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Directie Grondgebied Bureau Bodem  
T.a.v. mevrouw S. Ploumen  
Postbus 9105  
6500 HG NIJMEGEN

Plaats en datum  
Arnhem, 18 mei 2011

Referentienummer  
GM-0015352

Kenmerk  
288586

Betreft  
aanvullend bodemonderzoek dioxines Smit Draad te Nijmegen

Geachte mevrouw Ploumen,

Hierbij ontvangt u de resultaten van het aanvullend bodemonderzoek dat is uitgevoerd op en nabij de voormalige locatie van Smit Draad aan de Groenestraat 249, 263-271 te Nijmegen.

### **Aanleiding**

Aanleiding tot het verrichten van een aanvullend bodemonderzoek zijn de verhoogde gehalten aan dioxines (bij toenmalige normering) die zijn aangetoond bij voorgaand onderzoek op de locatie van Smit Draad.

Grontmij Nederland B.V.  
Statutair gevestigd te  
De Bilt  
Handelsregister 30129769

### **Doel**

Middels het aanvullende onderzoek wordt onderzocht of er sprake is van een verontreiniging met dioxines op de locatie van Smit Draad aan de Groenestraat 249, 263-271 te Nijmegen.

### **Werkzaamheden**

Het veldonderzoek is verricht door het Veldwerkbureau. Dit bureau is erkend voor het uitvoeren van veldwerk onder het procescertificaat BRL SIKB 2000 "Veldwerk bij Milieuhygiënisch bodemonderzoek" (versie 3.2a, 13 maart 2007). Op 14 oktober 2010 is door de heer B. Groenen van het Veldwerkbureau vijf boringen (2000 t/m 2004) tot een diepte van 1,0 m-mv verricht op de locatie van Smit Draad en in de achtertuinen van Wezenlaan 65 en 69. Tevens zijn mengmonsters samengesteld van de bovengrond ter plaatse van de Wezenlaan 65 en 69 (0-0,25 m-maaiveld).

Ten behoeve van nader onderzoek is op 8 februari 2011 door de heer B. Groenen zes boringen tot een diepte van 1,0 m-mv verricht (2000A t/m 2004A en Z207A). De locatie van de verrichte boringen is opgenomen in de situatietekening in bijlage 1. De boorprofielen van de uitgevoerde boringen zijn opgenomen in bijlage 2. Voor het onderzoek is tevens gebruik gemaakt van monsters welke op het laboratorium nog beschikbaar waren van het voorgaand onderzoek (Bodemonderzoek Smit Draad, Grontmij, kenmerk: 9905650, 9 september 2010).

Tijdens de boorwerkzaamheden zijn zintuiglijk kenmerken waargenomen die kunnen duiden op de aanwezigheid van verontreinigende stoffen. Deze waarnemingen zijn weergegeven in tabel 1. Bij de boringen die niet in de tabel zijn vermeld, zijn zintuiglijk geen verontreinigingskenmerken waargenomen.

**Tabel 1 Zintuiglijk waargenomen verontreinigingskenmerken**

| Boringnummer | Maximale boordiepte (m -mv) | Diepte (m –mv) | Grondsoort | Zintuiglijke waarneming           |
|--------------|-----------------------------|----------------|------------|-----------------------------------|
| 2001A        | 1,0                         | 0,0 - 0,5      | zand       | sporen baksteen, zwak koolhoudend |
|              |                             | 0,5 - 1,0      | zand       | sporen baksteen                   |
| 2004         | 1,0                         | 0,0 - 0,8      | zand       | Zwak baksteen- en puinhoudend,    |
| 207A         | 1,0                         | 0,0 - 0,5      | zand       | zwak puinhoudend                  |

De bodem bestaat tot 1,0 m-mv uit matig fijn tot matig grof zand.

### Analyses

De geselecteerde grond(meng)monsters zijn in het door RvA geaccrediteerde laboratorium van ALcontrol Laboratories geanalyseerd. In onderstaande tabel is een overzicht van de geanalyseerde monsters en de uitgevoerde analyses opgenomen.

Tijdens de looptijd van het onderzoek is het analysepakket voor dioxines veranderd. Daarom is besloten nieuwe monsters te nemen en deze te laten analyseren op het nieuwe dioxine-pakket.

**Tabel 2 Monsterselectie milieuhygiënisch onderzoek**

| Monstercode                 | Monstertraject (m -mv) | Boringnummers              | Analysepakket <sup>1)</sup> |
|-----------------------------|------------------------|----------------------------|-----------------------------|
| <b>Aanvullend onderzoek</b> |                        |                            |                             |
| Z207-1a                     | 0,0 - 0,5              | Z207 (voorgaand onderzoek) | Dioxines (oud pakket)       |
| Z207                        | 0,7 - 1,0              | Z207 (voorgaand onderzoek) | Dioxines (oud pakket)       |
| Z211-1a                     | 0,0 - 0,5              | Z211 (voorgaand onderzoek) | Dioxines (oud pakket)       |
| 2000-1                      | 0,0 - 0,25             | 2000                       | Dioxines (oud pakket)       |
| 2001-1                      | 0,08-0,33              | 2001                       | Dioxines (oud pakket)       |
| 2002-1                      | 0,08-0,33              | 2002                       | Dioxines (oud pakket)       |
| MM2003-1                    | 0,0 - 0,25             | 2003                       | Dioxines (oud pakket)       |
| MM2004-1                    | 0,0 - 0,25             | 2004                       | Dioxines (oud pakket)       |
| 2000-2                      | 0,25 - 0,5             | 2000                       | Dioxines (oud pakket)       |
| <b>Nader onderzoek</b>      |                        |                            |                             |
| 207A-1                      | 0,0 - 0,5              | 207A                       | Dioxines (nieuw pakket)     |
| 2000A-1                     | 0,0 - 0,2              | 2000A                      | Dioxines (nieuw pakket)     |
| 2001A-1                     | 0,0 - 0,2              | 2001A                      | Dioxines (nieuw pakket)     |
| 2002A-1                     | 0,08 - 0,3             | 2002A                      | Dioxines (nieuw pakket)     |
| 2003A-1                     | 0,0 - 0,2              | 2003A                      | Dioxines (nieuw pakket)     |
| 2004A-1                     | 0,0 - 0,2              | 2004A                      | Dioxines (nieuw pakket)     |

<sup>1)</sup> Dioxines:

oud pakket: Gechloreerde dibenzo-p-dioxines en gechloreerde debenzofuraren

nieuw pakket: Gechloreerde dibenzo-p-dioxines en gechloreerde debenzofuraren + PCB's ( 77, 81, 105, 114, 118, 123, 126, 156, 157, 167, 189 (=dioxine-achtige PCB's))

- : geen overschrijding

De analysecertificaten van ALcontrol Laboratories met de resultaten van het laboratoriumonderzoek en een toelichting op de toegepaste analysemethoden zijn weergegeven in bijlage 3. Het is mogelijk om de originaliteit van deze certificaten te controleren door via de website van ALcontrol Laboratories ([www.alcontrol.nl](http://www.alcontrol.nl)) het rapportnummer te raadplegen en daarbij de unieke code, vermeld op de certificaten, in te vullen

### Toetsingskader

Voor de bepaling of en in welke mate bodemverontreiniging aanwezig is, zijn toetsingswaarden opgenomen in de Circulaire bodemsanering 2009. De wijziging in toetsing en pakket van de som dioxines wordt in de toekomst ook in de Circulaire bodemsanering gewijzigd (gelijk aan de regeling bodemkwaliteit). Vooruitlopend hierop is er getoetst conform de Regeling bodemkwaliteit. Het toetsingsresultaat is in bijlage 4 weergegeven.

In de Staatscourant nr. 18160 van 18 november 2010 is een wijziging van de Regeling bodemkwaliteit gepubliceerd. Deze wijziging heeft onder andere betrekking op de toetsing van dioxines (som I-TEQ) en het analysepakket. In de regeling is dioxines (som I-TEQ) vervangen door dioxines (som TEQ). Voor de toetsing van dioxines (som TEQ) aan de norm uit de circulaire dienen de gemeten waarden vermenigvuldigd te worden met de TEF (ToxiciteitsEquivalentieFactor). De omrekening van de afzonderlijke gemeten dioxinegehalten naar dioxines (som TEQ) is opgenomen in bijlage 4. De toetsingsresultaten zijn opgenomen in de onderstaande tabel. Het analysepakket voor dioxines is aangevuld met een aantal specifieke PCB's ( 77, 81, 105, 114, 118, 123, 126, 156, 157, 167, 189).

De wijziging van de regeling bodemkwaliteit is aanleiding geweest tot het verrichten van nader bodemonderzoek.

**Tabel 3 Overschrijdingen van de toetsingswaarden grondmonsters**

| Monster              | Monstertraject<br>(m -mv) | Boringnummers              | Mate van verontreiniging           |    |     |
|----------------------|---------------------------|----------------------------|------------------------------------|----|-----|
|                      |                           |                            | > AW                               | >T | > I |
| Aanvullend onderzoek |                           |                            |                                    |    |     |
| Z207-1a              | 0,0 - 0,5                 | Z207 (voorgaand onderzoek) | -                                  | -  | -   |
| Z207-2               | 0,7 - 1,0                 | Z207 (voorgaand onderzoek) | Dioxines (som TEQ)<br>(21,9 ng/kg) | -  | -   |
| Z211-1a              | 0,0 - 0,5                 | Z211 (voorgaand onderzoek) | Dioxines (som TEQ)<br>(11,9 ng/kg) | -  | -   |
| 2000-1               | 0,0 - 0,25                | 2000                       | -                                  | -  | -   |
| 2001-1               | 0,08-0,33                 | 2001                       | -                                  | -  | -   |
| 2002-1               | 0,08-0,33                 | 2002                       | Dioxines (som TEQ)<br>(11,7 ng/kg) | -  | -   |
| MM2003-1             | 0,0 - 0,25                | 2003                       | -                                  | -  | -   |
| MM2004-1             | 0,0 - 0,25                | 2004                       | -                                  | -  | -   |
| 2000-2               | 0,25 - 0,5                | 2000                       | Dioxines (som TEQ)<br>(19,4 ng/kg) | -  | -   |
| Nader onderzoek      |                           |                            |                                    |    |     |
| 207A-1               | 0,0 - 0,5                 | 207A                       | -                                  | -  | -   |
| 2000A-1              | 0,0 - 0,2                 | 2000A                      | -                                  | -  | -   |
| 2001A-1              | 0,0 - 0,2                 | 2001A                      | -                                  | -  | -   |
| 2002A-1              | 0,08 - 0,3                | 2002A                      | -                                  | -  | -   |
| 2003A-1              | 0,0 - 0,2                 | 2003A                      | -                                  | -  | -   |
| 2004A-1              | 0,0 - 0,2                 | 2004A                      | Dioxines (som TEQ)<br>(52,8 ng/kg) | -  | -   |

> AW : overschrijding van de achtergrondwaarde

> T : overschrijding van de tussenwaarde

> I : overschrijding van de interventiewaarde

### Evaluatie

Bij de oude toetsing was op het terrein plaatselijk sprake van sterk verontreinigde grond (met dioxines). Met de gewijzigde normering zijn deze overschrijdingen komen te vervallen. Ook in de overige boringen zijn geen sterke verontreinigingen aangetroffen. Bij de conclusies wordt alleen de verontreinigingssituatie, getoetst aan de Regeling bodemkwaliteit, in beschouwing genomen.

#### **Conclusies**

Uit de onderzoeksresultaten blijkt dat in de boven- en ondergrond van het terrein van Smit Draad lokaal (boringen Z207, Z211 en 2002) licht verhoogde dioxinegehalten worden aangetroffen. Tevens is in de bovengrond ter plaatse van de achtertuin van Wezenlaan 69 (boringen 2004 en 2004A) een licht verhoogd dioxinegehalte aangetoond.

Omdat de aangetroffen gehalten de interventiewaarde niet overschrijden, is er geen sprake van humane risico's. De aangetroffen dioxinegehalten geven geen aanleiding tot het verrichten van aanvullend onderzoek.

Wij vertrouwen erop u hiermee voldoende geïnformeerd te hebben.

Met vriendelijke groet,  
Grontmij Nederland B.V.



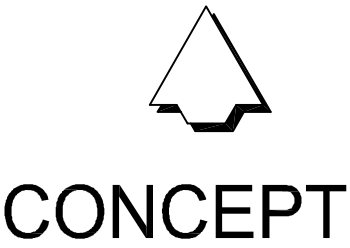
Ing. K. Kea  
Adviseur Bodem

#### **Bijlagen:**

1. situatietekening;
2. boorprofielen;
3. analysecertificaten;
4. toetsingsresultaten.

## **Bijlage 1**

### Situatietekening



## **Bijlage 2**

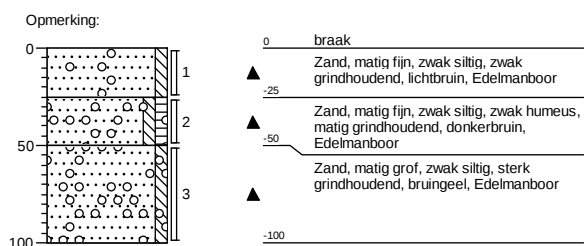
### Boorprofielen

Projectnummer: 288586-2011  
Projectnaam: BO Smit Draad

Opdrachtgever: Het Veldwerkbureau  
Projectleider: K. Kea

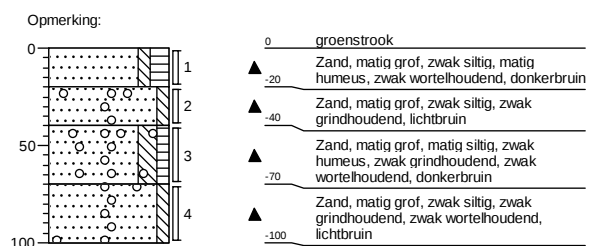
**Boring: 2000**

Boormeester:  
Datum: 14-10-2010



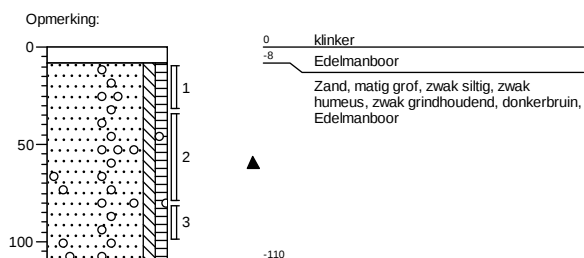
**Boring: 2000A**

Boormeester:  
Datum: 8-2-2011



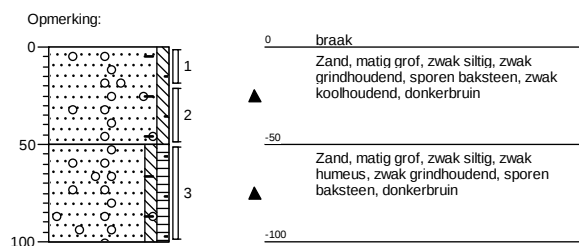
**Boring: 2001**

Boormeester:  
Datum: 14-10-2010



**Boring: 2001A**

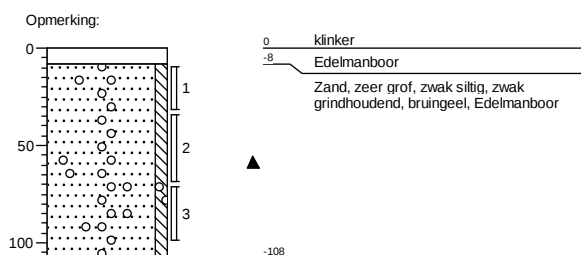
Boormeester:  
Datum: 8-2-2011



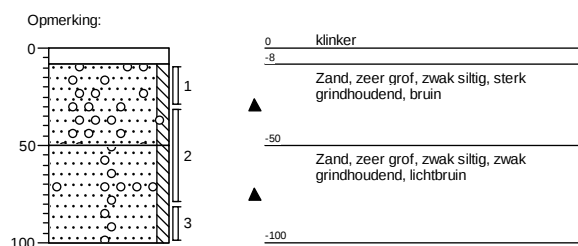
Projectnummer: 288586-2011  
Projectnaam: BO Smit Draad

Opdrachtgever: Het Veldwerkbureau  
Projectleider: K. Kea

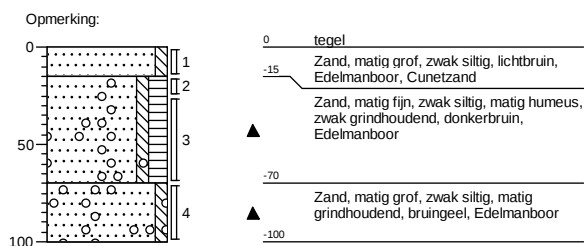
**Boring: 2002**  
Boormeester:  
Datum: 14-10-2010



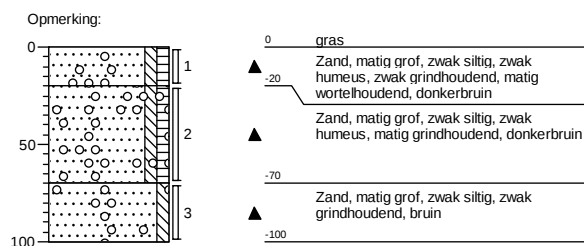
**Boring: 2002A**  
Boormeester:  
Datum: 8-2-2011



**Boring: 2003**  
Boormeester:  
Datum: 14-10-2010



**Boring: 2003A**  
Boormeester:  
Datum: 8-2-2011

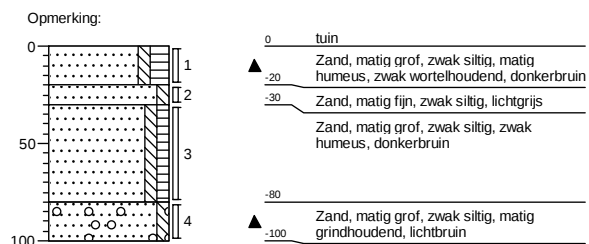
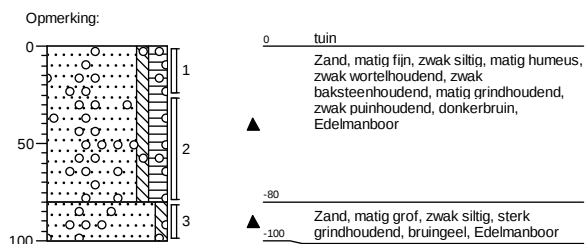


Projectnummer: 288586-2011  
Projectnaam: BO Smit Draad

Opdrachtgever: Het Veldwerkbureau  
Projectleider: K. Kea

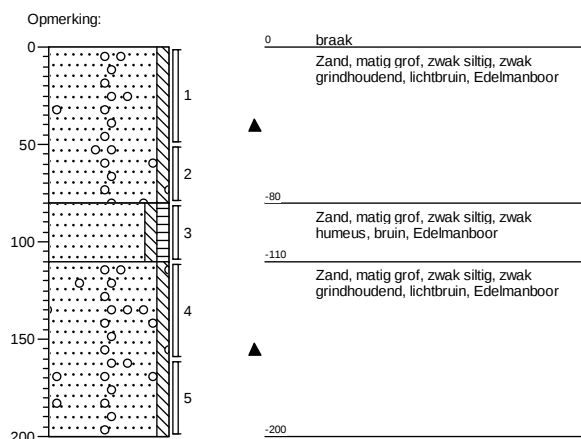
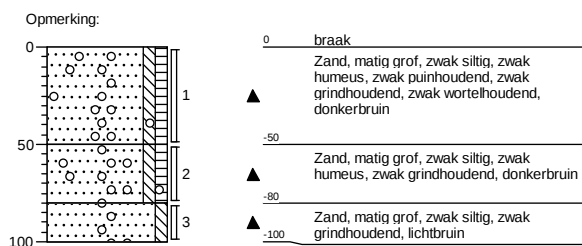
**Boring: 2004**  
Boormeester:  
Datum: 14-10-2010

**Boring: 2004A**  
Boormeester:  
Datum: 8-2-2011



**Boring: 207A**  
Boormeester:  
Datum: 8-2-2011

**Boring: Z207**  
Boormeester:  
Datum: 26-1-2010

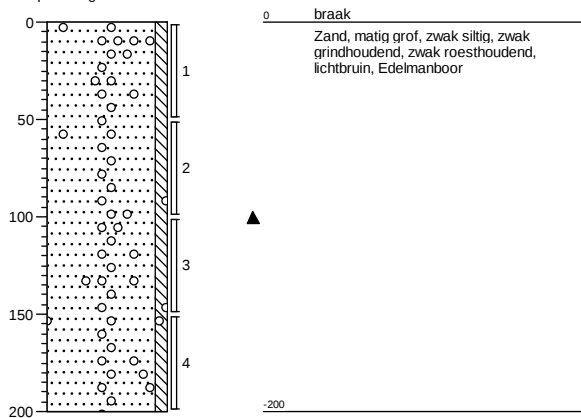


Projectnummer: 288586-2011  
Projectnaam: BO Smit Draad

Opdrachtgever: Het Veldwerkbureau  
Projectleider: K. Kea

**Boring: Z211**  
Boormeester:  
Datum: 23-8-2010

Opmerking:



## Legenda (conform NEN 5104)

### grind

|  |                       |
|--|-----------------------|
|  | Grind, siltig         |
|  | Grind, zwak zandig    |
|  | Grind, matig zandig   |
|  | Grind, sterk zandig   |
|  | Grind, uiterst zandig |

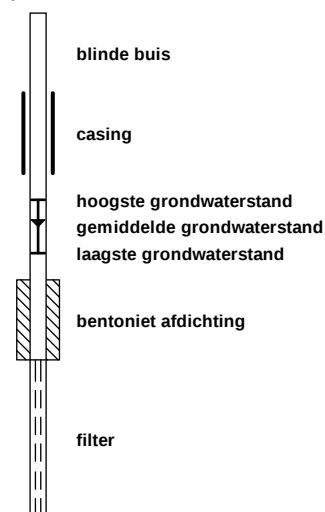
### zand

|  |                      |
|--|----------------------|
|  | Zand, kleiig         |
|  | Zand, zwak siltig    |
|  | Zand, matig siltig   |
|  | Zand, sterk siltig   |
|  | Zand, uiterst siltig |

### veen

|  |                    |
|--|--------------------|
|  | Veen, mineraalarm  |
|  | Veen, zwak kleiig  |
|  | Veen, sterk kleiig |
|  | Veen, zwak zandig  |
|  | Veen, sterk zandig |

### peilbuis



### klei

|  |                      |
|--|----------------------|
|  | Klei, zwak siltig    |
|  | Klei, matig siltig   |
|  | Klei, sterk siltig   |
|  | Klei, uiterst siltig |
|  | Klei, zwak zandig    |
|  | Klei, matig zandig   |
|  | Klei, sterk zandig   |

### leem

|  |                    |
|--|--------------------|
|  | Leem, zwak zandig  |
|  | Leem, sterk zandig |

### overige toevoegingen

|  |               |
|--|---------------|
|  | zwak humeus   |
|  | matig humeus  |
|  | sterk humeus  |
|  | zwak grindig  |
|  | matig grindig |
|  | sterk grindig |

### geur

|  |               |
|--|---------------|
|  | geen geur     |
|  | zwakke geur   |
|  | matige geur   |
|  | sterke geur   |
|  | uiterste geur |

### olie

|  |                             |
|--|-----------------------------|
|  | geen olie-water reactie     |
|  | zwakke olie-water reactie   |
|  | matige olie-water reactie   |
|  | sterke olie-water reactie   |
|  | uiterste olie-water reactie |

### p.i.d.-waarde

|  |        |
|--|--------|
|  | >0     |
|  | >1     |
|  | >10    |
|  | >100   |
|  | >1000  |
|  | >10000 |

### monsters

|  |                   |
|--|-------------------|
|  | geroerd monster   |
|  | ongeroerd monster |

### overig

|  |                                   |
|--|-----------------------------------|
|  | bijzonder bestanddeel             |
|  | Gemiddeld hoogste grondwaterstand |
|  | grondwaterstand                   |
|  | Gemiddeld laagste grondwaterstand |

|  |      |
|--|------|
|  | slib |
|--|------|

|  |       |
|--|-------|
|  | water |
|--|-------|

## **Bijlage 3**

### Analysecertificaten



## Analyserapport

Grontmij Nederland BV  
Kea  
Postbus 485  
6800 AL ARNHEM

Blad 1 van 6

Uw projectnaam : BO Smit Draad  
Uw projectnummer : 288586.  
ALcontrol rapportnummer : 11600075, versie nummer: 1  
Rapport verificatie nummer : SWUTQPC6

Rotterdam, 30-09-2010

Geachte heer/mevrouw,

Hierbij ontvangt u de analyse resultaten van het laboratoriumonderzoek ten behoeve van uw project 288586.. Het onderzoek werd uitgevoerd conform uw opdracht. De gerapporteerde resultaten hebben uitsluitend betrekking op de geteste monsters. De door u aangegeven omschrijvingen voor de monsters en het project zijn overgenomen in dit analyserapport.

Het onderzoek is, met uitzondering van eventueel door derden uitgevoerd onderzoek, uitgevoerd door ALcontrol Laboratories, gevestigd aan de Steenhouwerstraat 15 in Rotterdam (NL).

Dit analyserapport bestaat inclusief bijlagen uit 6 pagina's. In geval van een versienummer van '2' of hoger vervallen de voorgaande versies. Alle bijlagen maken onlosmakelijk onderdeel uit van het rapport. Alleen vermenigvuldiging van het hele rapport is toegestaan.

Uitgebreide informatie over de door ons gehanteerde analysemethoden kunt u terugvinden in onze informatiegids.

Mocht u vragen en/of opmerkingen hebben naar aanleiding van dit rapport, bijvoorbeeld als u nadere informatie nodig heeft over de meetonzekerheid van de analyseresultaten in dit rapport, dan verzoeken wij u vriendelijk contact op te nemen met de afdeling Customer Support.

Wij vertrouwen er op u met deze informatie van dienst te zijn.

Hoogachtend,



R. van Duin  
Laboratory Manager



Grontmij Nederland BV  
Kea

## Analyserapport

Blad 2 van 6

Projectnaam BO Smit Draad  
Projectnummer 288586  
Rapportnummer 11600075 - 1

Orderdatum 22-09-2010  
Startdatum 22-09-2010  
Rapportagedatum 30-09-2010

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|                |                |          |            |
|----------------|----------------|----------|------------|
| <b>Analyse</b> | <b>Eenheid</b> | <b>Q</b> | <b>001</b> |
|----------------|----------------|----------|------------|

---

|                      |             |
|----------------------|-------------|
| Dioxines (PCDD/PCDF) | zie bijlage |
|----------------------|-------------|

---

| Nummer | Monstersoort   | Monsterspecificatie |
|--------|----------------|---------------------|
| 001    | Grond (AS3000) | Z207-1a Z207 (0-50) |

---

Paraaf :



Grontmij Nederland BV  
Kea

## Analyserapport

Blad 3 van 6

Projectnaam BO Smit Draad  
Projectnummer 288586.  
Rapportnummer 11600075 - 1

Orderdatum 22-09-2010  
Startdatum 22-09-2010  
Rapportagedatum 30-09-2010

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### Monster beschrijvingen

---

001 \* De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk.

Paraaf :



Grontmij Nederland BV  
Kea

## Analyserapport

Blad 4 van 6

Projectnaam BO Smit Draad  
Projectnummer 288586  
Rapportnummer 11600075 - 1

Orderdatum 22-09-2010  
Startdatum 22-09-2010  
Rapportagedatum 30-09-2010

| Analyse              |          | Monstersoort   |             | Relatie tot norm   |
|----------------------|----------|----------------|-------------|--------------------|
| Dioxines (PCDD/PCDF) |          | Grond (AS3000) |             | Analyse uitbesteed |
| Monster              | Barcode  | Aanlevering    | Monstername | Verpakking         |
| 001                  | Y2729923 | 23-08-2010     | 23-08-2010  | ALC201             |

Paraaf :

**ALcontrol AB**

Box 1083, 581 10 Linköping, Sweden  
Tel: +46 13 254 900 · Fax: +46 13 121 728  
Registered 556152-0916 Registered office: Linköping, Sweden



1006  
ISO/IEC 17025

**REPORT**

Page 1 (2)

issued by an Accredited Laboratory

**Report No. 10279977***Assigner*

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

*Applies to***Information about the project****Solid**

Project number : Hoogvliet

**Information about sample and sampling**

|                       |   |               |                 |   |            |
|-----------------------|---|---------------|-----------------|---|------------|
| Description of sample | : | -             | Arrival date    | : | 2010-09-24 |
| Sampling date         | : | 2010-09-23    | Time of Arrival | : | 1210       |
| Sample name           | : | 11600075-X001 |                 |   |            |
| Reference             | : | -             |                 |   |            |
| Invoice reference     | : |               |                 |   |            |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit     | Uncert. of measur. |
|-------------|------------------------------|---------|----------|--------------------|
| SS-EN 11465 | Dry Substance                | 95.2    | %        | +/-10%             |
| SS-EN-1948  | 2378 TCDD                    | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 12378 PeCDD                  | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123478 HxCDD                 | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123678 HxCDD                 | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123789 HxCDD                 | 3.3     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234678 HpCDD                | 8.3     | ng/kg DS | +/-30%             |
| SS-EN-1948  | OCDD                         | 47      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 2378 TCDF                    | 6.9     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 12378 PeCDF                  | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 23478 PeCDF                  | 7.2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123478 HxCDF                 | 9.0     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123678 HxCDF                 | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123789 HxCDF                 | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 234678 HxCDF                 | 3.0     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234678 HpCDF                | 16      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234789 HpCDF                | 3.2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | OCDF                         | 17      | ng/kg DS | +/-30%             |
| SS-EN-1948  | I-PCDD/F-TEQ Lower Bound     | 6.2     | ng/kg DS | +/-35%             |
| SS-EN-1948  | I-PCDD/F-TEQ Upper Bound     | 10      | ng/kg DS | +/-35%             |
| SS-EN-1948  | Rec 2378 TCDD Extr spike     | 53      | %        |                    |
| SS-EN-1948  | Rec 12378 PeCDD Extr spike   | 62      | %        |                    |
| SS-EN-1948  | Rec 123478 HxCDD Extr spike  | 69      | %        |                    |
| SS-EN-1948  | Rec 123678 HxCDD Extr spike  | 59      | %        |                    |
| SS-EN-1948  | Rec 1234678 HpCDD Extr spike | 51      | %        |                    |
| SS-EN-1948  | Rec OCDD Extr spike          | 43      | %        |                    |
| SS-EN-1948  | Rec 2378 TCDF Extr spike     | 68      | %        |                    |
| SS-EN-1948  | Rec 12378 PeCDF Extr spike   | 55      | %        |                    |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

(continued)

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**REPORT**

Page 2 (2)

issued by an Accredited Laboratory

**Report No. 10279977***Assigner*

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

*Applies to***Information about the project****Solid**

Project number : Hoogvliet

**Information about sample and sampling**

|                       |                 |                 |              |
|-----------------------|-----------------|-----------------|--------------|
| Description of sample | : -             | Arrival date    | : 2010-09-24 |
| Sampling date         | : 2010-09-23    | Time of Arrival | : 1210       |
| Sample name           | : 11600075-X001 |                 |              |
| Reference             | : -             |                 |              |
| Invoice reference     | :               |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit | Uncert. of measurem. |
|-------------|------------------------------|---------|------|----------------------|
| SS-EN-1948  | Rec 23478 PeCDF Extr spike   | 58      | %    |                      |
| SS-EN-1948  | Rec 123478 HxCDF Extr spike  | 66      | %    |                      |
| SS-EN-1948  | Rec 123678 HxCDF Extr spike  | 55      | %    |                      |
| SS-EN-1948  | Rec 123789 HxCDF Extr spike  | 68      | %    |                      |
| SS-EN-1948  | Rec 234678 HxCDF Extr spike  | 60      | %    |                      |
| SS-EN-1948  | Rec 1234678 HpCDF Extr spike | 41      | %    |                      |
| SS-EN-1948  | Rec 1234789 HpCDF Extr spike | 56      | %    |                      |
| SS-EN-1948  | Rec OCDF Extr spike          | 43      | %    |                      |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

Linköping 2010-09-30

The report has been reviewed and approved by

Jan Granat  
Analyst

Control numbers 2281 6290 7326 0704



## Analyserapport

Grontmij Nederland BV  
Kea  
Postbus 485  
6800 AL ARNHEM

Blad 1 van 6

Uw projectnaam : BO Smit Draad  
Uw projectnummer : 288586.  
ALcontrol rapportnummer : 11607176, versie nummer: 1  
Rapport verificatie nummer : R6SHTEYZ

Rotterdam, 04-11-2010

Geachte heer/mevrouw,

Hierbij ontvangt u de analyse resultaten van het laboratoriumonderzoek ten behoeve van uw project 288586.. Het onderzoek werd uitgevoerd conform uw opdracht. De gerapporteerde resultaten hebben uitsluitend betrekking op de geteste monsters. De door u aangegeven omschrijvingen voor de monsters en het project zijn overgenomen in dit analyserapport.

Het onderzoek is, met uitzondering van eventueel door derden uitgevoerd onderzoek, uitgevoerd door ALcontrol Laboratories, gevestigd aan de Steenhouwerstraat 15 in Rotterdam (NL).

Dit analyserapport bestaat inclusief bijlagen uit 6 pagina's. In geval van een versienummer van '2' of hoger vervallen de voorgaande versies. Alle bijlagen maken onlosmakelijk onderdeel uit van het rapport. Alleen vermenigvuldiging van het hele rapport is toegestaan.

Uitgebreide informatie over de door ons gehanteerde analysemethoden kunt u terugvinden in onze informatiegids.

Mocht u vragen en/of opmerkingen hebben naar aanleiding van dit rapport, bijvoorbeeld als u nadere informatie nodig heeft over de meetonzekerheid van de analyseresultaten in dit rapport, dan verzoeken wij u vriendelijk contact op te nemen met de afdeling Customer Support.

Wij vertrouwen er op u met deze informatie van dienst te zijn.

Hoogachtend,



R. van Duin  
Laboratory Manager



Grontmij Nederland BV  
Kea

## Analyserapport

Blad 2 van 6

Projectnaam BO Smit Draad  
Projectnummer 288586.  
Rapportnummer 11607176 - 1

Orderdatum 13-10-2010  
Startdatum 13-10-2010  
Rapportagedatum 04-11-2010

---

|         |         |   |     |
|---------|---------|---|-----|
| Analyse | Eenheid | Q | 001 |
|---------|---------|---|-----|

---

### ANALYSES UITGEVOERD DOOR DERDEN

Dioxines (PCDD/PCDF)

zie bijlage

---

| Nummer | Monstersoort | Monsterspecificatie |
|--------|--------------|---------------------|
|--------|--------------|---------------------|

---

|     |                |                     |
|-----|----------------|---------------------|
| 001 | Grond (AS3000) | Z211-1a Z211 (0-50) |
|-----|----------------|---------------------|

---

Paraaf :



Grontmij Nederland BV  
Kea

## Analyserapport

Blad 3 van 6

Projectnaam BO Smit Draad  
Projectnummer 288586.  
Rapportnummer 11607176 - 1

Orderdatum 13-10-2010  
Startdatum 13-10-2010  
Rapportagedatum 04-11-2010

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### Monster beschrijvingen

---

001 \* De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk.

Paraaf :



Grontmij Nederland BV  
Kea

## Analyserapport

Blad 4 van 6

Projectnaam BO Smit Draad  
Projectnummer 288586  
Rapportnummer 11607176 - 1

Orderdatum 13-10-2010  
Startdatum 13-10-2010  
Rapportagedatum 04-11-2010

| Analyse              |          | Monstersoort   |             | Relatie tot norm   |  |
|----------------------|----------|----------------|-------------|--------------------|--|
| Dioxines (PCDD/PCDF) |          | Grond (AS3000) |             | Analyse uitbesteed |  |
| Monster              | Barcode  | Aanlevering    | Monstername | Verpakking         |  |
| 001                  | Y2729971 | 23-08-2010     | 23-08-2010  | ALC201             |  |

Paraaf :

**ALcontrol AB**

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Tel: +46 13 254 900 · Fax: +46 13 121 728  
Registered 556152-0916 Registered office: Linköping, Sweden



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**REPORT**

Page 1 (2)

issued by an Accredited Laboratory

**Report No. 10302091**

Assigner

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

Applies to

**Information about the project****Solid**

Project number : 11607152/11607176

**Information about sample and sampling**

|                       |                     |                 |              |
|-----------------------|---------------------|-----------------|--------------|
| Description of sample | : Solid             | Arrival date    | : 2010-10-15 |
| Sampling date         | : 2010-10-15        | Time of Arrival | : 1210       |
| Sample name           | : 607176x001        |                 |              |
| Reference             | : Marion v/d Draaij |                 |              |
| Invoice reference     | : 11607152/11607176 |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit     | Uncert. of measur. |
|-------------|------------------------------|---------|----------|--------------------|
| SS-EN 11465 | Dry Substance                | 95.4    | %        | +/-10%             |
| SS-EN-1948  | 2378 TCDD                    | 5.6     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 12378 PeCDD                  | 3.0     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123478 HxCDD                 | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123678 HxCDD                 | 3.1     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123789 HxCDD                 | 5.3     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234678 HpCDD                | 10      | ng/kg DS | +/-30%             |
| SS-EN-1948  | OCDD                         | 44      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 2378 TCDF                    | 4.4     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 12378 PeCDF                  | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 23478 PeCDF                  | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123478 HxCDF                 | 3.1     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123678 HxCDF                 | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123789 HxCDF                 | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 234678 HxCDF                 | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234678 HpCDF                | 9.7     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234789 HpCDF                | 5.9     | ng/kg DS | +/-30%             |
| SS-EN-1948  | OCDF                         | 7.8     | ng/kg DS | +/-30%             |
| SS-EN-1948  | I-PCDD/F-TEQ Lower Bound     | 9.0     | ng/kg DS | +/-35%             |
| SS-EN-1948  | I-PCDD/F-TEQ Upper Bound     | 11      | ng/kg DS | +/-35%             |
| SS-EN-1948  | Rec 2378 TCDD Extr spike     | 82      | %        |                    |
| SS-EN-1948  | Rec 12378 PeCDD Extr spike   | 104     | %        |                    |
| SS-EN-1948  | Rec 123478 HxCDD Extr spike  | 111     | %        |                    |
| SS-EN-1948  | Rec 123678 HxCDD Extr spike  | 109     | %        |                    |
| SS-EN-1948  | Rec 1234678 HpCDD Extr spike | 110     | %        |                    |
| SS-EN-1948  | Rec OCDD Extr spike          | 94      | %        |                    |
| SS-EN-1948  | Rec 2378 TCDF Extr spike     | 80      | %        |                    |
| SS-EN-1948  | Rec 12378 PeCDF Extr spike   | 80      | %        |                    |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

(continued)

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**REPORT**

Page 2 (2)

issued by an Accredited Laboratory

**Report No. 10302091***Assigner*

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

*Applies to***Information about the project****Solid**

Project number : 11607152/11607176

**Information about sample and sampling**

|                       |                     |                 |              |
|-----------------------|---------------------|-----------------|--------------|
| Description of sample | : Solid             | Arrival date    | : 2010-10-15 |
| Sampling date         | : 2010-10-15        | Time of Arrival | : 1210       |
| Sample name           | : 607176x001        |                 |              |
| Reference             | : Marion v/d Draaij |                 |              |
| Invoice reference     | : 11607152/11607176 |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit | Uncert. of measurem. |
|-------------|------------------------------|---------|------|----------------------|
| SS-EN-1948  | Rec 23478 PeCDF Extr spike   | 112     | %    |                      |
| SS-EN-1948  | Rec 123478 HxCDF Extr spike  | 115     | %    |                      |
| SS-EN-1948  | Rec 123678 HxCDF Extr spike  | 109     | %    |                      |
| SS-EN-1948  | Rec 123789 HxCDF Extr spike  | 95      | %    |                      |
| SS-EN-1948  | Rec 234678 HxCDF Extr spike  | 112     | %    |                      |
| SS-EN-1948  | Rec 1234678 HpCDF Extr spike | 104     | %    |                      |
| SS-EN-1948  | Rec 1234789 HpCDF Extr spike | 77      | %    |                      |
| SS-EN-1948  | Rec OCDF Extr spike          | 88      | %    |                      |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

Linköping 2010-11-04

The report has been reviewed and approved by

Jan Granat  
Responsible reviewer

Control numbers 0168 8995 6698 7498



## Analyserapport

Grontmij Nederland BV  
Kea  
Postbus 485  
6800 AL ARNHEM

Blad 1 van 6

Uw projectnaam : BO Smit Draad  
Uw projectnummer : 288586.  
ALcontrol rapportnummer : 11622489, versie nummer: 1  
Rapport verificatie nummer : SZ9B1EGZ

Rotterdam, 22-12-2010

Geachte heer/mevrouw,

Hierbij ontvangt u de analyse resultaten van het laboratoriumonderzoek ten behoeve van uw project 288586.. Het onderzoek werd uitgevoerd conform uw opdracht. De gerapporteerde resultaten hebben uitsluitend betrekking op de geteste monsters. De door u aangegeven omschrijvingen voor de monsters en het project zijn overgenomen in dit analyserapport.

Het onderzoek is, met uitzondering van eventueel door derden uitgevoerd onderzoek, uitgevoerd door ALcontrol Laboratories, gevestigd aan de Steenhouwerstraat 15 in Rotterdam (NL).

Dit analyserapport bestaat inclusief bijlagen uit 6 pagina's. In geval van een versienummer van '2' of hoger vervallen de voorgaande versies. Alle bijlagen maken onlosmakelijk onderdeel uit van het rapport. Alleen vermenigvuldiging van het hele rapport is toegestaan.

Uitgebreide informatie over de door ons gehanteerde analysemethoden kunt u terugvinden in onze informatiegids.

Mocht u vragen en/of opmerkingen hebben naar aanleiding van dit rapport, bijvoorbeeld als u nadere informatie nodig heeft over de meetonzekerheid van de analyseresultaten in dit rapport, dan verzoeken wij u vriendelijk contact op te nemen met de afdeling Customer Support.

Wij vertrouwen er op u met deze informatie van dienst te zijn.

Hoogachtend,



R. van Duin  
Laboratory Manager



Grontmij Nederland BV  
Kea

## Analyserapport

Blad 2 van 6

Projectnaam BO Smit Draad  
Projectnummer 288586.  
Rapportnummer 11622489 - 1

Orderdatum 25-11-2010  
Startdatum 25-11-2010  
Rapportagedatum 22-12-2010

---

|         |         |   |     |
|---------|---------|---|-----|
| Analyse | Eenheid | Q | 001 |
|---------|---------|---|-----|

---

### ANALYSES UITGEVOERD DOOR DERDEN

Dioxines (PCDD/PCDF)

zie bijlage

---

| Nummer | Monstersoort | Monsterspecificatie |
|--------|--------------|---------------------|
|--------|--------------|---------------------|

---

|     |                |                     |
|-----|----------------|---------------------|
| 001 | Grond (AS3000) | 2000-2 2000 (25-50) |
|-----|----------------|---------------------|

---

Paraaf :



Grontmij Nederland BV  
Kea

## Analyserapport

Blad 3 van 6

Projectnaam BO Smit Draad  
Projectnummer 288586.  
Rapportnummer 11622489 - 1

Orderdatum 25-11-2010  
Startdatum 25-11-2010  
Rapportagedatum 22-12-2010

---

### Monster beschrijvingen

---

001 \* De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk.

Paraaf :



Grontmij Nederland BV  
Kea

## Analyserapport

Blad 4 van 6

Projectnaam BO Smit Draad  
Projectnummer 288586  
Rapportnummer 11622489 - 1

Orderdatum 25-11-2010  
Startdatum 25-11-2010  
Rapportagedatum 22-12-2010

| Analyse              |          | Monstersoort   |             | Relatie tot norm   |                               |
|----------------------|----------|----------------|-------------|--------------------|-------------------------------|
| Dioxines (PCDD/PCDF) |          | Grond (AS3000) |             | Analyse uitbesteed |                               |
| Monster              | Barcode  | Aanlevering    | Monstername | Verpakking         |                               |
| 001                  | Y2906559 | 14-10-2010     | 14-10-2010  | ALC201             | Theoretische monsternamedatum |

Paraaf :

**ALcontrol AB**

Box 1083, 581 10 Linköping, Sweden  
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Registered 556152-0916 Registered office: Linköping, Sweden



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**REPORT**

Page 1 (2)

issued by an Accredited Laboratory

**Report No. 10354590**

Assigner

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

Applies to

**Information about the project****Solid**

Project number : 11622489

**Information about sample and sampling**

|                       |                        |                 |              |
|-----------------------|------------------------|-----------------|--------------|
| Description of sample | : Solid                | Arrival date    | : 2010-12-01 |
| Sampling date         | : 2010-12-01           | Time of Arrival | : 1200       |
| Sample name           | : 11622489x1           |                 |              |
| Reference             | : Mevr. Van Der Draaij |                 |              |
| Invoice reference     | : 11622489             |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit     | Uncert. of measur. |
|-------------|------------------------------|---------|----------|--------------------|
| SS-EN 11465 | Dry Substance                | 90.0    | %        | +/-10%             |
| SS-EN-1948  | 2378 TCDD                    | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 12378 PeCDD                  | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123478 HxCDD                 | < 2     | ng/kg DS | +/-35%             |
| SS-EN-1948  | 123678 HxCDD                 | < 2     | ng/kg DS | +/-35%             |
| SS-EN-1948  | 123789 HxCDD                 | 6.4     | ng/kg DS | +/-35%             |
| SS-EN-1948  | 1234678 HpCDD                | 25      | ng/kg DS | +/-30%             |
| SS-EN-1948  | OCDD                         | 140     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 2378 TCDF                    | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 12378 PeCDF                  | 7.3     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 23478 PeCDF                  | 31      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123478 HxCDF                 | 12      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123678 HxCDF                 | 9.8     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123789 HxCDF                 | 3.8     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 234678 HxCDF                 | 12      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234678 HpCDF                | 48      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234789 HpCDF                | 7.2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | OCDF                         | 43      | ng/kg DS | +/-30%             |
| SS-EN-1948  | I-PCDD/F-TEQ Lower Bound     | 22      | ng/kg DS | +/-35%             |
| SS-EN-1948  | I-PCDD/F-TEQ Upper Bound     | 25      | ng/kg DS | +/-35%             |
| SS-EN-1948  | Rec 2378 TCDD Extr spike     | 48      | %        |                    |
| SS-EN-1948  | Rec 12378 PeCDD Extr spike   | 46      | %        |                    |
| SS-EN-1948  | Rec 123478 HxCDD Extr spike  | 40      | %        |                    |
| SS-EN-1948  | Rec 123678 HxCDD Extr spike  | 53      | %        |                    |
| SS-EN-1948  | Rec 1234678 HpCDD Extr spike | 45      | %        |                    |
| SS-EN-1948  | Rec OCDD Extr spike          | 43      | %        |                    |
| SS-EN-1948  | Rec 2378 TCDF Extr spike     | 50      | %        |                    |
| SS-EN-1948  | Rec 12378 PeCDF Extr spike   | 50      | %        |                    |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

(continued)

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**REPORT**

Page 2 (2)

issued by an Accredited Laboratory

**Report No. 10354590***Assigner*

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

*Applies to***Information about the project****Solid**

Project number : 11622489

**Information about sample and sampling**

|                       |                        |                 |              |
|-----------------------|------------------------|-----------------|--------------|
| Description of sample | : Solid                | Arrival date    | : 2010-12-01 |
| Sampling date         | : 2010-12-01           | Time of Arrival | : 1200       |
| Sample name           | : 11622489x1           |                 |              |
| Reference             | : Mevr. Van Der Draaij |                 |              |
| Invoice reference     | : 11622489             |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit | Uncert. of measurem. |
|-------------|------------------------------|---------|------|----------------------|
| SS-EN-1948  | Rec 23478 PeCDF Extr spike   | 47      | %    |                      |
| SS-EN-1948  | Rec 123478 HxCDF Extr spike  | 48      | %    |                      |
| SS-EN-1948  | Rec 123678 HxCDF Extr spike  | 53      | %    |                      |
| SS-EN-1948  | Rec 123789 HxCDF Extr spike  | 50      | %    |                      |
| SS-EN-1948  | Rec 234678 HxCDF Extr spike  | 49      | %    |                      |
| SS-EN-1948  | Rec 1234678 HpCDF Extr spike | 44      | %    |                      |
| SS-EN-1948  | Rec 1234789 HpCDF Extr spike | 47      | %    |                      |
| SS-EN-1948  | Rec OCDF Extr spike          | 42      | %    |                      |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

Linköping 2010-12-22

The report has been reviewed and approved by

**Frida Björklund**  
Responsible reviewer

Control numbers 0169 8193 6846 5141



## Analyserapport

Grontmij Nederland BV  
Kea  
Postbus 485  
6800 AL ARNHEM

Blad 1 van 6

Uw projectnaam : BO Smit Draad  
Uw projectnummer : 288586.  
ALcontrol rapportnummer : 11607152, versie nummer: 1  
Rapport verificatie nummer : EMUKKD9P

Rotterdam, 04-11-2010

Geachte heer/mevrouw,

Hierbij ontvangt u de analyse resultaten van het laboratoriumonderzoek ten behoeve van uw project 288586.. Het onderzoek werd uitgevoerd conform uw opdracht. De gerapporteerde resultaten hebben uitsluitend betrekking op de geteste monsters. De door u aangegeven omschrijvingen voor de monsters en het project zijn overgenomen in dit analyserapport.

Het onderzoek is, met uitzondering van eventueel door derden uitgevoerd onderzoek, uitgevoerd door ALcontrol Laboratories, gevestigd aan de Steenhouwerstraat 15 in Rotterdam (NL).

Dit analyserapport bestaat inclusief bijlagen uit 6 pagina's. In geval van een versienummer van '2' of hoger vervallen de voorgaande versies. Alle bijlagen maken onlosmakelijk onderdeel uit van het rapport. Alleen vermenigvuldiging van het hele rapport is toegestaan.

Uitgebreide informatie over de door ons gehanteerde analysemethoden kunt u terugvinden in onze informatiegids.

Mocht u vragen en/of opmerkingen hebben naar aanleiding van dit rapport, bijvoorbeeld als u nadere informatie nodig heeft over de meetonzekerheid van de analyseresultaten in dit rapport, dan verzoeken wij u vriendelijk contact op te nemen met de afdeling Customer Support.

Wij vertrouwen er op u met deze informatie van dienst te zijn.

Hoogachtend,



R. van Duin  
Laboratory Manager



Grontmij Nederland BV  
Kea

## Analyserapport

Blad 2 van 6

Projectnaam BO Smit Draad  
Projectnummer 288586.  
Rapportnummer 11607152 - 1

Orderdatum 13-10-2010  
Startdatum 13-10-2010  
Rapportagedatum 04-11-2010

---

|         |         |   |     |
|---------|---------|---|-----|
| Analyse | Eenheid | Q | 001 |
|---------|---------|---|-----|

---

### ANALYSES UITGEVOERD DOOR DERDEN

Dioxines (PCDD/PCDF)

zie bijlage

---

| Nummer | Monstersoort | Monsterspecificatie |
|--------|--------------|---------------------|
|--------|--------------|---------------------|

---

|     |                |               |
|-----|----------------|---------------|
| 001 | Grond (AS3000) | Z207 (70-100) |
|-----|----------------|---------------|

---

Paraaf :



Grontmij Nederland BV  
Kea

## Analyserapport

Blad 3 van 6

Projectnaam BO Smit Draad  
Projectnummer 288586.  
Rapportnummer 11607152 - 1

Orderdatum 13-10-2010  
Startdatum 13-10-2010  
Rapportagedatum 04-11-2010

---

### Monster beschrijvingen

---

001 \* De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk.

Paraaf :



Grontmij Nederland BV  
Kea

## Analyserapport

Blad 4 van 6

Projectnaam BO Smit Draad  
Projectnummer 288586.  
Rapportnummer 11607152 - 1

Orderdatum 13-10-2010  
Startdatum 13-10-2010  
Rapportagedatum 04-11-2010

| Analyse              |          | Monstersoort   |             | Relatie tot norm   |                               |
|----------------------|----------|----------------|-------------|--------------------|-------------------------------|
| Dioxines (PCDD/PCDF) |          | Grond (AS3000) |             | Analyse uitbesteed |                               |
| Monster              | Barcode  | Aanlevering    | Monstername | Verpakking         |                               |
| 001                  | Y2729980 | 23-08-2010     | 23-08-2010  | ALC201             | Theoretische monsternamedatum |

Paraaf :

**ALcontrol AB**

Box 1083, 581 10 Linköping, Sweden  
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Registered 556152-0916 Registered office: Linköping, Sweden



1006  
ISO/IEC 17025

**REPORT**

Page 1 (2)

issued by an Accredited Laboratory

**Report No. 10302084***Assigner*

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

*Applies to***Information about the project****Solid**

Project number : 11607152/11607176

**Information about sample and sampling**

|                       |                     |                 |              |
|-----------------------|---------------------|-----------------|--------------|
| Description of sample | : Solid             | Arrival date    | : 2010-10-15 |
| Sampling date         | : 2010-10-15        | Time of Arrival | : 1210       |
| Sample name           | : 607152x001        |                 |              |
| Reference             | : Marion v/d Draaij |                 |              |
| Invoice reference     | : 11607152/11607176 |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit     | Uncert. of measur. |
|-------------|------------------------------|---------|----------|--------------------|
| SS-EN 11465 | Dry Substance                | 89.5    | %        | +/-10%             |
| SS-EN-1948  | 2378 TCDD                    | 6.8     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 12378 PeCDD                  | 2.9     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123478 HxCDD                 | < 2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123678 HxCDD                 | 3.1     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123789 HxCDD                 | 23      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234678 HpCDD                | 92      | ng/kg DS | +/-30%             |
| SS-EN-1948  | OCDD                         | 750     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 2378 TCDF                    | 4.9     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 12378 PeCDF                  | 2.9     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 23478 PeCDF                  | 7.6     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123478 HxCDF                 | 12      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123678 HxCDF                 | 6.2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123789 HxCDF                 | 11      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 234678 HxCDF                 | 7.6     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234678 HpCDF                | 130     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234789 HpCDF                | 25      | ng/kg DS | +/-30%             |
| SS-EN-1948  | OCDF                         | 440     | ng/kg DS | +/-30%             |
| SS-EN-1948  | I-PCDD/F-TEQ Lower Bound     | 22      | ng/kg DS | +/-35%             |
| SS-EN-1948  | I-PCDD/F-TEQ Upper Bound     | 23      | ng/kg DS | +/-35%             |
| SS-EN-1948  | Rec 2378 TCDD Extr spike     | 100     | %        |                    |
| SS-EN-1948  | Rec 12378 PeCDD Extr spike   | 117     | %        |                    |
| SS-EN-1948  | Rec 123478 HxCDD Extr spike  | 128     | %        |                    |
| SS-EN-1948  | Rec 123678 HxCDD Extr spike  | 104     | %        |                    |
| SS-EN-1948  | Rec 1234678 HpCDD Extr spike | 111     | %        |                    |
| SS-EN-1948  | Rec OCDD Extr spike          | 95      | %        |                    |
| SS-EN-1948  | Rec 2378 TCDF Extr spike     | 102     | %        |                    |
| SS-EN-1948  | Rec 12378 PeCDF Extr spike   | 97      | %        |                    |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

(continued)

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**REPORT**

Page 2 (2)

issued by an Accredited Laboratory

**Report No. 10302084***Assigner*

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

*Applies to***Information about the project****Solid**

Project number : 11607152/11607176

**Information about sample and sampling**

|                       |                     |                 |              |
|-----------------------|---------------------|-----------------|--------------|
| Description of sample | : Solid             | Arrival date    | : 2010-10-15 |
| Sampling date         | : 2010-10-15        | Time of Arrival | : 1210       |
| Sample name           | : 607152x001        |                 |              |
| Reference             | : Marion v/d Draaij |                 |              |
| Invoice reference     | : 11607152/11607176 |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit | Uncert. of measurem. |
|-------------|------------------------------|---------|------|----------------------|
| SS-EN-1948  | Rec 23478 PeCDF Extr spike   | 124     | %    |                      |
| SS-EN-1948  | Rec 123478 HxCDF Extr spike  | 126     | %    |                      |
| SS-EN-1948  | Rec 123678 HxCDF Extr spike  | 118     | %    |                      |
| SS-EN-1948  | Rec 123789 HxCDF Extr spike  | 110     | %    |                      |
| SS-EN-1948  | Rec 234678 HxCDF Extr spike  | 120     | %    |                      |
| SS-EN-1948  | Rec 1234678 HpCDF Extr spike | 106     | %    |                      |
| SS-EN-1948  | Rec 1234789 HpCDF Extr spike | 88      | %    |                      |
| SS-EN-1948  | Rec OCDF Extr spike          | 89      | %    |                      |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

Linköping 2010-11-04

The report has been reviewed and approved by

Jan Granat  
Responsible reviewer

Control numbers 1516 8094 6790 7298



## Analyserapport

Grontmij Nederland BV  
Kea  
Postbus 485  
6800 AL ARNHEM

Blad 1 van 14

Uw projectnaam : BO Smit Draad  
Uw projectnummer : 288586.  
ALcontrol rapportnummer : 11610461, versie nummer: 1  
Rapport verificatie nummer : QX37NG18

Rotterdam, 19-11-2010

Geachte heer/mevrouw,

Hierbij ontvangt u de analyse resultaten van het laboratoriumonderzoek ten behoeve van uw project 288586.. Het onderzoek werd uitgevoerd conform uw opdracht. De gerapporteerde resultaten hebben uitsluitend betrekking op de geteste monsters. De door u aangegeven omschrijvingen voor de monsters en het project zijn overgenomen in dit analyserapport.

Het onderzoek is, met uitzondering van eventueel door derden uitgevoerd onderzoek, uitgevoerd door ALcontrol Laboratories, gevestigd aan de Steenhouwerstraat 15 in Rotterdam (NL).

Dit analyserapport bestaat inclusief bijlagen uit 14 pagina's. In geval van een versienummer van '2' of hoger vervallen de voorgaande versies. Alle bijlagen maken onlosmakelijk onderdeel uit van het rapport. Alleen vermenigvuldiging van het hele rapport is toegestaan.

Uitgebreide informatie over de door ons gehanteerde analysemethoden kunt u terugvinden in onze informatiegids.

Mocht u vragen en/of opmerkingen hebben naar aanleiding van dit rapport, bijvoorbeeld als u nadere informatie nodig heeft over de meetonzekerheid van de analyseresultaten in dit rapport, dan verzoeken wij u vriendelijk contact op te nemen met de afdeling Customer Support.

Wij vertrouwen er op u met deze informatie van dienst te zijn.

Hoogachtend,



R. van Duin  
Laboratory Manager



Grontmij Nederland BV  
Kea

## Analyserapport

Blad 2 van 14

Projectnaam BO Smit Draad  
Projectnummer 288586.  
Rapportnummer 11610461 - 1

Orderdatum 21-10-2010  
Startdatum 21-10-2010  
Rapportagedatum 19-11-2010

| Analyse              | Eenheid | Q | 001         | 002         | 003         | 004         | 005         |
|----------------------|---------|---|-------------|-------------|-------------|-------------|-------------|
| Dioxines (PCDD/PCDF) |         |   | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

| Nummer | Monstersoort   | Monsterspecificatie    |
|--------|----------------|------------------------|
| 001    | Grond (AS3000) | 2000-1 2000 (0-25)     |
| 002    | Grond (AS3000) | 2001-1 2001 (8-33)     |
| 003    | Grond (AS3000) | 2002-1 2002 (8-33)     |
| 004    | Grond (AS3000) | MM2003-1 MM2003 (0-25) |
| 005    | Grond (AS3000) | MM2004-1 MM2004 (0-25) |

Paraaf :



Grontmij Nederland BV  
Kea

## Analyserapport

Blad 3 van 14

Projectnaam BO Smit Draad  
Projectnummer 288586.  
Rapportnummer 11610461 - 1

Orderdatum 21-10-2010  
Startdatum 21-10-2010  
Rapportagedatum 19-11-2010

---

### Monster beschrijvingen

---

- |     |   |                                                                                                                                                                          |
|-----|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 001 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 002 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 003 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 004 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 005 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

Paraaf :



Grontmij Nederland BV  
Kea

## Analysrapport

Blad 4 van 14

Projectnaam BO Smit Draad  
Projectnummer 288586.  
Rapportnummer 11610461 - 1

Orderdatum 21-10-2010  
Startdatum 21-10-2010  
Rapportagedatum 19-11-2010

| Analyse              |          | Monstersoort   |             | Relatie tot norm   |
|----------------------|----------|----------------|-------------|--------------------|
| Dioxines (PCDD/PCDF) |          | Grond (AS3000) |             | Analyse uitbesteed |
| Monster              | Barcode  | Aanlevering    | Monstername | Verpakking         |
| 001                  | Y2906583 | 14-10-2010     | 14-10-2010  | ALC201             |
| 002                  | Y2906179 | 14-10-2010     | 14-10-2010  | ALC201             |
| 003                  | Y2906231 | 14-10-2010     | 14-10-2010  | ALC201             |
| 004                  | Y2906164 | 14-10-2010     | 14-10-2010  | ALC201             |
| 005                  | Y2906225 | 14-10-2010     | 14-10-2010  | ALC201             |

Paraaf :



ALcontrol Laboratories

## ALcontrol AB

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## REPORT

Page 1 (2)

issued by an Accredited Laboratory

Report No. 10312899

## Assigner

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

## Applies to

## Information about the project

Solid

Project number : 11610461II Solid

## Information about sample and sampling

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2010-10-26 |
| Sampling date         | : 2010-10-25       | Time of Arrival | : 1230       |
| Sample name           | : 11610461 x1      |                 |              |
| Reference             | : Mevr. v/d Draaij |                 |              |
| Invoice reference     | : 11610461         |                 |              |

## Results of the analyses

| Test method | Analysis / Investigation of  | Results | Unit     | Uncert. of measurem. |
|-------------|------------------------------|---------|----------|----------------------|
| SS-EN 11465 | Dry Substance                | 92.7    | %        | +/-10%               |
| SS-EN-1948  | 2378 TCDD                    | 9.7     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 12378 PeCDD                  | 8.7     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123478 HxCDD                 | 18      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123678 HxCDD                 | 18      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123789 HxCDD                 | 78      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 1234678 HpCDD                | 110     | ng/kg DS | +/-30%               |
| SS-EN-1948  | OCDD                         | 370     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 2378 TCDF                    | 16      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 12378 PeCDF                  | 10      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 23478 PeCDF                  | 4.9     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123478 HxCDF                 | 15      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123678 HxCDF                 | 15      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123789 HxCDF                 | 19      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 234678 HxCDF                 | 25      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 1234678 HpCDF                | 94      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 1234789 HpCDF                | 76      | ng/kg DS | +/-30%               |
| SS-EN-1948  | OCDF                         | 150     | ng/kg DS | +/-30%               |
| SS-EN-1948  | I-PCDD/F-TEQ Lower Bound     | 41      | ng/kg DS | +/-35%               |
| SS-EN-1948  | I-PCDD/F-TEQ Upper Bound     | 41      | ng/kg DS | +/-35%               |
| SS-EN-1948  | Rec 2378 TCDD Extr spike     | 47      | %        |                      |
| SS-EN-1948  | Rec 12378 PeCDD Extr spike   | 62      | %        |                      |
| SS-EN-1948  | Rec 123478 HxCDD Extr spike  | 65      | %        |                      |
| SS-EN-1948  | Rec 123678 HxCDD Extr spike  | 42      | %        |                      |
| SS-EN-1948  | Rec 1234678 HpCDD Extr spike | 64      | %        |                      |
| SS-EN-1948  | Rec OCDD Extr spike          | 69      | %        |                      |
| SS-EN-1948  | Rec 2378 TCDF Extr spike     | 70      | %        |                      |
| SS-EN-1948  | Rec 12378 PeCDF Extr spike   | 75      | %        |                      |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

(continued)



ALcontrol Laboratories

**ALcontrol AB**

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**REPORT**

Page 2 (2)

issued by an Accredited Laboratory

**Report No. 10312899***Assigner*

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

*Applies to***Information about the project****Solid**

Project number : 11610461II Solid

**Information about sample and sampling**

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2010-10-26 |
| Sampling date         | : 2010-10-25       | Time of Arrival | : 1230       |
| Sample name           | : 11610461 x1      |                 |              |
| Reference             | : Mevr. v/d Draaij |                 |              |
| Invoice reference     | : 11610461         |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit | Uncert. of measure. |
|-------------|------------------------------|---------|------|---------------------|
| SS-EN-1948  | Rec 23478 PeCDF Extr spike   | 69      | %    |                     |
| SS-EN-1948  | Rec 123478 HxCDF Extr spike  | 60      | %    |                     |
| SS-EN-1948  | Rec 123678 HxCDF Extr spike  | 46      | %    |                     |
| SS-EN-1948  | Rec 123789 HxCDF Extr spike  | 69      | %    |                     |
| SS-EN-1948  | Rec 234678 HxCDF Extr spike  | 54      | %    |                     |
| SS-EN-1948  | Rec 1234678 HpCDF Extr spike | 53      | %    |                     |
| SS-EN-1948  | Rec 1234789 HpCDF Extr spike | 74      | %    |                     |
| SS-EN-1948  | Rec OCDF Extr spike          | 70      | %    |                     |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case Interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

**Comment**

For Dioxins, some recoveries of Internal Standards differ from accredited values, which are 50 to 130% for Tetra-Hexa compounds and 40 to 130% for Hepta- Octa compounds. The analytical results are compensated for differences in recoveries.

Linköping 2010-11-10

The report has been reviewed and approved by

Jan Granat  
Responsible reviewer

Control numbers 0160 8495 6785 7210

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ALcontrol Laboratories

## ALcontrol AB

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## REPORT

Page 1 (2)

issued by an Accredited Laboratory

Report No. 10312900

## Assigner

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

## Applies to

## Information about the project

Solid

Project number : 11610461II Solid

## Information about sample and sampling

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2010-10-26 |
| Sampling date         | : 2010-10-25       | Time of Arrival | : 1230       |
| Sample name           | : 11610461 x2      |                 |              |
| Reference             | : Mevr. v/d Draaij |                 |              |
| Invoice reference     | : 11610461         |                 |              |

## Results of the analyses

| Test method | Analysis / Investigation of  | Results | Unit     | Uncert. of measurem. |
|-------------|------------------------------|---------|----------|----------------------|
| SS-EN 11465 | Dry Substance                | 94.5    | %        | +/-10%               |
| SS-EN-1948  | 2378 TCDD                    | 6.8     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 12378 PeCDD                  | 4.1     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123478 HxCDD                 | 12      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123678 HxCDD                 | 10      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123789 HxCDD                 | 34      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 1234678 HpCDD                | 88      | ng/kg DS | +/-30%               |
| SS-EN-1948  | OCDD                         | 320     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 2378 TCDF                    | 11      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 12378 PeCDF                  | 7.1     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 23478 PeCDF                  | 7.7     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123478 HxCDF                 | 5.9     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123678 HxCDF                 | 8.7     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123789 HxCDF                 | 10      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 234678 HxCDF                 | 13      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 1234678 HpCDF                | 66      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 1234789 HpCDF                | 47      | ng/kg DS | +/-30%               |
| SS-EN-1948  | OCDF                         | 110     | ng/kg DS | +/-30%               |
| SS-EN-1948  | I-PCDD/F-TEQ Lower Bound     | 26      | ng/kg DS | +/-35%               |
| SS-EN-1948  | I-PCDD/F-TEQ Upper Bound     | 26      | ng/kg DS | +/-35%               |
| SS-EN-1948  | Rec 2378 TCDD Extr spike     | 40      | %        |                      |
| SS-EN-1948  | Rec 12378 PeCDD Extr spike   | 59      | %        |                      |
| SS-EN-1948  | Rec 123478 HxCDD Extr spike  | 58      | %        |                      |
| SS-EN-1948  | Rec 123678 HxCDD Extr spike  | 54      | %        |                      |
| SS-EN-1948  | Rec 1234678 HpCDD Extr spike | 65      | %        |                      |
| SS-EN-1948  | Rec OCDD Extr spike          | 73      | %        |                      |
| SS-EN-1948  | Rec 2378 TCDF Extr spike     | 64      | %        |                      |
| SS-EN-1948  | Rec 12378 PeCDF Extr spike   | 74      | %        |                      |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

(continued)



ALcontrol Laboratories

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**REPORT**

Page 2 (2)

issued by an Accredited Laboratory

**Report No. 10312900**

Assigner

ALcontrol Laboratories  
HoogvlietSteenhouwerstraat 15  
3194AG Hoogvliet, NL

Applies to

**Information about the project****Solid**

Project number : 11610461II Solid

**Information about sample and sampling**

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2010-10-26 |
| Sampling date         | : 2010-10-25       | Time of Arrival | : 1230       |
| Sample name           | : 11610461 x2      |                 |              |
| Reference             | : Mevr. v/d Draaij |                 |              |
| Invoice reference     | : 11610461         |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit | Uncert. of measur. |
|-------------|------------------------------|---------|------|--------------------|
| SS-EN-1948  | Rec 23478 PeCDF Extr spike   | 67      | %    |                    |
| SS-EN-1948  | Rec 123478 HxCDF Extr spike  | 61      | %    |                    |
| SS-EN-1948  | Rec 123678 HxCDF Extr spike  | 48      | %    |                    |
| SS-EN-1948  | Rec 123789 HxCDF Extr spike  | 69      | %    |                    |
| SS-EN-1948  | Rec 234678 HxCDF Extr spike  | 60      | %    |                    |
| SS-EN-1948  | Rec 1234678 HpCDF Extr spike | 59      | %    |                    |
| SS-EN-1948  | Rec 1234789 HpCDF Extr spike | 77      | %    |                    |
| SS-EN-1948  | Rec OCDF Extr spike          | 77      | %    |                    |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

**Comment**

For Dioxins, some recoveries of Internal Standards differ from accredited values, which are 50 to 130% for Tetra-Hexa compounds and 40 to 130% for Hepta- Octa compounds. The analytical results are compensated for differences in recoveries.

Linköping 2010-11-10

The report has been reviewed and approved by

Jan Granat  
Responsible reviewer

Control numbers 9981 9567 8416 7701

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ALcontrol Laboratories

## ALcontrol AB

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Registered 556152-0916 Registered office: Linköping, Sweden



## REPORT

Page 1 (2)

issued by an Accredited Laboratory

Report No. 10312902

## Assigner

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

## Applies to

## Information about the project

Solid

Project number : 11610461II Solid

## Information about sample and sampling

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2010-10-26 |
| Sampling date         | : 2010-10-25       | Time of Arrival | : 1230       |
| Sample name           | : 11610461 x3      |                 |              |
| Reference             | : Mevr. v/d Draaij |                 |              |
| Invoice reference     | : 11610461         |                 |              |

## Results of the analyses

| Test method | Analysis / Investigation of  | Results | Unit     | Uncert. of measurem. |
|-------------|------------------------------|---------|----------|----------------------|
| SS-EN 11465 | Dry Substance                | 97.4    | %        | +/-10%               |
| SS-EN-1948  | 2378 TCDD                    | 3.0     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 12378 PeCDD                  | < 2     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123478 HxCDD                 | 4.0     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123678 HxCDD                 | 6.1     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123789 HxCDD                 | 19      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 1234678 HpCDD                | 43      | ng/kg DS | +/-30%               |
| SS-EN-1948  | OCDD                         | 160     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 2378 TCDF                    | < 2     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 12378 PeCDF                  | < 2     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 23478 PeCDF                  | 2.7     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123478 HxCDF                 | 3.3     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123678 HxCDF                 | 3.4     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123789 HxCDF                 | 4.7     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 234678 HxCDF                 | 6.0     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 1234678 HpCDF                | 29      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 1234789 HpCDF                | 24      | ng/kg DS | +/-30%               |
| SS-EN-1948  | OCDF                         | 66      | ng/kg DS | +/-30%               |
| SS-EN-1948  | I-PCDD/F-TEQ Lower Bound     | 10      | ng/kg DS | +/-35%               |
| SS-EN-1948  | I-PCDD/F-TEQ Upper Bound     | 11      | ng/kg DS | +/-35%               |
| SS-EN-1948  | Rec 2378 TCDD Extr spike     | 53      | %        |                      |
| SS-EN-1948  | Rec 12378 PeCDD Extr spike   | 52      | %        |                      |
| SS-EN-1948  | Rec 123478 HxCDD Extr spike  | 53      | %        |                      |
| SS-EN-1948  | Rec 123678 HxCDD Extr spike  | 45      | %        |                      |
| SS-EN-1948  | Rec 1234678 HpCDD Extr spike | 61      | %        |                      |
| SS-EN-1948  | Rec OCDD Extr spike          | 67      | %        |                      |
| SS-EN-1948  | Rec 2378 TCDF Extr spike     | 59      | %        |                      |
| SS-EN-1948  | Rec 12378 PeCDF Extr spike   | 61      | %        |                      |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

(continued)

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**REPORT**

Page 2 (2)

issued by an Accredited Laboratory

**Report No. 10312902***Assigner*

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

*Applies to***Information about the project****Solid**

Project number : 11610461II Solid

**Information about sample and sampling**

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2010-10-26 |
| Sampling date         | : 2010-10-25       | Time of Arrival | : 1230       |
| Sample name           | : 11610461 x3      |                 |              |
| Reference             | : Mevr. v/d Draaij |                 |              |
| Invoice reference     | : 11610461         |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit | Uncert. of measurem. |
|-------------|------------------------------|---------|------|----------------------|
| SS-EN-1948  | Rec 23478 PeCDF Extr spike   | 58      | %    |                      |
| SS-EN-1948  | Rec 123478 HxCDF Extr spike  | 56      | %    |                      |
| SS-EN-1948  | Rec 123678 HxCDF Extr spike  | 46      | %    |                      |
| SS-EN-1948  | Rec 123789 HxCDF Extr spike  | 61      | %    |                      |
| SS-EN-1948  | Rec 234678 HxCDF Extr spike  | 53      | %    |                      |
| SS-EN-1948  | Rec 1234678 HpCDF Extr spike | 54      | %    |                      |
| SS-EN-1948  | Rec 1234789 HpCDF Extr spike | 66      | %    |                      |
| SS-EN-1948  | Rec OCDF Extr spike          | 67      | %    |                      |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

**Comment**

For Dioxins, some recoveries of Internal Standards differ from accredited values, which are 50 to 130% for Tetra-Hexa compounds and 40 to 130% for Hepta- Octa compounds. The analytical results are compensated for differences in recoveries.

Linköping 2010-11-10

The report has been reviewed and approved by

Jan Granat  
Responsible reviewer

Control numbers 9780 9269 8016 7503

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**REPORT**

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Page 1 (2)

**Report No. 10312903***Assigner*

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

*Applies to***Information about the project****Solid**

Project number : 11610461II Solid

**Information about sample and sampling**

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2010-10-26 |
| Sampling date         | : 2010-10-25       | Time of Arrival | : 1230       |
| Sample name           | : 11610461 x4      |                 |              |
| Reference             | : Mevr. v/d Draaij |                 |              |
| Invoice reference     | : 11610461         |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit     | Uncert. of measur. |
|-------------|------------------------------|---------|----------|--------------------|
| SS-EN 11465 | Dry Substance                | 91.0    | %        | +/-10%             |
| SS-EN-1948  | 2378 TCDD                    | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 12378 PeCDD                  | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123478 HxCDD                 | <2      | ng/kg DS | +/-35%             |
| SS-EN-1948  | 123678 HxCDD                 | <2      | ng/kg DS | +/-35%             |
| SS-EN-1948  | 123789 HxCDD                 | <2      | ng/kg DS | +/-35%             |
| SS-EN-1948  | 1234678 HpCDD                | 29      | ng/kg DS | +/-30%             |
| SS-EN-1948  | OCDD                         | 28      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 2378 TCDF                    | 2.5     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 12378 PeCDF                  | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 23478 PeCDF                  | 2.4     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123478 HxCDF                 | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123678 HxCDF                 | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123789 HxCDF                 | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 234678 HxCDF                 | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234678 HpCDF                | 19      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234789 HpCDF                | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | OCDF                         | 21      | ng/kg DS | +/-30%             |
| SS-EN-1948  | I-PCDD/F-TEQ Lower Bound     | <2      | ng/kg DS | +/-35%             |
| SS-EN-1948  | I-PCDD/F-TEQ Upper Bound     | 6.5     | ng/kg DS | +/-35%             |
| SS-EN-1948  | Rec 2378 TCDD Extr spike     | 53      | %        |                    |
| SS-EN-1948  | Rec 12378 PeCDD Extr spike   | 51      | %        |                    |
| SS-EN-1948  | Rec 123478 HxCDD Extr spike  | 51      | %        |                    |
| SS-EN-1948  | Rec 123678 HxCDD Extr spike  | 57      | %        |                    |
| SS-EN-1948  | Rec 1234678 HpCDD Extr spike | 59      | %        |                    |
| SS-EN-1948  | Rec OCDD Extr spike          | 32      | %        |                    |
| SS-EN-1948  | Rec 2378 TCDF Extr spike     | 55      | %        |                    |
| SS-EN-1948  | Rec 12378 PeCDF Extr spike   | 59      | %        |                    |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

(continued)



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**REPORT**

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Page 2 (2)

**Report No. 10312903***Assigner*

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

*Applies to***Information about the project****Solid**

Project number : 11610461II Solid

**Information about sample and sampling**

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2010-10-26 |
| Sampling date         | : 2010-10-25       | Time of Arrival | : 1230       |
| Sample name           | : 11610461 x4      |                 |              |
| Reference             | : Mevr. v/d Draaij |                 |              |
| Invoice reference     | : 11610461         |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit | Uncert. of measure. |
|-------------|------------------------------|---------|------|---------------------|
| SS-EN-1948  | Rec 23478 PeCDF Extr spike   | 56      | %    |                     |
| SS-EN-1948  | Rec 123478 HxCDF Extr spike  | 59      | %    |                     |
| SS-EN-1948  | Rec 123678 HxCDF Extr spike  | 58      | %    |                     |
| SS-EN-1948  | Rec 123789 HxCDF Extr spike  | 67      | %    |                     |
| SS-EN-1948  | Rec 234678 HxCDF Extr spike  | 57      | %    |                     |
| SS-EN-1948  | Rec 1234678 HpCDF Extr spike | 59      | %    |                     |
| SS-EN-1948  | Rec 1234789 HpCDF Extr spike | 67      | %    |                     |
| SS-EN-1948  | Rec OCDF Extr spike          | 41      | %    |                     |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

Linköping 2010-11-19

The report has been reviewed and approved by

Jan Granat  
Responsible reviewer

Control numbers 9689 9767 8916 7306

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## REPORT

Page 1 (2)

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Report No. 10312904

## Assigner

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

## Applies to

## Information about the project

Solid

Project number : 11610461II Solid

## Information about sample and sampling

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2010-10-26 |
| Sampling date         | : 2010-10-25       | Time of Arrival | : 1230       |
| Sample name           | : 11610461 x5      |                 |              |
| Reference             | : Mevr. v/d Draaij |                 |              |
| Invoice reference     | : 11610461         |                 |              |

## Results of the analyses

| Test method | Analysis / Investigation of  | Results | Unit     | Uncert. of measure. |
|-------------|------------------------------|---------|----------|---------------------|
| SS-EN 11465 | Dry Substance                | 87.3    | %        | +/-10%              |
| SS-EN-1948  | 2378 TCDD                    | 4.2     | ng/kg DS | +/-30%              |
| SS-EN-1948  | 12378 PeCDD                  | 2.2     | ng/kg DS | +/-30%              |
| SS-EN-1948  | 123478 HxCDD                 | < 2     | ng/kg DS | +/-30%              |
| SS-EN-1948  | 123678 HxCDD                 | 5.1     | ng/kg DS | +/-30%              |
| SS-EN-1948  | 123789 HxCDD                 | 6.2     | ng/kg DS | +/-30%              |
| SS-EN-1948  | 1234678 HpCDD                | 36      | ng/kg DS | +/-30%              |
| SS-EN-1948  | OCDD                         | 210     | ng/kg DS | +/-30%              |
| SS-EN-1948  | 2378 TCDF                    | 11      | ng/kg DS | +/-30%              |
| SS-EN-1948  | 12378 PeCDF                  | 5.0     | ng/kg DS | +/-30%              |
| SS-EN-1948  | 23478 PeCDF                  | 10      | ng/kg DS | +/-30%              |
| SS-EN-1948  | 123478 HxCDF                 | 11      | ng/kg DS | +/-30%              |
| SS-EN-1948  | 123678 HxCDF                 | 4.2     | ng/kg DS | +/-30%              |
| SS-EN-1948  | 123789 HxCDF                 | < 2     | ng/kg DS | +/-30%              |
| SS-EN-1948  | 234678 HxCDF                 | 7.3     | ng/kg DS | +/-30%              |
| SS-EN-1948  | 1234678 HpCDF                | 31      | ng/kg DS | +/-30%              |
| SS-EN-1948  | 1234789 HpCDF                | 6.1     | ng/kg DS | +/-30%              |
| SS-EN-1948  | OCDF                         | 64      | ng/kg DS | +/-30%              |
| SS-EN-1948  | I-PCDD/F-TEQ Lower Bound     | 16      | ng/kg DS | +/-35%              |
| SS-EN-1948  | I-PCDD/F-TEQ Upper Bound     | 17      | ng/kg DS | +/-35%              |
| SS-EN-1948  | Rec 2378 TCDD Extr spike     | 71      | %        |                     |
| SS-EN-1948  | Rec 12378 PeCDD Extr spike   | 97      | %        |                     |
| SS-EN-1948  | Rec 123478 HxCDD Extr spike  | 111     | %        |                     |
| SS-EN-1948  | Rec 123678 HxCDD Extr spike  | 77      | %        |                     |
| SS-EN-1948  | Rec 1234678 HpCDD Extr spike | 103     | %        |                     |
| SS-EN-1948  | Rec OCDD Extr spike          | 108     | %        |                     |
| SS-EN-1948  | Rec 2378 TCDF Extr spike     | 118     | %        |                     |
| SS-EN-1948  | Rec 12378 PeCDF Extr spike   | 56      | %        |                     |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

(continued)



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**REPORT**

Page 2 (2)

issued by an Accredited Laboratory

**Report No. 10312904***Assigner*

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

*Applies to***Information about the project****Solid**

Project number : 11610461II Solid

**Information about sample and sampling**

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2010-10-26 |
| Sampling date         | : 2010-10-25       | Time of Arrival | : 1230       |
| Sample name           | : 11610461 x5      |                 |              |
| Reference             | : Mevr. v/d Draaij |                 |              |
| Invoice reference     | : 11610461         |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit | Uncert. of measur. |
|-------------|------------------------------|---------|------|--------------------|
| SS-EN-1948  | Rec 23478 PeCDF Extr spike   | 112     | %    |                    |
| SS-EN-1948  | Rec 123478 HxCDF Extr spike  | 100     | %    |                    |
| SS-EN-1948  | Rec 123678 HxCDF Extr spike  | 84      | %    |                    |
| SS-EN-1948  | Rec 123789 HxCDF Extr spike  | 54      | %    |                    |
| SS-EN-1948  | Rec 234678 HxCDF Extr spike  | 95      | %    |                    |
| SS-EN-1948  | Rec 1234678 HpCDF Extr spike | 97      | %    |                    |
| SS-EN-1948  | Rec 1234789 HpCDF Extr spike | 59      | %    |                    |
| SS-EN-1948  | Rec OCDF Extr spike          | 112     | %    |                    |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

Linköping 2010-11-10

The report has been reviewed and approved by

Jan Granat  
Responsible reviewer

Control numbers 9584 9363 8116 7607

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## Analysrapport

Grontmij Nederland BV

Kea

Postbus 485

6800 AL ARNHEM

Blad 1 van 18

Uw projectnaam : BO Smit Draad  
Uw projectnummer : 288586-2011  
ALcontrol rapportnummer : 11643173, versie nummer: 1  
Rapport verificatie nummer : AJLVDSPC

Rotterdam, 01-03-2011

Geachte heer/mevrouw,

Hierbij ontvangt u de analyse resultaten van het laboratoriumonderzoek ten behoeve van uw project 288586-2011. Het onderzoek werd uitgevoerd conform uw opdracht. De gerapporteerde resultaten hebben uitsluitend betrekking op de geteste monsters. De door u aangegeven omschrijvingen voor de monsters en het project zijn overgenomen in dit analysrapport.

Het onderzoek is, met uitzondering van eventueel door derden uitgevoerd onderzoek, uitgevoerd door ALcontrol Laboratories, gevestigd aan de Steenhouwerstraat 15 in Rotterdam (NL).

Dit analysrapport bestaat inclusief bijlagen uit 18 pagina's. In geval van een versienummer van '2' of hoger vervallen de voorgaande versies. Alle bijlagen maken onlosmakelijk onderdeel uit van het rapport. Alleen vermenigvuldiging van het hele rapport is toegestaan.

Uitgebreide informatie over de door ons gehanteerde analysemethoden kunt u terugvinden in onze informatiegids.

Mocht u vragen en/of opmerkingen hebben naar aanleiding van dit rapport, bijvoorbeeld als u nadere informatie nodig heeft over de meetonzekerheid van de analyseresultaten in dit rapport, dan verzoeken wij u vriendelijk contact op te nemen met de afdeling Customer Support.

Wij vertrouwen er op u met deze informatie van dienst te zijn.

Hoogachtend,

  
R. van Duin  
Laboratory Manager



Grontmij Nederland BV  
Kea

## Analyserapport

Blad 2 van 18

Projectnaam BO Smit Draad  
Projectnummer 288586-2011  
Rapportnummer 11643173 - 1

Orderdatum 09-02-2011  
Startdatum 09-02-2011  
Rapportagedatum 01-03-2011

| Analyse                                | Eenheid | Q | 001         | 002              | 003         | 004         | 005         |
|----------------------------------------|---------|---|-------------|------------------|-------------|-------------|-------------|
| droge stof                             | gew.-%  | S | 91.7        | 82.9             | 91.2        | 98.1        | 90.5        |
| gewicht artefacten                     | g       | S | <1          | <1               | <1          | <1          | <1          |
| aard van de artefacten                 | g       | S | geen        | geen             | geen        | geen        | geen        |
| organische stof (gloeiverlies)         | % vd DS | S | 2.6         | 8.3              | 4.9         | <0.5        | 3.4         |
| <i>POLYCHLOORBIFENYLEN (PCB)</i>       |         |   |             |                  |             |             |             |
| PCB 28                                 | µg/kgds | S |             | <1               |             |             |             |
| PCB 52                                 | µg/kgds | S |             | <1               |             |             |             |
| PCB 101                                | µg/kgds | S |             | 5.7              |             |             |             |
| PCB 118                                | µg/kgds | S |             | 2.4              |             |             |             |
| PCB 138                                | µg/kgds | S |             | 18               |             |             |             |
| PCB 153                                | µg/kgds | S |             | 22               |             |             |             |
| PCB 180                                | µg/kgds | S |             | 13               |             |             |             |
| som PCB (7) (0.7 factor)               | µg/kgds | S |             | 63 <sup>1)</sup> |             |             |             |
| EOX                                    | mg/kgds | Q | <0.3        | 0.5              | <0.3        | <0.3        | 0.3         |
| <i>ANALYSES UITGEVOERD DOOR DERDEN</i> |         |   |             |                  |             |             |             |
| PCB WHO, Dioxin-like                   |         |   | zie bijlage | zie bijlage      | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000 erkenning. Overige accreditaties zijn gemerkt met een Q.

| Nummer | Monstersoort   | Monsterspecificatie  |
|--------|----------------|----------------------|
| 001    | Grond (AS3000) | 207A-1 207A (0-50)   |
| 002    | Grond (AS3000) | 2000A-1 2000A (0-20) |
| 003    | Grond (AS3000) | 2001A-1 2001A (0-20) |
| 004    | Grond (AS3000) | 2002A-1 2002A (8-30) |
| 005    | Grond (AS3000) | 2003A-1 2003A (0-20) |

Paraaf :



Grontmij Nederland BV  
Kea

## Analysereport

Blad 3 van 18

Projectnaam BO Smit Draad  
Projectnummer 288586-2011  
Rapportnummer 11643173 - 1

Orderdatum 09-02-2011  
Startdatum 09-02-2011  
Rapportagedatum 01-03-2011

### Monster beschrijvingen

- |     |   |                                                                                                                                                                          |
|-----|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 001 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 002 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 003 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 004 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 005 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

### Voetnoten

- |   |                                                             |
|---|-------------------------------------------------------------|
| 1 | De sommatie na verrekening van de 0.7 factor conform AS3000 |
|---|-------------------------------------------------------------|



Grontmij Nederland BV  
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## Analyserapport

Blad 4 van 18

Projectnaam BO Smit Draad  
Projectnummer 288586-2011  
Rapportnummer 11643173 - 1

Orderdatum 09-02-2011  
Startdatum 09-02-2011  
Rapportagedatum 01-03-2011

| Analyse | Eenheid | Q | 006 |
|---------|---------|---|-----|
|---------|---------|---|-----|

|                        |        |   |      |
|------------------------|--------|---|------|
| droge stof             | gew.-% | S | 87.0 |
| gewicht artefacten     | g      | S | <1   |
| aard van de artefacten | g      | S | geen |

|                                |         |   |     |
|--------------------------------|---------|---|-----|
| organische stof (gloeiverlies) | % vd DS | S | 5.2 |
|--------------------------------|---------|---|-----|

|     |         |   |     |
|-----|---------|---|-----|
| EOX | mg/kgds | Q | 0.4 |
|-----|---------|---|-----|

## ANALYSES UITGEVOERD DOOR DERDEN

PCB WHO, Dioxin-like

zie bijlage

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000 erkenning. Overige accreditaties zijn gemerkt met een Q.

| Nummer | Monstersoort | Monsterspecificatie |
|--------|--------------|---------------------|
|--------|--------------|---------------------|

|     |                |                      |
|-----|----------------|----------------------|
| 006 | Grond (AS3000) | 2004A-1 2004A (0-20) |
|-----|----------------|----------------------|

Paraaf :



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## Analyserapport

Blad 5 van 18

Projectnaam BO Smit Draad  
Projectnummer 288586-2011  
Rapportnummer 11643173 - 1

Orderdatum 09-02-2011  
Startdatum 09-02-2011  
Rapportagedatum 01-03-2011

---

### Monster beschrijvingen

---

006

\* De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk.



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## Analyserapport

Blad 6 van 18

Projectnaam BO Smit Draad  
Projectnummer 288586-2011  
Rapportnummer 11643173 - 1

Orderdatum 09-02-2011  
Startdatum 09-02-2011  
Rapportagedatum 01-03-2011

| Analyse                        | Monstersoort   | Relatie tot norm                                                                                           |
|--------------------------------|----------------|------------------------------------------------------------------------------------------------------------|
| droge stof                     | Grond (AS3000) | Grond: gelijkwaardig aan NEN-ISO 11465, conform OVAM-methode CMA 2/II/A.1 Grond (AS3000): conform AS3010-2 |
| gewicht artefacten             | Grond (AS3000) | Conform AS3000, NEN 5709                                                                                   |
| aard van de artefacten         | Grond (AS3000) | Idem                                                                                                       |
| organische stof (gloeiverlies) | Grond (AS3000) | Conform AS3010-3, gelijkwaardig aan NEN 5754.                                                              |
| EOX                            | Grond (AS3000) | Eigen methode, aceton-hexaan-extractie, analyse m.b.v. micro-coulometer                                    |
| PCB WHO, Dioxin-like           | Grond (AS3000) | Analyse uitbesteed                                                                                         |
| PCB 28                         | Grond (AS3000) | Conform AS3010-8                                                                                           |
| PCB 52                         | Grond (AS3000) | Idem                                                                                                       |
| PCB 101                        | Grond (AS3000) | Idem                                                                                                       |
| PCB 118                        | Grond (AS3000) | Idem                                                                                                       |
| PCB 138                        | Grond (AS3000) | Idem                                                                                                       |
| PCB 153                        | Grond (AS3000) | Idem                                                                                                       |
| PCB 180                        | Grond (AS3000) | Idem                                                                                                       |
| som PCB (7) (0.7 factor)       | Grond (AS3000) | Idem                                                                                                       |

| Monster | Barcode  | Aanlevering | Monstername | Verpakking |
|---------|----------|-------------|-------------|------------|
| 001     | Y3052982 | 08-02-2011  | 08-02-2011  | ALC201     |
| 002     | Y3052985 | 08-02-2011  | 08-02-2011  | ALC201     |
| 003     | Y3052959 | 08-02-2011  | 08-02-2011  | ALC201     |
| 004     | Y3052967 | 08-02-2011  | 08-02-2011  | ALC201     |
| 005     | Y3052970 | 08-02-2011  | 08-02-2011  | ALC201     |
| 006     | Y3052989 | 08-02-2011  | 08-02-2011  | ALC201     |



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## REPORT

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Report No. 11044566

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ALcontrol Laboratories

Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

Applies to

Information about the project

Solid

Project number : 11643173

## Information about sample and sampling

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2011-02-14 |
| Sampling date         | : 2011-02-08       | Time of Arrival | : 1240       |
| Sample name           | : 11643173x1       |                 |              |
| Reference             | : M van der Draaij |                 |              |
| Invoice reference     | : 11643173         |                 |              |

## Results of the analyses

| Test method | Analysis / Investigation of  | Results | Unit     | Uncert. of measurem. |
|-------------|------------------------------|---------|----------|----------------------|
| SS-EN 11465 | Dry Substance                | 91.3    | %        | +/-10%               |
| SS-EN-1948  | 2378 TCDD                    | < 2     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 12378 PeCDD                  | 3.2     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123478 HxCDD                 | < 2     | ng/kg DS | +/-38%               |
| SS-EN-1948  | 123678 HxCDD                 | 2.4     | ng/kg DS | +/-35%               |
| SS-EN-1948  | 123789 HxCDD                 | 2.4     | ng/kg DS | +/-35%               |
| SS-EN-1948  | 1234678 HpCDD                | 9.9     | ng/kg DS | +/-30%               |
| SS-EN-1948  | OCDD                         | 50      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 2378 TCDF                    | 3.0     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 12378 PeCDF                  | 2.7     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 23478 PeCDF                  | 4.2     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123478 HxCDF                 | 5.6     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123678 HxCDF                 | < 2     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123789 HxCDF                 | < 2     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 234678 HxCDF                 | 4.2     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 1234678 HpCDF                | 24      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 1234789 HpCDF                | < 2     | ng/kg DS | +/-30%               |
| SS-EN-1948  | OCDF                         | 30      | ng/kg DS | +/-30%               |
| SS-EN-1948  | I-PCDD/F-TEQ Lower Bound     | 6.0     | ng/kg DS | +/-35%               |
| SS-EN-1948  | I-PCDD/F-TEQ Upper Bound     | 8.7     | ng/kg DS | +/-35%               |
| SS-EN-1948  | Rec 2378 TCDD Extr spike     | 84      | %        |                      |
| SS-EN-1948  | Rec 12378 PeCDD Extr spike   | 82      | %        |                      |
| SS-EN-1948  | Rec 123478 HxCDD Extr spike  | 102     | %        |                      |
| SS-EN-1948  | Rec 123678 HxCDD Extr spike  | 81      | %        |                      |
| SS-EN-1948  | Rec 1234678 HpCDD Extr spike | 70      | %        |                      |
| SS-EN-1948  | Rec OCDD Extr spike          | 50      | %        |                      |
| SS-EN-1948  | Rec 2378 TCDF Extr spike     | 84      | %        |                      |
| SS-EN-1948  | Rec 12378 PeCDF Extr spike   | 80      | %        |                      |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

(continued)



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Applies to

**Information about the project***Solid*

Project number : 11643173

**Information about sample and sampling**

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2011-02-14 |
| Sampling date         | : 2011-02-08       | Time of Arrival | : 1240       |
| Sample name           | : 11643173x1       |                 |              |
| Reference             | : M van der Draaij |                 |              |
| Invoice reference     | : 11643173         |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit | Uncert. of measurement |
|-------------|------------------------------|---------|------|------------------------|
| SS-EN-1948  | Rec 23478 PeCDF Extr spike   | 79      | %    |                        |
| SS-EN-1948  | Rec 123478 HxCDF Extr spike  | 89      | %    |                        |
| SS-EN-1948  | Rec 123678 HxCDF Extr spike  | 88      | %    |                        |
| SS-EN-1948  | Rec 123789 HxCDF Extr spike  | 96      | %    |                        |
| SS-EN-1948  | Rec 234678 HxCDF Extr spike  | 90      | %    |                        |
| SS-EN-1948  | Rec 1234678 HpCDF Extr spike | 69      | %    |                        |
| SS-EN-1948  | Rec 1234789 HpCDF Extr spike | 75      | %    |                        |
| SS-EN-1948  | Rec OCDF Extr spike          | 54      | %    |                        |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

Linköping 2011-03-01

The report has been reviewed and approved by

Malin Jacobsson  
Responsible reviewer

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Applies to

Information about the project

Solid

Project number : 11643173

## Information about sample and sampling

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2011-02-14 |
| Sampling date         | : 2011-02-08       | Time of Arrival | : 1240       |
| Sample name           | : 11643173x2       |                 |              |
| Reference             | : M van der Draaij |                 |              |
| Invoice reference     | : 11643173         |                 |              |

## Results of the analyses

| Test method | Analysis / Investigation of  | Results | Unit     | Uncert. of measur. |
|-------------|------------------------------|---------|----------|--------------------|
| SS-EN 11465 | Dry Substance                | 81.0    | %        | +/-10%             |
| SS-EN-1948  | 2378 TCDD                    | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 12378 PeCDD                  | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123478 HxCDD                 | 2.4     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123678 HxCDD                 | 3.1     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123789 HxCDD                 | 4.0     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234678 HpCDD                | 24      | ng/kg DS | +/-30%             |
| SS-EN-1948  | OCDD                         | 84      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 2378 TCDF                    | 11      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 12378 PeCDF                  | 4.6     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 23478 PeCDF                  | 8.7     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123478 HxCDF                 | 8.6     | ng/kg DS | +/-20%             |
| SS-EN-1948  | 123678 HxCDF                 | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123789 HxCDF                 | 2.4     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 234678 HxCDF                 | 5.0     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234678 HpCDF                | 18      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234789 HpCDF                | 2.1     | ng/kg DS | +/-30%             |
| SS-EN-1948  | OCDF                         | 27      | ng/kg DS | +/-30%             |
| SS-EN-1948  | I-PCDD/F-TEQ Lower Bound     | 8.7     | ng/kg DS | +/-35%             |
| SS-EN-1948  | I-PCDD/F-TEQ Upper Bound     | 12      | ng/kg DS | +/-35%             |
| SS-EN-1948  | Rec 2378 TCDD Extr spike     | 68      | %        |                    |
| SS-EN-1948  | Rec 12378 PeCDD Extr spike   | 67      | %        |                    |
| SS-EN-1948  | Rec 123478 HxCDD Extr spike  | 73      | %        |                    |
| SS-EN-1948  | Rec 123678 HxCDD Extr spike  | 63      | %        |                    |
| SS-EN-1948  | Rec 1234678 HpCDD Extr spike | 52      | %        |                    |
| SS-EN-1948  | Rec OCDD Extr spike          | 40      | %        |                    |
| SS-EN-1948  | Rec 2378 TCDF Extr spike     | 66      | %        |                    |
| SS-EN-1948  | Rec 12378 PeCDF Extr spike   | 58      | %        |                    |

The stated uncertainty of measurement is calculated using a coverage k = 2. In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

(continued)



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Applies to

**Information about the project****Solid**

Project number : 11643173

**Information about sample and sampling**

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2011-02-14 |
| Sampling date         | : 2011-02-08       | Time of Arrival | : 1240       |
| Sample name           | : 11643173x2       |                 |              |
| Reference             | : M van der Draaij |                 |              |
| Invoice reference     | : 11643173         |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of   | Results | Unit | Uncert. of measurement |
|-------------|-------------------------------|---------|------|------------------------|
| SS-EN-1948  | Rec: 23478 PeCDF Extr spike   | 62      | %    |                        |
| SS-EN-1948  | Rec: 123478 HxCDF Extr spike  | 64      | %    |                        |
| SS-EN-1948  | Rec: 123678 HxCDF Extr spike  | 71      | %    |                        |
| SS-EN-1948  | Rec: 123789 HxCDF Extr spike  | 68      | %    |                        |
| SS-EN-1948  | Rec: 234678 HxCDF Extr spike  | 65      | %    |                        |
| SS-EN-1948  | Rec: 1234678 HpCDF Extr spike | 51      | %    |                        |
| SS-EN-1948  | Rec: 1234789 HpCDF Extr spike | 48      | %    |                        |
| SS-EN-1948  | Rec: OCDF Extr spike          | 45      | %    |                        |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case Interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

Linköping 2011-03-01

The report has been reviewed and approved by

Malin Jacobsson  
 Responsible reviewer

Control numbers 3280 1687 9350 5249

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Applies to

Information about the project

Solid

Project number : 11643173

## Information about sample and sampling

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2011-02-14 |
| Sampling date         | : 2011-02-08       | Time of Arrival | : 1240       |
| Sample name           | : 11643173x3       |                 |              |
| Reference             | : M van der Draaij |                 |              |
| Invoice reference     | : 11643173         |                 |              |

## Results of the analyses

| Test method | Analysis / Investigation of  | Results | Unit     | Uncert. of measurement |
|-------------|------------------------------|---------|----------|------------------------|
| SS-EN 11465 | Dry Substance                | 88.5    | %        | +/-10%                 |
| SS-EN-1948  | 2378 TCDD                    | 3.1     | ng/kg DS | +/-30%                 |
| SS-EN-1948  | 12378 PeCDD                  | 6.6     | ng/kg DS | +/-30%                 |
| SS-EN-1948  | 123478 HxCDD                 | < 2     | ng/kg DS | +/-35%                 |
| SS-EN-1948  | 123678 HxCDD                 | 4.0     | ng/kg DS | +/-35%                 |
| SS-EN-1948  | 123789 HxCDD                 | 2.4     | ng/kg DS | +/-35%                 |
| SS-EN-1948  | 1234678 HpCDD                | 29      | ng/kg DS | +/-30%                 |
| SS-EN-1948  | OCDD                         | 75      | ng/kg DS | +/-30%                 |
| SS-EN-1948  | 2378 TCDF                    | 6.6     | ng/kg DS | +/-30%                 |
| SS-EN-1948  | 12378 PeCDF                  | 4.8     | ng/kg DS | +/-30%                 |
| SS-EN-1948  | 23478 PeCDF                  | 6.7     | ng/kg DS | +/-30%                 |
| SS-EN-1948  | 123478 HxCDF                 | 6.0     | ng/kg DS | +/-30%                 |
| SS-EN-1948  | 123678 HxCDF                 | 7.6     | ng/kg DS | +/-30%                 |
| SS-EN-1948  | 123789 HxCDF                 | 3.2     | ng/kg DS | +/-30%                 |
| SS-EN-1948  | 234678 HxCDF                 | 8.1     | ng/kg DS | +/-30%                 |
| SS-EN-1948  | 1234678 HpCDF                | 42      | ng/kg DS | +/-30%                 |
| SS-EN-1948  | 1234789 HpCDF                | 4.3     | ng/kg DS | +/-30%                 |
| SS-EN-1948  | OCDF                         | 18      | ng/kg DS | +/-30%                 |
| SS-EN-1948  | I-PCDD/F-TEQ Lower Bound     | 15      | ng/kg DS | +/-35%                 |
| SS-EN-1948  | I-PCDD/F-TEQ Upper Bound     | 15      | ng/kg DS | +/-35%                 |
| SS-EN-1948  | Rec 2378 TCDD Extr spike     | 86      | %        |                        |
| SS-EN-1948  | Rec 12378 PeCDD Extr spike   | 79      | %        |                        |
| SS-EN-1948  | Rec 123478 HxCDD Extr spike  | 76      | %        |                        |
| SS-EN-1948  | Rec 123678 HxCDD Extr spike  | 78      | %        |                        |
| SS-EN-1948  | Rec 1234678 HpCDD Extr spike | 62      | %        |                        |
| SS-EN-1948  | Rec OCDD Extr spike          | 48      | %        |                        |
| SS-EN-1948  | Rec 2378 TCDF Extr spike     | 84      | %        |                        |
| SS-EN-1948  | Rec 12378 PeCDF Extr spike   | 94      | %        |                        |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

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Applies to

**Information about the project****Solid**

Project number : 11643173

**Information about sample and sampling**

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2011-02-14 |
| Sampling date         | : 2011-02-08       | Time of Arrival | : 1240       |
| Sample name           | : 11643173x3       |                 |              |
| Reference             | : M van der Draaij |                 |              |
| Invoice reference     | : 11643173         |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit | Uncert. of measurement |
|-------------|------------------------------|---------|------|------------------------|
| SS-EN-1948  | Rec 23478 PeCDF Extr spike   | 83      | %    |                        |
| SS-EN-1948  | Rec 123478 HxCDF Extr spike  | 86      | %    |                        |
| SS-EN-1948  | Rec 123678 HxCDF Extr spike  | 85      | %    |                        |
| SS-EN-1948  | Rec 123789 HxCDF Extr spike  | 86      | %    |                        |
| SS-EN-1948  | Rec 234678 HxCDF Extr spike  | 82      | %    |                        |
| SS-EN-1948  | Rec 1234678 HpCDF Extr spike | 63      | %    |                        |
| SS-EN-1948  | Rec 1234789 HpCDF Extr spike | 66      | %    |                        |
| SS-EN-1948  | Rec OCDF Extr spike          | 49      | %    |                        |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

Linköping 2011-03-01

The report has been reviewed and approved by

Malin Jacobsson  
Responsible reviewer

Control number 3185 1682 9554 5743

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Applies to

**Information about the project****Solid**

Project number : 11643173

**Information about sample and sampling**

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2011-02-14 |
| Sampling date         | : 2011-02-08       | Time of Arrival | : 1240       |
| Sample name           | : 11643173x4       |                 |              |
| Reference             | : M van der Draaij |                 |              |
| Invoice reference     | : 11643173         |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit     | Uncert. of measur. |
|-------------|------------------------------|---------|----------|--------------------|
| SS-EN 11465 | Dry Substance                | 97.1    | %        | +/-10%             |
| SS-EN-1948  | 2378 TCDD                    | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 12378 PeCDD                  | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123478 HxCDD                 | <2      | ng/kg DS | +/-35%             |
| SS-EN-1948  | 123678 HxCDD                 | <2      | ng/kg DS | +/-35%             |
| SS-EN-1948  | 123789 HxCDD                 | <2      | ng/kg DS | +/-35%             |
| SS-EN-1948  | 1234678 HpCDD                | 2.1     | ng/kg DS | +/-30%             |
| SS-EN-1948  | OCDD                         | 34      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 2378 TCDF                    | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 12378 PeCDF                  | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 23478 PeCDF                  | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123478 HxCDF                 | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123678 HxCDF                 | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123789 HxCDF                 | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 234678 HxCDF                 | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234678 HpCDF                | 2.7     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234789 HpCDF                | 6.2     | ng/kg DS | +/-30%             |
| SS-EN-1948  | OCDF                         | 4.7     | ng/kg DS | +/-30%             |
| SS-EN-1948  | I-PCDD/F-TEQ Lower Bound     | <2      | ng/kg DS | +/-35%             |
| SS-EN-1948  | I-PCDD/F-TEQ Upper Bound     | 5.8     | ng/kg DS | +/-35%             |
| SS-EN-1948  | Rec 2378 TCDD Extr spike     | 69      | %        |                    |
| SS-EN-1948  | Rec 12378 PeCDD Extr spike   | 63      | %        |                    |
| SS-EN-1948  | Rec 123478 HxCDD Extr spike  | 64      | %        |                    |
| SS-EN-1948  | Rec 123678 HxCDD Extr spike  | 64      | %        |                    |
| SS-EN-1948  | Rec 1234678 HpCDD Extr spike | 45      | %        |                    |
| SS-EN-1948  | Rec OCDD Extr spike          | 33      | %        |                    |
| SS-EN-1948  | Rec 2378 TCDF Extr spike     | 63      | %        |                    |
| SS-EN-1948  | Rec 12378 PeCDF Extr spike   | 59      | %        |                    |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

(continued)



ALcontrol Laboratories

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ISO/IEC 17025**REPORT**

issued by an Accredited Laboratory

Page 2 (2)

**Report No. 11044569**

Assigner

ALcontrol Laboratories  
HoogvlietSteenhouwerstraat 15  
3194AG Hoogvliet, NL

Applies to

**Information about the project****Solid**

Project number : 11643173

**Information about sample and sampling**

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2011-02-14 |
| Sampling date         | : 2011-02-08       | Time of Arrival | : 1240       |
| Sample name           | : 11643173x4       |                 |              |
| Reference             | : M van der Draaij |                 |              |
| Invoice reference     | : 11643173         |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit | Uncert. of measure. |
|-------------|------------------------------|---------|------|---------------------|
| SS-EN-1948  | Rec 23478 PeCDF Extr spike   | 66      | %    |                     |
| SS-EN-1948  | Rec 123478 HxCDF Extr spike  | 71      | %    |                     |
| SS-EN-1948  | Rec 123678 HxCDF Extr spike  | 74      | %    |                     |
| SS-EN-1948  | Rec 123789 HxCDF Extr spike  | 59      | %    |                     |
| SS-EN-1948  | Rec 234678 HxCDF Extr spike  | 69      | %    |                     |
| SS-EN-1948  | Rec 1234678 HpCDF Extr spike | 50      | %    |                     |
| SS-EN-1948  | Rec 1234789 HpCDF Extr spike | 49      | %    |                     |
| SS-EN-1948  | Rec OCDF Extr spike          | 39      | %    |                     |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set, the higher figure refers to measurement uncertainty for results close to the reporting limit.

Linköping 2011-03-01

The report has been reviewed and approved by

Malin Jacobsson  
Responsible reviewer

Control numbers 3085 1683 9655 5143

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**REPORT**

Page 1 (2)

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**Report No. 11044570**

Assigner

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

Applies to

Information about the project

Solid

Project number : 11643173

**Information about sample and sampling**

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2011-02-14 |
| Sampling date         | : 2011-02-08       | Time of Arrival | : 1240       |
| Sample name           | : 11643173x5       |                 |              |
| Reference             | : M van der Draaij |                 |              |
| Invoice reference     | : 11643173         |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit     | Uncert. of measurem. |
|-------------|------------------------------|---------|----------|----------------------|
| SS-EN 11465 | Dry Substance                | 90.3    | %        | +/-10%               |
| SS-EN-1948  | 2378 TCDD                    | < 2     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 12378 PeCDD                  | 2.0     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123478 HxCDD                 | 3.1     | ng/kg DS | +/-35%               |
| SS-EN-1948  | 123678 HxCDD                 | 3.5     | ng/kg DS | +/-35%               |
| SS-EN-1948  | 123789 HxCDD                 | 4.2     | ng/kg DS | +/-35%               |
| SS-EN-1948  | 1234678 HpCDD                | 71      | ng/kg DS | +/-30%               |
| SS-EN-1948  | OCDD                         | 580     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 2378 TCDF                    | 2.7     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 12378 PeCDF                  | 2.2     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 23478 PeCDF                  | 2.5     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123478 HxCDF                 | < 2     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123678 HxCDF                 | 2.9     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 123789 HxCDF                 | < 2     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 234678 HxCDF                 | 2.4     | ng/kg DS | +/-30%               |
| SS-EN-1948  | 1234678 HpCDF                | 25      | ng/kg DS | +/-30%               |
| SS-EN-1948  | 1234789 HpCDF                | 4.0     | ng/kg DS | +/-30%               |
| SS-EN-1948  | OCDF                         | 72      | ng/kg DS | +/-30%               |
| SS-EN-1948  | I-PCDD/F-TEQ Lower Bound     | 5.9     | ng/kg DS | +/-35%               |
| SS-EN-1948  | I-PCDD/F-TEQ Upper Bound     | 8.3     | ng/kg DS | +/-35%               |
| SS-EN-1948  | Rec 2378 TCDD Extr spike     | 105     | %        |                      |
| SS-EN-1948  | Rec 12378 PeCDD Extr spike   | 99      | %        |                      |
| SS-EN-1948  | Rec 123478 HxCDD Extr spike  | 120     | %        |                      |
| SS-EN-1948  | Rec 123678 HxCDD Extr spike  | 83      | %        |                      |
| SS-EN-1948  | Rec 1234678 HpCDD Extr spike | 95      | %        |                      |
| SS-EN-1948  | Rec OCDD Extr spike          | 78      | %        |                      |
| SS-EN-1948  | Rec 2378 TCDF Extr spike     | 99      | %        |                      |
| SS-EN-1948  | Rec 12378 PeCDF Extr spike   | 92      | %        |                      |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

(continued)



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## REPORT

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Report No. 11044570

Assigner

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

Applies to

Information about the project

Solid

Project number : 11643173

## Information about sample and sampling

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2011-02-14 |
| Sampling date         | : 2011-02-08       | Time of Arrival | : 1240       |
| Sample name           | : 11643173x5       |                 |              |
| Reference             | : M van der Draaij |                 |              |
| Invoice reference     | : 11643173         |                 |              |

## Results of the analyses

| Test method | Analysis / Investigation of  | Results | Unit | Uncert. of measurement |
|-------------|------------------------------|---------|------|------------------------|
| SS-EN-1948  | Rec 23478 PeCDF Extr spike   | 92      | %    |                        |
| SS-EN-1948  | Rec 123478 HxCDF Extr spike  | 100     | %    |                        |
| SS-EN-1948  | Rec 123678 HxCDF Extr spike  | 100     | %    |                        |
| SS-EN-1948  | Rec 123789 HxCDF Extr spike  | 104     | %    |                        |
| SS-EN-1948  | Rec 234678 HxCDF Extr spike  | 100     | %    |                        |
| SS-EN-1948  | Rec 1234678 HpCDF Extr spike | 87      | %    |                        |
| SS-EN-1948  | Rec 1234789 HpCDF Extr spike | 85      | %    |                        |
| SS-EN-1948  | Rec OCDF Extr spike          | 83      | %    |                        |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

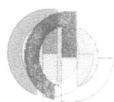
Linköping 2011-03-01

The report has been reviewed and approved by

Malin Jacobsson  
Responsible reviewer

Control numbers: 2981 6389 0156 5043

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**REPORT**

Page 1 (2)

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**Report No. 11044571**

Assigner

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

Applies to

Information about the project

Solid

Project number : 11643173

**Information about sample and sampling**

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2011-02-14 |
| Sampling date         | : 2011-02-08       | Time of Arrival | : 1240       |
| Sample name           | : 11643173x6       |                 |              |
| Reference             | : M van der Draaij |                 |              |
| Invoice reference     | : 11643173         |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit     | Uncert. of measur. |
|-------------|------------------------------|---------|----------|--------------------|
| SS-EN 11465 | Dry Substance                | 86.9    | %        | +/-10%             |
| SS-EN-1948  | 2378 TCDD                    | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 12378 PeCDD                  | 5.0     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123478 HxCDD                 | <2      | ng/kg DS | +/-35%             |
| SS-EN-1948  | 123678 HxCDD                 | 5.9     | ng/kg DS | +/-35%             |
| SS-EN-1948  | 123789 HxCDD                 | 2.8     | ng/kg DS | +/-35%             |
| SS-EN-1948  | 1234678 HpCDD                | 45      | ng/kg DS | +/-30%             |
| SS-EN-1948  | OCDD                         | 190     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 2378 TCDF                    | 12      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 12378 PeCDF                  | 5.7     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 23478 PeCDF                  | 9.5     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123478 HxCDF                 | 14      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123678 HxCDF                 | 5.7     | ng/kg DS | +/-30%             |
| SS-EN-1948  | 123789 HxCDF                 | <2      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 234678 HxCDF                 | 11      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234678 HpCDF                | 48      | ng/kg DS | +/-30%             |
| SS-EN-1948  | 1234789 HpCDF                | 4.4     | ng/kg DS | +/-30%             |
| SS-EN-1948  | OCDF                         | 38      | ng/kg DS | +/-30%             |
| SS-EN-1948  | I-PCDD/F-TEQ Lower Bound     | 14      | ng/kg DS | +/-35%             |
| SS-EN-1948  | I-PCDD/F-TEQ Upper Bound     | 16      | ng/kg DS | +/-35%             |
| SS-EN-1948  | Rec 2378 TCDD Extr spike     | 119     | %        |                    |
| SS-EN-1948  | Rec 12378 PeCDD Extr spike   | 110     | %        |                    |
| SS-EN-1948  | Rec 123478 HxCDD Extr spike  | 126     | %        |                    |
| SS-EN-1948  | Rec 123678 HxCDD Extr spike  | 118     | %        |                    |
| SS-EN-1948  | Rec 1234678 HpCDD Extr spike | 93      | %        |                    |
| SS-EN-1948  | Rec OCDD Extr spike          | 65      | %        |                    |
| SS-EN-1948  | Rec 2378 TCDF Extr spike     | 114     | %        |                    |
| SS-EN-1948  | Rec 12378 PeCDF Extr spike   | 105     | %        |                    |

The stated uncertainty of measurement is estimated using a coverage  $k = 2$ . In case Interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

(continued)



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**REPORT**

Page 2 (2)

issued by an Accredited Laboratory

**Report No. 11044571**

Assigner

ALcontrol Laboratories  
 Hoogvliet

Steenhouwerstraat 15  
 3194AG Hoogvliet, NL

Applies to

**Information about the project****Solid**

Project number : 11643173

**Information about sample and sampling**

|                       |                    |                 |              |
|-----------------------|--------------------|-----------------|--------------|
| Description of sample | : Solid            | Arrival date    | : 2011-02-14 |
| Sampling date         | : 2011-02-08       | Time of Arrival | : 1240       |
| Sample name           | : 11643173x6       |                 |              |
| Reference             | : M van der Draaij |                 |              |
| Invoice reference     | : 11643173         |                 |              |

**Results of the analyses**

| Test method | Analysis / Investigation of  | Results | Unit | Uncert. of measurem. |
|-------------|------------------------------|---------|------|----------------------|
| SS-EN-1948  | Rec 23478 PeCDF Extr spike   | 106     | %    |                      |
| SS-EN-1948  | Rec 123478 HxCDF Extr spike  | 117     | %    |                      |
| SS-EN-1948  | Rec 123678 HxCDF Extr spike  | 134     | %    |                      |
| SS-EN-1948  | Rec 123789 HxCDF Extr spike  | 131     | %    |                      |
| SS-EN-1948  | Rec 234678 HxCDF Extr spike  | 125     | %    |                      |
| SS-EN-1948  | Rec 1234678 HpCDF Extr spike | 98      | %    |                      |
| SS-EN-1948  | Rec 1234789 HpCDF Extr spike | 93      | %    |                      |
| SS-EN-1948  | Rec OCDF Extr spike          | 74      | %    |                      |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

Linköping 2011-03-01

The report has been reviewed and approved by

Malin Jacobsson  
 Responsible reviewer

Control numbers 2681 6081 9558 5349

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## Analyserapport

Grontmij Nederland BV  
Kea  
Postbus 485  
6800 AL ARNHEM

Blad 1 van 12

Uw projectnaam : BO Smit Draad  
Uw projectnummer : 288586-2011  
ALcontrol rapportnummer : 11643173, versie nummer: 3  
Rapport verificatie nummer : QU2MVLHE

Rotterdam, 30-03-2011

Geachte heer/mevrouw,

Hierbij ontvangt u de analyse resultaten van het laboratoriumonderzoek ten behoeve van uw project 288586-2011. Het onderzoek werd uitgevoerd conform uw opdracht. De gerapporteerde resultaten hebben uitsluitend betrekking op de geteste monsters. De door u aangegeven omschrijvingen voor de monsters en het project zijn overgenomen in dit analyserapport.

Het onderzoek is, met uitzondering van eventueel door derden uitgevoerd onderzoek, uitgevoerd door ALcontrol Laboratories, gevestigd aan de Steenhouwerstraat 15 in Rotterdam (NL).

Dit analyserapport bestaat inclusief bijlagen uit 12 pagina's. In geval van een versienummer van '2' of hoger vervallen de voorgaande versies. Alle bijlagen maken onlosmakelijk onderdeel uit van het rapport. Alleen vermenigvuldiging van het hele rapport is toegestaan.

Uitgebreide informatie over de door ons gehanteerde analysemethoden kunt u terugvinden in onze informatiegids.

Mocht u vragen en/of opmerkingen hebben naar aanleiding van dit rapport, bijvoorbeeld als u nadere informatie nodig heeft over de meetonzekerheid van de analyseresultaten in dit rapport, dan verzoeken wij u vriendelijk contact op te nemen met de afdeling Customer Support.

Wij vertrouwen er op u met deze informatie van dienst te zijn.

Hoogachtend,



R. van Duin  
Laboratory Manager



Grontmij Nederland BV  
Kea

## Analyserapport

Blad 2 van 12

Projectnaam BO Smit Draad  
Projectnummer 288586-2011  
Rapportnummer 11643173 - 3

Orderdatum 09-02-2011  
Startdatum 09-02-2011  
Rapportagedatum 30-03-2011

| Analyse                                | Eenheid | Q | 001         | 002              | 003         | 004         | 005         |
|----------------------------------------|---------|---|-------------|------------------|-------------|-------------|-------------|
| droge stof                             | gew.-%  | S | 91.7        | 82.9             | 91.2        | 98.1        | 90.5        |
| gewicht artefacten                     | g       | S | <1          | <1               | <1          | <1          | <1          |
| aard van de artefacten                 | g       | S | geen        | geen             | geen        | geen        | geen        |
| organische stof (gloeiverlies)         | % vd DS | S | 2.6         | 8.3              | 4.9         | <0.5        | 3.4         |
| <i>POLYCHLOORBIFENYLEN (PCB)</i>       |         |   |             |                  |             |             |             |
| PCB 28                                 | µg/kgds | S |             | <1               |             |             |             |
| PCB 52                                 | µg/kgds | S |             | <1               |             |             |             |
| PCB 101                                | µg/kgds | S |             | 5.7              |             |             |             |
| PCB 118                                | µg/kgds | S |             | 2.4              |             |             |             |
| PCB 138                                | µg/kgds | S |             | 18               |             |             |             |
| PCB 153                                | µg/kgds | S |             | 22               |             |             |             |
| PCB 180                                | µg/kgds | S |             | 13               |             |             |             |
| som PCB (7) (0.7 factor)               | µg/kgds | S |             | 63 <sup>1)</sup> |             |             |             |
| EOX                                    | mg/kgds | Q | <0.3        | 0.5              | <0.3        | <0.3        | 0.3         |
| <i>ANALYSES UITGEVOERD DOOR DERDEN</i> |         |   |             |                  |             |             |             |
| PCB WHO, Dioxin-like                   |         |   | zie bijlage | zie bijlage      | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000 erkenning. Overige accreditaties zijn gemerkt met een Q.

| Nummer | Monstersoort   | Monsterspecificatie  |
|--------|----------------|----------------------|
| 001    | Grond (AS3000) | 207A-1 207A (0-50)   |
| 002    | Grond (AS3000) | 2000A-1 2000A (0-20) |
| 003    | Grond (AS3000) | 2001A-1 2001A (0-20) |
| 004    | Grond (AS3000) | 2002A-1 2002A (8-30) |
| 005    | Grond (AS3000) | 2003A-1 2003A (0-20) |



Grontmij Nederland BV  
Kea

## Analysereport

Blad 3 van 12

Projectnaam BO Smit Draad  
Projectnummer 288586-2011  
Rapportnummer 11643173 - 3

Orderdatum 09-02-2011  
Startdatum 09-02-2011  
Rapportagedatum 30-03-2011

### Monster beschrijvingen

- |     |   |                                                                                                                                                                          |
|-----|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 001 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 002 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 003 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 004 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 005 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

### Voetnoten

- |   |                                                             |
|---|-------------------------------------------------------------|
| 1 | De sommatie na verrekening van de 0.7 factor conform AS3000 |
|---|-------------------------------------------------------------|



# Analyserapport

Blad 4 van 12

|                 |            |
|-----------------|------------|
| Orderdatum      | 09-02-2011 |
| Startdatum      | 09-02-2011 |
| Rapportagedatum | 30-03-2011 |

| Analyse                        | Eenheid | Q | 006  |
|--------------------------------|---------|---|------|
| droge stof                     | gew.-%  | S | 87.0 |
| gewicht artefacten             | g       | S | <1   |
| aard van de artefacten         | g       | S | geen |
| organische stof (gloeiverlies) | % vd DS | S | 5.2  |
| EOX                            | mg/kgds | Q | 0.4  |

PCB WHO, Dioxin-like

zie bijlage

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000 erkenning. Overige accreditaties zijn gemerkt met een Q.

| Nummer | Monstersoort   | Monsterspecificatie  |
|--------|----------------|----------------------|
| 006    | Grond (AS3000) | 2004A-1 2004A (0-20) |

Paraaf :



AL ONZE WERKZAAMHEDEN WORDEN OUDERWIS OORDEELD ONDER DE ALGEMENE VOORWAARDEN GEDEPONEERD BIJ DE KAMER VAN KOOPHANDEL EN FABRIEKEN TE ROTTERDAM INSCRJVING  
HANDELSREGISTRATIE: KYK ROTTERDAM 24252626





Grontmij Nederland BV  
Kea

## Analyserapport

Blad 5 van 12

Projectnaam BO Smit Draad  
Projectnummer 288586-2011  
Rapportnummer 11643173 - 3

Orderdatum 09-02-2011  
Startdatum 09-02-2011  
Rapportagedatum 30-03-2011

---

### Monster beschrijvingen

---

006 \* De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk.



Grontmij Nederland BV  
Kea

## Analysrapport

Blad 6 van 12

Projectnaam BO Smit Draad  
Projectnummer 288586-2011  
Rapportnummer 11643173 - 3

Orderdatum 09-02-2011  
Startdatum 09-02-2011  
Rapportagedatum 30-03-2011

| Analyse                        | Monstersoort   | Relatie tot norm                                                                                            |
|--------------------------------|----------------|-------------------------------------------------------------------------------------------------------------|
| droge stof                     | Grond (AS3000) | Grond: gelijkwaardig aan NEN-ISO 11465, conform OVAM-methode CMA 2/III/A.1 Grond (AS3000): conform AS3010-2 |
| gewicht artefacten             | Grond (AS3000) | Conform AS3000, NEN 5709                                                                                    |
| aard van de artefacten         | Grond (AS3000) | Idem                                                                                                        |
| organische stof (gloeiverlies) | Grond (AS3000) | Conform AS3010-3, gelijkwaardig aan NEN 5754.                                                               |
| EOX                            | Grond (AS3000) | Eigen methode, aceton-hexaan-extractie, analyse m.b.v. micro-coulometer                                     |
| PCB WHO, Dioxin-like           | Grond (AS3000) | Analyse uitbesteed                                                                                          |
| PCB 28                         | Grond (AS3000) | Conform AS3010-8                                                                                            |
| PCB 52                         | Grond (AS3000) | Idem                                                                                                        |
| PCB 101                        | Grond (AS3000) | Idem                                                                                                        |
| PCB 118                        | Grond (AS3000) | Idem                                                                                                        |
| PCB 138                        | Grond (AS3000) | Idem                                                                                                        |
| PCB 153                        | Grond (AS3000) | Idem                                                                                                        |
| PCB 180                        | Grond (AS3000) | Idem                                                                                                        |
| som PCB (7) (0.7 factor)       | Grond (AS3000) | Idem                                                                                                        |

| Monster | Barcode  | Aanlevering | Monstername | Verpakking |
|---------|----------|-------------|-------------|------------|
| 001     | Y3052982 | 08-02-2011  | 08-02-2011  | ALC201     |
| 002     | Y3052985 | 08-02-2011  | 08-02-2011  | ALC201     |
| 003     | Y3052959 | 08-02-2011  | 08-02-2011  | ALC201     |
| 004     | Y3052967 | 08-02-2011  | 08-02-2011  | ALC201     |
| 005     | Y3052970 | 08-02-2011  | 08-02-2011  | ALC201     |
| 006     | Y3052989 | 08-02-2011  | 08-02-2011  | ALC201     |

Paraaf :



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## REPORT

Page 1 (1)

Issued by an Accredited Laboratory

Report No. 11076508

Assigner

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

Applies to

## Information about the project

Solid

Project number : 11643173

## Information about sample and sampling

Sampling date : 2011-02-08  
Sample name : 11643173x1  
Sampler : -  
Previous labreport no : 11062828

Date of Arrival : 2011-03-16

## Results of the analyses

| Test method | Analysis / Investigation of | Results | Unit     | Uncert. of measur. |
|-------------|-----------------------------|---------|----------|--------------------|
| SS-EN 11465 | Dry Substance               | 91.8    | %        | +/-10%             |
| HRGC/HRMS   | 3,3',4,4'-TeCB, #77         | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,4,4',5'-TeCB, #81         | < 100   | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4'-PeCB, #105      | 590     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3,4,4',5'-PeCB, #114      | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3',4,4',5'-PeCB, #118     | 1500    | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2',3,4,4',5'-PeCB, #123     | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,3',4,4',5'-PeCB, #126     | < 100   | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4',5'-HxCB, #156   | 880     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3,3',4,4',5'-HxCB, #157   | 130     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3',4,4',5,5'-HxCB, #167   | 1700    | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,3',4,4',5,5'-HxCB, #169   | < 100   | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4',5,5'-HpCB, #189 | 200     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | WHO-PCB-TEQ Lower Bound     | < 20    | ng/kg DS | +/-20%             |
| HRGC/HRMS   | WHO-PCB-TEQ Upper Bound     | < 20    | ng/kg DS | +/-20%             |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

## Comment

The reported results for PCBs are indicative due to low recoveries of internal standards. These recoveries have been taken into account calculating the results.

Linköping 2011-03-23

The report has been reviewed and approved by

Britt Karlsson  
Responsible reviewer

Control numbers 9189 8894 2816 3343

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## REPORT

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Report No. 11076512

Assigner

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Hoogvliet

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Applies to

## Information about the project

Solid

Project number : 11643173

## Information about sample and sampling

Sampling date : 2011-02-08  
Sample name : 11643173x2  
Sampler : -  
Previous labreport no : 11062829

Date of Arrival : 2011-03-16

## Results of the analyses

| Test method | Analysis / Investigation of | Results | Unit     | Uncert. of measur. |
|-------------|-----------------------------|---------|----------|--------------------|
| SS-EN 11465 | Dry Substance               | 72.3    | %        | +/-10%             |
| HRGC/HRMS   | 3,3',4,4'-TeCB, #77         | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,4,4',5-TeCB, #81          | < 100   | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4'-PeCB, #105      | 400     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3,4,4',5-PeCB, #114       | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3',4,4',5-PeCB, #118      | 1800    | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2'3,4,4',5-PeCB, #123       | 490     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,3',4,4',5-PeCB, #126      | < 100   | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4',5-HxCB, #156    | 1400    | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3,3',4,4',5'-HxCB, #157   | 170     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3',4,4',5,5'-HxCB, #167   | 2400    | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,3',4,4',5,5'-HxCB, #169   | < 100   | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4',5,5'-HpCB, #189 | 240     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | WHO-PCB-TEQ Lower Bound     | < 20    | ng/kg DS | +/-20%             |
| HRGC/HRMS   | WHO-PCB-TEQ Upper Bound     | < 20    | ng/kg DS | +/-20%             |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

Linköping 2011-03-25

The report has been reviewed and approved by

Kristina Hallqvist  
Responsible reviewer

Control numbers 8782 8392 2164 3542

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## REPORT

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Report No. 11076513

## Assigner

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Hoogvliet

Steenhouwerstraat 15  
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## Applies to

## Information about the project

Solid

Project number : 11643173

## Information about sample and sampling

Sampling date : 2011-02-08  
Sample name : 11643173x3  
Sampler : -  
Previous labreport no : 11062830

Date of Arrival : 2011-03-16

## Results of the analyses

| Test method | Analysis / Investigation of | Results | Unit     | Uncert. of measur. |
|-------------|-----------------------------|---------|----------|--------------------|
| SS-EN 11465 | Dry Substance               | 90.5    | %        | +/-10%             |
| HRGC/HRMS   | 3,3',4,4'-TeCB, #77         | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,4,4',5'-TeCB, #81         | < 100   | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4'-PeCB, #105      | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3,4,4',5'-PeCB, #114      | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3',4,4',5'-PeCB, #118     | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2',3,4,4',5'-PeCB, #123     | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,3',4,4',5'-PeCB, #126     | < 100   | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4',5'-HxCB, #156   | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3,3',4,4',5'-HxCB, #157   | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3',4,4',5,5'-HxCB, #167   | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,3',4,4',5,5'-HxCB, #169   | < 100   | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4',5,5'-HpCB, #189 | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | WHO-PCB-TEQ Lower Bound     | < 20    | ng/kg DS | +/-20%             |
| HRGC/HRMS   | WHO-PCB-TEQ Upper Bound     | < 20    | ng/kg DS | +/-20%             |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

Linköping 2011-03-23

The report has been reviewed and approved by

Britt Karlsson  
Responsible reviewer

Control numbers 8686 8296 2162 3842

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## REPORT

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Report No. 11076514

Assigner

ALcontrol Laboratories  
Hoogvliet

Steenhouwerstraat 15  
3194AG Hoogvliet, NL

Applies to

## Information about the project

Solid

Project number : 11643173

## Information about sample and sampling

Sampling date : 2011-02-08  
Sample name : 11643173x4  
Sampler : +  
Previous labreport no : 11062831

Date of Arrival : 2011-03-16

## Results of the analyses

| Test method | Analysis / Investigation of | Results | Unit     | Uncert. of measur. |
|-------------|-----------------------------|---------|----------|--------------------|
| SS-EN 11465 | Dry Substance               | 99.3    | %        | +/-10%             |
| HRGC/HRMS   | 3,3',4,4'-TeCB, #77         | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,4,4',5'-TeCB, #81         | < 100   | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4'-PeCB, #105      | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3,4,4',5'-PeCB, #114      | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3',4,4',5'-PeCB, #118     | 120     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2'3,4,4',5'-PeCB, #123      | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,3',4,4',5'-PeCB, #126     | < 100   | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4',5'-HxCB, #156   | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3,3',4,4',5'-HxCB, #157   | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3',4,4',5,5'-HxCB, #167   | 110     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,3',4,4',5,5'-HxCB, #169   | < 100   | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4',5,5'-HpCB, #189 | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | WHO-PCB-TEQ Lower Bound     | < 20    | ng/kg DS | +/-20%             |
| HRGC/HRMS   | WHO-PCB-TEQ Upper Bound     | < 20    | ng/kg DS | +/-20%             |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit

## Comment

The reported results for PCB are indicative due to low recoveries of internal standards. These recoveries have been taken into account calculating the results.

Linköping 2011-03-30

The report has been reviewed and approved by

Jan Granat  
Responsible reviewer

Control numbers 8589 8197 2165 3442

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**REPORT**

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**Report No. 11076515**

Assigner

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Steenhouwerstraat 15  
3194AG Hoogvliet, NL

Applies to

**Information about the project****Solid**

Project number : 11643173

**Information about sample and sampling**

Sampling date : 2011-02-08  
Sample name : 11643173x5  
Sampler : -  
Previous labreport no : 11062832

Date of Arrival : 2011-03-16

**Results of the analyses**

| Test method | Analysis / Investigation of | Results | Unit     | Uncert. of measur. |
|-------------|-----------------------------|---------|----------|--------------------|
| SS-EN 11465 | Dry Substance               | 90.9    | %        | +/-10%             |
| HRGC/HRMS   | 3,3',4,4'-TeCB, #77         | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,4,4',5'-TeCB, #81         | < 100   | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4'-PeCB, #105      | 380     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3,4,4',5'-PeCB, #114      | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3',4,4',5'-PeCB, #118     | 920     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2'3,4,4',5'-PeCB, #123      | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,3',4,4',5'-PeCB, #126     | < 100   | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4',5'-HxCB, #156   | 660     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3,3',4,4',5'-HxCB, #157   | 110     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3',4,4',5,5'-HxCB, #167   | 1200    | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,3',4,4',5,5'-HxCB, #169   | < 100   | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4',5,5'-HpCB, #189 | 130     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | WHO-PCB-TEQ Lower Bound     | < 20    | ng/kg DS | +/-20%             |
| HRGC/HRMS   | WHO-PCB-TEQ Upper Bound     | < 20    | ng/kg DS | +/-20%             |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

**Comment**

The reported results for PCBs are indicative due to low recoveries of internal standards. These recoveries have been taken into account calculating the results.

Linköping 2011-03-23

The report has been reviewed and approved by

Britt Karlsson  
Responsible reviewer

Control numbers 8485 8791 2168 3949

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## REPORT

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Report No. 11076517

Assigner

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Applies to

## Information about the project

Solid

Project number : 11643173

## Information about sample and sampling

Sampling date : 2011-02-08  
Sample name : 11643173x6  
Sampler : -  
Previous labreport no : 11062840

Date of Arrival : 2011-03-16

## Results of the analyses

| Test method | Analysis / Investigation of | Results | Unit     | Uncert. of measur. |
|-------------|-----------------------------|---------|----------|--------------------|
| SS-EN 11465 | Dry Substance               | 87.4    | %        | +/-10%             |
| HRGC/HRMS   | 3,3',4,4'-TeCB, #77         | < 100   | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,4,4',5'-TeCB, #81         | < 100   | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4'-PeCB, #105      | 490     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3,4,4',5'-PeCB, #114      | 170     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3',4,4',5'-PeCB, #118     | 1300    | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2',3,4,4',5'-PeCB, #123     | 150     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,3',4,4',5'-PeCB, #126     | 360     | ng/kg DS | +/-20%             |
| HRGC/HRMS   | 2,3,3',4,4',5'-HxCB, #156   | 1200    | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3,3',4,4',5'-HxCB, #157   | 170     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 2,3',4,4',5,5'-HxCB, #167   | 2300    | ng/kg DS | +/-15%             |
| HRGC/HRMS   | 3,3',4,4',5,5'-HxCB, #169   | < 100   | ng/kg DS | +/- 20%            |
| HRGC/HRMS   | 2,3,3',4,4',5,5'-HpCB, #189 | 530     | ng/kg DS | +/-15%             |
| HRGC/HRMS   | WHO-PCB-TEQ Lower Bound     | 36      | ng/kg DS | +/-20%             |
| HRGC/HRMS   | WHO-PCB-TEQ Upper Bound     | 40      | ng/kg DS | +/-20%             |

The stated uncertainty of measurement is calculated using a coverage  $k = 2$ . In case interval is set the higher figure refers to measurement uncertainty for results close to the reporting limit.

## Comment

The reported results for PCB:s are indicative due to low recoveries of internal standards. These recoveries have been taken into account calculating the results.

Linköping 2011-03-23

The report has been reviewed and approved by

Britt Karlsson  
Responsible reviewer

Control numbers 8286 8593 2165 3344

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## **Bijlage 4**

### Toetsingsresultaten

# Toetsing Dioxines

| monster -->          |         | 207-1a (0-0,5)<br>Gehalte ng/kg<br>30-9-2010 | cor. TEF<br>30-9-2010 | 207A (0-0,5)<br>Gehalte ng/kg<br>1-3-2011 | cor. TEF<br>1-3-2011 | Z211-1a (0-0,5)<br>Gehalte ng/kg<br>4-11-2010 | cor TEF<br>4-11-2010 | 207-2 (0,7-1,0)<br>Gehalte ng/kg<br>4-11-2010 | cor. TEF<br>4-11-2010 |       |
|----------------------|---------|----------------------------------------------|-----------------------|-------------------------------------------|----------------------|-----------------------------------------------|----------------------|-----------------------------------------------|-----------------------|-------|
| Rapp datum alcontrol | TEF (1) |                                              |                       |                                           |                      |                                               |                      |                                               |                       |       |
| Org stof %           |         | 2                                            | 2                     | 2                                         | 2                    | 2                                             | 2                    | 2                                             | 2                     |       |
| 2,3,7,8-TCDD         | 1       | 2                                            | 2                     | 2                                         | 2                    | 5,6                                           | 5,6                  | 6,8                                           | 6,8                   |       |
| 1,2,3,7,8-PeCDD      | 1       | 2                                            | 2                     | 3,2                                       | 3,2                  | 3                                             | 3                    | 2,9                                           | 2,9                   |       |
| 1,2,3,6,7,8-HxCDD    | 0,1     | 2                                            | 0,2                   | 2,4                                       | 0,24                 | 3,1                                           | 0,31                 | 3,1                                           | 0,31                  |       |
| 1,2,3,7,8,9-HxCDD    | 0,1     | 3,3                                          | 0,33                  | 2,4                                       | 0,24                 | 5,3                                           | 0,53                 | 23                                            | 2,3                   |       |
| 1,2,3,4,7,8-HxCDD    | 0,1     | 2                                            | 0,2                   | 2                                         | 0,2                  | 2                                             | 0,2                  | 2                                             | 0,2                   |       |
| 1,2,3,4,6,7,8-HpCDD  | 0,01    | 8,3                                          | 0,083                 | 9,9                                       | 0,099                | 10                                            | 0,1                  | 92                                            | 0,92                  |       |
| 1,2,3,4,6,7,8,9-OCDD | 0,0003  | 47                                           | 0,0141                | 50                                        | 0,015                | 44                                            | 0,0132               | 750                                           | 0,225                 |       |
| 2,3,7,8-TCDF         | 0,1     | 6,9                                          | 0,69                  | 3                                         | 0,3                  | 4,4                                           | 0,44                 | 4,9                                           | 0,49                  |       |
| 1,2,3,7,8-PeCDF      | 0,03    | 2                                            | 0,06                  | 2,7                                       | 0,081                | 2                                             | 0,06                 | 2,9                                           | 0,087                 |       |
| 2,3,4,7,8-PeCDF      | 0,3     | 7,2                                          | 2,16                  | 4,2                                       | 1,26                 | 2                                             | 0,6                  | 7,6                                           | 2,28                  |       |
| 1,2,3,6,7,8-HxCDF    | 0,1     | 2                                            | 0,2                   | 2                                         | 0,2                  | 2                                             | 0,2                  | 6,2                                           | 0,62                  |       |
| 1,2,3,7,8,9-HxCDF    | 0,1     | 2                                            | 0,2                   | 2                                         | 0,2                  | 2                                             | 0,2                  | 11                                            | 1,1                   |       |
| 1,2,3,4,7,8-HxCDF    | 0,1     | 9                                            | 0,9                   | 5,6                                       | 0,56                 | 3,1                                           | 0,31                 | 12                                            | 1,2                   |       |
| 2,3,4,6,7,8-HxCDF    | 0,1     | 3                                            | 0,3                   | 4,2                                       | 0,42                 | 2                                             | 0,2                  | 7,6                                           | 0,76                  |       |
| 1,2,3,4,6,7,8-HpCDF  | 0,01    | 16                                           | 0,16                  | 24                                        | 0,24                 | 9,7                                           | 0,097                | 130                                           | 1,3                   |       |
| 1,2,3,4,7,8,9,-HpCDF | 0,01    | 3,2                                          | 0,032                 | 2                                         | 0,02                 | 5,9                                           | 0,059                | 25                                            | 0,25                  |       |
| 1,2,3,4,6,7,8,9-OCDF | 0,0003  | 17                                           | 0,0051                | 30                                        | 0,009                | 7,8                                           | 0,00234              | 440                                           | 0,132                 |       |
| PCB 77               | 0,0001  | 0                                            | 0                     | 0                                         | 0                    |                                               | 0                    |                                               | 0                     |       |
| PCB 81               | 0,0003  | 0                                            | 0                     | 0                                         | 0                    |                                               | 0                    |                                               | 0                     |       |
| PCB 105              | 0,00003 | 590                                          | 0,0177                | 590                                       | 0,0177               |                                               | 0                    |                                               | 0                     |       |
| PCB 114              | 0,00003 | 0                                            | 0                     | 0                                         | 0                    |                                               | 0                    |                                               | 0                     |       |
| PCB 118              | 0,00003 | 1500                                         | 0,045                 | 1500                                      | 0,045                |                                               | 0                    |                                               | 0                     |       |
| PCB 123              | 0,00003 | 0                                            | 0                     | 0                                         | 0                    |                                               | 0                    |                                               | 0                     |       |
| PCB 126              | 0,1     | 0                                            | 0                     | 0                                         | 0                    |                                               | 0                    |                                               | 0                     |       |
| PCB 156              | 0,00003 | 880                                          | 0,0264                | 880                                       | 0,0264               |                                               | 0                    |                                               | 0                     |       |
| PCB 157              | 0,00003 | 130                                          | 0,0039                | 130                                       | 0,0039               |                                               | 0                    |                                               | 0                     |       |
| PCB 167              | 0,00003 | 1700                                         | 0,051                 | 1700                                      | 0,051                |                                               | 0                    |                                               | 0                     |       |
| PCB 169              | 0,03    | 0                                            | 0                     | 0                                         | 0                    |                                               | 0                    |                                               | 0                     |       |
| PCB 189              | 0,00003 | 200                                          | 0,006                 | 200                                       | 0,006                |                                               | 0                    |                                               | 0                     |       |
|                      |         |                                              | 9,6842                | ng/kg                                     | 9,434                | ng/kg                                         | 11,92154             | ng/kg                                         | 21,874                | ng/kg |

.(1)

TEF: ToxiciteitsEquivalentieFactor

| Dioxine (som TEQ)    | 2000-1 (0,25)<br>Gehalte ng/kg<br>19-11-2010 | cor. TEF<br>19-11-2010 | 2000A (0-0,2)<br>Gehalte ng/kg<br>1-3-2011 | cor. TEF<br>1-3-2011 | 2000-2 (0,25-0,5)<br>Gehalte ng/kg<br>22-12-2010 | cor. TEF<br>22-12-2010 |       |
|----------------------|----------------------------------------------|------------------------|--------------------------------------------|----------------------|--------------------------------------------------|------------------------|-------|
| Rapp datum alcontrol |                                              |                        |                                            |                      |                                                  |                        |       |
| Org stof %           | 8,3                                          |                        | 8,3                                        |                      | 2                                                |                        |       |
| 2,3,7,8-TCDD         | 9,7                                          | 9,7                    | 2                                          | 2                    | 2                                                | 2                      |       |
| 1,2,3,7,8-PeCDD      | 8,7                                          | 8,7                    | 2                                          | 2                    | 2                                                | 2                      |       |
| 1,2,3,6,7,8-HxCDD    | 18                                           | 1,8                    | 3,1                                        | 0,31                 | 2                                                | 0,2                    |       |
| 1,2,3,7,8,9-HxCDD    | 78                                           | 7,8                    | 2,4                                        | 0,24                 | 6,4                                              | 0,64                   |       |
| 1,2,3,4,7,8-HxCDD    | 18                                           | 1,8                    | 8,6                                        | 0,86                 | 2                                                | 0,2                    |       |
| 1,2,3,4,6,7,8-HpCDD  | 110                                          | 1,1                    | 24                                         | 0,24                 | 25                                               | 0,25                   |       |
| 1,2,3,4,6,7,8,9-OCDD | 370                                          | 0,111                  | 84                                         | 0,0252               | 140                                              | 0,042                  |       |
| 2,3,7,8-TCDF         | 16                                           | 1,6                    | 11                                         | 1,1                  | 2                                                | 0,2                    |       |
| 1,2,3,7,8-PeCDF      | 10                                           | 0,3                    | 4,6                                        | 0,138                | 7,3                                              | 0,219                  |       |
| 2,3,4,7,8-PeCDF      | 4,9                                          | 1,47                   | 8,7                                        | 2,61                 | 31                                               | 9,3                    |       |
| 1,2,3,6,7,8-HxCDF    | 15                                           | 1,5                    | 2                                          | 0,2                  | 9,8                                              | 0,98                   |       |
| 1,2,3,7,8,9-HxCDF    | 19                                           | 1,9                    | 2,4                                        | 0,24                 | 3,8                                              | 0,38                   |       |
| 1,2,3,4,7,8-HxCDF    | 15                                           | 1,5                    | 8,6                                        | 0,86                 | 12                                               | 1,2                    |       |
| 2,3,4,6,7,8-HxCDF    | 25                                           | 2,5                    | 5                                          | 0,5                  | 12                                               | 1,2                    |       |
| 1,2,3,4,6,7,8-HpCDF  | 94                                           | 0,94                   | 18                                         | 0,18                 | 48                                               | 0,48                   |       |
| 1,2,3,4,7,8,9-HpCDF  | 76                                           | 0,76                   | 2,1                                        | 0,021                | 7,2                                              | 0,072                  |       |
| 1,2,3,4,6,7,8,9-OCDF | 150                                          | 0,045                  | 27                                         | 0,0081               | 43                                               | 0,0129                 |       |
| PCB 77               |                                              | 0                      | 0                                          | 0                    |                                                  |                        |       |
| PCB 81               |                                              | 0                      | 0                                          | 0                    |                                                  |                        |       |
| PCB 105              |                                              | 0                      | 400                                        | 0,012                |                                                  |                        |       |
| PCB 114              |                                              | 0                      | 0                                          | 0                    |                                                  |                        |       |
| PCB 118              |                                              | 0                      | 1800                                       | 0,054                |                                                  |                        |       |
| PCB 123              |                                              | 0                      | 490                                        | 0,0147               |                                                  |                        |       |
| PCB 126              |                                              | 0                      | 0                                          | 0                    |                                                  |                        |       |
| PCB 156              |                                              | 0                      | 1400                                       | 0,042                |                                                  |                        |       |
| PCB 157              |                                              | 0                      | 170                                        | 0,0051               |                                                  |                        |       |
| PCB 167              |                                              | 0                      | 2400                                       | 0,072                |                                                  |                        |       |
| PCB 169              |                                              | 0                      | 0                                          | 0                    |                                                  |                        |       |
| PCB 189              |                                              | 0                      | 240                                        | 0,0072               |                                                  |                        |       |
|                      | ng/kg                                        | 43,526                 | ng/kg                                      | 11,7393              | ng/kg                                            | 19,3759                | ng/kg |

| Dioxine (som TEQ)    | 2001-1<br>(0,08-0,33)<br>Gehalte ng/kg | cor. TEF   | 2001A<br>(0-0,2)<br>Gehalte ng/kg | cor. TEF | 2002-1<br>(0,08-0,33)<br>Gehalte ng/kg | cor. TEF   | 2002A<br>(0,08-0,3)<br>Gehalte ng/kg | cor. TEF |       |
|----------------------|----------------------------------------|------------|-----------------------------------|----------|----------------------------------------|------------|--------------------------------------|----------|-------|
| Rapp datum alcontrol | 19-11-2010                             | 19-11-2010 | 1-3-2011                          | 1-3-2011 | 19-11-2010                             | 19-11-2010 | 1-3-2011                             | 1-3-2011 |       |
| Org stof %           | 4,9                                    |            | 4,9                               |          | 0,5                                    |            | 0,5                                  |          |       |
| 2,3,7,8-TCDD         | 6,8                                    | 6,8        | 3,1                               | 3,1      | 3                                      | 3          | 2                                    | 2        |       |
| 1,2,3,7,8-PeCDD      | 4,1                                    | 4,1        | 6,6                               | 6,6      | 2                                      | 2          | 2                                    | 2        |       |
| 1,2,3,6,7,8-HxCDD    | 10                                     | 1          | 4                                 | 0,4      | 6,1                                    | 0,61       | 2                                    | 0,2      |       |
| 1,2,3,7,8,9-HxCDD    | 34                                     | 3,4        | 2,4                               | 0,24     | 19                                     | 1,9        | 2                                    | 0,2      |       |
| 1,2,3,4,7,8-HxCDD    | 12                                     | 1,2        | 2                                 | 0,2      | 4                                      | 0,4        | 2                                    | 0,2      |       |
| 1,2,3,4,6,7,8-HpCDD  | 88                                     | 0,88       | 29                                | 0,29     | 43                                     | 0,43       | 2,1                                  | 0,021    |       |
| 1,2,3,4,6,7,8,9-OCDD | 320                                    | 0,096      | 75                                | 0,0225   | 160                                    | 0,048      | 34                                   | 0,0102   |       |
| 2,3,7,8-TCDF         | 11                                     | 1,1        | 6,6                               | 0,66     | 2                                      | 0,2        | 2                                    | 0,2      |       |
| 1,2,3,7,8-PeCDF      | 7,1                                    | 0,213      | 4,8                               | 0,144    | 2                                      | 0,06       | 2                                    | 0,06     |       |
| 2,3,4,7,8-PeCDF      | 7,7                                    | 2,31       | 6,7                               | 2,01     | 2,7                                    | 0,81       | 2                                    | 0,6      |       |
| 1,2,3,6,7,8-HxCDF    | 8,7                                    | 0,87       | 7,6                               | 0,76     | 3,4                                    | 0,34       | 2                                    | 0,2      |       |
| 1,2,3,7,8,9-HxCDF    | 10                                     | 1          | 3,2                               | 0,32     | 4,7                                    | 0,47       | 2                                    | 0,2      |       |
| 1,2,3,4,7,8-HxCDF    | 5,9                                    | 0,59       | 6                                 | 0,6      | 3,3                                    | 0,33       | 2                                    | 0,2      |       |
| 2,3,4,6,7,8-HxCDF    | 13                                     | 1,3        | 8,1                               | 0,81     | 6                                      | 0,6        | 2                                    | 0,2      |       |
| 1,2,3,4,6,7,8-HpCDF  | 66                                     | 0,66       | 42                                | 0,42     | 29                                     | 0,29       | 2,7                                  | 0,027    |       |
| 1,2,3,4,7,8,9,-HpCDF | 47                                     | 0,47       | 4,3                               | 0,043    | 24                                     | 0,24       | 6,2                                  | 0,062    |       |
| 1,2,3,4,6,7,8,9-OCDF | 110                                    | 0,033      | 18                                | 0,0054   | 66                                     | 0,0198     | 4,7                                  | 0,00141  |       |
| PCB 77               |                                        | 0          | 0                                 | 0        |                                        | 0          | 0                                    | 0        |       |
| PCB 81               |                                        | 0          | 0                                 | 0        |                                        | 0          | 0                                    | 0        |       |
| PCB 105              |                                        | 0          | 0                                 | 0        |                                        | 0          | 0                                    | 0        |       |
| PCB 114              |                                        | 0          | 0                                 | 0        |                                        | 0          | 0                                    | 0        |       |
| PCB 118              |                                        | 0          | 0                                 | 0        |                                        | 0          | 120                                  | 0,0036   |       |
| PCB 123              |                                        | 0          | 0                                 | 0        |                                        | 0          | 0                                    | 0        |       |
| PCB 126              |                                        | 0          | 0                                 | 0        |                                        | 0          | 0                                    | 0        |       |
| PCB 156              |                                        | 0          | 0                                 | 0        |                                        | 0          | 0                                    | 0        |       |
| PCB 157              |                                        | 0          | 0                                 | 0        |                                        | 0          | 0                                    | 0        |       |
| PCB 167              |                                        | 0          | 0                                 | 0        |                                        | 0          | 110                                  | 0,0033   |       |
| PCB 169              |                                        | 0          | 0                                 | 0        |                                        | 0          | 0                                    | 0        |       |
| PCB 189              |                                        | 0          | 0                                 | 0        |                                        | 0          | 0                                    | 0        |       |
|                      |                                        | 26,022     | ng/kg                             | 16,6249  | ng/kg                                  | 11,7478    | ng/kg                                | 6,38851  | ng/kg |

| Dioxine (som TEQ)    | MM2003-1 (0-0,25)<br>Gehalte ng/kg<br>19-11-2010 | cor. TEF<br>19-11-2010 | 2003A (0-0,2)<br>Gehalte ng/kg<br>1-3-2011 | cor. TEF<br>1-3-2011 | MM2004-1 (0-0,25)<br>Gehalte ng/kg<br>21-10-2010 |         | 2004A-1 (0-0,2)<br>Gehalte ng/kg<br>1-3-2011 | cor. TEF<br>1-3-2011 |       |
|----------------------|--------------------------------------------------|------------------------|--------------------------------------------|----------------------|--------------------------------------------------|---------|----------------------------------------------|----------------------|-------|
| Rapp datum alcontrol |                                                  |                        |                                            |                      |                                                  |         |                                              |                      |       |
| Org stof %           | 3,4                                              |                        | 3,4                                        |                      | 5,2                                              |         | 5,2                                          |                      |       |
| 2,3,7,8-TCDD         | 2                                                | 2                      | 2                                          | 2                    | 4,2                                              | 4,2     | 2                                            | 2                    |       |
| 1,2,3,7,8-PeCDD      | 2                                                | 2                      | 2                                          | 2                    | 2,2                                              | 2,2     | 5                                            | 5                    |       |
| 1,2,3,6,7,8-HxCDD    | 2                                                | 0,2                    | 3,5                                        | 0,35                 | 5,1                                              | 0,51    | 5,9                                          | 0,59                 |       |
| 1,2,3,7,8,9-HxCDD    | 2                                                | 0,2                    | 4,2                                        | 0,42                 | 6,2                                              | 0,62    | 2,8                                          | 0,28                 |       |
| 1,2,3,4,7,8-HxCDD    | 2                                                | 0,2                    | 3,1                                        | 0,31                 | 2                                                | 0,2     | 2                                            | 0,2                  |       |
| 1,2,3,4,6,7,8-HpCDD  | 29                                               | 0,29                   | 71                                         | 0,71                 | 36                                               | 0,36    | 45                                           | 0,45                 |       |
| 1,2,3,4,6,7,8,9-OCDD | 28                                               | 0,0084                 | 580                                        | 0,174                | 210                                              | 0,063   | 190                                          | 0,057                |       |
| 2,3,7,8-TCDF         | 2,5                                              | 0,25                   | 2,7                                        | 0,27                 | 11                                               | 1,1     | 12                                           | 1,2                  |       |
| 1,2,3,7,8-PeCDF      | 2                                                | 0,06                   | 2,2                                        | 0,066                | 5                                                | 0,15    | 5,7                                          | 0,171                |       |
| 2,3,4,7,8-PeCDF      | 2,4                                              | 0,72                   | 2,5                                        | 0,75                 | 10                                               | 3       | 9,5                                          | 2,85                 |       |
| 1,2,3,6,7,8-HxCDF    | 2                                                | 0,2                    | 2,9                                        | 0,29                 | 4,2                                              | 0,42    | 5,7                                          | 0,57                 |       |
| 1,2,3,7,8,9-HxCDF    | 2                                                | 0,2                    | 2                                          | 0,2                  | 2                                                | 0,2     | 2                                            | 0,2                  |       |
| 1,2,3,4,7,8-HxCDF    | 2                                                | 0,2                    | 2                                          | 0,2                  | 11                                               | 1,1     | 14                                           | 1,4                  |       |
| 2,3,4,6,7,8-HxCDF    | 2                                                | 0,2                    | 2,4                                        | 0,24                 | 7,3                                              | 0,73    | 11                                           | 1,1                  |       |
| 1,2,3,4,6,7,8-HpCDF  | 19                                               | 0,19                   | 25                                         | 0,25                 | 31                                               | 0,31    | 48                                           | 0,48                 |       |
| 1,2,3,4,7,8,9,-HpCDF | 2                                                | 0,02                   | 4                                          | 0,04                 | 6,1                                              | 0,061   | 4,4                                          | 0,044                |       |
| 1,2,3,4,6,7,8,9-OCDF | 21                                               | 0,0063                 | 72                                         | 0,0216               | 64                                               | 0,0192  | 38                                           | 0,0114               |       |
| PCB 77               |                                                  | 0                      | 0                                          | 0                    |                                                  | 0       | 0                                            | 0                    |       |
| PCB 81               |                                                  | 0                      | 0                                          | 0                    |                                                  | 0       | 0                                            | 0                    |       |
| PCB 105              |                                                  | 0                      | 380                                        | 0,0114               |                                                  | 0       | 490                                          | 0,0147               |       |
| PCB 114              |                                                  | 0                      | 0                                          | 0                    |                                                  | 0       | 170                                          | 0,0051               |       |
| PCB 118              |                                                  | 0                      | 920                                        | 0,0276               |                                                  | 0       | 1300                                         | 0,039                |       |
| PCB 123              |                                                  | 0                      | 0                                          | 0                    |                                                  | 0       | 150                                          | 0,0045               |       |
| PCB 126              |                                                  | 0                      | 0                                          | 0                    |                                                  | 0       | 360                                          | 36                   |       |
| PCB 156              |                                                  | 0                      | 660                                        | 0,0198               |                                                  | 0       | 1200                                         | 0,036                |       |
| PCB 157              |                                                  | 0                      | 110                                        | 0,0033               |                                                  | 0       | 170                                          | 0,0051               |       |
| PCB 167              |                                                  | 0                      | 1200                                       | 0,036                |                                                  | 0       | 2300                                         | 0,069                |       |
| PCB 169              |                                                  | 0                      | 0                                          | 0                    |                                                  | 0       | 0                                            | 0                    |       |
| PCB 189              |                                                  | 0                      | 130                                        | 0,0039               |                                                  | 0       | 530                                          | 0,0159               |       |
|                      |                                                  | 6,9447                 | ng/kg                                      | 8,3936               | ng/kg                                            | 15,2432 | ng/kg                                        | 52,7927              | ng/kg |

Toetsingswaarden  
Dioxine (som TEQ)

( 0,5% org stof , 2% lutum)

|     |      |       |
|-----|------|-------|
| <AW | <11  | ng/kg |
| AW  | 11   | ng/kg |
| T   | 23,5 | ng/kg |
| I   | 36   | ng/kg |

( 2% org stof , 2% lutum)

|     |      |       |
|-----|------|-------|
| <AW | <11  | ng/kg |
| AW  | 11   | ng/kg |
| T   | 23,5 | ng/kg |
| I   | 36   | ng/kg |

( 3,4% org stof , 2% lutum)

|     |       |       |
|-----|-------|-------|
| <AW | <18,7 | ng/kg |
| AW  | 18,7  | ng/kg |
| T   | 39,95 | ng/kg |
| I   | 61,2  | ng/kg |

( 4,9% org stof , 2% lutum)

|     |        |       |
|-----|--------|-------|
| <AW | <26,95 | ng/kg |
| AW  | 26,95  | ng/kg |
| T   | 57,58  | ng/kg |
| I   | 88,2   | ng/kg |

( 5,2% org stof , 2% lutum)

|     |       |       |
|-----|-------|-------|
| <AW | <28,6 | ng/kg |
| AW  | 28,6  | ng/kg |
| T   | 61,1  | ng/kg |
| I   | 93,6  | ng/kg |

( 8,3% org stof , 2% lutum)

|     |        |       |
|-----|--------|-------|
| <AW | <45,65 | ng/kg |
| AW  | 45,65  | ng/kg |
| T   | 97,53  | ng/kg |
| I   | 149,4  | ng/kg |