16-1	599700	4643900	2	0.36	7.1	8.8	13	<0.1	7	29	55	650	7.04	10 YR 4/2
208	200	SSR16-2	599700	4644100	5.3	0.8	18	16	25	<0.1	7.7	56	100	940	7.43	10 YR 5/2
209	200	SSR16-3	599900	4644100	4.7	1.7	19	22	54	<0.1	14	320	260	1400	7.18	7.5 YR 3/2
210	200	SSR16-4	599900	4643900	14	4.3	18	25	50	<0.1	13	1400	770	1500	7.08	7.5 YR 3/2
211	200	SSR17-1	599700	4644300	6.3	0.47	14	18	24	<0.1	11	53	100	900	7.22	7.5 YR 4/2
212	200	SSR17-2	599700	4644500	11	0.8	9.5	23	27	<0.1	13	71	100	980	7.10	7.5 YR 3/2
213	200	SSR17-3	599900	4644500	8.8	0.5	15	28	27	<0.1	16	140	130	980	7.23	7.5 YR 3/3
214	200	SSR17-4	599900	4644300	6.1	0.83	15	25	31	<0.1	14	250	170	1100	7.18	7.5 YR 4/2
215	200	SSR18-1	599700	4644700	12	0.33	19	33	22	0.11	16	94	110	1300	7.13	10 YR 2/2
216	200	SSR18-2	599700	4644900	19	0.35	17	31	33	<0.1	17	84	140	930	7.19	7.5 YR 2/2
217	200	SSR18-3	599900	4644900	78	4.6	17	21	120	0.18	12	1600	990	7200	6.97	5 YR 2/2
218	200	SSR18-4	599900	4644700	18	0.85	20	32	34	<0.1	18	370	200	1100	7.15	7.5 YR 3/3
219	200	SSR19-1	599700	4645100	31	3.4	18	24	91	<0.1	10	1100	760	7700	6.61	7.5 YR 3/3
220	200	SSR19-2	599700	4645300	3.7	1	17	13	33	<0.1	7.3	360	320	1100	7.36	10 YR 5/3
221	200	SSR22-1	599700	4646300	24	0.37	22	49	28	0.15	26	94	150	1900	7.21	10 YR 4/3
222	200	SSR22-2	599700	4646500	140	0.24	18	40	21	<0.1	18	70	140	1100	7.18	10 YR 2/2
223	200	SSR23-1	599700	4646700	40	<0.1	20	30	36	<0.1	19	67	110	1300	7.22	10 YR 2/2
224	200	SSR23-2	599700	4646900	31	<0.1	18	7.3	39	<0.1	9.5	40	93	1300	7.33	10 YR 4/3
225	200	SSR23-3	599900	4646900	84	0.14	12	7.3	33	<0.1	6.2	38	78	1000	7.34	10 YR 3/3
226	200	SSR23-4	599900	4646700	31	0.49	20	48	33	<0.1	23	110	190	1600	7.28	10 YR 4/3
227	200	SSR24-1	599700	4647100	52	<0.1	16	13	38	<0.1	13	55	94	1300	7.44	10 YR 3/3
228	200	SSR24-2	599700	4647300	53	<0.1	17	15	45	<0.1	12	78	120	1300	7.38	10 YR 3/4
229	200	SSR24-3	599900	4647300	75	<0.1	12	12	30	0.13	7.1	49	95	1000	7.35	10 YR 4/4
230	200	SSR24-4	599900	4647100	120	0.34	11	8.6	33	<0.1	6.3	47	88	970	7.32	10 YR 5/4
231	200	SSR25-1	599700	4647500	130	0.34	17	13	38	0.17	13	100	110	1300	7.34	10 YR 3/2
232	200	SSR25-2	599700	4647700	110	0.22	18	16	35	0.1	6.2	73	81	1300	7.15	10 YR 3/2
233	200	SSR25-3	599900	4647700	1100	4.6	20	12	30	<0.1	9.5	35	100	1300	7.24	10 YR 4/6
234	200	SSR25-4	599900	4647500	78	0.17	16	10	27	<0.1	9.6	45	80	1000	7.32	10 YR 2/3
235	200	SSR26-1	599700	4647900	62	<0.1	22	34	41	<0.1	22	53	77	1400	7.13	10 YR 2/2
236	200	SSR26-2	599700	4648100	41	0.29	24	22	42	<0.1	16	68	87	1800	7.06	10 YR 2/2
237	200	SSR26-3	599900	4648100	63	0.15	16	9.5	25	0.11	9.4	51	78	1100	7.19	10 YR 3/2
238	200	SSR26-4	599900	4647900	79	0.15	19	13	28	<0.1	10	56	85	1100	7.17	10 YR 3/3
239	200	SSR27-1	599700	4648300	53	0.67	19	7.6	36	0.17	12	85	100	1300	7.14	10 YR 3/4
240	200	SSR27-2	599700	4648500	80	0.2	16	11	95	<0.1	4.6	58	76	970	7.15	10 YR 3/3
241	200	SSR27-3	599900	4648500	31	0.32	18	9.8	58	0.2	6.3	71	90	1200	7.14	7.5 YR 3/2
242	200	SSR27-4	599900	4648300	69	0.13	22	11	46	0.12	11	64	87	1700	7.18	10 YR 3/3
243	200	SSR28-1	599700	4648700	24	<0.1	16	4.6	52	<0.1	3.8	73	99	1300	7.33	7.5 YR 2/2
244	200	SSR28-2	599700	4648900	11	<0.1	14	16	25	0.14	13	57	85	800	7.44	10 YR 3/2
245	200	SSR28-3	599900	4648900	20	0.18	15	16	35	<0.1	8.3	67	100	1100	7.29	7.5 YR 3/2
246	200	SSR28-4	599900	4648700	19	<0.1	15	16	10	<0.1	11	56	86	1000	7.28	7.5 YR 3/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
247	200	SSR30-1	599700	4649500	6.1	0.3	12	23	32	<0.1	8.1	42	43	660	7.37	10 YR 5/2
248	200	SSR30-2	599700	4649700	9	0.19	13	17	13	<0.1	6.7	58	36	1100	7.41	10 YR 5/2
249	200	SSR30-3	599900	4649700	4.6	0.31	14	18	20	<0.1	11	38	63	910	7.45	10 YR 3/2
250	200	SSR30-4	599900	4649500	2.4	0.35	15	33	14	<0.1	16	56	60	1200	7.40	10 YR 4/2
251	200	SSS5-1	600100	4639500	5.4	0.58	18	46	33	<0.1	33	160	150	1100	7.08	7.5 YR 3/1
252	200	SSS5-2	600100	4639700	4.6	0.27	19	43	35	<0.1	32	110	160	1200	7.21	7.5 YR 2/1
253	200	SSS5-3	600300	4639700	6.3	2.6	19	47	53	<0.1	32	370	480	2700	7.23	7.5 YR 2/1
254	200	SSS5-4	600300	4639500	4.6	0.66	19	44	34	<0.1	31	120	180	1400	7.22	7.5 YR 2/1
255	200	SSS6-1	600100	4639900	2.3	0.43	15	46	31	<0.1	29	87	140	1200	7.33	7.5 YR 2/2
256	200	SSS6-2	600100	4640100	7.6	0.41	20	46	29	<0.1	18	74	120	1100	7.06	7.5 YR 3/2
257	200	SSS6-3	600300	4640100	20	4.3	21	39	76	<0.1	25	800	870	4300	7.04	7.5 YR 3/2
258	200	SSS6-4	600300	4639900	18	3.8	20	46	70	<0.1	30	570	720	3600	7.10	7.5 YR 3/2
259	200	SSS7-1	600100	4640300	8.1	1.1	20	42	37	<0.1	27	200	240	1700	7.29	7.5 YR 3/2
260	200	SSS7-2	600100	4640500	11	1.4	20	44	47	<0.1	27	300	310	2100	7.31	7.5 YR 3/2
261	200	SSS7-3	600300	4640500	16	5.7	18	41	110	<0.1	23	870	1200	6400	7.09	7.5 YR 2/2
262	200	SSS7-4	600300	4640300	14	2.6	17	39	70	<0.1	25	450	580	3300	7.06	7.5 YR 3/2
263	200	SSS8-1	600100	4640700	10	0.9	18	38	29	<0.1	30	200	230	1300	7.28	10 YR 4/3
264	200	SSS8-2	600100	4640900	31	5.5	18	35	110	<0.1	16	1000	960	4900	7.25	7.5 YR 3/2
265	200	SSS8-3	600300	4640900	19	4.4	16	37	120	<0.1	17	780	750	4400	7.21	7.5 YR 3/3
266	200	SSS8-4	600300	4640700	5.9	0.96	13	36	36	<0.1	25	180	310	1800	7.40	10 YR 3/2
267	200	SSS9-1	600100	4641100	40	1.7	17	18	32	<0.1	12	630	360	1100	7.35	10 YR 4/2
268	200	SSS9-2	600100	4641300	11	3.6	16	26	55	0.23	12	770	610	2500	7.15	10 YR 4/2
269	200	SSS9-3	600300	4641300	25	7.2	11	30	130	0.15	14	1200	1200	3800	7.08	7.5 YR 3/2
270	200	SSS9-4	600300	4641100	43	3.8	12	21	120	0.11	8.8	1600	1000	6000	7.07	7.5 YR 3/4
271	200	SSS10-1	600100	4641500	37	6.4	22	32	120	<0.1	15	1400	1000	8700	6.62	7.5 YR 3/2
272	200	SSS10-2	600100	4641700	27	8.6	20	31	140	0.15	13	1800	1600	8500	7.16	7.5 YR 3/2
273	200	SSS10-3	600300	4641700	89	6.9	23	30	130	0.11	8.6	1600	1200	10000	7.04	7.5 YR 4/3.
274	200	SSS10-4	600300	4641500	63	4.1	21	38	91	<0.1	16	770	910	4700	7.13	7.5 YR 3/2
275	200	SSS11-1	600100	4641900	25	6.6	20	27	110	<0.1	13	1100	1100	6400	7.06	7.5 YR 4/6
276	200	SSS11-2	600100	4642100	33	7.2	21	28	140	<0.1	15	1900	1300	5900	7.38	7.5 YR 3/2
277	200	SSS11-3	600300	4642100	31	9.3	20	32	130	<0.1	18	1500	1600	7300	7.45	7.5 YR 3/2
278	200	SSS11-4	600300	4641900	130	6.9	19	27	160	<0.1	13	2100	1400	11000	6.65	7.5 YR 4/4.
279	200	SSS12-1	600100	4642300	30	12	17	27	160	0.16	12	1800	1900	10000	6.92	10 YR 3/2
280	200	SSS12-2	600100	4642500	9.2	3.4	18	29	89	<0.1	13	590	650	3400	6.86	10 YR 3/2
281	200	SSS12-3	600300	4642500	14	6	19	33	140	<0.1	15	1300	1100	6800	7.08	7.5 YR 3/3
282	200	SSS12-4	600300	4642300	21	8.3	19	30	150	<0.1	16	1900	1500	9100	7.10	7.5 YR 3/3
283	200	SSS13-1	600100	4642700	15	2	17	28	75	<0.1	16	410	460	2200	7.06	10 YR 3/2
284	200	SSS13-2	600100	4642900	18	3.7	18	27	96	<0.1	13	640	720	4600	6.86	7.5 YR 2/3
285	200	SSS13-3	600300	4642900	26	3.7	20	43	92	<0.1	16	880	900	5200	7.35	10 YR 2/3
286	200	SSS13-4	600300	4642700	43	4.5	18	32	96	<0.1	12	1000	990	6800	7.35	10 YR 4/3
287	200	SSS14-1	600100	4643100	50	4.6	19	34	100	<0.1	15	1000	1000	7100	7.30	10 YR 3/3
288	200	SSS14-2	600100	4643300	54	2.5	20	33	70	<0.1	14	590	550	2400	7.23	10 YR 4/3
289	200	SSS14-3	600300	4643300	88	4.2	19	43	110	<0.1	17	970	1000	6200	7.13	10 YR 2/3
290	200	SSS14-4	600300	4643100	39	3.4	20	38	88	<0.1	15	830	840	4600	7.24	7.5 YR 4/3
291	200	SSS15-1	600100	4643500	31	4.1	19	32	130	<0.1	14	1100	830	4800	7.16	7.5 YR 3/3
292	200	SSS15-2	600100	4643700	65	9.3	17	24	180	<0.1	11	2800	1600	11000	7.17	7.5 YR 3/3
293	200	SSS15-3	600300	4643700	51	5.4	19	36	110	<0.1	13	1200	1100	7600	7.31	10 YR 2/3
294	200	SSS15-4	600300	4643500	54	6.2	18	27	130	<0.1	10	1500	1300	11000	7.28	5 YR 2/1
295	200	SSS16-1	600100	4643900	59	9.5	19	27	230	<0.1	12	2700	1700	14000	7.25	7.5 YR 2/2
296	200	SSS16-2	600100	4644100	79	11	18	24	230	<0.1	12	2900	1900	13000	7.01	7.5 YR 2/3
297	200	SSS16-3	600300	4644100	22	3.4	21	45	72	<0.1	17	560	750	3500	7.46	10 YR 4/3
298	200	SSS16-4	600300	4643900	28	4	20	38	87	<0.1	27	800	800	5400	7.40	7.5 YR 2/3
299	200	SSS17-1	600100	4644300	86	11	20	30	180	<0.1	15	2700	2000	14000	7.32	7.5 YR 3/3
300	200	SSS17-2	600100	4644500	65	6.3	18	21	140	0.24	11	1600	1200	8900	7.02	7.5 YR 4/3
301	200	SSS17-3	600300	4644500	25	2.1	22	40	54	<0.1	19	480	460	2100	7.12	10 YR 4/3
302	200	SSS17-4	600300	4644300	14	1.6	22	45	52	0.1	17	430	430	2000	7.35	10 YR 4/2
303	200	SSS18-1	600100	4644700	48	7.3	19	27	120	0.11	13	1600	1300	7200	7.24	7.5 YR 2/3
304	200	SSS18-2	600100	4644900	19	0.85	22	24	23	<0.1	11	85	130	1200	7.36	7.5 YR 2/2
305	200	SSS18-3	600300	4644900	15	2.2	20	41	51	0.12	16	500	550	2500	7.48	10 YR 4/3
306	200	SSS18-4	600300	4644700	16	1.2	21	43	47	<0.1	17	520	390	1100	7.28	10 YR 4/3
307	200	SSS19-3	600300	4645300	36	1.6	22	43	57	<0.1	19	430	330	1600	7.38	10 YR 4/3
308	200	SSS19-4	600300	4645100	35	1.5	22	38	53	<0.1	18	420	360	1600	7.32	10 YR 3/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
309	200	SSS20-1	600100	4645500	13	0.14	20	23	16	<0.1	9.2	54	100	1300	7.30	7.5 YR 4/2
310	200	SSS20-2	600100	4645700	24	0.42	20	33	18	<0.1	12	59	100	1300	7.36	7.5 YR 3/2
311	200	SSS20-3	600300	4645700	140	0.22	28	26	26	<0.1	12	51	140	1100	7.43	7.5 YR 3/2
312	200	SSS20-4	600300	4645500	26	0.51	21	34	22	<0.1	17	59	110	1300	7.27	7.5 YR 3/2
313	200	SSS21-3	600300	4646100	1600	0.32	19	23	21	<0.1	8.3	45	84	770	7.39	10 YR 3/2
314	200	SSS21-4	600300	4645900	24	1.5	22	40	41	<0.1	16	480	370	1900	7.14	10 YR 5/3
315	200	SSS24-1	600100	4647100	130	<0.1	13	10	27	<0.1	5.4	42	86	910	7.23	10 YR 4/3
316	200	SSS24-2	600100	4647300	120	<0.1	19	35	30	<0.1	19	63	210	1500	7.18	10 YR 3/3
317	200	SSS25-1	600100	4647500	160	<0.1	17	48	54	0.1	29	190	120	1100	7.17	10 YR 3/3
318	200	SSS25-2	600100	4647700	210	<0.1	24	12	28	<0.1	14	41	100	1200	7.17	10 YR 3/3
319	200	SSS25-3	600300	4647700	80	<0.1	16	7.3	26	<0.1	4.3	36	92	940	7.23	10 YR 3/4
320	200	SSS25-4	600300	4647500	34	0.47	21	50	29	<0.1	22	87	230	1600	7.24	7.5 YR 3/2
321	200	SSS26-1	600100	4647900	180	<0.1	20	7.7	31	<0.1	4.9	33	99	1200	7.16	10 YR 3/3
322	200	SSS26-2	600100	4648100	260	<0.1	21	8.4	31	<0.1	5.5	25	110	870	7.20	10 YR 3/4
323	200	SSS26-3	600300	4648100	86	<0.1	19	11	38	<0.1	7.8	40	83	1200	7.15	10 YR 3/4
324	200	SSS26-4	600300	4647900	86	<0.1	20	10	25	0.1	6	39	80	1200	7.24	10 YR 2/2
325	200	SSS27-1	600100	4648300	68	<0.1	18	13	50	<0.1	6.6	56	78	1300	7.17	10 YR 2/3
326	200	SSS27-2	600100	4648500	17	0.29	14	4.9	54	<0.1	0.79	61	120	1200	7.26	7.5 YR 3/3
327	200	SSS27-3	600300	4648500	35	<0.1	15	6.1	23	<0.1	10	46	75	1200	7.26	7.5 YR 3/2
328	200	SSS27-4	600300	4648300	160	<0.1	17	9.1	44	0.12	4.7	52	110	3700	7.27	7.5 YR 3/4
329	200	SSS30-1	600100	4649500	6.6	0.25	13	17	22	<0.1	10	55	56	980	7.53	10 YR 4/3
330	200	SSS30-2	600100	4649700	8.9	0.1	13	26	38	<0.1	14	64	66	970	7.37	10 YR 2/2
331	200	SSS30-3	600300	4649700	9.4	<0.1	27	45	34	<0.1	11	130	100	1900	7.42	10 YR 3/3
332	200	SSS30-4	600300	4649500	8.2	0.39	14	25	20	0.12	12	62	42	1200	7.33	10 YR 5/2
333	200	SSS31-1	600100	4649900	7.4	0.46	13	16	53	<0.1	10	47	68	980	7.37	7.5 YR 3/2
334	200	SSS31-2	600100	4650100	9.7	0.51	14	17	24	<0.1	9.1	63	93	1300	7.43	7.5 YR 2/2
335	200	SSS31-3	600300	4650100	15	0.53	16	16	37	0.1	9.1	78	95	1500	7.17	7.5 YR 3/3
336	200	SSS31-4	600300	4649900	7.9	0.64	15	20	31	<0.1	11	80	130	1500	7.52	10 YR 3/3
337	200	SST2-1	600500	4638300	5.8	0.55	15	43	21	<0.1	25	150	120	970	7.53	7.5 YR 4/2
338	200	SST2-2	600500	4638500	8.9	0.71	18	44	23	<0.1	30	120	120	1100	7.44	10 YR 3/1
339	200	SST2-3	600700	4638500	8.8	0.58	19	58	24	<0.1	42	71	120	1200	7.42	10 YR 2/2
340	200	SST2-4	600700	4638300	6.2	0.5	20	38	20	<0.1	21	84	110	1300	7.17	10 YR 2/1
341	200	SST3-1	600500	4638700	9.3	0.48	19	49	26	<0.1	33	96	120	1100	7.22	7.5 YR 2/2
342	200	SST3-2	600500	4638900	5.6	0.84	21	49	29	<0.1	41	93	160	1200	7.19	10 YR 3/2
343	200	SST3-3	600700	4638900	8.6	2.6	21	52	47	<0.1	37	370	470	2900	7.31	10 YR 2/1
344	200	SST3-4	600700	4638700	11	0.69	20	57	27	<0.1	44	62	110	1200	7.33	10 YR 2/1
345	200	SST4-1	600500	4639100	8	0.4	21	44	24	<0.1	42	64	120	1300	7.34	10 YR 2/2
346	200	SST4-2	600500	4639300	3.1	0.55	21	54	29	<0.1	37	82	160	1300	7.37	7.5 YR 3/1
347	200	SST4-3	600700	4639300	13	3.4	19	45	59	<0.1	32	500	640	4000	7.37	7.5 YR 2/2
348	200	SST4-4	600700	4639100	6.9	1.6	19	45	44	<0.1	36	280	410	2400	7.17	7.5 YR 2/2
349	200	SST5-1	600500	4639500	18	3.5	19	42	57	<0.1	28	630	660	3900	7.25	7.5 YR 2/1
350	200	SST5-2	600500	4639700	22	3.9	21	32	62	<0.1	20	610	730	3900	7.28	7.5 YR 3/2
351	200	SST5-3	600700	4639700	17	4	19	36	65	<0.1	17	690	680	4400	7.18	7.5 YR 3/2
352	200	SST5-4	600700	4639500	19	3.4	19	37	66	<0.1	21	560	770	3800	7.21	7.5 YR 2/2
353	200	SST6-1	600500	4639900	15	4.4	16	41	70	<0.1	29	550	850	4500	7.22	7.5 YR 3/2
354	200	SST6-2	600500	4640100	19	5.8	16	38	79	<0.1	25	700	1100	5300	7.18	7.5 YR 2/2
355	200	SST6-3	600700	4640100	47	5.5	16	36	88	<0.1	19	970	1400	8300	7.34	7.5 YR 3/2
356	200	SST6-4	600700	4639900	31	8.3	15	32	100	<0.1	20	1200	1500	11000	7.25	7.5 YR 3/2
357	200	SST7-1	600500	4640300	14	3.9	15	36	71	<0.1	23	490	740	3800	7.28	10 YR 3/2
358	200	SST7-2	600500	4640500	21	3.5	15	36	58	<0.1	21	460	690	4000	7.29	10 YR 4/3
359	200	SST7-3	600700	4640500	73	10	13	29	170	<0.1	7.3	1800	2100	13000	7.11	7.5 YR 3/3
360	200	SST7-4	600700	4640300	49	6.8	13	29	93	<0.1	15	960	1300	8500	7.37	10 YR 3/3
361	200	SST8-1	600500	4640700	77	8.5	15	30	210	<0.1	12	1800	2000	15000	7.25	7.5 YR 2/3
362	200	SST8-2	600500	4640900	58	6.6	14	28	110	<0.1	13	1300	1300	11000	6.75	7.5 YR 3/3
363	200	SST8-3	600700	4640900	29	10	13	29	140	<0.1	18	1500	2100	11000	6.98	7.5 YR 3/3
364	200	SST8-4	600700	4640700	22	9.1	14	34	130	<0.1	20	1700	1900	8400	7.15	7.5 YR 3/3
365	200	SST9-1	600500	4641100	36	7.5	21	31	100	<0.1	16	1500	1400	7100	7.26	7.5 YR 3/3
366	200	SST9-2	600500	4641300	37	9.8	21	28	150	<0.1	12	1900	1700	10000	7.25	7.5 YR 4/3
367	200	SST9-3	600700	4641300	29	5.7	18	32	120	<0.1	18	1100	1500	6500	7.10	7.5 YR 3/2
368	200	SST9-4	600700	4641100	55	12	19	33	190	<0.1	14	2300	2400	13000	6.91	7.5 YR 3/3
369	200	SST10-1	600500	4641500	56	5.5	17	27	120	<0.1	9	1300	1300	6700	7.11	7.5 YR 3/3
370	200	SST10-2	600500	4641700	36	6.7	19	30	150	<0.1	12	1500	1500	9100	7.09	7.5 YR 3/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
371	200	SST10-3	600700	4641700	21	0.39	19	27	26	<0.1	12	69	150	1500	7.28	7.5 YR 3/2
372	200	SST10-4	600700	4641500	34	5.4	19	32	110	<0.1	16	920	1200	5500	6.95	7.5 YR 4/3
373	200	SST11-1	600500	4641900	39	9.7	15	30	140	<0.1	14	1600	1800	9600	7.01	7.5 YR 3/3
374	200	SST11-2	600500	4642100	35	4.1	19	36	95	<0.1	15	1100	950	5600	7.33	7.5 YR 3/2
375	200	SST11-3	600700	4642100	23	<0.1	27	60	33	<0.1	18	81	140	1300	7.29	7.5 YR 4/2
376	200	SST11-4	600700	4641900	10	0.2	23	90	38	0.15	21	52	110	1500	7.32	5 YR 4/3
377	200	SST16-1	600500	4643900	13	1	21	31	54	<0.1	13	130	250	1700	7.34	7.5 YR 4/2
378	200	SST16-2	600500	4644100	13	0.49	21	45	40	<0.1	12	98	130	1200	7.23	7.5 YR 3/2
379	200	SST19-1	600500	4645100	19	1.4	22	39	48	<0.1	18	410	340	1600	7.18	10 YR 3/3
380	200	SST19-2	600500	4645300	22	1.8	22	36	44	<0.1	17	570	390	2000	7.35	10 YR 3/3
381	200	SST19-3	600700	4645300	13	0.18	16	21	15	<0.1	7.5	60	93	1000	7.23	10 YR 4/2
382	200	SST19-4	600700	4645100	21	0.22	24	22	27	<0.1	11	50	98	1500	7.31	10 YR 2/2
383	200	SST20-1	600500	4645500	16	1.9	22	41	49	<0.1	20	510	350	1300	7.24	10 YR 2/3
384	200	SST20-2	600500	4645700	89	<0.1	21	39	39	<0.1	16	220	200	970	7.23	10 YR 4/2
385	200	SST20-3	600700	4645700	16	2.9	21	38	52	<0.1	17	540	710	2900	7.44	10 YR 3/4
386	200	SST20-4	600700	4645500	14	2.7	20	37	55	<0.1	15	740	610	2400	7.46	10 YR 3/4
387	200	SST21-1	600500	4645900	220	0.12	22	64	40	<0.1	16	33	76	810	7.21	7.5 YR 3/2
388	200	SST21-2	600500	4646100	230	0.32	22	67	40	<0.1	15	43	80	870	7.20	7.5 YR 3/3
389	200	SST21-3	600700	4646100	23	1.6	21	26	44	<0.1	13	580	410	1600	7.37	10 YR 4/4
390	200	SST21-4	600700	4645900	20	1.3	23	37	40	<0.1	16	470	350	1900	7.46	10 YR 4/3
391	200	SST22-3	600700	4646500	270	0.59	19	27	15	<0.1	9.8	29	94	930	7.26	10 YR 3/3
392	200	SST22-4	600700	4646300	18	2.4	19	31	56	<0.1	12	530	2300	2500	7.43	10 YR 4/3
393	200	SST25-1	600500	4647500	44	<0.1	21	45	35	<0.1	20	160	220	2000	7.16	7.5 YR 3/2
394	200	SST25-2	600500	4647700	84	<0.1	14	13	19	<0.1	6.2	45	75	790	7.15	10 YR 4/3
395	200	SST25-3	600700	4647700	94	<0.1	18	19	26	<0.1	12	97	95	1200	7.18	10 YR 3/3
396	200	SST25-4	600700	4647500	20	0.24	18	17	28	<0.1	8.6	110	140	1500	7.21	10 YR 3/3
397	200	SST26-1	600500	4647900	76	<0.1	15	14	25	0.23	6.6	44	80	1100	7.05	10 YR 4/2
398	200	SST26-2	600500	4648100	120	<0.1	18	15	79	<0.1	10	41	81	1900	7.21	5 YR 2/4
399	200	SST26-3	600700	4648100	1200	<0.1	23	13	78	<0.1	13	56	110	2700	7.13	5 YR 3/3
400	200	SST26-4	600700	4647900	100	0.19	18	17	84	<0.1	13	61	110	1400	7.22	10 YR 3/4
401	200	SST27-1	600500	4648300	42	<0.1	18	25	41	<0.1	17	51	110	1300	7.25	7.5 YR 3/3
402	200	SST27-2	600500	4648500	6.4	0.55	19	29	49	<0.1	23	99	200	1300	7.21	10 YR 3/2
403	200	SST27-3	600700	4648500	150	<0.1	16	24	40	<0.1	15	65	110	1500	7.27	7.5 YR 2/3
404	200	SST27-4	600700	4648300	380	<0.1	20	21	55	<0.1	15	65	110	5100	7.18	5 YR 2/2
405	200	SSU2-1	600900	4638300	10	0.14	19	59	27	<0.1	46	61	92	1400	7.27	10 YR 2/1
406	200	SSU2-2	600900	4638500	9.1	1	19	30	42	<0.1	40	220	280	2000	7.51	10 YR 2/2
407	200	SSU2-3	601100	4638500	24	9	19	33	120	<0.1	19	1200	1800	10000	7.53	7.5 YR 3/3
408	200	SSU2-4	601100	4638300	16	3.8	19	41	64	<0.1	26	570	750	4000	7.41	7.5 YR 4/2
409	200	SSU3-1	600900	4638700	24	7.6	17	45	200	<0.1	29	1100	1400	9000	7.48	7.5 YR 2/2
410	200	SSU3-2	600900	4638900	21	2.5	19	40	47	<0.1	26	360	480	3100	7.49	10 YR 2/2
411	200	SSU3-3	601100	4638900	29	2.2	20	41	47	<0.1	20	240	350	2400	7.50	7.5 YR 3/3
412	200	SSU3-4	601100	4638700	24	4.2	18	35	78	<0.1	21	670	900	4400	7.30	7.5 YR 3/2
413	200	SSU4-1	600900	4639100	14	1.7	18	40	40	<0.1	26	340	420	2800	7.75	7.5 YR 2/2
414	200	SSU4-2	600900	4639300	19	4.2	17	30	57	<0.1	19	810	910	6400	7.76	7.5 YR 3/4
415	200	SSU4-3	601100	4639300	25	4.1	19	39	71	<0.1	19	620	920	4500	7.56	10 YR 5/3
416	200	SSU4-4	601100	4639100	37	6.7	19	31	100	<0.1	16	1300	1300	7800	7.39	7.5 YR 3/4
417	200	SSU5-1	600900	4639500	44	8.9	18	29	120	<0.1	17	1700	1800	13000	7.14	7.5 YR 3/3
418	200	SSU5-2	600900	4639700	28	4.1	17	34	63	<0.1	16	670	870	5000	7.30	10 YR 4/3
419	200	SSU5-3	601100	4639700	13	2.7	20	41	64	<0.1	18	600	660	3300	7.09	10 YR 2/2
420	200	SSU5-4	601100	4639500	30	4.6	19	42	96	<0.1	18	860	1100	6000	7.96	7.5 YR 3/2
421	200	SSU6-1	600900	4639900	36	9.3	18	34	110	<0.1	19	1000	1300	7700	7.23	7.5 YR 3/2
422	200	SSU6-2	600900	4640100	14	5	20	37	60	<0.1	20	390	550	3100	7.01	10 YR 3/2
423	200	SSU6-3	601100	4640100	20	2.2	16	40	47	<0.1	20	240	350	2400	7.04	7.5 YR 4/2
424	200	SSU6-4	601100	4639900	13	2.9	17	42	60	<0.1	22	250	490	3000	7.15	7.5 YR 2/1
425	200	SSU7-1	600900	4640300	18	6.2	16	34	130	<0.1	20	930	1300	6400	6.93	7.5 YR 3/2
426	200	SSU7-2	600900	4640500	23	3.2	14	32	60	<0.1	20	290	610	3400	7.28	10 YR 3/2
427	200	SSU7-3	601100	4640500	21	1.4	16	42	29	<0.1	20	89	140	1300	7.15	10 YR 3/3
428	200	SSU7-4	601100	4640300	28	0.57	16	50	29	<0.1	23	79	130	1100	7.17	10 YR 3/3
429	200	SSU21-1	600900	4645900	19	0.63	22	40	28	<0.1	15	140	210	1400	7.32	10 YR 2/2
430	200	SSU21-2	600900	4646100	26	0.71	24	35	42	<0.1	15	210	200	2300	7.20	7.5 YR 2/2
431	200	SSU21-3	601100	4646100	27	<0.1	24	37	21	<0.1	13	34	110	1400	7.30	7.5 YR 3/2
432	200	SSU21-4	601100	4645900	98	<0.1	25	44	24	<0.1	16	32	110	1600	7.22	7.5 YR 3/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
433	200	SSU22-1	600900	4646300	16	0.93	23	49	41	<0.1	20	380	370	1200	7.29	10 YR 4/3
434	200	SSU22-2	600900	4646500	16	2.9	22	46	65	<0.1	16	580	660	2700	7.22	10 YR 4/3
435	200	SSU22-3	601100	4646500	14	0.78	23	41	29	<0.1	19	130	180	1400	7.10	10 YR 4/2
436	200	SSU22-4	601100	4646300	15	<0.1	26	110	34	<0.1	22	45	120	1400	7.43	10 YR 4/3
437	200	SSU23-1	600900	4646700	80	<0.1	25	32	42	<0.1	14	250	250	1900	7.18	7.5 YR 3/3
438	200	SSU23-2	600900	4646900	89	<0.1	22	23	17	<0.1	8.3	42	110	1200	7.32	7.5 YR 3/3
439	200	SSU23-3	601100	4646900	25	1	20	28	65	<0.1	15	510	370	1300	7.11	10 YR 3/2
440	200	SSU23-4	601100	4646700	13	2.6	24	53	45	<0.1	18	420	650	2500	7.32	10 YR 3/3
441	200	SSU24-1	600900	4647100	140	<0.1	21	33	19	<0.1	14	47	110	1200	7.26	7.5 YR 3/2
442	200	SSU24-2	600900	4647300	110	<0.1	24	19	25	<0.1	8.5	47	150	1300	7.30	10 YR 4/3
443	200	SSU24-3	601100	4647300	190	0.18	23	31	19	<0.1	11	78	180	1100	7.17	10 YR 4/3
444	200	SSU24-4	601100	4647100	120	<0.1	23	25	29	<0.1	10	150	190	1900	7.39	7.5 YR 3/2
445	200	SSU25-1	600900	4647500	87	<0.1	23	14	30	<0.1	7.4	45	120	1700	7.29	10 YR 3/4
446	200	SSU25-2	600900	4647700	83	<0.1	21	28	23	<0.1	17	73	98	1400	6.98	10 YR 3/2
447	200	SSU25-3	601100	4647700	86	<0.1	19	12	27	<0.1	8.4	62	120	1300	7.23	10 YR 3/4
448	200	SSU25-4	601100	4647500	49	0.19	23	13	89	<0.1	7.2	50	130	1600	7.54	10 YR 3/3
449	200	SSU26-1	600900	4647900	69	<0.1	16	7.3	59	<0.1	5.1	51	110	1000	7.27	10 YR 4/4
450	200	SSU26-2	600900	4648100	100	<0.1	18	18	92	<0.1	15	49	150	1000	7.19	7.5 YR 4/4
451	200	SSU26-3	601100	4648100	140	<0.1	20	14	55	<0.1	9.7	60	110	1400	7.17	10 YR 3/4
452	200	SSU26-4	601100	4647900	130	<0.1	16	15	50	<0.1	11	77	170	1400	7.27	10 YR 4/3
453	200	SSU28-1	600900	4648700	14	<0.1	18	13	50	<0.1	23	56	78	1300	7.13	7.5 YR 3/2
454	200	SSU28-2	600900	4648900	7.5	0.17	17	20	50	<0.1	25	61	120	1100	7.25	10 YR 3/2
455	200	SSU28-3	601100	4648900	7.5	<0.1	16	29	33	0.11	20	81	110	1400	7.23	7.5 YR 3/3
456	200	SSU28-4	601100	4648700	11	0.39	16	38	37	0.12	28	73	170	1000	7.21	7.5 YR 3/2
457	200	SSU30-1	600900	4649500	11	0.17	19	25	52	<0.1	17	99	160	1600	7.25	7.5 YR 2/2
458	200	SSU30-2	600900	4649700	25	6.5	21	13	130	<0.1	7.7	1900	1500	5700	7.29	10 YR 4/3
459	200	SSU30-3	601100	4649700	59	<0.1	21	31	53	<0.1	46	51	160	1400	7.23	10 YR 5/4
460	200	SSU30-4	601100	4649500	65	0.12	20	22	100	<0.1	43	55	150	2300	7.22	7.5 YR 3/3
461	200	SSV1-1	601300	4637900	15	0.42	19	26	25	<0.1	11	66	110	1100	7.05	7.5 YR 4/1
462	200	SSV1-2	601300	4638100	15	2.9	19	34	55	<0.1	15	520	580	3700	7.30	10 YR 3/2
463	200	SSV1-3	601500	4638100	30	5.8	18	29	92	<0.1	18	880	1400	7700	7.27	10 YR 3/2
464	200	SSV1-4	601500	4637900	9.6	1.8	17	32	42	<0.1	13	270	380	1800	7.45	7.5 YR 2/2
465	200	SSV2-1	601300	4638300	11	6.5	17	30	80	<0.1	16	840	1300	7100	7.16	7.5 YR 3/3
466	200	SSV2-2	601300	4638500	27	4.7	18	35	73	<0.1	23	720	1200	7100	7.27	7.5 YR 3/2
467	200	SSV2-3	601500	4638500	36	6.2	18	30	100	<0.1	11	1100	1300	8200	7.26	7.5 YR 3/2
468	200	SSV2-4	601500	4638300	72	6.8	17	25	120	<0.1	8.9	1400	1400	8700	7.28	10 YR 3/2
469	200	SSV3-1	601300	4638700	24	6.6	19	30	85	<0.1	16	860	1300	7800	7.02	7.5 YR 2/2
470	200	SSV3-2	601300	4638900	25	3.5	18	35	85	<0.1	18	620	800	3500	7.16	10 YR 3/3
471	200	SSV3-3	601500	4638900	22	4.2	19	34	73	<0.1	16	710	890	3800	7.50	7.5 YR 2/2
472	200	SSV3-4	601500	4638700	38	1.5	18	34	60	<0.1	14	430	480	1600	7.33	7.5 YR 3/2
473	200	SSV4-1	601300	4639100	31	7.1	20	38	120	<0.1	18	1200	1500	6400	7.36	7.5 YR 3/1
474	200	SSV4-2	601300	4639300	37	6.8	20	36	100	<0.1	21	1000	1200	6100	7.37	10 YR 2/2
475	200	SSV4-3	601500	4639300	20	0.15	21	44	32	<0.1	20	91	170	1500	7.20	10 YR 4/4
476	200	SSV4-4	601500	4639100	11	3.3	19	38	87	<0.1	22	590	800	3700	7.28	7.5 YR 3/4
477	200	SSV24-1	601300	4647100	16	2	20	32	56	<0.1	14	550	480	2100	7.43	10 YR 4/3
478	200	SSV24-2	601300	4647300	24	1.3	19	23	55	<0.1	12	400	350	1900	7.44	10 YR 3/3
479	200	SSV24-3	601500	4647300	18	1	20	34	44	<0.1	14	710	370	1700	7.45	10 YR 3/2
480	200	SSV24-4	601500	4647100	14	0.34	23	39	27	<0.1	15	120	170	810	7.38	10 YR 3/3
481	200	SSV25-1	601300	4647500	42	<0.1	19	20	41	<0.1	12	100	170	1700	7.16	7.5 YR 3/2
482	200	SSV25-2	601300	4647700	27	<0.1	20	13	59	<0.1	9.9	110	170	1700	7.36	7.5 YR 4/3
483	200	SSV25-3	601500	4647700	23	1.9	17	18	58	0.28	10	860	470	2400	7.31	7.5 YR 3/2
484	200	SSV25-4	601500	4647500	21	2	20	31	66	<0.1	15	890	640	2900	7.36	10 YR 4/3
485	200	SSV26-1	601300	4647900	72	<0.1	16	21	38	<0.1	11	150	200	1500	7.39	7.5 YR 3/2
486	200	SSV26-2	601300	4648100	100	<0.1	17	13	40	<0.1	6.9	63	110	1200	7.16	7.5 YR 2/2
487	200	SSV26-3	601500	4648100	130	<0.1	18	19	41	<0.1	14	190	220	1600	7.13	7.5 YR 3/2
488	200	SSV26-4	601500	4647900	43	0.2	16	25	60	0.48	15	270	320	1800	7.35	7.5 YR 2/2
489	200	SSV28-1	601300	4648700	70	<0.1	17	14	53	<0.1	14	52	170	1600	7.17	7.5 YR 3/3
490	200	SSV28-2	601300	4648900	16	2.3	19	27	58	0.14	21	770	590	2800	7.14	7.5 YR 3/3
491	200	SSV28-3	601500	4648900	47	4.2	19	11	71	0.1	5.5	1300	1000	5000	7.23	5 YR 3/4
492	200	SSV28-4	601500	4648700	150	<0.1	18	17	79	0.1	11	95	150	1700	7.19	10 YR 3/4
493	200	SSV29-1	601300	4649100	130	<0.1	18	11	150	<0.1	15	72	190	2100	7.20	7.5 YR 3/4
494	200	SSV29-2	601300	4649300	47	<0.1	19	17	64	0.13	45	64	180	1900	7.17	10 YR 4/2

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
495	200	SSV29-3	601500	4649300	130	<0.1	17	45	56	<0.1	33	56	170	1000	7.17	5 YR 3/3
496	200	SSV29-4	601500	4649100	180	<0.1	15	13	41	<0.1	11	54	170	630	7.15	5 YR 3/4
497	200	SSW1-1	601700	4637900	13	6.4	19	31	78	<0.1	15	760	1300	7300	7.35	10 YR 3/2
498	200	SSW1-2	601700	4638100	8.8	5.4	19	33	93	<0.1	13	1100	1400	9200	7.36	10 YR 4/3
499	200	SSW1-3	601900	4638100	30	8.1	20	28	99	<0.1	13	1400	1400	11000	7.08	10 YR 3/3
500	200	SSW1-4	601900	4637900	47	5.5	17	33	100	<0.1	15	1000	1200	8700	7.24	10 YR 3/3
501	200	SSW2-1	601700	4638300	26	6.8	20	32	110	<0.1	14	1100	1500	7400	7.25	7.5 YR 3/2
502	200	SSW2-2	601700	4638500	30	5.7	19	30	81	<0.1	15	940	1000	6100	7.31	7.5 YR 3/3
503	200	SSW2-3	601900	4638500	30	8.4	18	33	98	<0.1	16	1200	1600	8000	7.30	7.5 YR 3/2
504	200	SSW2-4	601900	4638300	24	7.2	19	32	87	<0.1	19	1100	1500	7000	7.17	7.5 YR 2/2
505	200	SSW25-1	601700	4647500	28	<0.1	22	46	34	<0.1	17	130	220	1200	7.31	10 YR 3/2
506	200	SSW25-2	601700	4647700	28	2	22	42	49	<0.1	18	440	530	2300	7.43	10 YR 4/3
507	200	SSW26-1	601700	4647900	33	2.3	21	36	59	<0.1	16	670	550	2800	7.35	10 YR 2/2
508	200	SSW26-2	601700	4648100	22	1.5	20	43	48	<0.1	19	520	410	2100	7.45	10 YR 4/3
509	200	SSW26-3	601900	4648100	12	0.16	25	79	35	<0.1	37	86	150	1400	7.26	7.5 YR 2/2
510	200	SSW26-4	601900	4647900	8.3	0.16	26	71	29	<0.1	42	87	140	1300	7.22	7.5 YR 4/3
511	200	SSW27-1	601700	4648300	39	3.7	20	19	110	<0.1	11	2100	870	3800	7.46	10 YR 4/3
512	200	SSW27-2	601700	4648500	35	3.9	20	11	62	<0.1	5.1	2000	1000	4700	7.46	10 YR 4/3
513	200	SSW27-3	601900	4648500	72	<0.1	18	34	45	<0.1	24	180	230	1500	7.43	10 YR 4/2
514	200	SSW27-4	601900	4648300	33	0.097	20	50	30	<0.1	24	140	320	2100	7.44	10 YR 3/3
515	200	SSW28-1	601700	4648700	110	<0.1	15	11	110	<0.1	6.6	60	79	820	7.29	10 YR 4/4
516	200	SSW28-2	601700	4648900	450	<0.1	16	19	78	<0.1	11	59	61	620	7.24	10 YR 4/3
517	200	SSW28-3	601900	4648900	330	0.13	23	140	70	<0.1	79	47	120	850	7.20	10 YR 3/3
518	200	SSW28-4	601900	4648700	280	<0.1	20	51	53	<0.1	32	69	87	1200	7.18	10 YR 3/2
519	200	SSW29-3	601900	4649300	160	<0.1	24	450	75	<0.1	290	49	110	760	7.32	10 YR 3/3
520	200	SSW29-4	601900	4649100	51	<0.1	29	330	29	<0.1	250	41	76	770	7.41	10 YR 4/2
521	200	SSX27-1	602100	4648300	16	0.5	22	58	35	0.18	20	120	210	1100	7.32	10 YR 4/2
522	200	SSX27-2	602100	4648500	55	<0.1	24	150	34	0.17	68	130	170	930	7.24	10 YR 4/3
523	200	SSX27-3	602300	4648500	14	<0.1	22	60	32	0.14	24	86	170	1200	7.23	10 YR 3/3
524	200	SSX27-4	602300	4648300	54	<0.1	19	27	27	<0.1	12	77	140	1300	7.27	10 YR 3/3
525	200	SSX28-1	602100	4648700	100	<0.1	22	190	37	<0.1	100	240	250	1800	7.39	10 YR 4/2
526	200	SSX28-2	602100	4648900	120	<0.1	28	380	40	0.13	220	53	95	890	7.21	10 YR 3/2
527	200	SSX28-3	602300	4648900	99	<0.1	22	150	27	<0.1	85	66	97	1400	7.32	7.5 YR 2/2
528	200	SSX28-4	602300	4648700	89	<0.1	23	140	36	0.12	73	66	160	1400	7.25	7.5 YR 4/3
529	200	SSX29-1	602100	4649100	74	<0.1	26	380	35	<0.1	230	45	98	770	7.22	10 YR 3/2
530	200	SSX29-2	602100	4649300	290	0.46	20	180	25	<0.1	170	60	75	870	7.36	10 YR 3/3
531	200	SSX29-3	602300	4649300	200	0.29	24	130	32	<0.1	92	66	99	1300	7.15	10 YR 3/3
532	200	SSX29-4	602300	4649100	130	<0.1	21	110	35	<0.1	61	62	94	1300	7.08	10 YR 3/3
533	200	SSX30-1	602100	4649500	220	0.47	18	45	31	<0.1	27	57	88	1000	7.17	7.5 YR 3/2
534	200	SSX30-2	602100	4649700	56	<0.1	20	100	60	<0.1	50	53	100	1100	7.23	7.5 YR 3/2
535	200	SSX30-3	602300	4649700	52	<0.1	19	61	34	<0.1	34	85	150	1500	7.36	7.5 YR 3/2
536	200	SSX30-4	602300	4649500	140	<0.1	19	140	62	<0.1	100	34	110	940	7.30	10 YR 4/4
537	200	SSX31-1	602100	4649900	76	<0.1	24	130	63	<0.1	70	65	160	1700	7.29	7.5 YR 3/3
538	200	SSX31-2	602100	4650100	62	<0.1	22	16	86	<0.1	7.3	79	150	1800	7.28	10 YR 3/3
539	200	SSX31-3	602300	4650100	58	<0.1	13	7.5	71	<0.1	6.5	46	82	950	7.25	10 YR 4/4
540	200	SSX31-4	602300	4649900	52	<0.1	20	13	94	<0.1	6.4	63	130	1400	7.29	10 YR 4/4
541	200	SSY27-1	602500	4648300	58	<0.1	7.2	4.3	5.8	<0.1	3.5	24	41	1100	7.34	10 YR 3/4
542	200	SSY27-2	602500	4648500	21	<0.1	19	27	26	<0.1	11	82	150	1300	7.06	10 YR 5/3
543	200	SSY27-3	602700	4648500	59	0.22	20	15	24	<0.1	9.2	39	94	1200	7.32	10 YR 3/3
544	200	SSY27-4	602700	4648300	72	<0.1	19	19	23	0.11	11	46	100	1100	7.26	7.5 YR 4/4
545	200	SSY28-1	602500	4648700	12	0.78	22	58	34	<0.1	21	110	170	1100	7.41	10 YR 4/4
546	200	SSY28-2	602500	4648900	8.4	0.85	22	56	31	<0.1	21	120	180	1300	7.25	10 YR 3/3
547	200	SSY28-3	602700	4648900	31	3	22	39	36	<0.1	16	130	220	890	7.46	10 YR 3/3
548	200	SSY28-4	602700	4648700	49	1.4	19	24	29	<0.1	12	100	150	920	7.35	10 YR 3/3
549	200	SSY29-1	602500	4649100	45	0.47	24	55	43	<0.1	33	140	320	2200	7.27	7.5 YR 2/3
550	200	SSY29-2	602500	4649300	52	0.1	22	71	38	<0.1	38	89	230	1700	7.17	7.5 YR 3/3
551	200	SSY29-3	602700	4649300	23	0.8	21	27	43	<0.1	17	160	440	2400	7.43	10 YR 2/3
552	200	SSY29-4	602700	4649100	30	<0.1	24	110	46	0.1	35	91	150	830	7.19	10 YR 6/4
553	200	SSY30-1	602500	4649500	57	0.16	25	73	46	<0.1	42	120	260	2000	7.22	7.5 YR 3/4
554	200	SSY30-2	602500	4649700	50	0.24	18	15	67	<0.1	10	61	120	1200	7.39	10 YR 3/3
555	200	SSY30-3	602700	4649700	35	0.41	18	23	52	<0.1	16	88	190	1400	7.43	10 YR 4/3
556	200	SSY30-4	602700	4649500	20	1.1	17	35	54	<0.1	23	95	260	1500	7.26	10 YR 2/2



Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
557	200	SSY31-1	602500	4649900	40	<0.1	14	8.1	120	<0.1	5.5	58	100	870	7.26	10 YR 5/6
558	200	SSY31-2	602500	4650100	51	0.4	19	14	67	0.11	11	91	260	1700	7.30	10 YR 3/3
559	200	SSY31-3	602700	4650100	36	0.68	16	28	53	<0.1	17	110	370	1300	7.35	7.5 YR 4/2
560	200	SSY31-4	602700	4649900	34	1.2	18	29	44	0.18	19	110	300	1600	7.35	7.5 YR 3/3
561	200	SSY32-1	602500	4650300	50	0.59	18	20	61	<0.1	13	100	360	2000	7.30	7.5 YR 3/3
562	200	SSY32-2	602500	4650500	22	2	21	29	53	<0.1	18	160	530	2300	7.28	7.5 YR 5/3
563	200	SSY32-3	602700	4650500	62	0.84	18	25	98	<0.1	12	110	490	1200	7.25	7.5 YR 3/4
564	200	SSY32-4	602700	4650300	27	1.4	20	38	47	<0.1	22	140	400	1500	7.33	7.5 YR 3/3
565	200	SSZ28-1	602900	4648700	71	<0.1	19	37	23	<0.1	21	180	190	1100	7.35	7.5 YR 2/1
566	200	SSZ28-2	602900	4648900	24	6.8	23	27	33	<0.1	17	290	500	1500	7.20	10 YR 3/3
567	200	SSZ28-3	603100	4648900	5.4	25	14	7.8	28	<0.1	6	400	1300	1100	7.29	10 YR 4/3
568	200	SSZ28-4	603100	4648700	18	4.1	19	30	34	<0.1	22	310	390	1400	7.31	7.5 YR 3/2
569	200	SSZ29-1	602900	4649100	30	1.1	22	50	47	0.14	25	120	190	1300	7.34	10 YR 4/3
570	200	SSZ29-2	602900	4649300	74	1	24	72	32	0.11	31	120	210	1400	7.38	10 YR 4/3
571	200	SSZ29-3	603100	4649300	11	1.7	22	48	38	<0.1	24	200	310	1500	7.40	10 YR 4/3
572	200	SSZ29-4	603100	4649100	18	0.92	21	44	39	0.15	21	120	200	1200	7.39	10 YR 5/4
573	200	SSZ30-1	602900	4649500	9.8	1	23	71	33	0.17	31	110	230	1300	7.32	10 YR 5/3
574	200	SSZ30-2	602900	4649700	16	0.75	21	43	51	0.14	20	150	360	1700	7.31	10 YR 4/3
575	200	SSZ30-3	603100	4649700	7.8	6.3	18	18	44	<0.1	12	550	1900	1800	7.37	10 YR 4/2
576	200	SSZ30-4	603100	4649500	0.37	13	9	13	89	<0.1	11	480	850	710	7.40	10 YR 4/2
577	200	SSZ31-1	602900	4649900	12	1.1	23	69	41	<0.1	27	190	300	1700	7.45	10 YR 5/3
578	200	SSZ31-2	602900	4650100	12	2.5	20	35	51	0.11	18	230	640	1900	7.33	10 YR 2/3
579	200	SSZ31-3	603100	4650100	9.5	1.3	19	41	48	<0.1	24	130	430	1600	7.35	7.5 YR 3/3
580	200	SSZ31-4	603100	4649900	11	4.3	17	19	73	0.1	13	290	1100	2100	7.44	7.5 YR 4/4

**Data 4-1(3) Soil Samples of 100m Grid Content Analysis**

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
1	100	SSA18-1/3	592950	4644750	8.3	0.13	18	91	26	<0.10	74	40	74	870	7.51	10 YR 2/2
2	100	SSB19-4/2	593450	4645150	12	<0.10	20	87	25	0.12	69	36	71	1100	7.46	10 YR 4/2
3	100	SSD11-4/2	594250	4641950	27	<0.10	16	26	16	0.17	12	58	84	660	7.27	10 YR 3/3
4	100	SSD17-2/4	594150	4644450	14	<0.10	23	100	27	<0.10	86	41	79	1300	7.38	2.5 Y 3/3
5	100	SSD19-3/1	594250	4645250	5.3	0.13	21	79	32	<0.10	58	60	76	920	7.41	2.5 Y 3/3
6	100	SSD23-2/4	594150	4646850	18	<0.10	16	31	16	<0.10	19	44	70	1100	7.45	10 YR 3/2
7	100	SSD24-3/1	594250	4647250	60	<0.10	19	33	21	<0.10	16	64	70	1100	7.38	7.5 YR 2/2
8	100	SSD25-1/3	594150	4647550	27	<0.10	20	26	17	<0.10	17	51	71	1200	7.36	7.5 YR 2/2
9	100	SSE10-1/4	594550	4641450	28	<0.10	14	28	22	<0.10	14	56	80	600	7.36	10 YR 2/3
10	100	SSE14-2/3	594550	4643350	8.1	0.26	24	100	32	0.11	97	43	85	1300	7.43	10 YR 2/3
11	100	SSE16-3/1	594650	4644050	5	0.2	22	100	27	<0.10	81	26	84	990	7.47	10 YR 3/4
12	100	SSE23-1/3	594550	4646750	53	<0.10	20	34	23	<0.10	18	68	77	1200	7.29	7.5 YR 3/2
13	100	SSF9-3/2	595050	4641350	16	<0.10	18	110	21	<0.10	96	31	83	820	7.41	10 YR 4/3
14	100	SSF13-2/4	594950	4642850	7	<0.10	19	99	30	<0.10	93	36	70	1100	7.43	2.5 Y 4/2
15	100	SSF15-4/4	595150	4643450	8.6	0.14	25	99	32	<0.10	90	34	93	1600	7.47	10 YR 4/3
16	100	SSF18-1/2	594850	4644750	6.3	0.27	25	110	35	<0.10	100	57	100	1200	7.39	10 YR 3/2
17	100	SSF21-4/2	595050	4645950	31	<0.10	16	23	16	<0.10	13	41	92	970	7.43	10 YR 4/3
18	100	SSF22-1/3	594950	4646350	97	<0.10	15	26	21	<0.10	11	130	61	500	7.37	10 YR 3/2
19	100	SSG11-3/1	595450	4642050	14	0.2	25	110	31	<0.10	100	42	89	1400	7.32	10 YR 2/1
20	100	SSG16-4/2	595450	4643950	11	0.15	26	120	32	0.12	110	39	74	1400	7.25	10 YR 2/3
21	100	SSG19-4/2	595450	4645150	54	<0.10	13	21	17	0.1	8.7	78	70	560	7.31	2.5 Y 4/2
22	100	SSG20-1/3	595350	4645550	51	<0.10	19	33	21	0.18	18	85	99	1100	7.29	10 YR 2/3
23	100	SSG21-3/1	595450	4646050	43	<0.10	19	81	30	0.1	24	56	100	1100	7.26	10 YR 2/3
24	100	SSH14-3/1	595850	4643250	8.8	<0.10	22	92	24	0.13	68	34	81	1200	7.44	7.5 YR 3/3
25	100	SSH20-3/1	595850	4645650	23	<0.10	19	37	19	0.16	17	49	65	1100	7.27	10 YR 2/3
26	100	SSH36-1/3	595750	4651950	14	0.54	20	85	31	<0.10	89	65	160	1200	7.33	2.5 Y 3/2
27	100	SSH36-2/3	595750	4652150	13	0.12	20	85	28	<0.10	78	61	150	1100	7.16	7.5 YR 2/1
28	100	SSI10-4/2	596250	4641550	8.2	0.16	26	130	38	<0.10	130	49	150	1500	7.46	10 YR 3/2
29	100	SSI12-1/3	596150	4642350	6.4	0.11	21	88	29	<0.10	89	31	85	1500	7.42	2.5 Y 4/2
30	100	SSI32-1/4	596150	4650250	59	0.16	13	16	48	<0.10	8.8	770	120	400	7.35	7.5 YR 2/3
31	100	SSI32-2/4	596150	4650450	40	0.33	16	10	80	<0.10	6.8	220	130	520	7.40	7.5 YR 2/2
32	100	SSI32-3/3	596350	4650550	5.4	0.58	24	14	88	<0.10	13	58	110	1600	7.32	7.5 YR 2/2
33	100	SSI35-1/4	596150	4651450	16	0.52	20	73	23	<0.10	68	54	72	1100	7.27	10 YR 3/2
34	100	SSI35-3/1	596250	4651650	8.7	0.28	18	78	19	<0.10	70	58	85	1100	7.18	10 YR 3/4
35	100	SSI36-1/4	596150	4651850	14	0.48	23	110	32	<0.10	100	74	110	1100	7.34	2.5 Y 3/3
36	100	SSI36-3/1	596250	4652050	13	0.46	21	100	25	0.13	110	67	76	1400	7.45	2.5 Y 3/2
37	100	SSJ34-2/4	596550	4651250	11	1.9	22	110	32	<0.10	110	210	270	1000	7.42	10 YR 4/3
38	100	SSJ35-1/2	596450	4651550	16	0.33	21	110	26	<0.10	110	63	97	1000	7.42	2.5 Y 3/3
39	100	SSJ35-3/1	596650	4651650	26	0.23	21	95	28	<0.10	87	81	85	980	7.36	2.5 Y 3/3
40	100	SSJ36-2/3	596550	4652150	15	0.67	17	76	25	0.12	73	58	110	1200	7.45	2.5 Y 4/3
41	100	SSJ36-4/2	596650	4651950	12	0.44	23	100	27	<0.10	16	71	87	1100	7.47	2.5 Y 4/3
42	100	SSK8-2/4	596950	4640850	8.3	0.38	20	110	35	<0.10	99	36	86	1000	7.43	10 YR 2/3
43	100	SSK10-4/1	597050	4641450	6.7	0.64	28	120	31	<0.10	100	47	79	1700	7.41	10 YR 3/3
44	100	SSK12-1/3	596950	4642350	6.1	0.53	26	110	35	0.11	110	89	110	1500	7.41	2.5 Y 3/2
45	100	SSK33-2/1	596850	4650850	17	0.33	19	120	24	<0.10	110	51	93	1100	7.43	10 YR 4/3
46	100	SSK33-4/2	597050	4650750	13	<0.10	16	40	20	0.1	24	45	68	620	7.43	10 YR 3/3
47	100	SSK34-1/3	596950	4651150	32	<0.10	18	77	31	0.15	61	66	100	860	7.49	10 YR 3/3
48	100	SSK34-3/3	597150	4651350	18	0.27	17	92	27	<0.10	77	59	100	970	7.41	10 YR 4/3
49	100	SSK35-1/3	596950	4651550	25	<0.10	18	79	37	<0.10	64	67	90	1000	7.50	10 YR 3/2
50	100	SSL35-3/2	597450	4651750	32	0.18	14	27	34	<0.10	14	160	200	1300	7.51	10 YR 3/3
51	100	SSM9-1/2	597650	4641150	13	0.53	29	200	33	<0.10	180	37	130	1800	7.54	2.5 Y 3/3
52	100	SSM12-2/1	597650	4642450	1	0.36	19	22	17	<0.10	15	36	140	1100	7.43	10 YR 2/3
53	100	SSM12-3/4	597950	4642450	2.5	0.69	20	36	24	<0.10	18	47	130	1100	7.37	10 YR 3/3
54	100	SSM12-4/1	597850	4642250	3.8	0.57	19	36	22	<0.10	23	40	130	1100	7.44	10 YR 3/3
55	100	SSM34-2/3	597750	4651350	60	42	17	38	430	0.36	22	8600	10000	4200	7.46	10 YR 2/2
56	100	SSM35-1/3	597750	4651550	19	18	18	81	240	0.31	16	7200	3700	3200	7.49	10 YR 3/3
57	100	SSM35-3/2	597850	4651750	7.2	0.73	13	7	39	<0.10	6.2	240	200	1100	7.50	10 YR 2/3
58	100	SSN4-3/1	598250	4639250	5.5	0.62	16	13	17	<0.10	5.8	41	120	1800	7.35	7.5 YR 2/3
59	100	SSN8-4/2	598250	4640750	7.2	0.74	30	200	32	0.1	170	45	84	1600	7.46	10 YR 3/2
60	100	SSN34-1/4	598150	4651050	28	4.3	14	33	100	0.12	14	3100	880	2800	7.36	2.5 Y 4/2

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
61	100	SSN35-2/1	598050	4651650	19	1.1	12	11	53	<0.10	6.4	270	290	1200	7.47	10 YR 3/4
62	100	SSN35-4/1	598250	4651450	5.8	4.8	8.8	12	54	0.1	8	660	960	2200	7.41	10 YR 2/3
63	100	SSN36-2/1	598050	4652050	14	0.2	13	14	29	0.13	9.9	71	93	1000	7.44	7.5 YR 3/2
64	100	SSN36-4/1	598250	4651850	4.8	0.43	13	19	49	<0.10	11	86	160	1200	7.49	10 YR 2/3
65	100	SSO2-3/2	598650	4638550	31	0.44	16	22	20	<0.10	7.9	110	75	450	7.28	10 YR 3/4
66	100	SSO9-1/3	598550	4641150	24	0.18	23	130	31	<0.10	110	37	74	1300	7.53	2.5 Y 3/2
67	100	SSO25-3/1	598650	4647650	540	<0.10	14	18	62	<0.10	8.9	75	88	330	7.19	5 YR 3/4
68	100	SSO26-3/4	598750	4648050	220	<0.10	13	24	57	0.11	13	120	130	1400	7.27	5 YR 2/3
69	100	SSO34-1/3	598550	4651150	33	0.23	15	35	48	0.1	13	120	190	1100	7.36	10 YR 3/2
70	100	SSO34-3/2	598650	4651350	20	0.4	14	27	28	<0.10	12	77	120	1100	7.38	10 YR 3/2
71	100	SSP26-4/1	599050	4647850	49	<0.10	25	34	72	0.1	20	66	89	1600	7.48	7.5 YR 2/2
72	100	SSQ27-1/2	599250	4648350	65	<0.10	21	18	110	0.1	14	88	87	1300	7.23	10 YR 3/2
73	100	SSR5-3/4	599950	4639650	1.3	0.24	16	23	26	<0.10	12	68	110	1200	7.24	10 YR 2/2
74	100	SSR6-3/1	599850	4640050	10	0.14	18	38	27	0.11	24	110	100	1100	7.11	10 YR 2/3
75	100	SSR6-4/1	599850	4639850	15	<0.10	15	27	21	<0.10	17	56	84	910	7.11	7.5 YR 2/3
76	100	SSR7-3/3	599950	4640550	7.5	0.12	19	38	23	<0.10	25	66	84	1100	7.26	10 YR 3/3
77	100	SSR7-4/2	599850	4640350	9.3	<0.10	18	35	24	<0.10	26	41	90	1100	7.30	10 YR 3/3
78	100	SSR11-3/3	599950	4642150	2.7	0.1	21	70	34	<0.10	17	72	90	750	7.24	7.5 YR 2/3
79	100	SSR11-4/4	599950	4641850	4.6	<0.10	23	33	21	0.12	13	52	81	1200	7.17	10 YR 3/3
80	100	SSR12-3/4	599950	4642450	29	0.55	22	39	34	<0.10	27	120	150	1500	7.28	10 YR 2/3
81	100	SSR12-4/2	599850	4642350	1.3	0.52	20	39	24	0.1	12	260	160	980	7.26	10 YR 2/3
82	100	SSR13-3/4	599950	4642850	4.8	6.6	15	34	72	<0.10	22	1200	1300	2900	7.33	10 YR 2/3
83	100	SSR13-4/1	599850	4642650	12	<0.10	22	30	21	<0.10	15	67	83	1000	7.33	7.5 YR 2/2
84	100	SSR13-4/4	599950	4642650	9.3	1.8	21	32	78	<0.10	14	380	470	3200	7.24	7.5 YR 2/2
85	100	SSR14-3/1	599850	4643250	3.3	0.14	21	28	22	<0.10	15	74	110	1200	7.18	7.5 YR 2/2
86	100	SSR14-3/4	599950	4643250	2.2	0.57	18	23	26	<0.10	15	200	150	1200	7.32	10 YR 2/3
87	100	SSR14-4/4	599950	4643050	3.9	0.48	23	26	24	<0.10	13	240	150	1200	7.37	10 YR 2/3
88	100	SSR15-3/1	599850	4643650	6.1	0.32	15	19	34	<0.10	12	100	130	1200	7.25	10 YR 3/3
89	100	SSR15-3/4	599950	4643650	8.5	1	18	27	40	<0.10	13	300	250	1500	7.31	10 YR 2/3
90	100	SSR15-4/1	599850	4643450	5.3	0.75	17	29	40	0.12	17	130	170	1400	7.27	10 YR 2/2
91	100	SSR16-1/3	599750	4643950	4.5	<0.10	13	13	20	<0.10	7.3	49	68	890	7.26	10 YR 3/3
92	100	SSR16-2/3	599750	4644150	7.9	0.2	15	12	19	0.11	7.7	43	63	780	7.26	7.5 YR 3/2
93	100	SSR16-3/3	599950	4644150	12	2.9	17	28	57	<0.10	18	770	540	2200	7.31	7.5 YR 2/3
94	100	SSR16-4/3	599950	4643950	9.5	4.4	21	34	67	<0.10	16	930	780	3100	7.25	10 YR 3/3
95	100	SSR17-1/3	599750	4644350	5.8	0.42	14	12	19	<0.10	6.9	47	74	920	7.41	10 YR 2/3
96	100	SSR17-3/3	599950	4644550	7.6	1.6	20	33	37	<0.10	17	720	320	1700	7.17	7.5 YR 2/3
97	100	SSR17-4/3	599950	4644350	7.9	0.18	17	28	30	<0.10	16	240	150	1200	7.26	7.5 YR 2/3
98	100	SSR18-1/3	599750	4644750	13	<0.10	17	28	23	0.11	16	70	86	1100	7.17	10 YR 2/3
99	100	SSR18-2/2	599650	4644950	46	1.3	20	39	55	0.1	26	470	360	1700	7.29	10 YR 2/3
100	100	SSR18-2/3	599750	4644950	8.2	0.67	20	32	26	0.11	21	95	110	1900	7.26	7.5 YR 2/3
101	100	SSR18-3/3	599950	4644950	10	0.69	23	21	23	<0.10	8.5	120	190	1300	7.26	10 YR 2/3
102	100	SSR18-3/4	599950	4644850	35	9.8	18	18	210	<0.10	8	3200	2200	16000	7.21	7.5 YR 2/3
103	100	SSR26-2/3	599750	4648150	36	<0.10	20	17	41	<0.10	11	58	77	1600	7.33	10 YR 3/3
104	100	SSS2-3/3	600350	4638550	7.2	<0.10	13	48	15	<0.10	32	53	120	880	7.24	10 YR 4/2
105	100	SSS3-2/3	600150	4638950	5.5	0.29	15	17	16	<0.10	8.5	48	160	1200	7.29	10 YR 2/2
106	100	SSS3-4/3	600350	4638750	5.5	0.34	14	32	17	<0.10	19	140	160	900	7.28	10 YR 3/3
107	100	SSS4-1/3	600150	4639150	8.3	1.1	16	59	32	0.11	33	280	230	1400	7.24	10 YR 2/2
108	100	SSS4-4/2	600250	4639150	3.8	0.3	17	48	25	<0.10	35	110	180	1200	7.34	10 YR 2/3
109	100	SSS4-4/4	600350	4639050	6.5	0.62	18	54	25	<0.10	37	93	160	1100	7.16	10 YR 2/3
110	100	SSS5-2/1	600050	4639650	4.7	1.3	16	35	51	<0.10	24	260	350	2000	7.25	10 YR 2/3
111	100	SSS5-3/4	600350	4639650	15	6.2	17	44	87	0.1	27	1100	1100	5400	7.26	7.5 YR 2/2
112	100	SSS5-4/1	600250	4639450	6.5	1.5	18	54	47	<0.10	38	200	410	2500	7.20	7.5 YR 2/2
113	100	SSS6-1/1	600050	4639850	13	<0.10	17	47	37	<0.10	33	110	200	1200	7.28	10 YR 2/2
114	100	SSS6-2/1	600050	4640050	7.4	0.72	17	46	41	<0.10	31	110	210	1200	7.34	10 YR 3/2
115	100	SSS6-3/1	600250	4640050	19	1.2	20	42	43	0.12	28	180	300	1400	7.30	10 YR 2/3
116	100	SSS7-2/1	600050	4640450	12	2.3	17	44	73	<0.10	28	410	550	3200	7.22	10 YR 2/3
117	100	SSS7-3/1	600250	4640450	16	4.4	18	42	84	<0.10	24	700	870	4100	7.33	10 YR 2/3
118	100	SSS7-4/1	600250	4640250	13	1.3	18	46	54	0.1	31	220	310	1500	7.27	10 YR 2/3
119	100	SSS8-1/1	600050	4640650	14	4.4	17	43	48	0.11	32	460	800	2600	7.32	10 YR 3/4
120	100	SSS8-2/2	600050	4640950	25	7.3	18	39	140	<0.10	18	1000	1500	6100	7.05	10 YR 2/3
121	100	SSS8-3/2	600250	4640950	23	3.9	18	41	140	<0.10	20	670	840	3800	7.11	10 YR 2/3
122	100	SSS8-4/1	600250	4640650	11	0.93	17	37	45	<0.10	23	150	300	1800	7.31	10 YR 3/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
123	100	SSS9-1/2	600050	4641150	2.4	0.54	17	26	24	<0.10	13	150	52	1100	7.17	10 YR 2/3
124	100	SSS9-1/3	600150	4641150	25	8.7	16	31	120	0.1	15	1300	1600	7000	7.20	10 YR 2/3
125	100	SSS9-2/2	600050	4641350	<1	0.37	16	20	20	<0.10	10	110	170	1100	7.27	10 YR 3/3
126	100	SSS9-2/3	600150	4641350	43	9.1	15	30	170	<0.10	15	1500	1700	9700	7.08	10 YR 2/3
127	100	SSS10-1/2	600050	4641550	3.7	0.57	16	17	22	<0.10	8.7	220	180	1000	7.21	10 YR 3/3
128	100	SSS10-1/3	600150	4641550	36	11	16	33	160	0.14	15	1500	1800	8200	7.16	10 YR 3/3
129	100	SSS10-2/2	600050	4641750	7.3	1.5	16	24	40	<0.10	13	270	360	1700	7.33	2.5 YR 3/2
130	100	SSS10-3/4	600350	4641650	81	6.9	17	28	150	<0.10	11	1400	1400	10000	7.15	10 YR 2/3
131	100	SSS11-1/4	600150	4641850	30	12	15	25	130	<0.10	13	1500	1800	6800	7.17	10 YR 2/3
132	100	SSS11-2/2	600050	4642150	32	9.1	15	29	120	<0.10	15	1200	1600	8600	7.21	10 YR 2/2
133	100	SSS12-1/3	600150	4642350	53	13	13	27	190	0.15	13	2000	2200	10000	6.96	10 YR 2/3
134	100	SSS13-2/1	600050	4642850	16	3.3	16	29	84	<0.10	15	530	670	3500	7.20	10 YR 2/3
135	100	SSS13-3/1	600250	4642850	120	7.1	14	25	200	0.19	7.3	2400	1800	14000	6.71	10 YR 2/3
136	100	SSS13-4/4	600350	4642650	55	6.1	17	34	130	<0.10	13	1300	1200	9100	6.98	7.5 YR 2/3
137	100	SSS14-1/1	600050	4643050	10	2.4	15	23	56	<0.10	14	370	520	2700	7.23	10 YR 2/3
138	100	SSS14-3/2	600250	4643350	220	3.5	9.5	21	250	<0.10	4.9	3100	2000	12000	6.76	10 YR 3/3
139	100	SSS15-1/1	600050	4643450	28	4.5	17	36	110	0.1	17	940	950	3700	7.22	7.5 YR 3/3
140	100	SSS15-3/1	600250	4643650	83	4.9	14	31	170	0.11	8.3	1800	1300	10000	6.75	10 YR 3/3
141	100	SSS16-1/3	600150	4643950	66	8.2	15	30	150	<0.10	11	1800	1700	11000	6.80	10 YR 3/3
142	100	SSS17-1/1	600050	4644250	44	8.5	15	29	140	0.11	13	1500	1500	8900	7.02	10 YR 2/3
143	100	SSS17-3/1	600250	4644450	46	5	21	39	90	0.1	14	1000	1000	6500	7.01	10 YR 3/3
144	100	SSS18-1/1	600050	4644650	49	6.1	22	35	120	<0.10	16	1300	1200	8600	7.20	10 YR 3/2
145	100	SSS18-2/4	600150	4644850	17	0.66	22	40	37	<0.10	18	140	160	1300	7.29	7.5 YR 3/2
146	100	SSS18-4/1	600250	4644650	17	2.3	22	47	53	<0.10	20	550	520	1600	7.21	10 YR 3/4
147	100	SSS23-3/1	600250	4646850	2100	<0.10	16	21	22	<0.10	13	46	90	630	7.28	10 YR 5/4
148	100	SSS25-2/1	600050	4647650	150	<0.10	25	24	29	0.1	14	58	100	1500	7.20	10 YR 3/3
149	100	SSS26-3/4	600350	4648050	61	<0.10	18	11	46	<0.10	9.3	48	71	1100	7.34	10 YR 3/4
150	100	SST2-2/4	600550	4638450	6.7	0.49	19	45	24	<0.10	27	120	120	1200	7.29	10 YR 3/2
151	100	SST2-4/3	600750	4638350	2.7	0.46	18	43	23	0.1	27	87	110	1100	7.38	10 YR 3/1
152	100	SST3-1/2	600450	4638750	4.9	0.28	17	33	16	<0.10	18	67	97	990	7.31	10 YR 3/3
153	100	SST4-3/2	600650	4639350	20	7.1	19	41	89	<0.10	23	980	1300	6500	7.29	10 YR 2/3
154	100	SST4-4/2	600650	4639150	9.8	0.45	21	53	26	<0.10	37	95	130	1500	7.32	10 YR 2/2
155	100	SST5-2/3	600550	4639750	18	3.8	19	39	67	<0.10	22	550	770	4600	7.33	10 YR 3/3
156	100	SST5-4/3	600750	4639550	41	15	19	28	150	0.11	17	2300	2600	16000	7.01	7.5 YR 2/3
157	100	SST6-2/4	600550	4640050	19	4.7	20	32	73	<0.10	21	700	910	5400	7.30	10 YR 3/4
158	100	SST6-4/4	600750	4639850	29	5.8	20	42	110	<0.10	21	960	1200	7300	7.24	10 YR 2/3
159	100	SST7-1/3	600550	4640350	28	4.2	19	33	66	0.1	21	570	890	5600	7.34	10 YR 3/2
160	100	SST7-2/3	600550	4640550	23	4.5	21	45	78	0.11	19	520	1100	5800	7.21	10 YR 3/4
161	100	SST8-1/3	600550	4640750	62	6.1	17	27	120	<0.10	<1	1400	1200	120	6.47	10 YR 3/4
162	100	SST8-2/3	600550	4640950	25	7	22	34	91	<0.10	16	1300	1300	6000	7.13	7.5 YR 2/3
163	100	SST8-4/3	600750	4640750	57	15	17	31	220	0.21	14	2600	2900	18000	7.06	10 YR 3/4
164	100	SST9-1/2	600450	4641150	69	6.3	18	30	130	0.12	12	1500	1400	9200	7.10	10 YR 3/4
165	100	SST9-2/2	600450	4641350	79	6.7	21	25	160	0.12	8.1	2000	1500	13000	6.72	10 YR 3/4
166	100	SST9-3/4	600750	4641250	38	9	20	36	160	0.11	16	1600	1700	11000	7.14	10 YR 2/3
167	100	SST9-4/4	600750	4641050	33	9.2	19	37	180	<0.10	16	1500	1800	9600	7.19	10 YR 3/3
168	100	SST10-3/2	600650	4641750	17	1	22	47	37	<0.10	18	130	210	1700	7.21	7.5 YR 3/2
169	100	SST10-3/3	600750	4641750	5.1	0.27	22	26	20	<0.10	13	51	110	1200	7.31	10 YR 3/2
170	100	SST10-4/4	600750	4641450	46	8.7	20	35	190	<0.10	15	1600	1700	11000	6.90	10 YR 3/4
171	100	SST11-2/1	600450	4642050	41	7.9	22	41	170	0.16	19	1400	1600	8400	7.15	10 YR 3/3
172	100	SST11-3/1	600650	4642050	13	0.79	30	100	49	<0.10	31	72	150	1800	7.25	7.5 YR 3/3
173	100	SST12-1/2	600450	4642350	59	13	20	29	230	0.12	15	2600	2400	16000	7.16	7.5 YR 2/3
174	100	SST12-1/3	600550	4642350	8.4	0.66	24	26	23	<0.10	10	73	130	1300	7.27	10 YR 3/3
175	100	SST12-2/3	600550	4642550	13	0.67	23	34	30	<0.10	16	94	150	1300	7.26	7.5 YR 3/3
176	100	SST13-1/1	600450	4642650	5.8	0.42	22	23	21	<0.10	12	55	110	1200	7.11	10 YR 3/3
177	100	SST13-2/1	600450	4642850	5.6	<0.10	23	23	21	0.1	13	46	100	1200	7.23	7.5 YR 3/2
178	100	SST14-1/2	600450	4643150	7.8	0.49	15	12	27	0.1	8	81	150	1400	7.32	10 YR 3/4
179	100	SST14-1/3	600550	4643150	12	0.54	17	14	24	0.12	8.2	49	110	1100	7.34	10 YR 4/2
180	100	SST14-2/2	600450	4643350	8.6	0.46	14	15	26	0.1	8.9	47	100	970	7.32	10 YR 3/4
181	100	SST14-2/3	600550	4643350	12	<0.10	18	11	20	0.16	5.2	36	75	800	7.25	10 YR 4/4
182	100	SST15-2/4	600550	4643650	5.8	0.79	17	23	37	<0.10	11	81	160	1300	7.29	10 YR 2/3
183	100	SST15-3/3	600750	4643750	8.1	0.29	17	23	33	<0.10	6.5	46	100	880	7.30	10 YR 3/3
184	100	SST15-4/3	600750	4643550	11	0.56	23	49	45	0.14	15	86	130	1400	7.34	10 YR 2/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
185	100	SST16-1/2	600450	4643950	11	0.87	21	32	58	0.11	14	150	200	1300	7.37	10 YR 2/3
186	100	SST16-2/2	600450	4644150	14	0.74	24	55	54	0.17	15	130	160	1300	7.20	10 YR 2/3
187	100	SST16-3/2	600650	4644150	15	0.31	25	120	64	0.14	18	41	110	1300	7.41	7.5 YR 3/3
188	100	SST16-4/2	600650	4643950	3.7	0.44	16	17	26	0.16	5.7	56	120	890	7.35	10 YR 3/3
189	100	SST17-1/3	600550	4644350	5.8	0.7	16	25	23	0.1	11	53	120	1300	7.25	7.5 YR 2/2
190	100	SST17-2/3	600550	4644550	8	0.77	19	22	46	0.15	9.6	63	110	1200	7.28	7.5 YR 3/2
191	100	SST17-3/3	600750	4644550	3.2	0.18	14	15	30	0.14	7.3	40	78	610	7.30	10 YR 5/3
192	100	SST17-4/2	600650	4644350	11	0.7	22	19	20	0.13	9.1	47	110	1400	7.33	10 YR 2/3
193	100	SST18-2/4	600550	4644850	20	0.53	22	29	27	0.1	9.8	110	150	1200	7.26	7.5 YR 3/3
194	100	SST18-3/1	600650	4644850	21	0.18	24	26	30	<0.10	9	46	110	960	7.20	7.5 YR 3/2
195	100	SST23-2/4	600550	4646850	170	0.53	20	27	18	<0.10	12	49	100	1100	7.36	10 YR 3/3
196	100	SST24-2/2	600450	4647350	33	0.3	19	50	31	<0.10	20	120	170	1700	7.32	7.5 YR 3/3
197	100	SST27-4/3	600750	4648350	430	<0.10	22	33	46	<0.10	21	74	76	6400	7.23	7.5 YR 3/3
198	100	SST33-2/4	600550	4650850	65	0.14	17	8.3	61	<0.10	7.4	59	140	660	7.35	5 YR 4/4
199	100	SSU2-2/3	600950	4638550	10	1.5	20	52	43	<0.10	36	220	310	2000	7.23	10 YR 2/3
200	100	SSU3-1/2	600850	4638750	4.5	4.3	18	46	59	0.1	34	810	820	4600	7.34	10 YR 3/2
201	100	SSU3-3/1	601050	4638850	17	1.7	20	34	49	0.1	21	360	390	2400	7.35	10 YR 3/3
202	100	SSU4-1/1	600850	4639050	10	1.8	19	46	44	<0.10	32	280	380	2400	7.40	10 YR 3/2
203	100	SSU4-2/1	600850	4639250	25	4.7	18	33	69	<0.10	20	920	930	7200	7.28	10 YR 4/3
204	100	SSU5-3/3	601150	4639750	9.7	2.6	23	40	74	<0.10	21	330	570	3200	7.43	7.5 YR 3/2
205	100	SSU5-4/2	601050	4639550	18	4.7	21	37	92	<0.10	21	720	990	6100	7.44	10 YR 3/4
206	100	SSU6-3/1	601050	4640050	12	1.5	23	41	52	<0.10	18	140	320	1900	7.46	10 YR 2/3
207	100	SSU6-3/4	601150	4640050	12	2	20	40	46	0.13	19	230	410	2300	7.59	10 YR 3/3
208	100	SSU7-1/1	600850	4640250	7.5	4.1	23	38	71	0.11	17	540	760	3300	7.17	10 YR 2/2
209	100	SSU7-2/1	600850	4640450	8.3	3.8	19	42	83	0.33	19	460	850	4000	7.34	10 YR 4/4
210	100	SSU7-2/3	600950	4640550	7.3	2.1	19	35	42	0.12	16	260	390	2100	7.34	10 YR 2/3
211	100	SSU7-3/1	601050	4640450	17	0.51	23	49	28	<0.10	21	74	160	1400	7.42	10 YR 3/3
212	100	SSU7-4/1	601050	4640250	22	0.75	20	39	29	0.13	16	91	170	1400	7.16	10 YR 3/4
213	100	SSU7-4/4	601150	4640250	46	<0.10	21	53	33	0.11	16	73	180	1200	7.33	7.5 YR 4/4
214	100	SSU8-1/2	600850	4640750	2.8	0.54	21	26	29	0.13	12	66	180	1000	7.22	10 YR 3/3
215	100	SSU9-1/1	600850	4641050	12	0.24	22	37	30	0.1	16	56	180	1100	7.29	5 YR 4/3
216	100	SSU9-2/1	600850	4641250	18	0.29	23	37	31	0.12	17	69	190	1200	7.23	10 YR 3/3
217	100	SSU10-1/1	600850	4641450	19	0.64	23	36	30	<0.10	19	64	200	1400	7.26	10 YR 3/3
218	100	SSU10-2/3	600950	4641750	39	<0.10	20	50	36	<0.10	21	66	220	1100	7.31	7.5 YR 4/3
219	100	SSU10-3/1	601050	4641650	43	<0.10	20	48	35	<0.10	21	75	240	1200	7.21	10 YR 3/4
220	100	SSU20-2/1	600850	4645650	8.1	0.87	21	39	26	<0.10	16	66	130	1200	7.35	7.5 YR 2/2
221	100	SSU20-2/4	600950	4645650	15	1.3	23	45	40	<0.10	20	300	270	1600	7.43	10 YR 2/3
222	100	SSU21-1/4	600950	4645850	19	1.3	24	55	42	0.13	22	120	230	9100	7.39	10 YR 2/3
223	100	SSU21-4/4	601150	4645850	210	<0.10	35	100	39	<0.10	30	49	130	1900	7.35	10 YR 3/4
224	100	SSU27-3/3	601150	4648550	380	<0.10	21	36	60	<0.10	16	62	98	3000	7.28	5 YR 3/3
225	100	SSU31-2/2	600850	4650150	48	<0.10	16	18	30	<0.10	12	60	92	1200	7.40	7.5 YR 3/4
226	100	SSU32-2/4	600950	4650450	110	<0.10	17	13	35	<0.10	8.9	45	120	1400	7.42	7.5 YR 4/3
227	100	SSU33-1/3	600950	4650750	78	<0.10	18	7.3	68	<0.10	5.9	74	90	740	7.28	7.5 YR 4/4
228	100	SSV1-1/2	601250	4637950	3.4	0.2	20	31	28	<0.10	15	74	130	1300	7.21	10 YR 2/2
229	100	SSV2-1/2	601250	4638350	30	7.9	20	34	120	<0.10	16	1200	1500	8200	7.29	10 YR 2/3
230	100	SSV2-3/4	601550	4638450	49	9.9	23	35	130	0.16	19	1700	1700	11000	7.44	10 YR 2/3
231	100	SSV3-2/4	601350	4638850	22	3.3	22	40	96	0.1	16	570	750	3000	7.35	10 YR 2/3
232	100	SSV4-2/4	601350	4639250	30	6.1	23	39	99	0.14	24	880	1300	6800	7.45	10 YR 3/2
233	100	SSV4-3/3	601550	4639350	25	0.29	21	45	32	<0.10	21	68	120	1200	7.41	10 YR 3/3
234	100	SSV5-1/1	601250	4639450	22	1.7	23	44	48	0.1	24	210	380	2300	7.39	10 YR 3/2
235	100	SSV5-1/3	601350	4639550	39	<0.10	22	52	36	<0.10	23	68	240	1200	7.43	10 YR 3/4
236	100	SSV5-2/2	601250	4639750	46	0.32	21	51	34	0.1	21	71	210	1100	7.45	7.5 YR 3/3
237	100	SSV5-3/3	601550	4639750	30	0.22	23	61	35	<0.10	27	62	200	1500	7.28	10 YR 3/3
238	100	SSV7-1/3	601350	4640350	45	<0.10	22	53	36	<0.10	22	110	250	1200	7.22	10 YR 3/4
239	100	SSV7-3/2	601450	4640550	37	<0.10	19	42	36	<0.10	20	71	260	1200	7.25	10 YR 3/4
240	100	SSV10-1/1	601250	4641450	44	0.13	22	53	37	<0.10	24	70	240	1100	7.29	10 YR 4/4
241	100	SSV10-3/1	601450	4641650	35	0.12	25	65	39	<0.10	29	51	230	1200	7.26	10 YR 3/4
242	100	SSV27-4/2	601450	4648350	87	<0.10	20	23	54	0.11	14	52	97	1400	7.37	10 YR 3/3
243	100	SSV30-2/4	601350	4649650	58	<0.10	19	47	44	0.11	52	71	110	1300	7.38	10 YR 3/4
244	100	SSV31-4/2	601450	4649950	56	<0.10	20	77	36	<0.10	64	63	100	1200	7.36	10 YR 3/4
245	100	SSV32-2/4	601350	4650450	38	<0.10	19	11	59	<0.10	18	72	100	2100	7.33	7.5 YR 3/3
246	100	SSW1-1/3	601750	4637950	30	5.6	21	46	110	0.11	21	700	1200	6900	7.39	10 YR 3/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
247	100	SSW1-3/2	601850	4638150	33	7.3	21	33	110	0.12	18	1200	1300	6900	7.33	10 YR 2/3
248	100	SSW2-1/3	601750	4638350	38	11	23	35	130	0.1	19	1300	1800	10000	7.35	10 YR 2/3
249	100	SSW3-2/1	601650	4638850	30	5.3	21	45	100	0.1	24	790	1100	4700	7.32	2.5 YR 3/2
250	100	SSW3-2/3	601750	4638950	29	0.33	20	42	36	<0.10	17	61	200	1100	7.40	10 YR 3/4
251	100	SSW3-4/1	601850	4638650	30	7.7	21	40	120	0.21	20	980	1400	5900	7.31	10 YR 3/3
252	100	SSW3-4/4	601950	4638650	28	0.79	19	41	38	0.1	19	74	210	1100	7.34	10 YR 3/3
253	100	SSW4-1/3	601750	4639150	25	0.36	22	50	33	<0.10	25	70	160	1300	7.44	10 YR 3/3
254	100	SSW4-3/2	601850	4639350	32	<0.10	20	49	38	<0.10	24	65	170	900	7.18	10 YR 3/4
255	100	SSW5-1/1	601650	4639450	35	0.24	22	51	37	<0.10	26	70	220	1400	7.41	10 YR 3/4
256	100	SSW5-2/4	601750	4639650	30	0.31	21	51	39	<0.10	27	64	220	1300	7.28	10 YR 4/4
257	100	SSW6-1/3	601750	4639950	39	0.2	19	47	37	<0.10	21	79	250	1200	7.17	7.5 YR 3/4
258	100	SSW6-4/3	601950	4639950	34	0.12	20	49	47	<0.10	25	84	250	1300	7.44	10 YR 3/3
259	100	SSW7-1/3	601750	4640350	26	0.41	20	47	38	<0.10	23	65	220	1300	7.41	10 YR 3/4
260	100	SSW7-3/2	601850	4640550	20	0.72	22	48	41	<0.10	24	80	230	1400	7.33	10 YR 3/4
261	100	SSW30-3/1	601850	4649650	210	<0.10	22	180	82	<0.10	94	58	78	850	7.37	7.5 YR 4/3
262	100	SSW31-4/2	601850	4649950	67	<0.10	19	79	50	<0.10	56	63	120	1300	7.36	10 YR 4/4
263	100	SSW32-1/3	601750	4650350	22	<0.10	20	18	59	<0.10	16	68	94	1500	7.35	5 YR 3/3
264	100	SSW33-3/3	601950	4650950	8.9	<0.10	15	14	14	<0.10	9.4	63	95	1300	7.46	10 YR 4/4
265	100	SSX26-2/3	602150	4648150	130	0.17	14	15	22	<0.10	12	41	81	1300	7.37	10 YR 4/3
266	100	SSX33-3/1	602250	4650850	190	<0.10	17	25	28	<0.10	13	76	100	1200	7.37	10 YR 3/4
267	100	SSY24-2/3	602550	4647350	200	<0.10	17	33	28	0.1	13	110	480	780	7.47	7.5 YR 3/3
268	100	SSY27-3/1	602650	4648450	37	<0.10	18	16	25	<0.10	9.8	39	100	1200	7.52	10 YR 3/4
269	100	SSY30-3/4	602750	4649650	28	0.29	16	32	49	<0.10	20	81	200	1300	7.59	10 YR 2/3
270	100	SSY33-1/4	602550	4650650	37	3.3	21	40	90	<0.10	21	330	780	1700	7.45	7.5 YR 3/4
271	100	SSY33-4/4	602750	4650650	480	3	15	13	18	<0.10	9.1	200	1400	1400	7.53	10 YR 3/4
272	100	SSZ24-1/3	602950	4647150	30	0.22	17	20	18	<0.10	9.8	140	400	1000	7.56	7.5 YR 3/3
273	100	SSZ25-1/4	602950	4647450	2700	<0.10	12	32	27	<0.10	7.3	270	250	560	7.35	10 YR 5/3
274	100	SSZ26-4/1	603050	4647850	350	<0.10	14	40	26	0.15	12	210	120	1000	7.35	7.5 YR 3/4
275	100	SSZ27-1/2	602850	4648350	64	0.32	22	29	24	<0.10	15	65	120	1100	7.37	10 YR 4/3
276	100	SSZ28-1/2	602850	4648750	46	0.95	18	18	29	<0.10	13	170	230	1400	7.59	10 YR 4/4
277	100	SSZ31-2/1	602850	4650050	22	1.6	17	38	110	<0.10	22	130	470	1900	7.49	10 YR 3/3
278	100	SSZ32-2/4	602950	4650450	11	1.1	20	23	29	0.15	14	100	390	1400	7.49	7.5 YR 4/4
279	100	SSa25-1/3	603350	4647550	270	<0.10	9.3	40	27	0.24	6.5	2800	62	290	7.21	7.5 YR 4/4
280	100	SSa28-2/3	603350	4648950	17	24	22	7.9	36	<0.10	7.5	2800	2900	1900	7.43	10 YR 4/6
281	100	SSa29-3/2	603450	4649350	12	2.8	22	31	95	<0.10	18	300	410	1400	7.39	7.5 YR 3/4
282	100	SSa30-1/2	603250	4649550	13	3.2	21	32	84	<0.10	19	280	430	1700	7.35	7.5 YR 4/4
283	100	SSa30-3/4	603550	4649650	4.6	3.1	19	14	24	<0.10	9.4	310	410	1600	7.37	7.5 YR 3/4
284	100	SSa31-2/4	603350	4650050	9.4	1.8	22	17	29	<0.10	9.8	150	320	1700	7.41	10 YR 4/6
285	100	SSa32-1/4	603350	4650250	2.1	4.8	23	40	20	<0.10	17	200	390	2100	7.53	10 YR 2/3
286	100	SSa32-3/3	603550	4650550	11	0.61	18	30	25	0.15	15	67	150	1700	7.40	10 YR 2/3
287	100	SSa33-1/4	603350	4650650	7.5	1.3	17	28	130	0.12	15	270	350	2400	7.31	10 YR 2/3
288	100	SSa33-3/4	603550	4650850	8	5.5	17	23	70	0.18	10	2400	2300	3100	7.52	10 YR 2/3

**Data 4-1(4) Soil Samples of 50m Grid Content Analysis**

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
1	50	SSK27-3/2/4	597075	4648525	15	<0.10	15	39	33	<0.10	30	59	70	1700	7.11	10 YR 2/2
2	50	SSK27-3/3/1	597125	4648525	16	<0.10	17	39	27	<0.10	28	54	70	1900	7.04	10 YR 2/2
3	50	SSK27-3/3/3	597175	4648575	32	<0.10	16	27	33	<0.10	17	62	86	1400	7.16	10 YR 2/2
4	50	SSK27-3/4/2	597125	4648475	21	<0.10	16	30	25	<0.10	18	54	64	1400	7.36	10 YR 2/2
5	50	SSK27-3/4/4	597175	4648425	23	<0.10	16	31	34	<0.10	22	59	77	1000	7.13	10 YR 2/2
6	50	SSK27-4/3/3	597175	4648375	27	<0.10	15	26	25	<0.10	14	50	70	1100	7.20	10 YR 2/2
7	50	SSK28-4/2/4	597075	4648725	31	<0.10	16	26	22	<0.10	11	54	66	1100	7.18	10 YR 3/2
8	50	SSK28-4/4/1	597125	4648625	39	<0.10	15	25	21	<0.10	11	59	61	1400	7.21	10 YR 2/2
9	50	SSK28-4/4/2	597125	4648675	35	<0.10	14	26	20	<0.10	12	57	66	1300	7.24	10 YR 2/2
10	50	SSK28-4/4/4	597175	4648625	34	<0.10	17	31	260	<0.10	17	87	110	1500	7.10	10 YR 2/2
11	50	SSL26-3/1/3	597475	4648075	24	<0.10	17	36	35	<0.10	21	60	74	1200	7.17	10 YR 2/2
12	50	SSL26-3/1/4	597475	4648025	23	<0.10	16	35	32	0.1	20	70	70	1100	7.28	10 YR 2/3
13	50	SSL26-3/2/1	597425	4648125	27	<0.10	16	34	35	<0.10	19	67	72	1100	7.09	10 YR 2/2
14	50	SSL26-3/2/2	597425	4648175	21	<0.10	17	33	35	<0.10	22	68	85	1300	7.00	10 YR 2/2
15	50	SSL26-3/2/3	597475	4648175	16	<0.10	16	39	31	<0.10	24	84	80	1300	6.98	10 YR 2/2
16	50	SSL26-3/4/1	597525	4648025	23	<0.10	17	35	34	0.1	23	59	77	1300	7.20	10 YR 2/2
17	50	SSL26-4/3/3	597575	4647975	12	<0.10	15	30	45	<0.10	14	62	83	1200	7.17	10 YR 2/3
18	50	SSL27-1/1/3	597275	4648275	21	<0.10	16	30	31	<0.10	19	65	76	1100	6.96	10 YR 2/2
19	50	SSL27-1/2/2	597225	4648375	48	<0.1	16	29	28	<0.10	16	59	75	1200	6.96	10 YR 2/2
20	50	SSL27-1/2/4	597275	4648325	20	<0.10	16	29	30	<0.10	19	60	72	1000	7.08	10 YR 2/2
21	50	SSL27-1/4/1	597325	4648225	16	<0.10	16	35	32	<0.10	21	67	86	1100	6.86	10 YR 2/1
22	50	SSL27-1/4/4	597375	4648225	14	<0.10	17	33	36	0.1	21	70	98	1300	6.61	10 YR 2/1
23	50	SSL27-3/2/3	597475	4648575	23	<0.10	15	16	28	<0.10	12	66	79	1200	7.00	7.5 YR 4/3
24	50	SSL27-3/3/1	597525	4648525	24	<0.10	15	15	26	<0.10	8.4	71	90	1500	7.03	10 YR 3/4
25	50	SSL27-3/4/1	597525	4648425	17	<0.10	16	15	25	<0.10	19	82	83	1500	6.93	10 YR 3/3
26	50	SSL27-3/4/2	597525	4648475	18	<0.10	14	13	21	<0.10	9.7	67	79	1300	6.95	7.5 YR 4/3
27	50	SSL27-3/4/3	597575	4648475	20	<0.10	14	12	33	<0.10	38	76	97	1400	7.05	7.5 YR 2/3
28	50	SSL27-4/1/1	597425	4648225	9.5	<0.10	16	32	38	<0.10	23	69	110	1400	6.94	10 YR 2/1
29	50	SSL27-4/3/2	597525	4648375	19	<0.10	16	16	29	<0.10	9.9	69	86	1500	6.99	7.5 YR 3/3
30	50	SSL27-4/3/4	597575	4648325	24	<0.10	17	19	27	<0.10	14	72	84	2400	6.91	10 YR 3/3
31	50	SSL28-1/3/3	597375	4648775	7.3	<0.10	15	9.4	27	<0.10	8.2	55	100	1400	7.06	10 YR 4/3
32	50	SSL28-2/2/4	597275	4648925	5	<0.10	14	11	23	0.12	48	57	97	1200	7.04	10 YR 4/2
33	50	SSL28-2/3/2	597325	4648975	4	<0.10	14	9.1	27	<0.10	8.3	53	97	1400	6.97	10 YR 4/3
34	50	SSL28-2/4/2	597325	4648875	5.3	<0.10	15	12	24	0.1	8.8	60	110	1300	6.95	10 YR 4/3
35	50	SSL28-3/1/1	597425	4648825	4	0.24	17	10	16	0.11	6.4	58	96	1300	7.07	10 YR 4/3
36	50	SSL28-3/1/3	597475	4648875	7.6	<0.10	17	10	25	0.15	6.8	60	100	1600	7.00	10 YR 2/3
37	50	SSL28-3/1/4	597475	4648825	5.6	<0.10	15	10	19	<0.10	7.5	57	79	1400	6.80	7.5 YR 3/2
38	50	SSL28-3/2/3	597475	4648975	8.8	<0.10	16	10	26	0.1	6	57	98	1600	7.08	10 YR 3/2
39	50	SSL28-3/2/4	597475	4648925	12	<0.10	18	6	26	<0.10	6.6	77	120	2200	7.17	2.5 YR 4/2
40	50	SSL28-4/1/1	597425	4648625	24	<0.10	16	18	25	<0.10	11	65	79	1200	6.97	10 YR 3/3
41	50	SSL28-4/1/2	597425	4648675	12	<0.10	<1	11	20	<0.10	7.9	66	90	2000	7.02	7.5 YR 4/3
42	50	SSL28-4/1/3	597475	4648675	15	<0.10	14	14	17	0.1	11	52	81	1200	7.07	10 YR 4/3
43	50	SSL28-4/1/4	597475	4648625	14	<0.10	15	11	22	0.1	9.1	66	89	1400	7.10	10 YR 4/3
44	50	SSL28-4/2/1	597425	4648725	18	<0.10	14	12	23	<0.10	8.4	63	89	1400	7.04	10 YR 4/3
45	50	SSL28-4/4/1	597525	4648625	11	<0.10	16	7	23	0.12	7	83	85	1600	7.00	7.5 YR 3/3
46	50	SSL29-1/4/1	597325	4649025	1.6	<0.10	16	7	36	<0.10	7.1	51	120	1500	6.99	10 YR 3/3
47	50	SSL29-1/4/4	597375	4649025	7.9	<0.10	16	6.6	38	<0.10	5.9	48	120	1700	7.13	10 YR 3/4
48	50	SSL29-4/3/4	597575	4649125	140	<0.10	16	29	43	0.1	14	390	90	660	6.67	5 YR 3/6
49	50	SSL29-4/4/1	597525	4649025	46	<0.10	18	18	49	<0.10	65	200	210	2200	7.09	5 YR 3/3
50	50	SSL29-4/4/3	597575	4649075	110	<0.10	19	37	36	<0.10	21	330	85	1200	7.10	5 YR 4/3
51	50	SSL29-4/4/4	597575	4649025	110	<0.10	18	32	41	0.11	20	230	100	1300	7.06	5 YR 3/3
52	50	SSM24-3/3/1	597925	4647325	18	<0.10	15	24	38	<0.10	13	67	92	1300	7.31	10 YR 2/2
53	50	SSM24-3/3/2	597925	4647375	16	<0.1	15	22	38	<0.10	14	60	80	1100	7.38	10 YR 2/3
54	50	SSM24-3/3/3	597975	4647375	20	<0.10	16	39	26	<0.10	29	50	68	1500	6.95	10 YR 2/3
55	50	SSM24-3/4/3	597975	4647275	18	<0.10	16	19	34	<0.10	20	59	80	1100	7.23	10 YR 2/3
56	50	SSM24-3/4/4	597975	4647225	17	<0.10	16	38	35	<0.10	22	58	84	1100	7.38	10 YR 3/2
57	50	SSM25-1/3/2	597725	4647575	16	<0.10	17	30	33	0.1	20	49	73	1200	7.22	10 YR 2/2
58	50	SSM25-1/3/3	597775	4647575	17	<0.10	16	34	28	0.12	24	43	71	1200	7.05	10 YR 2/2
59	50	SSM25-2/1/3	597675	4647675	12	<0.10	14	27	40	0.1	14	54	81	1100	7.13	10 YR 2/2
60	50	SSM25-2/1/4	597675	4647625	19	<0.10	16	29	33	0.13	20	48	71	1300	7.11	10 YR 2/2

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
61	50	SSM25-2/2/3	597675	4647775	10	<0.10	14	24	51	0.1	5.5	57	81	1200	7.34	2.5 Y 4/2
62	50	SSM25-2/2/4	597675	4647725	7.9	0.22	14	21	48	<0.10	7.4	52	83	1100	7.42	2.5 Y 3/3
63	50	SSM25-2/3/1	597725	4647725	14	<0.10	14	19	41	<0.10	6.2	53	82	660	7.35	10 YR 3/3
64	50	SSM25-3/2/3	597875	4647775	8.7	<0.10	16	17	17	<0.10	11	58	64	17000	7.10	7.5 YR 3/2
65	50	SSM25-3/2/4	597875	4647725	11	<0.10	16	16	23	<0.10	12	57	54	1500	6.91	7.5 YR 3/3
66	50	SSM25-3/3/2	597925	4647775	11	<0.10	16	16	18	0.1	11	47	58	1900	6.97	10 YR 4/3
67	50	SSM25-3/4/2	597925	4647675	7.5	0.37	15	14	22	0.1	10	55	72	1900	7.03	10 YR 4/3
68	50	SSM25-3/4/4	597975	4647625	8.6	<0.10	17	16	30	<0.10	10	65	99	1800	6.99	7.5 YR 3/2
69	50	SSM25-4/1/3	597875	4647475	8.8	<0.10	17	24	36	<0.10	16	55	78	1200	6.99	10 YR 3/2
70	50	SSM25-4/2/1	597825	4647525	9.5	0.55	18	26	34	0.1	18	53	67	1200	7.12	10 YR 2/3
71	50	SSM25-4/2/2	597825	4647575	24	<0.10	16	19	45	<0.10	11	100	150	1800	6.94	10 YR 3/3
72	50	SSM25-4/2/4	597875	4647525	23	<0.10	15	21	48	<0.10	13	190	240	2600	6.59	10 YR 3/3
73	50	SSM25-4/4/1	597925	4647425	16	<0.10	16	29	38	0.11	17	61	87	1200	7.31	10 YR 2/3
74	50	SSM26-1/1/1	597625	4647825	11	<0.10	14	23	47	<0.10	16	55	99	1200	7.29	10 YR 3/2
75	50	SSM26-1/1/2	597625	4647875	9.6	<0.10	15	25	50	<0.10	12	56	89	1300	7.26	10 YR 3/2
76	50	SSM26-1/1/4	597675	4647825	16	<0.10	14	28	45	0.1	12	63	87	1100	7.18	10 YR 3/2
77	50	SSM26-1/2/1	597625	4647925	10	<0.10	15	28	49	0.1	13	61	94	1300	7.47	10 YR 2/2
78	50	SSM26-1/3/2	597725	4647975	9	<0.10	15	17	25	<0.10	12	50	71	1600	6.91	10 YR 3/3
79	50	SSM26-1/3/4	597775	4647925	1.9	<0.10	15	17	20	<0.10	11	42	61	1500	7.01	10 YR 4/3
80	50	SSM26-1/4/3	597775	4647875	6.2	<0.10	16	16	20	<0.10	11	41	67	1900	7.04	10 YR 3/3
81	50	SSM26-1/4/4	597775	4647825	<1	<0.10	15	18	24	<0.10	10	52	69	1500	6.96	7.5 YR 3/3
82	50	SSM26-2/1/3	597675	4648075	16	<0.10	16	17	21	0.1	15	50	72	2400	7.01	10 YR 4/3
83	50	SSM26-2/2/2	597625	4648175	18	<0.10	16	18	21	<0.10	11	50	75	1800	7.09	10 YR 3/3
84	50	SSM26-2/2/4	597675	4648125	17	<0.10	16	18	21	<0.10	12	51	70	1900	7.11	10 YR 4/3
85	50	SSM26-2/4/1	597725	4648025	1.5	<0.10	15	19	29	<0.10	14	50	74	1300	6.87	10 YR 4/3
86	50	SSM26-2/4/4	597775	4648025	8.9	0.11	15	15	18	0.1	10	25	65	1500	7.03	10 YR 4/3
87	50	SSM26-4/1/2	597825	4647875	<1	<0.10	15	16	19	<0.10	16	50	65	1600	7.04	10 YR 4/2
88	50	SSM27-1/1/1	597625	4648225	16	<0.10	15	18	21	0.12	10	50	79	1500	7.03	10 YR 4/3
89	50	SSM27-1/1/2	597625	4648275	18	<0.10	17	23	26	<0.10	13	61	93	2100	6.88	7.5 YR 3/3
90	50	SSM27-1/1/4	597675	4648225	18	<0.10	16	19	21	<0.10	12	53	78	2100	7.02	10 YR 4/3
91	50	SSM27-1/2/1	597625	4648325	17	<0.10	17	24	31	0.1	16	62	100	3300	6.74	7.5 YR 3/2
92	50	SSM29-1/2/2	597625	4649175	100	<0.10	18	14	69	<0.10	11	180	250	1200	6.78	7.5 YR 4/3
93	50	SSM29-1/2/3	597675	4649175	69	<0.10	18	28	45	0.11	14	190	140	1500	6.71	7.5 YR 3/4
94	50	SSM29-1/2/4	597675	4649125	110	<0.10	15	28	39	<0.10	15	200	120	1600	6.85	5 YR 3/3
95	50	SSM29-1/3/2	597725	4649175	22	0.11	23	7.1	92	<0.10	4	120	250	2200	6.97	10 YR 3/3
96	50	SSM29-1/3/4	597775	4649125	51	<0.10	21	5.8	92	<0.10	3.4	65	280	830	6.93	7.5 YR 4/3
97	50	SSM29-2/2/1	597625	4649325	21	0.31	21	27	80	<0.10	18	180	210	2400	6.91	7.5 YR 3/2
98	50	SSM29-2/2/4	597675	4649325	23	<0.10	21	34	70	<0.10	25	140	140	1900	6.71	7.5 YR 3/2
99	50	SSM29-2/3/1	597725	4649325	23	<0.10	20	36	64	<0.10	28	300	210	2200	6.90	7.5 YR 3/2
100	50	SSM29-2/3/2	597725	4649375	18	<0.10	19	38	65	0.11	180	78	120	1500	7.16	10 YR 3/3
101	50	SSM29-2/3/4	597775	4649325	17	0.13	21	43	64	<0.10	39	190	200	2500	6.97	7.5 YR 3/2
102	50	SSM29-3/2/1	597825	4649325	18	3.5	19	33	140	<0.10	30	540	860	9900	7.08	10 YR 3/3
103	50	SSM29-3/2/3	597875	4649375	23	9.1	18	36	130	0.13	24	1200	1700	7800	6.96	10 YR 2/3
104	50	SSM29-3/4/4	597975	4649225	20	0.82	23	25	84	<0.10	16	160	240	3400	6.81	7.5 YR 2/2
105	50	SSM29-4/1/2	597825	4649075	47	<0.10	17	8.8	67	<0.10	4.8	64	170	640	7.08	7.5 YR 3/3
106	50	SSM29-4/2/1	597825	4649125	14	<0.10	23	12	97	0.12	7.6	58	170	1500	6.92	7.5 YR 4/3
107	50	SSM29-4/2/3	597875	4649175	50	<0.10	21	13	89	<0.10	7.8	100	180	1800	7.06	7.5 YR 3/2
108	50	SSM29-4/2/4	597875	4649125	45	<0.10	21	11	88	0.1	8	61	160	1500	7.01	7.5 YR 3/2
109	50	SSM29-4/3/2	597925	4649175	32	<0.10	22	19	90	<0.10	11	81	140	2200	7.05	7.5 YR 3/2
110	50	SSM29-4/3/3	597975	4649175	27	<0.10	23	30	92	<0.10	16	85	120	2300	6.95	10 YR 2/3
111	50	SSM30-3/1/3	597875	4649675	33	<0.10	23	49	60	<0.10	38	370	180	2300	7.03	10 YR 3/2
112	50	SSM30-3/1/4	597875	4649625	35	<0.10	21	46	64	<0.10	33	420	200	2400	6.63	7.5 YR 3/2
113	50	SSM30-3/2/3	597875	4649775	32	0.38	20	43	44	<0.10	31	370	160	1900	6.99	7.5 YR 3/2
114	50	SSM30-3/2/4	597875	4649725	28	<0.10	19	50	34	<0.10	16	240	120	1600	6.97	7.5 YR 3/2
115	50	SSM30-3/4/1	597925	4649625	110	1.8	16	30	100	<0.10	16	1900	1300	8700	6.34	7.5 YR 3/2
116	50	SSM30-4/1/3	597875	4649475	16	0.81	17	34	65	<0.10	23	220	220	1700	7.13	7.5 YR 3/2
117	50	SSM30-4/1/4	597875	4649425	90	11	16	24	340	0.24	16	6200	2900	24000	7.16	7.5 YR 2/2
118	50	SSM30-4/2/3	597875	4649575	24	0.17	20	47	56	0.1	33	240	170	1900	6.98	7.5 YR 2/2
119	50	SSM30-4/3/1	597925	4649525	87	5.1	9.9	27	100	0.16	14	1700	1400	11000	5.62	7.5 YR 3/2
120	50	SSM30-4/3/4	597975	4649525	94	15	15	15	250	<0.10	6.1	3800	3200	13000	6.81	10 YR 4/2
121	50	SSN22-2/3/1	598125	4646525	6.9	<0.10	15	22	41	<0.10	13	40	58	1100	6.70	7.5 YR 3/2
122	50	SSN22-2/3/4	598175	4646525	7.7	<0.10	15	22	37	<0.10	11	39	60	1000	6.79	7.5 YR 3/2



Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
123	50	SSN22-2/4/2	598125	4646475	13	0.11	16	18	30	<0.10	11	58	68	1100	6.70	7.5 YR 2/2
124	50	SSN22-3/2/1	598225	4646525	6.8	0.15	15	23	36	<0.10	12	39	60	1000	6.85	7.5 YR 3/2
125	50	SSN22-3/2/2	598225	4646575	5.6	0.39	17	25	70	0.13	15	48	94	1200	6.81	7.5 YR 3/2
126	50	SSN22-3/2/4	598275	4646525	5	0.44	16	25	46	<0.10	14	44	72	1100	6.94	7.5 YR 3/2
127	50	SSN22-3/4/1	598325	4646425	8.7	0.37	16	22	49	<0.10	11	54	80	1300	6.96	7.5 YR 3/2
128	50	SSN22-3/4/2	598325	4646475	8.3	0.37	15	23	52	<0.10	13	46	86	1200	6.91	7.5 YR 3/2
129	50	SSN22-3/4/3	598375	4646475	7.7	0.45	16	21	54	<0.10	12	50	88	1200	6.95	7.5 YR 3/2
130	50	SSN22-4/3/3	598375	4646375	10	1.3	18	23	140	<0.10	12	100	160	1600	6.87	7.5 YR 3/2
131	50	SSN23-1/4/3	598175	4646675	8.7	0.72	17	24	69	<0.10	15	62	120	1300	7.03	7.5 YR 3/2
132	50	SSN23-2/3/1	598125	4646925	12	0.19	14	21	35	<0.10	16	60	70	1300	6.94	10 YR 2/3
133	50	SSN23-2/3/2	598125	4646975	11	0.23	14	19	35	<0.10	11	59	75	1200	6.93	10 YR 2/3
134	50	SSN23-2/4/3	598175	4646875	50	<0.10	16	29	240	<0.10	14	540	140	1200	6.73	10 YR 2/3
135	50	SSN23-3/1/2	598225	4646875	19	3.1	19	32	290	<0.10	18	280	340	1700	6.58	10 YR 2/3
136	50	SSN23-3/1/4	598275	4646825	12	3.2	17	34	200	<0.10	20	170	330	1800	7.28	10 YR 2/2
137	50	SSN23-4/1/2	598225	4646675	9.1	2.5	18	26	190	<0.10	18	140	270	1700	7.00	7.5 YR 3/2
138	50	SSN23-4/2/3	598275	4646775	6.1	3.2	16	33	210	<0.10	20	120	330	1600	7.34	10 YR 3/2
139	50	SSN23-4/2/4	598275	4646725	8.8	2.8	16	34	200	<0.10	20	88	280	1400	7.34	10 YR 3/3
140	50	SSN23-4/3/2	598325	4646775	5	3	17	36	160	<0.10	22	100	290	1500	7.28	10 YR 2/3
141	50	SSN24-1/1/3	598075	4647075	14	<0.10	15	25	37	<0.10	16	54	77	1100	7.18	10 YR 3/2
142	50	SSN24-1/2/1	598025	4647125	15	0.15	16	30	34	<0.10	19	55	71	1000	6.99	7.5 YR 2/2
143	50	SSN24-1/2/2	598025	4647175	16	0.11	15	32	35	<0.10	19	50	73	1000	6.84	7.5 YR 2/2
144	50	SSN24-1/2/3	598075	4647175	13	0.16	16	28	39	<0.10	16	63	79	1400	7.10	7.5 YR 2/2
145	50	SSN24-1/4/1	598125	4647025	14	0.16	15	25	37	<0.10	16	58	73	1100	6.57	10 YR 2/2
146	50	SSN24-1/4/4	598175	4647025	31	2.1	10	23	320	<0.10	11	520	230	1600	6.70	10 YR 2/3
147	50	SSN24-2/3/3	598175	4647375	72	7.4	20	19	210	<0.10	9	2100	1600	12000	5.87	10 YR 4/4
148	50	SSN24-3/1/3	598275	4647275	79	<0.10	24	39	37	0.14	21	180	120	2000	6.86	7.5 YR 3/3
149	50	SSN24-3/2/1	598225	4647325	230	<0.10	23	41	43	<0.10	17	170	160	2300	6.84	7.5 YR 3/3
150	50	SSN24-3/2/2	598225	4647375	100	<0.10	21	41	50	<0.10	17	300	310	3000	6.88	7.5 YR 4/3
151	50	SSN24-3/4/1	598325	4647225	31	<0.10	17	24	27	0.1	13	92	100	1600	6.87	7.5 YR 3/2
152	50	SSN24-3/4/4	598375	4647225	9.8	0.34	16	16	21	0.14	11	80	90	2000	6.91	10 YR 3/4
153	50	SSN24-4/3/3	598375	4647175	2.7	0.82	17	8.1	32	0.25	4.1	65	130	2500	6.95	7.5 YR 3/2
154	50	SSN24-4/3/4	598375	4647125	4.7	0.39	22	67	23	0.16	<1	53	85	1300	6.85	10 YR 3/3
155	50	SSN24-4/4/3	598375	4647075	47	2.6	11	8.8	200	0.28	52	3700	2100	6900	6.95	10 YR 3/3
156	50	SSN24-4/4/4	598375	4647025	26	7.8	17	14	120	0.18	7	1400	1500	8600	6.25	10 YR 3/3
157	50	SSN25-1/1/3	598075	4647475	7.6	0.42	19	23	43	<0.10	19	100	140	2200	6.87	7.5 YR 3/2
158	50	SSN25-1/2/2	598025	4647575	5.6	0.53	14	15	32	<0.10	8.8	110	120	1300	6.74	7.5 YR 3/3
159	50	SSN25-1/2/4	598075	4647525	180	<0.10	23	42	33	<0.10	19	170	130	2300	6.94	10 YR 3/3
160	50	SSN25-1/3/3	598175	4647575	770	<0.10	13	14	21	<0.10	23	420	69	990	6.71	5 YR 3/3
161	50	SSN25-1/3/4	598175	4647525	220	<0.10	20	45	40	0.1	17	240	180	2800	6.81	5 YR 3/4
162	50	SSN25-1/4/1	598125	4647425	19	<0.10	19	20	52	<0.10	6.5	87	150	2200	6.80	10 YR 4/3
163	50	SSN25-2/1/1	598025	4647625	6.4	0.24	16	14	20	<0.10	18	69	88	1800	6.88	10 YR 5/3
164	50	SSN25-2/4/3	598175	4647675	160	0.5	18	25	360	0.12	14	1800	820	7300	5.85	7.5 YR 3/4
165	50	SSN25-3/1/1	598225	4647625	100	<0.10	20	40	62	<0.10	20	200	210	3000	6.77	7.5 YR 3/3
166	50	SSN25-3/1/2	598225	4647675	140	<0.10	22	50	56	<0.10	25	270	280	5000	7.24	5 YR 3/4
167	50	SSN25-4/1/1	598225	4647425	330	<0.1	19	37	35	<0.10	17	370	130	2100	6.83	7.5 YR 3/3
168	50	SSN25-4/1/2	598225	4647475	95	<0.10	30	63	41	0.12	57	220	200	3200	6.54	5 YR 3/6
169	50	SSN25-4/1/3	598275	4647475	140	22	18	17	290	0.19	6.7	4200	4600	33000	6.97	7.5 YR 3/3
170	50	SSN25-4/2/3	598275	4647575	72	<0.10	28	60	43	0.1	30	200	180	3800	6.84	7.5 YR 3/4
171	50	SSO21-2/3/1	598525	4646125	11	0.7	18	17	120	<0.10	7.7	87	150	1400	6.97	7.5 YR 3/2
172	50	SSO21-2/3/3	598575	4646175	11	<0.10	18	19	63	<0.10	11	63	93	1300	6.90	7.5 YR 3/2
173	50	SSO21-2/4/2	598525	4646075	13	0.75	19	16	170	<0.10	6.6	130	160	1300	6.95	7.5 YR 2/3
174	50	SSO21-3/2/2	598625	4646175	12	<0.10	19	22	66	<0.10	11	62	96	1300	6.78	7.5 YR 2/2
175	50	SSO21-3/2/3	598675	4646175	7.6	<0.10	16	17	51	<0.10	10	70	85	1100	6.83	7.5 YR 3/2
176	50	SSO21-3/3/1	598725	4646125	6.3	1.5	17	18	160	<0.10	11	140	210	1400	6.83	7.5 YR 2/2
177	50	SSO21-3/3/2	598725	4646175	3.8	0.76	16	18	120	<0.10	10	140	150	1200	6.87	7.5 YR 2/2
178	50	SSO21-3/3/4	598775	4646125	6.2	0.83	17	19	96	<0.10	11	120	150	1500	6.89	7.5 YR 3/2
179	50	SSO21-3/4/3	598775	4646075	8.1	0.2	14	15	56	<0.10	8.3	70	110	1000	6.78	7.5 YR 3/3
180	50	SSO21-3/4/4	598775	4646025	16	<0.10	14	11	39	<0.10	5.3	45	79	790	7.02	10 YR 3/4
181	50	SSO21-4/3/3	598775	4645975	15	0.67	12	8.6	120	<0.10	4.8	45	110	810	7.08	7.5 YR 3/3
182	50	SSO22-1/2/2	598425	4646375	5.6	<0.10	18	26	48	<0.10	15	55	92	1300	7.07	7.5 YR 3/2
183	50	SSO22-1/2/3	598475	4646375	8.5	<0.10	18	30	37	<0.10	16	50	77	1300	6.66	7.5 YR 4/2
184	50	SSO22-1/3/1	598525	4646325	9	<0.10	17	28	36	<0.10	14	46	75	1300	6.95	7.5 YR 2/2

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
185	50	SSO22-1/4/2	598525	4646275	4.7	0.57	16	16	70	<0.10	8.4	92	110	1200	6.94	7.5 YR 3/2
186	50	SSO23-1/3/2	598525	4646775	26	0.93	14	7.2	44	<0.10	4.9	170	260	1600	7.15	7.5 YR 4/2
187	50	SSO23-1/3/3	598575	4646775	58	<0.10	17	4.4	38	<0.10	2.2	48	120	680	7.28	5 YR 4/3
188	50	SSO23-2/1/2	598425	4646875	32	2	20	27	100	0.13	13	660	460	3200	6.03	10 YR 3/4
189	50	SSO23-2/1/4	598475	4646825	9.9	2	15	29	60	<0.10	22	390	550	4200	7.18	7.5 YR 3/2
190	50	SSO23-2/2/1	598425	4646925	10	0.94	17	21	37	0.18	13	150	170	1900	7.04	10 YR 3/3
191	50	SSO23-2/2/2	598425	4646975	20	0.21	16	27	25	0.1	15	72	100	1700	6.98	7.5 YR 3/2
192	50	SSO23-2/4/1	598525	4646825	28	0.68	14	27	36	0.1	16	69	120	750	7.08	7.5 YR 4/2
193	50	SSO23-4/1/2	598625	4646675	58	<0.10	17	17	44	0.1	10	140	170	1300	7.14	7.5 YR 3/2
194	50	SSO23-4/2/1	598625	4646725	57	<0.10	12	12	39	<0.10	6.5	58	120	620	6.94	7.5 YR 3/3
195	50	SSO23-4/2/3	598675	4646775	85	<0.10	16	17	42	<0.10	7.4	87	98	840	6.54	7.5 YR 3/2
196	50	SSO23-4/2/4	598675	4646725	78	<0.10	20	26	50	<0.10	11	79	130	920	7.21	7.5 YR 2/3
197	50	SSO23-4/3/2	598725	4646775	180	<0.10	19	20	48	<0.10	11	140	120	970	6.83	7.5 YR 3/3
198	50	SSO23-4/3/3	598775	4646775	78	<0.10	29	20	320	<0.10	8.1	53	170	580	6.70	5 YR 4/3
199	50	SSO23-4/3/4	598775	4646725	40	<0.10	21	21	45	<0.10	14	150	170	1500	7.35	10 YR 2/3
200	50	SSO24-1/2/1	598425	4647125	13	0.23	15	14	22	<0.10	16	58	83	2000	7.10	10 YR 3/3
201	50	SSP20-2/3/3	598975	4645775	6.6	0.14	16	18	42	<0.10	9.4	60	90	960	7.04	7.5 Y 4/3
202	50	SSP20-2/3/4	598975	4645725	15	<0.10	17	19	19	<0.10	6.6	51	65	950	7.07	7.5 YR 4/3
203	50	SSP20-3/1/3	599075	4645675	24	<0.10	13	6.2	22	<0.10	1.8	33	64	640	7.01	10 YR 4/4
204	50	SSP20-3/2/1	599025	4645725	10	<0.10	11	3.9	24	<0.10	2.6	23	54	500	7.14	7.5 YR 4/3
205	50	SSP20-3/2/2	599025	4645775	8.3	0.39	12	5.9	39	<0.10	2	40	96	720	7.11	7.5 YR 4/3
206	50	SSP20-3/4/1	599125	4645625	20	0.12	12	7.5	28	<0.10	3.6	36	72	900	7.09	10 YR 3/4
207	50	SSP20-3/4/4	599175	4645625	18	<0.10	13	9	35	<0.10	4.2	34	79	920	7.17	10 YR 3/3
208	50	SSP20-4/3/3	599175	4645575	9.4	<0.10	13	8.9	23	<0.10	5.5	34	60	990	7.05	10 YR 3/3
209	50	SSP21-1/1/2	598825	4645875	16	0.12	14	13	40	0.11	8.3	43	110	640	7.13	7.5 YR 4/4
210	50	SSP21-1/1/3	598875	4645875	7.4	0.33	12	9.7	35	<0.10	4.6	32	87	570	7.08	7.5 YR 3/3
211	50	SSP21-1/1/4	598875	4645825	6.6	0.81	13	12	79	<0.10	6.4	49	130	750	7.03	7.5 YR 3/3
212	50	SSP21-1/2/1	598825	4645925	4.7	0.68	11	7.7	100	<0.10	3	40	140	570	7.20	7.5 YR 3/3
213	50	SSP21-1/2/2	598825	4645975	14	0.53	15	17	60	<0.10	10	53	100	810	7.03	7.5 YR 3/2
214	50	SSP21-1/4/1	598925	4645825	4.3	<0.1	2.7	1.4	11	<0.10	1.9	20	50	130	6.97	7.5 YR 4/4
215	50	SSP21-2/1/2	598825	4646075	6.4	<0.1	13	22	55	<0.10	11	60	87	1400	7.01	7.5 YR 4/2
216	50	SSP21-2/1/3	598875	4646075	5.7	<0.1	16	18	50	<0.10	10	72	110	1400	7.05	7.5 YR 3/2
217	50	SSP21-3/1/2	599025	4646075	130	20	18	15	280	<0.10	3.9	4300	4400	33000	7.05	10 YR 2/3
218	50	SSP21-3/1/4	599075	4646025	25	0.64	20	21	39	<0.10	8.4	160	230	2000	7.10	10 YR 4/3
219	50	SSP21-3/2/1	599025	4646125	67	15	19	19	200	<0.10	21	1900	2800	22000	7.18	10 YR 2/2
220	50	SSP21-3/2/2	599025	4646175	71	2	23	18	90	0.22	49	570	410	3800	7.05	10 YR 2/3
221	50	SSP21-3/2/3	599075	4646175	43	<0.10	20	18	50	<0.10	11	150	170	1700	7.05	10 YR 2/2
222	50	SSP21-3/4/1	599125	4646025	25	0.24	21	20	42	0.13	38	110	160	1600	6.95	10 YR 3/3
223	50	SSP21-4/3/2	599125	4645975	30	<0.10	20	12	36	<0.10	7.3	86	100	1300	6.92	10 YR 3/3
224	50	SSP21-4/3/4	599175	4645925	33	0.2	23	14	37	<0.10	8.8	180	120	1600	6.82	10 YR 3/3
225	50	SSP22-2/3/3	598975	4646575	32	<0.10	19	15	99	<0.10	5.7	60	78	1600	7.19	10 YR 5/6
226	50	SSP22-3/2/1	599025	4646525	98	<0.10	20	14	110	0.13	8.1	68	73	1600	6.74	10 YR 4/4
227	50	SSP22-3/2/3	599075	4646575	70	<0.10	24	20	100	0.1	12	78	92	1900	6.80	10 YR 3/3
228	50	SSP22-3/4/2	599125	4646475	45	0.2	21	14	83	0.13	9.3	120	140	1500	7.26	10 YR 3/4
229	50	SSP22-3/4/3	599175	4646475	42	<0.10	19	12	81	<0.10	6.9	72	92	1200	7.21	10 YR 4/4
230	50	SSP22-3/4/4	599175	4646425	53	<0.10	20	15	82	<0.10	16	210	120	1400	7.13	10 YR 3/4
231	50	SSP22-4/1/3	599075	4646275	59	0.11	20	11	110	0.13	27	94	110	1400	7.11	10 YR 3/4
232	50	SSP22-4/1/4	599075	4646225	70	<0.10	23	21	94	<0.10	15	75	91	1800	6.83	10 YR 3/3
233	50	SSP22-4/2/4	599075	4646325	49	<0.10	21	11	97	<0.10	8	72	93	1400	6.90	10 YR 3/4
234	50	SSP22-4/3/1	599125	4646325	50	<0.10	19	11	100	<0.10	9.8	76	94	1200	7.08	10 YR 3/4
235	50	SSP22-4/3/2	599125	4646375	48	<0.10	19	12	91	0.12	26	90	100	1300	7.18	10 YR 3/4
236	50	SSP23-1/1/2	598825	4646675	24	0.15	33	11	81	<0.10	8.6	39	110	1900	7.03	10 YR 3/2
237	50	SSP23-1/2/1	598825	4646725	4.7	0.69	24	10	78	<0.10	7.5	57	110	2000	7.02	7.5 YR 3/2
238	50	SSP23-1/2/4	598875	4646725	5.9	0.19	25	11	77	<0.10	8.4	57	110	1800	7.00	10 YR 4/3
239	50	SSP23-1/4/1	598925	4646625	74	<0.10	23	23	54	<0.10	14	65	94	2600	6.92	10 YR 3/3
240	50	SSP23-1/4/2	598925	4646675	46	<0.10	25	22	73	0.1	12	96	140	2600	6.96	10 YR 3/3
241	50	SSP23-4/1/4	599075	4646625	70	<0.10	24	12	100	<0.10	8.4	95	110	1500	6.93	10 YR 3/3
242	50	SSP23-4/3/4	599175	4646725	46	<0.10	24	32	66	<0.10	18	74	110	1600	7.11	10 YR 3/3
243	50	SSP23-4/4/2	599125	4646675	37	<0.10	25	40	76	<0.10	25	64	110	1400	6.86	10 YR 2/3
244	50	SSQ04-3/2/4	599475	4639325	11	0.16	19	29	13	<0.10	14	70	85	1200	7.21	7.5 YR 2/2
245	50	SSQ04-3/3/3	599575	4639375	8.7	0.14	19	37	14	<0.10	20	43	77	1100	7.25	7.5 YR 3/2
246	50	SSQ04-3/4/4	599575	4639225	7.1	<0.10	17	36	14	<0.10	19	52	76	1000	7.24	7.5 YR 3/2

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
247	50	SSQ05-4/1/1	599425	4639425	12	0.2	20	37	15	<0.10	19	51	69	1300	7.08	7.5 YR 3/2
248	50	SSQ05-4/3/4	599575	4639525	9.5	0.34	22	77	22	<0.10	67	35	77	1300	7.08	7.5 YR 2/2
249	50	SSQ19-2/2/3	599275	4645375	15	<0.10	18	20	33	<0.10	11	60	57	1300	6.90	7.5 YR 3/2
250	50	SSQ19-2/3/1	599325	4645325	18	0.16	18	21	32	<0.10	11	76	50	1400	6.86	7.5 YR 3/2
251	50	SSQ19-2/3/4	599375	4645325	14	<0.10	17	20	30	<0.10	9	57	54	1200	6.88	7.5 YR 3/3
252	50	SSQ19-3/1/2	599425	4645275	12	<0.10	13	14	27	<0.10	9	47	51	890	6.85	7.5 YR 3/3
253	50	SSQ19-3/1/3	599475	4645275	6.4	<0.10	14	18	26	<0.10	9.9	41	52	920	6.75	7.5 YR 3/3
254	50	SSQ19-3/4/1	599525	4645225	8.8	<0.10	15	19	25	<0.10	410	48	60	1000	6.77	10 YR 3/3
255	50	SSQ19-3/4/2	599525	4645275	6.5	0.41	15	25	45	<0.10	15	48	100	1000	6.98	7.5 YR 3/3
256	50	SSQ19-4/3/1	599525	4645125	16	<0.10	14	23	23	<0.10	11	50	49	900	6.92	7.5 YR 3/2
257	50	SSQ19-4/3/2	599525	4645175	10	<0.10	13	14	22	<0.10	8.7	46	49	990	6.71	10 YR 3/3
258	50	SSQ19-4/4/3	599575	4645075	14	<0.10	16	23	24	<0.10	10	60	59	1100	6.93	7.5 YR 3/3
259	50	SSQ20-1/1/3	599275	4645475	10	<0.10	13	8	25	<0.10	4.9	35	57	1200	7.28	10 YR 3/3
260	50	SSQ20-1/1/4	599275	4645425	14	<0.1	15	16	31	<0.10	16	26	60	990	6.70	7.5 YR 3/2
261	50	SSQ20-1/2/1	599225	4645525	22	<0.10	14	12	34	<0.10	8.1	45	73	1200	7.19	10 YR 2/3
262	50	SSQ20-1/2/2	599225	4645575	13	0.16	14	15	33	<0.10	8.6	44	75	1100	6.82	7.5 YR 3/2
263	50	SSQ20-1/4/1	599325	4645425	8.9	0.19	16	28	68	<0.10	15	56	64	1200	7.00	7.5 YR 3/2
264	50	SSQ20-2/3/1	599325	4645725	23	0.8	23	14	27	<0.10	8.8	150	160	1800	7.00	10 YR 3/3
265	50	SSQ20-2/3/3	599375	4645775	7.6	1.8	20	8.7	23	0.1	3.2	350	320	1200	7.27	10 YR 4/2
266	50	SSQ20-2/3/4	599375	4645725	16	8.2	19	24	100	0.1	25	5100	1700	3300	6.95	2.5 Y 4/3
267	50	SSQ20-2/4/4	599375	4645625	29	2.5	22	18	60	0.11	9	520	550	4300	6.90	10 YR 3/3
268	50	SSQ20-3/1/1	599425	4645625	56	0.45	23	13	41	0.12	7.5	340	280	2500	7.27	10 YR 3/4
269	50	SSQ20-3/1/2	599425	4645675	36	1.2	24	20	42	0.1	27	280	210	2100	6.93	7.5 YR 4/3
270	50	SSQ20-3/1/4	599475	4645625	25	0.39	17	16	32	<0.10	6.1	250	160	1300	6.97	7.5 YR 4/3
271	50	SSQ20-4/2/4	599475	4645525	39	1.6	14	12	73	<0.10	4.8	720	420	3600	6.60	10 YR 4/4
272	50	SSQ20-4/3/1	599525	4645525	3.1	2	14	15	47	0.17	15	560	490	1400	7.30	10 YR 4/4
273	50	SSQ20-4/3/2	599525	4645575	19	0.19	15	16	22	<0.10	7	200	140	1100	7.00	7.5 YR 4/3
274	50	SSQ20-4/4/2	599525	4645475	7.9	1	13	7.5	44	<0.10	3.1	750	260	1100	7.09	10 YR 4/4
275	50	SSQ20-4/4/3	599575	4645475	8	2.2	18	12	66	0.16	16	1600	540	1500	7.35	10 YR 3/4
276	50	SSQ20-4/4/4	599575	4645425	13	3.7	18	32	75	0.12	26	1800	800	3200	7.25	10 YR 3/4
277	50	SSQ21-1/1/2	599225	4645875	35	0.23	24	18	35	<0.10	8	110	130	1500	7.07	7.5 YR 3/2
278	50	SSQ21-1/1/4	599275	4645825	17	0.5	24	23	29	<0.10	10	220	180	1700	7.04	7.5 YR 3/2
279	50	SSQ21-1/2/1	599225	4645925	33	0.24	23	17	32	<0.10	7.9	210	150	1300	7.11	7.5 YR 3/2
280	50	SSQ21-1/2/2	599225	4645975	23	1.2	21	17	36	<0.10	7.9	500	240	1500	7.16	10 YR 3/3
281	50	SSQ21-1/2/3	599275	4645975	26	2.9	21	21	60	0.1	8.8	1000	560	1400	7.12	10 YR 3/3
282	50	SSQ21-1/3/2	599325	4645975	27	0.22	25	24	24	<0.10	12	130	140	1400	7.40	10 YR 3/2
283	50	SSQ21-1/4/1	599325	4645825	12	0.83	19	15	32	<0.10	7.5	330	200	1700	7.18	7.5 YR 3/2
284	50	SSR04-2/2/3	599675	4639375	13	0.17	15	9.1	32	0.1	5.6	64	120	1300	7.24	7.5 YR 3/2
285	50	SSR04-2/3/3	599775	4639375	7.2	0.47	22	66	23	<0.10	43	57	88	1400	7.14	7.5 YR 3/2
286	50	SSR04-3/1/2	599825	4639275	4.1	0.24	19	34	18	<0.10	21	53	98	1200	7.25	10 YR 3/2
287	50	SSR04-4/3/4	599975	4639125	8.7	0.21	19	28	15	0.1	15	51	82	1400	7.09	7.5 YR 3/2
288	50	SSR05-4/2/4	599875	4639525	2.3	0.53	18	23	21	0.17	15	66	120	1400	7.19	7.5 YR 3/2
289	50	SSR12-3/3/3	599975	4642575	1.9	0.85	23	33	42	<0.10	16	130	260	1600	7.15	10 YR 2/3
290	50	SSR12-4/3/2	599925	4642375	2.8	0.58	22	43	36	<0.10	14	380	220	1100	7.23	10 YR 2/3
291	50	SSR14-2/2/1	599625	4643325	2.6	0.4	18	17	19	<0.10	9	50	110	1500	7.21	10 YR 3/3
292	50	SSR14-3/2/4	599875	4643325	3.6	0.35	18	23	28	<0.10	13	100	130	1300	7.12	10 YR 2/3
293	50	SSR15-1/2/2	599625	4643575	6.2	0.64	17	28	33	<0.10	19	87	160	1400	7.20	10 YR 3/3
294	50	SSR15-2/4/2	599725	4643675	1.1	0.24	16	17	26	0.1	9.7	61	100	1100	7.15	10 YR 3/3
295	50	SSR15-4/3/4	599975	4643525	24	4.8	22	40	110	<0.10	20	900	950	4900	7.06	10 YR 3/3
296	50	SSR16-3/1/1	599825	4644025	<1	0.28	15	17	24	<0.10	7.7	55	100	990	7.18	10 YR 4/3
297	50	SSR16-4/1/1	599825	4643825	3.4	0.26	15	19	24	<0.10	11	57	87	1100	7.14	10 YR 3/3
298	50	SSR16-4/4/1	599925	4643825	14	1.1	19	35	44	0.19	18	470	250	1500	7.02	10 YR 2/3
299	50	SSR17-2/1/4	599675	4644425	4.2	<0.10	15	13	19	<0.10	6.5	63	82	860	7.26	10 YR 4/3
300	50	SSR17-3/1/3	599875	4644475	8.9	0.44	17	25	23	<0.10	12	71	81	880	7.12	10 YR 3/4
301	50	SSR17-4/1/1	599825	4644225	<1	0.21	15	14	29	<0.10	7.7	53	78	940	7.26	10 YR 3/3
302	50	SSR17-4/2/4	599875	4644325	6.6	0.39	15	23	24	0.1	12	69	81	960	7.19	10 YR 3/3
303	50	SSR18-2/1/4	599675	4644825	22	<0.10	21	45	26	<0.10	22	77	91	1200	7.10	7.5 YR 2/3
304	50	SSR18-3/1/3	599875	4644875	45	5.2	17	14	140	0.1	6.9	1500	1100	8900	7.08	10 YR 2/3
305	50	SSR18-3/2/3	599875	4644975	72	5.4	15	14	180	0.15	4.8	2500	1500	9000	6.65	10 YR 3/4
306	50	SSR18-4/1/4	599875	4644625	18	0.17	21	37	26	<0.10	25	120	110	1300	7.10	7.5 YR 3/3
307	50	SSR19-1/1/1	599625	4645025	17	<0.10	16	26	26	0.1	17	78	81	1200	7.00	7.5 YR 3/2
308	50	SSR19-1/1/2	599625	4645075	10	<0.10	16	24	30	0.1	13	82	89	1200	6.94	7.5 YR 3/2

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
309	50	SSR19-1/1/4	599675	4645025	25	0.83	17	28	70	<0.10	15	96	160	1300	7.09	7.5 YR 3/2
310	50	SSR19-1/3/1	599725	4645125	140	13	16	15	260	<0.10	3.8	3900	3300	230000	6.60	10 YR 2/3
311	50	SSR19-1/3/2	599725	4645175	76	7.7	21	15	230	<0.10	6.4	2600	1900	28000	5.50	10 YR 2/2
312	50	SSR19-1/4/3	599775	4645075	2.8	12	19	19	100	<0.10	11	3200	2600	3600	7.11	10 YR 2/3
313	50	SSR19-2/1/3	599675	4645275	10	0.54	16	8.1	33	<0.10	4.3	230	170	1300	7.36	2.5 Y 4/2
314	50	SSR19-2/2/1	599625	4645325	1.3	2	18	12	41	<0.10	6.2	420	550	1300	7.12	10 YR 3/2
315	50	SSR19-2/2/2	599625	4645375	1.9	2.5	16	32	55	0.12	31	1400	580	1100	7.36	10 YR 5/3
316	50	SSR19-2/4/1	599725	4645225	4.2	2.1	16	28	56	<0.10	34	1200	460	1400	7.45	10 YR 4/2
317	50	SSR19-2/4/4	599775	4645225	12	0.49	23	20	25	<0.10	8.3	150	140	1300	7.24	10 YR 3/2
318	50	SSR19-4/1/1	599825	4645025	6	1.6	21	24	40	0.16	12	490	380	2100	7.16	10 YR 3/3
319	50	SSR19-4/1/2	599825	4645075	8.1	0.2	21	24	23	<0.10	11	120	130	1300	7.44	10 YR 2/3
320	50	SSR19-4/1/4	599875	4645025	4.7	0.43	21	20	24	<0.10	9.7	110	130	1300	7.37	10 YR 3/3
321	50	SSR20-1/1/1	599625	4645425	4.4	0.88	20	16	35	<0.10	8.9	510	260	1500	7.19	10 YR 3/3
322	50	SSS05-1/3/1	600125	4639525	6.6	0.53	18	46	35	<0.10	32	84	120	1200	7.37	10 YR 3/2
323	50	SSS05-2/3/4	600175	4639725	4.1	0.55	19	44	32	<0.10	31	71	130	1200	7.44	10 YR 3/2
324	50	SSS05-3/3/3	600375	4639775	16	3.6	19	42	66	<0.10	26	430	640	4000	7.49	10 YR 3/3
325	50	SSS05-4/3/4	600375	4639525	5	1.5	20	47	43	<0.10	30	240	240	1800	7.38	10 YR 3/2
326	50	SSS06-1/3/2	600125	4639975	5.6	0.83	19	45	36	0.13	29	99	150	1400	7.23	10 YR 3/3
327	50	SSS06-1/4/3	600175	4639875	11	2.8	19	44	68	<0.10	28	410	650	3900	7.27	10 YR 2/3
328	50	SSS06-2/3/2	600125	4640175	6	0.72	20	45	40	<0.10	30	120	160	1400	7.18	10 YR 3/2
329	50	SSS06-3/2/2	600225	4640175	7	0.92	19	45	38	0.1	30	110	160	1200	7.21	10 YR 2/3
330	50	SSS06-3/4/2	600325	4640075	9.9	1.4	19	45	51	<0.10	29	280	330	1500	7.09	10 YR 3/2
331	50	SSS06-4/3/4	600375	4639925	9.7	2.1	20	49	67	<0.10	31	430	460	2300	7.10	10 YR 3/2
332	50	SSS07-1/2/4	600075	4640325	9.9	0.89	20	45	45	<0.10	28	180	240	1800	7.28	10 YR 3/3
333	50	SSS07-2/3/1	600125	4640525	6.3	0.51	19	43	33	<0.10	28	130	180	1300	7.32	10 YR 3/3
334	50	SSS07-3/3/1	600325	4640525	20	8.1	19	41	100	<0.10	26	880	1500	8500	7.37	10 YR 2/3
335	50	SSS07-4/3/2	600325	4640375	11	2.2	19	44	48	<0.10	26	350	540	2100	7.19	10 YR 3/3
336	50	SSS08-1/3/3	600175	4640775	9.8	4.7	21	42	130	<0.10	24	780	1100	4900	6.97	10 YR 3/3
337	50	SSS08-2/4/2	600125	4640875	25	6.8	20	40	150	<0.10	20	1200	1400	4800	6.93	10 YR 3/3
338	50	SSS08-3/1/3	600275	4640875	16	2.7	20	47	110	<0.10	20	540	620	2100	6.91	10 YR 3/3
339	50	SSS08-4/2/3	600275	4640775	14	2.7	22	49	95	<0.10	28	450	700	3000	7.04	10 YR 3/3
340	50	SSS09-1/4/4	600175	4641025	30	8.6	20	39	190	<0.10	16	1500	1700	8200	7.01	10 YR 3/3
341	50	SSS09-2/4/3	600175	4641275	20	12	20	37	200	0.1	17	1900	2300	9700	6.83	10 YR 3/3
342	50	SSS09-4/1/3	600275	4641075	26	5.6	21	40	150	<0.10	20	1100	1200	4500	6.93	10 YR 3/3
343	50	SSS09-4/2/3	600275	4641175	25	9.7	21	35	170	<0.10	17	1600	1800	6800	6.87	10 YR 3/3
344	50	SSS10-2/4/2	600125	4641675	4.7	2.3	23	51	54	<0.10	13	440	440	2700	6.98	10 YR 3/3
345	50	SSS10-3/1/1	600225	4641625	28	9	22	39	160	<0.10	18	1700	1600	6300	7.07	7.5 YR 3/2
346	50	SSS10-3/2/3	600275	4641775	77	6.8	20	33	160	<0.10	11	1900	1500	12000	6.23	10 YR 3/4
347	50	SSS10-4/1/1	600225	4641425	31	13	18	30	190	0.16	15	2200	2500	8600	6.53	10 YR 2/3
348	50	SSS11-1/3/2	600125	4641975	44	11	20	34	200	0.15	14	1800	2200	12000	6.41	10 YR 3/4
349	50	SSS11-2/4/2	600125	4642075	31	5.9	24	37	120	<0.10	20	830	1200	5100	6.77	10 YR 2/3
350	50	SSS11-3/2/1	600225	4642125	29	7.7	21	41	150	<0.10	19	1200	870	6900	7.03	10 YR 3/4
351	50	SSS11-4/1/2	600225	4641875	47	13	20	30	190	0.11	14	2400	2400	12000	6.95	7.5 YR 2/3
352	50	SSS12-1/1/4	600075	4642225	60	9.4	22	32	190	0.12	17	2600	1700	16000	6.88	7.5 YR 2/2
353	50	SSS12-1/2/2	600025	4642375	18	2.3	19	36	79	<0.10	17	500	650	5700	7.08	10 YR 2/3
354	50	SSS12-2/4/2	600125	4642475	15	3	19	33	99	0.1	14	590	650	2400	6.80	10 YR 2/3
355	50	SSS12-3/1/3	600275	4642475	23	4.4	20	36	120	<0.10	19	1000	890	3700	6.83	10 YR 3/3
356	50	SSS12-4/1/1	600225	4642225	48	16	17	26	230	0.14	11	3200	2900	13000	6.60	10 Y 2/3
357	50	SSS12-4/3/1	600325	4642325	14	5.5	19	35	130	0.12	17	880	1200	6300	7.14	10 YR 3/3
358	50	SSS13-1/2/4	600075	4642725	20	7.6	21	30	140	<0.10	16	1300	1300	7100	6.97	10 YR 2/3
359	50	SSS13-1/4/4	600175	4642625	38	6.3	17	26	150	<0.10	9.8	1500	1300	12000	7.11	10 YR 3/4
360	50	SSS13-2/3/1	600125	4642925	20	3.2	21	28	110	<0.10	16	650	770	3900	7.10	10 YR 2/3
361	50	SSS13-4/3/1	600325	4642725	50	7.3	20	33	130	0.1	14	1300	1400	10000	7.03	10 YR 2/3
362	50	SSS14-1/3/4	600175	4643125	26	4.8	22	37	110	<0.10	16	1000	860	5100	6.98	10 YR 3/3
363	50	SSS14-2/3/1	600125	4643325	20	2.7	23	34	87	<0.10	16	620	520	2800	7.00	10 YR 3/4
364	50	SSS14-3/1/1	600225	4643225	27	4.8	25	38	100	0.1	15	910	1000	5700	7.01	10 YR 3/3
365	50	SSS14-4/1/1	600225	4643025	81	14	26	35	230	0.18	16	2900	2400	19000	6.97	10 YR 2/3
366	50	SSS15-3/2/3	600275	4643775	56	6.8	23	40	180	<0.10	16	1500	1400	9200	7.14	10 YR 3/4
367	50	SSS15-4/2/1	600225	4643525	120	9	16	31	220	<0.10	8.6	3200	2200	14000	6.43	10 YR 3/4
368	50	SSS16-1/1/4	600075	4643825	42	8.3	26	38	250	0.1	17	2300	1500	13000	7.17	7.5 YR 2/3
369	50	SSS16-2/1/4	600075	4644025	38	11	25	44	230	<0.10	19	2100	1900	11000	7.00	10 YR 3/3
370	50	SSS16-2/2/2	600025	4644175	34	7	22	34	140	<0.10	16	1100	1300	7800	7.05	10 YR 3/4

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
371	50	SSS16-2/3/2	600125	4644175	110	8.9	19	33	330	<0.10	12	3300	2100	16000	6.40	10 YR 3/4
372	50	SSS16-3/4/2	600325	4644075	15	2.9	26	63	80	<0.10	16	440	700	3400	7.14	10 YR 4/4
373	50	SSS17-1/3/1	600125	4644325	110	8.8	18	23	240	<0.10	8.3	2800	2200	17000	6.39	10 YR 3/4
374	50	SSS17-2/1/2	600025	4644475	13	0.77	24	40	47	<0.10	22	150	150	1700	7.10	10 YR 3/3
375	50	SSS17-3/2/1	600225	4644525	59	7.5	22	45	150	0.11	16	1700	1500	11000	6.84	10 YR 3/4
376	50	SSS17-3/3/4	600375	4644525	12	1.2	26	48	53	<0.10	20	270	280	1800	7.23	10 YR 3/3
377	50	SSS17-3/4/1	600325	4644425	11	2.1	28	61	67	<0.10	26	520	440	2000	7.03	10 YR 3/4
378	50	SSS17-4/3/1	600325	4644325	5.2	1.2	26	57	57	<0.10	20	250	290	1200	7.06	10 YR 4/2
379	50	SSS17-4/4/1	600325	4644225	5.7	1.1	27	66	52	<0.10	23	160	250	1300	7.08	10 YR 3/3
380	50	SSS18-1/2/4	600075	4644725	39	7.5	25	38	150	<0.10	15	1600	1500	8200	6.92	10 YR 3/4
381	50	SSS18-1/3/4	600175	4644725	18	2.7	28	51	76	<0.10	21	650	570	2500	7.03	10 YR 3/4
382	50	SSS18-2/1/2	600025	4644875	9.4	0.34	19	7.4	18	<0.10	3.9	46	99	1100	7.10	2.5 Y 5/3
383	50	SSS18-2/2/4	600075	4644925	9.3	0.27	22	17	22	<0.10	9.6	60	110	1200	7.03	7.5 YR 3/2
384	50	SSS18-2/3/2	600125	4644975	12	0.52	21	24	22	0.12	13	93	120	1200	6.84	7.5 YR 3/2
385	50	SSS18-3/1/4	600275	4644825	12	3.8	25	47	71	<0.10	18	780	690	3200	7.04	10 YR 3/4
386	50	SSS18-4/3/1	600325	4644725	12	2	28	56	59	<0.10	21	560	450	1500	6.96	10 YR 4/3
387	50	SSS19-1/3/3	600175	4645175	9	0.26	23	28	22	0.1	13	78	110	1500	7.01	7.5 YR 3/2
388	50	SSS19-1/4/3	600175	4645075	3.7	0.88	19	32	39	<0.10	15	420	350	1800	7.22	7.5 YR 3/2
389	50	SSS19-1/4/4	600175	4645025	6.7	1.4	23	41	44	0.16	15	300	320	1900	7.20	10 YR 3/2
390	50	SSS19-3/1/1	600225	4645225	9.7	0.83	20	32	26	<0.10	21	220	190	1500	7.16	10 YR 3/2
391	50	SSS19-3/1/2	600225	4645275	11	0.99	19	27	29	<0.10	12	230	220	1400	7.02	7.5 YR 3/2
392	50	SSS19-3/1/4	600275	4645225	18	1.7	22	44	55	<0.10	19	450	410	2000	7.19	10 YR 3/4
393	50	SSS19-3/2/2	600225	4645375	5.4	<0.10	20	24	22	<0.10	16	56	93	1200	6.91	7.5 YR 3/2
394	50	SSS19-3/2/3	600275	4645375	12	0.31	19	37	28	<0.10	20	120	180	1300	7.24	10 YR 3/2
395	50	SSS19-3/2/4	600275	4645325	16	<0.10	20	32	23	<0.10	14	58	100	1200	7.07	10 YR 3/2
396	50	SSS19-4/2/1	600225	4645125	20	0.41	22	42	45	<0.10	19	280	290	1900	7.18	10 YR 3/2
397	50	SSS19-4/3/1	600325	4645125	19	1.2	23	44	56	<0.10	17	340	350	2100	7.13	10 YR 3/4
398	50	SSS20-4/1/4	600275	4645425	13	<0.10	19	30	24	0.1	11	59	93	1200	7.02	10 YR 2/3
399	50	SSS20-4/3/1	600325	4645525	13	0.7	20	39	30	<0.10	17	220	190	1700	7.14	10 YR 3/2
400	50	SSS20-4/3/4	600375	4645525	25	<0.10	18	30	19	<0.10	13	63	75	1200	6.93	10 YR 3/3
401	50	SSS20-4/4/1	600325	4645425	15	<0.10	16	32	21	<0.10	13	50	88	1000	7.15	10 YR 2/3
402	50	SSS20-4/4/2	600325	4645475	13	<0.10	20	41	27	<0.10	18	64	99	1300	7.16	10 YR 3/3
403	50	SST02-1/1/4	600475	4638225	1.1	0.44	15	33	15	<0.10	23	60	82	930	7.37	10 YR 2/3
404	50	SST02-1/2/1	600425	4638325	1.6	0.36	15	38	17	0.11	26	69	81	880	7.34	10 YR 3/2
405	50	SST02-2/2/4	600475	4638525	<1	0.54	16	40	20	<0.10	27	99	87	980	7.40	10 YR 2/2
406	50	SST02-3/1/3	600675	4638475	1.6	0.55	17	51	23	0.1	36	80	93	920	7.42	10 YR 2/2
407	50	SST02-3/3/4	600775	4638525	2.4	0.76	16	50	25	<0.10	35	99	140	1300	7.38	10 YR 2/2
408	50	SST02-4/2/2	600625	4638375	<1	0.31	16	32	17	<0.10	19	79	85	980	7.39	10 YR 2/2
409	50	SST02-4/4/1	600725	4638225	1.9	0.31	17	39	20	<0.10	26	77	78	940	7.36	10 YR 2/2
410	50	SST03-1/1/1	600425	4638625	<1	0.75	14	14	16	<0.10	8.7	250	150	960	7.43	10 YR 2/2
411	50	SST03-1/4/3	600575	4638675	5.7	0.15	19	66	28	0.11	43	83	120	1700	7.45	10 YR 2/2
412	50	SST03-2/1/2	600425	4638875	5.5	<0.10	19	50	24	<0.10	34	85	98	1800	7.41	10 YR 3/2
413	50	SST03-2/3/4	600575	4638925	32	7.6	200	540	370	0.1	370	1400	2200	13000	7.29	10 YR 2/2
414	50	SST03-3/4/2	600725	4638875	10	2.3	20	54	50	0.1	38	390	500	3100	7.41	10 YR 2/2
415	50	SST03-4/3/2	600725	4638775	6.4	<0.10	19	61	30	<0.10	44	80	140	1700	7.39	10 YR 2/2
416	50	SST03-4/4/1	600725	4638625	7.7	<0.10	16	64	26	<0.10	47	55	88	2600	7.41	10 YR 2/2
417	50	SST04-1/1/3	600475	4639075	6.5	0.65	20	53	27	0.1	41	60	98	1300	7.41	10 YR 3/2
418	50	SST04-2/2/1	600425	4639325	6.3	0.57	20	52	25	<0.10	38	61	110	1200	7.42	10 YR 2/2
419	50	SST04-2/4/2	600525	4639275	5.3	0.52	20	47	26	<0.10	34	57	89	1200	7.40	10 YR 3/1
420	50	SST04-3/3/4	600775	4639325	22	3.4	18	31	66	<0.10	23	460	620	5400	7.28	10 YR 2/3
421	50	SST04-4/1/4	600675	4639025	4.3	1.6	20	50	39	0.1	35	180	270	1700	7.41	10 YR 2/2
422	50	SST04-4/3/3	600775	4639175	12	3.8	19	40	56	<0.10	30	450	670	5700	7.43	10 YR 2/3
423	50	SST05-1/4/3	600575	4639475	9.5	3.6	19	39	75	0.1	22	600	700	3700	7.36	10 YR 2/3
424	50	SST05-2/4/4	600575	4639625	9.9	4.1	20	39	74	<0.10	20	600	780	4800	7.31	10 YR 2/3
425	50	SST05-3/2/3	600675	4639775	3.2	1.9	21	33	48	<0.10	16	310	360	2600	7.45	10 YR 4/3
426	50	SST05-3/4/2	600725	4639675	6	5	21	36	77	<0.10	19	720	820	5900	7.43	10 YR 2/3
427	50	SST06-1/1/4	600475	4639825	22	7.2	19	41	95	<0.10	20	970	1600	8900	7.38	10 YR 2/3
428	50	SST06-1/3/4	600575	4639925	19	6.3	20	42	100	<0.10	24	730	1300	6300	7.44	10 YR 3/3
429	50	SST06-2/2/4	600475	4640125	19	5.3	22	44	100	<0.10	26	710	1200	6000	7.24	10 YR 3/3
430	50	SST06-3/1/4	600675	4640025	69	8.7	16	32	140	0.1	15	1500	2000	13000	7.44	10 YR 2/3
431	50	SST06-3/3/3	600775	4640175	36	10	20	40	170	0.12	17	1600	2100	9500	6.80	10 YR 3/3
432	50	SST07-1/1/2	600425	4640275	14	2.5	20	44	76	0.11	27	410	650	3100	7.21	10 YR 3/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
433	50	SST07-2/1/2	600425	4640475	11	3.3	21	41	86	<0.10	25	450	770	3100	7.01	10 YR 4/2
434	50	SST07-3/1/2	600625	4640475	69	6.1	18	29	120	0.1	13	1200	1400	11000	6.79	10 YR 2/3
435	50	SST07-3/3/1	600725	4640525	52	14	17	31	210	0.11	14	2200	2900	14000	6.44	10 YR 3/4
436	50	SST07-4/3/2	600725	4640375	88	6.4	17	27	150	<0.10	11	1900	1600	15000	6.67	7.5 YR 2/3
437	50	SST08-1/1/3	600475	4640675	35	7	19	37	100	0.1	15	1200	1400	10000	7.11	10 YR 2/2
438	50	SST08-2/1/3	600475	4640875	50	8.6	100	27	150	<0.10	14	1500	1600	14000	6.56	7.5 YR 2/3
439	50	SST08-3/1/3	600675	4640875	31	4.4	21	34	98	<0.10	19	850	900	4100	6.56	10 YR 3/4
440	50	SST08-3/3/2	600725	4640975	35	11	20	38	180	0.11	18	1700	2100	11000	6.74	10 YR 3/3
441	50	SST09-1/1/4	600475	4641025	34	6.9	21	35	120	<0.10	18	1400	1400	8300	6.79	10 YR 3/4
442	50	SST09-1/4/3	600575	4641075	25	8	21	34	150	<0.10	16	1800	1500	6900	6.87	10 YR 3/4
443	50	SST09-2/3/4	600575	4641325	40	13	18	36	200	<0.10	14	2100	2700	11000	6.74	10 YR 3/3
444	50	SST09-3/3/4	600775	4641325	29	4.8	20	36	100	0.1	18	870	1100	6800	6.91	10 YR 3/4
445	50	SST09-4/2/2	600625	4641175	25	5.8	20	34	130	0.11	15	1300	1200	5600	7.03	10 YR 3/3
446	50	SST10-1/1/3	600475	4641475	71	6.3	16	27	140	0.12	9.6	1700	1600	11000	5.64	10 YR 3/4
447	50	SST10-1/3/4	600575	4641525	23	5.6	22	40	110	0.1	17	970	1200	5700	6.94	10 YR 3/4
448	50	SST10-2/3/1	600525	4641725	41	9.7	20	38	200	0.14	19	1500	1900	11000	6.99	10 YR 3/3
449	50	SST10-3/1/1	600625	4641625	49	7	21	37	150	0.11	20	1100	1400	6600	6.95	10 YR 3/3
450	50	SST10-4/1/1	600625	4641425	28	14	19	39	240	0.12	17	2200	2800	15000	6.69	10 YR 3/3
451	50	SST10-4/2/4	600675	4641525	26	9.9	19	37	160	0.1	16	1600	2000	9800	6.98	10 YR 3/3
452	50	SST11-1/1/4	600475	4641825	52	14	19	34	210	0.13	15	2200	2400	20000	7.00	10 YR 2/3
453	50	SST11-1/2/3	600475	4641975	44	7.3	20	36	180	0.1	17	1500	1500	9800	6.99	10 YR 3/3
454	50	SST11-2/2/4	600475	4642125	41	5.9	21	38	160	<0.10	17	1200	1300	8700	6.99	10 YR 3/4
455	50	SST11-3/2/3	600675	4642175	11	0.27	27	82	37	<0.10	24	77	130	1900	7.11	10 YR 3/3
456	50	SST11-4/1/1	600625	4641825	14	1.3	24	56	58	<0.10	21	220	310	2700	7.12	10 YR 3/3
457	50	SST15-1/1/1	600425	4643425	5.4	0.26	16	20	31	<0.10	9.3	62	130	1200	7.11	10 YR 3/4
458	50	SST15-1/2/4	600475	4643525	5	<0.10	15	14	25	<0.10	8	44	83	1100	7.19	10 YR 4/4
459	50	SST15-2/1/1	600425	4643625	7.8	0.59	20	32	34	<0.10	14	65	120	1200	7.16	10 YR 3/4
460	50	SST15-2/2/3	600475	4643775	3.6	0.87	18	22	41	0.1	10	110	240	1400	7.06	10 YR 2/2
461	50	SST15-4/1/2	600625	4643475	4.8	0.36	18	20	24	<0.10	10	50	81	1100	6.98	10 YR 3/4
462	50	SST16-1/3/1	600525	4643925	4.6	1.1	17	21	46	<0.10	29	140	220	1400	7.19	10 YR 2/3
463	50	SST16-1/4/1	600525	4643825	4.5	1.5	20	30	55	<0.10	19	180	310	1700	7.23	10 YR 2/3
464	50	SST16-2/1/4	600475	4644025	5.8	0.77	21	32	42	<0.10	13	140	150	1200	7.13	10 YR 3/3
465	50	SST16-2/3/4	600575	4644125	11	0.43	23	29	27	<0.10	10	59	120	1400	7.21	7.5 YR 3/2
466	50	SST17-1/2/3	600475	4644375	5.6	0.96	25	33	44	<0.10	14	150	190	1600	7.12	10 YR 4/2
467	50	SST17-1/4/2	600525	4644275	9	<0.10	25	28	33	<0.10	9.8	75	150	1700	7.09	7.5 YR 3/2
468	50	SST17-3/2/2	600625	4644575	2.6	0.55	22	15	57	<0.10	7.2	64	100	1500	7.25	10 YR 2/3
469	50	SST18-1/1/1	600425	4644625	17	1.4	28	54	63	<0.10	32	500	420	2200	7.22	10 YR 3/3
470	50	SST18-1/3/2	600525	4644775	12	0.79	28	40	52	<0.10	15	250	250	1700	7.22	10 YR 3/3
471	50	SST18-2/1/3	600475	4644875	16	2	29	60	72	<0.10	26	610	470	2700	7.15	10 YR 3/3
472	50	SST18-2/3/3	600575	4644975	22	0.14	25	25	20	<0.10	9.7	58	110	1000	7.08	7.5 YR 2/3
473	50	SST18-2/3/4	600575	4644925	29	0.33	23	24	20	<0.10	6.9	54	100	890	7.10	7.5 YR 2/3
474	50	SST18-4/1/2	600625	4644675	16	0.33	28	35	30	<0.10	17	60	120	1500	7.12	7.5 YR 2/3
475	50	SST19-1/4/4	600575	4645025	16	0.36	27	30	24	<0.10	13	86	120	1400	7.06	7.5 YR 2/3
476	50	SST19-3/4/4	600775	4645225	4.8	0.45	26	23	16	<0.10	7.7	52	110	1400	7.08	10 YR 3/3
477	50	SST19-4/1/1	600625	4645025	16	0.39	28	31	24	<0.10	14	67	120	1600	7.08	7.5 YR 2/3
478	50	SST19-4/1/3	600675	4645075	15	0.39	27	33	23	<0.10	13	73	120	1500	7.11	7.5 YR 3/2
479	50	SST19-4/2/4	600675	4645125	14	0.25	29	37	23	<0.10	17	61	120	1700	7.08	10 YR 3/3
480	50	SST19-4/3/1	600725	4645125	12	0.66	29	39	22	<0.10	17	66	120	1800	7.19	7.5 YR 3/2
481	50	SST19-4/3/3	600775	4645175	9.3	0.34	26	22	16	<0.10	11	47	110	1400	7.18	10 YR 3/3
482	50	SST20-1/2/2	600425	4645575	34	0.35	20	36	43	<0.10	14	320	290	1200	7.16	10 YR 4/4
483	50	SST20-2/1/1	600425	4645625	170	<0.10	23	29	28	<0.10	13	120	130	1200	7.19	10 YR 3/4
484	50	SST20-2/1/3	600475	4645675	89	<0.10	20	37	37	<0.10	14	110	130	1300	7.21	10 YR 2/3
485	50	SST20-2/1/4	600475	4645625	31	0.36	19	36	50	<0.10	13	410	320	540	7.23	10 YR 4/4
486	50	SST20-2/2/4	600475	4645725	65	<0.10	17	36	30	<0.10	14	93	120	1600	7.19	7.5 YR 3/2
487	50	SST20-2/3/1	600525	4645725	43	0.14	20	37	51	<0.10	16	320	280	1500	7.14	10 YR 2/2
488	50	SST20-2/3/3	600575	4645775	23	0.93	19	34	54	<0.10	14	470	340	850	7.27	10 YR 4/3
489	50	SST20-2/4/1	600525	4645625	22	0.58	20	34	55	<0.10	15	430	340	1700	7.21	10 YR 4/3
490	50	SST21-1/3/1	600525	4645925	310	<0.10	19	37	28	<0.10	16	74	93	1100	7.16	10 YR 3/2
491	50	SST21-1/3/2	600525	4645975	99	<0.10	19	40	25	<0.10	16	49	90	1100	7.21	10 YR 3/3
492	50	SST21-1/4/1	600525	4645825	140	<0.10	19	45	40	<0.10	19	260	240	1400	7.26	10 YR 2/2
493	50	SST21-1/4/3	600575	4645875	48	0.45	19	32	41	<0.10	12	380	310	1600	7.21	10 YR 3/3
494	50	SST21-2/3/1	600525	4646125	300	<0.10	31	73	42	<0.10	19	61	88	1200	7.19	10 YR 3/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
495	50	SST21-2/3/3	600575	4646175	100	<0.10	27	88	52	<0.10	24	54	95	1100	7.20	7.5 YR 3/3
496	50	SST21-2/3/4	600575	4646125	230	<0.10	27	73	44	<0.10	19	77	100	1100	7.15	10 YR 3/3
497	50	SST21-2/4/3	600575	4646075	160	<0.10	19	51	32	<0.10	14	160	150	1100	7.21	10 YR 4/3
498	50	SST21-2/4/4	600575	4646025	60	0.29	18	36	30	0.17	16	280	280	1400	7.29	10 YR 4/2
499	50	SST21-3/1/2	600625	4646075	11	2.1	19	35	45	0.1	15	370	590	2300	7.31	10 YR 4/2
500	50	SST21-4/1/2	600625	4645875	12	1.4	21	32	53	<0.10	12	520	380	1500	7.25	10 YR 3/4
501	50	SST22-3/3/3	600775	4646575	45	<0.10	20	31	25	<0.10	12	120	160	1200	7.26	10 YR 3/3
502	50	SST22-3/3/4	600775	4646525	92	<0.10	19	37	21	<0.10	17	61	110	1100	7.26	10 YR 3/4
503	50	SST22-3/4/2	600725	4646475	150	<0.10	17	27	18	<0.10	14	60	88	1000	7.13	10 YR 4/4
504	50	SST22-4/1/1	600625	4646225	48	<0.10	22	65	36	<0.10	22	43	85	1000	7.20	7.5 YR 2/3
505	50	SST22-4/1/3	600675	4646275	66	<0.10	21	45	47	<0.10	19	350	350	1600	7.35	10 YR 3/3
506	50	SST22-4/2/3	600675	4646375	100	<0.10	20	25	21	<0.10	11	36	86	1200	7.43	10 YR 3/3
507	50	SST22-4/2/4	600675	4646325	48	<0.10	21	37	33	<0.10	17	96	150	1300	7.26	10 YR 3/3
508	50	SST22-4/3/2	600725	4646375	350	<0.10	20	29	28	<0.10	17	62	120	1200	7.21	10 YR 3/3
509	50	SSU02-1/3/1	600925	4638325	10	0.34	17	53	25	<0.10	38	62	92	1200	7.33	10 YR 2/2
510	50	SSU02-3/4/2	601125	4638475	11	1.7	19	40	46	0.1	28	290	400	3000	7.39	10 YR 2/3
511	50	SSU02-4/1/1	601025	4638225	11	1.3	18	41	56	0.13	27	280	320	1500	7.34	10 YR 2/2
512	50	SSU02-4/2/2	601025	4638375	12	1.9	18	39	53	0.17	25	300	480	3400	7.42	10 YR 2/3
513	50	SSU02-4/3/3	601175	4638375	35	9.4	18	29	130	0.12	16	1300	1800	12000	7.46	10 YR 2/3
514	50	SSU02-4/4/2	601125	4638275	11	7.7	18	37	120	0.11	22	1300	1500	7100	7.30	10 YR 2/3
515	50	SSU03-1/4/2	600925	4638675	9.7	6.2	19	41	100	0.1	30	970	1300	7900	7.44	10 YR 2/2
516	50	SSU03-2/2/4	600875	4638925	3.1	2.7	19	43	67	<0.10	30	350	530	3400	7.43	10 YR 2/3
517	50	SSU03-2/4/1	600925	4638825	2.9	7	19	40	83	<0.10	16	790	1200	8100	7.47	10 YR 2/3
518	50	SSU03-3/2/1	601025	4638925	9.6	2.7	19	39	52	<0.10	23	400	520	3600	7.48	10 YR 2/3
519	50	SSU03-4/1/3	601075	4638675	11	8.2	20	34	120	0.14	21	890	1500	7500	7.41	10 Y 3/3
520	50	SSU03-4/3/2	601125	4638775	17	4.6	20	32	97	0.18	18	690	930	6200	7.42	10 YR 3/3
521	50	SSU04-1/3/1	600925	4639125	9.1	1.6	18	34	41	<0.10	21	250	290	2400	7.47	10 Y 3/3
522	50	SSU04-3/4/1	601125	4639225	18	6.5	21	35	130	<0.10	20	1000	1300	7100	7.26	10 YR 3/3
523	50	SSU04-4/1/4	601075	4639025	8	4.2	21	45	64	<0.10	19	500	950	4300	7.62	10 YR 2/2
524	50	SSU04-4/4/3	601175	4639075	21	5.9	21	36	110	0.1	15	1100	1200	6600	7.38	7.5 YR 3/3
525	50	SSU05-1/1/4	600875	4639425	26	7.3	20	33	83	<0.10	16	1100	1300	9800	7.52	10 YR 2/3
526	50	SSU05-2/2/4	600875	4639725	22	4.2	19	37	73	0.1	21	570	940	5500	7.46	10 YR 2/3
527	50	SSU05-3/2/4	601075	4639725	29	5.8	23	40	110	0.16	21	960	1200	8000	6.99	10 YR 2/3
528	50	SSU06-1/4/4	600975	4639825	29	5.2	21	40	100	0.14	19	800	1100	7500	7.24	10 YR 3/3
529	50	SSU06-2/1/4	600875	4640025	52	17	19	31	230	0.16	14	2600	3000	18000	7.28	10 YR 2/3
530	50	SSU06-2/3/2	600925	4640175	7.7	1	22	36	51	<0.10	15	160	330	1600	7.15	10 YR 2/3
531	50	SSU06-3/2/4	601075	4640125	22	3.1	22	39	120	0.11	18	560	850	5400	7.04	10 YR 2/3
532	50	SSU06-4/3/1	601125	4639925	11	2.1	22	47	93	<0.10	25	310	590	2900	7.26	10 YR 2/2
533	50	SSU07-2/4/2	600925	4640475	13	2	19	41	53	<0.10	17	220	530	2400	7.48	10 YR 3/4
534	50	SSU07-3/3/2	601125	4640575	9.9	0.56	20	43	32	<0.10	18	79	240	1500	7.27	10 YR 2/3
535	50	SSU07-4/2/2	601025	4640375	16	5.6	18	34	100	<0.10	18	690	1100	6900	7.42	10 YR 3/3
536	50	SSU19-1/2/2	600825	4645175	6.5	0.14	19	15	14	<0.10	6.3	42	87	1100	7.00	10 YR 3/2
537	50	SSU19-2/1/1	600825	4645225	8.1	0.19	22	22	16	<0.10	16	41	95	1200	6.92	10 YR 3/3
538	50	SSU19-2/1/2	600825	4645275	8.5	0.5	22	36	17	<0.10	11	53	97	1200	7.02	10 YR 3/3
539	50	SSU19-2/2/3	600875	4645375	9.4	0.31	18	22	14	<0.10	11	39	97	940	7.04	10 YR 4/3
540	50	SSU19-2/2/4	600875	4645325	9.4	<0.10	19	22	12	<0.10	8.5	52	88	930	7.05	10 YR 3/3
541	50	SSU19-2/3/2	600925	4645375	8.4	0.31	17	20	12	<0.10	4.9	28	76	860	7.01	10 YR 4/2
542	50	SSU20-1/3/3	600975	4645575	8.4	<0.10	18	28	11	0.11	9.9	25	66	930	7.07	10 YR 3/3
543	50	SSU20-1/4/1	600925	4645425	17	<0.10	13	14	7.4	<0.10	4.4	20	69	670	7.00	10 YR 4/3
544	50	SSU20-1/4/2	600925	4645475	15	0.16	18	20	13	0.11	8.8	30	82	1100	7.07	10 YR 4/3
545	50	SSU20-1/4/3	600975	4645475	16	0.21	18	22	17	0.11	8.4	29	81	1100	6.99	10 YR 4/3
546	50	SSU20-2/3/3	600975	4645775	11	<0.10	20	78	26	<0.10	17	42	95	1300	7.07	10 YR 3/4
547	50	SSU20-2/3/4	600975	4645725	17	0.39	26	91	34	<0.10	22	66	130	1900	7.07	10 YR 4/4
548	50	SSU20-4/2/2	601025	4645575	9.1	<0.10	19	27	14	0.1	8.6	29	86	1100	7.12	10 YR 3/2
549	50	SSU21-3/2/3	601075	4646175	6.2	0.52	26	97	40	<0.10	26	37	110	1500	7.09	10 YR 3/4
550	50	SSU21-3/3/1	601125	4646125	9.5	0.19	25	74	30	<0.10	20	33	110	1400	7.13	10 YR 3/3
551	50	SSU21-3/3/4	601175	4646125	11	0.11	17	27	16	0.1	5.6	20	74	990	7.12	10 YR 4/4
552	50	SSU21-4/1/1	601025	4645825	10	0.56	24	100	36	<0.10	23	50	120	1500	7.02	10 YR 3/4
553	50	SSU21-4/1/2	601025	4645875	58	<0.10	23	67	34	<0.10	20	52	120	1400	7.06	10 YR 3/4
554	50	SSU21-4/1/3	601075	4645875	110	<0.10	26	72	33	0.11	21	39	110	1500	7.09	10 YR 3/4
555	50	SSU21-4/2/3	601075	4645975	71	<0.10	24	32	27	<0.10	13	48	100	1500	7.12	10 YR 3/4
556	50	SSU21-4/3/1	601125	4645925	110	<0.10	24	33	20	<0.10	11	30	100	1400	7.07	10 YR 3/4

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
557	50	SSU21-4/3/2	601125	4645975	100	<0.10	23	29	24	<0.10	11	37	110	1400	7.06	10 YR 3/4
558	50	SSU22-2/2/2	600825	4646575	33	1.2	20	27	50	0.11	16	340	310	1800	7.34	10 YR 3/4
559	50	SSU22-3/1/2	601025	4646475	16	1.5	23	59	60	<0.10	21	390	370	1300	7.11	10 YR 3/3
560	50	SSU22-3/1/3	601075	4646475	14	0.41	22	45	31	<0.10	19	65	140	1300	7.08	10 YR 3/3
561	50	SSU22-3/1/4	601075	4646425	13	1.4	23	48	44	<0.10	18	270	300	1700	7.12	10 YR 3/4
562	50	SSU22-3/2/3	601075	4646575	16	1.7	24	52	53	<0.10	22	390	390	1900	7.21	10 YR 3/3
563	50	SSU22-3/2/4	601075	4646525	10	0.8	22	42	31	<0.10	17	110	170	1400	7.10	10 YR 3/3
564	50	SSU22-3/3/2	601125	4646575	9.3	0.26	24	42	27	<0.10	29	61	120	1300	7.08	10 YR 3/3
565	50	SSU22-4/2/1	601025	4646325	16	1.2	23	53	47	<0.10	23	310	290	1600	7.10	10 YR 3/3
566	50	SSU22-4/2/3	601075	4646375	13	1.6	23	53	49	0.11	18	340	360	1700	7.19	10 YR 3/3
567	50	SSU22-4/2/4	601075	4646325	10	0.59	24	87	42	<0.10	22	130	210	1400	7.17	10 YR 2/3
568	50	SSU22-4/3/2	601125	4646375	12	0.31	28	76	29	<0.10	25	47	110	1600	7.07	7.5 YR 2/3
569	50	SSU22-4/4/1	601125	4646225	9.1	0.29	27	100	35	<0.10	25	45	100	1600	7.12	10 YR 4/3
570	50	SSU22-4/4/2	601125	4646275	10	0.23	27	110	36	<0.10	27	55	110	1500	7.17	10 YR 3/4
571	50	SSU23-1/1/3	600875	4646675	43	1.2	21	32	44	<0.10	12	370	330	1900	7.31	10 YR 3/4
572	50	SSU23-1/1/4	600875	4646625	22	2	21	32	59	<0.10	13	740	470	2500	7.32	10 YR 3/4
573	50	SSU23-1/3/1	600925	4646725	67	<0.10	22	33	57	<0.10	15	390	370	2000	7.31	10 YR 3/3
574	50	SSU23-1/3/3	600975	4646775	55	2.3	23	33	85	0.12	14	560	570	1900	7.07	10 YR 3/4
575	50	SSU23-2/1/4	600875	4646825	250	<0.10	23	25	18	<0.10	9.3	46	110	1300	7.07	10 YR 4/4
576	50	SSU23-2/3/4	600975	4646925	130	<0.10	22	32	26	<0.10	13	63	120	1300	7.03	10 YR 3/3
577	50	SSU23-2/4/1	600925	4646825	130	<0.10	23	30	35	<0.10	12	320	270	1600	7.05	10 YR 3/4
578	50	SSU23-2/4/3	600975	4646875	80	0.81	23	30	63	<0.10	13	270	400	1700	7.14	10 YR 3/3
579	50	SSU23-2/4/4	600975	4646825	49	1.7	21	34	75	<0.10	15	490	430	1300	7.16	10 YR 3/4
580	50	SSU23-3/2/1	601025	4646925	73	0.87	23	40	57	<0.10	17	330	340	1800	7.22	10 YR 3/3
581	50	SSU23-3/2/3	601075	4646975	30	1.6	21	28	59	<0.10	13	430	360	1900	7.23	10 YR 3/3
582	50	SSU23-4/4/1	601125	4646625	17	2	24	55	60	<0.10	22	450	420	2000	7.12	10 YR 3/4
583	50	SSU23-4/4/3	601175	4646675	13	1.1	22	50	39	<0.10	19	300	270	1500	7.12	10 YR 3/4
584	50	SSU24-4/1/4	601075	4647025	120	<0.10	22	33	25	<0.10	15	87	140	1300	7.18	10 YR 3/3
585	50	SSU24-4/4/1	601125	4647025	24	1.7	22	32	71	<0.10	14	460	430	1800	7.13	10 YR 3/3
586	50	SSU24-4/4/2	601125	4647075	31	2.5	23	30	73	<0.10	15	690	540	3100	7.17	10 YR 3/3
587	50	SSU24-4/4/3	601175	4647075	22	1.7	22	30	77	<0.10	14	430	390	1800	7.17	10 YR 3/4
588	50	SSV01-1/1/2	601225	4637875	1.6	0.24	19	23	28	<0.10	11	68	100	1300	7.41	10 YR 2/2
589	50	SSV01-1/3/3	601375	4637975	8.2	2	18	35	66	<0.10	18	460	510	2700	7.41	10 YR 2/3
590	50	SSV01-1/4/4	601375	4637825	1.6	0.1	18	23	29	0.13	10	73	120	1300	7.45	10 YR 2/2
591	50	SSV01-2/1/1	601225	4638025	1.4	0.13	19	32	31	0.11	17	68	120	1400	7.48	10 YR 2/2
592	50	SSV01-2/3/1	601325	4638125	21	9.7	20	35	140	0.12	20	1400	1900	12000	7.50	10 YR 2/3
593	50	SSV01-3/1/3	601475	4638075	29	8.9	19	34	120	<0.10	18	1100	1900	9100	7.36	10 YR 2/3
594	50	SSV01-3/2/2	601425	4638175	34	8.5	18	26	120	<0.10	16	1000	1800	12000	7.48	10 YR 2/3
595	50	SSV01-4/2/4	601475	4637925	8.1	0.8	19	29	40	0.1	15	250	250	1600	7.50	10 YR 2/3
596	50	SSV02-1/1/4	601275	4638225	25	8.1	21	40	140	<0.10	20	1400	1600	11000	7.51	10 YR 3/3
597	50	SSV02-2/2/4	601275	4638525	36	6.3	19	34	110	<0.10	18	1200	1300	11000	7.37	7.5 YR 2/3
598	50	SSV02-3/1/2	601425	4638475	38	7.9	21	38	140	<0.10	19	1500	1600	12000	7.26	7.5 YR 2/3
599	50	SSV02-3/2/3	601475	4638575	25	4.4	20	44	94	<0.10	22	820	1100	5600	7.12	10 YR 2/3
600	50	SSV02-4/2/1	601425	4638325	24	6.5	20	40	110	0.14	20	910	1300	8100	7.33	10 YR 3/3
601	50	SSV02-4/4/1	601525	4638225	26	5.2	18	34	130	<0.10	19	840	1200	7400	7.36	10 YR 2/3
602	50	SSV03-1/1/3	601275	4638675	15	0.67	21	44	28	<0.10	18	72	140	1400	7.50	10 YR 3/3
603	50	SSV03-2/2/4	601275	4638925	15	3.1	20	39	98	<0.10	20	560	670	2700	7.27	10 YR 3/3
604	50	SSV03-3/1/4	601475	4638825	17	2	22	41	71	<0.10	21	430	330	1900	7.17	10 YR 3/3
605	50	SSV03-3/3/2	601525	4638975	24	6.8	21	39	110	<0.10	23	1100	1300	7100	7.13	10 YR 2/3
606	50	SSV03-4/2/1	601425	4638725	20	1.4	21	39	63	<0.10	19	330	330	1600	7.19	10 YR 3/3
607	50	SSV03-4/4/3	601575	4638675	15	2	19	38	68	0.1	17	440	450	890	7.18	10 YR 3/3
608	50	SSV04-1/4/3	601375	4639075	18	2.2	19	39	70	<0.10	22	470	500	2900	7.27	2.5 Y 3/1
609	50	SSV04-4/2/3	601475	4639175	22	4.1	22	46	100	<0.10	24	620	960	5400	7.36	10 YR 2/2
610	50	SSV05-1/2/1	601225	4639525	22	1.8	24	43	48	<0.10	19	200	320	2400	7.18	10 YR 2/3
611	50	SSV23-1/1/2	601225	4646675	20	0.57	23	42	26	<0.10	19	62	130	1200	7.14	10 YR 3/3
612	50	SSV23-1/2/1	601225	4646725	16	1	24	50	50	<0.10	20	400	320	1600	7.22	10 YR 3/4
613	50	SSV23-1/2/3	601275	4646775	13	0.52	23	36	26	<0.10	15	70	130	1300	7.11	10 YR 3/3
614	50	SSV23-1/3/2	601325	4646775	11	0.46	18	35	24	<0.10	13	58	92	880	7.16	10 YR 3/3
615	50	SSV23-2/1/4	601275	4646825	18	1.7	18	36	49	<0.10	15	650	440	2600	7.13	10 YR 3/4
616	50	SSV23-2/3/4	601375	4646925	20	0.81	19	44	38	<0.10	16	300	260	1700	7.12	10 YR 3/4
617	50	SSV23-2/4/2	601325	4646875	17	0.9	18	37	30	<0.10	16	290	240	1300	7.08	10 YR 3/4
618	50	SSV23-2/4/3	601375	4646875	11	0.43	22	35	27	<0.10	16	59	120	1300	7.21	10 YR 3/3



Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
619	50	SSV23-3/2/2	601425	4646975	15	0.56	18	35	31	0.1	17	340	200	830	7.18	10 YR 3/3
620	50	SSV23-3/2/3	601475	4646975	14	0.28	15	20	16	<0.10	11	40	110	1000	7.16	10 YR 3/3
621	50	SSV24-1/1/2	601225	4647075	28	3.4	23	33	140	<0.10	17	920	800	2000	7.21	10 YR 3/3
622	50	SSV24-1/2/1	601225	4647125	20	1.6	22	31	72	<0.10	15	500	420	2000	7.17	10 Y 3/3
623	50	SSV24-1/2/2	601225	4647175	18	1.6	21	26	79	<0.10	14	450	390	1500	7.27	10 YR 3/2
624	50	SSV24-2/1/3	601275	4647275	31	0.69	21	31	62	0.13	15	240	270	1500	7.13	10 YR 2/3
625	50	SSV24-2/1/4	601275	4647225	16	1.8	21	27	77	<0.10	15	420	420	2000	7.19	10 YR 4/3
626	50	SSV24-2/3/1	601325	4647325	18	1.6	21	32	69	<0.10	16	440	410	2000	7.27	10 YR 3/3
627	50	SSV24-2/3/2	601325	4647375	30	0.84	22	32	53	<0.10	16	150	180	1800	7.22	10 YR 2/3
628	50	SSV24-2/3/3	601375	4647375	19	0.67	21	22	65	0.11	11	300	300	1800	7.26	10 YR 3/3
629	50	SSV24-3/4/3	601575	4647275	17	0.71	23	50	38	<0.10	21	140	230	920	6.93	10 YR 3/3
630	50	SSV24-3/4/4	601575	4647225	54	<0.10	24	33	33	<0.10	15	86	160	1300	7.13	10 YR 3/3
631	50	SSV24-4/3/4	601575	4647125	38	0.24	24	25	22	<0.10	11	46	140	1400	7.17	10 YR 3/3
632	50	SSV24-4/4/1	601525	4647025	16	0.98	24	24	25	<0.10	11	47	140	1500	7.18	10 YR 3/4
633	50	SSV24-4/4/2	601525	4647075	33	0.69	24	26	24	<0.10	11	43	140	1400	7.17	10 YR 3/4
634	50	SSV24-4/4/3	601575	4647075	42	0.18	23	22	22	<0.10	12	44	140	1400	7.17	10 YR 3/4
635	50	SSV25-1/2/3	601275	4647575	41	0.43	20	31	62	0.1	16	220	330	1800	7.27	10 YR 3/3
636	50	SSV25-1/3/1	601325	4647525	33	0.3	22	23	69	0.1	14	130	190	1900	7.22	10 YR 3/3
637	50	SSV25-1/4/2	601325	4647475	36	<0.10	22	25	51	<0.10	15	110	170	2000	7.19	10 YR 2/3
638	50	SSV25-1/4/4	601375	4647425	18	1.2	19	19	66	<0.10	9.9	330	310	1800	7.41	10 YR 3/3
639	50	SSV25-2/1/4	601275	4647625	20	2.2	19	28	100	<0.10	15	350	520	2000	7.24	10 YR 2/2
640	50	SSV25-2/3/4	601375	4647725	15	1.6	16	24	70	0.16	12	380	380	1900	7.29	10 YR 2/3
641	50	SSV25-2/4/2	601325	4647675	20	0.82	22	17	77	0.16	10	190	210	1800	7.24	10 YR 4/2
642	50	SSV25-2/4/3	601375	4647675	23	0.27	20	15	78	<0.10	8.4	110	190	1600	7.31	10 YR 2/3
643	50	SSV25-3/2/2	601425	4647775	13	1.7	16	42	68	0.19	21	670	510	2000	7.28	10 YR 2/3
644	50	SSV26-3/1/4	601475	4648025	120	<0.10	19	21	140	<0.10	13	200	190	1700	6.88	10 YR 2/3
645	50	SSV26-3/3/1	601525	4648125	160	<0.10	19	21	44	0.1	14	150	160	1600	6.98	10 YR 3/3
646	50	SSV26-3/3/3	601575	4648175	89	0.28	19	22	50	<0.10	15	180	190	1700	7.04	10 YR 3/3
647	50	SSV26-3/3/4	601575	4648125	37	1.9	16	29	51	0.1	15	530	420	2100	7.03	10 YR 3/3
648	50	SSV26-3/4/2	601525	4648075	63	0.8	19	30	51	<0.10	19	400	350	1800	7.03	10 YR 2/2
649	50	SSV26-4/1/2	601425	4647875	31	0.55	17	23	59	0.28	15	360	250	1800	7.20	10 YR 3/3
650	50	SSV26-4/1/3	601475	4647875	22	1.4	17	26	79	0.24	15	380	380	1800	7.10	10 YR 3/3
651	50	SSV26-4/1/4	601475	4647825	21	1.4	16	29	100	0.52	14	630	350	1900	7.21	10 YR 2/3
652	50	SSV26-4/2/4	601475	4647925	34	1.3	17	30	69	0.28	16	290	360	1800	7.04	10 YR 3/2
653	50	SSV26-4/3/2	601525	4647975	33	2.2	19	23	79	0.39	13	820	540	2100	7.01	10 YR 3/3
654	50	SSW01-1/2/1	601625	4637925	8.2	4.9	19	29	78	<0.10	15	650	1000	4700	7.45	7.5 YR 2/3
655	50	SSW01-2/3/1	601725	4638125	39	8.3	20	32	150	<0.10	14	1800	1600	16000	7.24	7.5 YR 2/3
656	50	SSW01-3/3/3	601975	4638175	23	4.3	22	37	98	<0.10	20	770	980	5400	7.20	7.5 YR 3/3
657	50	SSW01-4/1/1	601825	4637825	22	8.1	19	31	110	<0.10	18	990	1800	10000	7.54	7.5 YR 2/3
658	50	SSW01-4/3/2	601925	4637975	24	7.5	20	33	110	<0.10	15	1200	1500	11000	7.35	7.5 YR 2/3
659	50	SSW01-4/4/4	601975	4637825	94	7.5	17	27	180	0.11	10	1900	1900	18000	6.80	10 YR 2/3
660	50	SSW02-1/2/1	601625	4638325	31	8.1	23	36	130	<0.10	17	1400	1600	8700	7.10	7.5 YR 3/3
661	50	SSW02-1/4/4	601775	4638225	29	6.6	21	35	130	<0.10	16	1200	1400	7800	7.32	7.5 YR 2/3
662	50	SSW02-2/2/1	601625	4638525	23	11	19	41	100	<0.10	22	1100	2200	11000	7.17	10 YR 2/3
663	50	SSW02-2/3/3	601775	4638575	17	1.8	21	42	73	<0.10	20	450	470	2400	7.17	10 YR 3/3
664	50	SSW02-3/1/1	601825	4638425	17	2.6	23	45	71	<0.10	23	530	640	3900	7.22	10 YR 2/3
665	50	SSW02-4/2/4	601875	4638325	31	7.3	23	39	120	<0.10	19	1300	1500	8800	7.15	10 YR 2/3
666	50	SSW02-4/4/3	601975	4638275	28	6.7	23	38	110	<0.10	17	1300	1400	7600	6.87	7.5 YR 2/3
667	50	SSW24-1/2/1	601625	4647125	41	0.79	22	22	21	<0.10	10	46	120	1300	7.20	7.5 YR 3/3
668	50	SSW24-2/1/2	601625	4647275	27	0.6	21	32	27	<0.10	14	100	170	1200	6.97	10 YR 3/3
669	50	SSW24-2/2/4	601675	4647325	44	<0.10	21	26	22	<0.10	12	68	160	1200	7.13	10 YR 3/3
670	50	SSW25-2/3/1	601725	4647725	18	0.66	28	81	40	<0.10	37	100	200	1500	7.03	10 YR 4/3
671	50	SSW25-2/3/2	601725	4647775	15	1	20	54	30	<0.10	23	150	220	1300	7.07	10 YR 2/3
672	50	SSW25-2/3/3	601775	4647775	26	<0.10	38	97	35	<0.10	59	100	120	1800	7.09	10 YR 3/3
673	50	SSW25-2/4/2	601725	4647675	55	0.14	23	58	31	<0.10	30	79	150	1200	7.17	10 YR 3/3
674	50	SSW25-2/4/4	601775	4647625	210	<0.10	21	27	24	<0.10	27	57	150	1100	7.17	10 YR 4/3
675	50	SSW25-4/2/1	601825	4647525	130	<0.10	20	25	22	<0.10	10	39	120	1000	7.28	10 YR 3/3
676	50	SSW25-4/2/2	601825	4647575	200	<0.10	23	23	20	<0.10	11	40	140	1300	7.22	10 YR 3/3
677	50	SSW26-1/3/3	601775	4647975	15	0.8	26	68	57	<0.10	26	120	250	1400	7.12	10 YR 3/4
678	50	SSW26-1/4/3	601775	4647875	15	0.62	25	90	40	0.1	31	84	200	1200	7.25	10 YR 3/3
679	50	SSW26-3/1/1	601825	4648025	8.1	0.22	23	72	28	0.11	36	83	120	1200	7.17	10 YR 2/3
680	50	SSW26-3/1/2	601825	4648075	7.7	0.28	25	79	32	<0.10	44	73	130	1300	7.25	10 YR 3/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
681	50	SSW26-3/1/3	601875	4648075	7.1	0.5	22	65	38	<0.10	37	86	130	1400	7.10	10 YR 3/2
682	50	SSW26-3/2/1	601825	4648125	12	0.34	30	97	34	<0.10	78	75	110	1500	7.20	2.5 Y 4/2
683	50	SSW26-3/3/2	601925	4648175	14	0.66	26	66	37	<0.10	46	98	200	1500	7.23	10 YR 2/3
684	50	SSW26-3/3/3	601975	4648175	15	0.53	25	66	33	<0.10	35	84	160	1400	7.21	10 YR 2/2
685	50	SSW26-3/3/4	601975	4648125	10	0.38	23	60	36	0.1	35	84	120	1400	7.14	10 YR 3/2
686	50	SSW26-4/1/1	601825	4647825	13	0.42	32	90	29	<0.10	100	100	130	1600	7.21	10 YR 2/3
687	50	SSW26-4/2/1	601825	4647925	14	0.15	23	70	25	0.13	34	81	110	1100	7.18	10 YR 3/3
688	50	SSW27-1/1/1	601625	4648225	87	<0.10	21	33	49	<0.10	23	260	250	2100	7.18	10 YR 3/3
689	50	SSW27-1/1/2	601625	4648275	110	<0.10	20	28	49	<0.10	21	260	230	2300	7.23	10 YR 3/3
690	50	SSW27-1/2/4	601675	4648325	45	5.5	21	17	110	0.16	11	2000	1300	4900	7.31	10 YR 3/4
691	50	SSW27-2/4/4	601775	4648425	59	0.42	20	48	45	<0.10	57	290	340	1800	7.22	10 YR 3/3
692	50	SSW27-3/1/1	601825	4648425	110	<0.10	24	71	51	<0.10	45	180	330	1900	7.17	10 YR 3/3
693	50	SSW27-3/1/2	601825	4648475	72	<0.10	22	57	49	<0.10	29	140	180	1400	7.15	10 YR 3/3
694	50	SSW27-3/3/4	601975	4648525	180	<0.10	21	81	37	0.11	43	54	170	1200	7.10	10 YR 3/4
695	50	SSW27-3/4/1	601925	4648425	88	<0.10	28	130	55	<0.10	62	160	270	1300	7.19	10 YR 3/4
696	50	SSW27-3/4/2	601925	4648475	180	<0.10	26	56	50	<0.10	59	89	500	2200	7.25	10 YR 3/4
697	50	SSW27-4/2/3	601875	4648375	78	<0.10	26	120	49	0.1	58	210	280	1000	7.20	10 YR 3/3
698	50	SSX26-2/2/1	602025	4648125	7.8	0.56	19	57	31	0.11	29	80	120	1400	7.25	10 YR 2/2
699	50	SSX26-2/2/3	602075	4648175	34	<0.10	20	53	28	<0.10	26	65	110	1200	7.28	10 YR 2/2
700	50	SSX26-3/2/2	602225	4648175	110	<0.10	16	15	26	<0.10	11	47	80	1300	7.30	10 YR 4/4
701	50	SSX26-3/2/3	602275	4648175	230	<0.10	12	10	22	<0.10	9	52	77	1200	7.33	10 YR 4/4
702	50	SSX26-3/2/4	602275	4648125	130	<0.10	18	21	26	<0.10	13	50	79	1000	7.26	10 YR 4/3
703	50	SSX27-2/2/1	602025	4648525	98	<0.10	22	110	42	0.1	65	95	170	1300	7.14	10 Y 3/3
704	50	SSX27-2/2/3	602075	4648575	85	<0.10	22	100	37	<0.10	49	71	160	1600	7.10	10 Y 4/3
705	50	SSX27-4/3/4	602375	4648325	74	<0.10	14	16	25	<0.10	11	39	77	960	7.29	10 YR 4/4
706	50	SSX27-4/4/1	602325	4648225	94	<0.10	10	7.4	19	<0.10	6.8	37	49	590	7.36	2.5 Y 5/3
707	50	SSX27-4/4/2	602325	4648275	80	<0.10	16	15	25	<0.10	9.7	47	96	1100	7.40	10 YR 4/3
708	50	SSX28-1/1/3	602075	4648675	74	<0.10	22	180	40	<0.10	87	120	170	1200	7.23	10 YR 2/2
709	50	SSX28-1/1/4	602075	4648625	74	0.16	24	170	37	<0.10	82	68	130	1200	7.16	10 YR 3/3
710	50	SSX28-1/3/1	602125	4648725	96	<0.10	25	190	47	<0.10	100	480	290	1700	7.26	10 YR 3/2
711	50	SSX28-1/3/3	602175	4648775	86	0.25	24	220	39	<0.10	110	260	280	1500	7.22	7.5 YR 3/2
712	50	SSX28-1/4/2	602125	4648675	110	<0.10	27	280	34	<0.10	140	78	120	1100	7.17	10 YR 3/2
713	50	SSX28-3/1/1	602225	4648825	100	<0.10	25	260	43	<0.10	130	190	270	1300	7.23	10 YR 3/3
714	50	SSX28-3/1/4	602275	4648825	120	0.95	22	200	33	<0.10	100	60	110	1000	7.20	10 YR 3/3
715	50	SSX28-3/3/4	602375	4648925	65	<0.10	20	79	36	<0.10	41	77	150	1400	7.23	7.5 YR 3/2
716	50	SSX28-3/4/2	602325	4648875	67	<0.10	19	98	28	<0.10	46	61	96	1000	7.19	10 YR 3/2
717	50	SSY27-1/2/2	602425	4648375	54	<0.10	21	41	34	<0.10	19	68	130	1100	7.24	10 YR 4/3
718	50	SSY27-1/2/4	602475	4648325	87	<0.10	18	22	25	<0.10	13	44	90	1100	7.23	10 YR 4/4
719	50	SSY27-1/3/3	602575	4648375	41	<0.10	15	10	21	<0.10	6.5	33	65	980	7.30	2.5 YR 5/3
720	50	SSY27-2/4/1	602525	4648425	62	<0.10	21	18	28	<0.10	9	47	97	1300	7.31	10 YR 4/3
721	50	SSY27-3/2/3	602675	4648575	19	<0.10	11	7.1	16	<0.10	16	37	52	990	7.23	10 YR 3/3
722	50	SSY27-3/3/1	602725	4648525	32	<0.10	19	8.1	26	<0.10	6.1	39	82	1300	7.26	10 YR 3/3
723	50	SSY28-2/2/1	602425	4648925	52	0.19	22	67	35	<0.10	34	80	210	1700	7.01	7.5 YR 3/2
724	50	SSY28-2/2/3	602475	4648975	52	0.27	22	59	38	0.14	31	100	230	1900	7.09	10 YR 3/3
725	50	SSY28-4/4/1	602725	4648625	34	<0.10	16	6.9	26	<0.10	4.1	40	78	1100	7.09	10 YR 4/3
726	50	SSY28-4/4/2	602725	4648675	37	<0.10	16	19	26	<0.10	9.9	64	100	1100	7.29	10 YR 3/1
727	50	SSY28-4/4/4	602775	4648625	33	<0.10	15	6.4	28	<0.10	5.6	36	69	1200	7.34	10 YR 4/3
728	50	SSY29-1/1/4	602475	4649025	54	0.21	23	57	42	<0.10	31	110	280	2100	7.01	7.5 YR 3/2
729	50	SSY29-1/3/4	602575	4649125	39	0.47	22	47	42	<0.10	24	130	300	1900	7.06	10 YR 3/3
730	50	SSY29-1/4/1	602525	4649025	17	0.5	20	49	42	<0.10	21	120	240	1600	7.08	10 YR 3/3
731	50	SSY29-1/4/2	602525	4649075	65	0.11	23	56	45	<0.10	31	150	270	2100	7.03	10 YR 3/3
732	50	SSY29-3/1/2	602625	4649275	30	0.38	18	39	38	0.11	16	96	250	1500	7.03	10 YR 3/3
733	50	SSY29-3/1/3	602675	4649275	26	1	21	37	51	<0.10	18	140	300	2000	7.02	10 YR 3/3
734	50	SSY29-3/2/2	602625	4649375	23	4.5	21	28	72	<0.10	15	450	800	3900	7.14	10 YR 3/3
735	50	SSY29-3/2/3	602675	4649375	26	0.84	21	32	60	0.1	16	160	470	2500	7.15	10 YR 3/3
736	50	SSY29-3/3/1	602725	4649325	30	1.3	19	24	47	0.1	13	160	460	2400	7.12	10 YR 3/3
737	50	SSY29-3/4/1	602725	4649225	36	1.5	20	21	46	0.11	12	180	500	2700	7.17	10 YR 3/3
738	50	SSY29-3/4/2	602725	4649275	26	1.6	19	21	56	0.12	11	190	510	2700	7.06	10 YR 2/3
739	50	SSY29-4/2/2	602625	4649175	31	0.53	21	43	48	0.1	22	120	260	1700	7.07	7.5 YR 3/3
740	50	SSY29-4/2/3	602675	4649175	12	1	22	51	42	<0.10	20	130	290	1900	7.11	10 YR 3/3
741	50	SSY30-4/2/1	602625	4649525	29	1.1	17	31	99	<0.10	19	120	290	1600	7.12	10 YR 2/3
742	50	SSY30-4/2/2	602625	4649575	38	0.33	19	21	67	<0.10	13	100	190	1600	7.06	10 YR 3/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
743	50	SSY30-4/2/3	602675	4649575	64	0.39	15	24	50	<0.10	14	140	250	1500	7.12	10 YR 2/3
744	50	SSY30-4/2/4	602675	4649525	36	1	17	36	54	<0.10	19	53	240	1400	7.16	10 YR 3/3
745	50	SSZ28-3/2/1	603025	4648925	7.7	54	18	4.8	38	<0.10	4.6	350	2600	1500	7.04	10 YR 4/4
746	50	SSZ28-3/2/2	603025	4648975	33	4.6	12	9.6	27	0.1	6.9	130	330	1100	7.02	10 YR 4/3
747	50	SSZ28-3/2/3	603075	4648975	40	1.1	10	5.9	25	<0.10	3.6	95	230	930	7.03	10 YR 4/4
748	50	SSZ29-2/4/4	602975	4649225	27	1.8	20	36	39	<0.10	18	190	280	1500	7.02	10 YR 3/3
749	50	SSZ29-3/1/1	603025	4649225	180	<0.10	14	25	38	0.1	25	120	220	910	7.02	10 YR 5/4
750	50	SSZ29-3/1/3	603075	4649275	22	0.68	18	48	46	0.1	22	91	180	1100	7.04	10 YR 3/3
751	50	SSZ29-3/2/1	603025	4649325	20	3.1	20	39	35	<0.10	21	260	410	1500	7.04	10 YR 4/4
752	50	SSZ29-3/2/2	603025	4649375	15	11	21	29	40	<0.10	17	940	1200	1900	7.07	10 YR 3/4
753	50	SSZ30-2/2/3	602875	4649775	19	1.3	21	42	62	<0.10	21	170	390	1800	7.08	10 YR 4/4
754	50	SSZ30-3/1/3	603075	4649675	6.4	6.3	17	16	49	<0.10	9.6	480	1700	1800	7.07	10 YR 3/4
755	50	SSZ30-3/2/1	603025	4649725	7.8	2.2	23	45	47	<0.10	21	230	600	1800	7.05	10 YR 3/3
756	50	SSZ30-3/2/3	603075	4649775	10	4.6	17	18	56	<0.10	7.5	280	1200	2000	7.12	10 YR 3/4
757	50	SSZ30-3/2/4	603075	4649725	23	6.7	19	17	36	0.11	10	570	1900	2200	7.12	10 YR 3/4
758	50	SSZ30-3/4/1	603125	4649625	<1	8	12	15	30	<0.10	8.4	590	2500	1300	7.07	10 YR 4/4
759	50	SSZ30-4/1/3	603075	4649475	9.5	7.9	16	23	26	0.1	14	340	750	1200	7.11	10 YR 3/3
760	50	SSZ30-4/1/4	603075	4649425	20	5.2	18	33	35	<0.10	18	420	1100	1400	7.11	10 YR 4/4
761	50	SSZ30-4/2/3	603075	4649575	<1	13	12	12	37	<0.10	190	640	1400	1100	7.13	10 YR 4/3
762	50	SSZ30-4/2/4	603075	4649525	7	12	10	12	22	<0.10	7.8	600	1000	930	7.18	10 YR 4/2
763	50	SSZ30-4/3/1	603125	4649525	8.2	12	6.6	4	110	<0.10	4.1	770	790	490	7.09	10 YR 5/2
764	50	SSZ30-4/4/1	603125	4649425	16	2	20	42	36	<0.10	21	170	300	1400	7.09	7.5 YR 3/3
765	50	SSZ31-1/1/2	602825	4649875	12	1.5	14	30	62	0.21	15	180	390	1400	7.12	10 YR 2/2
766	50	SSZ31-1/1/3	602875	4649875	5.4	1.1	23	63	43	0.1	22	160	290	1500	7.15	10 YR 3/4
767	50	SSZ31-1/1/4	602875	4649825	7.7	1.2	26	68	48	0.16	24	150	330	1700	7.19	10 YR 3/4
768	50	SSZ31-1/2/4	602875	4649925	15	1.3	18	36	50	<0.10	18	120	330	1700	7.11	10 YR 3/3
769	50	SSZ31-1/3/2	602925	4649975	4.3	1.4	22	70	53	<0.10	27	440	490	1800	7.05	2.5 Y 3/2
770	50	SSZ31-2/2/2	602825	4650175	35	1.4	18	30	39	0.11	15	110	370	1500	7.08	10 YR 3/4
771	50	SSZ31-2/2/4	602875	4650125	19	2	18	44	88	0.15	21	140	630	1600	7.17	10 YR 3/3
772	50	SSZ31-4/1/3	603075	4649875	8.4	4.1	14	18	87	<0.10	12	220	1000	2100	7.08	10 YR 2/3
773	50	SSZ31-4/2/3	603075	4649975	5.5	1.5	13	15	54	<0.10	8.9	150	370	1400	7.15	10 YR 3/3
774	50	SSZ31-4/2/4	603075	4649925	11	2.7	17	20	69	<0.10	12	200	600	1800	7.11	10 YR 2/3
775	50	SSZ31-4/3/1	603125	4649925	8.1	3	18	18	91	<0.10	9.2	220	440	1300	7.11	10 YR 3/4
776	50	SSZ31-4/4/1	603125	4649825	2.9	6.6	17	15	81	<0.10	11	310	2000	2900	7.14	10 YR 3/4
777	50	SSZ32-1/1/4	602875	4650225	27	1.4	15	32	45	<0.10	18	100	410	1300	7.18	10 YR 3/3
778	50	SSZ32-1/4/1	602925	4650225	19	1.6	17	33	52	0.1	19	230	420	1400	7.19	10 YR 3/3
779	50	SSZ32-1/4/2	602925	4650275	19	1.8	16	25	120	<0.10	15	110	440	1400	7.13	10 YR 3/4
780	50	SSZ32-1/4/3	602975	4650275	12	1.9	16	23	89	0.1	15	170	500	1800	7.07	10 YR 4/3
781	50	SSZ32-3/1/1	603025	4650425	8.6	0.81	18	28	30	<0.10	15	91	460	1500	7.16	10 YR 3/4
782	50	SSZ32-3/1/3	603075	4650475	9.6	0.67	22	21	34	<0.10	11	130	200	2200	7.08	10 YR 4/4
783	50	SSZ32-3/1/4	603075	4650425	9.3	0.34	18	22	49	<0.10	14	86	440	1600	7.09	10 YR 3/4
784	50	SSZ32-3/3/4	603175	4650525	11	0.99	19	28	75	<0.10	16	230	410	2300	7.02	10 YR 2/3
785	50	SSZ32-3/4/2	603125	4650475	5	0.89	19	27	67	<0.10	13	130	320	2100	7.17	10 YR 3/3
786	50	SSa31-2/1/1	603225	4650025	5.4	1.1	21	33	41	<0.10	16	77	280	1800	7.01	10 YR 3/4
787	50	SSa31-2/1/4	603275	4650025	20	0.76	25	20	37	<0.10	16	100	200	2300	7.03	10 YR 3/4
788	50	SSa32-2/2/1	603225	4650525	12	1.4	17	31	78	0.1	20	250	480	2000	7.03	10 YR 2/3
789	50	SSa32-2/2/2	603225	4650575	3.8	1.2	18	23	72	<0.10	17	170	440	2300	6.97	2.5 Y 3/2
790	50	SSa32-3/1/3	603475	4650475	10	0.75	22	29	34	<0.10	15	170	190	2300	7.12	10 YR 3/4
791	50	SSa32-3/4/1	603525	4650425	11	4.9	25	31	31	<0.10	13	340	890	2700	7.01	10 YR 3/4
792	50	SSa32-4/2/1	603425	4650325	30	0.95	28	27	37	<0.10	14	110	210	3400	7.02	10 YR 3/3
793	50	SSa32-4/2/3	603475	4650375	9.3	8.8	24	24	32	<0.10	11	1000	2100	2800	7.07	10 YR 4/3
794	50	SSa32-4/2/4	603475	4650325	12	4.5	26	29	32	<0.10	12	270	650	2800	7.07	10 YR 3/4
795	50	SSa33-1/1/3	603275	4650675	6.9	0.5	20	27	33	<0.10	15	130	200	2100	7.07	10 YR 3/4
796	50	SSa33-1/1/4	603275	4650625	7.4	0.44	16	22	39	<0.10	12	69	250	1300	7.06	10 YR 4/4
797	50	SSa33-4/2/1	603425	4650725	2.6	0.75	20	27	33	<0.10	13	180	240	1900	7.08	10 YR 3/3
798	50	SSa33-4/2/3	603475	4650775	3.8	1.7	19	25	33	<0.10	15	160	1300	1700	7.12	10 YR 3/4
799	50	SSa33-4/4/1	603525	4650625	8.5	1.8	23	40	39	<0.10	18	270	770	2200	7.02	10 YR 2/3
800	50	SSa33-4/4/4	603575	4650625	6	1.3	19	31	83	0.1	15	150	590	1500	6.99	10 YR 3/4



## **4-2 Soil Elution 400m, 200m, 100m, 50m grids**



**Data 4-2(1) Soil Samples of 400m Grid Elution Analysis**

Num	Grid	Sample No.	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1	400	SS A18	<0.003	<0.001	<0.005	0.006	0.066	<0.0001	0.012	0.003	0.02	0.02
2	400	SS B23	<0.003	<0.001	<0.005	<0.005	0.092	<0.0001	0.009	0.003	0.02	0.019
3	400	SS C14	0.004	<0.001	<0.005	<0.005	0.012	<0.0001	<0.005	<0.001	0.01	0.055
4	400	SS D17	0.003	<0.001	<0.005	0.018	0.009	<0.0001	0.012	0.005	0.02	0.09
5	400	SS D20	<0.003	<0.001	<0.005	<0.005	0.006	<0.0001	0.011	0.005	0.01	0.061
6	400	SS F14	<0.003	<0.001	<0.005	<0.005	0.089	<0.0001	0.009	0.004	0.02	0.044
7	400	SS G11	<0.003	<0.001	<0.005	0.026	0.054	<0.0001	0.019	0.005	0.04	0.05
8	400	SS G17	<0.003	<0.001	<0.005	0.009	0.083	<0.0001	0.01	0.004	0.03	0.039
9	400	SS G20	0.0062	<0.001	<0.005	<0.005	0.007	<0.0001	<0.005	0.005	0.02	0.33
10	400	SS G23	<0.003	<0.001	<0.005	<0.005	0.013	<0.0001	<0.005	0.004	0.02	0.25
11	400	SS G26	0.003	<0.001	<0.005	0.007	0.016	<0.0001	<0.005	0.096	0.01	0.24
12	400	SS G29	0.016	<0.001	<0.005	0.061	0.022	<0.0001	0.04	0.023	0.12	0.3
13	400	SS G32	0.003	<0.001	<0.005	<0.005	0.093	<0.0001	<0.005	0.003	0.01	0.012
14	400	SS I14	<0.003	<0.001	<0.005	0.015	0.027	<0.0001	0.014	0.004	0.02	0.06
15	400	SS J11	<0.003	<0.001	<0.005	0.006	0.006	<0.0001	0.006	0.006	0.01	0.007
16	400	SS J17	<0.003	<0.001	<0.005	0.02	0.028	<0.0001	0.009	0.01	0.09	0.37
17	400	SS J20	0.004	<0.001	<0.005	0.028	0.039	<0.0001	0.016	0.13	0.11	0.82
18	400	SS J23	<0.003	<0.001	<0.005	0.009	0.13	<0.0001	0.009	0.019	0.08	0.25
19	400	SS J26	<0.003	<0.001	<0.005	0.008	0.064	<0.0001	0.006	0.004	0.03	0.04
20	400	SS J29	<0.003	0.003	<0.005	<0.005	0.029	<0.0001	<0.005	<0.001	0.01	0.014
21	400	SS J32	<0.003	<0.001	<0.005	<0.005	0.013	<0.0001	<0.005	0.01	0.02	0.032
22	400	SS J35	<0.003	<0.001	<0.005	<0.005	0.088	<0.0001	0.007	0.001	0.01	0.007
23	400	SS L8	<0.003	<0.001	<0.005	0.008	0.008	<0.0001	0.005	0.22	<0.005	0.026
24	400	SS L14	<0.003	<0.001	<0.005	0.031	0.025	<0.0001	0.01	0.021	0.09	0.47
25	400	SS L24	0.005	0.001	0.0063	0.073	0.052	<0.0001	0.033	<0.001	0.17	0.59
26	400	SS L27	0.006	<0.001	<0.005	0.027	0.033	<0.0001	0.017	0.01	0.11	0.57
27	400	SS M5	0.019	<0.001	<0.005	0.039	0.028	<0.0001	0.015	0.031	0.11	0.52
28	400	SS M11	0.015	<0.001	<0.005	0.018	0.018	<0.0001	0.008	0.51	0.08	0.37
29	400	SS M17	0.008	0.005	<0.005	0.011	0.019	<0.0001	0.041	0.0094	0.07	0.11
30	400	SS M20	<0.003	<0.001	<0.005	0.008	0.018	<0.0001	<0.005	<0.001	0.04	0.11
31	400	SS M29	0.004	<0.001	<0.005	<0.005	0.021	<0.0001	<0.005	0.003	0.03	0.11
32	400	SS M32	<0.003	<0.001	<0.005	<0.005	0.011	<0.0001	<0.005	0.005	<0.005	0.014
33	400	SS N24	0.1	0.04	<0.005	0.022	0.14	<0.0001	0.009	0.025	1.1	1.6
34	400	SS O20	0.003	0.003	<0.005	0.009	0.03	<0.0001	0.005	0.005	0.06	0.31
35	400	SS P5	<0.003	<0.001	<0.005	<0.005	0.006	<0.0001	<0.005	0.004	<0.005	<0.005
36	400	SS P8	<0.003	<0.001	<0.005	0.0063	0.009	<0.0001	<0.005	0.005	0.01	0.019
37	400	SS P11	<0.003	<0.001	<0.005	<0.005	0.008	<0.0001	<0.005	<0.001	0.03	0.086
38	400	SS P14	0.015	<0.001	0.005	0.034	0.046	<0.0001	0.013	0.082	0.18	0.94
39	400	SS P17	0.009	<0.001	<0.005	0.058	0.041	<0.0001	0.03	0.051	0.15	0.69
40	400	SS P21	0.003	0.003	<0.005	<0.005	0.006	<0.0001	<0.005	<0.001	0.44	0.8
41	400	SS P26	0.14	0.002	0.0071	0.062	0.086	<0.0001	0.026	0.04	0.18	0.5
42	400	SS P35	<0.003	<0.001	<0.005	0.016	0.033	<0.0001	0.006	0.033	0.17	0.32
43	400	SS Q19	0.003	<0.001	<0.005	0.048	0.061	<0.0001	0.023	0.049	0.2	0.68
44	400	SS Q23	0.01	<0.001	<0.005	<0.005	0.016	<0.0001	<0.005	0.015	0.04	0.057
45	400	SS Q32	0.006	0.002	0.016	0.035	0.1	<0.0001	0.015	0.084	0.3	0.76
46	400	SS R2	0.007	0.001	0.007	0.052	0.024	<0.0001	0.026	0.027	0.16	0.52
47	400	SS S5	<0.003	<0.001	0.0078	0.074	0.061	<0.0001	0.042	0.001	0.6	0.57
48	400	SS S8	<0.003	<0.001	<0.005	0.042	0.088	<0.0001	0.022	0.015	0.67	0.57
49	400	SS S11	0.0048	<0.001	<0.005	0.023	0.082	<0.0001	0.007	0.001	1.1	0.72
50	400	SS S14	<0.003	<0.001	<0.005	<0.005	0.016	<0.0001	<0.005	0.024	0.08	0.094
51	400	SS S17	<0.003	0.032	<0.005	<0.005	0.02	<0.0001	0.006	0.035	5.6	24.3
52	400	SS S23	0.49	<0.001	<0.005	0.008	0.02	<0.0001	<0.005	0.014	0.08	0.17
53	400	SS S26	0.2	1.8	<0.005	0.02	0.037	<0.0001	0.024	0.016	0.31	0.56
54	400	SS S29	<0.003	<0.001	0.006	0.022	0.022	<0.0001	0.035	0.023	0.11	0.37
55	400	SS T20	0.004	<0.001	<0.005	0.016	0.027	<0.0001	0.006	0.18	0.2	0.44
56	400	SS T32	0.004	<0.001	<0.005	0.006	0.014	<0.0001	<0.005	0.049	0.07	0.13
57	400	SS U2	<0.003	<0.001	<0.005	0.006	0.02	<0.0001	0.005	0.01	0.04	0.04
58	400	SS U22	0.004	<0.001	<0.005	0.016	0.037	<0.0001	0.007	0.19	0.25	0.49
59	400	SS V5	<0.003	<0.001	<0.005	<0.005	<0.005	<0.0001	<0.005	<0.001	0.01	0.034
60	400	SS V8	0.009	<0.001	<0.005	0.049	0.029	<0.0001	0.023	0.042	0.2	0.55

Num	Grid	Sample No.	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
61	400	SS V11	0.005	<0.001	<0.005	0.034	0.023	<0.0001	0.012	0.02	0.17	0.49
62	400	SS V14	0.003	<0.001	<0.005	0.035	0.014	<0.0001	0.013	0.012	0.11	0.24
63	400	SS V17	<0.003	<0.001	<0.005	0.04	0.016	<0.0001	0.025	0.037	0.08	0.7
64	400	SS V26	0.056	<0.001	<0.005	<0.005	0.022	<0.0001	0.006	0.002	0.01	0.089
65	400	SS V29	0.011	<0.001	<0.005	0.005	0.018	<0.0001	0.006	0.005	0.06	0.15
66	400	SS W32	0.016	<0.001	<0.005	0.007	0.026	<0.0001	0.005	0.006	0.06	0.11
67	400	SS Y26	0.003	<0.001	<0.005	<0.005	0.008	<0.0001	<0.005	0.001	0.01	0.017
68	400	SS Y29	0.006	<0.001	<0.005	0.026	0.027	<0.0001	0.012	0.036	0.25	0.28



**Data 4-2(2) Soil Samples of 200m Grid Elution Analysis**

Num	Grid	Sample No.	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1	200	SS G28-1	<0.0030	0.002	<0.0050	<0.0050	0.0494	0.00012	<0.0050	0.0012	0.0094	0.0324
2	200	SS G31-1	<0.0030	<0.0010	<0.0050	0.0079	0.0098	<0.00010	0.0063	0.0038	0.0237	0.0584
3	200	SS H30-1	0.0062	0.0016	<0.0050	0.0135	0.0114	<0.00010	0.005	0.0028	0.0363	0.0875
4	200	SS I28-1	0.0032	0.0016	<0.0050	0.0243	0.015	<0.00010	0.0223	0.0107	0.0521	0.1791
5	200	SS J27-1	<0.0030	0.001	<0.0050	<0.0050	<0.0050	<0.00010	<0.0050	<0.0010	0.0052	0.0201
6	200	SS L29-1	<0.0030	0.0024	<0.0050	0.0052	0.0277	0.0001	<0.0050	0.0031	0.0462	0.1279
7	200	SS N20-1	<0.0030	0.001	<0.0050	0.005	0.1073	0.00021	<0.0050	0.0058	0.0658	0.1592
8	200	SS N23-1	0.0069	0.0037	<0.0050	0.0173	0.2121	0.0001	0.0172	0.0101	0.1321	0.2267
9	200	SS N24-1	0.008	<0.0010	<0.0050	0.0065	0.0907	<0.00010	0.0062	0.0034	0.0467	0.1382
10	200	SS O21-1	<0.0030	0.0013	<0.0050	<0.0050	0.0106	0.0001	<0.0050	0.0014	0.0136	0.0652
11	200	SS P19-1	<0.0030	0.001	<0.0050	0.0058	0.1016	<0.00010	0.0065	0.0031	0.0385	0.0615
12	200	SS P21-1	<0.0030	0.001	<0.0050	<0.0050	0.0111	0.00015	<0.0050	<0.0010	0.0101	0.0234
13	200	SS P23-1	<0.0030	0.0011	<0.0050	0.006	0.1251	0.00011	0.0057	0.0087	0.0522	0.1578
14	200	SS P26-1	<0.0030	0.0018	<0.0050	0.0082	0.1164	<0.00010	0.0059	0.0107	0.0774	0.1053
15	200	SS P27-1	0.0753	0.0023	<0.0050	0.0362	0.143	<0.00010	0.0225	0.0256	0.1559	0.2433
16	200	SS Q20-1	<0.0030	<0.0010	<0.0050	<0.0050	0.0086	0.0001	<0.0050	0.0011	0.0066	0.0415
17	200	SS Q22-1	0.0036	<0.0010	<0.0050	<0.0050	0.0898	<0.00010	<0.0050	<0.0010	0.026	0.0537
18	200	SS Q24-1	0.0272	0.0023	<0.0050	0.0051	0.033	0.00011	<0.0050	0.0036	0.0387	0.0543
19	200	SS Q31-1	0.0068	0.0019	<0.0050	<0.0050	0.1145	<0.00010	<0.0050	0.0101	0.0685	0.1273
20	200	SS R15-1	0.0085	0.003	<0.0050	0.0068	0.0155	<0.00010	0.0066	0.001	0.0365	0.0853
21	200	SS R17-1	0.0273	0.0019	<0.0050	<0.0050	0.0288	0.00012	<0.0050	0.004	0.0372	0.0534
22	200	SS R18-1	0.005	0.0052	<0.0050	0.0442	0.0214	<0.00010	0.0214	0.0159	0.122	0.4378
23	200	SS R26-1	0.0313	0.0029	<0.0050	0.0168	0.0264	<0.00010	0.0105	0.0069	0.1056	0.2116
24	200	SS R28-1	0.0121	0.001	<0.0050	<0.0050	0.0281	<0.00010	<0.0050	0.0054	0.0512	0.1429
25	200	SS R30-1	<0.0030	0.001	<0.0050	<0.0050	0.0908	<0.00010	0.0052	0.0016	0.0273	0.0631
26	200	SS S05-1	0.003	<0.0010	<0.0050	<0.0050	0.009	<0.00010	0.005	<0.0010	0.007	<0.0050
27	200	SS S06-1	<0.0030	0.0061	<0.0050	0.0182	0.0183	<0.00010	0.0085	0.0101	0.0783	0.1085
28	200	SS S08-1	0.008	0.0011	<0.0050	0.005	0.0109	<0.00010	<0.0050	0.0141	0.0683	0.0571
29	200	SS S10-1	<0.0030	0.0067	<0.0050	<0.0050	<0.0050	<0.00010	<0.0050	<0.0010	0.827	1.052
30	200	SS S13-1	<0.0030	0.0057	<0.0050	0.0214	0.0627	<0.00010	0.0092	0.0723	0.561	0.3706
31	200	SS S16-1	<0.0030	0.0028	<0.0050	<0.0050	0.0176	0.0001	<0.0050	0.0445	0.274	0.317
32	200	SS S25-1	0.0574	0.0104	<0.0050	0.012	0.017	<0.00010	0.007	0.0124	0.0923	0.2554
33	200	SS T02-1	<0.0030	0.0013	<0.0050	<0.0050	0.005	<0.00010	<0.0050	0.0015	0.0143	0.011
34	200	SS T04-1	0.0105	0.001	<0.0050	0.019	0.0131	0.0001	0.0124	0.0063	0.0614	0.0945
35	200	SS T07-1	<0.0030	<0.0010	<0.0050	<0.0050	0.0094	<0.00010	<0.0050	<0.0010	0.0135	0.0065
36	200	SS T09-1	<0.0030	0.0018	<0.0050	0.0058	0.0269	<0.00010	<0.0050	0.1657	0.3829	0.703
37	200	SS T11-1	<0.0030	0.0022	<0.0050	<0.0050	0.0235	0.0001	<0.0050	0.0638	0.2663	0.2588
38	200	SS T19-1	<0.0030	0.0021	<0.0050	<0.0050	0.0101	0.0001	<0.0050	0.0288	0.0686	0.0649
39	200	SS T21-1	0.1581	0.0053	<0.0050	0.0411	0.0255	<0.00010	0.0148	0.0053	0.0976	0.1559
40	200	SS T26-1	0.0437	0.001	<0.0050	0.016	0.0177	<0.00010	0.0075	0.0137	0.0994	0.2704
41	200	SS T27-1	0.0108	0.0013	<0.0050	0.0243	0.0319	<0.00010	0.0152	0.0105	0.1253	0.3293
42	200	SS U05-1	0.0032	0.0013	<0.0050	0.005	0.0243	<0.00010	<0.0050	0.1156	0.28	0.353
43	200	SS U23-1	0.0536	0.0024	<0.0050	0.0152	0.0198	<0.00010	<0.0050	0.0335	0.1281	0.1505
44	200	SS U26-1	0.01	0.001	<0.0050	0.005	0.017	<0.00010	<0.0050	<0.0010	0.0092	0.0687
45	200	SS U30-1	0.0081	0.0022	<0.0050	0.0143	0.0322	<0.00010	0.011	0.0163	0.0906	0.3632
46	200	SS V02-1	0.003	0.0028	<0.0050	0.025	0.08	0.00016	0.0093	0.2431	1.055	0.884
47	200	SS V04-1	0.005	0.0011	<0.0050	0.0237	0.0575	<0.00010	0.0092	0.146	0.613	0.654
48	200	SS V24-1	0.01	0.0013	<0.0050	<0.0050	0.0169	<0.00010	<0.0050	0.0115	0.0537	0.0302
49	200	SS V25-1	0.0363	0.0036	<0.0050	0.0153	0.0311	<0.00010	0.0098	0.0292	0.1899	0.3621
50	200	SS W01-1	0.0058	0.0035	0.005	0.024	0.0664	<0.00010	0.0091	0.423	1.463	1.575
51	200	SS W26-1	0.0191	0.0017	<0.0050	0.0057	0.0214	<0.00010	<0.0050	0.0506	0.1062	0.1028
52	200	SS W28-1	0.0643	0.0039	<0.0050	0.0173	0.1001	0.0001	0.0073	0.0088	0.0898	0.1703
53	200	SS X30-1	0.1353	0.0018	<0.0050	0.042	0.0302	<0.00010	0.0213	0.0174	0.1008	0.2983
54	200	SS Y27-1	0.0157	0.001	<0.0050	<0.0050	0.0079	<0.00010	<0.0050	0.0013	0.0237	0.0623
55	200	SS Y28-1	<0.0030	0.001	<0.0050	0.005	0.005	<0.00010	<0.0050	0.0194	0.0288	0.0706
56	200	SS Y31-1	0.0156	0.001	<0.0050	<0.0050	0.0788	<0.00010	<0.0050	0.0106	0.0536	0.1016
57	200	SS Z28-1	0.021	0.0014	<0.0050	0.0256	0.0168	<0.00010	0.0105	0.0209	0.2019	0.2505
58	200	SS Z30-1	0.0054	0.0047	<0.0050	<0.0050	0.0113	<0.00010	<0.0050	0.0068	0.0217	0.0315

**Data 4-2(3) Soil Samples of 100m Grid Elution Analysis**

Num	Grid	Sample No.	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1	100	SS B19-4/2	<0.0030	0.002	<0.0050	<0.0050	0.0108	<0.00010	0.0181	0.0012	0.005	0.1548
2	100	SS D24-3/1	0.003	0.0018	<0.0050	0.0123	0.0091	<0.00010	0.0096	0.008	0.0325	0.3621
3	100	SS F13-2/4	<0.0030	<0.0010	<0.0050	0.0058	0.0125	<0.00010	0.0163	<0.0010	0.004	0.0294
4	100	SS G16-4/2	<0.0030	0.0019	<0.0050	0.056	0.0192	0.0001	0.0662	0.0114	0.0413	0.4846
5	100	SS I32-1/4	0.0142	0.0014	<0.0050	0.0176	0.0485	<0.00010	0.005	0.0665	0.098	0.1627
6	100	SS I35-3/1	0.003	0.003	<0.0050	0.0427	0.0083	<0.00010	0.0403	0.0871	0.0481	0.1921
7	100	SS M09-1/2	<0.0030	0.0012	<0.0050	0.0197	0.0083	0.0001	0.0271	0.005	0.0067	0.1324
8	100	SS M12-2/1	0.003	<0.0010	<0.0050	0.0056	0.0072	0.00012	<0.0050	0.0022	0.0231	0.1131
9	100	SS N35-2/1	0.0036	<0.0010	<0.0050	<0.0050	0.0337	<0.00010	<0.0050	0.0105	0.0289	0.0429
10	100	SS O25-3/1	0.1677	<0.0010	<0.0050	0.0112	0.0538	0.00011	0.0071	0.0293	0.0699	0.1134
11	100	SS R07-4/2	0.0051	0.002	<0.0050	0.005	0.0172	<0.00010	0.0067	0.0045	0.0265	0.0591
12	100	SS R12-4/2	<0.0030	0.0039	<0.0050	0.0102	0.0175	<0.00010	0.0063	0.0494	0.0691	0.1038
13	100	SS S03-2/3	0.011	0.004	<0.0050	0.0104	0.0125	<0.00010	<0.0050	0.0096	0.0779	0.159
14	100	SS S13-3/1	<0.0030	0.061	<0.0050	<0.0050	0.0755	<0.00010	0.0176	0.0505	10.59	17.96
15	100	SS S18-1/1	0.003	0.004	<0.0050	<0.0050	0.0787	0.0001	<0.0050	0.0152	0.2553	0.3422
16	100	SS S26-3/4	0.027	<0.0010	<0.0050	0.0051	0.0241	<0.00010	<0.0050	0.0081	0.0372	0.1511
17	100	SS T06-4/4	<0.0030	0.0022	<0.0050	0.0056	0.0301	<0.00010	<0.0050	0.1051	0.2599	0.3064
18	100	SS T08-1/3	<0.0030	0.0654	<0.0050	0.0021	0.0239	0.00012	0.0212	0.0012	9.47	24.78
19	100	SS T10-3/3	<0.0030	0.0027	<0.0050	<0.0050	0.006	0.0001	0.0054	0.0014	0.0284	0.761
20	100	SS T16-1/2	0.0142	0.0047	<0.0050	0.005	0.0439	<0.00010	0.0063	0.0113	0.0466	0.3431
21	100	SS U07-1/1	0.0048	0.0029	<0.0050	0.0159	0.0482	<0.00010	0.0074	0.0533	0.4631	0.1694
22	100	SS U07-4/4	0.0078	0.0018	<0.0050	0.005	0.0094	0.00011	0.0053	0.0021	0.0257	0.1167
23	100	SS V32-2/4	0.0103	<0.0010	<0.0050	<0.0050	0.0262	0.0001	<0.0050	0.0021	0.0201	0.3001
24	100	SS W02-1/3	0.0068	0.0015	<0.0050	0.005	0.0367	<0.00010	<0.0050	0.0762	0.1906	0.3826
25	100	SS W05-1/1	0.011	0.0021	0.0177	<0.0050	0.0061	<0.00010	0.0226	0.0012	0.0164	2.322
26	100	SS W30-3/1	0.0252	<0.0010	<0.0050	0.0052	0.0121	<0.00010	0.0369	<0.0010	<0.0050	0.3085
27	100	SS Y30-3/4	0.0307	<0.0010	<0.0050	<0.0050	0.0126	<0.00010	<0.0050	0.0045	0.0122	0.0962
28	100	SS Z26-4/1	0.0239	<0.0010	<0.0050	<0.0050	0.0089	<0.00010	<0.0050	0.0051	0.0189	1.137
29	100	SS a32-3/3	0.01	<0.0010	<0.0050	0.0087	0.0092	<0.00010	<0.0050	0.0085	0.0527	0.1734

**Data 4-2(4) Soil Samples of 50m Grid Elution Analysis**

Num	Grid	Sample No.	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1	50	S K27-3/2/4	<0.0030	0.0026	<0.0050	<0.0050	0.013	<0.00010	0.011	<0.0010	<0.0050	0.0785
2	50	S L26-3/2/3	0.008	0.0011	<0.0050	<0.0050	0.0097	0.00012	0.0105	<0.0010	0.007	0.4633
3	50	S L29-1/4/1	0.0089	0.0036	0.0082	<0.0050	0.0029	0.0001	0.0096	0.0011	0.0511	3.992
4	50	S L29-4/3/4	0.0105	0.0015	0.0264	<0.0050	0.0161	0.00012	<0.0050	0.0242	0.10	3.5
5	50	S M25-2/3/1	0.0075	0.0019	<0.0050	<0.0050	0.0134	0.00016	<0.0050	<0.0010	<0.0050	0.2033
6	50	S M25-4/2/4	0.0068	0.0015	<0.0050	0.014	0.0305	<0.00010	0.0107	0.0225	0.1607	0.976
7	50	S M26-2/2/4	0.0063	0.0018	<0.0050	<0.0050	0.0122	<0.00010	<0.0050	0.0013	0.0251	2.444
8	50	S M29-3/2/1	0.0091	0.001	<0.0050	0.0055	0.0699	<0.00010	0.0163	0.011	0.1298	1.136
9	50	S M30-4/3/4	0.0051	0.1004	0.0708	<0.0050	0.0578	0.00015	0.0137	0.0093	19.74	133.2
10	50	S N22-3/2/4	0.0127	0.0025	0.0051	0.0155	0.039	0.00015	0.0173	0.0125	0.0564	1.044
11	50	S N23-3/1/2	0.0098	0.006	<0.0050	0.0301	0.2789	0.0001	0.0226	0.0661	0.507	0.819
12	50	S N24-2/3/3	0.0093	0.0068	0.012	<0.0050	0.0145	0.0001	0.0052	0.006	1.037	17.63
13	50	S N25-2/4/3	0.014	0.0262	0.0716	<0.0050	0.1364	0.00011	0.0163	0.0187	2.819	60.3
14	50	S O21-4/3/3	0.005	0.003	<0.0050	0.0088	0.1349	<0.00010	0.0065	0.0098	0.2013	0.689
15	50	S O22-1/3/1	0.0092	0.0029	<0.0050	0.0283	0.0483	<0.00010	0.0234	0.0192	0.1187	0.693
16	50	S O23-4/1/2	0.003	0.0029	0.014	<0.0050	0.0115	0.0001	0.0128	<0.0010	0.0602	2.908
17	50	S P20-3/2/1	0.0059	0.0024	<0.0050	<0.0050	0.0342	<0.00010	<0.0050	0.0085	0.0805	0.3441
18	50	S P21-3/2/2	0.0196	0.0045	0.0491	<0.0050	0.0339	<0.00010	0.0315	0.0041	0.2407	8.58
19	50	S P22-2/3/3	0.0108	<0.0010	<0.0050	<0.0050	0.0213	<0.00010	<0.0050	0.0015	0.0055	0.0972
20	50	S Q20-1/4/1	<0.0030	0.0045	<0.0050	0.0148	0.0306	<0.00010	0.0155	0.0136	0.0521	1.094
21	50	S Q20-2/4/4	0.0087	0.0022	0.0154	<0.0050	0.0161	<0.00010	0.0088	0.0085	0.2792	6.5
22	50	S Q21-1/3/2	0.0128	<0.0010	<0.0050	<0.0050	0.0097	0.00013	<0.0050	<0.0010	0.0065	0.2548
23	50	S R04-2/2/3	0.009	0.0013	<0.0050	<0.0050	0.0171	<0.00010	<0.0050	0.0054	0.0404	0.3113
24	50	S R12-4/3/2	0.003	0.0012	<0.0050	0.021	0.0317	<0.00010	0.0076	0.0715	0.1098	0.347
25	50	S R14-3/2/4	0.0118	0.0017	<0.0050	0.0065	0.023	<0.00010	0.0073	0.0105	0.0665	0.2448
26	50	S R16-3/1/1	0.0088	0.0028	0.0065	<0.0050	0.0185	<0.00010	0.0133	<0.0010	0.0175	2.151
27	50	S R18-3/1/3	<0.0030	0.0121	<0.0050	<0.0050	0.0065	0.00011	<0.0050	0.0047	0.992	8.66
28	50	S R19-1/3/1	<0.0030	0.0194	0.005	<0.0050	0.0096	<0.00010	<0.0050	<0.0010	2.887	19.37
29	50	S R20-1/1/1	0.003	0.0011	<0.0050	<0.0050	0.0105	<0.00010	0.0019	0.0191	0.0413	0.2936
30	50	S S06-1/3/2	0.0108	0.0013	<0.0050	0.0316	0.0357	<0.00010	0.0192	0.0295	0.1246	0.2018
31	50	S S07-2/3/1	0.006	<0.0010	<0.0050	0.0123	0.0208	<0.00010	0.012	0.0216	0.0648	0.2702
32	50	S S10-4/1/1	0.0066	0.003	<0.0050	<0.0050	0.059	0.0001	<0.0050	0.0682	0.719	1.456
33	50	S S11-3/2/1	0.009	0.0022	<0.0050	0.0096	0.0482	<0.00010	0.0055	0.1208	0.649	0.662
34	50	S S12-3/1/3	0.004	0.0015	<0.0050	0.0098	0.0789	0.0001	0.0052	0.107	0.3558	0.796
35	50	S S14-3/1/1	<0.0030	0.0015	<0.0050	<0.0050	0.033	<0.00010	<0.0050	0.0405	0.2105	1.475
36	50	S S15-3/2/3	0.0216	0.0014	<0.0050	<0.0050	0.0485	<0.00010	<0.0050	0.1727	0.2505	0.918
37	50	S S17-1/3/1	<0.0030	0.0912	0.0234	0.0234	0.0955	<0.00010	0.0171	0.0283	12.23	63.1
38	50	S S18-1/2/4	<0.0030	0.004	<0.0050	0.0063	0.0799	<0.00010	0.0058	0.126	0.758	3.767
39	50	S S18-2/3/2	0.0095	0.0011	<0.0050	0.0058	0.0133	<0.00010	0.0055	0.0068	0.0315	0.656
40	50	S S18-4/3/1	0.0101	0.002	<0.0050	0.0137	0.0476	<0.00010	0.0063	0.185	0.2589	0.544
41	50	S S19-3/2/4	0.0096	0.0013	<0.0050	0.0059	0.0138	<0.00010	0.0057	0.0028	0.0369	0.3044
42	50	S T03-2/3/4	0.004	<0.0010	<0.0050	0.0348	0.0286	<0.00010	0.0329	0.0208	0.1743	0.1623
43	50	S T05-1/4/3	0.005	0.0017	<0.0050	0.0238	0.0653	0.00012	0.0168	0.11	0.4769	0.652
44	50	S T07-1/1/2	0.0113	0.0015	<0.0050	0.0101	0.0447	<0.00010	0.0054	0.0618	0.2152	0.1659
45	50	S T08-2/1/3	0.0032	0.0033	<0.0050	<0.0050	0.0084	0.0001	<0.0050	0.0196	0.97	1.505
46	50	S T10-4/2/4	0.003	0.0018	<0.0050	<0.0050	0.0311	<0.00010	<0.0050	0.0508	0.2372	0.678
47	50	S T11-1/2/3	0.0157	0.002	<0.0050	<0.0050	0.0586	<0.00010	<0.0050	0.101	0.4455	1.435
48	50	S T15-4/1/2	<0.0030	0.0011	<0.0050	0.0168	0.0221	0.00017	0.0061	0.0168	0.0879	0.4978
49	50	S T17-1/4/2	<0.0030	0.0014	0.0051	0.0169	0.0279	<0.00010	0.0078	0.0235	0.1345	1.183
50	50	S T18-1/3/2	0.0184	0.0019	<0.0050	0.0096	0.0362	<0.00010	0.0065	0.0381	0.1093	0.4465
51	50	S T20-2/4/1	0.004	0.0012	<0.0050	0.005	0.0355	0.0001	0.005	0.0431	0.0947	0.1484
52	50	S T21-2/3/3	0.0165	0.0027	0.023	<0.0050	0.0151	0.0001	0.0283	<0.0010	0.0069	2.843
53	50	S U02-3/4/2	0.0077	0.0011	0.0025	0.0052	0.0390	0.0001	0.0090	0.0150	0.0390	0.1100
54	50	S U04-1/3/1	0.0163	<0.0010	<0.0050	0.0077	0.0358	0.00011	0.0077	0.0289	0.0747	0.0461
55	50	S U05-2/2/4	0.0126	<0.0010	<0.0050	<0.0050	0.0555	<0.00010	<0.0050	0.0454	0.137	0.1656
56	50	S U06-2/1/4	0.0129	0.0012	<0.0050	<0.0050	0.05	<0.00010	<0.0050	0.114	0.3546	0.564
57	50	S U07-4/2/2	0.003	<0.0010	<0.0050	0.0193	0.0148	<0.00010	0.0185	0.0206	0.0757	0.3508
58	50	S U19-1/2/2	0.0035	0.001	<0.0050	0.0018	0.0066	0.0001	<0.0050	<0.0010	<0.0050	1.129
59	50	S U20-2/3/4	<0.0030	0.0034	<0.0050	0.0397	0.0182	<0.00010	0.0092	0.0164	0.0564	0.905
60	50	S U22-2/2/2	0.032	0.0025	<0.0050	0.0069	0.0369	<0.00010	<0.0050	0.0463	0.1127	0.248

Num	Grid	Sample No.	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
61	50	S U22-3/1/2	0.0155	0.0032	<0.0050	0.0116	0.0455	<0.00010	0.0058	0.0985	0.1536	0.2111
62	50	S U24-4/4/1	<0.0030	0.0024	<0.0050	0.0034	0.0549	<0.00010	0.0094	0.0114	0.1403	1.706
63	50	S V01-3/1/3	0.018	0.002	<0.0050	0.0121	0.0428	<0.00010	0.0056	0.1813	0.662	0.0897
64	50	S V03-2/2/4	0.0035	0.0012	<0.0050	0.0151	0.0632	<0.00010	0.0064	0.1082	0.3607	0.4869
65	50	S V05-1/2/1	0.0038	0.0011	<0.0050	0.0231	0.033	<0.00010	0.0136	0.0519	0.2457	0.4841
66	50	S V23-2/4/2	<0.0030	0.001	<0.0050	<0.0050	0.022	<0.00010	<0.0050	0.0302	0.0459	0.1291
67	50	S V24-2/3/3	0.0214	0.0017	<0.0050	0.005	0.0461	<0.00010	0.0051	0.0397	0.1203	0.3136
68	50	S V24-3/4/3	0.0121	0.0025	<0.0050	0.0131	0.033	<0.00010	0.0084	0.0401	0.1006	0.2206
69	50	S V26-4/1/4	0.0435	0.0019	<0.0050	0.0098	0.0509	0.0004	0.0098	0.0647	0.1945	0.4229
70	50	SW 02-2/3/3	0.0030	0.0013	0.0025	0.0080	0.0340	0.0001	0.0075	0.0320	0.1600	0.4200
71	50	S W26-3/3/2	0.0035	0.0037	<0.0050	0.0226	0.0316	<0.00010	0.0482	0.0074	0.0685	0.2469
72	50	S W27-4/2/3	0.0114	0.0038	<0.0050	0.0167	0.0296	0.0001	0.0212	0.0135	0.0617	0.1909
73	50	S X26-3/2/4	0.0787	0.0035	<0.0050	0.0175	0.0237	<0.00010	0.0141	0.0145	0.0881	0.894
74	50	S X28-1/4/2	0.0288	0.0025	<0.0050	0.0416	0.0185	<0.00010	0.0568	0.0201	0.0305	0.1464
75	50	S Y28-2/2/3	0.0125	0.0042	<0.0050	0.0153	0.0242	<0.00010	0.0136	0.0075	0.1012	0.2792
76	50	S Y28-4/4/2	0.0099	0.004	<0.0050	0.0068	0.0268	<0.00010	0.0057	0.0112	0.0942	0.4474
77	50	S Y29-3/4/1	0.0088	0.001	<0.0050	0.0056	0.0197	<0.00010	<0.0050	0.0249	0.1359	0.3896
78	50	S Z30-2/2/3	0.0121	0.0015	<0.0050	0.0067	0.046	<0.00010	0.0064	0.0473	0.1793	0.72
79	50	SS a31-2/1/1	0.003	0.0018	<0.0050	0.0059	0.0202	<0.00010	0.005	0.0892	0.0668	0.476
80	50	SS a33-1/1/4	<0.0030	0.0018	<0.0050	<0.0050	0.0184	0.00013	<0.0050	0.0012	0.0273	0.1774

### **4-3 Analytical Results of Tailings Dam**



## Samples of Tailings Dam Drilling Content Analysis

### TBH-1

#### Content Analysis

	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
Samples	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TBH-1-01	29	6	15	30	39	<0.1	18	410	820	3,400
TBH-1-02	170	33	16	19	300	<0.1	5.9	2,900	7,300	42,000
TBH-1-03	280	31	15	16	320	<0.1	4.3	3,800	6,500	47,000
TBH-1-04	400	53	16	22	410	<0.1	4.3	3,600	10,000	54,000
TBH-1-05	160	35	15	14	290	<0.1	3.5	3,200	7,100	39,000
TBH-1-06	360	42	24	28	300	<0.1	8.3	2,600	7,000	50,000
TBH-1-07	230	35	23	25	320	<0.1	4.6	4,700	5,900	47,000
TBH-1-08	200	36	16	24	290	<0.1	0.23	2,900	5,800	45,000
TBH-1-09	320	90	19	26	350	<0.1	4.5	2,900	14,000	46,000
TBH-1-10	250	67	20	22	380	<0.1	6.1	4,200	11,000	43,000
TBH-1-11	280	37	15	24	450	<0.1	6.6	3,600	6,200	43,000
TBH-1-12	200	35	10	18	320	<0.1	6.2	2,600	5,900	32,000
TBH-1-13	6	1	16	25	17	<0.1	20	120	220	1,700

### TBH-2

#### Content Analysis

	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
Samples	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TBH-2-01	450	7	18	19	160	<0.1	3	4,400	2,500	34,000
TBH-2-02	470	14	20	17	170	<0.1	3	4,600	2,200	32,000
TBH-2-03	340	14	25	15	210	<0.1	10	3,200	2,700	30,000
TBH-2-04	550	12	30	13	310	<0.1	13	3,200	2,600	24,000
TBH-2-05	480	9	27	18	350	<0.1	6	2,500	2,100	35,000
TBH-2-06	500	9	26	16	300	<0.1	3	2,700	3,000	31,000
TBH-2-07	610	2	28	18	200	<0.1	7	2,400	1,800	33,000
TBH-2-08	510	4	26	15	190	<0.1	6	2,500	2,100	30,000
TBH-2-09	400	4	24	15	150	<0.1	1	1,900	1,700	30,000
TBH-2-10	510	14	23	17	220	<0.1	8	2,500	3,200	31,000
TBH-2-11	340	5	19	15	130	<0.1	2	1,800	1,700	30,000
TBH-2-12	220	8	17	14	77	<0.1	2	360	1,700	26,000
TBH-2-13	670	2	25	19	210	<0.1	4	2,200	1,300	35,000
TBH-2-14	400	7	19	17	180	<0.1	3	1,400	1,600	33,000
TBH-2-15	470	0	31	22	34	<0.1	12	190	200	970

## Samples of Tailings Dam Drilling Elution Analysis

### TBH-1

Elution Analysis

	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
Samples	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
TBH-1-01	<0,0030	<0,0010	<0,0050	<0,0050	0.0084	0.00015	<0,0050	0.0013	<0,0050	0.011
TBH-1-02	<0,0030	0.19	0.25	<0,0050	<0,0050	<0,00010	0.053	0.42	26	200
TBH-1-03	<0,0030	0.16	0.21	<0,0050	0.005	0.0001	0.051	0.84	19	150
TBH-1-04	<0,0030	0.12	0.16	0.005	<0,0050	<0,00010	0.039	1.1	21	69
TBH-1-05	<0,0030	0.054	0.049	<0,0050	<0,0050	0.0001	0.007	0.18	4.8	15
TBH-1-06	<0,0030	0.03	0.036	<0,0050	<0,0050	0.00015	0.0062	0.13	3.1	7.3
TBH-1-07	<0,0030	0.0088	0.017	<0,0050	<0,0050	<0,00010	0.005	0.031	0.85	4.6
TBH-1-08	<0,0030	0.02	0.043	<0,0050	<0,0050	0.00011	0.012	0.19	1.7	26
TBH-1-09	<0,0030	0.054	0.041	<0,0050	<0,0050	0.00022	0.011	0.14	5.9	20
TBH-1-10	<0,0030	0.034	0.031	<0,0050	<0,0050	0.00012	0.0072	0.17	3.2	11
TBH-1-11	<0,0030	0.0089	0.0085	<0,0050	<0,0050	0.0001	<0,0050	0.039	0.47	5.8
TBH-1-12	0.003	<0,0010	<0,0050	<0,0050	<0,0050	<0,00010	<0,0050	<0,0010	0.021	2.0
TBH-1-13	<0,0030	<0,0010	<0,0050	<0,0050	<0,0050	0.0001	<0,0050	<0,0010	0.014	0.027

### TBH-2

Elution analysis

	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
Samples	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
TBH-2-01	<0,0030	0.078	0.0072	<0,0050	<0,0050	0.00011	<0,0050	0.38	1.7	82
TBH-2-02	<0,0030	0.22	0.042	0.011	0.0054	0.00032	0.016	0.97	4.0	300
TBH-2-03	<0,0030	0.045	0.11	0.005	<0,0050	0.00021	0.034	0.44	5.5	120
TBH-2-04	<0,0030	0.053	0.079	<0,0050	<0,0050	<0,00010	0.019	1.0	4.7	83
TBH-2-05	<0,0030	0.013	0.05	<0,0050	<0,0050	<0,00010	0.0096	0.042	1.2	28
TBH-2-06	<0,0030	0.006	0.034	<0,0050	<0,0050	<0,00010	0.0058	0.051	0.74	12
TBH-2-07	<0,0030	0.022	0.051	<0,0050	<0,0050	0.00012	0.011	0.13	2.1	34
TBH-2-08	<0,0030	0.013	0.051	<0,0050	<0,0050	0.0001	0.01	0.031	1.4	23
TBH-2-09	<0,0030	0.002	0.0065	<0,0050	<0,0050	<0,00010	<0,0050	0.0058	0.16	4.0
TBH-2-10	<0,0030	0.065	0.066	<0,0050	<0,0050	0.00015	0.02	0.28	10	69
TBH-2-11	<0,0030	0.011	0.018	<0,0050	<0,0050	0.00017	0.005	0.017	0.73	17
TBH-2-12	<0,0030	0.0019	0.0075	<0,0050	<0,0050	0.00013	<0,0050	0.001	0.21	5.3
TBH-2-13	<0,0030	0.025	0.036	<0,0050	<0,0050	<0,00010	0.0068	0.13	1.5	17
TBH-2-14	<0,0030	0.0014	0.0061	<0,0050	<0,0050	0.00015	<0,0050	0.0095	0.098	2.2
TBH-2-15	<0,0030	0.0029	0.016	<0,0050	0.0061	0.00013	0.005	0.23	0.16	2.3



## **4-4 Analytical Results of Drilling Survey of Soil**



**Data 4-4(1) Soil Samples of Drilling Survey of Soil Content Analysis**

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
1	Drilling	PF1-1-1	4649481.05	597540.68	37	4.7	18	24	110	0.10	13	930	1100	9000	7.12	7.5 YR 3/3
2	Drilling	PF1-1-2	4649481.05	597540.68	15	0.56	24	21	71	<0.10	12	87	100	1600	7.11	7.5 YR 3/3
3	Drilling	PF1-1-3	4649481.05	597540.68	14	<0.10	13	14	49	<0.10	11	38	57	920	7.17	7.5 YR 3/3
4	Drilling	PF1-1-4	4649481.05	597540.68	7.6	0.24	15	12	62	<0.10	8.8	27	55	1000	6.88	7.5 YR 4/2
5	Drilling	PF1-1-5	4649481.05	597540.68	3.1	0.69	18	7.7	47	<0.10	7.5	32	76	1700	7.17	7.5 YR 4/3
6	Drilling	PF1-1-6	4649481.05	597540.68	6.9	1.7	31	3.6	64	<0.10	7.4	120	140	7500	7.20	7.5 YR 4/3
7	Drilling	PF1-1-7	4649481.05	597540.68	<1	0.47	21	8.9	73	<0.10	7.9	35	64	2700	6.95	7.5 YR 3/4
8	Drilling	PF1-1-8	4649481.05	597540.68	1.3	0.84	24	4.4	130	<0.10	6	44	83	3100	7.20	7.5 YR 3/4
9	Drilling	PF1-1-9	4649481.05	597540.68	4.2	0.68	32	8.3	120	<0.10	9.5	28	87	4200	7.24	7.5 YR 4/3
10	Drilling	PF1-2-1	4649355.76	597604.92	5.1	0.65	27	59	56	0.20	19	54	180	1800	6.87	7.5 YR 3/2
11	Drilling	PF1-2-2	4649355.76	597604.92	23	0.28	22	30	100	<0.10	18	78	99	1900	7.12	7.5 YR 2/2
12	Drilling	PF1-2-3	4649355.76	597604.92	22	<0.10	21	27	65	<0.10	17	170	140	2000	7.19	7.5 YR 2/2
13	Drilling	PF1-2-4	4649355.76	597604.92	38	<0.10	28	36	65	<0.10	21	87	80	1500	6.97	7.5 YR 2/2
14	Drilling	PF1-2-5	4649355.76	597604.92	23	<0.10	25	190	76	<0.10	20	53	80	1600	7.22	7.5 YR 2/2
15	Drilling	PF1-2-6	4649355.76	597604.92	22	<0.10	19	38	57	0.12	22	70	94	1500	7.26	7.5 YR 2/2
16	Drilling	PF1-2-7	4649355.76	597604.92	30	<0.10	21	37	62	<0.10	24	57	85	1500	7.26	7.5 YR 2/2
17	Drilling	PF1-2-8	4649355.76	597604.92	2.1	0.34	16	64	18	0.18	76	17	52	3500	7.29	7.5 YR 2/2
18	Drilling	PF1-2-9	4649355.76	597604.92	16	1.5	18	17	52	<0.10	49	490	350	1800	6.92	7.5 YR 2/2
19	Drilling	PF1-3-1	4649349.43	597710.23	22	0.42	21	40	66	0.11	30	100	130	1800	7.19	7.5 YR 3/3
20	Drilling	PF1-3-2	4649349.43	597710.23	15	<0.10	15	36	40	<0.10	21	56	79	480	7.10	7.5 YR 4/2
21	Drilling	PF1-3-3	4649349.43	597710.23	90	<0.10	19	11	96	<0.10	12	390	220	2900	7.21	7.5 YR 4/2
22	Drilling	PF1-3-4	4649349.43	597710.23	21	7.7	21	15	92	0.11	9.7	320	1100	4700	7.27	7.5 YR 3/4
23	Drilling	PF1-3-5	4649349.43	597710.23	100	0.19	12	11	58	0.10	<1	430	240	1400	7.21	7.5 YR 3/4
24	Drilling	PF1-3-6	4649349.43	597710.23	55	0.21	20	13	130	<0.10	<1	510	160	3400	7.24	7.5 YR 3/4
25	Drilling	PF1-3-7	4649349.43	597710.23	120	0.27	32	18	140	<0.10	10	1500	230	1500	7.20	7.5 YR 4/3
26	Drilling	PF1-3-8	4649349.43	597710.23	17	0.37	33	22	160	<0.10	<1	61	110	52	7.20	10 YR 5/6
27	Drilling	PF1-3-9	4649349.43	597710.23	24	0.14	30	32	180	<0.10	66	47	100	1400	7.24	10 YR 5/6
28	Drilling	PF1-4-1	4649346.06	597837.93	90	11	16	24	290	0.13	18	3600	2700	20000	6.75	7.5 YR 4/2
29	Drilling	PF1-4-2	4649346.06	597837.93	7.5	1.7	22	45	51	0.11	42	610	430	2200	7.05	7.5 YR 4/2
30	Drilling	PF1-4-3	4649346.06	597837.93	66	0.49	22	37	90	<0.10	44	750	410	1400	7.12	7.5 YR 4/2
31	Drilling	PF1-4-4	4649346.06	597837.93	19	0.61	20	45	40	<0.10	<1	110	100	1900	7.15	7.5 YR 4/2
32	Drilling	PF1-4-5	4649346.06	597837.93	9.6	0.21	18	52	31	<0.10	28	42	86	520	7.18	7.5 YR 4/2
33	Drilling	PF1-4-6	4649346.06	597837.93	5.5	0.33	18	41	18	<0.10	25	32	68	1200	7.18	7.5 YR 4/2
34	Drilling	PF1-4-7	4649346.06	597837.93	34	0.42	21	32	48	<0.10	34	190	130	2000	7.22	7.5 YR 4/2
35	Drilling	PF1-4-8	4649346.06	597837.93	9.7	0.57	29	80	33	<0.10	17	34	120	1600	7.26	7.5 YR 4/3
36	Drilling	PF1-4-9	4649346.06	597837.93	23	0.23	22	27	59	0.11	24	130	120	1700	7.09	7.5 YR 4/3
37	Drilling	PF1-5-1	4649293.03	598032.69	<1	0.13	28	410	11	<0.10	270	31	57	590	6.95	7.5 YR 4/4
38	Drilling	PF1-5-2	4649293.03	598032.69	60	3.9	19	17	130	<0.10	2.2	1200	990	8400	6.01	7.5 YR 4/4
39	Drilling	PF1-5-3	4649293.03	598032.69	<1	3.7	7.1	5.3	13	<0.10	6.7	70	140	550	7.11	7.5 YR 2/3
40	Drilling	PF1-5-4	4649293.03	598032.69	21	1.1	26	32	120	<0.10	20	140	160	2500	7.23	7.5 YR 2/3
41	Drilling	PF1-5-5	4649293.03	598032.69	23	0.3	18	19	65	<0.10	11	70	94	1500	7.27	7.5 YR 2/3
42	Drilling	PF1-5-6	4649293.03	598032.69	17	0.65	20	22	74	<0.10	13	65	100	1900	7.27	7.5 YR 2/3
43	Drilling	PF1-5-7	4649293.03	598032.69	13	<0.10	14	43	26	<0.10	8.4	56	77	210	7.06	7.5 YR 3/4
44	Drilling	PF1-5-8	4649293.03	598032.69	3.8	12	19	15	100	<0.10	17	370	1500	3700	7.28	7.5 YR 3/4
45	Drilling	PF1-5-9	4649293.03	598032.69	230	<0.10	24	17	72	<0.10	9.6	220	90	1200	7.34	7.5 YR 5/4
46	Drilling	PF1-6-1	4649327.53	598200.33	41	0.14	14	9.7	48	0.10	3.6	120	150	1300	6.85	5 YR 4/2
47	Drilling	PF1-6-2	4649327.53	598200.33	41	<0.10	14	9.3	49	<0.10	4.1	87	120	930	7.15	5 YR 4/2
48	Drilling	PF1-6-3	4649327.53	598200.33	17	<0.10	20	7.6	35	<0.10	9.5	72	110	990	6.84	5 YR 3/4
49	Drilling	PF1-6-4	4649327.53	598200.33	17	<0.10	20	9.5	42	<0.10	5.4	45	110	820	7.20	5 YR 3/4
50	Drilling	PF1-6-5	4649327.53	598200.33	15	<0.10	25	82	29	<0.10	32	47	120	1500	7.25	5 YR 3/4
51	Drilling	PF1-6-6	4649327.53	598200.33	690	<0.10	21	17	32	<0.10	9.7	50	100	1200	7.18	5 YR 3/4
52	Drilling	PF1-6-7	4649327.53	598200.33	27	0.11	19	2.2	55	0.11	4.7	46	90	710	7.18	5 YR 3/4
53	Drilling	PF1-6-8	4649327.53	598200.33	15	0.13	20	3.5	59	<0.10	5.6	64	120	770	7.25	5 YR 3/4
54	Drilling	PF1-6-9	4649327.53	598200.33	23	<0.10	24	2.5	51	<0.10	20	63	110	1100	7.29	5 YR 3/4
55	Drilling	PF2-1-1	4646654.34	597908.58	11	0.91	18	36	36	0.14	21	150	140	1500	7.21	7.5 YR 2/2
56	Drilling	PF2-1-2	4646654.34	597908.58	7.9	1.9	18	39	41	0.11	22	420	370	1400	7.23	7.5 YR 2/2
57	Drilling	PF2-1-3	4646654.34	597908.58	14	<0.10	18	40	37	<0.10	31	44	91	1100	7.22	10 YR 5/3
58	Drilling	PF2-1-4	4646654.34	597908.58	12	0.25	13	31	19	<0.10	16	33	57	660	7.27	10 YR 5/3
59	Drilling	PF2-1-5	4646654.34	597908.58	6.4	0.35	14	33	21	0.10	15	33	57	640	7.18	10 YR 5/3
60	Drilling	PF2-1-6	4646654.34	597908.58	6.4	0.26	16	40	23	<0.10	24	40	62	710	7.27	10 YR 5/3
61	Drilling	PF2-1-7	4646654.34	597908.58	6.9	<0.10	18	48	20	<0.10	26	58	77	500	7.20	10 YR 5/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
62	Drilling	PF2-1-8	4646654.34	597908.58	55	1.9	22	24	160	<0.10	17	950	240	1700	7.23	10 YR 5/3
63	Drilling	PF2-1-9	4646654.34	597908.58	25	<0.10	17	46	27	<0.10	22	40	83	550	7.24	10 YR 4/4
64	Drilling	PF2-2-1	4646788.27	598144.09	7.7	<0.10	14	34	26	0.13	20	68	70	850	7.18	7.5 YR 2/3
65	Drilling	PF2-2-2	4646788.27	598144.09	10	0.44	12	31	23	<0.10	16	32	53	600	7.13	7.5 YR 2/3
66	Drilling	PF2-2-3	4646788.27	598144.09	1.4	3.7	5.4	2.6	6.1	<0.10	1.8	70	110	520	7.20	7.5 YR 2/3
67	Drilling	PF2-2-4	4646788.27	598144.09	1.4	0.25	8.9	25	13	<0.10	12	18	34	550	7.13	7.5 YR 4/2
68	Drilling	PF2-2-5	4646788.27	598144.09	2	0.1	13	28	19	<0.10	21	27	44	1400	6.98	7.5 YR 4/2
69	Drilling	PF2-2-6	4646788.27	598144.09	4.4	0.33	16	37	24	<0.10	21	36	63	570	7.20	7.5 YR 4/2
70	Drilling	PF2-2-7	4646788.27	598144.09	11	0.2	12	30	30	<0.10	17	35	68	510	7.24	7.5 YR 4/2
71	Drilling	PF2-2-8	4646788.27	598144.09	2	0.37	20	100	30	<0.10	98	23	71	1100	7.28	10 YR 4/3
72	Drilling	PF2-2-9	4646788.27	598144.09	270	<0.10	57	32	26	<0.10	25	57	140	1800	7.14	10 YR 4/3
73	Drilling	PF2-3-1	4646852.4	598373.75	77	6.3	17	22	180	0.11	9	1800	1600	10000	6.86	7.5 YR 2/2
74	Drilling	PF2-3-2	4646852.4	598373.75	36	7.8	19	25	170	0.10	15	1100	1400	8800	6.95	7.5 YR 2/2
75	Drilling	PF2-3-3	4646852.4	598373.75	24	2.3	22	19	110	<0.10	11	340	380	1800	7.01	7.5 YR 2/2
76	Drilling	PF2-3-4	4646852.4	598373.75	30	2.8	25	28	93	0.10	21	580	720	3600	7.05	7.5 YR 4/4
77	Drilling	PF2-3-5	4646852.4	598373.75	41	1.3	20	15	83	<0.10	11	290	210	1300	7.11	7.5 YR 4/4
78	Drilling	PF2-3-6	4646852.4	598373.75	37	0.65	24	12	130	0.10	15	670	310	1900	7.18	7.5 YR 4/4
79	Drilling	PF2-3-7	4646852.4	598373.75	12	0.4	20	32	62	<0.10	21	60	98	1500	7.02	7.5 YR 4/4
80	Drilling	PF2-3-8	4646852.4	598373.75	73	2	24	14	150	<0.10	5.3	950	350	2000	7.09	7.5 YR 4/4
81	Drilling	PF2-3-9	4646852.4	598373.75	42	2.8	30	19	160	<0.10	16	740	530	2800	7.10	7.5 YR 4/4
82	Drilling	PF2-4-1	4646827.74	598496.49	41	0.6	18	14	59	<0.10	9.1	190	190	1300	7.07	7.5 YR 3/2
83	Drilling	PF2-4-2	4646827.74	598496.49	41	0.2	17	7.1	42	<0.10	11	68	120	820	7.13	7.5 YR 3/2
84	Drilling	PF2-4-3	4646827.74	598496.49	31	4	22	28	110	0.10	16	1700	750	2800	7.09	7.5 YR 3/2
85	Drilling	PF2-4-4	4646827.74	598496.49	45	0.18	18	26	37	<0.10	<1	71	100	1200	7.09	7.5 YR 3/2
86	Drilling	PF2-4-5	4646827.74	598496.49	42	0.91	19	24	73	<0.10	12	270	160	1400	7.12	7.5 YR 3/2
87	Drilling	PF2-4-6	4646827.74	598496.49	45	<0.10	18	19	39	<0.10	16	76	100	1100	7.14	7.5 YR 3/2
88	Drilling	PF2-4-7	4646827.74	598496.49	100	0.38	21	16	190	0.17	11	740	330	2600	7.21	7.5 YR 3/2
89	Drilling	PF2-4-8	4646827.74	598496.49	97	1.1	54	17	130	0.12	12	650	240	3300	7.12	7.5 YR 3/4
90	Drilling	PF2-4-9	4646827.74	598496.49	62	<0.10	19	14	56	<0.10	13	350	140	1700	7.10	7.5 YR 3/4
91	Drilling	PF2-5-1	4646769.86	598661.36	71	0.24	22	19	92	0.13	10	330	170	1300	7.02	7.5 YR 4/2
92	Drilling	PF2-5-2	4646769.86	598661.36	20	<0.10	19	2.6	57	<0.10	16	34	100	850	7.03	7.5 YR 4/3
93	Drilling	PF2-5-3	4646769.86	598661.36	15	1.2	22	45	56	0.10	22	210	260	1300	6.80	7.5 YR 4/3
94	Drilling	PF2-5-4	4646769.86	598661.36	130	<0.10	19	20	42	<0.10	11	69	110	910	6.96	7.5 YR 4/3
95	Drilling	PF2-5-5	4646769.86	598661.36	17	<0.10	27	30	29	<0.10	12	53	110	560	7.13	-
96	Drilling	PF2-5-6	4646769.86	598661.36	22	4.4	22	34	170	0.12	17	870	970	8000	6.98	-
97	Drilling	PF2-5-7	4646769.86	598661.36	2.9	0.38	9.6	28	21	<0.10	<1	34	53	530	6.86	-
98	Drilling	PF2-5-8	4646769.86	598661.36	13	0.56	20	40	40	<0.10	20	83	130	1800	7.13	-
99	Drilling	PF2-5-9	4646769.86	598661.36	130	<0.10	12	5.1	53	<0.10	4.9	35	140	250	7.11	-
100	Drilling	PF3-1-1	4645820.37	598823.53	90	3.7	24	32	68	<0.10	11	620	1000	11000	7.10	7.5 YR 4/3
101	Drilling	PF3-1-2	4645820.37	598823.53	7.6	0.53	17	11	80	<0.10	9.1	60	130	660	7.19	-
102	Drilling	PF3-1-3	4645820.37	598823.53	2.9	0.15	15	4.9	23	<0.10	2.8	44	120	440	7.44	-
103	Drilling	PF3-1-4	4645820.37	598823.53	5.1	85	16	14	530	<0.10	7.7	12000	10000	32000	7.35	-
104	Drilling	PF3-1-5	4645820.37	598823.53	2.9	0.23	14	<1	22	<0.10	<1	30	80	540	-	-
105	Drilling	PF3-1-6	4645820.37	598823.53	<1	0.46	13	1.7	17	<0.10	18	34	72	510	-	-
106	Drilling	PF3-2-1	4645889.07	598891.07	14	0.17	15	16	30	<0.10	13	50	73	1000	7.07	7.5 YR 3/2
107	Drilling	PF3-2-2	4645889.07	598891.07	1	0.55	17	7.9	20	0.10	3.1	28	92	740	7.14	-
108	Drilling	PF3-2-3	4645889.07	598891.07	8.4	0.11	20	34	45	<0.10	22	38	90	1200	7.22	-
109	Drilling	PF3-2-4	4645889.07	598891.07	210	<0.10	35	36	45	<0.10	20	60	150	1600	-	-
110	Drilling	PF3-2-5	4645889.07	598891.07	1.3	0.75	12	5.8	14	0.10	1.4	17	57	520	-	-
111	Drilling	PF3-2-6	4645889.07	598891.07	<1	0.37	11	2.7	12	<0.10	1.8	16	44	540	-	-
112	Drilling	PF3-3-1	4645950.44	598942.16	6.4	0.46	14	24	37	0.10	12	220	130	1000	7.16	7.5 YR 3/2
113	Drilling	PF3-3-2	4645950.44	598942.16	5.1	3.4	19	24	57	<0.10	9.7	550	1000	3100	7.18	7.5 YR 4/4
114	Drilling	PF3-3-3	4645950.44	598942.16	11	0.6	27	55	98	<0.10	360	66	170	2000	7.22	7.5 YR 4/4
115	Drilling	PF3-3-4	4645950.44	598942.16	11	<0.10	14	24	29	0.10	9.1	31	65	670	7.21	7.5 YR 4/4
116	Drilling	PF3-3-5	4645950.44	598942.16	15	0.13	17	27	34	<0.10	14	36	78	970	7.18	7.5 YR 4/4
117	Drilling	PF3-3-6	4645950.44	598942.16	14	<0.10	19	27	27	<0.10	<1	53	75	1100	7.25	7.5 YR 4/4
118	Drilling	PF3-3-7	4645950.44	598942.16	6.7	2.1	23	48	42	<0.10	23	210	370	3000	7.21	7.5 YR 4/4
119	Drilling	PF3-3-8	4645950.44	598942.16	16	<0.10	24	32	48	<0.10	18	90	100	1300	7.31	7.5 YR 4/2
120	Drilling	PF3-3-9	4645950.44	598942.16	18	0.28	26	32	82	0.13	19	88	120	2600	7.25	7.5 YR 4/2
121	Drilling	PF3-4-1	4646029.16	599040.95	150	3.6	15	11	200	0.11	2.6	1900	1000	4900	5.04	7.5 YR 5/6
122	Drilling	PF3-4-2	4646029.16	599040.95	86	<0.10	21	38	42	<0.10	13	660	250	2000	5.19	7.5 YR 4/3
123	Drilling	PF3-4-3	4646029.16	599040.95	47	1.7	20	40	72	0.16	15	330	490	2500	6.74	7.5 YR 4/3
124	Drilling	PF3-4-4	4646029.16	599040.95	46	0.32	22	19	100	0.13	16	370	740	6800	6.30	7.5 YR 4/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
125	Drilling	PF3-4-5	4646029.16	599040.95	11	11	19	20	100	0.13	19	320	1400	3900	7.17	7.5 YR 4/3
126	Drilling	PF3-4-6	4646029.16	599040.95	2.7	0.16	13	3.1	31	<0.10	2.3	60	150	660	6.96	7.5 YR 4/3
127	Drilling	PF3-4-7	4646029.16	599040.95	52	4.5	23	15	75	0.15	9.2	420	720	2300	7.08	7.5 YR 4/4
128	Drilling	PF3-4-8	4646029.16	599040.95	48	3.6	27	17	160	<0.10	9.9	410	670	2100	7.25	7.5 YR 4/4
129	Drilling	PF3-4-9	4646029.16	599040.95	52	3.7	110	23	150	<0.10	13	380	470	1600	7.25	7.5 YR 4/4
130	Drilling	PF3-5-1	4646105.09	599174.47	54	0.68	20	19	26	<0.10	8	520	260	15000	7.01	7.5 YR 2/2
131	Drilling	PF3-5-2	4646105.09	599174.47	58	<0.10	22	26	32	<0.10	15	48	97	1100	6.68	7.5 YR 2/2
132	Drilling	PF3-5-3	4646105.09	599174.47	49	<0.10	22	31	36	<0.10	17	54	99	1100	7.29	7.5 YR 2/2
133	Drilling	PF3-5-4	4646105.09	599174.47	47	<0.10	23	40	39	<0.10	19	37	100	1100	7.26	7.5 YR 2/2
134	Drilling	PF3-5-5	4646105.09	599174.47	45	<0.10	21	40	34	<0.10	22	32	84	950	6.78	7.5 YR 5/6
135	Drilling	PF3-5-6	4646105.09	599174.47	18	0.3	24	48	20	<0.10	18	25	100	1700	7.21	7.5 YR 5/6
136	Drilling	PF3-5-7	4646105.09	599174.47	13	0.6	20	120	42	<0.10	110	96	150	1300	7.09	7.5 YR 5/6
137	Drilling	PF3-5-8	4646105.09	599174.47	<1	1	25	56	40	<0.10	22	95	260	2600	7.22	7.5 YR 5/6
138	Drilling	PF3-5-9	4646105.09	599174.47	67	<0.10	17	36	39	0.12	23	30	100	1100	7.14	7.5 YR 3/2
139	Drilling	PF4-1-1	4645758.63	600307.54	53	4.1	24	40	170	<0.10	18	1800	970	11000	7.03	7.5 YR 3/3
140	Drilling	PF4-1-2	4645758.63	600307.54	1.6	0.95	23	130	32	<0.10	120	29	78	1200	6.99	7.5 YR 3/3
141	Drilling	PF4-1-3	4645758.63	600307.54	620	<0.10	22	27	27	0.12	14	60	120	840	6.93	7.5 YR 3/3
142	Drilling	PF4-1-4	4645758.63	600307.54	16	0.15	23	45	34	<0.10	<1	52	120	1500	7.13	7.5 YR 3/3
143	Drilling	PF4-1-5	4645758.63	600307.54	460	<0.10	39	24	28	<0.10	17	59	140	2500	7.15	7.5 YR 3/3
144	Drilling	PF4-1-6	4645758.63	600307.54	280	<0.10	41	27	25	0.12	24	56	140	11000	7.14	7.5 YR 3/3
145	Drilling	PF4-1-7	4645758.63	600307.54	300	<0.10	28	28	30	<0.10	20	36	120	1700	7.24	7.5 YR 3/3
146	Drilling	PF4-1-8	4645758.63	600307.54	290	<0.10	26	26	24	<0.10	20	40	110	1500	7.25	7.5 YR 3/3
147	Drilling	PF4-1-9	4645758.63	600307.54	17	1.3	23	26	100	<0.10	12	120	340	2400	6.89	7.5 YR 3/3
148	Drilling	PF4-2-1	4645712.28	600528.86	9.9	1.3	15	51	25	<0.10	31	97	120	980	7.61	7.5 YR 4/3
149	Drilling	PF4-2-2	4645712.28	600528.86	28	5.9	20	40	99	<0.10	12	1300	980	11000	7.06	7.5 YR 4/3
150	Drilling	PF4-2-3	4645712.28	600528.86	68	<0.10	22	40	49	0.16	11	430	320	1900	7.14	7.5 YR 4/3
151	Drilling	PF4-2-4	4645712.28	600528.86	5.5	0.72	17	12	54	<0.10	7.8	53	130	600	7.11	7.5 YR 4/3
152	Drilling	PF4-2-5	4645712.28	600528.86	69	<0.10	29	55	42	0.10	22	400	300	1800	7.10	7.5 YR 4/3
153	Drilling	PF4-2-6	4645712.28	600528.86	72	0.12	25	60	59	<0.10	20	210	270	1900	7.12	7.5 YR 4/3
154	Drilling	PF4-2-7	4645712.28	600528.86	75	<0.10	29	68	45	<0.10	21	230	220	1700	7.05	7.5 YR 4/3
155	Drilling	PF4-2-8	4645712.28	600528.86	34	0.36	21	48	38	0.13	17	160	210	610	7.04	7.5 YR 4/4
156	Drilling	PF4-2-9	4645712.28	600528.86	39	0.43	20	29	39	0.10	12	150	210	620	7.08	7.5 YR 4/4
157	Drilling	PF4-3-1	4645673.95	600653.77	11	2.2	18	31	46	0.12	7.9	430	460	2300	7.15	7.5 YR 4/4
158	Drilling	PF4-3-2	4645673.95	600653.77	15	2.6	26	39	52	0.10	23	880	660	3400	7.29	7.5 YR 4/4
159	Drilling	PF4-3-3	4645673.95	600653.77	16	2	18	27	56	0.10	11	310	360	2500	7.36	7.5 YR 4/4
160	Drilling	PF4-3-4	4645673.95	600653.77	14	1.6	22	34	45	<0.10	12	630	390	2600	7.31	7.5 YR 4/4
161	Drilling	PF4-3-5	4645673.95	600653.77	5.9	0.34	15	25	29	<0.10	20	48	100	1100	7.27	7.5 YR 4/4
162	Drilling	PF4-3-6	4645673.95	600653.77	8.8	1.7	13	31	84	0.13	14	460	430	2500	7.39	7.5 YR 4/4
163	Drilling	PF4-3-7	4645673.95	600653.77	210	<0.10	27	31	26	<0.10	13	46	73	1000	7.31	7.5 YR 3/2
164	Drilling	PF4-3-8	4645673.95	600653.77	11	2.3	52	36	47	<0.10	11	440	400	3400	7.32	7.5 YR 3/2
165	Drilling	PF4-3-9	4645673.95	600653.77	19	1.7	19	43	52	<0.10	16	340	350	2500	7.18	7.5 YR 3/2
166	Drilling	PF4-4-1	4645663.51	600780.45	13	0.86	22	39	24	<0.10	11	85	140	1400	7.05	7.5 YR 4/4
167	Drilling	PF4-4-2	4645663.51	600780.45	19	0.2	25	44	30	<0.10	15	170	190	1900	7.24	7.5 YR 4/4
168	Drilling	PF4-4-3	4645663.51	600780.45	13	0.49	19	100	31	<0.10	100	51	97	1200	7.13	7.5 YR 4/4
169	Drilling	PF4-4-4	4645663.51	600780.45	52	0.17	33	39	37	<0.10	21	96	140	1300	7.30	7.5 YR 4/4
170	Drilling	PF4-4-5	4645663.51	600780.45	<1	0.22	26	350	13	<0.10	250	28	50	590	7.22	7.5 YR 4/4
171	Drilling	PF4-4-6	4645663.51	600780.45	11	0.35	18	70	33	<0.10	18	45	110	1100	7.29	7.5 YR 6/4
172	Drilling	PF4-4-7	4645663.51	600780.45	27	1.4	18	32	57	0.10	12	240	310	2400	7.21	7.5 YR 6/4
173	Drilling	PF4-4-8	4645663.51	600780.45	5	<0.10	15	19	73	<0.10	7.3	31	73	360	7.19	7.5 YR 6/4
174	Drilling	PF4-4-9	4645663.51	600780.45	27	<0.10	21	45	40	<0.10	17	390	340	1900	7.23	-
175	Drilling	PF4-5-1	4645631.8	600876.91	10	0.56	24	42	28	0.10	14	78	150	1400	7.10	7.5 YR 4/2
176	Drilling	PF4-5-2	4645631.8	600876.91	5.2	0.35	22	210	34	<0.10	230	38	85	2600	7.09	7.5 YR 4/2
177	Drilling	PF4-5-3	4645631.8	600876.91	5.3	0.82	21	41	33	<0.10	13	52	150	1500	7.16	7.5 YR 4/2
178	Drilling	PF4-5-4	4645631.8	600876.91	14	0.49	24	17	35	<0.10	12	38	130	1500	7.00	7.5 YR 4/2
179	Drilling	PF4-5-5	4645631.8	600876.91	11	0.45	26	46	39	<0.10	18	39	110	1600	7.10	7.5 YR 4/2
180	Drilling	PF4-5-6	4645631.8	600876.91	12	1.6	19	38	49	<0.10	130	220	280	2200	7.16	7.5 YR 4/2
181	Drilling	PF4-5-7	4645631.8	600876.91	48	<0.10	13	7.6	45	<0.10	6.9	31	140	280	7.15	7.5 YR 4/2
182	Drilling	PF4-5-8	4645631.8	600876.91	32	6.4	20	41	150	<0.10	<1	1100	1500	6900	7.22	10 YR 5/4
183	Drilling	PF4-5-9	4645631.8	600876.91	71	0.45	21	35	79	<0.10	13	410	350	2300	7.27	10 YR 5/4
184	Drilling	PF4-6-1	4645692.87	600956.49	9.6	0.87	24	57	35	0.10	19	110	160	1600	7.07	7.5 YR 4/3
185	Drilling	PF4-6-2	4645692.87	600956.49	9.7	0.28	24	53	17	<0.10	13	62	120	1300	7.24	7.5 YR 4/3
186	Drilling	PF4-6-3	4645692.87	600956.49	5.9	0.52	24	77	36	<0.10	22	73	150	1500	7.23	7.5 YR 4/3
187	Drilling	PF4-6-4	4645692.87	600956.49	15	<0.10	16	26	18	<0.10	16	63	96	1000	6.93	7.5 YR 4/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
188	Drilling	PF4-6-5	4645692.87	600956.49	16	0.5	22	65	22	<0.10	17	32	100	1100	7.25	7.5 YR 4/3
189	Drilling	PF4-6-6	4645692.87	600956.49	16	0.16	20	62	15	<0.10	18	37	110	1200	7.01	7.5 YR 4/3
190	Drilling	PF4-6-7	4645692.87	600956.49	10	2	26	26	110	0.11	12	330	260	2700	7.46	7.5 YR 4/3
191	Drilling	PF4-6-8	4645692.87	600956.49	11	<0.10	23	76	23	<0.10	21	23	97	1200	7.32	7.5 YR 3/2
192	Drilling	PF4-6-9	4645692.87	600956.49	15	0.58	23	65	40	<0.10	66	73	98	1400	7.24	7.5 YR 3/2
193	Drilling	PF5-1-1	4643517.92	599858.21	3.5	0.82	22	39	31	<0.10	<1	200	200	1400	7.20	7.5 YR 3/3
194	Drilling	PF5-1-2	4643517.92	599858.21	8.2	0.26	18	38	32	<0.10	22	71	120	1200	7.00	7.5 YR 3/3
195	Drilling	PF5-1-3	4643517.92	599858.21	11	0.18	14	25	24	0.10	15	39	79	920	7.32	7.5 YR 8/1
196	Drilling	PF5-1-4	4643517.92	599858.21	37	<0.10	35	18	30	<0.10	12	72	100	1300	7.42	7.5 YR 8/1
197	Drilling	PF5-1-5	4643517.92	599858.21	33	0.11	23	24	37	<0.10	15	130	160	1600	7.44	7.5 YR 5/4
198	Drilling	PF5-1-6	4643517.92	599858.21	16	0.38	13	22	26	<0.10	14	59	110	820	7.43	7.5 YR 5/4
199	Drilling	PF5-1-7	4643517.92	599858.21	13	0.37	21	130	36	<0.10	120	35	71	1600	7.41	7.5 YR 4/3
200	Drilling	PF5-1-8	4643517.92	599858.21	81	<0.10	12	4.5	39	<0.10	4.6	41	120	270	7.37	7.5 YR 4/3
201	Drilling	PF5-1-9	4643517.92	599858.21	73	0.24	86	29	33	<0.10	13	170	140	500	7.43	10 YR 6/4
202	Drilling	PF5-2-1	4643553.08	600089.65	31	3.6	26	30	95	<0.10	57	700	900	4400	6.61	7.5 YR 4/4
203	Drilling	PF5-2-2	4643553.08	600089.65	24	0.61	15	23	69	<0.10	28	100	130	3400	7.30	7.5 YR 6/3
204	Drilling	PF5-2-3	4643553.08	600089.65	20	1.7	19	29	54	<0.10	12	260	260	1900	7.54	7.5 YR 6/3
205	Drilling	PF5-2-4	4643553.08	600089.65	<1	0.28	14	5.8	22	<0.10	1.6	17	72	650	7.53	7.5 YR 6/3
206	Drilling	PF5-2-5	4643553.08	600089.65	70	0.24	31	31	87	<0.10	21	220	210	10000	7.48	7.5 YR 6/3
207	Drilling	PF5-2-6	4643553.08	600089.65	31	0.68	40	19	40	<0.10	6.4	210	210	1200	7.51	7.5 YR 6/3
208	Drilling	PF5-2-7	4643553.08	600089.65	18	0.76	12	39	29	<0.10	21	95	100	960	7.49	7.5 YR 6/3
209	Drilling	PF5-2-8	4643553.08	600089.65	4.6	0.28	16	16	13	<0.10	10	27	83	1000	7.52	7.5 YR 6/3
210	Drilling	PF5-2-9	4643553.08	600089.65	24	1.2	19	36	51	<0.10	11	180	200	1400	7.40	7.5 YR 6/3
211	Drilling	PF5-3-1	4643626.52	600265.94	58	5.2	16	33	150	0.10	11	1300	1200	9100	6.77	7.5 YR 6/6
212	Drilling	PF5-3-2	4643626.52	600265.94	150	13	20	22	380	<0.10	9.2	6900	3000	34000	7.03	7.5 YR 6/4
213	Drilling	PF5-3-3	4643626.52	600265.94	16	0.22	20	110	27	<0.10	120	41	88	1200	7.28	7.5 YR 6/4
214	Drilling	PF5-3-4	4643626.52	600265.94	40	4.9	23	47	96	0.10	15	1600	810	9000	7.17	7.5 YR 6/4
215	Drilling	PF5-3-5	4643626.52	600265.94	11	6.2	22	36	76	<0.10	11	670	890	7400	7.34	7.5 YR 6/4
216	Drilling	PF5-3-6	4643626.52	600265.94	<1	0.36	11	19	22	<0.10	8.7	22	64	670	7.28	7.5 YR 6/4
217	Drilling	PF5-3-7	4643626.52	600265.94	7.6	5.3	23	34	71	0.10	29	900	870	9600	7.25	7.5 YR 6/4
218	Drilling	PF5-3-8	4643626.52	600265.94	22	1.4	18	29	36	0.10	13	210	290	1700	7.28	7.5 YR 6/4
219	Drilling	PF5-3-9	4643626.52	600265.94	8.1	0.52	21	43	33	<0.10	13	47	120	1500	7.50	7.5 YR 6/4
220	Drilling	PF5-4-1	4643447.37	600375.85	4.9	1	17	28	39	<0.10	7.9	120	180	1300	7.22	7.5 YR 3/4
221	Drilling	PF5-4-2	4643447.37	600375.85	6.3	0.54	24	47	30	<0.10	22	80	150	1500	7.28	7.5 YR 3/4
222	Drilling	PF5-4-3	4643447.37	600375.85	11	0.13	16	38	25	<0.10	23	39	71	980	7.27	7.5 YR 3/4
223	Drilling	PF5-4-4	4643447.37	600375.85	19	<0.10	22	37	26	<0.10	16	79	120	1200	7.20	7.5 YR 3/4
224	Drilling	PF5-4-5	4643447.37	600375.85	25	0.17	21	43	39	<0.10	15	100	140	1500	7.26	7.5 YR 3/4
225	Drilling	PF5-4-6	4643447.37	600375.85	40	<0.10	19	26	35	0.11	14	98	130	1300	7.30	7.5 YR 3/2
226	Drilling	PF5-4-7	4643447.37	600375.85	50	0.12	21	24	38	<0.10	11	95	140	1200	7.26	7.5 YR 3/2
227	Drilling	PF5-4-8	4643447.37	600375.85	<1	0.48	22	200	41	<0.10	230	26	89	2900	7.24	7.5 YR 3/2
228	Drilling	PF5-4-9	4643447.37	600375.85	45	0.52	28	30	46	<0.10	16	120	170	2400	7.15	7.5 YR 3/2
229	Drilling	PF5-5-1	4643584.73	600163.59	93	9.1	16	26	180	0.14	8.7	2700	2100	13000	5.90	7.5 YR 5/6
230	Drilling	PF5-5-2	4643584.73	600163.59	82	9.2	19	20	220	0.13	4.8	3400	2200	16000	6.48	7.5 YR 5/6
231	Drilling	PF5-5-3	4643584.73	600163.59	6.3	0.57	28	150	30	<0.10	170	42	89	1500	6.88	7.5 YR 5/4
232	Drilling	PF5-5-4	4643584.73	600163.59	1.3	140	15	19	890	0.10	5	20000	17000	49000	7.22	7.5 YR 5/4
233	Drilling	PF5-5-5	4643584.73	600163.59	21	3.5	19	23	55	<0.10	13	380	720	2600	7.20	7.5 YR 5/4
234	Drilling	PF5-5-6	4643584.73	600163.59	26	3	20	26	51	<0.10	8.9	350	790	2300	7.25	7.5 YR 5/4
235	Drilling	PF5-5-7	4643584.73	600163.59	16	1.3	19	27	50	<0.10	9.4	430	610	1600	7.25	7.5 YR 5/4
236	Drilling	PF5-5-8	4643584.73	600163.59	26	1.9	22	38	52	<0.10	13	280	510	1500	7.32	7.5 YR 5/4
237	Drilling	PF5-5-9	4643584.73	600163.59	5	5.3	21	42	150	<0.10	30	740	1000	5700	7.30	7.5 YR 5/4
238	Drilling	PF6-1-1	4640493.33	599975.34	5.4	0.55	20	43	23	<0.10	28	71	91	1100	7.56	7.5 YR 3/2
239	Drilling	PF6-1-2	4640493.33	599975.34	6.9	<0.10	20	48	24	<0.10	33	39	74	1100	7.51	7.5 YR 3/2
240	Drilling	PF6-1-3	4640493.33	599975.34	6.5	0.21	20	30	12	<0.10	20	47	94	1100	7.47	7.5 YR 3/2
241	Drilling	PF6-1-4	4640493.33	599975.34	5.7	0.24	21	35	13	<0.10	42	38	97	1100	7.43	7.5 YR 3/2
242	Drilling	PF6-1-5	4640493.33	599975.34	6.6	<0.10	19	30	18	<0.10	14	57	77	1200	7.43	7.5 YR 3/2
243	Drilling	PF6-1-6	4640493.33	599975.34	19	<0.10	20	58	26	0.10	33	41	110	1100	7.47	7.5 YR 3/2
244	Drilling	PF6-1-7	4640493.33	599975.34	7.2	0.46	20	39	22	<0.10	25	44	79	1200	7.55	7.5 YR 3/2
245	Drilling	PF6-1-8	4640493.33	599975.34	9	0.15	22	61	16	<0.10	27	43	120	8200	7.51	7.5 YR 5/3
246	Drilling	PF6-1-9	4640493.33	599975.34	23	<0.10	24	59	21	0.10	22	30	110	1500	7.47	7.5 YR 5/3
247	Drilling	PF6-2-1	4640377.33	600142.18	5.7	3.7	19	40	110	0.10	26	660	700	3300	6.89	7.5 YR 7/3
248	Drilling	PF6-2-2	4640377.33	600142.18	20	5.7	23	37	99	<0.10	15	430	880	7000	7.12	7.5 YR 7/3
249	Drilling	PF6-2-3	4640377.33	600142.18	12	3.4	22	50	180	<0.10	34	390	380	1700	7.21	7.5 YR 7/3
250	Drilling	PF6-2-4	4640377.33	600142.18	8	1.2	22	43	47	0.12	31	120	150	1400	7.24	7.5 YR 6/2

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
251	Drilling	PF6-2-5	4640377.33	600142.18	4.2	0.65	12	28	27	<0.10	16	88	88	490	7.32	7.5 YR 6/2
252	Drilling	PF6-2-6	4640377.33	600142.18	7.8	0.23	20	35	25	<0.10	22	52	100	1200	7.34	7.5 YR 6/2
253	Drilling	PF6-2-7	4640377.33	600142.18	6	0.25	19	32	16	<0.10	19	95	120	1100	7.13	7.5 YR 6/2
254	Drilling	PF6-2-8	4640377.33	600142.18	13	<0.10	18	23	20	<0.10	10	120	120	1300	7.16	7.5 YR 6/2
255	Drilling	PF6-2-9	4640377.33	600142.18	16	<0.10	19	34	22	<0.10	24	110	140	1100	7.13	7.5 YR 6/2
256	Drilling	PF6-3-1	4640487.75	600371.11	5.9	6.6	19	44	110	0.10	28	820	1300	6200	6.93	7.5 YR 3/3
257	Drilling	PF6-3-2	4640487.75	600371.11	5.9	3.8	21	38	74	0.10	23	440	690	2900	6.89	7.5 YR 3/3
258	Drilling	PF6-3-3	4640487.75	600371.11	36	12	23	28	130	0.11	35	2100	2100	15000	7.21	7.5 YR 6/3
259	Drilling	PF6-3-4	4640487.75	600371.11	16	4.3	18	21	57	<0.10	16	850	810	4900	7.29	7.5 YR 6/3
260	Drilling	PF6-3-5	4640487.75	600371.11	21	2.7	21	26	54	<0.10	12	510	550	3500	7.46	7.5 YR 6/3
261	Drilling	PF6-3-6	4640487.75	600371.11	39	0.88	22	43	84	0.14	16	280	380	2200	7.38	7.5 YR 6/3
262	Drilling	PF6-3-7	4640487.75	600371.11	18	0.94	19	38	37	0.10	21	180	220	1700	7.22	7.5 YR 6/3
263	Drilling	PF6-3-8	4640487.75	600371.11	42	0.46	19	32	38	<0.10	13	100	150	1400	7.20	7.5 YR 6/3
264	Drilling	PF6-3-9	4640487.75	600371.11	21	0.5	22	37	40	<0.10	17	82	140	1800	7.28	7.5 YR 6/3
265	Drilling	PF6-4-1	4640523.34	600555.54	17	3.3	20	42	59	0.20	16	800	700	3700	7.18	7.5 YR 4/4
266	Drilling	PF6-4-2	4640523.34	600555.54	29	6.2	20	33	270	0.10	16	1100	1300	8100	7.09	7.5 YR 5/6
267	Drilling	PF6-4-3	4640523.34	600555.54	66	<0.10	19	110	38	0.17	16	190	100	1400	6.98	7.5 YR 6/4
268	Drilling	PF6-4-4	4640523.34	600555.54	77	<0.10	17	11	100	0.17	9.1	380	160	1500	7.19	7.5 YR 6/4
269	Drilling	PF6-4-5	4640523.34	600555.54	9	2.5	17	20	91	<0.10	14	210	540	3900	7.44	7.5 YR 6/4
270	Drilling	PF6-4-6	4640523.34	600555.54	12	2	24	48	42	<0.10	17	330	370	3200	7.18	7.5 YR 6/4
271	Drilling	PF6-4-7	4640523.34	600555.54	9.5	0.94	18	20	38	<0.10	12	210	220	1800	7.31	7.5 YR 6/4
272	Drilling	PF6-4-8	4640523.34	600555.54	14	1.8	21	52	53	<0.10	14	220	400	3200	7.22	7.5 YR 6/4
273	Drilling	PF6-4-9	4640523.34	600555.54	12	1.1	34	60	51	<0.10	16	120	220	2700	7.34	7.5 YR 6/4
274	Drilling	PF6-5-1	4640591.29	600695.55	270	2	34	28	60	<0.10	15	750	680	3700	6.75	7.5 YR 4/4
275	Drilling	PF6-5-2	4640591.29	600695.55	<1	1.1	25	30	21	<0.10	17	60	380	2000	6.99	7.5 YR 4/4
276	Drilling	PF6-5-3	4640591.29	600695.55	16	2	29	24	52	0.12	12	250	430	2700	7.09	7.5 YR 4/6
277	Drilling	PF6-5-4	4640591.29	600695.55	18	1.7	37	28	53	<0.10	13	210	380	2200	7.16	7.5 YR 4/6
278	Drilling	PF6-5-5	4640591.29	600695.55	13	0.98	48	26	41	0.10	12	220	320	1700	7.12	7.5 YR 4/6
279	Drilling	PF6-5-6	4640591.29	600695.55	15	0.84	21	25	37	<0.10	14	220	290	1500	7.19	7.5 YR 4/6
280	Drilling	PF6-5-7	4640591.29	600695.55	72	<0.10	13	7.4	61	<0.10	7	34	140	270	7.29	7.5 YR 4/6
281	Drilling	PF6-5-8	4640591.29	600695.55	26	0.48	26	27	43	<0.10	25	190	140	2500	6.97	7.5 YR 4/6
282	Drilling	PF6-5-9	4640591.29	600695.55	18	1.4	22	37	53	0.11	16	230	290	990	6.89	7.5 YR 4/6
283	Drilling	PF6-6-1	4640655.27	600795.05	32	8.9	16	41	180	0.13	18	2200	2000	9400	6.95	7.5 YR 5/4
284	Drilling	PF6-6-2	4640655.27	600795.05	4.5	0.24	26	130	44	<0.10	140	24	93	560	6.82	7.5 YR 3/3
285	Drilling	PF6-6-3	4640655.27	600795.05	3.8	2.1	22	27	30	0.12	9.2	93	540	1900	7.01	7.5 YR 3/3
286	Drilling	PF6-6-4	4640655.27	600795.05	<1	1.9	22	30	25	<0.10	11	62	530	1500	6.96	7.5 YR 3/3
287	Drilling	PF6-6-5	4640655.27	600795.05	<1	1.3	24	27	21	<0.10	24	60	410	2000	7.07	7.5 YR 3/3
288	Drilling	PF6-6-6	4640655.27	600795.05	16	2.9	19	45	92	<0.10	17	390	620	4200	6.91	7.5 YR 3/3
289	Drilling	PF6-6-7	4640655.27	600795.05	15	2.6	26	24	96	<0.10	53	340	330	2400	7.07	7.5 YR 3/3
290	Drilling	PF6-6-8	4640655.27	600795.05	8	3.8	21	22	29	<0.10	11	590	550	3200	7.16	7.5 YR 3/3
291	Drilling	PF6-6-9	4640655.27	600795.05	3.2	0.52	22	24	18	<0.10	8.1	44	100	840	7.18	7.5 YR 3/3
292	Drilling	D18-1	4644873.6	594174.57	8.1	0.33	28	120	36	<0.10	120	35	76	1700	7.08	7.5 YR 3/3
293	Drilling	D18-2	4644873.6	594174.57	7.7	<0.10	37	220	34	<0.10	260	44	100	1400	7.50	7.5 YR 3/3
294	Drilling	D18-3	4644873.6	594174.57	3	0.66	21	100	25	<0.10	100	160	150	1800	7.33	10 YR 7/3
295	Drilling	D18-4	4644873.6	594174.57	6.8	0.37	25	120	29	<0.10	130	15	71	2700	7.33	10 YR 7/3
296	Drilling	D18-5	4644873.6	594174.57	6.5	0.54	31	140	39	<0.10	150	17	97	1600	7.37	5 Y 4/2
297	Drilling	D18-6	4644873.6	594174.57	3.1	0.15	29	160	42	<0.10	160	24	91	1800	7.31	5 Y 4/2
298	Drilling	D18-7	4644873.6	594174.57	3.4	0.54	29	140	36	0.10	140	24	100	1800	7.36	5 Y 4/2
299	Drilling	D18-8	4644873.6	594174.57	22	1.3	23	28	65	<0.10	710	280	330	2500	7.46	5 Y 4/2
300	Drilling	D18-9	4644873.6	594174.57	9.8	<0.10	21	110	22	<0.10	150	21	57	1700	-	5 Y 4/2
301	Drilling	E14-1	4643326.62	594600.32	5.4	<0.10	26	120	25	<0.10	140	39	77	920	7.36	7.5 YR 2/3
302	Drilling	E14-2	4643326.62	594600.32	<1	0.28	28	98	41	<0.10	110	45	87	710	7.34	7.5 Y 4/1
303	Drilling	E14-3	4643326.62	594600.32	2.9	0.45	31	150	49	<0.10	160	17	99	550	7.35	7.5 Y 4/1
304	Drilling	E14-4	4643326.62	594600.32	38	0.23	16	32	51	0.26	11	150	200	1200	7.42	7.5 Y 4/1
305	Drilling	E14-5	4643326.62	594600.32	3.4	<0.10	32	120	29	0.11	150	18	74	490	7.26	7.5 Y 4/1
306	Drilling	E14-6	4643326.62	594600.32	16	0.74	19	53	36	<0.10	45	150	150	1500	7.28	7.5 Y 4/1
307	Drilling	E14-7	4643326.62	594600.32	2.5	0.15	26	110	35	<0.10	16	15	85	670	7.36	7.5 Y 4/1
308	Drilling	E14-8	4643326.62	594600.32	<1	0.41	18	76	16	<0.10	69	27	97	950	7.37	7.5 Y 4/1
309	Drilling	E14-9	4643326.62	594600.32	<1	0.41	28	130	37	<0.10	120	24	100	910	7.45	7.5 Y 4/1
310	Drilling	H11-1	4641774.35	595870.78	12	0.51	25	110	32	0.13	100	63	96	1500	6.99	7.5 YR 3/1
311	Drilling	H11-2	4641774.35	595870.78	120	<0.10	14	12	38	2.70	4.3	260	160	1300	7.08	7.5 YR 3/1
312	Drilling	H11-3	4641774.35	595870.78	6.6	0.39	25	130	30	0.10	130	35	82	1400	7.13	7.5 YR 3/1
313	Drilling	H11-4	4641774.35	595870.78	8.1	0.3	15	99	21	<0.10	95	26	64	950	6.81	10 YR 5/3

Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
314	Drilling	H11-5	4641774.35	595870.78	58	<0.10	25	43	57	<0.10	22	39	110	1200	7.23	10 YR 5/3
315	Drilling	H11-6	4641774.35	595870.78	7.4	1.8	25	60	100	<0.10	43	190	250	2100	7.55	10 YR 5/3
316	Drilling	H11-7	4641774.35	595870.78	7.4	0.52	19	110	25	<0.10	110	55	85	1300	7.10	5 Y 4/2
317	Drilling	H11-8	4641774.35	595870.78	40	1.9	26	55	79	<0.10	53	410	270	2600	7.10	5 Y 4/2
318	Drilling	H11-9	4641774.35	595870.78	11	0.62	21	19	90	<0.10	13	57	110	1900	7.31	5 Y 4/2
319	Drilling	H15-1	4643706.61	595773.59	11	0.16	26	120	34	0.13	120	51	86	1700	7.71	7.5 YR 2/1
320	Drilling	H15-2	4643706.61	595773.59	10	<0.10	27	160	34	0.11	140	37	84	1500	7.46	7.5 YR 2/1
321	Drilling	H15-3	4643706.61	595773.59	10	0.28	28	150	34	0.12	130	43	86	1600	7.45	7.5 YR 2/1
322	Drilling	H15-4	4643706.61	595773.59	5.4	0.3	22	120	27	<0.10	110	24	63	1400	7.49	7.5 YR 2/1
323	Drilling	H15-5	4643706.61	595773.59	130	<0.10	19	20	49	<0.10	15	94	99	890	7.47	7.5 YR 2/1
324	Drilling	H15-6	4643706.61	595773.59	7	0.11	17	180	20	<0.10	150	16	50	940	7.43	10 YR 5/2
325	Drilling	H15-7	4643706.61	595773.59	5.5	<0.10	24	200	19	<0.10	190	23	61	890	7.49	10 YR 6/4
326	Drilling	H15-8	4643706.61	595773.59	4.6	0.44	28	190	35	0.10	210	17	70	970	7.53	10 YR 6/4
327	Drilling	H15-9	4643706.61	595773.59	3.1	0.36	27	210	35	0.10	210	23	87	840	7.51	10 YR 6/4
328	Drilling	I36-1	4651909.33	596296.64	14	0.41	19	82	24	0.12	75	76	93	1200	7.29	7.5 YR 3/3
329	Drilling	I36-2	4651909.33	596296.64	10	<0.10	26	130	19	0.17	200	150	120	1600	7.12	7.5 YR 3/3
330	Drilling	I36-3	4651909.33	596296.64	17	0.25	19	93	25	<0.10	82	81	89	1100	7.32	7.5 YR 2/2
331	Drilling	I36-4	4651909.33	596296.64	18	0.35	27	34	110	<0.10	20	110	130	1700	7.21	7.5 YR 2/2
332	Drilling	I36-5	4651909.33	596296.64	9.6	0.81	22	53	48	<0.10	48	150	130	1700	7.29	7.5 YR 2/2
333	Drilling	I36-6	4651909.33	596296.64	17	0.24	19	110	27	<0.10	110	49	93	1000	7.36	7.5 YR 3/3
334	Drilling	I36-7	4651909.33	596296.64	5.6	0.48	20	35	37	<0.10	14	46	110	1400	7.25	10 YR 6/4
335	Drilling	I36-8	4651909.33	596296.64	12	0.13	16	90	29	0.16	97	37	86	990	7.24	10 YR 6/4
336	Drilling	I36-9	4651909.33	596296.64	8.7	0.25	17	20	11	<0.10	7.6	40	80	840	7.26	10 YR 6/4
337	Drilling	K10-1	4641442.18	596954.87	3	0.31	26	140	20	<0.10	130	28	97	13000	7.04	7.5 YR 3/2
338	Drilling	K10-2	4641442.18	596954.87	30	0.1	16	30	63	<0.10	25	75	84	1700	7.08	7.5 YR 3/2
339	Drilling	K10-3	4641442.18	596954.87	2.7	<0.10	16	75	10	<0.10	53	20	57	750	7.34	2.5 YR 4/3
340	Drilling	K10-4	4641442.18	596954.87	1.7	0.34	18	59	11	<0.10	32	32	75	540	7.29	2.5 YR 4/3
341	Drilling	K10-5	4641442.18	596954.87	3.5	<0.10	15	53	15	<0.10	29	15	52	420	7.32	2.5 YR 4/3
342	Drilling	K10-6	4641442.18	596954.87	3.5	0.36	16	63	16	<0.10	94	17	65	580	7.35	2.5 YR 4/3
343	Drilling	K10-7	4641442.18	596954.87	18	3.7	18	23	130	0.10	110	550	820	4800	7.33	2.5 YR 4/3
344	Drilling	K10-8	4641442.18	596954.87	<1	<0.10	18	63	16	<0.10	45	17	57	530	7.35	2.5 YR 4/3
345	Drilling	K10-9	4641442.18	596954.87	2.4	0.83	20	68	19	<0.10	49	31	120	660	7.33	2.5 YR 7/3
346	Drilling	M10-1	4641420.74	597937.46	3.2	0.4	25	110	31	0.10	140	50	76	1700	7.11	7.5 YR 3/3
347	Drilling	M10-2	4641420.74	597937.46	6.3	0.37	26	130	32	<0.10	110	40	82	1500	7.04	7.5 YR 3/3
348	Drilling	M10-3	4641420.74	597937.46	11	0.63	31	170	32	0.12	150	36	94	1900	7.25	7.5 YR 3/3
349	Drilling	M10-4	4641420.74	597937.46	5	<0.10	19	94	22	0.12	84	21	60	920	7.50	7.5 YR 4/3
350	Drilling	M10-5	4641420.74	597937.46	6.5	0.48	21	110	24	<0.10	220	21	68	1100	7.56	7.5 YR 4/3
351	Drilling	M10-6	4641420.74	597937.46	4	0.25	17	75	15	<0.10	69	37	80	900	7.37	7.5 YR 4/3
352	Drilling	M10-7	4641420.74	597937.46	4.8	0.28	21	94	22	<0.10	86	23	60	1300	7.36	7.5 YR 4/3
353	Drilling	M10-8	4641420.74	597937.46	6	0.17	22	220	28	<0.10	210	15	57	840	7.46	7.5 YR 4/3
354	Drilling	M10-9	4641420.74	597937.46	8.8	0.26	22	110	24	0.11	110	19	58	1300	7.44	2.5 Y 5/3
355	Drilling	M35-1	4651643.91	597595.57	57	30	17	28	240	0.37	19	9700	6300	9600	7.13	7.5 YR 3/2
356	Drilling	M35-2	4651643.91	597595.57	5.7	52	16	21	590	0.26	5.8	10000	9700	20000	6.85	7.5 YR 8/2
357	Drilling	M35-3	4651643.91	597595.57	4.2	100	16	20	900	0.48	9.5	24000	19000	12000	6.95	7.5 YR 8/2
358	Drilling	M35-4	4651643.91	597595.57	140	74	9.3	31	920	0.28	2.7	25000	14000	66000	6.81	7.5 YR 4/4
359	Drilling	M35-5	4651643.91	597595.57	55	110	20	21	700	<0.10	9	25000	17000	46000	6.95	7.5 YR 2/1
360	Drilling	M35-6	4651643.91	597595.57	7.8	4.8	18	26	39	<0.10	16	320	880	8400	6.91	7.5 YR 2/1
361	Drilling	M35-7	4651643.91	597595.57	13	5.8	20	56	84	<0.10	14	560	860	7400	6.93	10 YR 5/1
362	Drilling	M35-8	4651643.91	597595.57	12	110	17	27	680	0.15	3.6	16000	14000	51000	6.98	10 YR 5/1
363	Drilling	M35-9	4651643.91	597595.57	12	0.57	21	40	33	2.50	13	86	160	840	6.94	10 YR 5/1
364	Drilling	N33-1	4650796.54	598298.00	18	0.46	15	24	27	0.11	7.4	180	130	940	7.16	7.5 YR 2/2
365	Drilling	N33-2	4650796.54	598298.00	22	0.19	15	33	20	<0.10	16	91	80	800	7.20	7.5 YR 2/2
366	Drilling	N33-3	4650796.54	598298.00	18	9.3	15	33	150	0.22	16	1500	1700	9500	7.23	7.5 YR 2/2
367	Drilling	N33-4	4650796.54	598298.00	<1	0.77	25	150	39	0.10	150	85	160	1800	7.17	10 YR 5/3
368	Drilling	N33-5	4650796.54	598298.00	4.5	0.21	11	23	8.5	<0.10	7.2	75	85	290	7.18	10 YR 5/3
369	Drilling	N33-6	4650796.54	598298.00	5.5	1.4	14	41	20	<0.10	7.8	280	200	680	7.17	2.5 YR 4/1
370	Drilling	N33-7	4650796.54	598298.00	78	0.13	12	33	26	<0.10	4.9	34	71	220	7.19	10 YR 5/6
371	Drilling	N33-8	4650796.54	598298.00	12	0.45	21	44	25	<0.10	18	65	130	1400	7.27	10 YR 5/2
372	Drilling	N33-9	4650796.54	598298.00	31	<0.10	17	29	30	0.18	11	50	64	120	7.21	10 YR 5/2
373	Drilling	P28-1	4648726.06	599168.88	90	0.18	24	15	70	<0.10	9.6	150	110	1800	6.93	7.5 YR 4/2
374	Drilling	P28-2	4648726.06	599168.88	61	0.23	16	20	67	<0.10	12	62	100	1700	7.19	7.5 YR 4/2
375	Drilling	P28-3	4648726.06	599168.88	51	<0.10	21	22	96	<0.10	13	51	84	1800	6.99	7.5 YR 3/4
376	Drilling	P28-4	4648726.06	599168.88	7.2	0.22	13	26	10	<0.10	12	35	72	730	7.35	7.5 YR 3/4



Num	Grid	Sample No.	E	N	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	Color
			X	Y	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
377	Drilling	P28-5	4648726.06	599168.88	17	2	20	19	60	0.11	9.6	610	450	2200	7.06	-
378	Drilling	P28-6	4648726.06	599168.88	5.5	0.19	14	11	38	<0.10	<1	35	88	290	-	-
379	Drilling	P28-7	4648726.06	599168.88	6.6	<0.10	15	15	40	<0.10	4.5	44	98	270	-	-
380	Drilling	Q4-1	4639407.83	599527.62	9.7	0.86	22	39	22	<0.10	23	72	110	1400	7.09	7.5 YR 2/2
381	Drilling	Q4-2	4639407.83	599527.62	11	0.24	21	47	19	<0.10	30	52	89	1100	6.71	7.5 YR 2/2
382	Drilling	Q4-3	4639407.83	599527.62	2.9	0.17	28	140	43	<0.10	140	15	93	630	7.34	7.5 YR 5/2
383	Drilling	Q4-4	4639407.83	599527.62	15	0.33	18	11	52	<0.10	7.8	39	110	660	7.36	7.5 YR 5/2
384	Drilling	Q4-5	4639407.83	599527.62	6.4	0.21	19	24	16	<0.10	13	42	90	1000	7.32	7.5 YR 3/3
385	Drilling	Q4-6	4639407.83	599527.62	5.7	0.36	19	25	16	<0.10	9.6	40	98	1000	7.41	7.5 YR 3/3
386	Drilling	Q4-7	4639407.83	599527.62	15	0.17	21	28	17	0.12	14	43	100	1200	7.34	7.5 YR 3/3
387	Drilling	Q4-8	4639407.83	599527.62	20	<0.10	16	28	47	0.11	18	59	94	1100	7.36	7.5 YR 3/3
388	Drilling	Q4-9	4639407.83	599527.62	14	1.5	22	42	58	<0.10	14	390	390	1900	7.42	2.5 YR 6/1
389	Drilling	R25-1	4647589.87	599819.72	28	6.6	23	35	260	0.15	14	2100	1200	8300	6.84	7.5 YR 3/3
390	Drilling	R25-2	4647589.87	599819.72	680	<0.10	23	16	33	<0.10	8.5	57	110	1500	7.10	7.5 YR 3/3
391	Drilling	R25-3	4647589.87	599819.72	800	<0.10	20	18	33	<0.10	9.3	54	120	1200	7.11	7.5 YR 3/3
392	Drilling	R25-4	4647589.87	599819.72	480	<0.10	21	31	32	<0.10	19	42	87	1100	7.12	7.5 YR 3/3
393	Drilling	R25-5	4647589.87	599819.72	310	<0.10	19	25	32	<0.10	13	34	79	1000	7.29	7.5 YR 4/3
394	Drilling	R25-6	4647589.87	599819.72	300	<0.10	19	27	35	<0.10	14	35	79	1100	7.08	7.5 YR 4/3
395	Drilling	R25-7	4647589.87	599819.72	190	<0.10	18	30	30	<0.10	16	38	80	880	7.16	7.5 YR 5/4
396	Drilling	R25-8	4647589.87	599819.72	110	<0.10	18	36	43	<0.10	16	37	91	950	7.17	7.5 YR 5/4
397	Drilling	R25-9	4647589.87	599819.72	110	<0.10	18	32	53	0.10	15	36	86	1000	7.04	7.5 YR 5/4
398	Drilling	T3-1	4638734.67	600476.66	1.3	0.61	17	38	22	0.13	23	67	99	1100	7.21	7.5 YR 3/3
399	Drilling	T3-2	4638734.67	600476.66	5.5	0.61	20	42	25	0.11	23	68	120	1500	7.27	7.5 YR 3/3
400	Drilling	T3-3	4638734.67	600476.66	7.1	0.57	21	36	18	<0.10	21	70	130	1000	7.22	7.5 YR 3/3
401	Drilling	T3-4	4638734.67	600476.66	6	0.49	19	37	20	<0.10	21	63	97	1000	7.22	7.5 YR 3/3
402	Drilling	T3-5	4638734.67	600476.66	14	0.49	20	61	36	<0.10	31	88	160	2100	7.23	7.5 YR 5/6
403	Drilling	T3-6	4638734.67	600476.66	17	0.35	22	46	26	<0.10	19	84	140	570	7.31	7.5 YR 5/6
404	Drilling	T3-7	4638734.67	600476.66	21	<0.10	25	45	27	0.15	17	190	160	1200	7.26	7.5 YR 6/3
405	Drilling	T3-8	4638734.67	600476.66	24	0.16	19	32	24	<0.10	16	130	140	1200	7.11	7.5 YR 6/3
406	Drilling	T3-9	4638734.67	600476.66	14	0.22	17	29	28	<0.10	12	80	120	1200	7.29	7.5 YR 6/3
407	Drilling	U30-1	4649690.59	600869.32	47	0.1	22	36	36	<0.10	18	38	100	1100	6.92	7.5 YR 4/4
408	Drilling	U30-2	4649690.59	600869.32	5.2	0.21	9.7	59	20	<0.10	40	19	58	630	6.85	7.5 YR 4/4
409	Drilling	U30-3	4649690.59	600869.32	80	<0.10	20	23	54	<0.10	11	120	120	990	6.75	7.5 YR 4/4
410	Drilling	U30-4	4649690.59	600869.32	17	1.6	22	20	61	<0.10	10	650	430	2100	7.02	7.5 YR 4/4
411	Drilling	U30-5	4649690.59	600869.32	33	0.39	24	15	69	<0.10	7.2	430	280	2000	7.08	7.5 YR 4/4
412	Drilling	U30-6	4649690.59	600869.32	17	2.5	24	41	80	0.10	19	500	590	3700	7.18	-
413	Drilling	U6-1	4639839.61	601153.54	17	0.91	26	30	110	<0.10	130	100	160	2500	7.10	7.5 YR 3/4
414	Drilling	U6-2	4639839.61	601153.54	46	7.7	39	28	140	<0.10	10	2400	1000	17000	6.99	7.5 YR 3/3
415	Drilling	U6-3	4639839.61	601153.54	170	<0.10	39	35	31	<0.10	16	70	150	1100	7.13	7.5 YR 3/3
416	Drilling	U6-4	4639839.61	601153.54	4.1	0.36	17	39	30	<0.10	30	35	99	1100	7.15	7.5 YR 3/3
417	Drilling	U6-5	4639839.61	601153.54	13	<0.10	16	28	14	<0.10	16	42	80	900	7.23	7.5 YR 3/3
418	Drilling	U6-6	4639839.61	601153.54	19	0.65	28	60	32	<0.10	43	55	140	1600	7.24	7.5 YR 3/3
419	Drilling	U6-7	4639839.61	601153.54	19	0.23	31	66	27	<0.10	34	92	140	1400	7.29	7.5 YR 3/3
420	Drilling	U6-8	4639839.61	601153.54	55	0.17	20	35	35	<0.10	19	42	99	1000	7.22	7.5 YR 3/3
421	Drilling	U6-9	4639839.61	601153.54	15	0.3	22	42	22	0.13	21	84	140	1200	7.15	7.5 YR 3/3
422	Drilling	X29-1	4649025.42	602075.57	53	<0.10	32	390	35	<0.10	240	70	93	1000	7.03	7.5 YR 3/3
423	Drilling	X29-2	4649025.42	602075.57	44	0.13	29	410	32	<0.10	250	44	76	880	7.26	7.5 YR 3/3
424	Drilling	X29-3	4649025.42	602075.57	7.2	3.2	18	35	33	<0.10	17	170	380	1200	7.60	10 YR 5/3
425	Drilling	X29-4	4649025.42	602075.57	<1	0.17	26	340	15	<0.10	240	21	49	510	7.26	10 YR 5/3
426	Drilling	X29-5	4649025.42	602075.57	1.4	0.27	28	350	14	<0.10	260	32	83	530	7.34	10 YR 5/3
427	Drilling	X29-6	4649025.42	602075.57	<1	0.21	27	340	11	0.11	250	28	80	490	7.38	10 YR 5/3
428	Drilling	X29-7	4649025.42	602075.57	5.8	2.5	19	26	38	<0.10	22	220	420	1400	7.38	10 YR 5/3
429	Drilling	X29-8	4649025.42	602075.57	<1	0.28	27	290	16	0.10	220	24	51	600	7.38	10 YR 5/3
430	Drilling	X29-9	4649025.42	602075.57	<1	0.16	28	300	12	<0.10	230	33	81	550	7.33	10 YR 5/3
431	Drilling	a30-1	4649471.32	603249.87	12	3.1	22	44	31	<0.10	20	340	470	1400	6.91	7.5 YR 4/4
432	Drilling	a30-2	4649471.32	603249.87	<1	1.2	21	51	15	<0.10	27	190	320	690	7.19	7.5 YR 4/4
433	Drilling	a30-3	4649471.32	603249.87	9.9	1.2	18	29	16	<0.10	16	170	280	830	6.98	7.5 YR 4/6
434	Drilling	a30-4	4649471.32	603249.87	12	1.9	19	31	34	<0.10	17	200	370	1200	7.22	7.5 YR 4/6
435	Drilling	a30-5	4649471.32	603249.87	8.3	2.5	20	57	56	0.12	12	300	620	1700	7.22	7.5 YR 4/6
436	Drilling	a30-6	4649471.32	603249.87	12	2.8	20	31	42	<0.10	16	210	370	1300	7.12	7.5 YR 4/6
437	Drilling	a30-7	4649471.32	603249.87	73	<0.10	14	10	37	<0.10	46	45	120	340	7.17	2.5 YR 6/3
438	Drilling	a30-8	4649471.32	603249.87	18	1.5	28	42	61	<0.10	20	190	360	2200	7.09	2.5 YR 6/3
439	Drilling	a30-9	4649471.32	603249.87	15	1.9	21	39	45	<0.10	14	580	460	3200	7.08	2.5 YR 6/3

**Data 4-4(2) Soil Samples of Drilling Survey of Soil Elution Analysis**

No.	Grid	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1	PF1-2-1	0.036	0.0092	0.0052	0.034	0.034	0.0001	0.013	0.0043	0.18	0.39
2	PF1-3-3	0.011	<0.001	<0.005	<0.005	0.0073	<0.0001	<0.005	0.0052	0.017	0.058
3	PF1-4-4	0.0045	0.025	<0.005	0.018	0.018	0.0001	0.015	0.01	0.057	0.19
4	PF1-5-4	<0.003	<0.001	0.0053	<0.005	0.018	<0.0001	0.0083	<0.001	0.0048	0.46
5	PF1-5-6	0.0075	0.0018	<0.005	<0.005	0.0067	<0.0001	<0.005	<0.001	0.0052	0.015
6	PF2-1-3	0.005	0.0073	<0.005	<0.005	0.0055	0.00014	<0.005	0.001	<0.005	<0.005
7	PF2-1-4	0.014	0.0075	<0.005	<0.005	0.005	<0.0001	<0.005	0.0012	<0.005	<0.005
8	PF2-2-3	<0.003	<0.001	<0.005	<0.005	0.0097	<0.0001	<0.005	0.0068	0.15	0.043
9	PF2-4-1	0.015	0.012	0.005	0.0051	0.041	<0.0001	0.0067	0.0053	0.088	1.1
10	PF3-1-4	<0.003	0.0053	0.0069	<0.005	<0.005	0.00012	<0.005	0.002	0.18	13
11	PF3-3-1	0.01	0.016	0.005	0.0096	0.03	0.0001	0.011	0.0045	0.081	0.62
12	PF3-3-9	0.012	0.0074	<0.005	0.0086	0.038	0.0001	0.0055	0.013	0.061	0.3
13	PF3-5-1	0.0088	0.017	0.009	<0.005	0.027	<0.0001	0.0076	0.01	0.085	2.8
14	PF4-1-1	<0.003	0.041	<0.005	<0.005	0.0066	<0.0001	<0.005	<0.001	1.1	5.8
15	PF4-1-7	0.11	0.02	<0.005	0.013	0.016	<0.0001	0.0072	<0.001	0.076	0.17
16	PF4-2-5	0.035	0.015	<0.005	0.0082	0.025	<0.0001	<0.005	0.042	0.12	0.13
17	PF4-3-4	0.0048	0.0013	<0.005	<0.005	0.016	<0.0001	<0.005	0.039	0.029	0.19
18	PF4-4-9	0.035	0.0057	0.0058	0.012	0.029	<0.0001	0.005	0.018	0.16	1.2
19	PF4-5-2	<0.003	0.0016	<0.005	<0.005	<0.005	0.0001	<0.005	<0.001	0.0052	0.011
20	PF4-6-8	0.012	0.0042	<0.005	0.028	0.01	0.00015	0.0053	0.001	0.039	0.12
21	PF5-1-9	0.089	0.0093	0.091	0.02	0.046	<0.0001	0.01	0.038	0.13	0.25
22	PF5-2-2	0.019	<0.001	<0.005	0.02	0.034	0.00011	0.0053	0.017	0.099	0.092
23	PF5-3-2	<0.003	0.012	<0.005	<0.005	0.006	<0.0001	<0.005	<0.001	0.95	16
24	PF5-3-8	0.019	0.0064	<0.005	0.017	0.021	<0.0001	0.0055	0.021	0.093	0.19
25	PF5-5-2	<0.003	0.032	0.0071	<0.005	0.0063	0.0001	<0.005	<0.001	3.9	29
26	PF6-2-3	0.0088	0.0055	<0.005	0.0068	0.044	<0.0001	0.0052	0.037	0.1	0.094
27	PF6-3-9	0.004	0.0026	0.0055	0.0067	0.017	<0.0001	0.0053	0.039	0.056	0.56
28	PF6-4-2	0.0035	0.0022	<0.005	<0.005	0.037	<0.0001	<0.005	0.052	0.097	0.32
29	PF6-4-7	<0.003	0.0018	0.005	<0.005	0.022	0.0001	0.0067	0.0048	0.049	2
30	PF6-6-9	<0.003	0.0057	0.0059	0.024	0.016	<0.0001	0.0065	0.013	0.14	0.28
31	D18-1	<0.003	<0.001	<0.005	<0.005	0.015	<0.0001	0.029	<0.001	0.005	0.75
32	E14-3	<0.003	<0.001	<0.005	0.005	<0.005	<0.0001	0.005	0.0012	<0.005	0.03
33	I36-6	0.004	0.0012	<0.005	0.023	0.0074	<0.0001	0.018	<0.001	0.03	0.039
34	K10-3	<0.003	<0.001	<0.005	0.0058	<0.005	<0.0001	0.005	<0.001	0.0053	0.019
35	N33-1	0.0097	0.0023	<0.005	0.0065	0.027	0.0001	0.017	0.0078	0.061	0.22
36	N33-9	0.10	<0.001	0.0076	0.054	0.073	0.00011	0.016	0.041	0.16	0.073
37	P28-3	0.031	<0.001	<0.005	0.0091	0.033	<0.0001	<0.005	0.0012	0.031	0.053
38	Q4-6	0.0055	0.0012	<0.005	0.015	0.01	<0.0001	0.0052	0.0038	0.059	0.16
39	R25-6	0.038	<0.001	<0.005	<0.005	0.0043	<0.0001	<0.005	<0.001	0.0038	<0.005
40	T3-1	0.011	<0.001	<0.005	0.0098	0.021	0.00015	0.008	0.0014	0.031	0.15
41	U30-6	0.016	0.005	0.005	0.018	0.081	0.00011	0.0089	0.11	0.42	1.4
42	U6-9	0.018	<0.001	<0.005	0.0058	0.0038	<0.0001	<0.0050	0.0015	0.018	0.039
43	X29-9	<0.003	<0.001	<0.005	0.0078	0.004	<0.0001	0.025	0.0012	0.0073	0.032
44	a30-5	0.0046	0.0022	<0.005	<0.005	0.0083	<0.0001	<0.0050	0.032	0.065	0.2
45	a30-7	0.046	0.0064	<0.005	0.0053	0.02	<0.0001	<0.0050	0.0013	0.055	0.052

## **4-5 Analytical Results of River Bottom Sediments**



## Analytical Results of River Bottom Sediments

	River	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BS-01	Zletovska	22	4	20	30	61	<0.1	15	510	1,000	4,900
BS-02	Zletovska	21	4	19	41	48	<0.1	21	380	800	3,300
BS-03	Zletovska	32	4	17	21	51	<0.1	10	450	1,000	3,800
BS-04	Kiselica	120	13	14	8.9	160	<0.1	8.1	1,500	3,000	14,000
BS-05	Kiselica	33	4	16	22	77	<0.1	13	840	880	4,500
BS-06	Kiselica	220	0.11	11	8.2	290	<0.1	2.5	1,600	330	1,100
Average Soil*		6	0.35	8	70	30	0.06	50	35	90	1,000

\*: By Bowen (1979)



## **4-6 Analytical Results of Surface Water**





## Analytical Results of Surface Water

Date of sampling: August 15, 2006

No	River	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	EC
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		
SW01	Zletovska	<0.003	<0.001	<0.001	<0.001	<0.002	<0.0001	<0.002	0.002	0.03	0.20	7.80	36.4
SW02	Zletovska	<0.003	<0.001	<0.001	<0.001	<0.002	<0.0001	<0.002	0.003	0.02	0.13	8.04	32.7
SW03	Zletovska	<0.003	<0.001	<0.001	<0.001	<0.002	<0.0001	<0.002	0.006	0.003	0.05	8.15	19.2
SW04	Kiselica	<0.003	<0.001	<0.001	<0.001	0.003	<0.0001	<0.002	<0.001	0.13	0.99	7.76	154.1
SW05	Kiselica	0.005	<0.001	<0.001	<0.001	0.006	<0.0001	<0.002	0.009	0.51	9.20	7.24	79.4
SW06	Kiselica	0.011	0.009	<0.001	<0.001	0.063	<0.0001	<0.002	0.015	0.76	1.60	6.85	99.5
Standard		0.03	0.01	0.1	0.05	0.2	0.0002	0.05	0.01	0.1	0.05		

Standard: Taken from Environmental Standard for Water of Macedonia (As, Cd, Co, Cr, Hg, Ni, Pb, Zn, Mn) and guideline value of WHO (Cu)

    : Values exceeding standard



## **4-7 Chemical Composition of Core Samples of the Monitoring Borehole**



## Chemical Composition of Core Samples of the Monitoring Borehole

### Content Analysis

		River	Depth	Type of	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH
			(m)	Material	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
1	MBH 02-1	Zletovsca	0.80-1.30	Brown soil with partly orange part	45	10	17	21	120	<0.1	13	2,300	1,700	7,700	6.47
2	MBH 02-2	Zletovsca	1.50-2.00	Brown Soil	14	2.4	18	22	50	<0.1	17	150	400	1,600	7.21
3	MBH 03-1	Zletovsca	0.50-1.00	Brown soil	67	9.1	18	20	100	<0.1	7.7	1,300	1,200	6,300	7.06
4	MBH 03-2	Zletovsca	1.30-1.70	Orange brown tailings material	260	56	23	28	730	<0.1	6.0	9,300	6,600	46,000	6.68
5	MBH 03-3	Zletovsca	2.00-2.40	Light brown soil	92	16	33	60	230	<0.1	12	3,100	2,400	14,000	7.21
6	MBH 06-1	Zletovsca	0.10-0.75	Brown soil to orange brown soil	110	13	18	23	180	<0.1	8.8	1,900	1,400	8,600	5.97
7	MBH 06-2	Zletovsca	1.00-1.50	Brown soil	150	34	19	23	310	<0.1	11	3,100	5,200	17,000	7.05
8	MBH 12-1	Kiselica	0.00-0.50	Brown Soil	11	1.7	18	21	78	<0.1	18	130	240	1,200	7.22
9	MBH 12-2	Kiselica	0.50-1.10	Brown soil, partly orange spots	13	0.9	19	24	62	<0.1	18	130	210	1,400	7.34

: orange brown soil similar to the tailings materials

### Elution Analysis

		River	Depth	Type of	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH
			(m)	Material	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
1	MBH-02-1	Zletovsca	0.80-1.30	Brown soil with partly orange part	<0.003	0.093	0.026	<0.005	<0.005	<0.0001	0.041	0.44	11	69	6.47
2	MBH-02-2	Zletovsca	1.50-2.00	Brown Soil	<0.003	0.009	<0.005	<0.005	<0.005	0.0002	0.037	0.12	1.9	9.2	7.21
3	MBH-03-1	Zletovsca	0.50-1.00	Brown soil	<0.003	0.018	0.007	<0.005	<0.005	0.0001	0.009	0.041	2.5	41	7.06
4	MBH-03-2	Zletovsca	1.30-1.70	orange brown tailings material	<0.003	0.009	<0.005	<0.005	<0.005	0.0002	<0.005	0.001	1.5	10	6.68
5	MBH-03-3	Zletovsca	2.00-2.40	Light brown soil	<0.003	<0.001	0.006	<0.005	<0.005	0.0001	<0.005	0.001	0.088	2.9	7.21
6	MBH-06-1	Zletovsca	0.10-0.75	Brown soil to orange brown soil	<0.003	0.077	0.007	<0.005	0.064	0.0003	0.008	0.13	5.9	22	5.97
7	MBH-06-2	Zletovsca	1.00-1.50	Brown soil	<0.003	0.093	0.032	<0.005	<0.005	0.0002	0.016	0.052	6.3	38	7.05
8	MBH-12-1	Kiselica	0.00-0.50	Brown Soil	0.005	0.001	<0.005	0.021	0.074	0.0001	0.010	0.021	0.30	0.37	7.22
9	MBH-12-2	Kiselica	0.50-1.10	Brown soil, partly orange spots	<0.003	<0.001	<0.005	0.007	0.039	0.0001	0.006	0.016	0.085	0.14	7.34
Reference Value					0.03	0.01	0.1	0.05	0.2	0.0002	0.05	0.01	0.1	0.05	

Reference Value: Taken from Environmental Standard for Water of Macedonia (As, Cd, Co, Cr, Hg, Ni, Pb, Zn, Mn) and guideline value of WHO (Cu)

: Exceeding Reference Value

: orange brown soil similar to the tailings materials



## **4-8 Groundwater of the Monitoring Well**





## Analytical Results of Groundwater of the Monitoring Boreholes (1)

August 14, 2006

No	River	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	EC	Temp.
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		mS/m	C. Deg.
MBH01-01	Zletovska	0.009	0.009	0.013	0.001	0.064	<0.0001	0.025	0.38	0.74	5.00	7.20	37.3	19.5
MBH02-01	Zletovska	0.005	0.002	<0.001	<0.001	0.003	<0.0001	0.007	0.003	0.25	3.60	7.52	55.2	19.4
MBH03-01	Zletovska	0.005	0.17	0.014	0.002	0.047	<0.0001	0.054	0.029	16.00	65.0	6.57	132.2	20.7
MBH04-01	Zletovska	<0.003	<0.001	0.006	<0.001	<0.002	<0.0001	0.029	<0.001	0.01	7.20	7.45	41.2	17.3
MBH05-01	Zletovska	<0.003	<0.001	<0.001	<0.001	0.013	<0.0001	<0.002	0.18	0.38	0.28	7.72	49.0	18.6
MBH06-01	Zletovska	<0.003	0.003	<0.001	0.002	0.028	<0.0001	<0.002	0.17	1.30	1.30	6.40	110.2	20.2
MBH07-01	Kiselica	<0.003	<0.001	0.031	<0.001	0.004	<0.0001	0.096	0.004	0.40	33.0	7.30	238.0	15.6
MBH08-01	Kiselica	0.030	0.01	0.020	0.005	0.460	<0.0001	0.016	0.32	0.72	6.10	7.50	109.5	16.6
MBH09-01	Kiselica	<0.003	0.001	<0.001	<0.001	0.002	<0.0001	0.015	0.006	0.011	2.20	7.35	90.5	15.8
MBH10-01	Kiselica	0.012	0.001	0.012	<0.001	0.054	<0.0001	0.029	0.11	0.30	8.40	7.40	92.5	18.3
MBH11-01	Kiselica	0.006	<0.001	<0.001	<0.001	0.005	<0.0001	0.014	0.001	0.15	0.97	7.36	95.1	16.8
MBH12-01	Kiselica	0.006	<0.001	0.004	<0.001	0.028	<0.0001	0.007	0.15	0.30	2.30	7.50	84.2	15.4
Standard		0.03	0.01	0.1	0.05	0.2	0.0002	0.05	0.01	0.1	0.05			

September 25, 2006

No	River	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	EC	Temp.
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		mS/m	C. deg.
MBH01-02	Zletovska	<0.003	<0.001	<0.001	<0.001	0.12	<0.0001	0.004	0.043	0.10	0.36	7.01	21.1	18.5
MBH02-02	Zletovska	<0.003	0.005	0.005	0.018	0.15	<0.0001	0.018	0.72	0.53	4.20	7.28	69.3	17.5
MBH03-02	Zletovska	<0.003	0.110	0.015	0.052	0.25	0.0001	0.045	0.58	17.00	68.0	6.58	67.2	20.2
MBH04-02	Zletovska	<0.003	<0.001	0.040	<0.001	0.02	0.0001	0.120	<0.001	0.05	9.90	7.39	42.5	17.5
MBH05-02	Zletovska	<0.003	<0.001	0.002	<0.001	0.14	<0.0001	0.004	0.23	0.15	0.15	7.72	27.1	16.4
MBH06-02	Zletovska	<0.003	<0.001	<0.001	0.002	0.12	<0.0001	0.003	0.086	0.20	0.51	6.65	53.6	18.9
MBH07-02	Kiselica	<0.003	0.001	0.011	0.016	0.19	0.0001	0.046	0.13	0.36	14.0	7.11	255.0	15.6
MBH08-02	Kiselica	0.003	0.001	0.001	0.003	0.18	<0.0001	0.005	0.11	0.090	1.50	7.46	58.5	16.6
MBH09-02	Kiselica	0.004	0.001	0.007	0.016	0.20	0.0001	0.028	0.052	0.18	11.0	7.25	127.3	17.1
MBH10-02	Kiselica	<0.003	<0.001	0.006	0.002	0.15	<0.0001	0.016	0.17	0.11	2.30	7.38	82.5	19.1
MBH11-02	Kiselica	<0.003	<0.001	0.001	<0.001	0.02	<0.0001	0.008	<0.001	0.032	0.37	7.50	94.1	17.4
MBH12-02	Kiselica	<0.003	<0.001	0.002	0.001	0.13	<0.0001	0.005	0.053	0.09	0.47	7.50	72.2	17.0
Standard		0.03	0.01	0.1	0.05	0.2	0.0002	0.050	0.01	0.1	0.05			

October 26, 2006

No	River	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	EC	Temp.
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		mS/m	C. Deg.
MBH01-03	Zletovska	<0.003	<0.001	<0.001	<0.001	0.12	<0.0001	0.004	0.043	0.099	0.36	7.00	20.6	17.6
MBH02-03	Zletovska	<0.003	0.005	0.005	0.018	0.15	<0.0001	0.018	0.72	0.53	4.21	7.33	124.2	17.2
MBH03-03	Zletovska	<0.003	0.11	0.015	0.052	0.25	0.0001	0.045	0.58	16.83	68.1	6.49	63.6	18.3
MBH04-03	Zletovska	<0.003	<0.001	0.040	<0.001	0.02	0.0001	0.117	<0.001	0.052	9.89	7.59	27.2	15.4
MBH05-03	Zletovska	<0.003	<0.001	0.002	<0.001	0.14	<0.0001	0.004	0.23	0.15	0.15	7.76	56.2	15.3
MBH06-03	Zletovska	<0.003	<0.001	<0.001	0.002	0.12	<0.0001	0.003	0.086	0.20	0.51	6.50	81.0	16.1
MBH07-03	Kiselica	<0.003	0.001	0.011	0.016	0.19	0.0001	0.046	0.13	0.36	14.2	7.03	251.0	15.8
MBH08-03	Kiselica	0.003	0.001	0.001	0.003	0.18	<0.0001	0.005	0.11	0.090	1.49	7.44	123.8	15.5
MBH09-03	Kiselica	0.004	0.001	0.007	0.016	0.20	0.0001	0.028	0.052	0.18	10.6	7.16	138.8	15.3
MBH10-03	Kiselica	<0.003	<0.001	0.006	0.002	0.15	<0.0001	0.016	0.17	0.11	2.25	7.41	85.3	16.8
MBH11-03	Kiselica	<0.003	<0.001	0.001	<0.001	0.02	<0.0001	0.008	<0.001	0.032	0.37	7.43	93.9	16.2
MBH12-03	Kiselica	<0.003	<0.001	0.002	0.001	0.13	<0.0001	0.005	0.053	0.089	0.47	7.53	81.7	16.1
Standard		0.03	0.01	0.1	0.05	0.2	0.0002	0.05	0.01	0.1	0.05			

Standard: Taken from Environmental Standard for Water of Macedonia (As, Cd, Co, Cr, Hg, Ni, Pb, Zn, Mn) and guideline value of WHO (Cu)

: exceeding Standard Value

## Analytical Results of Groundwater of the Monitoring Boreholes (2)

November 24,2006

No	River	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	EC	Temp.
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		mS/m	C. Deg.
MBH01-04	Zletovska	<0.003	0.002	<0.001	<0.001	0.11	<0.0001	0.006	0.03	0.15	0.67	6.67	36.9	15.4
MBH02-04	Zletovska	<0.003	<0.001	<0.001	<0.001	0.04	<0.0001	0.006	<0.001	0.086	1.26	7.22	4.4	14.8
MBH03-04	Zletovska	<0.003	0.059	0.007	0.011	0.15	<0.0001	0.032	0.25	12.99	58.1	6.32	62.9	16.2
MBH04-04	Zletovska	<0.003	<0.001	0.004	<0.001	0.02	<0.0001	0.021	<0.001	0.011	3.70	7.18	59.4	14.4
MBH05-04	Zletovska	<0.003	<0.001	<0.001	<0.001	0.02	<0.0001	<0.002	<0.001	0.023	0.031	7.62	22.5	14.1
MBH06-04	Zletovska	<0.003	<0.001	<0.001	<0.001	0.14	<0.0001	0.005	0.043	0.14	0.22	6.24	66.6	14.4
MBH07-04	Kiselica	0.004	<0.001	0.007	0.007	0.17	<0.0001	0.036	0.063	0.23	11.0	7.03	256.0	14.9
MBH08-04	Kiselica	<0.003	<0.001	<0.001	0.001	0.10	<0.0001	0.006	0.12	0.068	1.17	7.48	90.6	11.9
MBH09-04	Kiselica	<0.003	<0.001	<0.001	<0.001	0.02	<0.0001	0.012	<0.001	0.026	7.79	7.16	110.2	12.8
MBH10-04	Kiselica	<0.003	<0.001	<0.001	<0.001	0.02	<0.0001	0.007	<0.001	0.013	0.074	7.27	98.6	15.2
MBH11-04	Kiselica	<0.003	<0.001	<0.001	<0.001	0.02	<0.0001	0.005	<0.001	0.006	0.036	7.17	45.1	13.8
MBH12-04	Kiselica	0.012	<0.001	<0.001	<0.001	0.03	<0.0001	0.005	0.001	0.025	0.063	7.37	66.9	14.6
Standard		0.03	0.01	0.1	0.05	0.2	0.0002	0.05	0.01	0.1	0.05			

December 15,2006

No	River	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	EC	Temp.
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		mS/m	C. Deg.
MBH01-05	Zletovska	<0.003	<0.001	0.002	0.002	0.16	<0.0001	0.008	0.091	0.14	0.60	6.82	40.4	12.9
MBH02-05	Zletovska	<0.003	0.001	<0.001	0.004	0.13	<0.0001	0.008	0.062	0.099	1.04	7.23	138.2	12.4
MBH03-05	Zletovska	0.012	0.055	0.008	0.018	0.18	<0.0001	0.037	0.33	15.90	63.8	6.32	129.8	13.4
MBH04-05	Zletovska	<0.003	<0.001	0.005	0.007	0.16	<0.0001	0.019	0.043	0.090	3.23	7.10	59.8	13.8
MBH05-05	Zletovska	<0.003	<0.001	0.001	<0.001	0.17	<0.0001	0.005	0.069	0.11	0.059	7.38	55.0	12.5
MBH06-05	Zletovska	<0.003	<0.001	<0.001	0.001	0.18	<0.0001	0.005	0.021	0.15	0.11	6.18	91.0	12.7
MBH07-05	Kiselica	<0.003	0.001	0.006	0.006	0.17	<0.0001	0.032	0.046	0.15	10.0	7.12	261.0	13.7
MBH08-05	Kiselica	<0.003	<0.001	<0.001	0.002	0.15	<0.0001	0.007	0.061	0.083	1.02	7.13	127.7	11.9
MBH09-05	Kiselica	<0.003	0.002	0.004	0.004	0.15	<0.0001	0.009	0.79	0.20	5.05	7.03	120.6	12.3
MBH10-05	Kiselica	0.011	0.001	0.003	0.003	0.25	<0.0001	0.011	0.073	0.13	0.82	7.10	98.4	13.2
MBH11-05	Kiselica	0.017	<0.001	<0.001	0.002	0.13	<0.0001	0.005	0.027	0.062	0.12	7.13	93.0	13
MBH12-05	Kiselica	0.011	<0.001	<0.001	0.002	0.15	<0.0001	0.006	0.025	0.100	0.21	7.29	81.4	13.7
Standard		0.03	0.01	0.1	0.05	0.2	0.0002	0.05	0.01	0.1	0.05			

January 26,2007

No	River	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn	pH	EC	Temp.
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l		mS/m	C. Deg.
MBH01-06	Zletovska	0.003	0.006	0.195	0.005	0.16	<0.0001	0.025	0.22	0.61	2.12	6.73	38.9	12.2
MBH02-06	Zletovska	0.003	0.005	0.172	0.015	0.17	<0.0001	0.015	0.55	0.56	3.82	7.23	140.5	12.2
MBH03-06	Zletovska	0.005	0.204	0.402	0.045	0.40	<0.0001	0.044	1.31	21.76	66.0	6.30	111.6	11.5
MBH04-06	Zletovska	0.003	0.001	0.032	0.005	0.03	<0.0001	0.027	0.032	0.37	4.73	7.19	63.5	13
MBH05-06	Zletovska	<0.003	0.004	0.027	0.003	0.03	<0.0001	0.003	0.17	0.39	0.75	7.46	53.1	13.4
MBH06-06	Zletovska	<0.003	0.004	0.063	0.006	0.06	<0.0001	0.006	0.11	0.88	0.61	6.34	68.2	11.6
MBH07-06	Kiselica	<0.003	0.002	0.074	0.007	0.07	<0.0001	0.040	0.094	0.62	9.71	7.12	266.0	12.2
MBH08-06	Kiselica	0.005	0.001	0.032	0.002	0.03	<0.0001	0.004	0.033	0.24	0.98	7.01	131.5	10.5
MBH09-06	Kiselica	<0.003	0.005	0.070	0.007	0.07	<0.0001	0.023	0.35	0.45	7.64	7.12	113.8	9.4
MBH10-06	Kiselica	0.003	<0.001	0.021	0.005	0.02	<0.0001	0.025	0.14	0.16	3.14	7.20	97.2	11.2
MBH11-06	Kiselica	0.059	<0.001	0.032	0.004	0.03	<0.0001	0.005	0.053	0.24	0.64	7.30	94.9	12.3
MBH12-06	Kiselica	<0.003	<0.001	0.034	0.002	0.03	<0.0001	0.017	0.79	0.26	0.68	7.47	59.2	12.2
Standard		0.03	0.01	0.1	0.05	0.2	0.0002	0.05	0.01	0.1	0.05			

Standard: Taken from Environmental Standard for Water of Macedonia (As, Cd, Co, Cr, Hg, Ni, Pb, Zn, Mn) and guideline value of WHO (Cu)

: exceeding Standard Value

## **4-9 Water of the Tailings Dam**



## Water of the Tailings Dam

No		As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GWOTD	Old Tailings dam	0.235	0.320	1.022	3.558	0.619	<0.0001	0.542	1.213	791	5,433
GWNTD	New Tailings dam	0.027	<0.001	0.007	<0.001	<0.002	<0.0001	<0.002	<0.001	0.370	14.00



**4-10 Analytical Results of Groundwater and Surface  
Water**







## Analytical Results of Groundwater and Surface Water (2)

(Groundwater Sampling)

#	Vil	Sample No.	Village/Town Name	GK_X(E)	GK_Y(N)	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
55	18	PI 1	Pisica	600936.22	4637463.46	0.012	0.0001	0.051	0.008	0.013	<0.0001	0.048	0.008	0.013	0.011
56		PI 2	Pisica	600767.62	4637458.19	0.009	0.0002	0.042	0.007	0.010	<0.0001	0.038	0.008	<0.01	0.013
57		PI 3	Pisica	601111.84	4637626.78	0.010	0.0002	0.038	0.010	0.009	<0.0001	0.034	0.010	<0.01	0.010
58	19	PL 1	Plesinci	594229.47	4651386.89	0.013	0.0003	0.030	0.018	0.006	<0.0001	0.042	0.011	<0.01	0.013
59		PL 2	Plesinci	594299.49	4651231.85	0.013	0.0002	0.068	0.015	0.015	<0.0001	0.047	0.017	0.025	0.011
60		PL 3	Plesinci	594437.53	4651065.80	0.015	0.0002	0.076	0.012	0.013	<0.0001	0.046	0.019	0.014	0.011
61		PL 4	Plesinci	594585.58	4651067.80	0.013	0.0001	0.066	0.013	0.010	<0.0001	0.038	0.016	0.012	0.008
62	20	PR 1	Probistip	598185.46	4652062.16	0.010	0.0002	0.043	<0.005	0.008	<0.0001	0.035	0.011	<0.01	0.010
63		PR 2	Probistip	597095.78	4652162.46	0.010	0.0003	0.040	<0.005	0.009	<0.0001	0.023	0.013	<0.01	0.011
64		PR 3	Probistip	598245.09	4650996.88	0.013	0.0002	0.068	0.007	0.013	<0.0001	0.028	0.015	0.033	0.012
65		PR 4	Probistip	598989.92	4650057.49	0.011	0.0003	0.043	0.008	0.010	<0.0001	0.034	0.009	<0.01	0.009
66	21	PS 1	Pestrisino	594496.90	4641128.18	0.009	0.0002	0.040	0.011	0.008	<0.0001	0.026	0.011	<0.01	0.009
67	22	PT 1	Petsino	596775.05	4646251.23	0.012	0.0004	0.033	0.012	0.007	<0.0001	0.031	0.009	<0.01	0.008
68		PT 2	Petsino	596853.58	4646287.05	0.015	0.0003	0.089	0.032	0.028	<0.0001	0.057	0.028	0.13	0.019
69		PT 3	Petsino	596925.23	4646492.35	0.013	0.0003	0.075	0.019	0.010	<0.0001	0.047	0.015	0.016	0.014
70	23	PZ 1	Puzderci	594370.19	4644931.17	0.009	0.0003	0.041	<0.005	0.007	<0.0001	0.031	0.017	<0.01	0.011
71		PZ 2	Puzderci	594062.56	4644421.39	0.009	0.0002	0.037	<0.005	0.009	<0.0001	0.022	0.012	<0.01	0.009
72		PZ 3	Puzderci	594443.70	4645001.81	0.010	0.0002	0.030	<0.005	0.007	<0.0001	0.027	0.014	<0.01	0.010
73		PZ 4	Puzderci	594457.07	4645072.46	0.011	0.0003	0.038	<0.005	0.010	<0.0001	0.018	0.011	<0.01	0.007
74	24	RT 1	Ratavica	601478.32	4648025.92	0.011	0.0003	0.031	0.007	0.011	<0.0001	0.033	0.010	<0.01	0.010
75		RT 2	Ratavica	601365.23	4647772.00	0.010	0.0002	0.035	0.008	0.011	<0.0001	0.037	0.009	<0.01	0.011
76		RT 3	Ratavica	601268.00	4647629.68	0.011	0.0003	0.048	0.013	0.012	<0.0001	0.034	0.013	0.012	0.010
77		RT 4	Ratavica	601308.06	4647583.22	0.014	0.0003	0.089	0.034	0.019	<0.0001	0.036	0.023	0.14	0.018
78	25	ST 1	Strisovci	591550.65	4647301.65	0.009	0.0002	0.041	0.013	0.010	<0.0001	0.025	0.018	<0.01	0.009
79		ST 2	Strisovci	591329.58	4647360.67	0.014	0.0003	0.061	0.022	0.018	<0.0001	0.049	0.022	0.044	0.013
80		ST 3	Strisovci	591182.54	4647553.73	0.013	0.0003	0.054	0.018	0.015	<0.0001	0.039	0.017	0.026	0.012
81		ST 4	Strisovci	591570.66	4647537.72	0.012	0.0001	0.034	0.010	0.009	<0.0001	0.017	0.011	<0.01	0.008
82	26	TL 1	Troolo	596129.41	4640590.89	0.013	0.0002	0.033	0.011	0.010	<0.0001	0.034	0.012	0.010	0.008
83		TL 2	Troolo	596411.27	4640449.22	0.009	0.0003	0.040	<0.005	0.008	<0.0001	0.031	0.009	<0.01	0.010
84		TL 3	Troolo	596251.90	4640434.46	0.009	0.0003	0.041	<0.005	0.008	<0.0001	0.034	0.009	<0.01	0.010
85	27	TR 1	Tripatanci	600517.03	4643695.07	0.009	0.0001	0.045	<0.005	0.009	<0.0001	0.029	0.013	<0.01	0.010
86		TR 2	Tripatanci	600583.56	4643862.41	0.011	0.0002	0.036	<0.005	0.009	<0.0001	0.041	0.012	<0.01	0.006
87		TR 3	Tripatanci	600539.21	4643957.17	0.010	0.0002	0.033	0.007	0.007	<0.0001	0.033	0.009	<0.01	0.009
88		TR 4	Tripatanci	600320.32	4643884.61	0.011	0.0003	0.067	0.011	0.010	<0.0001	0.028	0.017	0.025	0.011
89	28	ZL 1	Zletovo	603345.71	4650530.48	0.011	0.0002	0.043	<0.005	0.007	<0.0001	0.031	0.008	<0.01	0.011
90		ZL 2	Zletovo	603119.01	4650240.02	0.010	0.0002	0.046	<0.005	0.007	<0.0001	0.037	0.008	<0.01	0.011
91		ZL 3	Zletovo	603021.60	4649848.61	0.009	0.0002	0.051	<0.005	0.009	<0.0001	0.026	0.006	<0.01	0.009
92		ZL 4	Zletovo	602520.38	4649276.54	0.011	0.0004	0.052	0.010	0.013	<0.0001	0.037	0.008	0.035	0.009
93	29	ZR 1	Zarapinci	595445.91	4644880.75	0.011	0.0001	0.045	<0.005	0.006	<0.0001	0.031	0.009	<0.01	0.008
94		ZR 2	Zarapinci	595614.38	4644790.97	0.010	0.0001	0.038	<0.005	0.006	0.00018	0.034	0.010	<0.01	0.009
95		ZR 3	Zarapinci	595505.76	4644848.61	0.010	0.0002	0.032	<0.005	0.007	0.00011	0.036	0.011	<0.01	0.009

:Value exceeding the Standard of Drinking Water  
 :Value exceeding the Water Quality Standard  
 :Value exceeding the Water Quality Standard and the Standard for Drinking Water

### Analytical Results of Groundwater and Surface Water (3)

(River Sampling)

#	Sample No.	GK_X(E)	GK_Y(N)	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
96	RS 01	599649.12	4653562.56	0.020	0.0017	0.093	0.013	0.068	<0.0001	0.57	0.015	3.3	12
97	RS 02	596521.17	4652806.33	0.012	0.0013	0.087	0.010	0.18	<0.0001	0.77	0.033	2.9	5.8
98	RS 03	596489.16	4652784.32	0.009	0.0003	0.060	0.013	0.010	<0.0001	0.68	0.012	<0.01	0.007
99	RS 04	598373.73	4652510.24	0.012	0.0003	0.028	0.0068	0.009	<0.0001	0.79	0.012	<0.01	0.008
100	RS 05	597650.51	4651656.98	0.018	0.0003	0.16	0.022	0.032	<0.0001	0.77	0.020	5.8	21
101	RS 06	595460.84	4650134.51	0.039	0.0015	1.1	0.017	0.075	<0.0001	0.59	0.043	0.10	12
102	RS 07	595440.84	4650088.5	0.012	0.0002	0.13	0.009	0.009	<0.0001	0.57	0.019	<0.01	0.055
103	RS 08	602585.01	4649460.31	0.011	0.0002	0.062	0.007	0.007	<0.0001	0.51	0.011	<0.01	0.006
104	RS 09	602921.12	4649913.44	0.011	0.0002	0.031	0.008	0.009	<0.0001	0.49	0.008	<0.01	0.072
105	RS 10	598603.8	4648876.13	0.011	0.0003	0.054	0.010	0.010	<0.0001	0.44	0.058	<0.01	0.40
106	RS 11	603168.19	4649040.18	0.012	0.0002	0.061	0.011	0.010	<0.0001	0.45	0.007	<0.01	0.20
107	RS 12	597505.47	4649126.2	0.012	0.0001	0.14	<0.005	0.014	<0.0001	0.52	0.019	0.063	33
108	RS 13	597227.38	4648623.05	0.010	0.0001	0.29	0.018	0.014	<0.0001	0.64	0.019	<0.01	13
109	RS 14	601672.74	4648398.98	0.009	0.0007	0.11	0.017	0.009	<0.0001	0.59	0.016	1.4	2.6
110	RS 15	593493.24	4648069.88	0.008	0.0002	0.045	<0.005	0.008	<0.0001	0.50	0.011	<0.01	0.009
111	RS 16	601223.6	4647709.77	0.013	<0.0001	0.098	<0.005	0.007	<0.0001	0.66	0.012	<0.01	0.90
112	RS 17	598118.65	4647659.76	0.016	0.0007	0.28	0.021	0.012	<0.0001	0.48	0.016	0.11	21
113	RS 18	601924.81	4647392.68	0.011	0.0001	0.029	<0.005	0.005	<0.0001	0.49	0.009	<0.01	0.077
114	RS 19	593047.11	4646368.36	0.013	0.0004	0.043	0.018	0.006	<0.0001	0.57	0.010	<0.01	0.011
115	RS 20	594693.61	4645346.05	0.010	0.0002	0.042	0.012	0.006	<0.0001	0.61	0.016	<0.01	0.009
116	RS 21	599739.15	4645091.97	0.011	0.0004	0.12	0.014	0.013	<0.0001	0.59	0.019	<0.01	0.045
117	RS 22	595710.92	4644977.94	0.013	<0.0001	0.18	0.017	0.013	<0.0001	0.50	0.027	<0.01	1.9
118	RS 23	600295.31	4645008.95	0.012	0.0002	0.016	0.011	0.006	<0.0001	0.58	0.008	<0.01	0.062
119	RS 24	599511.08	4643478.48	0.010	0.0002	0.059	0.009	0.006	<0.0001	0.50	0.012	<0.01	0.064
120	RS 25	595683.91	4643019.34	0.011	0.0001	0.068	0.007	0.006	<0.0001	0.63	0.017	<0.01	0.056
121	RS 26	600531.39	4643487.49	0.012	0.0003	0.043	0.008	0.008	<0.0001	0.57	0.014	<0.01	0.049
122	RS 27	599771.15	4640697.64	0.013	0.0002	0.034	0.009	0.007	<0.0001	0.55	0.010	<0.01	0.051
123	RS 28	601060.55	4640678.63	0.014	<0.0001	0.049	<0.005	0.006	<0.0001	0.61	0.010	<0.01	0.061
124	RS 29	599234.99	4639556.29	0.014	0.0003	0.044	<0.005	0.007	<0.0001	0.70	0.013	<0.01	0.050
125	RS 30	601786.77	4638159.86	0.011	0.0003	0.015	<0.005	0.009	<0.0001	0.64	0.007	0.015	0.080
126	RS 31	599541.08	4637261.59	0.015	0.0003	0.008	<0.005	0.005	<0.0001	0.54	0.008	<0.01	0.045

:Value exceeding the Water Quality Standard  
 :Value exceeding the Water Quality Standard and the Standard for Drinking Water



## **4-11 Analytical Results of Crop Samples**



### Analytical Results of Crop Samples - Wheat (1)

No.	Heavy metals		As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
	Location		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	Standard and Reference Value *1		1	0.2	-	-	-	50	-	0.2	-	-
1	WH- B-20	<0.25	<0.005	<0.05	0.20	2.2	<0.4	<0.25	0.18	37	36	
2	WH- B-23	<0.25	<0.005	0.23	0.51	2.5	<0.4	<0.25	0.22	51	36	
3	WH- B-25	<0.25	<0.005	0.35	0.99	2.9	<0.4	<0.25	0.38	50	37	
4	WH- C-17	<0.25	<0.005	0.11	0.42	1.5	<0.4	0.42	0.24	46	40	
5	WH- D-16	<0.25	<0.005	<0.05	0.33	2.8	<0.4	<0.25	0.21	40	40	
6	WH- E-14	<0.25	<0.005	<0.05	0.13	2.4	<0.4	0.88	0.13	41	39	
7	WH- F-16	<0.25	<0.005	0.39	<0.05	2.7	10	0.51	<0.05	57	32	
8	WH- G-13	<0.25	<0.005	0.10	0.37	1.6	<0.4	0.29	1.0	48	43	
9	WH- G-15	<0.25	<0.005	<0.05	<0.05	2.7	<0.4	<0.25	0.32	47	39	
10	WH- G-28	0.67	<0.005	0.17	0.35	2.2	<0.4	0.53	0.79	40	37	
11	WH- G-30	0.49	<0.005	0.19	0.60	1.9	<0.4	0.53	0.73	33	39	
12	WH- H-11	<0.25	<0.005	0.15	0.20	1.6	<0.4	0.28	0.15	40	41	
13	WH- H-16	<0.25	0.006	0.13	0.25	2.0	<0.4	0.35	0.36	39	42	
14	WH- H-29	<0.25	<0.005	0.17	0.31	2.4	<0.4	0.41	0.31	40	38	
15	WH- I-13	<0.25	<0.005	0.09	0.31	4.0	6.7	0.49	0.14	48	34	
16	WH- I-26	0.28	0.007	<0.05	0.41	3.9	6.1	0.32	0.28	45	35	
17	WH- I-28	<0.25	0.005	<0.05	0.40	3.5	<0.4	0.38	0.19	43	36	
18	WH- I-35	<0.25	<0.005	<0.05	<0.05	2.3	<0.4	<0.25	<0.05	39	35	
19	WH- J-9	0.61	<0.005	0.09	0.71	2.1	<0.4	0.48	0.58	45	38	
20	WH- J-11	0.65	<0.005	0.14	0.28	1.9	<0.4	0.58	0.15	39	38	
21	WH- J-15	0.26	<0.005	0.14	1.0	1.6	<0.4	<0.25	<0.05	40	39	
22	WH- J-20	0.71	0.007	0.21	0.23	3.4	<0.4	33	0.74	68	40	
23	WH- J-26	<0.25	<0.005	0.83	0.13	1.4	<0.4	47	1.2	70	40	
24	WH- K-11	0.27	<0.005	0.29	0.29	1.4	23	0.72	0.16	33	39	
25	WH- K-23	<0.25	<0.005	0.26	0.19	1.8	<0.4	0.61	1.5	30	40	
26	WH- K-24	0.33	0.006	0.31	0.52	1.8	4.8	1.6	1.3	39	39	
27	WH- K-25	<0.25	<0.005	0.28	0.63	2.0	5.4	0.94	1.3	40	37	
28	WH- K-34	<0.25	<0.005	0.09	1.0	2.2	5.3	0.31	<0.05	41	41	
29	WH- L-10	0.38	<0.005	<0.05	<0.05	2.2	<0.4	<0.25	<0.05	52	34	
30	WH- L-19	<0.25	<0.005	<0.05	0.22	2.0	<0.4	0.96	<0.05	40	35	
31	WH- L-21	<0.25	0.007	<0.05	0.25	2.3	<0.4	0.77	<0.05	43	33	
32	WH- L-24	<0.25	<0.005	0.08	0.24	2.5	<0.4	0.33	0.07	57	35	
33	WH- M-8	0.29	0.006	<0.05	0.13	1.5	<0.4	<0.25	0.25	36	38	
34	WH- M-11	<0.25	<0.005	<0.05	0.076	1.0	<0.4	<0.25	0.32	33	38	
35	WH- M-18	<0.25	<0.005	<0.05	0.38	1.8	<0.4	0.53	1.92	40	40	
36	WH- M-20	<0.25	<0.005	0.19	0.63	2.4	<0.4	0.31	<0.05	41	44	
37	WH- M-22	<0.25	<0.005	0.18	0.62	1.8	<0.4	0.46	<0.05	39	43	
38	WH- N-7	0.28	<0.005	0.19	0.39	2.4	<0.4	0.59	0.2	40	42	
39	WH- N-8	0.29	<0.005	0.21	0.33	2.4	<0.4	0.73	0.18	42	41	
40	WH- N-23	0.41	<0.005	<0.05	0.19	2.3	<0.4	<0.25	<0.05	46	42	
41	WH- O-5	0.37	<0.005	<0.05	0.13	1.8	<0.4	<0.25	<0.05	31	39	
42	WH- O-9	0.43	<0.005	<0.05	0.20	2.2	<0.4	0.5	<0.05	36	38	
43	WH- O-19	0.59	0.006	<0.05	0.38	2.4	6.2	1.3	<0.05	38	39	
44	WH- O-21	0.57	<0.005	<0.05	0.40	2.5	4.1	1.2	<0.05	39	40	
45	WH- O-22	0.37	<0.005	<0.05	0.59	2.5	<0.4	0.27	<0.05	38	42	

\*1: Cd and Pb: Maximum Levels of Heavy Metals in Foodstuffs (Macedonia, 2005)

Hg and As: Maximum Allowed Concentration (Former Yugoslavia, 1992)

## Analytical Results of Crop Samples - Wheat (2)

No.	Heavy metals		As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
	Location		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	Standard and Reference Value *1		1	0.1	-	-		50	-	0.2	-	-
46	WH- P-4		<0.25	<0.005	<0.05	<0.05	3.2	<0.4	<0.25	<0.05	32	40
47	WH- P-7		<0.25	<0.005	0.13	0.35	1.3	<0.4	0.93	<0.05	35	40
48	WH- P-18		<0.25	<0.005	0.08	0.42	2.7	<0.4	0.59	0.29	37	40
49	WH- Q-5		<0.25	<0.005	0.44	0.79	2.7	<0.4	3.1	<0.05	64	40
50	WH- Q-24		0.28	<0.005	0.31	0.61	2.8	4.9	2.0	0.21	58	37
51	WH- Q-30		0.31	<0.005	0.35	0.72	2.9	4.4	2.4	0.19	55	37
52	WH- R-3		<0.25	0.016	0.20	0.56	2.8	<0.4	42	<0.05	80	38
53	WH- R-26		<0.25	0.008	0.35	0.59	3.1	5.2	3.6	0.84	78	37
54	WH- S-2		<0.25	<0.005	<0.05	0.63	3.7	<0.4	<0.25	<0.05	40	40
55	WH- S-5		<0.25	0.009	0.18	<0.05	2.0	5.5	<0.25	<0.05	61	38
56	WH- S-9		<0.25	<0.005	<0.05	0.50	2.9	<0.4	<0.25	<0.05	63	41
57	WH- S-13		<0.25	0.006	<0.05	0.57	2.7	4.3	0.93	0.37	60	40
58	WH- S-15		0.46	0.008	<0.05	0.48	2.6	<0.4	2.2	0.28	58	39
59	WH- S-18		0.58	0.009	0.17	0.39	2.1	<0.4	3.3	<0.05	46	36
60	WH- S-19		0.49	<0.005	<0.05	0.35	1.9	<0.4	0.28	<0.05	43	35
61	WH- S-28		0.39	0.006	<0.05	0.36	2.3	5.5	0.98	0.19	38	38
62	WH- T-1		0.31	<0.005	<0.05	<0.05	1.8	<0.4	<0.25	<0.05	37	40
63	WH- T-2		0.46	<0.005	<0.05	0.19	3.1	<0.4	<0.25	<0.05	38	40
64	WH- T-4		<0.25	<0.005	<0.05	0.081	1.7	<0.4	<0.25	<0.05	58	39
65	WH- T-6		0.28	0.007	0.06	0.20	1.9	5.2	<0.25	<0.05	50	40
66	WH- T-18		0.66	0.011	0.09	0.21	3.2	<0.4	2.3	<0.05	62	42
67	WH- T-20		0.30	0.039	0.34	<0.05	4.3	<0.4	<0.25	0.76	64	37
68	WH- U-5		0.56	<0.005	0.24	0.15	2.4	<0.4	1.4	<0.05	55	39
69	WH- U-7		<0.25	0.014	0.15	0.30	2.3	<0.4	<0.25	<0.05	48	37
70	WH- U-20		<0.25	0.008	0.32	0.74	2.1	<0.4	1.9	<0.05	43	38
71	WH- U-21		<0.25	0.007	0.35	0.81	2.4	<0.4	1.1	<0.05	42	38
72	WH- U23/I		<0.25	0.022	0.85	1.7	2.1	<0.4	0.34	<0.05	41	39
73	WH- U-29		<0.25	<0.005	0.17	<0.05	2.5	<0.4	39	<0.05	60	38
74	WH- V-1		<0.25	0.006	<0.05	<0.05	2.2	<0.4	<0.25	<0.05	60	37
75	WH- V-11		<0.25	<0.005	0.07	0.69	2.0	<0.4	0.33	<0.05	41	40
76	WH- V-25		<0.25	<0.005	0.32	0.65	3.0	<0.4	0.48	<0.05	91	40
77	WH- W-4		<0.25	<0.005	<0.05	<0.05	2.1	<0.4	<0.25	1.1	42	39
78	WH- W-6		<0.25	<0.005	0.44	0.54	2.6	<0.4	32	0.89	50	37
79	WH- W-33		<0.25	<0.005	<0.05	0.44	3.0	<0.4	<0.25	0.85	55	38
80	WH- X-27		<0.25	0.008	0.28	0.68	2.0	<0.4	0.61	<0.05	56	38
81	WH- X-28		0.44	<0.005	0.26	<0.05	1.5	<0.4	<0.25	<0.05	51	39
82	WH- X-30		<0.25	<0.005	0.22	0.10	1.5	<0.4	0.45	<0.05	52	38
83	WH- X-32		0.94	<0.005	0.19	0.30	1.5	<0.4	0.32	1.3	41	38
84	WH- Y-28		0.56	0.031	<0.05	0.21	3.2	<0.4	1.1	<0.05	55	37

\*1: Cd and Pb: Maximum Levels of Heavy Metals in Foodstuffs (Macedonia, 2005)  
Hg and As: Maximum Allowed Concentration (Former Yugoslavia, 1992)



### Analytical Results of Crop Samples - Corn

No.	Heavy metals	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
	Location	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg		mg/kg	mg/kg	mg/kg
	Standard and Reference Value *1	1	0.2	-	-		50	-	0.2	-	-
1	CS- P22-2	<0.25	<0.005	<0.05	0.14	2.6	<0.4	<0.25	0.19	23	40
2	CS- Q19-4	<0.25	<0.005	0.18	0.21	2.8	<0.4	0.89	0.26	18	40
3	CS- Q24-2	<0.25	<0.005	0.24	0.16	3.0	<0.4	0.58	0.31	21	21
4	CS- Q29-4	<0.25	<0.005	0.21	0.20	3.1	<0.4	0.62	0.28	23	21
5	CS- S05-2	<0.25	<0.005	<0.05	0.19	2.2	<0.4	0.41	0.14	24	19
6	CS- S06-2	<0.25	<0.005	<0.05	0.20	2.4	<0.4	0.55	0.17	23	19
7	CS- S10-4	<0.25	<0.005	<0.05	0.18	2.6	<0.4	0.39	0.23	25	21
8	CS- S15-2	<0.25	0.006	<0.05	0.15	3.0	4.9	0.42	0.31	25	20
9	CS- S18-4	<0.25	0.008	<0.05	0.16	3.0	<0.4	0.49	0.24	22	22
10	CS- T26-3	<0.25	0.007	0.21	0.097	2.2	<0.4	<0.25	<0.05	20	22
11	CS- U21-1	<0.25	0.009	<0.05	0.14	3.2	<0.4	0.61	<0.05	21	20
12	CS- V03-1	<0.25	<0.005	<0.05	0.21	3.1	<0.4	0.93	<0.05	25	21
13	CS- V24-3	<0.25	<0.005	<0.05	0.27	2.8	<0.4	1.1	<0.05	24	21
14	CS- V28-1	<0.25	<0.005	0.26	0.25	2.6	<0.4	0.85	<0.05	25	20
15	CS- W27-4	<0.25	<0.005	<0.05	0.23	3.2	<0.4	1.1	0.31	21	21
16	CS- Y32-1	<0.25	<0.005	<0.05	0.28	4.2	<0.4	0.87	0.37	22	20

\*1: Cd and Pb: Maximum Levels of Heavy Metals in Foodstuffs (Macedonia, 2005)  
Hg and As: Maximum Allowed Concentration (Former Yugoslavia, 1992)

### Analytical Results of Crop Samples - Rice

No.	Heavy metals	As	Cd	Co	Cr	Cu	Hg	Ni	Pb	Zn	Mn
	Location	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	Standard and Reference Value *1	1	0.2	-	-		50	-	0.2	-	-
1	RS- U4-4	0.38	0.12	0.63	0.18	6.3	<0.4	0.85	0.32	28	22
2	RS- V3-2	0.42	0.16	0.72	0.25	3.6	<0.4	0.91	0.25	37	24
3	RS- V3-4	0.33	0.14	0.54	0.16	5.3	<0.4	0.72	0.18	29	26
4	RS- W1-3	0.35	0.11	0.51	0.21	4.2	<0.4	0.81	0.26	23	22

\*1: Cd and Pb: Maximum Levels of Heavy Metals in Foodstuffs (Macedonia, 2005)  
Hg and As: Maximum Allowed Concentration (Former Yugoslavia, 1992)



**4-12 Analytical Results of Wheat and Soil Samples of  
the Additional survey**



## Analytical Results of Wheat Samples (2007)

		Pb, mg/kg	Cd, mg/kg	As, mg/kg
1	B20	0.16	0.0025	0.125
2	B23	0.18	0.0025	0.125
3	B25	0.21	0.0025	0.125
4	D16	0.17	0.0025	0.125
5	D20	0.14	0.0025	0.125
6	F14	0.025	0.0025	0.125
7	G11	0.22	0.0025	0.125
8	G13	0.36	0.0025	0.125
9	G15	0.18	0.0025	0.125
10	G30	0.13	0.0025	0.283
11	H16	0.11	0.007	0.125
12	H29	0.09	0.0025	0.125
13	I14	0.07	0.0025	0.125
14	I26	0.08	0.006	0.125
15	I35	0.025	0.0025	0.125
16	J09	0.12	0.0025	0.30
17	J11	0.025	0.0025	0.29
18	J20	0.17	0.006	0.27
19	J26	0.29	0.0025	0.125
20	K23	0.26	0.0025	0.125
21	K25	0.21	0.0025	0.125
22	L08	0.025	0.0025	0.125
23	L21	0.025	0.005	0.125
24	M08	0.11	0.006	0.262
25	M11	0.17	0.0025	0.125
26	M18	0.21	0.0025	0.125
27	P05	0.025	0.0025	0.125
28	P08	0.025	0.0025	0.125
29	Q24	0.025	0.0025	0.125
30	R02	0.025	0.006	0.125
31	R26	0.025	0.006	0.125
32	S26	0.025	0.005	0.29
Standard and Reference Values *		0.2	0.2	1

\*Cd and Pb: Maximum Levels of Heavy Metals in Foodstuffs (Macedonia, 2005)

As: Maximum Allowed Concentration (Former Yugoslavia, 1992)

: Value Exceeding Standard Value of Pb

## Analytical Results of Soil Samples (2007)

No		Sample No.	Pb		Cd		As		Color
			Content	Elution	Content	Elution	Content	Elution	
			mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	
1	07WH	B 20	33	0.0042	0.25	<0.0001	7.3	0.004	7,5 YR; 2/1
2	07WH	B23	38	0.0052	0.15	0.0002	<1	0.005	7,5 YR; 3/3
3	07WH	B 25	31	0.0032	0.52	<0.0001	3.9	0.003	10 YR; 3/4
4	07WH	D 16	42	0.0050	0.56	<0.0001	5.9	<0.001	10 YR; 2/3
5	07WH	D 20	39	0.0038	0.24	<0.0001	5.3	0.001	2,5 Y; 3/3
6	07WH	F 14	28	0.0066	0.55	<0.0001	6.0	0.001	10 YR; 3/3
7	07WH	G 11	41	0.0048	0.43	<0.0001	15	0.001	7,5 YR; 3/2
8	07WH	G 13	21	0.0029	0.51	<0.0001	9.2	0.003	10 YR; 3/2
9	07WH	G 15	27	0.0040	0.57	0.0002	1.0	<0.001	2,5 Y; 4/4
10	07WH	G 30	38	0.0074	0.27	0.0002	10	<0.001	2,5 Y; 4/4
11	07WH	H 16	31	0.0043	0.56	0.0002	11	0.003	7,5 YR; 3/3
12	07WH	H 29	44	0.0068	0.38	0.0001	20	0.005	2,5 Y; 3/2
13	07WH	I 14	34	0.0056	0.48	0.0002	7.4	0.004	7,5 YR; 2/2
14	07WH	I 26	40	0.012	0.6	0.0003	7.2	0.003	5 YR; 2/1
15	07WH	I 35	43	0.0052	0.31	0.0002	6.0	0.003	2,5 Y; 4/6
16	07WH	J 09	29	0.0033	0.53	0.0002	5.2	0.002	2,5 Y; 4/3
17	07WH	J 11	33	0.0065	0.62	0.0002	4.5	<0.001	2,5 Y; 4/3
18	07WH	J 20	37	0.0044	0.53	0.0002	2.5	<0.001	7,5 YR; 2/3
19	07WH	J 26	80	0.0057	0.39	0.0001	22	0.004	10 YR; 3/2
20	07WH	K 23	44	0.0052	0.43	0.0001	21	0.004	7,5 YR; 2/2
21	07WH	K 25	48	0.016	0.44	0.0003	<1	0.008	7,5 YR; 2/2
22	07WH	L 08	47	0.0042	0.62	0.0002	9.3	0.003	10 YR; 3/2
23	07WH	L 21	49	0.0044	0.67	0.0001	9.7	0.002	7,5 YR; 2/2
24	07WH	M 08	31	0.0044	0.54	0.0001	6.9	0.001	10 YR; 4/4
25	07WH	M 11	31	0.020	0.34	0.0003	7.1	<0.001	2,5 Y; 3/2
26	07WH	M 18	53	0.0054	0.43	0.0002	6.6	0.001	7,5 YR; 2/3
27	07WH	P 05	56	0.016	0.42	0.0002	<1	0.009	10 YR; 2/2
28	07WH	P 08	32	0.0045	0.24	0.0001	20	0.003	2,5 Y; 4/2
29	07WH	Q 24	144	0.0038	0.42	0.0002	21	0.004	YR(k)10K(l); 3/2
30	07WH	R 02	42	0.020	0.52	0.0004	11	0.003	10 YR; 2/1
31	07WH	R 26	58	0.012	0.37	0.0003	28	0.004	10 R; 2/1
32	07WH	S 26	49	0.012	0.21	0.0003	22	0.006	5 YR; 4/2

: Values Exceeding Reference Value

## **Data 5 Drilling Core Description**

**Data 5-1 Tailing Boreholes Description**

**Data 5-2 5m Soil Drilling**

**Data 5-3 Monitoring Drilling Hole**





**Data 5-1 Tailing Boreholes Description**





CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
X = 4 650357.96  
Y = 7 598187.37  
Elevation:

Z = 532.48m

Scale: 1:200

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

**TBH – 1**

**Project:** Study on capacity development for soil contamination management

**Location:** Old tailings

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks	
520	1.10			No presence	Dark brown, yellowish to gray sandy silt, confined		
	3.65				Light gray to yellowish sandy silt, well confined		
515							
510							
505							
500							
	23.45						
	23.95					Dark gray to black silty, sandy high plastic clay	
495	25.40					Light brown to yellowish silty clayey sand	
	27.00					Clayey white andesitic tuff	
	28.30				Greenish gray marl		
490	29.80				Gray to white andesitic tuff		
485							
	40.00						
480							
					Dark to light gray marl		



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
X = 4 647861.20  
Y = 7 598218.18  
Elevation:

Z = 484.00m  
Scale:

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

**TBH – 2**

**Project:** Study on capacity development for soil contamination management

**Location:** New tailing

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks
530				No presence		
	3.20				Light gray, brown to dark brown sandy silt, unconfined	
	5.00				Light gray to white sandy silt	
525	6.35				Yellowish gray to brown sandy silt	
520					Light brown to gray sandy silt	
	14.00					
515						
				Light gray sandy silt		
510						
	23.50					
505					Yellowish brown to light gray sandy silt	
	27.30					
	28.00				Red silty, sandy, poorly clayey pebbles	
500						

**Data 5-2 5m Soil Drilling**





CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 638 734.66  
Y = 7 600 476.65  
Elevation:  
Z = 333.59m  
Scale:  
1:50

**GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE**

**T - 3**

**Project:** Study on capacity development for soil contamination management

**Location:** North from v. Pisica

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
333						
	1.85				Well compacted, fine sandy - clayey silt	
331	2.70			2.80 Oct. 2006	Brown-redish silty clay	
329	5.00				Poorly clayey, sandy gravel	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 639 407.83  
Y = 7 599 527.62  
Elevation:  
Z = 351.63m  
Scale:  
1:50

**GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE**

**Q - 4**

**Project:** Study on capacity development for soil contamination management

**Location:** West from v. Gujuovci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
351						
	1.00				Silty sandy clay	
349					Silty sand mixed with small pieces and cobbles, incoherent	
347	5.00					

Skopje, December 2006

Mapping by: *D. Petroski*

Draftsman: *D. Petroski*

Checked by: *Z. Iljovski*

Appendix



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 643 517.91  
Y = 7 599 858.21  
Elevation:  
Z = 377.23m  
Scale:  
1:50

**GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE  
PF 5 - 1**

Project: Study on capacity development for soil contamination management

Location: v. Buciste

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
377	0.80				Well compacted, dark brown silt	
375	2.70				Well compacted silt mixed with small pieces and cobbles	
373	5.00				Coarse, poorly clayey, sand with gravel and cobbles	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 643 553.08  
Y = 7 600 089.65  
Elevation:  
Z = 372.73m  
Scale:  
1:50

**GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE  
PF 5 - 2**

Project: Study on capacity development for soil contamination management

Location: Between v. Buciste and v. Tripatanci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
351						
349						
347	5.00				Alluvial terrace of poorly clayey silty sand mixed with gravel and cobbles	

Skopje, December 2006

Mapping by: *D. Petroski*

Draftsman: *D. Petroski*

Checked by: *Z. Ilijovski*

Appendix





CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
X = 4 643 626.51  
Y = 7 600 265.94  
Elevation:  
Z = 372.65m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE

PF 5 – 3

Project: Study on capacity development for soil contamination management

Location: Between v. Buciste and v. Tripatanci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
372	0.30				Humus	
370	3.00				Poorly clayey silt and sand mixed with gravel	
368	5.00				Coarse sand and gravel with cobbles	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
X = 4 643 447.37  
Y = 7 600 375.85  
Elevation:  
Z = 372.48m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

PF 5 – 4

Project: Study on capacity development for soil contamination management

Location: Between v. Buciste and v. Tripatanci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
372	2.10				Poorly clayey silty sand mixed with rear pieces of rocks	
368	5.00				Gravel and sand mixed with cobbles	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 643 584.73  
Y = 7 600 163.59  
Elevation:  
Z = 372.38m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE  
PF 5 - 5

Project: Study on capacity development for soil contamination management

Location: Between v. Buciste and v. Tripatanci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
372	0.80				Well compacted sandy silt	
370					Silty sand mixed with gravel	
368	5.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 641 420.74  
Y = 7 597 937.46  
Elevation:  
Z = 397.11m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE  
M 10

Project: Study on capacity development for soil contamination management

Location: Southwest from v. Lezovo

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
397	1.20				Dark brown silty clay	
395					Light brown clayey silty sand mixed with rear fragments of andesitic tuff	
393	4.10				Gray-greenish clayey silty sand mixed with rear fragments of andesitic tuff	
	5.00					

je, December 2006

Mapping by: D. Petroski

Draftsman: D. Petroski

Checked by: Z. Iljovski

Appendix



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 641 420.18  
Y = 7 596 954.87  
Elevation:  
Z = 436.40m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE

K 10

Project: Study on capacity development for soil contamination management

Location: Northeast from v. Troolo

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
436	0.80				Dark brown silty clay	
434					Yellowish-brown fine grained silty sand	
432	5.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 641 774.35  
Y = 7 595 870.78  
Elevation:  
Z = 479.56m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

H 11

Project: Study on capacity development for soil contamination management

Location: Northwest from v. Troolo

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
479	0.30				Humus	
477					Dark gray to black silty clay	
475	3.40				Clayey marlstone	
	5.00					

opje, December 2006

Mapping by: D. Petrovski

Draftsman: D. Petrovski

Checked by: Z. Iljovski

Appendix



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 643 706.60  
Y = 7 595 773.59  
Elevation:  
Z = 410.56m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE

H 15

Project: Study on capacity development for soil contamination management

Location: South from v. Zarapinci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
410						
	2.10				Black, highly plastic silty clay	
					Greenish-gray, silty- sandy clay	
406						
	5.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 644 873.59  
Y = 7 594 174.57  
Elevation:  
Z = 472.86m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

D 18

Project: Study on capacity development for soil contamination management

Location: Southwest from v. Puzderci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
473						
	0.30				Humus	
	0.70				Dark brown silty sandy clay	
					Well compacted fine grained sandy mixed with rear pieces of rocks	
471						
	3.40					
					Weathered volcanic bedrock	
469						
	5.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 643 326.62  
Y = 7 594 600.32  
Elevation:  
Z = 464.65m  
Scale:  
1:50

**GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE**

**E 14**

**Project:** Study on capacity development for soil contamination management

**Location:** South from v. Puzderci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
465						
463						
461						
	5.00				Greenish-brown, well compacted, fine grained sandy silt	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 639 839.61  
Y = 7 601 153.54  
Elevation:  
Z = 340.29m  
Scale:  
1:50

**GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE**

**U 6**

**Project:** Study on capacity development for soil contamination management

**Location:** South from v. Lepepelci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
340						
	1.40				Dark brown, highly plastic silty clay	
338	2.30				Incoherent clayey sand mixed with gravel	
336						
	5.00				Fine to medium grained sand and gravel, well compacted	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 640 493.33  
Y = 7 599 976.33  
Elevation:  
Z = 347.84m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE  
PF 6 - 1

Project: Study on capacity development for soil contamination management

Location: North from v. Gujnovci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
348	0.50				Dark-brown silty clay	
346					Poorly clayey, silty sand mixed with pieces of various rocks	
344	5.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 640 377.33  
Y = 7 600 142.18  
Elevation:  
Z = 345.26m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE  
PF 6 - 2

Project: Study on capacity development for soil contamination management

Location: North east from v. Gujnovci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
345	0.80				Dark brown, highly plastic clay	
343					Fine grained silty sand mixed with gravel and cobbles	
341	5.00					

Skopje, December 2006

Mapping by: *D. Petroski*

Draftsman: *D. Petroski*

Checked by: *Z. Ilijovski*

Appendix



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 640 487.75  
Y = 7 600 371.11  
Elevation:  
Z = 347.35m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE

PF 6 - 3

Project: Study on capacity development for soil contamination management

Location: Northeast from v. Gujaovci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
347	0.60				Dark-brown silty clay	
345	2.10				Fine grained silty sand mixed with pieces of gravel	
343	5.00				Mixture of sand and gravel with cobbles	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 640 523.34  
Y = 7 600 555.54  
Elevation:  
Z = 344.9m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

PF 6 - 4

Project: Study on capacity development for soil contamination management

Location: West from v. Lepepelci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
345	1.40				Fine grained sand mixed with gravel	
343					Gravel and sand mixed with cobbles	
341	5.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 640 581.29  
Y = 7 600 696.55  
Elevation:  
Z = 344.31m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE  
PF 6 - 5

Project: Study on capacity development for soil contamination management

Location: West from v. Lepepelci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
344	0.80				Dark-brown silty clay	
342					Fine grained silty sand mixed with pieces of gravel	
340	5.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 640 655.27  
Y = 7 600 795.05  
Elevation:  
Z = 347.68m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE  
PF 6 - 6

Project: Study on capacity development for soil contamination management

Location: West from v. Lepepelci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
348						
346						
346	5.00					

je, December 2006

Mapping by: D. Petroski

Draftsman: D. Petroski

Checked by: Z. Iljovski

Appendix





CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 646 105.09  
Y = 7 599 174.47  
Elevation:  
Z = 430.58m  
Scale:  
1:50

**GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE**

**PF 3 - 5**

Project: Study on capacity development for soil contamination management

Location: South from v. Neokazi

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
344	1.30				Silty, sandy clay mixed with small pieces of rocks	
342					Silty sand, poorly clayey mixed with pieces of rocks	
340	5.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 646 029.16  
Y = 7 599 040.95  
Elevation:  
Z = 407.55m  
Scale:  
1:50

**GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE**

**PF 3 - 4**

Project: Study on capacity development for soil contamination management

Location: South from v. Neokazi

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
408	0.80				Sandy clay with rare fragments of rocks	
406					Sandy gravel, poorly clayey mixed with cobbles	
404	5.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
X = 4 645 950.44  
Y = 7 598 942.15  
Elevation:  
Z = 410.76m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE

PF 3 – 3

Project: Study on capacity development for soil contamination management

Location: South from v. Neokazi

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
411	0.50				Brown, silty, sandy clay	
409					Clayey silty sand	
407	5.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
X = 4 645 899.07  
Y = 7 598 891.07  
Elevation:  
Z = 416.07m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

PF 3 – 2

Project: Study on capacity development for soil contamination management

Location: South from v. Neokazi

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
416	0.40				Poorly clayey silty sand	
414	2.50				Highly weathered andesite	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 648 654.34  
Y = 7 597 908.85  
Elevation:  
Z = 440.61m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE

PF 2 - 1

Project: Study on capacity development for soil contamination management

Location: West from v. Neokazi

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
441	1.00				Brown, silty, sandy clay	
439					Clayey silty sand mixed with pieces of volcanic rocks	
437	4.60				Yellow silty clay	
	5.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 645 820.37  
Y = 7 598 823.53  
Elevation:  
Z = 425.15m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

PF 3 - 1

Project: Study on capacity development for soil contamination management

Location: South from v. Neokazi

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
416	0.40				Poorly clayey silty sand	
414	2.50				Highly weathered andesite	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 646 788.27  
Y = 7 598 144.09  
Elevation:  
Z = 434.89m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE

PF 2 - 2

Project: Study on capacity development for soil contamination management

Location: West from v. Neokazi

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
435						
433						
431	5.00				Silty sand, poorly clayey mixed with pieces of volcanic rocks	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 646 852.40  
Y = 7 598 373.74  
Elevation:  
Z = 423.56m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

PF 2 - 3

Project: Study on capacity development for soil contamination management

Location: West from v. Neokazi

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
424						
422	2.20				Clayey sand mixed with gravel	
420	5.00				Sand and gravel mixed with cobbles	

Skopje, December 2006

Mapping by: D. Petroski

Draftsman: D. Petroski

Checked by: Z. Iljovski

Appendix



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 848 827.74  
Y = 7 598 496.49  
Elevation:  
Z = 423.67m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE

PF 2 - 4

Project: Study on capacity development for soil contamination management

Location: West from v. Neokazi

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
424						
422	2.30				Silty sandy clay mixed with gravel	
420	5.00				Sand and gravel mixed with cobbles	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 646 769.86  
Y = 7 598 661.36  
Elevation:  
Z = 432.60m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

PF 2 - 5

Project: Study on capacity development for soil contamination management

Location: West from v. Neokazi

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
433	0.40				Humus	
431	2.00				Silty clay mixed with pieces of rocks	
429	5.00				Highly weathered andesitic tuff	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 649 327.53  
Y = 7 598 200.33  
Elevation:  
Z = 509.80m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE  
PF 1 - 6

Project: Study on capacity development for soil contamination management

Location: Southwest from Probistip

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
510						
	1.35				Silty clay mixed with small pieces of rocks	
508						
					Well compacted sandy silt, poorly clayey	
506						
	5.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 649 293.03  
Y = 7 598 032.69  
Elevation:  
Z = 489.82m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE  
PF 1 - 5

Project: Study on capacity development for soil contamination management

Location: Southwest from Probistip

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
490						
					Dark brown, highly plastic clay with rare fragments of rocks	
488						
					Highly weathered bedrock	
486						
	4.60					
	5.00					

01.12.2006, December 2006

Mapping by: D. Petroski

Draftsman: D. Petroski

Checked by: Z. Iljovski

Appendix



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
X = 4 649 348.06  
Y = 7 597 837.93  
Elevation:  
Z = 487.05m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE

PF 1 – 4

Project: Study on capacity development for soil contamination management

Location: Southwest from Probistip

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
487	1.35			 2.35 Nov. 2006	Silty clay mixed with small pieces of rocks	
485					Medium to poorly clayey coarse sand mixed with small pieces and boulders	
483	5.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
X = 4 649 349.43  
Y = 7 597 710.23  
Elevation:  
Z = 488.99m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

PF 1 – 3

Project: Study on capacity development for soil contamination management

Location: Southwest from Probistip

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
489	0.80			 2.30	Clayey silt with rare fragments of rocks	
487	2.30				Poorly clayey silty sand mixed with fragments of volcanic rocks	
485	5.00				Yellowish sand mixed with boulders and pieces of volcanic rocks, poorly clayey	

opje, December 2006

Mapping by: D. Petroski

Draftsman: D. Petroski

Checked by: Z. Ilijovski

Appendix



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 649 855.76  
Y = 7 597 604.92  
Elevation:  
Z = 489.51m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE  
PF 1 - 2

Project: Study on capacity development for soil contamination management

Location: Southwest from Probstip

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
489						
487						
485						
	5.00				Black silty clay mixed with small pieces of volcanic rocks	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 649 481.05  
Y = 7 597 540.68  
Elevation:  
Z = 511.64m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE  
PF 1 - 1

Project: Study on capacity development for soil contamination management

Location: Southwest from Probstip

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
512						
	1.40				Dark brown coarse sandy clay	
510						
					Clayey sandy silt	
508						
	5.00					





CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
X = 4 650 796.54  
Y = 7 598 297.99  
Elevation:  
Z = 542.09m  
Scale:  
1:50

**GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE  
N 33**

Project: Study on capacity development for soil contamination management

Location: Probistip

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
542	1.30				Silty clay mixed with small pieces of rocks and boulders	
540	2.20				Gray-greenish clayey sand	
538	5.00				Gray-greenish to redish marl	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
X = 4 651 909.33  
Y = 7 598 296.64  
Elevation:  
Z = 584.18m  
Scale:  
1:50

**GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE  
I 36**

Project: Study on capacity development for soil contamination management

Location: Northwest from Probistip

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
584	1.40				Dark brown coarse sandy clay	
582					Clayey sandy silt	
580	5.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
X = 4 651 643.91  
Y = 7 597 595.57  
Elevation:  
Z = 553.43m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE  
M 35

Project: Study on capacity development for soil contamination management

Location: Probistip

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
553	1.10				Silty clay mixed with small pieces of rocks	
551	2.15				Silty sand in various colors	
549	5.00				Light to dark gray, poorly clayey silty sand	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
X = 4 645 758.62  
Y = 7 600 307.54  
Elevation:  
Z = 416.88m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE  
PF 4 – 1

Project: Study on capacity development for soil contamination management

Location: Globica

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
417						
415					Poorly silty, sandy clay mixed with fragments of volcanic rocks	
413	5.00					

ije, December 2006

Mapping by: D.Petroski

Draftsman: D. Petroski

Checked by: Z.Iltjovski

Appendix



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 645 712.28  
Y = 7 600 528.86  
Elevation:  
Z = 396.28m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE

PF 4 - 2

Project: Study on capacity development for soil contamination management

Location: Globica

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
396	1.30				Silty sand mixed with gravel	
394	2.50				Silty sandy clay mixed with gravel and cobbles	
392	5.00				Poorly clayey sand mixed with gravel and cobbles	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 645 673.94  
Y = 7 600 653.77  
Elevation:  
Z = 394.63m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

PF 4 - 3

Project: Study on capacity development for soil contamination management

Location: Globica

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
395						
393	9.50				Fine grained silty sand mixed with gravel	
391	5.00				Coarse sand and gravel and cobbles	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 645 663.51  
Y = 7 600 780.45  
Elevation:  
Z = 395.45m  
Scale:  
1:50

**GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE  
PF 4 - 4**

Project: Study on capacity development for soil contamination management

Location: Globica

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
395	0.40			 2.90 Nov, 2006	Clayey sand	
					Clayey sand mixed with gravel	
393	2.20				Sand mixed with gravel and cobbles	
391	5.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 645 631.80  
Y = 7 600 876.90  
Elevation:  
Z = 402.52m  
Scale:  
1:50

**GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE  
PF 4 - 5**

Project: Study on capacity development for soil contamination management

Location: Globica

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
402	0.60			 2.60	Silty clay with rare cobbles	
400					Clayey sandy silt with rare pieces of rocks	
398	2.60				Silty medium grained sand	
	5.00					

Skopje, December 2006

Mapping by: *D. Petroski*

Draftsman: *D. Petroski*

Checked by: *Z. Iljovski*

Appendix



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 845 692.87  
Y = 7 600 956.49  
Elevation:  
Z = 407.71m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE

PF 4 - 6

Project: Study on capacity development for soil contamination management

Location: Globica

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
408	1.00				Sandy clay mixed with pieces of rocks	
406	2.60				Silty clayey sand mixed with pieces of rocks	
404	5.00				Poorly clayey silty sand mixed with pieces of various rocks	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 649 025.41  
Y = 7 602 075.57  
Elevation:  
Z = 463.66m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

X 29

Project: Study on capacity development for soil contamination management

Location: Southwest from v. Zletovo

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
464	0.70				Dark brown silty sandy clay	
462					Well compacted sandy silt	
460	5.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 649 471.32  
Y = 7 603 249.87  
Elevation:  
Z = 487.93m  
Scale:  
1:50

**GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE  
a 30**

Project: Study on capacity development for soil contamination management

Location: Southeast from v. Zletovo

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
488	0.80				Silty clay	
486	3.20				Silty, poorly clayey sand mixed with pieces and boulders of rocks	
484	5.00				Soft and weathered marl	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 647 589.87  
Y = 7 599 819.72  
Elevation:  
Z = 498.62m  
Scale:  
1:50

**GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE  
R 25**

Project: Study on capacity development for soil contamination management

Location: Northwest from v. Neokazi

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
499					Poorly silty clay with fragments of rocks	
497	2.60				Highly weathered andesitic tuff - bedrock	
495	5.00				Highly weathered andesitic tuff - bedrock	

pje, December 2006

Mapping by: *D. Peroski*

Draftsman: *D. Peroski*

Checked by: *Z. Hljovski*

Appendix



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 648 726.06  
Y = 7 599 168.88  
Elevation:  
Z = 503.99m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF DRILLED BOREHOLE

P 28

Project: Study on capacity development for soil contamination management

Location: South from Probistip

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
504						
	1.60				Brown, silty clay	
502					Highly weathered andesitic tuff	
	3.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. - Skopje

Coordinates:  
X = 4 649 690.59  
Y = 7 600 869.32  
Elevation:  
Z = 470.17m  
Scale:  
1:50

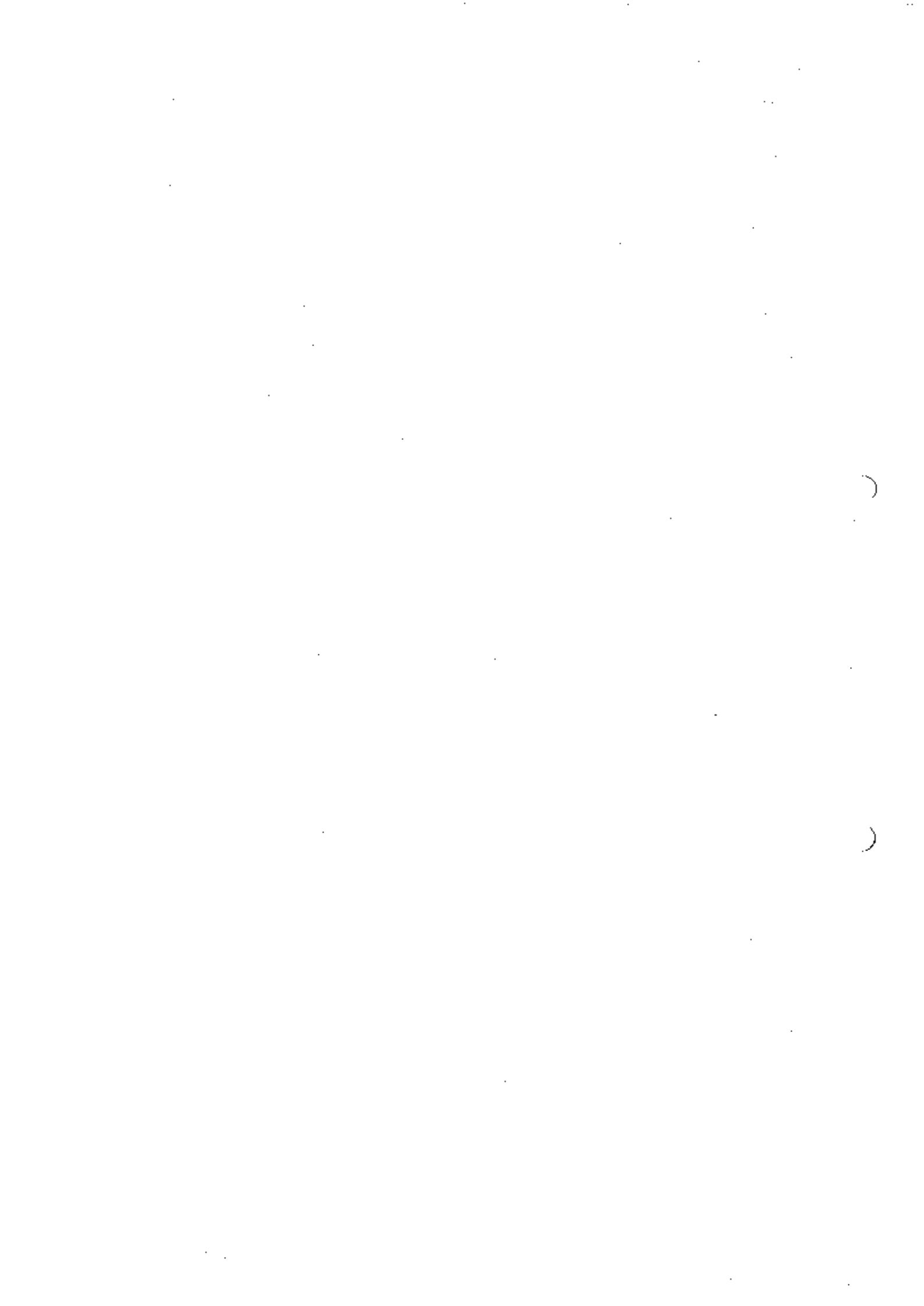
GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

U 30

Project: Study on capacity development for soil contamination management

Location: East from Probistip

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
470						
	2.00				Poorly clayey sandy gravel with cobbles	
468					Weathered andesitic tuff	
	2.50					





## **Data 5-3 Monitoring Drilling Hole**





CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
N 4 645 671.32  
E 7 600 565.17  
Elevation:  
395.66m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

**MBH – 1**

**Project:** Study on capacity development for soil contamination management

**Location:** North from v. Tripatanci, on the road to Zletovo

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
398						
	2.00			 2.33 June, 2006	Brown silty, sandy clay	
396					Clayey, gravely sand mixed with pebbles	
394	4.00				Pebbles and blocks mixed with sandy- gravely fractions (ø max 100mm)	
392	5.25				Light brown poor silty sand mixed with poorly processed pieces and rear blocks	
	7.00				Light brown poor silty sand mixed with poorly processed pieces and rear blocks	
390						
388	10.00				Light brown poor silty sand mixed with poorly processed pieces and rear blocks	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
N 4 644 631.70  
E 7 600 033.14  
Elevation:  
384.22m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

**MBH – 2**

**Project:** Study on capacity development for soil contamination management

**Location:** Junction point of r. Kiselica and r. Zletovska

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks
379	0.90			 2.33 June, 2006	Dark brown clayey, fine grained sand mixed with well processed pieces of gravel	■ (1) ● (2)
	1.50				Dark brown well granulated, fine grained sand	
377	2.60				Dark brown, clayey, fine grained silt and sand mixed with well processed gravel and pebbles	
375					Light green to blue, hard and compact andesitic tuff, poorly jointed	
373						
371						
369	10.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
N 4 643 863.07  
E 7 600 179.23  
Elevation:  
375.80 m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

**MBH – 3**

**Project:** Study on capacity development for soil contamination management

**Location:** Between v. Buciste and v. Tripatanci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks
376	1.30			1.44	Light brown silt with coarse pieces of rocks	■ (1) ● (2)
	1.75			June, 2006	Tailings material (sandy silt), orange-redish color	
374					Alluvial material, made of silty sand mixed with cobbles, incoherent	
372	4.30				Hard rock andesite, greenish blue in color with limonite scum	
370						
368						
366	10.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
N 4 644 168.74  
E 7 600 555.05  
Elevation:  
393.26m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

**MBH – 4**

**Project:** Study on capacity development for soil contamination management

**Location:** North from v. Tripatanci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
405	1.60			 9.65 June, 2006	Well to medium compact, fine grained sand and silt mixed with small fragments of andesites	
403					Dark brown, medium coarse sand mixed with pieces of andesite (ø max 80-100mm)	
401	4.00				Dark brown, well compacted, fine to medium grained sand mixed with pebbles and blocks	
399	6.70				Yellow-greenish, well compacted fine grained clayey sand mixed with small andesite fragments (8,15-8,60m andesite block)	
397						
395	10.00					



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
N 4 644 525.00  
E 7 600 570.72  
Elevation:  
390.98m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

**MBH – 4B**

**Project:** Study on capacity development for soil contamination management

**Location:** North from v. Tripatanci

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks
394						■ (1) ● (2)
	5.35				Brown-redish, compact, highly plastic silty clay	
	5.80			6.20 July, 2006	Silty, clayey sand mixed with gravel	
	9.40				Gravel and pebbles, poorly sorted and compacted, mixed with fine to medium grained sand	
384	10.00				Brown-yellowish, soft and crushed andesitic tuff	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
N 4 644 163.77  
E 7 599 834.91  
Elevation:  
386.08m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

**MBH – 5**

**Project:** Study on capacity development for soil contamination management

**Location:** North from v. Buciste

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks
384						(1) ■ (2) ●
	5.00				Brown-redish silty sand, clayey and well compact, mixed with small pieces of different origin	
	7.20				Silty sand mixed with pebbles and gravel $\varnothing$ max 80mm, mostly of alluvial origin	
	8.60				Pebbles and gravel (the sand is probably washed out in the drilling process)	
				9.10 July, 2006		
					Hard rock andesite, gray-greenish in color, very fresh and compact	
	15.00					
369						





CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
N 4 642920.21  
E 7 600 253.30  
Elevation:  
366.50  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

**MBH – 6**

**Project:** Study on capacity development for soil contamination management

**Location:** Downstream from r.Zletovska, South from v.Buciste

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks
365	0.80			0.93 June, 2006	Tailings material (orange redish sandy silt)	■ (1) ● (2)
363					Alluvial material, made of sandy gravel mixed with medium to good processed pebbles (mostly andesites), $\varnothing$ max 100mm	
361						
359						
357	7.70 8.10		V V V		Andesite block	
355	10.00				Gray-greenish, silty sand mixed with pebbles	



CIVIL ENGINEERING INSTITUTE  
"Makedonija", a.d. – Skopje

Coordinates:  
N 4 648 218.43  
E 7 597 533.43  
Elevation:  
452.12m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

**MBH – 7**

**Project:** Study on capacity development for soil contamination management

**Location:** Downstream from r.Zletovska, South from v.Buciste

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks
448						■ (1) ● (2)
	3.00			0.93 June, 2006	Dark brown to black, clayey, sandy silt mixed with small fragments of different volcanic rocks. Occasionally occurrence of sublayers of pure clay	
444	6.40				Different colors (rose, yellow, green) of silt mixed with small fragments of rocks, ø max 10-30mm	
440	10.00				Gray-greenish, silty sand mixed with small fragments and pebbles	
438						



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Coordinates:  
N 4 646 860.61  
E 7 598 312.31  
Elevation:  
424.84m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

**MBH – 8**

**Project:** Study on capacity development for soil contamination management

**Location:** East from v. Neokazi

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks ■ (1) ● (2)
428	0.40				Light brown incoherent silt mixed with fragments	
426	2.90				Dark brown, medium coarse silty sand mixed with pieces of andesite and different rocks (ø max 60-80mm)	
424						
422					Grey-greenish, andesitic ignimbrites with large phenocrystals. The core is mechanically crushed into coarse grained sand	
420						
418	10.00			9.65 June, 2006		



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Coordinates:  
N 4 646 200.42  
E 7 598 854.37  
Elevation:  
411.65m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

**MBH – 9**

**Project:** Study on capacity development for soil contamination management

**Location:** Southeast from v. Neokazi on r. Kiselica

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks
418	1.50				Dark brown to black, well to medium compacted silt and sand mixed with small fragments of volcanic rocks	■ (1) ● (2)
416	2.10			2.33 June, 2006	Mixture of gravel and medium grained sand	
414						
412					Light blue, hard and compact andesitic tuff, poorly jointed	
410						
408	10.00					



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Coordinates:  
N 4 645 966.16  
E 7 598 593.82  
Elevation:  
429.04m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

**MBH – 10**

**Project:** Study on capacity development for soil contamination management

**Location:** Southeast from v. Neokazi

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks
433						
431	2.00			2.33 June, 2006	Dark brown to black, clayey silt and sand	■ (1) ● (2)
429	4.55				Sand and silt mixed with different grained pieces of rocks	
427					Yellow-greenish hard and compact andesitic tuff, poorly jointed	
425						
423	10.00					



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Coordinates:  
N 4 646 396.32  
E 7 599 280.29  
Elevation:  
444.43m  
Scale:  
1:50

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

**MBH – 11**

**Project:** Study on capacity development for soil contamination management

**Location:** South from v. Neokazi on the main road to Probistip

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks
447	1.00			0.80 June, 2006	Dark brown, clayey silt and sand, well compacted	■ (1) ● (2)
445	2.85				Highly degraded and crushed pieces of tuff, the sand is washed out in the process of drilling	
443	5.00				Brown-greyish, medium to well petrified claystone	
441	6.00				Light grey to white marlstone	
439	10.00				Dark grey marlstone (marlstone breccia)	
437						



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Coordinates:  
N 4 645403.21  
E 7 599433.40  
Elevation:

398.11m  
Scale:

GEOLOGICAL PROFILE  
OF MONITORING BOREHOLE

**MBH – 12**

1:50

**Project:** Study on capacity development for soil contamination management

**Location:** Downstream r. Kiselica, South from v. Neokazi

Elevation	Depth [m]	Symbol	Pattern	Ground water table	Material description	Remarks
398	1.10			 2.33 June, 2006	Dark brown to black clay with small fragments of andesitic tuff	■ (1) ● (2)
396	2.00				Mixture of clayey coarse sand and tuff cutings, ø max 80-120mm	
394					Light blue, fresh and compact andesitic tuff	
392						
390						
388	10.00					

