

## Submittal Guidelines for Imported Soil

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The following guidelines are provided as a prescriptive step process to ensure the contractual and regulatory requirements for Baylands Soil Processing are met and the appropriate quality control documentation is provided in a timely manner. Please contact [info@thebaylands.com](mailto:info@thebaylands.com) for questions.

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### Soil Review & Acceptance Guidelines

**1. Complete Source Information Form (SIF)**

- a. SIF located at: <http://thebaylands.com/import/>
- b. Do not leave any area blank.
- c. Submit via email to [info@thebaylands.com](mailto:info@thebaylands.com)

**2. Determine Number of Samples by type of project:**

- a. Borrow Area (e.g., one common piece of property with the same use; commonly referred to as a Mass Excavation)
- b. Stockpile (e.g., pipelines, multiple locations, multiple uses on one site)

Sampling Requirements	
Borrow Area (aka Mass Excavation)	
2 acres or less	4 discreet samples
2 to 4 acres	Minimum 1 sample per ½ acre
4 to 10 acres	Minimum 8 samples
Greater than 10 acres	Minimum of 8 locations with 4 subsamples per location
Stockpile <sup>(1)</sup>	
Up to 1,000 cubic yards (CY)	1 sample per 250 CY
1,000 CY to 5,000 CY	4 samples for first 1,000CY's plus 1 sample for each additional 500 CY
Greater than 5,000 CY	12 samples for first 5,000CY's plus 1 sample for each additional 500 CY

- 1. Composite samples are acceptable provided they don't exceed 4:1 ratio.  
For example: 2-point (2:1) composite may represent up to 500 CY for stockpile material.  
4-point (4:1) composite may represent up to 1,000 CY for stockpile material.

**3. Testing:**

- a. Normally provided by contractor but can be performed by BSP staff at an additional cost. Contact BSP for pricing.

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- b. **ONLY** BSP Staff are allowed to conduct sampling and testing for materials located on BSP facilities. This includes materials imported beyond the estimated volume as shown on the Source Information Form.
- c. Prior Environmental Reports may be used for preliminary screening; however, BSP requires laboratory testing performed within the past 6 months for purposes of review and approval.
- d. Composited soil samples shall be analyzed for the following constituents:
- VOCs, including MTBE4 and TPH – GRO (EPA Method 8260B);
  - SVOCs (EPA Method 8270C); **8270C SIM may be used to augment 8270C**
  - Organochlorine Pesticides (EPA Method 8081);
  - PCBs (EPA Method 8082);
  - TPH – D and MO7 (EPA Method 8015);
  - Chromium +6 (EPA Method 7199); and
  - 17 CAM metals (EPA Method 6000/7000 series):
    - antimony (EPA Method 6010B);
    - arsenic (EPA Method 200.8);
    - barium (EPA Method 6010B);
    - beryllium (EPA Method 6010B);
    - cadmium (EPA Method 6010B);
    - chromium (EPA Method 6010B);
    - cobalt (EPA Method 6010B);
    - copper (EPA Method 6010B);
    - lead (EPA Method 6010B);
    - mercury (EPA Method 7470A);
    - nickel (EPA Method 6010B);
    - selenium (EPA Method 6010B);
    - silver (EPA Method 6010B);
    - thallium (EPA Method 6010B);
    - tin (EPA Method 6010B);
    - vanadium (EPA Method 6010B); and
    - zinc (EPA Method 6010B).
  - ph (EPA Mthod 9045C)
- e. **Additional requirements**
- i. Maximum Detection Limits (MDL's) shall be included in lab reports for tests 8081, 8082 and 8270. MDL's shall be at or below the Environmental Screening Limits (ESL's) shown in Table 1 and Table 2.
  - ii. If a CAM-17 TTLC test result is ten (10) times **greater** than its Table 2 value, BSP requires an STLC test to be submitted to determine soluble concentration. Results must be less than the STLC ESL's shown in Table 2 to be accepted.

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- iii. pH results that are less than 5 or greater than 10 may result in higher dump fees.
- iv. Chain of Custody form to state if sample is a composite and the ratio (e.g., 1:2 or 4:1). BSP does not accept composites greater than 4:1.

#### 4. Review Process

- a. Submit SIF and Test Results from an ELAP certified laboratory for BSP review via email to: [info@thebaylands.com](mailto:info@thebaylands.com)
- b. Material Review Notes:
  - i. Summary tables are useful to facilitate review, but actual lab reports are required to confirm values.
  - ii. If “Background” value in Table 1 is shown, the higher value between Background value and ESL shall be used to determine acceptance.
- c. If the materials are deemed acceptable, BSP will issue a unique project ID number, Purchase Order and Soil Acceptance Letter stating conditions of approval including maximum import volume limit.
- d. BSP will reply via email if the materials are unacceptable, or if corrective action is required to properly determine material acceptance.

**ALTERNATIVE:** At the sole discretion of BSP, materials may be imported into BSP’s Material Containment Area (MCA) prior to approval provided that the Source Generator submits a letter acknowledging: (1) they are the Generator and (2) responsible for all associated cost should the materials found to be unacceptable. Letter shall be accompanied with preliminary test information sufficient for BSP to determine if materials can be imported into the MCA. All materials imported into the MCA are subject to confirmation testing by BSP at additional costs to the Generator, or as mutually agreed to by BSP and the Generator.

## **Submittal Guidelines for Imported Soil**

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### **Table 1**

## **Environmental Screening Levels (ESLs)**

### **For**

## **Imported Materials**

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**Table 1 Notes:**

" -- " not applicable or not available; " mg/kg " milligrams per kilogram

If background value is available, the higher value between background and ESL shall be used.

\* ESL not available; USEPA Risk-Based Soil Screening Levels (SSLs) for the protection of groundwater were used (4).

**References:**

(1) Background Metals Concentrations in Soil in Northern Santa Clara County (Scott, 1995)

(2) Analysis of Background Distributions of Metals in the Soil at Lawrence Berkeley National Laboratory (LBNL June 2002, Revised April 2009)

(3) All proposed concentrations are from California Regional Water Quality Control Board, San Francisco Bay Region (CRWQCB). Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim Final. rev June 2016. Minimum ESL between GW protection and Direct contact for soils < 3 meters below ground surface unless highlighted in red.

(4) USEPA, 2011. Regional Screening Levels (RSLs) for Chemical Contaminants at Superfund Sites.

(5) 95% Upper Confidence Limit of the Mean Concentration for Benzo(a)pyrene equivalents from Use of the Northern and Southern California Polynuclear Aromatic Hydrocarbon (PAH) Studies in the Manufactured Gas Plant Site Cleanup Process Draft for Public Comment – Cal-EPA May 8, 2009

(6) SF RWQCB Letter dated 9/14/17 regarding Concurrence with Proposed Revisions to the Baylands Soil Processing Acceptance Criteria, Brisbane Landfill, San Mateo County

(7) SF RWQCB correspondence dated 10/23/17 regarding Concurrence with Proposed Revisions to the Baylands Soil Processing Acceptance Criteria, Brisbane Landfill, San Mateo County

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## Submittal Guidelines for Imported Soil

**Table 1**

Chemical	Background (mg/kg) <sup>(1)</sup>	BSP ESL (mg/kg) <sup>(3)</sup>
<b>Inorganics</b>		
Antimony	22	31
Arsenic <sup>(1)</sup>	11	11
Barium <sup>(2)</sup>	410	3000
Beryllium	3.2	42
Cadmium	14	39
Chromium	170	120,000
Chromium VI	-	0.3
Cobalt <sup>(2)</sup>	25	25
Copper	67	3,100
Lead <sup>(2)</sup>	54	80
Mercury	1.3	13
Molybdenum <sup>(2)</sup>	4.8	390
Nickel	145	150
Selenium <sup>(2)</sup>	4.9	390
Silver	4.8	390
Thallium	3.8	3.8
Vanadium <sup>(2)</sup>	90	390
Zinc	120	23,000

**PAH's**

Chemical	Background (mg/kg)	BSP ESL (mg/kg) <sup>(3)</sup>
Acenaphthene	-	1.6
Acenaphthylene	-	13
Anthracene	-	2.8
Benzo[a]anthracene	-	0.16
Benzo[a]pyrene	0.4 <sup>(5)</sup>	0.4
Benzo[b]fluoranthene	-	0.16
Benzo[g,h,i]perylene	-	2.5
Benzo[k]fluoranthene	-	1.6
Chrysene	-	3.8
Dibenz[a,h]anthracene	-	0.016
Fluoranthene	-	60
Fluorene	-	8.9
Indeno[1,2,3-c,d]pyrene	-	0.16
Methylnaphthalene, 2	-	0.25
Naphthalene	-	0.03
Phenanthrene	-	11
Pyrene	-	85

## Submittal Guidelines for Imported Soil

**Table 1 Continued**

Chemical	Background (mg/kg)	BSP ESL (mg/kg) <sup>(3)</sup>
<b>Pesticides/PCBs</b>		
4,4'-DDD	-	2.7
4,4'-DDE	-	1.9
4,4'-DDT	-	1.9
Aldrin		0.036
Aroclor 1248	-	0.23
Aroclor 1254	-	0.24
Aroclor 1260	-	0.24
Chlordane	-	0.48
Dieldrin	0.002 <sup>(6)</sup>	0.002
Endosulfan I		0.0046
Endosulfan II		0.0046
Endosulfan sulfate		0.0046
Endrin	0.002 <sup>(6)</sup>	0.002
Endrin aldehyde	0.002 <sup>(6)</sup>	0.002
Endrin ketone	0.002 <sup>(6)</sup>	0.002
Heptachlor	0.002 <sup>(6)</sup>	0.002
Heptachlor epoxide	0.002 <sup>(6)</sup>	0.002
Lindane	-	0.0098
Methoxychlor	-	19

<b>SVOCs</b>		
Chemical	Background (mg/kg)	BSP ESL (mg/kg) <sup>(3)</sup>
2,4,6-Trichlorophenol	-	0.21
2,4-Dichlorophenol	-	0.3
2,4-Dinitrotoluene	0.13 <sup>(7)</sup>	0.0018
Benzoic Acid		34*
Bis(2-Ethylhexyl) Phthalate	-	39
Butyl-benzyl-phthalate		0.51*
Diethyl phthalate	-	0.035
Dimethyl Phthalate	-	0.035
Hexachlorobutadiene		0.68
Hexachloroethane	-	1.1
Phenol	-	0.076

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**Table 1 Continued**

TPH	
Chemical	BSP ESL (mg/kg) <sup>(3)</sup>
TPH Gasoline (GRO) C6 - C10	100
TPH Diesel (DRO) C11- C28	230
TPH Motor oil C23 – C36	5,100

Chemical	Background (mg/kg)	BSP ESL (mg/kg) <sup>(3)</sup>
<b>VOCs</b>		
1,1,1,2-Tetrachloroethane	-	0.01
1,1,1-Trichloroethane	-	7.8
1,1,2,2-Tetrachloroethane	-	0.018
1,1,2-Trichloroethane	-	0.07
1,1-Dichloroethane	-	0.2
1,1-Dichloroethylene	-	0.55
1,2,4-Trichlorobenzene	-	1.5
1,2,4-Trimethylbenzene		0.081
1,2-Dibromo-3-chloropropane	-	0.0045
1,2-Dibromoethane	0.004 <sup>(6)</sup>	0.00033
1,2-Dichlorobenzene	-	1.6
1,2-Dichloroethane	-	0.0045
1,2-Dichloropropane	-	0.12
1,3,5-Trimethylbenzene		0.087*
1,3-Dichloropropene	-	0.059
1,4-Dichlorobenzene	-	0.59
2,2-Dichloropropane		0.25*
2-Chlorotoluene		0.23
4-Isopropyltoluene (p-cymene)		1.1*
4-Methyl-2-pentanone (MIBK)	-	2.8
Acetone	-	0.5
Benzene	-	0.044
Bromodichloromethane	-	0.52
Bromoform	-	1.7
Bromomethane	-	0.3
Butylbenzene, n-		5.9*
Carbon disulfide		0.24
Carbon tetrachloride	-	0.048
Chlorobenzene	-	1.5
Chloroethane	-	1.1
Chloroform	-	0.68
Chloromethane (methyl chloride)	-	2.9
Dibromochloromethane	-	3.8
Dichloroethylene, cis-1,2	-	0.19

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**Table 1 Continued**

Chemical	Background (mg/kg)	BSP ESL (mg/kg) <sup>(3)</sup>
<b>VOCs</b>		
Dichloroethylene, trans-1,2	-	1
Ethylbenzene	-	1.4
Methyl ethyl ketone (2-butanone)	-	5.1
Methyl tert-butyl ether (MTBE)	-	0.023
Methylene chloride	-	0.077
Naphthalene	-	0.033
Propylbenzene, n-	-	1.2
Styrene	-	1.5
Tetrachloroethylene	-	0.42
Toluene	-	2.9
Trichloroethylene	-	0.46
Trichlorofluoromethane	-	0.838
Vinyl chloride	-	0.008
Xylene (total)	-	2.3

**Table 2**  
**STLC Limits for Imported Materials**

Chemical	STLC (mg/L)
Antimony	15
Arsenic	5
Barium	100
Beryllium	0.8
Cadmium	1.0
Chromium	5
Cobalt	80
Copper	25
Lead	5
Mercury	0.2
Molybdenum	350
Nickel	20
Selenium	1
Silver	5
Thallium	7
Vanadium	24
Zinc	250